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# **Redfish Message Registry Guide**

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## CONTENTS

1 Overview .....	4
1.1 Who should read this document? .....	4
1.2 How can I provide feedback? .....	4
1.3 Where can I find more information? .....	4
1.4 Related documents .....	5
2 Reference guide .....	7
2.1 AccountSecurity 1.0.1 .....	7
2.2 AutomationNodeEvent 1.0.1 .....	16
2.3 Base 1.22.1 .....	19
2.4 Composition 1.1.3 .....	76
2.5 Environmental 1.4.0 .....	82
2.6 EthernetFabric 1.0.2 .....	141
2.7 Fabric 1.0.3 .....	145
2.8 HeartbeatEvent 1.1.1 .....	167
2.9 JobEvent 1.1.1 .....	168
2.10 License 1.0.4 .....	174
2.11 LogService 1.1.0 .....	177
2.12 ManagerEvent 1.0.0 .....	179
2.13 NetworkDevice 1.1.1 .....	180
2.14 Platform 1.3.2 .....	185
2.15 Power 1.2.0 .....	199
2.16 ResourceEvent 1.4.3 .....	242
2.17 SensorEvent 1.1.0 .....	255
2.18 ServiceCommunications 1.0.1 .....	267
2.19 StorageDevice 1.5.1 .....	269
2.20 TaskEvent 1.0.5 .....	288
2.21 Telemetry 1.1.1 .....	292
2.22 Update 1.3.0 .....	298
3 ANNEX A (informative) Change log .....	309

# 1 Overview

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The Redfish standard comprises a set of specifications maintained by the Redfish Forum, a working group within DMTF. The standard defines a protocol that uses RESTful interfaces to provide access to data and operations associated with the management of systems and networks. One of the strengths of the Redfish protocol is that it works with a wide range of servers: from stand-alone servers to rack-mount and bladed environments to large-scale data centers and cloud environments.

The Redfish standard addresses several key issues for infrastructures that require scalability. Large infrastructures often consist of many simple servers of different makes and types. This hyper-scale usage model requires a new approach to systems management. The Redfish protocol addresses these needs by providing a standard protocol based on out-of-band systems management.

With these goals in mind, the Redfish protocol was designed as an open-industry standard to meet scalability requirements in multi-vendor deployments. It easily integrates with commonly used tools, using RESTful interfaces to perform operations and using JSON for data payloads.

## 1.1 Who should read this document?

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Redfish responses can contain messages to help guide clients when next steps or corrective actions need to be taken. This document is useful for client developers who want to understand how to interpret standard Redfish messages. This document is also useful for service developers who want to understand how standard Redfish messages are to be used in their service.

## 1.2 How can I provide feedback?

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Feedback on all Redfish specifications and documents is encouraged. Feedback can be directed to DMTF and the Redfish Forum by the following means:

- **Redfish User Forum:** <https://redfishforum.com> - User forum monitored by DMTF Redfish Forum personnel to answer questions about any Redfish-related topics.
- **DMTF Feedback Portal:** <https://www.dmtf.org/standards/feedback> - Formal submission portal for enhancements or proposals to DMTF and the Redfish Forum.

## 1.3 Where can I find more information?

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The following web sites provide more information about the Redfish standard:

- [Redfish Developer Hub](#)

Resources for developers who use Redfish to build applications. Contains an interactive schema explorer, hosted schema, and other links.

- [Redfish Specification Forum](#)

DMTF Redfish-monitored user forum. Answers questions about Redfish-related topics.

- [DMTF GitHub repositories](#)

Open source tools and libraries for working with Redfish.

- [Redfish standards](#)

Schemas, specifications, mockups, white papers, FAQ, educational material, and more.

- [DMTF Redfish Forum](#)

Working group that maintains the Redfish standard. Site lists member companies, future work and schedules, charter, and information about joining.

## 1.4 Related documents

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The following documents are part of the Redfish development effort. They can be accessed or downloaded from DMTF's Redfish Standards web site: <https://www.dmtf.org/standards/redfish>

- [DSP0218](#) - Platform Level Data Model (PLDM) for Redfish Device Enablement Specification - Binary-encoded JSON (BEJ) and dictionary-based mapping of Redfish schemas and properties into PLDM messages.
- [DSP0266](#) - Redfish Specification - Main Redfish Specification.
- [DSP0268](#) - Redfish Data Model Specification - Normative descriptions and additional text for every schema defined in DSP8010 and example payloads for every resource.
- [DSP0270](#) - Redfish Host Interface Specification - "In-band" or "OS-based" Redfish host interface.
- [DSP0272](#) - Redfish Interoperability Profiles Specification - Structure and JSON document that is used to define and publish an interoperability profile that checks an implementation's conformance to a defined minimum set of functionality.
- [DSP2043](#) - Redfish Mockups Bundle - Set of mockups that can be used as sample output from `GET` responses from a Redfish service. Informative in nature, it was used to develop the schema. A person can set up an NGINX or similar server and configure it to output JSON format and then use this directory for demonstration purposes.
- [DSP2044](#) - Redfish White Paper - Non-normative document helping those new to Redfish understand how to interact with the Redfish service and understand common functions and tasks.
- [DSP2046](#) - Redfish Resource and Schema Guide - Informative documentation regarding common Redfish resource properties and a listing of properties that can be found in each of the Redfish resources.
- [DSP2053](#) - Redfish Property Guide - Informative documentation providing an index to individual property

definitions across all Redfish schema.

- [DSP2065](#) - Redfish Message Registry Guide - Informative documentation providing details regarding the messages defined in Redfish standard message registries.
- [DSP8010](#) - Redfish Schema - Redfish schema definitions. These files are normative in nature and are normatively referenced by the *Redfish Specification*. The three schema formats are CSDL (OData Common Schema Definition Language format, which is in XML), JSON Schema, and OpenAPI schema. These schema definitions should be functionally equivalent, thus specifying the schema in three different languages.
- [DSP8011](#) - Redfish Standard Registries - Redfish registry definitions. This bundle of Redfish registries includes message registries used for Redfish-defined messages including events and privilege maps.
- [DSP8013](#) - Redfish Interoperability Profiles Bundle - Bundle of published Redfish interoperability profile documents and supporting schema and sample documents used for creating profiles.

## 2 Reference guide

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The following sections contain details for each message registry and their messages in the Redfish Standard Registries (DSP8011).

### 2.1 AccountSecurity 1.0.1

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This registry defines the account security messages. These messages are intended for audit logs and security event notifications. Services shall not include these messages in responses to clients.

Message	Severity	Description
<a href="#">AccountCreated</a>	OK	Indicates that an account was created.
<a href="#">AccountDisabled</a>	Warning	Indicates that an account was disabled.
<a href="#">AccountEnabled</a>	OK	Indicates that an account was enabled.
<a href="#">AccountLocked</a>	Critical	Indicates that an account was locked due to failed authorization attempts.
<a href="#">AccountLockoutExpired</a>	OK	Indicates that the lockout timer on an account expired and the account is now unlocked.
<a href="#">AccountRemoved</a>	OK	Indicates that an account was removed.
<a href="#">AccountUnlocked</a>	OK	Indicates that an account was manually unlocked.
<a href="#">InsufficientPrivilege</a>	Critical	Indicates that a user with valid credentials attempted an operation without the necessary privileges.
<a href="#">InvalidCredentials</a>	Critical	Indicates that a user provided invalid credentials with a request.
<a href="#">ManagerAccountRoleChanged</a>	OK	Indicates that the role for an account was changed.
<a href="#">PasswordModified</a>	OK	Indicates that the password of an account was changed.
<a href="#">RolePrivilegeAdded</a>	OK	Indicates that a privilege was added to a role.
<a href="#">RolePrivilegeRemoved</a>	OK	Indicates that a privilege was removed from a role.
<a href="#">SuccessfulLogin</a>	OK	Indicates that a user provided valid credentials and made a successful login.
<a href="#">UserCertificateAdded</a>	OK	Indicates that a user certificate was added to an account.
<a href="#">UserCertificateRemoved</a>	OK	Indicates that a user certificate was removed from an account.
<a href="#">UserCertificateReplaced</a>	OK	Indicates that a user certificate was replaced on an account.

Message	Severity	Description
UserKeyAdded	OK	Indicates that a user key was added to an account.
UserKeyRemoved	OK	Indicates that a user key was removed from an account.

### 2.1.1 AccountCreated

Indicates that an account was created.

- This message shall indicate that an account was created. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' was created."

1. *string*: The username of the account that was created.
  - This argument shall contain the username of the account that was created.

### 2.1.2 AccountDisabled

Indicates that an account was disabled.

- This message shall indicate that an account was disabled. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "Account '<Arg1>' was disabled."

1. *string*: The username of the account that was disabled.
  - This argument shall contain the username of the account that was disabled.



### 2.1.3 AccountEnabled

Indicates that an account was enabled.

- This message shall indicate that an account was enabled. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' was enabled."

1. *string*: The username of the account that was enabled.
  - This argument shall contain the username of the account that was enabled.

### 2.1.4 AccountLocked

Indicates that an account was locked due to failed authorization attempts.

- This message shall indicate that an account was locked due to failed authorization attempts. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Account '<Arg1>' was locked due to excessive failed authorization attempts."

1. *string*: The username of the account that was locked.
  - This argument shall contain the username of the account that was locked.

### 2.1.5 AccountLockoutExpired

Indicates that the lockout timer on an account expired and the account is now unlocked.

- This message shall indicate that the lockout timer on an account expired and the account is now unlocked. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' was unlocked following the expiration of a lockout timer."

1. *string*: The username of the account that was unlocked.
  - This argument shall contain the username of the account that was unlocked.

### 2.1.6 AccountRemoved

Indicates that an account was removed.

- This message shall indicate that an account was removed. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' was removed."

1. *string*: The username of the account that was removed.
  - This argument shall contain the username of the account that was removed.

### 2.1.7 AccountUnlocked

Indicates that an account was manually unlocked.

- This message shall indicate that an account was manually unlocked. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' was unlocked by an administrator."

1. *string*: The username of the account that was unlocked.
  - This argument shall contain the username of the account that was unlocked.

### 2.1.8 InsufficientPrivilege

Indicates that a user with valid credentials attempted an operation without the necessary privileges.

- This message shall indicate that a user with valid credentials attempted an operation without the necessary privileges. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "'<Arg1>' attempted an operation over '<Arg2>' with the privileges '<Arg3>', but requires the privileges '<Arg4>'."

1. *string*: The IP address of the user that attempted the operation.
  - This argument shall contain the IP address of the user that attempted the operation.
2. *string*: The protocol or interface over which the operation was attempted. Examples include 'Redfish', 'Web UI', and 'SSH'.
  - This argument shall contain the protocol or interface over which the operation was attempted.
3. *string*: The privileges of the user that attempted the operation.
  - This argument shall contain the privileges of the user that attempted the operation.
4. *string*: The required privileges for the requested operation.
  - This argument shall contain the required privileges for the requested operation.

### 2.1.9 InvalidCredentials

Indicates that a user provided invalid credentials with a request.

- This message shall indicate that a user provided invalid credentials with a request, such as those found in the `Authorization` and `X-Auth-Token` HTTP request headers. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "'<Arg1>' provided invalid credentials over '<Arg2>'."

1. *string*: The IP address of the user that attempted the operation.

- This argument shall contain the IP address of the user that attempted the operation.
- 2. *string*: The protocol or interface over which the operation was attempted. Examples include 'Redfish', 'Web UI', and 'SSH'.
  - This argument shall contain the protocol or interface over which the operation was attempted.

### 2.1.10 ManagerAccountRoleChanged

Indicates that the role for an account was changed.

- This message shall indicate that the role for an account was changed. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Account '<Arg1>' has changed from role '<Arg2>' to '<Arg3>'."

1. *string*: The username of the account that was modified.
  - This argument shall contain the username of the account that was modified.
2. *string*: The former role for the account.
  - This argument shall contain the former Redfish role for the account.
3. *string*: The new role for the account
  - This argument shall contain the new Redfish role for the account.

### 2.1.11 PasswordModified

Indicates that the password of an account was changed.

- This message shall indicate that the password of an account was changed. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The password for account '<Arg1>' was changed."

1. *string*: The username of the account with the modified password.
  - This argument shall contain the username of the account with the modified password.

### 2.1.12 RolePrivilegeAdded

Indicates that a privilege was added to a role.

- This message shall indicate that a privilege was added to a role. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Privilege '<Arg1>' was added to role '<Arg2>'."

1. *string*: The privilege that was added to the role.
  - This argument shall contain the privilege that was added too the role.
2. *string*: The role that was modified.
  - This argument shall contain the Redfish role that was modified.

### 2.1.13 RolePrivilegeRemoved

Indicates that a privilege was removed from a role.

- This message shall indicate that a privilege was removed from a role. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Privilege '<Arg1>' was removed from role '<Arg2>'."

1. *string*: The privilege that was removed from the role.
  - This argument shall contain the privilege that was removed from the role.
2. *string*: The role that was modified.
  - This argument shall contain the Redfish role that was modified.

### 2.1.14 SuccessfulLogin

Indicates that a user provided valid credentials and made a successful login.

- This message shall indicate that a user provided valid credentials and made a successful login. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Successful login of user '<Arg1>' from '<Arg2>' over '<Arg3>'."

1. *string*: The username of the account that made a successful login.
  - This argument shall contain the username of the account that made a successful login.
2. *string*: The IP address of the user that made a successful login.
  - This argument shall contain the IP address of the user that made a successful login.
3. *string*: The protocol or interface over which the login was made. Examples include 'Redfish', 'Web UI', and 'SSH'.
  - This argument shall contain the protocol or interface over which the login was made.

### 2.1.15 UserCertificateAdded

Indicates that a user certificate was added to an account.

- This message shall indicate that a user certificate was added to an account. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A user certificate was added to account '<Arg1>'."

1. *string*: The username of the account with the certificate that was added.
  - This argument shall contain the username of the account with the certificate that was added.

### 2.1.16 UserCertificateRemoved

Indicates that a user certificate was removed from an account.

- This message shall indicate that a user certificate was removed from an account. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A user certificate was removed from account '<Arg1>'."

1. *string*: The username of the account with the certificate that was removed.
  - This argument shall contain the username of the account with the certificate that was removed.

### 2.1.17 UserCertificateReplaced

Indicates that a user certificate was replaced on an account.

- This message shall indicate that a user certificate was replaced on an account. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A user certificate was replaced on account '<Arg1>'."

1. *string*: The username of the account with the certificate that was replaced.
  - This argument shall contain the username of the account with the certificate that was replaced.

### 2.1.18 UserKeyAdded

Indicates that a user key was added to an account.

- This message shall indicate that a user key was added to an account. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A user key was added to account '<Arg1>'."

1. *string*: The username of the account with the key that was added.

- This argument shall contain the username of the account with the key that was added.

### 2.1.19 UserKeyRemoved

Indicates that a user key was removed from an account.

- This message shall indicate that a user key was removed from an account. Services shall not include this message in responses to clients.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A user key was removed from account '<Arg1>'."

1. *string*: The username of the account with the key that was removed.
  - This argument shall contain the username of the account with the key that was removed.

## 2.2 AutomationNodeEvent 1.0.1

This registry defines the messages for Automation node related events.

Message	Severity	Description
<a href="#">NodeDone</a>	OK	A node is done running.
<a href="#">NodeIdle</a>	OK	A node is idle.
<a href="#">NodeRunning</a>	OK	A node is running.
<a href="#">NodeStoppedCondition</a>	Warning	A node has stopped because of conditions.
<a href="#">NodeStoppedError</a>	Warning	A node has stopped with warnings or errors.
<a href="#">NodeWaiting</a>	OK	A node is waiting.

### 2.2.1 NodeDone

A node is done running.

- This message shall indicate that a node `NodeState` property transitioned to `Done`.

Version Added: 1.0.0



Severity: OK

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' is done running."

1. *string*: The `Id` of the node.
  - This argument shall contain the value of the `Id` property of the node resource that is done running.

### 2.2.2 NodeIdle

A node is idle.

- This message shall indicate that a node `NodeState` property transitions to `Idle`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' is idle."

1. *string*: The `Id` of the node that is idle.
  - This argument shall contain the value of the `Id` property of the node resource that is idle.

### 2.2.3 NodeRunning

A node is running.

- This message shall indicate that a node `NodeState` property transitioned to one of the `Running` states.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' is running."

1. *string*: The `Id` of the node.
  - This argument shall contain the value of the `Id` property of the node resource that is running.

## 2.2.4 NodeStoppedCondition

A node has stopped because of conditions.

- This message shall indicate that a node has stopped and the `NodeState` property transitioned to `ConditionStop`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' has stopped because of conditions."

1. *string*: The `Id` of the node.
  - This argument shall contain the value of the `Id` property of the node resource that has stopped.

## 2.2.5 NodeStoppedError

A node has stopped with warnings or errors.

- This message shall indicate that a node has stopped and the `NodeState` property transitioned to `ErrorStop`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' has stopped with warnings or errors."

1. *string*: The `Id` of the node.
  - This argument shall contain the value of the `Id` property of the node resource that has stopped.

## 2.2.6 NodeWaiting

A node is waiting.

- This message shall indicate that a node `NodeState` property transitioned to `Waiting`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The node with Id '<Arg1>' is waiting."

1. *string*: The `Id` of the node.
  - This argument shall contain the value of the `Id` property of the node resource that is waiting.

## 2.3 Base 1.22.1

This registry defines the base messages for Redfish.

Message	Severity	Description
<a href="#">AccessDenied</a>	Critical	Indicates that while attempting to access, connect to, or transfer to or from another resource, the service denied access.
<a href="#">AccessForbidden</a>	Critical	Indicates that the request contained valid credentials, but the user does not have the necessary privileges to perform the requested operation.
<a href="#">AccessUnauthorized</a>	Critical	Indicates that the request did not contain valid credentials.
<a href="#">AccountForSessionNoLongerExists</a>	OK	Indicates that the account for the session was removed, and so the session was removed as well.
<a href="#">AccountModified</a>	OK	Indicates that the account was successfully modified.
<a href="#">AccountNotModified</a>	Warning	Indicates that the modification requested for the account was not successful.
<a href="#">AccountRemoved</a>	OK	Indicates that the account was successfully removed.
<a href="#">ActionDeprecated</a>	Warning	Indicates the action is deprecated.
<a href="#">ActionNotSupported</a>	Critical	Indicates that the action supplied with the <code>POST</code> operation is not supported by the resource.
<a href="#">ActionParameterDuplicate</a>	Warning	Indicates that the action was supplied with a duplicated action parameter in the request body.
<a href="#">ActionParameterMissing</a>	Critical	Indicates that the action requested was missing an action parameter that is required to process the action.
<a href="#">ActionParameterNotSupported</a>	Warning	Indicates that the parameter supplied for the action is not supported on the resource.
<a href="#">ActionParameterUnknown</a>	Warning	Indicates that an action was submitted but an action parameter supplied did not match any of the known parameters.
<a href="#">ActionParameterValueConflict</a>	Warning	Indicates that the requested parameter value could not be completed because of a mismatch with other parameters or properties in the resource.
<a href="#">ActionParameterValueError</a>	Warning	Indicates that a parameter was given an invalid value.

Message	Severity	Description
<a href="#">ActionParameterValueFormatError</a>	Warning	Indicates that a parameter was given the correct value type but the format of the value is not supported.
<a href="#">ActionParameterValueNotInList</a>	Warning	Indicates that a parameter was given the correct value type but the value of that parameter was not supported. The value is not in an enumeration.
<a href="#">ActionParameterValueOutOfRange</a>	Warning	Indicates that a parameter was given the correct value type but the value of that parameter is outside the supported range.
<a href="#">ActionParameterValueTypeError</a>	Warning	Indicates that a parameter was given the wrong value type, such as when a number is supplied for a parameter that requires a string.
<a href="#">ArraySizeTooLong</a>	Warning	Indicates that the size of the array exceeded the maximum number of elements.
<a href="#">ArraySizeTooShort</a>	Warning	Indicates that the size of the array is less than the minimum number of elements.
<a href="#">AuthenticationTokenRequired</a>	Critical	Indicates that the request could not be performed because an authentication token was not provided.
<a href="#">ChassisPowerStateOffRequired</a>	Warning	Indicates that the request requires a specified chassis to be powered off.
<a href="#">ChassisPowerStateOnRequired</a>	Warning	Indicates that the request requires a specified chassis to be powered on.
<a href="#">ConditionInRelatedResource</a>	Warning	Indicates that one or more fault or error conditions exist in a related resource.
<a href="#">CouldNotEstablishConnection</a>	Critical	Indicates that the attempt to access the resource, file, or image at the URI was unsuccessful because a session could not be established.
<a href="#">CreateFailedMissingReqProperties</a>	Critical	Indicates that a create operation was attempted on a resource but that properties that are required for the create operation were missing from the request.
<a href="#">CreateLimitReachedForResource</a>	Critical	Indicates that no more resources can be created on the resource as it has reached its create limit.
<a href="#">Created</a>	OK	Indicates that all conditions of a successful create operation were met.
<a href="#">EmptyJSON</a>	Warning	Indicates that the request body contained an empty JSON object when one or more properties are expected in the body.
<a href="#">EventBufferExceeded</a>	Warning	Indicates undelivered events may have been lost due to a lack of buffer space in the service.
<a href="#">EventSubscriptionLimitExceeded</a>	Critical	Indicates that an event subscription establishment was requested but the operation failed due to the number of simultaneous connections exceeding the limit of the implementation.
<a href="#">GeneralError</a>	Critical	Indicates that a general error has occurred. Use in <code>@Message.ExtendedInfo</code> is discouraged. When used in <code>@Message.ExtendedInfo</code> , implementations are expected to include a <code>Resolution</code> property with this message and provide a service-defined resolution to indicate how to resolve the error.

Message	Severity	Description
<a href="#">GenerateSecretKeyRequired</a>	Critical	Indicates that the Time-based One-Time Password (TOTP) secret key needs to be generated for the account before accessing the service. The secret key can be generated with a <code>POST</code> to the <code>GenerateSecretKey</code> action for the <code>ManagerAccount</code> resource instance.
<a href="#">HeaderInvalid</a>	Critical	Indicates that a request header is invalid.
<a href="#">HeaderMissing</a>	Critical	Indicates that a required request header is missing.
<a href="#">InsufficientPrivilege</a>	Critical	Indicates that the credentials associated with the established session do not have sufficient privileges for the requested operation.
<a href="#">InsufficientStorage</a>	Critical	Indicates that the operation could not be completed due to a lack of storage or memory available to the service.
<a href="#">InternalError</a>	Critical	Indicates that the request failed for an unknown internal error but that the service is still operational.
<a href="#">InvalidIndex</a>	Warning	The index is not valid.
<a href="#">InvalidJSON</a>	Critical	Indicates that the request body contains invalid JSON.
<a href="#">InvalidObject</a>	Critical	Indicates that the object in question is invalid according to the implementation. An example is a firmware update malformed URI.
<a href="#">InvalidURI</a>	Critical	Indicates that the operation encountered a URI that does not correspond to a valid resource.
<a href="#">LicenseRequired</a>	Critical	Indicates that a license is required to perform the requested operation.
<a href="#">MalformedJSON</a>	Critical	Indicates that the request body was malformed JSON.
<a href="#">MaximumErrorsExceeded</a>	Critical	Indicates that so many errors have occurred that the reporting service cannot return them all.
<a href="#">MissingOrMalformedPart</a>	Critical	Indicates that a multipart request is missing a required part or contains malformed parts.
<a href="#">NetworkNameResolutionNotConfigured</a>	Warning	Indicates that network-based name resolution is not configured on the service.
<a href="#">NetworkNameResolutionNotSupported</a>	Warning	Indicates the service does not support network-based name resolution.
<a href="#">NoOperation</a>	Warning	Indicates that the requested operation will not perform any changes on the service.
<a href="#">NoValidSession</a>	Critical	Indicates that the operation failed because a valid session is required in order to access any resources.
<a href="#">OneTimePasscodeSent</a>	OK	Indicates that a required one-time passcode was sent to the user. The code should be provided as the <code>Token</code> property in the request to create a session.

Message	Severity	Description
<a href="#">OperationFailed</a>	Warning	Indicates that one of the internal operations necessary to complete the request failed. An example of this is when an internal service provider is unable to complete the request, such as in aggregation or RDE.
<a href="#">OperationNotAllowed</a>	Critical	Indicates that the HTTP method in the request is not allowed on this resource.
<a href="#">OperationTimeout</a>	Warning	Indicates that one of the internal operations necessary to complete the request timed out. An example of this is when an internal service provider is unable to complete the request, such as in aggregation or RDE.
<a href="#">PasswordChangeRequired</a>	Critical	Indicates that the password for the account provided must be changed before accessing the service. The password can be changed with a <code>PATCH</code> to the <code>Password</code> property in the manager account resource instance. Implementations that provide a default password for an account may require a password change prior to first access to the service.
<a href="#">PasswordComplexityNotMet</a>	Critical	Indicates that the password for the account provided does not meet the password complexity requirements of the service. The password for the account was not changed.
<a href="#">PasswordIncorrectLength</a>	Critical	Indicates that the password for the account provided does not meet the password length requirements of the service. The password for the account was not changed.
<a href="#">PasswordReuseTooRecent</a>	Critical	Indicates that the password for the account provided does not meet the password reuse requirements of the service. The password for the account was not changed.
<a href="#">PayloadTooLarge</a>	Critical	Indicates that the supplied payload is too large to be accepted by the service.
<a href="#">PreconditionFailed</a>	Critical	Indicates that the ETag supplied did not match the current ETag of the resource.
<a href="#">PreconditionRequired</a>	Critical	Indicates that the request did not provide the required precondition such as an <code>If-Match</code> or <code>If-None-Match</code> header or <code>@odata.etag</code> annotations.
<a href="#">PropertyDeprecated</a>	Warning	Indicates the property is deprecated.
<a href="#">PropertyDuplicate</a>	Warning	Indicates that a duplicate property was included in the request body.
<a href="#">PropertyMissing</a>	Warning	Indicates that a required property was not supplied as part of the request.
<a href="#">PropertyModified</a>	OK	Indicates that all properties listed in <code>RelatedProperties</code> in the message were successfully modified.
<a href="#">PropertyNotUpdated</a>	Critical	Indicates that a property was not updated due to an internal service error, but the service is still functional.
<a href="#">PropertyNotWritable</a>	Warning	Indicates that a property was given a value in the request body, but the property is a read-only property.
<a href="#">PropertyUnknown</a>	Warning	Indicates that an unknown property was included in the request body.

Message	Severity	Description
<a href="#">PropertyValueConflict</a>	Warning	Indicates that the requested write of a property value could not be completed because of a conflict with another property value.
<a href="#">PropertyValueDeprecated</a>	Warning	Indicates that a property was given a deprecated value.
<a href="#">PropertyValueError</a>	Warning	Indicates that a property was given an invalid value.
<a href="#">PropertyValueExternalConflict</a>	Warning	Indicates that the requested write of a property value could not be completed due to conflicts with other configurations in the service managed with non-Redfish interfaces.
<a href="#">PropertyValueFormatError</a>	Warning	Indicates that a property was given the correct value type but the format of the value is not supported.
<a href="#">PropertyValueIncorrect</a>	Warning	Indicates that the requested write of a property value could not be completed because of an incorrect value of the property. Examples include values that do not match a regular expression requirement, passwords that do not match the implementation constraints, or specifying an invalid URI in a reference property.
<a href="#">PropertyValueModified</a>	Warning	Indicates that a property was given the correct value type but the value of that property was modified. Examples are truncated or rounded values.
<a href="#">PropertyValueNotInList</a>	Warning	Indicates that a property was given the correct value type but the value of that property was not supported. The value is not in an enumeration.
<a href="#">PropertyValueOutOfRange</a>	Warning	Indicates that a property was given the correct value type but the value of that property is outside the supported range.
<a href="#">PropertyValueResourceConflict</a>	Warning	Indicates that the requested write of a property value could not be completed due to the current state or configuration of another resource.
<a href="#">PropertyValueTypeError</a>	Warning	Indicates that a property was given the wrong value type, such as when a number is supplied for a property that requires a string.
<a href="#">QueryCombinationInvalid</a>	Warning	Indicates the request contains multiple query parameters and that two or more of them cannot be used together.
<a href="#">QueryNotSupported</a>	Warning	Indicates that query is not supported on the implementation.
<a href="#">QueryNotSupportedOnOperation</a>	Warning	Indicates that query is not supported with the given operation, such as when the <code>\$expand</code> query is attempted with a <code>PATCH</code> operation.
<a href="#">QueryNotSupportedOnResource</a>	Warning	Indicates that query is not supported on the given resource, such as when the <code>\$skip</code> query is attempted on a resource that is not a collection.
<a href="#">QueryParameterOutOfRange</a>	Warning	Indicates that a query parameter was provided that is out of range for the given resource. This can happen with values that are too low or that exceed what is possible for the supplied resource, such as when a page is requested that is beyond the last page.
<a href="#">QueryParameterUnsupported</a>	Warning	Indicates that a query parameter is not supported.

Message	Severity	Description
<a href="#">QueryParameterValueError</a>	Warning	Indicates that a query parameter was given an invalid value.
<a href="#">QueryParameterValueFormatError</a>	Warning	Indicates that a query parameter was given the correct value type but the format of the value is not supported.
<a href="#">QueryParameterValueTypeError</a>	Warning	Indicates that a query parameter was given the wrong value type, such as when a number is supplied for a query parameter that requires a string.
<a href="#">ResetRecommended</a>	Warning	Indicates that a component reset is recommended for error recovery while unaffected applications can continue running without any effect on accuracy and performance.
<a href="#">ResetRequired</a>	Warning	Indicates that a component reset is required for changes, error recovery, or operations to complete.
<a href="#">ResourceAlreadyExists</a>	Critical	Indicates that a resource change or creation was attempted but that the operation cannot proceed because the resource already exists.
<a href="#">ResourceAtUriInUnknownFormat</a>	Critical	Indicates that the URI was valid but the resource or image at that URI was in a format not supported by the service.
<a href="#">ResourceAtUriUnauthorized</a>	Critical	Indicates that the attempt to access the resource, file, or image at the URI was unauthorized.
<a href="#">ResourceCannotBeDeleted</a>	Critical	Indicates that a delete operation was attempted on a resource that cannot be deleted.
<a href="#">ResourceCreationConflict</a>	Warning	Indicates that the requested resource creation could not be completed because the service has a resource that conflicts with the request.
<a href="#">ResourceDeprecated</a>	Warning	Indicates the resource is deprecated.
<a href="#">ResourceExhaustion</a>	Critical	Indicates that a resource could not satisfy the request due to some unavailability of resources. An example is that available capacity was allocated.
<a href="#">ResourceInStandby</a>	Critical	Indicates that the request could not be performed because the resource is in standby.
<a href="#">ResourceInUse</a>	Warning	Indicates that a change was requested to a resource but the change was rejected due to the resource being in use or transition.
<a href="#">ResourceMissingAtURI</a>	Critical	Indicates that the operation expected an image or other resource at the provided URI but none was found. Examples of this are in requests that require URIs such as firmware updates.
<a href="#">ResourceNotFound</a>	Critical	Indicates that the operation expected a resource identifier that corresponds to an existing resource but one was not found.
<a href="#">ResourceTypeIncompatible</a>	Critical	Indicates that the resource type of the operation does not match that of the operation destination. Examples of this are a <code>POST</code> to a resource collection using the wrong resource type, an update where the <code>@odata.type</code> properties do not match, or a case of major version incompatibility.
<a href="#">RestrictedPrivilege</a>	Warning	Indicates that the operation was not successful because a privilege is restricted.



Message	Severity	Description
<a href="#">RestrictedRole</a>	Warning	Indicates that the operation was not successful because the role is restricted.
<a href="#">ServiceDisabled</a>	Warning	Indicates that the operation failed because the service, such as the account service, is disabled and cannot accept requests.
<a href="#">ServiceInUnknownState</a>	Critical	Indicates that the operation failed because the service is in an unknown state and cannot accept additional requests.
<a href="#">ServiceShuttingDown</a>	Critical	Indicates that the operation failed because the service is shutting down, such as when the service reboots.
<a href="#">ServiceTemporarilyUnavailable</a>	Critical	Indicates the service is temporarily unavailable.
<a href="#">SessionLimitExceeded</a>	Critical	Indicates that a session establishment was requested but the operation failed due to the number of simultaneous sessions exceeding the limit of the implementation.
<a href="#">SessionTerminated</a>	OK	Indicates that the <code>DELETE</code> operation on the session resource resulted in the successful termination of the session.
<a href="#">SourceDoesNotSupportProtocol</a>	Critical	Indicates that while attempting to access, connect to, or transfer a resource, file, or image from another location that the other end of the connection did not support the protocol.
<a href="#">StrictAccountTypes</a>	Warning	Indicates the request failed because a set of <code>AccountTypes</code> or <code>OEMAccountTypes</code> was not accepted while <code>StrictAccountTypes</code> is set to <code>true</code> .
<a href="#">StringValueTooLong</a>	Warning	Indicates that a string value passed to the given resource was longer than the maximum allowed length. An example is when an implementation has imposed a shorter maximum length than that allowed by the specification.
<a href="#">StringValueTooShort</a>	Warning	Indicates that a string value passed to the given resource was shorter than the minimum required length. An example is when an implementation has imposed a greater minimum length than that required by the specification. This message also applies to cases of empty strings where the minimum string length is 1.
<a href="#">SubscriptionTerminated</a>	OK	An event subscription was terminated by the service. No further events will be delivered.
<a href="#">Success</a>	OK	Indicates that all conditions of a successful operation were met.
<a href="#">UndeterminedFault</a>	Critical	Indicates that a fault or error condition exists but the source of the fault cannot be determined or is unknown to the service.
<a href="#">UnrecognizedRequestBody</a>	Warning	Indicates that the service encountered an unrecognizable request body that could not even be interpreted as malformed JSON.

### 2.3.1 AccessDenied

Indicates that while attempting to access, connect to, or transfer to or from another resource, the service denied access.

- This message shall indicate that while attempting to access, connect to, or transfer to or from another resource, the service denied access.

Version Added: 1.0.0

Severity: Critical

Resolution: Attempt to ensure that the URI is correct and that the service has the appropriate credentials.

Message and Arguments: "While attempting to establish a connection to '<Arg1>', the service denied access."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.

### 2.3.2 AccessForbidden

Indicates that the request contained valid credentials, but the user does not have the necessary privileges to perform the requested operation.

- This message shall indicate that the request contained valid credentials, but the user does not have the necessary privileges to perform the requested operation.

Version Added: 1.20.0

Severity: Critical

Resolution: Resubmit the request with credentials that contain the necessary privileges to perform the requested operation.

Message and Arguments: "Forbidden."

### 2.3.3 AccessUnauthorized

Indicates that the request did not contain valid credentials.

- This message shall indicate that the request did not contain valid credentials, such as those found in the `Authorization` and `X-Auth-Token` HTTP request headers.

Version Added: 1.20.0

Severity: Critical

Resolution: Resubmit the request with valid credentials.

Message and Arguments: "Unauthorized."

### **2.3.4 AccountForSessionNoLongerExists**

Indicates that the account for the session was removed, and so the session was removed as well.

- This message shall indicate that the account for the session was removed, and so the session was removed as well.

Version Added: 1.0.0

Severity: OK

Resolution: Attempt to connect with a valid account.

Message and Arguments: "The account for the current session was removed, and so the current session was removed as well."

### **2.3.5 AccountModified**

Indicates that the account was successfully modified.

- This message shall indicate that the account was successfully modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The account was successfully modified."

### **2.3.6 AccountNotModified**

Indicates that the modification requested for the account was not successful.

- This message shall indicate that the modification requested for the account was not successful.

Version Added: 1.0.0

Severity: Warning

Resolution: The modification may have failed due to permission issues or issues with the request body.

Message and Arguments: "The account modification request failed."

### 2.3.7 AccountRemoved

Indicates that the account was successfully removed.

- This message shall indicate that the account was successfully removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The account was successfully removed."

### 2.3.8 ActionDeprecated

Indicates the action is deprecated.

- This message shall indicate that the action is deprecated.

Version Added: 1.10.0

Severity: Warning

Resolution: Refer to the schema guide for more information.

Message and Arguments: "The action <Arg1> is deprecated."

1. *string*: The name of the action.
  - This argument shall contain the name of the action that is deprecated.

### 2.3.9 ActionNotSupported

Indicates that the action supplied with the `POST` operation is not supported by the resource.

- This message shall indicate that the action supplied with the `POST` operation is not supported by the resource.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the Actions property in the resource for the supported actions.

Message and Arguments: "The action <Arg1> is not supported by the resource."

1. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.10 ActionParameterDuplicate

Indicates that the action was supplied with a duplicated action parameter in the request body.

- This message shall indicate that the action was supplied with a duplicated action parameter in the request body.

Version Added: 1.0.0

Severity: Warning

Resolution: Resubmit the action with only one instance of the action parameter in the request body if the operation failed.

Message and Arguments: "The action <Arg1> was submitted with more than one value for the parameter <Arg2>."

1. *string*: The name of the action.
  - This argument shall contain the name of the action.
2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.

### 2.3.11 ActionParameterMissing

Indicates that the action requested was missing an action parameter that is required to process the action.

- This message shall indicate that the action requested was missing an action parameter that is required to process the action.

Version Added: 1.0.0

Severity: Critical

Resolution: Supply the action with the required parameter in the request body when the request is resubmitted.

Message and Arguments: "The action <Arg1> requires the parameter <Arg2> to be present in the request body."

1. *string*: The name of the action.

- This argument shall contain the name of the action.
- 2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.

### 2.3.12 ActionParameterNotSupported

Indicates that the parameter supplied for the action is not supported on the resource.

- This message shall indicate that the parameter supplied for the action is not supported on the resource.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the parameter supplied and resubmit the request if the operation failed.

Message and Arguments: "The parameter <Arg1> for the action <Arg2> is not supported on the target resource."

1. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.
2. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.13 ActionParameterUnknown

Indicates that an action was submitted but an action parameter supplied did not match any of the known parameters.

- This message shall indicate that an action was submitted but an action parameter supplied did not match any of the known parameters.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the invalid action parameter and resubmit the request if the operation failed.

Message and Arguments: "The action <Arg1> was submitted with the invalid parameter <Arg2>."

1. *string*: The name of the action.
  - This argument shall contain the name of the action.
2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.

### 2.3.14 ActionParameterValueConflict

Indicates that the requested parameter value could not be completed because of a mismatch with other parameters or properties in the resource.

- This message shall indicate that the requested parameter value could not be completed because of a mismatch with other parameters or properties in the resource.

Version Added: 1.12.0

Severity: Warning

Resolution: None.

Message and Arguments: "The parameter '<Arg1>' with the requested value of '<Arg2>' does not meet the constraints of the implementation."

1. *string*: The name of the parameter for which a write was requested.
  - This argument shall contain the name of the parameter provided in the action request.
2. *string*: The value of the parameter with which there is a conflict.
  - This argument shall contain the value of the parameter with which there is a conflict.

### 2.3.15 ActionParameterValueError

Indicates that a parameter was given an invalid value.

- This message shall indicate that a parameter was given an invalid value, and the value cannot or should not be included in the message.

Version Added: 1.11.0

Severity: Warning

Resolution: Correct the value for the parameter in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value for the parameter <Arg1> in the action <Arg2> is invalid."

1. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.
2. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.16 ActionParameterValueFormatError

Indicates that a parameter was given the correct value type but the format of the value is not supported.

- This message shall indicate that a parameter was given the correct value type but the format of the value is not supported.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the parameter in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the parameter <Arg2> in the action <Arg3> is not a format that the parameter can accept."

1. *string*: The value provided for the action parameter.
  - This argument shall contain the value provided for the action parameter. Numeric values shall be converted to a string, and null values shall be represented by the string `null`.
2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.
3. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.17 ActionParameterValueNotInList

Indicates that a parameter was given the correct value type but the value of that parameter was not supported. The value is not in an enumeration.

- This message shall indicate that a parameter was given the correct value type but the value of that parameter was not supported.

Version Added: 1.10.0

Severity: Warning

Resolution: Choose a value from the enumeration list that the implementation can support and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the parameter <Arg2> in the action <Arg3> is not in the list of acceptable values."

1. *string*: The value provided for the action parameter.



- This argument shall contain the value provided for the action parameter.
- 2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.
- 3. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.18 ActionParameterValueOutOfRange

Indicates that a parameter was given the correct value type but the value of that parameter is outside the supported range.

- This value shall indicate that a parameter was given the correct value type but the value of that parameter is outside the supported range.

Version Added: 1.18.0

Severity: Warning

Resolution: Correct the value for the parameter in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the parameter <Arg2> in the action <Arg3> is not in the supported range of acceptable values."

1. *string*: The value provided for the parameter.
  - This argument shall contain the value provided for the parameter.
2. *string*: The name of the parameter.
  - This argument shall contain the name of the parameter.
3. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.19 ActionParameterValueTypeError

Indicates that a parameter was given the wrong value type, such as when a number is supplied for a parameter that requires a string.

- This message shall indicate that a parameter was given the wrong value type, such as when a number is supplied for a parameter that requires a string.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the parameter in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the parameter <Arg2> in the action <Arg3> is not a type that the parameter can accept."

1. *string*: The value provided for the action parameter.
  - This argument shall contain the value provided for the action parameter. Numeric values shall be converted to a string, and null values shall be represented by the string `null`.
2. *string*: The name of the action parameter.
  - This argument shall contain the name of the action parameter.
3. *string*: The name of the action.
  - This argument shall contain the name of the action.

### 2.3.20 ArraySizeTooLong

Indicates that the size of the array exceeded the maximum number of elements.

- This message shall indicate that the size of the array exceeded the maximum number of elements.

Version Added: 1.16.0

Severity: Warning

Resolution: Resubmit the request with an appropriate array size.

Message and Arguments: "The array provided for property <Arg1> exceeds the size limit <Arg2>."

1. *string*: The name of the property.
  - This argument shall contain the name of the property.
2. *number*: The maximum number of elements supported for the array.
  - This argument shall contain the maximum number of elements supported for the array for this property.

### 2.3.21 ArraySizeTooShort

Indicates that the size of the array is less than the minimum number of elements.

- This message shall indicate that the size of the array is less than the minimum number of elements.

Version Added: 1.16.0

Severity: Warning

Resolution: Resubmit the request with an appropriate array size.

Message and Arguments: "The array provided for property <Arg1> is under the minimum size limit <Arg2>."

1. *string*: The name of the property.
  - This argument shall contain the name of the property.
2. *number*: The minimum number of elements supported for the array.
  - This argument shall contain the minimum number of elements supported for the array for this property.

### 2.3.22 AuthenticationTokenRequired

Indicates that the request could not be performed because an authentication token was not provided.

- This message shall indicate that the request could not be performed because the user provided in the request requires multifactor authentication and an authentication token was not provided.

Version Added: 1.15.0

Severity: Critical

Resolution: Obtain an authentication token and resubmit the request.

Message and Arguments: "The request could not be performed because an authentication token was not provided."

### 2.3.23 ChassisPowerStateOffRequired

Indicates that the request requires a specified chassis to be powered off.

- This message shall indicate that the request requires the specified `Chassis` resource to be powered off as indicated by its `PowerState` property.

Version Added: 1.6.0

Severity: Warning

Resolution: Power off the specified chassis and resubmit the request.

Message and Arguments: "The chassis with Id '<Arg1>' is required to be powered off to perform this request."

1. *string*: The `Id` of the chassis that is required to be powered off.
  - This argument shall contain the value of the `Id` property of the `Chassis` resource that is required to be powered off.

### 2.3.24 ChassisPowerStateOnRequired

Indicates that the request requires a specified chassis to be powered on.

- This message shall indicate that the request requires the specified `Chassis` resource to be powered on as indicated by its `PowerState` property.

Version Added: 1.6.0

Severity: Warning

Resolution: Power on the specified chassis and resubmit the request.

Message and Arguments: "The chassis with Id '<Arg1>' is required to be powered on to perform this request."

1. *string*: The Id of the chassis that is required to be powered on.
  - This argument shall contain the value of the `Id` property of the `Chassis` resource that is required to be powered on.

### 2.3.25 ConditionInRelatedResource

Indicates that one or more fault or error conditions exist in a related resource.

- This message shall indicate that one or more conditions that require attention exist in a resource that affects the Health or HealthRollup of this resource. This message can be used in place of multiple messages in a `Conditions` property to roll up conditions from a single resource. The resource can be located using the `OriginOfCondition` property. The value of the `MessageSeverity` property should match the highest severity of any conditions in the resource referenced by the `OriginOfCondition` property.

Version Added: 1.9.0

Severity: Warning

Resolution: Check the Conditions array in the resource shown in the OriginOfCondition property to determine the conditions that need attention.

Message and Arguments: "One or more conditions exist in a related resource. See the OriginOfCondition property."

### 2.3.26 CouldNotEstablishConnection

Indicates that the attempt to access the resource, file, or image at the URI was unsuccessful because a session could not be established.

- This message shall indicate that the attempt to access the resource, file, or image at the URI was unsuccessful because a session could not be established.

Version Added: 1.0.0

Severity: Critical

Resolution: Ensure that the URI contains a valid and reachable node name, protocol information, and other URI components.

Message and Arguments: "The service failed to establish a connection with the URI '<Arg1>'."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.

### 2.3.27 CreateFailedMissingReqProperties

Indicates that a create operation was attempted on a resource but that properties that are required for the create operation were missing from the request.

- This message shall indicate that a create operation was attempted on a resource but that properties that are required for the create operation were missing from the request.

Version Added: 1.0.0

Severity: Critical

Resolution: Correct the body to include the required property with a valid value and resubmit the request if the operation failed.

Message and Arguments: "The create operation failed because the required property <Arg1> was missing from the request."

1. *string*: The name of the required property.
  - This argument shall contain the name of the required property.

### 2.3.28 CreateLimitReachedForResource

Indicates that no more resources can be created on the resource as it has reached its create limit.

- This message shall indicate that no more resources can be created on the resource as it has reached its create limit.

Version Added: 1.0.0

Severity: Critical

Resolution: Either delete resources and resubmit the request if the operation failed or do not resubmit the request.

Message and Arguments: "The create operation failed because the resource has reached the limit of possible resources."

### 2.3.29 Created

Indicates that all conditions of a successful create operation were met.

- This message shall indicate that all conditions of a successful create operation were met.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource was created successfully."

### 2.3.30 EmptyJSON

Indicates that the request body contained an empty JSON object when one or more properties are expected in the body.

- This message shall indicate that the request body contained an empty JSON object when one or more properties are expected in the body.

Version Added: 1.2.0

Severity: Warning

Resolution: Add properties in the JSON object and resubmit the request.

Message and Arguments: "The request body submitted contained an empty JSON object and the service is unable to process it."

### 2.3.31 EventBufferExceeded

Indicates undelivered events may have been lost due to a lack of buffer space in the service.

- This message shall indicate that event buffer space used by the service has been exceeded, and as a result one or more undelivered events may have been lost.

Version Added: 1.13.0

Severity: Warning

Resolution: None.

Message and Arguments: "Undelivered events may have been lost due to exceeding the event buffer."

### 2.3.32 EventSubscriptionLimitExceeded

Indicates that an event subscription establishment was requested but the operation failed due to the number of simultaneous connections exceeding the limit of the implementation.

- This message shall indicate that an event subscription establishment was requested but the operation failed due to the number of simultaneous connections exceeding the limit of the implementation.

Version Added: 1.0.0

Severity: Critical

Resolution: Reduce the number of other subscriptions before trying to establish the event subscription or increase the limit of simultaneous subscriptions, if supported.

Message and Arguments: "The event subscription failed due to the number of simultaneous subscriptions exceeding the limit of the implementation."

### 2.3.33 GeneralError

Indicates that a general error has occurred. Use in `@Message.ExtendedInfo` is discouraged. When used in `@Message.ExtendedInfo`, implementations are expected to include a `Resolution` property with this message and provide a service-defined resolution to indicate how to resolve the error.

- This message shall indicate that a general error has occurred. Implementations should not use this message in `@Message.ExtendedInfo`. If used in `@Message.ExtendedInfo`, implementations should include a `Resolution` property with this message and provide a service-defined resolution to indicate how to resolve the error.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "A general error has occurred. See Resolution for information on how to resolve the error, or `@Message.ExtendedInfo` if Resolution is not provided."

### 2.3.34 GenerateSecretKeyRequired

Indicates that the Time-based One-Time Password (TOTP) secret key needs to be generated for the account before accessing the service. The secret key can be generated with a `POST` to the `GenerateSecretKey` action for the `ManagerAccount` resource instance.

- This message shall indicate that the RFC6238-defined Time-based One-Time Password (TOTP) secret key needs to be generated for the account before accessing the service. The secret key can be generated with a POST to the `GenerateSecretKey` action for the `ManagerAccount` resource instance.

Version Added: 1.19.0

Severity: Critical

Resolution: Generate secret key for this account by performing the `GenerateSecretKey` action on the referenced URI and retaining the secret key from the action response to produce a Time-based One-Time Password (TOTP) for the `Token` property in future session creation requests.

Message and Arguments: "The Time-based One-Time Password (TOTP) secret key for this account must be generated before access is granted. Perform the `GenerateSecretKey` action at URI '<Arg1>' and retain the secret key from the response."

1. *string*: The URI for the `GenerateSecretKey` action of the account that requires a new Time-based One-Time Password (TOTP) secret key.
  - This argument shall contain the URI for the `GenerateSecretKey` action of the account that requires a new RFC6238-defined Time-based One-Time Password (TOTP) secret key.

### 2.3.35 HeaderInvalid

Indicates that a request header is invalid.

- This message shall indicate that a request header is known but is invalid.

Version Added: 1.13.0

Severity: Critical

Resolution: Resubmit the request with a valid request header.

Message and Arguments: "Header '<Arg1>' is invalid."

1. *string*: The request header.
  - This argument shall contain the full request header, including the field name and field value.

### 2.3.36 HeaderMissing

Indicates that a required request header is missing.

- This message shall indicate that a required request header is missing in the request.

Version Added: 1.13.0



Severity: Critical

Resolution: Resubmit the request with the required request header.

Message and Arguments: "Required header '<Arg1>' is missing in the request."

1. *string*: The missing required request header.
  - This argument shall contain the missing required request header.

### 2.3.37 InsufficientPrivilege

Indicates that the credentials associated with the established session do not have sufficient privileges for the requested operation.

- This message shall indicate that the credentials associated with the established session do not have sufficient privileges for the requested operation.

Version Added: 1.0.0

Severity: Critical

Resolution: Either abandon the operation or change the associated access rights and resubmit the request if the operation failed.

Message and Arguments: "There are insufficient privileges for the account or credentials associated with the current session to perform the requested operation."

### 2.3.38 InsufficientStorage

Indicates that the operation could not be completed due to a lack of storage or memory available to the service.

- This message shall indicate that the request exceeds the storage or memory available to the service. For cases where the payload is larger than the maximum size supported, regardless of available storage, the message `PayloadTooLarge` shall be used.

Version Added: 1.13.0

Severity: Critical

Resolution: Increase the free storage space available to the service and resubmit the request.

Message and Arguments: "Insufficient storage or memory available to complete the request."

### 2.3.39 InternalError

Indicates that the request failed for an unknown internal error but that the service is still operational.

- This message shall indicate that the request failed for an unknown internal error but that the service is still operational.

Version Added: 1.0.0

Severity: Critical

Resolution: Resubmit the request. If the problem persists, consider resetting the service.

Message and Arguments: "The request failed due to an internal service error. The service is still operational."

### 2.3.40 InvalidIndex

The index is not valid.

- This message shall indicate that the index is not valid.

Version Added: 1.0.0

Severity: Warning

Resolution: Verify the index value provided is within the bounds of the array.

Message and Arguments: "The index <Arg1> is not a valid offset into the array."

1. *number*: The array index.
  - This argument shall contain the array index value provided.

### 2.3.41 InvalidJSON

Indicates that the request body contains invalid JSON.

- This message shall indicate that the request body contains invalid JSON.

Version Added: 1.10.0

Severity: Critical

Resolution: Ensure that the request body is valid JSON and resubmit the request.

Message and Arguments: "The request body submitted is invalid JSON starting at line <Arg1> and could not be parsed by the receiving service."

1. *number*: The line number where the invalid JSON starts.
  - This argument shall contain the line number where the invalid JSON starts.

### 2.3.42 InvalidObject

Indicates that the object in question is invalid according to the implementation. An example is a firmware update malformed URI.

- This message shall indicate that the object in question is invalid according to the implementation.

Version Added: 1.0.0

Severity: Critical

Resolution: Either the object is malformed or the URI is not correct. Correct the condition and resubmit the request if it failed.

Message and Arguments: "The object at '<Arg1>' is invalid."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.

### 2.3.43 InvalidURI

Indicates that the operation encountered a URI that does not correspond to a valid resource.

- This message shall indicate that the operation encountered a URI that does not correspond to a valid resource.

Version Added: 1.10.0

Severity: Critical

Resolution: Provide a valid URI and resubmit the request.

Message and Arguments: "The URI <Arg1> was not found."

1. *string*: The supplied URI.
  - This argument shall contain the invalid URI that was encountered.

### 2.3.44 LicenseRequired

Indicates that a license is required to perform the requested operation.

- This message shall indicate that that a license is required to perform the requested operation.

Version Added: 1.16.0

Severity: Critical

Resolution: Install the requested license and resubmit the request.

Message and Arguments: "A license is required for this operation: <Arg1>."

1. *string*: The vendor description of the license required to perform the operation.
  - This argument shall contain the vendor description of the license required to perform the operation.

### 2.3.45 MalformedJSON

Indicates that the request body was malformed JSON.

- This message shall indicate that the request body was malformed JSON.

Version Added: 1.0.0

Severity: Critical

Resolution: Ensure that the request body is valid JSON and resubmit the request.

Message and Arguments: "The request body submitted was malformed JSON and could not be parsed by the receiving service."

### 2.3.46 MaximumErrorsExceeded

Indicates that so many errors have occurred that the reporting service cannot return them all.

- The maximum number of errors that the implementation can report was exceeded. This shall not be the only message reported by the service. The use of this message should be limited to RDE implementations.

Version Added: 1.8.0

Severity: Critical

Resolution: Resolve other reported errors and retry the current operation.

Message and Arguments: "Too many errors have occurred to report them all."

### 2.3.47 MissingOrMalformedPart

Indicates that a multipart request is missing a required part or contains malformed parts.

- This message shall indicate that the request payload supplied as part of an HTTP multipart request is missing one or more required parts or contains malformed parts.

Version Added: 1.13.0

Severity: Critical

Resolution: Add any missing required parts or correct the malformed parts and resubmit the request.

Message and Arguments: "The multipart request contains malformed parts or is missing required parts."

### 2.3.48 NetworkNameResolutionNotConfigured

Indicates that network-based name resolution is not configured on the service.

- This message shall indicate that network-based name resolution, such as DNS or WINS protocols, is not configured on the service.

Version Added: 1.11.0

Severity: Warning

Resolution: Configure the network-based name resolution protocol support on this service, or update any URI values to include an IP address instead of a network name and resubmit the request.

Message and Arguments: "Network name resolution is not configured on this service."

### 2.3.49 NetworkNameResolutionNotSupported

Indicates the service does not support network-based name resolution.

- This message shall indicate that the service does not support network-based name resolution, such as DNS or WINS protocols. URIs provided as property values must contain an IP address as the service cannot resolve a network name.

Version Added: 1.11.0

Severity: Warning

Resolution: Update any URI values to include an IP address instead of a network name and resubmit the request.

Message and Arguments: "Resolution of network-based names is not supported by this service."

### 2.3.50 NoOperation

Indicates that the requested operation will not perform any changes on the service.

- This message shall indicate that the requested operation will not perform any changes on the service.

Version Added: 1.4.0

Severity: Warning

Resolution: Add properties in the JSON object and resubmit the request.

Message and Arguments: "The request body submitted contain no data to act upon and no changes to the resource took place."

### 2.3.51 NoValidSession

Indicates that the operation failed because a valid session is required in order to access any resources.

- This message shall indicate that the operation failed because a valid session is required in order to access any resources.

Version Added: 1.0.0

Severity: Critical

Resolution: Establish a session before attempting any operations.

Message and Arguments: "There is no valid session established with the implementation."

### 2.3.52 OneTimePasscodeSent

Indicates that a required one-time passcode was sent to the user. The code should be provided as the Token property in the request to create a session.

- This message shall indicate that a one-time passcode was generated by the service as the result of a request to create a session. The one-time passcode shall be sent to the delivery address associated with account credentials supplied in the request.

Version Added: 1.17.0

Severity: OK

Resolution: Obtain the one-time passcode sent to the delivery address and resubmit the request using the passcode as the `Token` property.

Message and Arguments: "A one-time passcode was sent to: <Arg1>. Supply the passcode as the `Token` property in the request to create a session."

1. *string*: The delivery address for the one-time passcode. The address is at least partially redacted.
  - This argument shall contain the delivery address for the one-time passcode. The value shall be partially or fully redacted to prevent receipt by unauthorized clients.

### 2.3.53 OperationFailed

Indicates that one of the internal operations necessary to complete the request failed. An example of this is when an internal service provider is unable to complete the request, such as in aggregation or RDE.

- This message shall indicate that one of the internal operations necessary to complete the request failed. Partial results of the client operation may be returned.

Version Added: 1.8.0

Severity: Warning

Resolution: Resubmit the request. If the problem persists, consider resetting the service or provider.

Message and Arguments: "An error occurred internal to the service as part of the overall request. Partial results may have been returned."

### 2.3.54 OperationNotAllowed

Indicates that the HTTP method in the request is not allowed on this resource.

- This message shall indicate that the HTTP method in the request is not allowed on this resource. This error message should be used together with HTTP status code 405 Method Not Allowed.

Version Added: 1.13.0

Severity: Critical

Resolution: None.

Message and Arguments: "The HTTP method is not allowed on this resource."

### 2.3.55 OperationTimeout

Indicates that one of the internal operations necessary to complete the request timed out. An example of this is when an internal service provider is unable to complete the request, such as in aggregation or RDE.

- This message shall indicate that one of the internal operations necessary to complete the request timed out. Partial results of the client operation may be returned.

Version Added: 1.8.0

Severity: Warning

Resolution: Resubmit the request. If the problem persists, consider resetting the service or provider.

Message and Arguments: "A timeout internal to the service occurred as part of the request. Partial results may have been returned."

### 2.3.56 PasswordChangeRequired

Indicates that the password for the account provided must be changed before accessing the service. The password can be changed with a `PATCH` to the `Password` property in the manager account resource instance. Implementations that provide a default password for an account may require a password change prior to first access to the service.

- This message shall indicate that the password for the account provided must be changed before accessing the service. The password can be changed with a `PATCH` to the `Password` property in the manager account resource instance. Implementations that provide a default password for an account may require a password change prior to first access to the service.

Version Added: 1.5.0

Severity: Critical

Resolution: Change the password for this account using a `PATCH` to the `Password` property at the URI provided.

Message and Arguments: "The password provided for this account must be changed before access is granted. `PATCH` the `Password` property for this account located at the target URI '<Arg1>' to complete this process."

1. *string*: The URI of the target resource.
  - This argument shall contain the URI of the target manager account resource instance.



### 2.3.57 PasswordComplexityNotMet

Indicates that the password for the account provided does not meet the password complexity requirements of the service. The password for the account was not changed.

- This message shall indicate that the password for the account provided does not meet the password complexity requirements of the service.

Version Added: 1.21.0

Severity: Critical

Resolution: Resubmit the request with a password that meets the password complexity requirements as specified by the `PasswordGuidanceMessage` property in the `AccountService` resource.

Message and Arguments: "The password provided for this account does not meet the password complexity requirements of the service."

### 2.3.58 PasswordIncorrectLength

Indicates that the password for the account provided does not meet the password length requirements of the service. The password for the account was not changed.

- This message shall indicate that the password for the account provided does not meet the length requirements of the service. The length of the supplied password is either too short or too long.

Version Added: 1.21.0

Severity: Critical

Resolution: Resubmit the request with a password that meets the password length requirements as specified by the `MinPasswordLength` and `MaxPasswordLength` properties in the `AccountService` resource.

Message and Arguments: "The password provided for this account does not meet the password length requirements of the service."

### 2.3.59 PasswordReuseTooRecent

Indicates that the password for the account provided does not meet the password reuse requirements of the service. The password for the account was not changed.

- This message shall indicate that the password for the account provided does not meet the password reuse requirements of the service. The supplied password was used too recently.

Version Added: 1.21.0

Severity: Critical

Resolution: Resubmit the request with a password that meets the password reuse requirements specified by the `EnforcePasswordHistoryCount` property in the `AccountService` resource.

Message and Arguments: "The password provided for this account does not meet the password reuse requirements of the service."

### 2.3.60 PayloadTooLarge

Indicates that the supplied payload is too large to be accepted by the service.

- This message shall indicate that the payload supplied exceeds the size supported by the service. For cases where the payload size is supported but there is insufficient available storage space, the message `InsufficientStorage` shall be used.

Version Added: 1.13.0

Severity: Critical

Resolution: Check that the supplied payload is correct and supported by this service.

Message and Arguments: "The supplied payload exceeds the maximum size supported by the service."

### 2.3.61 PreconditionFailed

Indicates that the ETag supplied did not match the current ETag of the resource.

- Indicates that the ETag supplied either in the header or using that `@odata.etag` annotation in the resource did not match the one expected by the service and so the operation on this resource failed. The use of this message shall only be used in responses for deep operations, since HTTP status code 412 is typically used for this.

Version Added: 1.8.0

Severity: Critical

Resolution: Try the operation again using the appropriate ETag.

Message and Arguments: "The ETag supplied did not match the ETag required to change this resource."

### 2.3.62 PreconditionRequired

Indicates that the request did not provide the required precondition such as an `If-Match` or `If-None-Match` header or `@odata.etag` annotations.

- Indicates that the request did not provide the required precondition such as an `If-Match` or `If-None-Match` header or `@odata.etag` annotations. The use of this message shall only be used in responses for deep operations, since HTTP status code 428 is typically used for this.

Version Added: 1.8.0

Severity: Critical

Resolution: Try the operation again using an `If-Match` or `If-None-Match` header and appropriate ETag.

Message and Arguments: "A precondition header or annotation is required to change this resource."

### 2.3.63 PropertyDeprecated

Indicates the property is deprecated.

- This message shall indicate that the property is deprecated.

Version Added: 1.10.0

Severity: Warning

Resolution: Refer to the schema guide for more information.

Message and Arguments: "The deprecated property <Arg1> was included in the request body."

- string*: The name of the property.
  - This argument shall contain the name of the property that is deprecated.

### 2.3.64 PropertyDuplicate

Indicates that a duplicate property was included in the request body.

- This message shall indicate that a duplicate property was included in the request body.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the duplicate property from the request body and resubmit the request if the operation failed.

Message and Arguments: "The property <Arg1> was duplicated in the request."

1. *string*: The name of the duplicate property.
  - This argument shall contain the name of the duplicate property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.65 PropertyMissing

Indicates that a required property was not supplied as part of the request.

- This message shall indicate that a required property was not supplied as part of the request.

Version Added: 1.0.0

Severity: Warning

Resolution: Ensure that the property is in the request body and has a valid value and resubmit the request if the operation failed.

Message and Arguments: "The property <Arg1> is a required property and must be included in the request."

1. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.66 PropertyModified

Indicates that all properties listed in `RelatedProperties` in the message were successfully modified.

- This message shall indicate that the properties listed in `RelatedProperties` were successfully modified.

Version Added: 1.19.0

Severity: OK

Resolution: None.

Message and Arguments: "One or more properties were successfully modified."

### 2.3.67 PropertyNotUpdated

Indicates that a property was not updated due to an internal service error, but the service is still functional.

- This message shall indicate that a property was not updated due to an internal service error, but the service is still functional.

Version Added: 1.12.0

Severity: Critical

Resolution: Resubmit the request. If the problem persists, check for additional messages and consider resetting the service.

Message and Arguments: "The property <Arg1> was not updated due to an internal service error. The service is still operational."

1. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.68 PropertyNotWritable

Indicates that a property was given a value in the request body, but the property is a read-only property.

- This message shall indicate that a property was given a value in the request body, but the property is a read-only property.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the property from the request body and resubmit the request if the operation failed.

Message and Arguments: "The property <Arg1> is a read-only property and cannot be assigned a value."

1. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.69 PropertyUnknown

Indicates that an unknown property was included in the request body.

- This message shall indicate that an unknown property was included in the request body.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the unknown property from the request body and resubmit the request if the operation failed.

Message and Arguments: "The property <Arg1> is not in the list of valid properties for the resource."

1. *string*: The name of the unknown property.
  - This argument shall contain the name of the unknown property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.70 PropertyValueConflict

Indicates that the requested write of a property value could not be completed because of a conflict with another property value.

- This message shall indicate that the requested write of a property could not be completed because of a conflict with the value of another property.

Version Added: 1.6.0

Severity: Warning

Resolution: None.

Message and Arguments: "The property '<Arg1>' could not be written because its value would conflict with the value of the '<Arg2>' property."

1. *string*: The name of the property for which a write was requested.
  - This argument shall contain the name of the property for which a write was requested.
2. *string*: The name of the property with which there is a conflict.
  - This argument shall contain the name of the property with which there is a conflict.

### 2.3.71 PropertyValueDeprecated

Indicates that a property was given a deprecated value.

- This message shall indicate that a property was given a deprecated value.

Version Added: 1.10.0

Severity: Warning

Resolution: Refer to the schema guide for more information.

Message and Arguments: "The value '<Arg1>' for the property <Arg2> is deprecated."

1. *string*: The value provided for the property.

- This argument shall contain the deprecated value provided for the property.
- 2. *string*: The name of the property.
  - This argument shall contain the name of the property.

### 2.3.72 PropertyValueError

Indicates that a property was given an invalid value.

- This message shall indicate that a property was given an invalid value, and the value cannot or should not be included in the message text.

Version Added: 1.11.0

Severity: Warning

Resolution: Correct the value for the property in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value provided for the property <Arg1> is not valid."

1. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.73 PropertyValueExternalConflict

Indicates that the requested write of a property value could not be completed due to conflicts with other configurations in the service managed with non-Redfish interfaces.

- This message shall indicate that the requested write of a property could not be completed because the requested value of the property, which is a value supported by the implementation, cannot be accepted due to conflicts with other configurations in the service managed with non-Redfish interfaces.

Version Added: 1.10.0

Severity: Warning

Resolution: None.

Message and Arguments: "The property '<Arg1>' with the requested value of '<Arg2>' could not be written because the value is not available due to a configuration conflict."

1. *string*: The name of the property for which a write was requested.
  - This argument shall contain the name of the property for which a write was requested.
2. *string*: The value of the property that is in conflict.

- This argument shall contain the value of the property that is in conflict.

### 2.3.74 PropertyValueFormatError

Indicates that a property was given the correct value type but the format of the value is not supported.

- This message shall indicate that a property was given the correct value type but the format of the value is not supported.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the property in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the property <Arg2> is not a format that the property can accept."

1. *string*: The value provided for the property.
  - This argument shall contain the value provided for the property. Numeric values shall be converted to a string, and null values shall be represented by the string `null`.
2. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.75 PropertyValueIncorrect

Indicates that the requested write of a property value could not be completed because of an incorrect value of the property. Examples include values that do not match a regular expression requirement, passwords that do not match the implementation constraints, or specifying an invalid URI in a reference property.

- This message shall indicate that the requested write of a property could not be completed because of an incorrect value for the property.

Version Added: 1.7.0

Severity: Warning

Resolution: None.

Message and Arguments: "The property '<Arg1>' with the requested value of '<Arg2>' could not be written because the value is not acceptable for the property."

1. *string*: Name of the property for which a write was requested.
  - This argument shall contain the name of the property for which a write was requested.



2. *string*: Value of the property that is incorrect.
  - This argument shall contain the value of the property that is incorrect.

### 2.3.76 PropertyValueModified

Indicates that a property was given the correct value type but the value of that property was modified. Examples are truncated or rounded values.

- This message shall indicate that a property was given the correct value type but the value of that property was modified.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The property <Arg1> was assigned the value '<Arg2>' due to modification by the service."

1. *string*: The name of the property.
  - This argument shall contain the name of the property.
2. *string*: The value assigned for property.
  - This argument shall contain the value assigned for property.

### 2.3.77 PropertyValueNotInList

Indicates that a property was given the correct value type but the value of that property was not supported. The value is not in an enumeration.

- This message shall indicate that a property was given the correct value type but the value of that property was not supported.

Version Added: 1.0.0

Severity: Warning

Resolution: Choose a value from the enumeration list that the implementation can support and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the property <Arg2> is not in the list of acceptable values."

1. *string*: The value provided for the property.
  - This argument shall contain the value provided for the property.
2. *string*: The name of the property.

- This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.78 PropertyValueOutOfRange

Indicates that a property was given the correct value type but the value of that property is outside the supported range.

- This value shall indicate that a property was given the correct value type but the value of that property is outside the supported range.

Version Added: 1.3.0

Severity: Warning

Resolution: Correct the value for the property in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the property <Arg2> is not in the supported range of acceptable values."

1. *string*: The value provided for the property.
  - This argument shall contain the value provided for the property.
2. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.79 PropertyValueResourceConflict

Indicates that the requested write of a property value could not be completed due to the current state or configuration of another resource.

- This message shall indicate that the requested write of a property could not be completed because the requested value of the property, which is a value supported by the implementation, cannot be accepted due to conflicts in the state or configuration of another resource.

Version Added: 1.10.0

Severity: Warning

Resolution: None.

Message and Arguments: "The property '<Arg1>' with the requested value of '<Arg2>' could not be written because the value conflicts with the state or configuration of the resource at '<Arg3>'."

1. *string*: The name of the property for which a write was requested.
  - This argument shall contain the name of the property for which a write was requested.
2. *string*: The value of the property that is in conflict.
  - This argument shall contain the value of the property that is in conflict.
3. *string*: The URI of the resource in conflict.
  - This argument shall contain the URI of the resource that is in conflict with the value of the requested property.

### 2.3.80 PropertyValueTypeError

Indicates that a property was given the wrong value type, such as when a number is supplied for a property that requires a string.

- This message shall indicate that a property was given the wrong value type.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the property in the request body and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the property <Arg2> is not a type that the property can accept."

1. *string*: The value provided for the property.
  - This argument shall contain the value provided for the property. Numeric values shall be converted to a string, and null values shall be represented by the string `null`.
2. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.

### 2.3.81 QueryCombinationInvalid

Indicates the request contains multiple query parameters and that two or more of them cannot be used together.

- This message shall indicate that the request contains multiple query parameters and that two or more of them cannot be used together.

Version Added: 1.6.0

Severity: Warning

Resolution: Remove one or more of the query parameters and resubmit the request if the operation failed.

Message and Arguments: "Two or more query parameters in the request cannot be used together."

### 2.3.82 QueryNotSupported

Indicates that query is not supported on the implementation.

- This message shall indicate that query is not supported on the implementation.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the query parameters and resubmit the request if the operation failed.

Message and Arguments: "Querying is not supported by the implementation."

### 2.3.83 QueryNotSupportedOnOperation

Indicates that query is not supported with the given operation, such as when the `$expand` query is attempted with a `PATCH` operation.

- This message shall indicate that query is not supported with the given operation.

Version Added: 1.6.0

Severity: Warning

Resolution: Remove the query parameters and resubmit the request if the operation failed.

Message and Arguments: "Querying is not supported with the requested operation."

### 2.3.84 QueryNotSupportedOnResource

Indicates that query is not supported on the given resource, such as when the `$skip` query is attempted on a resource that is not a collection.

- This message shall indicate that query is not supported on the given resource.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the query parameters and resubmit the request if the operation failed.

Message and Arguments: "Querying is not supported on the requested resource."

### 2.3.85 QueryParameterOutOfRange

Indicates that a query parameter was provided that is out of range for the given resource. This can happen with values that are too low or that exceed what is possible for the supplied resource, such as when a page is requested that is beyond the last page.

- This message shall indicate that a query parameter was provided that is out of range for the given resource.

Version Added: 1.0.0

Severity: Warning

Resolution: Reduce the value for the query parameter to a value that is within range, such as a start or count value that is within bounds of the number of resources in a collection or a page number that is within the range of valid pages.

Message and Arguments: "The value '<Arg1>' for the query parameter <Arg2> is out of range <Arg3>."

1. *string*: The value provided for the query parameter.
  - This argument shall contain the value provided for the query parameter.
2. *string*: The query parameter.
  - This argument shall contain the name of the query parameter.
3. *string*: The valid range for the query parameter.
  - This argument shall contain a string representation of the valid range of values supported for the query parameter.

### 2.3.86 QueryParameterUnsupported

Indicates that a query parameter is not supported.

- This message shall indicate that a query parameter is not supported by this service.

Version Added: 1.15.0

Severity: Warning

Resolution: Correct or remove the query parameter and resubmit the request.

Message and Arguments: "Query parameter '<Arg1>' is not supported."

1. *string*: The query parameter.
  - This argument shall contain the name of the query parameter.

### 2.3.87 QueryParameterValueError

Indicates that a query parameter was given an invalid value.

- This message shall indicate that a query parameter was given an invalid value that cannot or should not be included in the message.

Version Added: 1.11.0

Severity: Warning

Resolution: Correct the value for the query parameter in the request and resubmit the request if the operation failed.

Message and Arguments: "The value for the parameter <Arg1> is invalid."

1. *string*: The query parameter.
  - This argument shall contain the name of the query parameter.

### 2.3.88 QueryParameterValueFormatError

Indicates that a query parameter was given the correct value type but the format of the value is not supported.

- This message shall indicate that a query parameter was given the correct value type but the format of the value is not supported.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the query parameter in the request and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the parameter <Arg2> is not a format that the parameter can accept."

1. *string*: The value provided for the query parameter.
  - This argument shall contain the value provided for the query parameter.
2. *string*: The query parameter.
  - This argument shall contain the name of the query parameter.

### 2.3.89 QueryParameterValueTypeError

Indicates that a query parameter was given the wrong value type, such as when a number is supplied for a query parameter that requires a string.

- This message shall indicate that a query parameter was given the wrong value type, such as when a number is supplied for a query parameter that requires a string.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the value for the query parameter in the request and resubmit the request if the operation failed.

Message and Arguments: "The value '<Arg1>' for the query parameter <Arg2> is not a type that the parameter can accept."

1. *string*: The value provided for the query parameter.
  - This argument shall contain the value provided for the query parameter.
2. *string*: The query parameter.
  - This argument shall contain the name of the query parameter.

### 2.3.90 ResetRecommended

Indicates that a component reset is recommended for error recovery while unaffected applications can continue running without any effect on accuracy and performance.

- This message shall indicate that a component reset is recommended for error recovery while unaffected applications can continue running without any effect on accuracy and performance.

Version Added: 1.12.0

Severity: Warning

Resolution: Perform the recommended reset action on the specified component.

Message and Arguments: "In order to recover from errors, a component reset is recommended with the Reset action URI '<Arg1>' and ResetType '<Arg2>'."

1. *string*: The URI for the reset action of the component that recommends a reset.
  - This argument shall contain the URI for the reset action that is recommended to be invoked for error recovery.
2. *string*: The `ResetType` required in a reset action on the component URI.
  - This argument shall contain the `ResetType` required in a reset action on the component URI for error recovery while unaffected applications can continue running without any effect on accuracy and performance. A reset action `POST` shall contain this `ResetType` parameter.

### 2.3.91 ResetRequired

Indicates that a component reset is required for changes, error recovery, or operations to complete.

- This message shall indicate that a component reset is required for changes, error recovery, or operations to complete.

Version Added: 1.6.0

Severity: Warning

Resolution: Perform the required reset action on the specified component.

Message and Arguments: "In order to apply changes, recover from errors, or complete the operation, a component reset is required with the Reset action URI '<Arg1>' and ResetType '<Arg2>'."

1. *string*: The URI for the reset action of the component that requires a reset.
  - This argument shall contain the URI for the reset action that is required to be invoked for changes, error recovery or operations to complete.
2. *string*: The `ResetType` required in a reset action on the component URI.
  - This argument shall contain the `ResetType` required in a reset action on the component URI for changes, error recovery or operations to complete. A reset action `POST` shall contain this `ResetType` parameter.

### 2.3.92 ResourceAlreadyExists

Indicates that a resource change or creation was attempted but that the operation cannot proceed because the resource already exists.

- This message shall indicate that a resource change or creation was attempted but that the operation cannot proceed because the resource already exists.

Version Added: 1.0.0

Severity: Critical

Resolution: Do not repeat the create operation as the resource was already created.

Message and Arguments: "The requested resource of type <Arg1> with the property <Arg2> with the value '<Arg3>' already exists."

1. *string*: The type of resource.
  - This argument shall contain the schema name of the resource.



2. *string*: The name of the property.
  - This argument shall contain the name of the property.
3. *string*: The value of the property.
  - This argument shall contain the value provided for the property. Numeric values shall be converted to a string, and null values shall be represented by the string `null`.

### 2.3.93 ResourceAtUriInUnknownFormat

Indicates that the URI was valid but the resource or image at that URI was in a format not supported by the service.

- This message shall indicate that the URI was valid but the resource or image at that URI was in a format not supported by the service.

Version Added: 1.0.0

Severity: Critical

Resolution: Place an image or resource or file that is recognized by the service at the URI.

Message and Arguments: "The resource at '<Arg1>' is in a format not recognized by the service."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.

### 2.3.94 ResourceAtUriUnauthorized

Indicates that the attempt to access the resource, file, or image at the URI was unauthorized.

- This message shall indicate that the attempt to access the resource, file, or image at the URI was unauthorized.

Version Added: 1.0.0

Severity: Critical

Resolution: Ensure that the appropriate access is provided for the service in order for it to access the URI.

Message and Arguments: "While accessing the resource at '<Arg1>', the service received an authorization error '<Arg2>'."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.
2. *string*: The error message received from the authorization service.
  - This argument shall contain the error message received from the authorization service or software.

### 2.3.95 ResourceCannotBeDeleted

Indicates that a delete operation was attempted on a resource that cannot be deleted.

- This message shall indicate that a delete operation was attempted on a resource that cannot be deleted.

Version Added: 1.0.0

Severity: Critical

Resolution: Do not attempt to delete a non-deletable resource.

Message and Arguments: "The delete request failed because the resource requested cannot be deleted."

### 2.3.96 ResourceCreationConflict

Indicates that the requested resource creation could not be completed because the service has a resource that conflicts with the request.

- This message shall indicate that the requested creation of a resource could not be completed because the service has a resource that conflicts with the request, such as when the resource already exists or an existing resource has similar property values.

Version Added: 1.7.0

Severity: Warning

Resolution: None.

Message and Arguments: "The resource could not be created. The service has a resource at URI '<Arg1>' that conflicts with the creation request."

1. *string*: URI of the resource that conflicts with the creation request.
  - This argument shall contain the URI of the resource with which there is a conflict.

### 2.3.97 ResourceDeprecated

Indicates the resource is deprecated.

- This message shall indicate that the resource is deprecated.

Version Added: 1.10.0

Severity: Warning

Resolution: Refer to the schema guide for more information.

Message and Arguments: "The operation was performed on a deprecated resource '<Arg1>'."

1. *string*: The URI of the resource.
  - This argument shall contain the URI of the resource that is deprecated.

### 2.3.98 ResourceExhaustion

Indicates that a resource could not satisfy the request due to some unavailability of resources. An example is that available capacity was allocated.

- This message shall indicate that a resource could not satisfy the request due to some unavailability of resources.

Version Added: 1.2.0

Severity: Critical

Resolution: Ensure that the resources are available and resubmit the request.

Message and Arguments: "The resource '<Arg1>' was unable to satisfy the request due to unavailability of resources."

1. *string*: The URI of the resource.
  - This argument shall contain the URI of the relevant resource.

### 2.3.99 ResourceInStandby

Indicates that the request could not be performed because the resource is in standby.

- This message shall indicate that the request could not be performed because the resource is in standby.

Version Added: 1.2.0

Severity: Critical

Resolution: Ensure that the resource is in the correct power state and resubmit the request.

Message and Arguments: "The request could not be performed because the resource is in standby."

### 2.3.100 ResourceInUse

Indicates that a change was requested to a resource but the change was rejected due to the resource being in use or transition.

- This message shall indicate that a change was requested to a resource but the change was rejected due to the resource being in use or transition.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the condition and resubmit the request if the operation failed.

Message and Arguments: "The change to the requested resource failed because the resource is in use or in transition."

### 2.3.101 ResourceMissingAtURI

Indicates that the operation expected an image or other resource at the provided URI but none was found. Examples of this are in requests that require URIs such as firmware updates.

- This message shall indicate that the operation expected an image or other resource at the provided URI but none was found.

Version Added: 1.0.0

Severity: Critical

Resolution: Place a valid resource at the URI or correct the URI and resubmit the request.

Message and Arguments: "The resource at the URI '<Arg1>' was not found."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.

### 2.3.102 ResourceNotFound

Indicates that the operation expected a resource identifier that corresponds to an existing resource but one was not found.

- This message shall indicate that the operation expected a resource identifier that corresponds to an existing resource but one was not found.

Version Added: 1.2.0

Severity: Critical

Resolution: Provide a valid resource identifier and resubmit the request.

Message and Arguments: "The requested resource of type <Arg1> named '<Arg2>' was not found."

1. *string*: The type of resource.
  - This argument shall contain the schema name of the resource.
2. *string*: The `Id` of the resource.
  - This argument shall contain the value of the `Id` property of the requested resource.

### 2.3.103 ResourceTypeIncompatible

Indicates that the resource type of the operation does not match that of the operation destination. Examples of this are a `POST` to a resource collection using the wrong resource type, an update where the `@odata.type` properties do not match, or a case of major version incompatibility.

- This message shall indicate that the resource type of the operation does not match that of the operation destination.

Version Added: 1.2.0

Severity: Critical

Resolution: Resubmit the request with a payload compatible with the resource's schema.

Message and Arguments: "The `@odata.type` of the request body <Arg1> is incompatible with the `@odata.type` of the resource, which is <Arg2>."

1. *string*: The `@odata.type` of the request.
  - This argument shall contain the value of the `@odata.type` property provided in the request.
2. *string*: The supported `@odata.type` value.
  - This argument shall contain the value of the `@odata.type` property supported by the resource.

### 2.3.104 RestrictedPrivilege

Indicates that the operation was not successful because a privilege is restricted.

- This message shall indicate that the operation was not successful because a privilege is restricted.

Version Added: 1.9.0

Severity: Warning

Resolution: Remove restricted privileges from the request body and resubmit the request.

Message and Arguments: "The operation was not successful because the privilege '<Arg1>' is restricted."

1. *string*: The name of the restricted privilege.
  - This argument shall contain the name of the restricted privilege.

### 2.3.105 RestrictedRole

Indicates that the operation was not successful because the role is restricted.

- This message shall indicate that the operation was not successful because the role is restricted.

Version Added: 1.9.0

Severity: Warning

Resolution: No resolution is required. For standard roles, consider using the role specified in the AlternateRoleId property in the Role resource.

Message and Arguments: "The operation was not successful because the role '<Arg1>' is restricted."

1. *string*: The name of the restricted role.
  - This argument shall contain the name of the restricted role.

### 2.3.106 ServiceDisabled

Indicates that the operation failed because the service, such as the account service, is disabled and cannot accept requests.

- This message shall indicate that the operation failed because the service, such as the account service, is disabled and cannot accept requests.

Version Added: 1.11.0

Severity: Warning

Resolution: Enable the service and resubmit the request if the operation failed.

Message and Arguments: "The operation failed because the service at <Arg1> is disabled and cannot accept requests."

1. *string*: The URI of the disabled service.
  - This argument shall contain the URI of the disabled service.

### 2.3.107 ServiceInUnknownState

Indicates that the operation failed because the service is in an unknown state and cannot accept additional requests.

- This message shall indicate that the operation failed because the service is in an unknown state and cannot accept additional requests.

Version Added: 1.0.0

Severity: Critical

Resolution: Restart the service and resubmit the request if the operation failed.

Message and Arguments: "The operation failed because the service is in an unknown state and can no longer take incoming requests."

### 2.3.108 ServiceShuttingDown

Indicates that the operation failed because the service is shutting down, such as when the service reboots.

- This message shall indicate that the operation failed because the service is shutting down.

Version Added: 1.0.0

Severity: Critical

Resolution: When the service becomes available, resubmit the request if the operation failed.

Message and Arguments: "The operation failed because the service is shutting down and can no longer take incoming requests."

### 2.3.109 ServiceTemporarilyUnavailable

Indicates the service is temporarily unavailable.

- This message shall indicate that the service is temporarily unavailable.

Version Added: 1.0.0

Severity: Critical

Resolution: Wait for the indicated retry duration and retry the operation.

Message and Arguments: "The service is temporarily unavailable. Retry in <Arg1> seconds."

1. *string*: The retry duration in seconds.
  - This argument shall contain the number of seconds the client should wait before attempting the operation again.

### 2.3.110 SessionLimitExceeded

Indicates that a session establishment was requested but the operation failed due to the number of simultaneous sessions exceeding the limit of the implementation.

- This message shall indicate that a session establishment was requested but the operation failed due to the number of simultaneous sessions exceeding the limit of the implementation.

Version Added: 1.0.0

Severity: Critical

Resolution: Reduce the number of other sessions before trying to establish the session or increase the limit of simultaneous sessions, if supported.

Message and Arguments: "The session establishment failed due to the number of simultaneous sessions exceeding the limit of the implementation."

### 2.3.111 SessionTerminated

Indicates that the `DELETE` operation on the session resource resulted in the successful termination of the session.

- This message shall indicate that the `DELETE` operation on the session resource resulted in the successful termination of the session.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "The session was successfully terminated."

### 2.3.112 SourceDoesNotSupportProtocol

Indicates that while attempting to access, connect to, or transfer a resource, file, or image from another location that the other end of the connection did not support the protocol.

- This message shall indicate that while attempting to access, connect to, or transfer a resource, file, or image from another location that the other end of the connection did not support the protocol.

Version Added: 1.0.0



Severity: Critical

Resolution: Change protocols or URIs.

Message and Arguments: "The other end of the connection at '<Arg1>' does not support the specified protocol <Arg2>."

1. *string*: The URI provided.
  - This argument shall contain the URI provided for this operation.
2. *string*: The protocol specified.
  - This argument shall contain the name of the protocol requested for this operation.

### 2.3.113 StrictAccountTypes

Indicates the request failed because a set of `AccountTypes` or `OEMAccountTypes` was not accepted while `StrictAccountTypes` is set to `true`.

- This message shall indicate that the request failed because a set of `AccountTypes` or `OEMAccountTypes` was not accepted while `StrictAccountTypes` is set to `true`.

Version Added: 1.9.0

Severity: Warning

Resolution: Resubmit the request either with an acceptable set of `AccountTypes` and `OEMAccountTypes` or with `StrictAccountTypes` set to `false`.

Message and Arguments: "The request could not be fulfilled with the account types included in property '<Arg1>' because the property `StrictAccountTypes` is set to `true`."

1. *string*: The name of the property.
  - This argument shall contain the name of the property `AccountTypes` or `OEMAccountTypes`.

### 2.3.114 StringValueTooLong

Indicates that a string value passed to the given resource was longer than the maximum allowed length. An example is when an implementation has imposed a shorter maximum length than that allowed by the specification.

- This message shall indicate that a string value passed to the given resource was longer than the maximum allowed length.

Version Added: 1.2.0

Severity: Warning

Resolution: Resubmit the request with an appropriate string length.

Message and Arguments: "The string '<Arg1>' exceeds the length limit <Arg2>."

1. *string*: The string provided.
  - This argument shall contain the string value provided for this operation.
2. *number*: The maximum string length.
  - This argument shall contain the maximum supported string length for this property.

### 2.3.115 StringValueTooShort

Indicates that a string value passed to the given resource was shorter than the minimum required length. An example is when an implementation has imposed a greater minimum length than that required by the specification. This message also applies to cases of empty strings where the minimum string length is 1.

- This message shall indicate that a string value passed to the given resource was shorter than the minimum required length.

Version Added: 1.16.0

Severity: Warning

Resolution: Resubmit the request with an appropriate string length.

Message and Arguments: "The string '<Arg1>' was under the minimum required length <Arg2>."

1. *string*: The string provided.
  - This argument shall contain the string value provided for this operation.
2. *number*: The minimum string length.
  - This argument shall contain the minimum supported string length for this property.

### 2.3.116 SubscriptionTerminated

An event subscription was terminated by the service. No further events will be delivered.

- This message shall indicate that an event subscription was terminated by the service.

Version Added: 1.5.0

Severity: OK

Resolution: None.

Message and Arguments: "The event subscription was terminated."

### 2.3.117 Success

Indicates that all conditions of a successful operation were met.

- This message shall indicate that all conditions of a successful operation were met.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The request completed successfully."

### 2.3.118 UndeterminedFault

Indicates that a fault or error condition exists but the source of the fault cannot be determined or is unknown to the service.

- This message shall indicate that a fault or error condition was reported to the service, but the source of the fault cannot be determined or is unknown to the service.

Version Added: 1.9.0

Severity: Critical

Resolution: None.

Message and Arguments: "An undetermined fault condition was reported by '<Arg1>'."

1. *string*: The software, provider, or service that reported the fault condition.
  - This argument shall contain the name of the entity that reported the fault condition.

### 2.3.119 UnrecognizedRequestBody

Indicates that the service encountered an unrecognizable request body that could not even be interpreted as malformed JSON.

- This message shall indicate that the service encountered an unrecognizable request body that could not even be interpreted as malformed JSON.

Version Added: 1.0.0

Severity: Warning

Resolution: Correct the request body and resubmit the request if it failed.

Message and Arguments: "The service detected a malformed request body that it was unable to interpret."

## 2.4 Composition 1.1.3

This registry defines the messages for composition related events.

Message	Severity	Description
<a href="#">ConstrainedResourceAlreadyReserved</a>	Critical	Indicates that the requested resources are already reserved in response to a constrained composition request.
<a href="#">EmptyManifest</a>	Warning	Indicates that the manifest contains no stanzas or that a stanza in the manifest contains no request.
<a href="#">IncompatibleZone</a>	Critical	Indicates that not all referenced resource blocks are in the same resource zone.
<a href="#">NoResourceMatch</a>	Critical	Indicates that the service could not find a matching resource based on the given parameters.
<a href="#">ResourceBlockChanged</a>	OK	Indicates that a resource block has changed. This is not used whenever there is another event message for that specific change, such as when only the state has changed.
<a href="#">ResourceBlockCompositionStateChanged</a>	OK	Indicates that the composition state of a resource block has changed, specifically the value of the <code>CompositionState</code> property within <code>CompositionStatus</code> .
<a href="#">ResourceBlockInUse</a>	Warning	Indicates that the composition request contains a resource block that is unable to participate in more compositions.
<a href="#">ResourceBlockInvalid</a>	Critical	Indicates that the <code>Id</code> of a referenced resource block is no longer valid.
<a href="#">ResourceBlockNotFound</a>	Critical	Indicates that the referenced resource block was not found.
<a href="#">ResourceBlockStateChanged</a>	OK	Indicates that the state of a resource block has changed, specifically the value of the <code>State</code> property within <code>Status</code> .
<a href="#">ResourceZoneMembershipChanged</a>	OK	Indicates that the membership of a resource zone has changed due to resource blocks being added or removed from the resource zone.
<a href="#">SpecifiedResourceAlreadyReserved</a>	Critical	Indicates that a resource block is already reserved in response to a specific composition request.
<a href="#">UnableToProcessStanzaRequest</a>	Critical	Indicates that the manifest provided for the <code>Compose</code> action contains a stanza with <code>Content</code> that could not be processed.

### 2.4.1 ConstrainedResourceAlreadyReserved

Indicates that the requested resources are already reserved in response to a constrained composition request.

- This message shall indicate that the requested resources are already reserved in response to a constrained composition request.

Version Added: 1.1.0

Severity: Critical

Resolution: Delete the reservation containing the resources and resubmit the request.

Message and Arguments: "The requested resources are reserved under reservation '<Arg1>'."

1. *string*: The `Id` of the reservation.
  - This argument shall contain the value of the `Id` property of the `CompositionReservation` resource containing the requested resources.

### 2.4.2 EmptyManifest

Indicates that the manifest contains no stanzas or that a stanza in the manifest contains no request.

- This message shall indicate that the manifest contains no stanzas or that a stanza in the manifest contains no request.

Version Added: 1.1.0

Severity: Warning

Resolution: Provide a request content for the manifest and resubmit.

Message and Arguments: "The provided manifest is empty or a stanza in the manifest contains no request."

### 2.4.3 IncompatibleZone

Indicates that not all referenced resource blocks are in the same resource zone.

- This message shall indicate that not all referenced `ResourceBlock` resources are in the same resource zone.

Version Added: 1.1.0

Severity: Critical

Resolution: Request resource blocks from the same resource zone.

Message and Arguments: "The requested resource blocks span multiple resource zones."

#### 2.4.4 NoResourceMatch

Indicates that the service could not find a matching resource based on the given parameters.

- This message shall indicate that the service could not find a matching resource based on the given parameters.

Version Added: 1.1.0

Severity: Critical

Resolution: Change parameters associated with the resource, such as quantity or performance, and resubmit the request.

Message and Arguments: "The requested resources of type '<Arg1>' are not available for allocation."

1. *string*: The resource type requested.
  - This argument shall contain the schema name of the requested resource.

#### 2.4.5 ResourceBlockChanged

Indicates that a resource block has changed. This is not used whenever there is another event message for that specific change, such as when only the state has changed.

- This message shall indicate that one or more properties of a `ResourceBlock` resource have changed. This message shall not be used for cases where a more specific message could be used in its place.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Resource block '<Arg1>' has changed on the service."

1. *string*: The `Id` of the resource block that has changed.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that has changed.

## 2.4.6 ResourceBlockCompositionStateChanged

Indicates that the composition state of a resource block has changed, specifically the value of the `CompositionState` property within `CompositionStatus`.

- This message shall indicate that the `CompositionState` property within the `CompositionStatus` object of a `ResourceBlock` resource has changed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The composition status of the resource block '<Arg1>' has changed."

1. *string*: The `Id` of the resource block that has changed.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that has changed.

## 2.4.7 ResourceBlockInUse

Indicates that the composition request contains a resource block that is unable to participate in more compositions.

- This message shall indicate that the composition request contains a `ResourceBlock` resource that is unable to participate in more compositions due to restrictions specified in its `CompositionStatus` property. For example, the resource block has reached its composition limit specified by the `MaxCompositions` property.

Version Added: 1.0.0

Severity: Warning

Resolution: Remove the resource block from the request and resubmit the request.

Message and Arguments: "Resource block '<Arg1>' cannot be part of any new compositions."

1. *string*: The `Id` of the resource block that cannot be part of any new compositions.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that cannot be part of any new compositions.

## 2.4.8 ResourceBlockInvalid

Indicates that the `Id` of a referenced resource block is no longer valid.

- This message shall indicate that the `Id` of a referenced `ResourceBlock` resource is no longer valid.

Version Added: 1.1.0

Severity: Critical

Resolution: Remove the resource block and resubmit the request.

Message and Arguments: "Resource block '<Arg1>' is not valid."

1. *string*: The `Id` of the resource block.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that is no longer valid.

## 2.4.9 ResourceBlockNotFound

Indicates that the referenced resource block was not found.

- This message shall indicate that the referenced `ResourceBlock` resource was not found.

Version Added: 1.1.0

Severity: Critical

Resolution: Remove the resource block and resubmit the request.

Message and Arguments: "Resource block '<Arg1>' was not found."

1. *string*: The URI of the resource block.
  - This argument shall contain the value of the URI of the `ResourceBlock` resource that was not found.

## 2.4.10 ResourceBlockStateChanged

Indicates that the state of a resource block has changed, specifically the value of the `State` property within `Status`.

- This message shall indicate that the `State` property within the `Status` object of a `ResourceBlock` resource has changed.

Version Added: 1.0.0

Severity: OK

Resolution: None.



Message and Arguments: "The state of resource block '<Arg1>' has changed."

1. *string*: The `Id` of the resource block that has changed.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that has changed.

### 2.4.11 ResourceZoneMembershipChanged

Indicates that the membership of a resource zone has changed due to resource blocks being added or removed from the resource zone.

- This message shall indicate that entries found in the `ResourceBlocks` array within the `Links` object for a resource zone have been added or removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The membership of resource zone '<Arg1>' has been changed."

1. *string*: The `Id` of the resource zone that has changed.
  - This argument shall contain the value of the `Id` property of the `Zone` resource that represents the resource zone that has changed.

### 2.4.12 SpecifiedResourceAlreadyReserved

Indicates that a resource block is already reserved in response to a specific composition request.

- This message shall indicate that a `ResourceBlock` resource is already reserved in response to a specific composition request.

Version Added: 1.1.0

Severity: Critical

Resolution: Delete the reservation containing the resource block or select a different resource block and resubmit the request.

Message and Arguments: "Resource block '<Arg1>' is already reserved under reservation '<Arg2>'."

1. *string*: The `Id` of the resource block.
  - This argument shall contain the value of the `Id` property of the `ResourceBlock` resource that is already reserved.

2. *string*: The `Id` of the reservation.
  - This argument shall contain the value of the `Id` property of the `CompositionReservation` resource containing the requested resource.

### 2.4.13 UnableToProcessStanzaRequest

Indicates that the manifest provided for the `Compose` action contains a stanza with `Content` that could not be processed.

- This message shall indicate that the manifest provided for the `Compose` action contains a stanza with `Content` that could not be processed.

Version Added: 1.1.0

Severity: Critical

Resolution: Add the `Content` parameter to the stanza or remove the stanza, and resubmit the request.

Message and Arguments: "The provided manifest for the `Compose` action of type <Arg1> contains a stanza with `Id` of value '<Arg2>' with a `Content` parameter that could not be processed."

1. *string*: The `RequestType` of the `Compose` action.
  - This argument shall contain the value of the `RequestType` parameter of the `Compose` action.
2. *string*: The `Id` of the stanza.
  - This argument shall contain the value of the `Id` parameter of the stanza.

## 2.5 Environmental 1.4.0

This registry defines messages related to environmental sensors, heating and cooling equipment, or other environmental conditions.

Message	Severity	Description
<a href="#">CoolingUnitGroupCritical</a>	Critical	Indicates that a cooling unit group has a critical status.
<a href="#">CoolingUnitGroupNormal</a>	OK	Indicates that a cooling unit group has returned to normal operations.
<a href="#">CoolingUnitGroupWarning</a>	Warning	Indicates that a cooling unit group has a warning status.
<a href="#">FanFailed</a>	Critical	Indicates that a fan has failed.
<a href="#">FanGroupCritical</a>	Critical	Indicates that a fan group has a critical status.
<a href="#">FanGroupNormal</a>	OK	Indicates that a fan group has returned to normal operations.

Message	Severity	Description
<a href="#">FanGroupWarning</a>	Warning	Indicates that a fan group has a warning status.
<a href="#">FanInserted</a>	OK	Indicates that a fan was inserted or installed.
<a href="#">FanRemoved</a>	OK	Indicates that a fan was removed.
<a href="#">FanRestored</a>	OK	Indicates that a fan was repaired or restored to normal operation.
<a href="#">FanWarning</a>	Warning	Indicates that a fan has a warning condition.
<a href="#">FilterInserted</a>	OK	Indicates that a filter was inserted or installed.
<a href="#">FilterRemoved</a>	OK	Indicates that a filter was removed.
<a href="#">FilterRequiresService</a>	Warning	Indicates that a filter requires service.
<a href="#">FilterRestored</a>	OK	Indicates that a filter was repaired or restored to normal operation.
<a href="#">FilterSubsystemHealth</a>	OK	Indicates the health of the filter subsystem for the equipment.
<a href="#">FlowRateAboveLowerCriticalThreshold</a>	Warning	Indicates that a flow rate reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">FlowRateAboveLowerFatalThreshold</a>	Critical	Indicates that a flow rate reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">FlowRateAboveUpperCautionThreshold</a>	Warning	Indicates that a flow rate reading is above the upper caution threshold.
<a href="#">FlowRateAboveUpperCriticalThreshold</a>	Critical	Indicates that a flow rate reading is above the upper critical threshold.
<a href="#">FlowRateAboveUpperFatalThreshold</a>	Critical	Indicates that a flow rate reading is above the upper fatal threshold.
<a href="#">FlowRateBelowLowerCautionThreshold</a>	Warning	Indicates that a flow rate reading is below the lower caution threshold.
<a href="#">FlowRateBelowLowerCriticalThreshold</a>	Critical	Indicates that a flow rate reading is below the lower critical threshold.
<a href="#">FlowRateBelowLowerFatalThreshold</a>	Critical	Indicates that a flow rate reading is below the lower fatal threshold.
<a href="#">FlowRateBelowUpperCriticalThreshold</a>	Warning	Indicates that a flow rate reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">FlowRateBelowUpperFatalThreshold</a>	Critical	Indicates that a flow rate reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">FlowRateCritical</a>	Critical	Indicates that a flow rate reading exceeds an internal critical level.
<a href="#">FlowRateFatal</a>	Critical	Indicates that a flow rate reading exceeds an internal fatal level or flow rate reading is zero (0).
<a href="#">FlowRateNoLongerCritical</a>	Warning	Indicates that a flow rate reading no longer exceeds an internal critical level but still exceeds an internal warning level.

Message	Severity	Description
<a href="#">FlowRateNoLongerFatal</a>	Critical	Indicates that a flow rate reading is no longer exceeds an internal fatal level but is still exceeds an internal critical level.
<a href="#">FlowRateNormal</a>	OK	Indicates that a flow rate reading is now within normal operating range.
<a href="#">FlowRateWarning</a>	Warning	Indicates that a flow rate reading exceeds an internal warning level.
<a href="#">FluidLevelAboveLowerCriticalThreshold</a>	Warning	Indicates that a fluid level reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">FluidLevelAboveLowerFatalThreshold</a>	Critical	Indicates that a fluid level reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">FluidLevelAboveUpperCautionThreshold</a>	Warning	Indicates that a fluid level reading is above the upper caution threshold.
<a href="#">FluidLevelAboveUpperCriticalThreshold</a>	Critical	Indicates that a fluid level reading is above the upper critical threshold.
<a href="#">FluidLevelAboveUpperFatalThreshold</a>	Critical	Indicates that a fluid level reading is above the upper fatal threshold.
<a href="#">FluidLevelBelowLowerCautionThreshold</a>	Warning	Indicates that a fluid level reading is below the lower caution threshold.
<a href="#">FluidLevelBelowLowerCriticalThreshold</a>	Critical	Indicates that a fluid level reading is below the lower critical threshold.
<a href="#">FluidLevelBelowLowerFatalThreshold</a>	Critical	Indicates that a fluid level reading is below the lower fatal threshold.
<a href="#">FluidLevelBelowUpperCriticalThreshold</a>	Warning	Indicates that a fluid level reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">FluidLevelBelowUpperFatalThreshold</a>	Critical	Indicates that a fluid level reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">FluidLevelCritical</a>	Critical	Indicates that a fluid level reading violates an internal critical level.
<a href="#">FluidLevelNoLongerCritical</a>	Warning	Indicates that a fluid level reading no longer violates an internal critical level but still violates an internal warning level.
<a href="#">FluidLevelNormal</a>	OK	Indicates that a fluid level reading is now within normal operating range.
<a href="#">FluidLevelWarning</a>	Warning	Indicates that a fluid level reading violates an internal warning level.
<a href="#">FluidQualityCritical</a>	Critical	Indicates that a fluid quality reading exceeds an internal critical level.
<a href="#">FluidQualityNoLongerCritical</a>	Warning	Indicates that a fluid quality reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">FluidQualityNormal</a>	OK	Indicates that a fluid quality reading is now within normal operating range.
<a href="#">FluidQualityWarning</a>	Warning	Indicates that a fluid quality reading exceeds an internal warning level.
<a href="#">HumidityAboveLowerCriticalThreshold</a>	Warning	Indicates that a humidity reading is no longer below the lower critical threshold but is still outside of normal operating range.

Message	Severity	Description
<a href="#">HumidityAboveUpperCautionThreshold</a>	Warning	Indicates that a humidity reading is above the upper caution threshold.
<a href="#">HumidityAboveUpperCriticalThreshold</a>	Critical	Indicates that a humidity reading is above the upper critical threshold.
<a href="#">HumidityBelowLowerCautionThreshold</a>	Warning	Indicates that a humidity reading is below the lower caution threshold.
<a href="#">HumidityBelowLowerCriticalThreshold</a>	Critical	Indicates that a humidity reading is below the lower critical threshold.
<a href="#">HumidityBelowUpperCriticalThreshold</a>	Warning	Indicates that a humidity reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">HumidityNormal</a>	OK	Indicates that a humidity reading is now within normal operating range.
<a href="#">LeakDetectedCritical</a>	Critical	Indicates that a leak detector is in a critical state.
<a href="#">LeakDetectedNormal</a>	OK	Indicates that a leak detector is within normal operating range.
<a href="#">LeakDetectedWarning</a>	Warning	Indicates that a leak detector is in a warning state.
<a href="#">LeakDetectorConnected</a>	OK	Indicates that an external leak detector was connected.
<a href="#">LeakDetectorDisconnected</a>	Warning	Indicates that an external leak detector was disconnected.
<a href="#">LeakDetectorFailure</a>	Warning	Indicates that the service cannot communicate with a leak detector or detected a failure.
<a href="#">LeakDetectorRestored</a>	OK	Indicates that a leak detector was repaired or communications were restored.
<a href="#">PressureAboveLowerCriticalThreshold</a>	Warning	Indicates that a pressure reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">PressureAboveLowerFatalThreshold</a>	Critical	Indicates that a pressure reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">PressureAboveUpperCautionThreshold</a>	Warning	Indicates that a pressure reading is above the upper caution threshold.
<a href="#">PressureAboveUpperCriticalThreshold</a>	Critical	Indicates that a pressure reading is above the upper critical threshold.
<a href="#">PressureAboveUpperFatalThreshold</a>	Critical	Indicates that a pressure reading is above the upper fatal threshold.
<a href="#">PressureBelowLowerCautionThreshold</a>	Warning	Indicates that a pressure reading is below the lower caution threshold.
<a href="#">PressureBelowLowerCriticalThreshold</a>	Critical	Indicates that a pressure reading is below the lower critical threshold.
<a href="#">PressureBelowLowerFatalThreshold</a>	Critical	Indicates that a pressure reading is below the lower fatal threshold.
<a href="#">PressureBelowUpperCriticalThreshold</a>	Warning	Indicates that a pressure reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">PressureBelowUpperFatalThreshold</a>	Critical	Indicates that a pressure reading is no longer above the upper fatal threshold but is still outside of normal operating range.

Message	Severity	Description
<a href="#">PressureCritical</a>	Critical	Indicates that a pressure reading exceeds an internal critical level.
<a href="#">PressureNoLongerCritical</a>	Warning	Indicates that a pressure reading no longer violates an internal critical level but still violates an internal warning level.
<a href="#">PressureNormal</a>	OK	Indicates that a pressure reading is now within normal operating range.
<a href="#">PressureWarning</a>	Warning	Indicates that a pressure reading exceeds an internal warning level.
<a href="#">PrimaryCoolantConnectorSubsystemHealth</a>	OK	Indicates the health of the primary coolant connector subsystem for the equipment.
<a href="#">PumpFailed</a>	Critical	Indicates that a pump has failed.
<a href="#">PumpInserted</a>	OK	Indicates that a pump was inserted or installed.
<a href="#">PumpRemoved</a>	OK	Indicates that a pump was removed.
<a href="#">PumpRestored</a>	OK	Indicates that a pump was repaired or restored to normal operation.
<a href="#">PumpSubsystemHealth</a>	OK	Indicates the health of the pump subsystem for the equipment.
<a href="#">ReservoirSubsystemHealth</a>	OK	Indicates the health of the reservoir subsystem for the equipment.
<a href="#">SecondaryCoolantConnectorSubsystemHealth</a>	OK	Indicates the health of the secondary coolant connector subsystem for the equipment.
<a href="#">TemperatureAboveLowerCriticalThreshold</a>	Warning	Indicates that a temperature reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">TemperatureAboveLowerFatalThreshold</a>	Critical	Indicates that a temperature reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">TemperatureAboveUpperCautionThreshold</a>	Warning	Indicates that a temperature reading is above the upper caution threshold.
<a href="#">TemperatureAboveUpperCriticalThreshold</a>	Critical	Indicates that a temperature reading is above the upper critical threshold.
<a href="#">TemperatureAboveUpperFatalThreshold</a>	Critical	Indicates that a temperature reading is above the upper fatal threshold.
<a href="#">TemperatureBelowLowerCautionThreshold</a>	Warning	Indicates that a temperature reading is below the lower caution threshold.
<a href="#">TemperatureBelowLowerCriticalThreshold</a>	Critical	Indicates that a temperature reading is below the lower critical threshold.
<a href="#">TemperatureBelowLowerFatalThreshold</a>	Critical	Indicates that a temperature reading is below the lower fatal threshold.
<a href="#">TemperatureBelowUpperCriticalThreshold</a>	Warning	Indicates that a temperature reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">TemperatureBelowUpperFatalThreshold</a>	Critical	Indicates that a temperature reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">TemperatureCritical</a>	Critical	Indicates that a temperature reading exceeds an internal critical level.

Message	Severity	Description
<a href="#">TemperatureNoLongerCritical</a>	Warning	Indicates that a temperature reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">TemperatureNormal</a>	OK	Indicates that a temperature reading is now within normal operating range.
<a href="#">TemperatureWarning</a>	Warning	Indicates that a temperature reading exceeds an internal warning level.
<a href="#">ValveClosed</a>	OK	Indicates that a valve was closed.
<a href="#">ValveOpened</a>	OK	Indicates that a valve was opened.
<a href="#">ValvePositionChanged</a>	OK	Indicates that the position of a valve was changed.
<a href="#">ValveUnableToReachSetPoint</a>	Warning	Indicates that a valve is stuck or otherwise unable to reach the desired position.
<a href="#">ValveUnableToReachSetPointPercent</a>	Warning	Indicates that a valve is stuck or otherwise unable to reach the desired percent open position.

### 2.5.1 CoolingUnitGroupCritical

Indicates that a cooling unit group has a critical status.

- This message shall indicate that a cooling unit group is operating in a critical state due to a fault or a change in configuration.

Version Added: 1.4.0

Severity: Critical

Resolution: None.

Message and Arguments: "Cooling unit group '<Arg1>' is in a critical state."

- string*: The name or identifier of the cooling unit group.
  - This argument shall contain a string that identifies or describes the group of `CoolingUnit` resources.

### 2.5.2 CoolingUnitGroupNormal

Indicates that a cooling unit group has returned to normal operations.

- This message shall indicate that a cooling unit group has returned to a normal operating state.

Version Added: 1.4.0

Severity: OK

Resolution: None.

Message and Arguments: "Cooling unit group '<Arg1>' is operating normally."

1. *string*: The name or identifier of the cooling unit group.
  - This argument shall contain a string that identifies or describes the group of `CoolingUnit` resources.

### 2.5.3 CoolingUnitGroupWarning

Indicates that a cooling unit group has a warning status.

- This message shall indicate that a cooling unit group is operating with a warning status or in a non-redundant state due to a fault or a change in configuration.

Version Added: 1.4.0

Severity: Warning

Resolution: None.

Message and Arguments: "Cooling unit group '<Arg1>' is in a warning state."

1. *string*: The name or identifier of the cooling unit group.
  - This argument shall contain a string that identifies or describes the group of `CoolingUnit` resources.

### 2.5.4 FanFailed

Indicates that a fan has failed.

- This message shall indicate that a fan has failed.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the fan hardware and replace any faulty component.

Message and Arguments: "Fan '<Arg1>' has failed."

1. *string*: The name or identifier of the fan.
  - This argument shall contain a string that identifies or describes the `Fan` resource.



### 2.5.5 FanGroupCritical

Indicates that a fan group has a critical status.

- This message shall indicate that a fan group is operating in a critical state due to a fault or a change in configuration.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Fan group '<Arg1>' is in a critical state."

1. *string*: The name or identifier of the fan group.
  - This argument shall contain a string that identifies or describes the group of `Fan` resources.

### 2.5.6 FanGroupNormal

Indicates that a fan group has returned to normal operations.

- This message shall indicate that a fan group has returned to a normal operating state.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Fan group '<Arg1>' is operating normally."

1. *string*: The name or identifier of the fan group.
  - This argument shall contain a string that identifies or describes the group of `Fan` resources.

### 2.5.7 FanGroupWarning

Indicates that a fan group has a warning status.

- This message shall indicate that a fan group is operating with a warning status or in a non-redundant state due to a fault or a change in configuration.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "Fan group '<Arg1>' is in a warning state."

1. *string*: The name or identifier of the fan group.
  - This argument shall contain a string that identifies or describes the group of `Fan` resources.

## 2.5.8 FanInserted

Indicates that a fan was inserted or installed.

- This message shall indicate that a fan was inserted or installed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Fan '<Arg1>' was inserted."

1. *string*: The name or identifier of the fan.
  - This argument shall contain a string that identifies or describes the `Fan` resource.

## 2.5.9 FanRemoved

Indicates that a fan was removed.

- This message shall indicate that a fan was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Fan '<Arg1>' was removed."

1. *string*: The name or identifier of the fan.
  - This argument shall contain a string that identifies or describes the `Fan` resource.

### 2.5.10 FanRestored

Indicates that a fan was repaired or restored to normal operation.

- This message shall indicate that a fan was repaired, replaced, or otherwise returned to normal operation.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Fan '<Arg1>' was restored."

1. *string*: The name or identifier of the fan.
  - This argument shall contain a string that identifies or describes the `Fan` resource.

### 2.5.11 FanWarning

Indicates that a fan has a warning condition.

- This message shall indicate that a fan has a warning condition but continues to operate, potentially in a degraded state.

Version Added: 1.4.0

Severity: Warning

Resolution: Check the fan hardware and replace any faulty component.

Message and Arguments: "Fan '<Arg1>' has a warning condition."

1. *string*: The name or identifier of the fan.
  - This argument shall contain a string that identifies or describes the `Fan` resource.

### 2.5.12 FilterInserted

Indicates that a filter was inserted or installed.

- This message shall indicate that a filter was inserted or installed.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Filter '<Arg1>' was inserted."

1. *string*: The name or identifier of the filter.
  - This argument shall contain a string that identifies or describes the `Filter` resource.

### 2.5.13 FilterRemoved

Indicates that a filter was removed.

- This message shall indicate that a filter was removed.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Filter '<Arg1>' was removed."

1. *string*: The name or identifier of the filter.
  - This argument shall contain a string that identifies or describes the `Filter` resource.

### 2.5.14 FilterRequiresService

Indicates that a filter requires service.

- This message shall indicate that a filter requires service. Examples include a dirty filter or a filter reaching the end of its life.

Version Added: 1.1.0

Severity: Warning

Resolution: Replace the filter or filter media.

Message and Arguments: "Filter '<Arg1>' requires service."

1. *string*: The name or identifier of the filter.
  - This argument shall contain a string that identifies or describes the `Filter` resource.

### 2.5.15 FilterRestored

Indicates that a filter was repaired or restored to normal operation.

- This message shall indicate that a filter was repaired, replaced, or otherwise returned to normal operation.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Filter '<Arg1>' was restored."

1. *string*: The name or identifier of the filter.
  - This argument shall contain a string that identifies or describes the `Filter` resource.

### 2.5.16 FilterSubsystemHealth

Indicates the health of the filter subsystem for the equipment.

- This message shall indicate the health of the filter subsystem for the equipment.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "The filter subsystem health is <Arg1>."

1. *string*: The health of the filter subsystem for the equipment.
  - This argument shall contain the health of the filter subsystem for the equipment. This argument shall contain a value defined by the `Health` enumeration in the `Resource` schema.

### 2.5.17 FlowRateAboveLowerCriticalThreshold

Indicates that a flow rate reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a flow rate reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the flow rate violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

## 2.5.18 FlowRateAboveLowerFatalThreshold

Indicates that a flow rate reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a flow rate reading, previously below the lower fatal threshold, no longer violates the lower fatal threshold. However, the flow rate violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.19 FlowRateAboveUpperCautionThreshold

Indicates that a flow rate reading is above the upper caution threshold.

- This message shall indicate that a flow rate reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties. Otherwise, the message shall indicate that the reading violates an internal level or threshold.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - If the reading originated from a `Sensor` resource, this argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource. Otherwise, this argument shall contain an internal level or threshold value.

### 2.5.20 FlowRateAboveUpperCriticalThreshold

Indicates that a flow rate reading is above the upper critical threshold.

- This message shall indicate that a flow rate reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.21 FlowRateAboveUpperFatalThreshold

Indicates that a flow rate reading is above the upper fatal threshold.

- This message shall indicate that a flow rate reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.22 FlowRateBelowLowerCautionThreshold

Indicates that a flow rate reading is below the lower caution threshold.

- This message shall indicate that a flow rate reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.1.0



Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.5.23 FlowRateBelowLowerCriticalThreshold

Indicates that a flow rate reading is below the lower critical threshold.

- This message shall indicate that a flow rate reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.24 FlowRateBelowLowerFatalThreshold

Indicates that a flow rate reading is below the lower fatal threshold.

- This message shall indicate that a flow rate reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.25 FlowRateBelowUpperCriticalThreshold

Indicates that a flow rate reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a flow rate reading, previously above the upper critical threshold, no longer violates the upper critical threshold. However, the flow rate violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.26 FlowRateBelowUpperFatalThreshold

Indicates that a flow rate reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a flow rate reading, previously above the upper fatal threshold, no longer violates the upper fatal threshold. However, the flow rate violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.27 FlowRateCritical

Indicates that a flow rate reading exceeds an internal critical level.

- This message shall indicate that a flow rate reading violates an internal critical level. This message shall be used for flow rate properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The flow rate properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min exceeds the critical level."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

## 2.5.28 FlowRateFatal

Indicates that a flow rate reading exceeds an internal fatal level or flow rate reading is zero (0).

- This message shall indicate that a flow rate reading violates an internal fatal level. This message shall be used for flow rate properties or `Sensor` resources that implement boolean trip points for a fatal limit, such as from hardware mechanisms with no threshold value. The flow rate properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min exceeds the fatal level."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

## 2.5.29 FlowRateNoLongerCritical

Indicates that a flow rate reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a flow rate reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for flow rate properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The flow rate properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min no longer exceeds the critical level."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

### 2.5.30 FlowRateNoLongerFatal

Indicates that a flow rate reading is no longer exceeds an internal fatal level but is still exceeds an internal critical level.

- This message shall indicate that a flow rate reading no longer violates an internal fatal level but still violates an internal critical level. This message shall be used for flow rate properties or `Sensor` resources that implement boolean trip points for a fatal limit, such as from hardware mechanisms with no threshold value. The flow rate properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min no longer exceeds the fatal level."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

### 2.5.31 FlowRateNormal

Indicates that a flow rate reading is now within normal operating range.

- This message shall indicate that a flow rate reading has returned to its normal operating range.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min is within normal operating range."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

## 2.5.32 FlowRateWarning

Indicates that a flow rate reading exceeds an internal warning level.

- This message shall indicate that a flow rate reading violates an internal warning level. This message shall be used for flow rate properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The flow rate properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Flow rate '<Arg1>' reading of <Arg2> L/min exceeds the warning level."

1. *string*: The name or identifier of the flow rate reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the flow rate reading.
2. *number*: The flow rate in litres per minute.
  - This argument shall contain the flow rate in litres per minute.

## 2.5.33 FluidLevelAboveLowerCriticalThreshold

Indicates that a fluid level reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a fluid level reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the fluid level violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.34 FluidLevelAboveLowerFatalThreshold

Indicates that a fluid level reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a fluid level reading, previously below the lower fatal threshold, no longer violates the lower fatal threshold. However, the fluid level violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.35 FluidLevelAboveUpperCautionThreshold

Indicates that a fluid level reading is above the upper caution threshold.

- This message shall indicate that a fluid level reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties. Otherwise, the message shall indicate that the reading violates an internal level or threshold.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - If the reading originated from a `Sensor` resource, this argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource. Otherwise, this argument shall contain an internal level or threshold value.

### 2.5.36 FluidLevelAboveUpperCriticalThreshold

Indicates that a fluid level reading is above the upper critical threshold.

- This message shall indicate that a fluid level reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.



Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.37 FluidLevelAboveUpperFatalThreshold

Indicates that a fluid level reading is above the upper fatal threshold.

- This message shall indicate that a fluid level reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.38 FluidLevelBelowLowerCautionThreshold

Indicates that a fluid level reading is below the lower caution threshold.

- This message shall indicate that a fluid level reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of

the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.5.39 FluidLevelBelowLowerCriticalThreshold

Indicates that a fluid level reading is below the lower critical threshold.

- This message shall indicate that a fluid level reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or

`LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.40 FluidLevelBelowLowerFatalThreshold

Indicates that a fluid level reading is below the lower fatal threshold.

- This message shall indicate that a fluid level reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.41 FluidLevelBelowUpperCriticalThreshold

Indicates that a fluid level reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a fluid level reading, previously above the upper critical threshold, no longer violates the upper critical threshold. However, the fluid level violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.42 FluidLevelBelowUpperFatalThreshold

Indicates that a fluid level reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a fluid level reading, previously above the upper fatal threshold, no longer violates the upper fatal threshold. However, the fluid level violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Fluid level '<Arg1>' reading of <Arg2> percent is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.
2. *number*: The fluid level in percent.
  - This argument shall contain the fluid level in percent.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.43 FluidLevelCritical

Indicates that a fluid level reading violates an internal critical level.

- This message shall indicate that a fluid level reading violates an internal critical level. This message shall be used for fluid level properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The fluid level properties or `Sensor` resources may contain

readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid level '<Arg1>' reading violates the critical level."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.

## 2.5.44 FluidLevelNoLongerCritical

Indicates that a fluid level reading no longer violates an internal critical level but still violates an internal warning level.

- This message shall indicate that a fluid level reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for fluid level properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The fluid level properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid level '<Arg1>' reading no longer violates the critical level."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.

## 2.5.45 FluidLevelNormal

Indicates that a fluid level reading is now within normal operating range.

- This message shall indicate that a fluid level reading has returned to its normal operating range.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Fluid level '<Arg1>' reading is within normal operating range."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.

## 2.5.46 FluidLevelWarning

Indicates that a fluid level reading violates an internal warning level.

- This message shall indicate that a fluid level reading violates an internal warning level. This message shall be used for fluid level properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The fluid level properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid level '<Arg1>' reading violates the warning level."

1. *string*: The name or identifier of the fluid level reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid level reading.

## 2.5.47 FluidQualityCritical

Indicates that a fluid quality reading exceeds an internal critical level.

- This message shall indicate that a fluid quality reading violates an internal critical level. This message shall be used for fluid quality properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The fluid quality properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid quality '<Arg1>' reading exceeds the critical level."

1. *string*: The name or identifier of the fluid quality reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid quality reading.

### 2.5.48 FluidQualityNoLongerCritical

Indicates that a fluid quality reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a fluid quality reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for fluid quality properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The fluid quality properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid quality '<Arg1>' reading no longer exceeds the critical level."

1. *string*: The name or identifier of the fluid quality reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid quality reading.

### 2.5.49 FluidQualityNormal

Indicates that a fluid quality reading is now within normal operating range.

- This message shall indicate that a fluid quality reading has returned to its normal operating range.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Fluid quality '<Arg1>' reading is within normal operating range."

1. *string*: The name or identifier of the fluid quality reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid quality reading.

### 2.5.50 FluidQualityWarning

Indicates that a fluid quality reading exceeds an internal warning level.

- This message shall indicate that a fluid quality reading violates an internal warning level. This message shall be used for fluid quality properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The fluid quality properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Fluid quality '<Arg1>' reading exceeds the warning level."

1. *string*: The name or identifier of the fluid quality reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the fluid quality reading.

### 2.5.51 HumidityAboveLowerCriticalThreshold

Indicates that a humidity reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a humidity reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the humidity violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The percent humidity.



- This argument shall contain the humidity as a percentage.
- 3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.52 HumidityAboveUpperCautionThreshold

Indicates that a humidity reading is above the upper caution threshold.

- This message shall indicate that a humidity reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The humidity in percent units.
  - This argument shall contain the humidity as a percentage.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.5.53 HumidityAboveUpperCriticalThreshold

Indicates that a humidity reading is above the upper critical threshold.

- This message shall indicate that a humidity reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The humidity in percent units.
  - This argument shall contain the humidity as a percentage.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.54 HumidityBelowLowerCautionThreshold

Indicates that a humidity reading is below the lower caution threshold.

- This message shall indicate that a humidity reading violates an lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The humidity in percent units.
  - This argument shall contain the humidity as a percentage.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.5.55 HumidityBelowLowerCriticalThreshold

Indicates that a humidity reading is below the lower critical threshold.

- This message shall indicate that a humidity reading violates a lower critical threshold. If the reading originates

from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The humidity in percent units.
  - This argument shall contain the humidity as a percentage.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

## 2.5.56 HumidityBelowUpperCriticalThreshold

Indicates that a humidity reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a humidity reading, previously above the critical threshold, no longer violates the critical threshold. However, the humidity violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The percent humidity.
  - This argument shall contain the humidity as a percentage.
3. *number*: The threshold value.

- This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.57 HumidityNormal

Indicates that a humidity reading is now within normal operating range.

- This message shall indicate that a humidity reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Humidity '<Arg1>' reading of <Arg2> percent is within normal operating range."

1. *string*: The name or identifier of the humidity reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the humidity reading.
2. *number*: The percent humidity.
  - This argument shall contain the humidity as a percentage.

### 2.5.58 LeakDetectedCritical

Indicates that a leak detector is in a critical state.

- This message shall indicate a leak detector is in a critical state.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Leak detector '<Arg1>' reports a critical level leak."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the location or physical context of the leak detector.

### 2.5.59 LeakDetectedNormal

Indicates that a leak detector is within normal operating range.

- This message shall indicate that a leak detector returned to its normal operating state.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Leak detector '<Arg1>' has returned to normal."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the location or physical context of the leak detector.

## 2.5.60 LeakDetectedWarning

Indicates that a leak detector is in a warning state.

- This message shall indicate a leak detector is in a warning state.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Leak detector '<Arg1>' reports a warning level leak."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the location or physical context of the leak detector.

## 2.5.61 LeakDetectorConnected

Indicates that an external leak detector was connected.

- This message shall indicate that an external leak detector was connected.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Leak detector '<Arg1>' was connected."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the `LeakDetector` resource.

### 2.5.62 LeakDetectorDisconnected

Indicates that an external leak detector was disconnected.

- This message shall indicate that an external leak detector was disconnected.

Version Added: 1.3.0

Severity: Warning

Resolution: Check the leak detector connection or re-connect the leak detector.

Message and Arguments: "Leak detector '<Arg1>' was disconnected."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the `LeakDetector` resource.

### 2.5.63 LeakDetectorFailure

Indicates that the service cannot communicate with a leak detector or detected a failure.

- This message shall indicate that the service is unable to communicate with a leak detector or otherwise detected a fault condition with the leak detector.

Version Added: 1.3.0

Severity: Warning

Resolution: Check the leak detector hardware or connection.

Message and Arguments: "Leak detector '<Arg1>' failed."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the `LeakDetector` resource.

### 2.5.64 LeakDetectorRestored

Indicates that a leak detector was repaired or communications were restored.

- This message shall indicate that the service is able to communicate with a leak detector that had previously failed, or the leak detector was repaired or replaced.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Leak detector '<Arg1>' was restored."

1. *string*: The name or identifier of the leak detector.
  - This argument shall contain a string that identifies or describes the `LeakDetector` resource.

### 2.5.65 PressureAboveLowerCriticalThreshold

Indicates that a pressure reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a pressure reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the pressure violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.66 PressureAboveLowerFatalThreshold

Indicates that a pressure reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a pressure reading, previously below the lower fatal threshold, no longer

violates the lower fatal threshold. However, the pressure violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

## 2.5.67 PressureAboveUpperCautionThreshold

Indicates that a pressure reading is above the upper caution threshold.

- This message shall indicate that a pressure reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties. Otherwise, the message shall indicate that the reading violates an internal level or threshold.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.



- If the reading originated from a `Sensor` resource, this argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource. Otherwise, this argument shall contain an internal level or threshold value.

### 2.5.68 PressureAboveUpperCriticalThreshold

Indicates that a pressure reading is above the upper critical threshold.

- This message shall indicate that a pressure reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.69 PressureAboveUpperFatalThreshold

Indicates that a pressure reading is above the upper fatal threshold.

- This message shall indicate that a pressure reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.70 PressureBelowLowerCautionThreshold

Indicates that a pressure reading is below the lower caution threshold.

- This message shall indicate that a pressure reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.5.71 PressureBelowLowerCriticalThreshold

Indicates that a pressure reading is below the lower critical threshold.

- This message shall indicate that a pressure reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

## 2.5.72 PressureBelowLowerFatalThreshold

Indicates that a pressure reading is below the lower fatal threshold.

- This message shall indicate that a pressure reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.73 PressureBelowUpperCriticalThreshold

Indicates that a pressure reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a pressure reading, previously above the upper critical threshold, no longer violates the upper critical threshold. However, the pressure violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.74 PressureBelowUpperFatalThreshold

Indicates that a pressure reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a pressure reading, previously above the upper fatal threshold, no longer violates the upper fatal threshold. However, the pressure violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.5.75 PressureCritical

Indicates that a pressure reading exceeds an internal critical level.

- This message shall indicate that a pressure reading violates an internal critical level. This message shall be used for pressure properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The pressure properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa exceeds the critical level."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.

### 2.5.76 PressureNoLongerCritical

Indicates that a pressure reading no longer violates an internal critical level but still violates an internal warning level.

- This message shall indicate that a pressure reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for pressure properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The pressure properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa no longer violates the critical level."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.

### 2.5.77 PressureNormal

Indicates that a pressure reading is now within normal operating range.

- This message shall indicate that a pressure reading has returned to its normal operating range.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa is within normal operating range."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.

### 2.5.78 PressureWarning

Indicates that a pressure reading exceeds an internal warning level.

- This message shall indicate that a pressure reading violates an internal warning level. This message shall be used for pressure properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The pressure properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Pressure '<Arg1>' reading of <Arg2> kPa exceeds the warning level."

1. *string*: The name or identifier of the pressure reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the pressure reading.
2. *number*: The pressure in kilopascals.
  - This argument shall contain the pressure in kilopascals.

### 2.5.79 PrimaryCoolantConnectorSubsystemHealth

Indicates the health of the primary coolant connector subsystem for the equipment.

- This message shall indicate the health of the primary coolant connector subsystem for the equipment.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "The primary coolant connector subsystem health is <Arg1>."

1. *string*: The health of the primary coolant connector subsystem for the equipment.
  - This argument shall contain the health of the primary coolant connector subsystem for the equipment. This argument shall contain a value defined by the `Health` enumeration in the `Resource` schema.

### 2.5.80 PumpFailed

Indicates that a pump has failed.

- This message shall indicate that a pump has failed.

Version Added: 1.1.0

Severity: Critical

Resolution: Check the pump hardware and replace any faulty component.

Message and Arguments: "Pump '<Arg1>' has failed."

1. *string*: The name or identifier of the pump.
  - This argument shall contain a string that identifies or describes the `Pump` resource.

### 2.5.81 PumpInserted

Indicates that a pump was inserted or installed.

- This message shall indicate that a pump was inserted or installed.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Pump '<Arg1>' was inserted."

1. *string*: The name or identifier of the pump.
  - This argument shall contain a string that identifies or describes the `Pump` resource.

### 2.5.82 PumpRemoved

Indicates that a pump was removed.

- This message shall indicate that a pump was removed.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Pump '<Arg1>' was removed."

1. *string*: The name or identifier of the pump.
  - This argument shall contain a string that identifies or describes the `Pump` resource.

### 2.5.83 PumpRestored

Indicates that a pump was repaired or restored to normal operation.

- This message shall indicate that a pump was repaired, replaced, or otherwise returned to normal operation.

Version Added: 1.1.0



Severity: OK

Resolution: None.

Message and Arguments: "Pump '<Arg1>' was restored."

1. *string*: The name or identifier of the pump.
  - This argument shall contain a string that identifies or describes the `Pump` resource.

## 2.5.84 PumpSubsystemHealth

Indicates the health of the pump subsystem for the equipment.

- This message shall indicate the health of the pump subsystem for the equipment.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "The pump subsystem health is <Arg1>."

1. *string*: The health of the pump subsystem for the equipment.
  - This argument shall contain the health of the pump subsystem for the equipment. This argument shall contain a value defined by the `Health` enumeration in the `Resource` schema.

## 2.5.85 ReservoirSubsystemHealth

Indicates the health of the reservoir subsystem for the equipment.

- This message shall indicate the health of the reservoir subsystem for the equipment.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "The reservoir subsystem health is <Arg1>."

1. *string*: The health of the reservoir subsystem for the equipment.
  - This argument shall contain the health of the reservoir subsystem for the equipment. This argument shall contain a value defined by the `Health` enumeration in the `Resource` schema.

## 2.5.86 SecondaryCoolantConnectorSubsystemHealth

Indicates the health of the secondary coolant connector subsystem for the equipment.

- This message shall indicate the health of the secondary coolant connector subsystem for the equipment.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "The secondary coolant connector subsystem health is <Arg1>."

1. *string*: The health of the secondary coolant connector subsystem for the equipment.
  - This argument shall contain the health of the secondary coolant connector subsystem for the equipment. This argument shall contain a value defined by the `Health` enumeration in the `Resource` schema.

## 2.5.87 TemperatureAboveLowerCriticalThreshold

Indicates that a temperature reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a temperature reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the temperature violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.

- This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.88 TemperatureAboveLowerFatalThreshold

Indicates that a temperature reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a temperature reading, previously below the lower fatal threshold, no longer violates the lower fatal threshold. However, the temperature violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.89 TemperatureAboveUpperCautionThreshold

Indicates that a temperature reading is above the upper caution threshold.

- This message shall indicate that a temperature reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties. Otherwise, the message shall indicate that the reading violates an internal level or threshold.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - If the reading originated from a `Sensor` resource, this argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource. Otherwise, this argument shall contain an internal level or threshold value.

### 2.5.90 TemperatureAboveUpperCriticalThreshold

Indicates that a temperature reading is above the upper critical threshold.

- This message shall indicate that a temperature reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.91 TemperatureAboveUpperFatalThreshold

Indicates that a temperature reading is above the upper fatal threshold.

- This message shall indicate that a temperature reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

## 2.5.92 TemperatureBelowLowerCautionThreshold

Indicates that a temperature reading is below the lower caution threshold.

- This message shall indicate that a temperature reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.

3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.5.93 TemperatureBelowLowerCriticalThreshold

Indicates that a temperature reading is below the lower critical threshold.

- This message shall indicate that a temperature reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.5.94 TemperatureBelowLowerFatalThreshold

Indicates that a temperature reading is below the lower fatal threshold.

- This message shall indicate that a temperature reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.5.95 TemperatureBelowUpperCriticalThreshold

Indicates that a temperature reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a temperature reading, previously above the upper critical threshold, no longer violates the upper critical threshold. However, the temperature violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.5.96 TemperatureBelowUpperFatalThreshold

Indicates that a temperature reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a temperature reading, previously above the upper fatal threshold, no longer violates the upper fatal threshold. However, the temperature violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

## 2.5.97 TemperatureCritical

Indicates that a temperature reading exceeds an internal critical level.

- This message shall indicate that a temperature reading violates an internal critical level. This message shall be used for temperature properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The temperature properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) exceeds the critical level."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.



## 2.5.98 TemperatureNoLongerCritical

Indicates that a temperature reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a temperature reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for temperature properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The temperature properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) no longer exceeds the critical level."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.

## 2.5.99 TemperatureNormal

Indicates that a temperature reading is now within normal operating range.

- This message shall indicate that a temperature reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) is within normal operating range."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.

- This argument shall contain the temperature in degrees Celsius.

## 2.5.100 TemperatureWarning

Indicates that a temperature reading exceeds an internal warning level.

- This message shall indicate that a temperature reading violates an internal warning level. This message shall be used for temperature properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The temperature properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Temperature '<Arg1>' reading of <Arg2> degrees (C) exceeds the warning level."

1. *string*: The name or identifier of the temperature reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the temperature reading.
2. *number*: The temperature in degrees Celsius.
  - This argument shall contain the temperature in degrees Celsius.

## 2.5.101 ValveClosed

Indicates that a valve was closed.

- This message shall indicate that a valve, previously in an opened state, was closed. This message may be used for any valve type.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Valve '<Arg1>' was closed."

1. *string*: The name or identifier of the valve.
  - This argument shall contain a string that identifies or describes the location or physical context of the valve.

### 2.5.102 ValveOpened

Indicates that a valve was opened.

- This message shall indicate that a valve, previously in a closed state, was opened. This message may be used for any valve type. The `ValvePositionPercent` property in the related resource may provide more detailed information about the position of the valve.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Valve '<Arg1>' was opened."

1. *string*: The name or identifier of the valve.
  - This argument shall contain a string that identifies or describes the location or physical context of the valve.

### 2.5.103 ValvePositionChanged

Indicates that the position of a valve was changed.

- This message shall indicate that the position of the valve, in percent open units, was changed. This message may be used for valves that support variable percent open positions. This message is intended to indicate a valve position change due to a updated set point, not for changes due to the normal operation of a control loop. Services should use the `ValveClosed` for a change to a value of zero percent.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Valve '<Arg1>' was changed to <Arg1> percent open."

1. *string*: The name or identifier of the valve.
  - This argument shall contain a string that identifies or describes the location or physical context of the valve.
2. *number*: The new position of the valve, in percent open units.
  - This argument shall contain a number that indicates the new valve position, in percent open units.

### 2.5.104 ValveUnableToReachSetPoint

Indicates that a valve is stuck or otherwise unable to reach the desired position.

- This message shall indicate that the valve is unable to attain the desired position set point, due to an issue with the valve or an obstruction. Services should use the `ValveUnableToReachSetPointPercent` message if the valve contains percent-based position and set point information.

Version Added: 1.3.0

Severity: Warning

Resolution: Cycle the valve to a different position. Inspect the valve, control unit, motor, or other components.

Message and Arguments: "Valve '<Arg1>' is unable to reach the desired set point."

1. *string*: The name or identifier of the valve.
  - This argument shall contain a string that identifies or describes the location or physical context of the valve.

### 2.5.105 ValveUnableToReachSetPointPercent

Indicates that a valve is stuck or otherwise unable to reach the desired percent open position.

- This message shall indicate that the valve is unable to attain the desired position set point, in percent open units, due to an issue with the valve or an obstruction. Services should use the `ValveUnableToReachSetPoint` message if the valve does not contain percent-based position and set point position information.

Version Added: 1.3.0

Severity: Warning

Resolution: Cycle the valve to a different position. Inspect the valve, control unit, motor, or other components.

Message and Arguments: "Valve '<Arg1>' is unable to reach the desired <Arg2> percent open set point and is currently at <Arg3> percent open."

1. *string*: The name or identifier of the valve.
  - This argument shall contain a string that identifies or describes the location or physical context of the valve.
2. *number*: The desired valve set point, in percent open units.
  - This argument shall contain the desired set point of the valve, in percent open units.
3. *number*: The current valve position, in percent open units.

- This argument shall contain the current position of the valve, in percent open units.

## 2.6 EthernetFabric 1.0.2

This registry defines messages for Ethernet fabrics.

Message	Severity	Description
<a href="#">LLDPInterfaceDisabled</a>	Warning	Indicates that an interface has disabled Link Layer Discovery Protocol (LLDP).
<a href="#">LLDPInterfaceEnabled</a>	OK	Indicates that an interface has enabled Link Layer Discovery Protocol (LLDP).
<a href="#">MLAGInterfaceDegraded</a>	Warning	Indicates that multi-chassis link aggregation group (MLAG) interfaces were established, but at an unexpectedly low aggregated link speed.
<a href="#">MLAGInterfaceDown</a>	Warning	Indicates that the multi-chassis link aggregation group (MLAG) interface is down on a switch.
<a href="#">MLAGInterfacesUp</a>	OK	Indicates that all multi-chassis link aggregation group (MLAG) interfaces are up.
<a href="#">MLAGPeerDown</a>	Warning	Indicates that the multi-chassis link aggregation group (MLAG) peer is down.
<a href="#">MLAGPeerUp</a>	OK	Indicates that the multi-chassis link aggregation group (MLAG) peer is up.
<a href="#">RoutingFailureThresholdExceeded</a>	Warning	Indicates that a switch has encountered an unusually large number of routing errors.

### 2.6.1 LLDPInterfaceDisabled

Indicates that an interface has disabled Link Layer Discovery Protocol (LLDP).

- This message shall indicate that an interface has disabled Link Layer Discovery Protocol (LLDP).

Version Added: 1.0.0

Severity: Warning

Resolution: Check that LLDP is enabled on device endpoints.

Message and Arguments: "LLDP was disabled on switch '<Arg1>' port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` on which LLDP was disabled.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` on which LLDP was

disabled.

## 2.6.2 LLDPInterfaceEnabled

Indicates that an interface has enabled Link Layer Discovery Protocol (LLDP).

- This message shall indicate that an interface has enabled Link Layer Discovery Protocol (LLDP).

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "LLDP was enabled on switch '<Arg1>' port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource on which LLDP was enabled.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource on which LLDP was enabled.

## 2.6.3 MLAGInterfaceDegraded

Indicates that multi-chassis link aggregation group (MLAG) interfaces were established, but at an unexpectedly low aggregated link speed.

- This message shall indicate that multi-chassis link aggregation group (MLAG) interfaces were established, but the aggregated link speed is lower than provisioned.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "MLAG interface '<Arg1>' is degraded on switch '<Arg2>'."

1. *string*: The MLAG domain ID.
  - This argument shall contain the MLAG domain ID that is degraded.
2. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource for which an MLAG interface is degraded.

### 2.6.4 MLAGInterfaceDown

Indicates that the multi-chassis link aggregation group (MLAG) interface is down on a switch.

- This message shall indicate that the multi-chassis link aggregation group (MLAG) interface is down on a switch.

Version Added: 1.0.0

Severity: Warning

Resolution: Check physical connectivity and that the MLAG system ID matches on switch pairs.

Message and Arguments: "The MLAG interface '<Arg1>' on switch '<Arg2>' is down."

1. *string*: The MLAG domain ID.
  - This argument shall contain the MLAG domain ID that dropped.
2. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource for which an MLAG interface is down.

### 2.6.5 MLAGInterfacesUp

Indicates that all multi-chassis link aggregation group (MLAG) interfaces are up.

- This message shall indicate all multi-chassis link aggregation group (MLAG) interfaces were established for one MLAG domain ID.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "All MLAG interfaces were established for MLAG ID '<Arg1>'."

1. *string*: The MLAG domain ID.
  - This argument shall contain the MLAG domain ID that was established.

### 2.6.6 MLAGPeerDown

Indicates that the multi-chassis link aggregation group (MLAG) peer is down.

- This message shall indicate that a multi-chassis link aggregation group (MLAG) peer is down.

Version Added: 1.0.0

Severity: Warning

Resolution: Check physical connectivity and that the port channel ID matches on switch pairs.

Message and Arguments: "MLAG peer switch '<Arg1>' with MLAG ID '<Arg2>' is down."

1. *string*: The `Id` of the peer switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource that represents the peer switch for which MLAG interface dropped.
2. *string*: The MLAG domain ID.
  - This argument shall contain the value of the MLAG domain ID that dropped.

## 2.6.7 MLAGPeerUp

Indicates that the multi-chassis link aggregation group (MLAG) peer is up.

- This message shall indicate that a multi-chassis link aggregation group (MLAG) peer is up.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "MLAG peer switch '<Arg1>' with MLAG ID '<Arg2>' is up."

1. *string*: The `Id` of the peer switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource that represents the peer switch for which MLAG interfaces are up.
2. *string*: The MLAG domain ID.
  - This argument shall contain the value of the MLAG domain ID that is established.

## 2.6.8 RoutingFailureThresholdExceeded

Indicates that a switch has encountered an unusually large number of routing errors.

- This message shall indicate that a switch has exceeded a rate threshold for routing errors. This message shall not be emitted more than once in any 24-hour period of time.

Version Added: 1.0.0

Severity: Warning



Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' has encountered <Arg2> routing errors in the last <Arg3> minutes."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource that encountered routing errors.
2. *number*: The number of routing errors encountered.
  - This argument shall contain the number of routing errors encountered.
3. *number*: The number of minutes over which routing errors were encountered.
  - This argument shall contain the number of minutes over which routing errors were encountered.

## 2.7 Fabric 1.0.3

This registry defines messages for generic fabrics.

Message	Severity	Description
<a href="#">AddressPoolCreated</a>	OK	Indicates that an address pool was created.
<a href="#">AddressPoolModified</a>	OK	Indicates that an address pool was modified.
<a href="#">AddressPoolRemoved</a>	OK	Indicates that an address pool was removed.
<a href="#">CableFailed</a>	Warning	Indicates that a cable has failed.
<a href="#">CableInserted</a>	OK	Indicates that a cable was inserted into a switch's port.
<a href="#">CableOK</a>	OK	Indicates that a cable has returned to working condition.
<a href="#">CableRemoved</a>	Warning	Indicates that a cable was removed from a switch's port.
<a href="#">ConnectionCreated</a>	OK	Indicates that a connection was created.
<a href="#">ConnectionModified</a>	OK	Indicates that a connection was modified.
<a href="#">ConnectionRemoved</a>	OK	Indicates that a connection was removed.
<a href="#">DegradedDownstreamLinkEstablished</a>	Warning	Indicates that a switch's downstream connection is established but is in a degraded state.
<a href="#">DegradedInterswitchLinkEstablished</a>	Warning	Indicates that a switch's interswitch connection is established but is in a degraded state.
<a href="#">DegradedUpstreamLinkEstablished</a>	Warning	Indicates that a switch's upstream connection is established but is in a degraded state.
<a href="#">DownstreamLinkDropped</a>	Warning	Indicates that a switch's downstream connection has gone down.

Message	Severity	Description
<a href="#">DownstreamLinkEstablished</a>	OK	Indicates that a switch's downstream connection is established.
<a href="#">DownstreamLinkFlapDetected</a>	Warning	Indicates that a switch's downstream connection is highly unstable.
<a href="#">EndpointCreated</a>	OK	Indicates that an endpoint was created or discovered.
<a href="#">EndpointModified</a>	OK	Indicates that an endpoint was modified.
<a href="#">EndpointRemoved</a>	OK	Indicates that an endpoint was removed.
<a href="#">InterswitchLinkDropped</a>	Warning	Indicates that a switch's interswitch connection has gone down.
<a href="#">InterswitchLinkEstablished</a>	OK	Indicates that a switch's interswitch connection is established.
<a href="#">InterswitchLinkFlapDetected</a>	Warning	Indicates that a switch's interswitch connection is highly unstable.
<a href="#">MaxFrameSizeExceeded</a>	Warning	Indicates that the maximum transmission unit (MTU) for the link was exceeded.
<a href="#">MediaControllerAdded</a>	OK	Indicates that a media controller was added.
<a href="#">MediaControllerModified</a>	OK	Indicates that a media controller was modified.
<a href="#">MediaControllerRemoved</a>	OK	Indicates that a media controller was removed.
<a href="#">PortAutomaticallyDisabled</a>	OK	Indicates that a switch's port was automatically disabled.
<a href="#">PortAutomaticallyEnabled</a>	OK	Indicates that a switch's port was automatically enabled.
<a href="#">PortDegraded</a>	Warning	Indicates that a switch's port is in a degraded state.
<a href="#">PortFailed</a>	Critical	Indicates that a switch's port has become inoperative.
<a href="#">PortManuallyDisabled</a>	OK	Indicates that a switch's port was manually disabled.
<a href="#">PortManuallyEnabled</a>	OK	Indicates that a switch's port was manually enabled.
<a href="#">PortOK</a>	OK	Indicates that a switch's port has returned to a functional state.
<a href="#">SwitchDegraded</a>	Warning	Indicates that a switch is in a degraded state.
<a href="#">SwitchFailed</a>	Critical	Indicates that a switch has become inoperative.
<a href="#">SwitchOK</a>	OK	Indicates that a switch has returned to a functional state.
<a href="#">UpstreamLinkDropped</a>	Warning	Indicates that a switch's upstream connection has gone down.
<a href="#">UpstreamLinkEstablished</a>	OK	Indicates that a switch's upstream connection is established.
<a href="#">UpstreamLinkFlapDetected</a>	Warning	Indicates that a switch's upstream connection is highly unstable.
<a href="#">ZoneCreated</a>	OK	Indicates that a zone was created.

Message	Severity	Description
<a href="#">ZoneModified</a>	OK	Indicates that a zone was modified.
<a href="#">ZoneRemoved</a>	OK	Indicates that a zone was removed.

### 2.7.1 AddressPoolCreated

Indicates that an address pool was created.

- This message shall indicate that a resource of type `AddressPool` was created.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Address pool '<Arg1>' was created in fabric '<Arg2>'."

1. *string*: The `Id` of the address pool.
  - This argument shall contain the value of the `Id` property of the `AddressPool` resource that was created.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the address pool was created.

### 2.7.2 AddressPoolModified

Indicates that an address pool was modified.

- This message shall indicate that a resource of type `AddressPool` was modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Address pool '<Arg1>' in fabric '<Arg2>' was modified."

1. *string*: The `Id` of the address pool.
  - This argument shall contain the value of the `Id` property of the `AddressPool` resource that was modified.

2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the address pool was modified.

### 2.7.3 AddressPoolRemoved

Indicates that an address pool was removed.

- This message shall indicate that a resource of type `AddressPool` was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Address pool '<Arg1>' was removed from fabric '<Arg2>'."

1. *string*: The `Id` of the address pool.
  - This argument shall contain the value of the `Id` property of the `AddressPool` resource that was removed.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the address pool was removed.

### 2.7.4 CableFailed

Indicates that a cable has failed.

- This message shall indicate that a cable was detected as failed. This message shall not be emitted more than once in any 24-hour period of time.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "The cable in switch '<Arg1>' port '<Arg2>' has failed."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the failed cable.
2. *string*: The `Id` of the port.

- This argument shall contain the value of the `Id` property of the `Port` resource with the failed cable.

### 2.7.5 CableInserted

Indicates that a cable was inserted into a switch's port.

- This message shall indicate that a cable was inserted into a port on a switch.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A cable was inserted into switch '<Arg1>' port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the port whose cable was inserted.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource whose cable was inserted.

### 2.7.6 CableOK

Indicates that a cable has returned to working condition.

- This message shall indicate that a cable was restored to working condition.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The cable in switch '<Arg1>' port '<Arg2>' has returned to working condition."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the cable that returned to a functional state.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource with the cable that returned to a functional state.

### 2.7.7 CableRemoved

Indicates that a cable was removed from a switch's port.

- This message shall indicate that a cable was removed from a port on a switch.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "A cable was removed from switch '<Arg1>' port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the port whose cable was removed.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource whose cable was removed.

### 2.7.8 ConnectionCreated

Indicates that a connection was created.

- This message shall indicate that a resource of type `Connection` was created.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Connection '<Arg1>' was created in fabric '<Arg2>'."

1. *string*: The `Id` of the connection.
  - This argument shall contain the value of the `Id` property of the `Connection` resource that was created.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the connection was created.

### 2.7.9 ConnectionModified

Indicates that a connection was modified.

- This message shall indicate that a resource of type `Connection` was modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Connection '<Arg1>' in fabric '<Arg2>' was modified."

1. *string*: The `Id` of the connection.
  - This argument shall contain the value of the `Id` property of the `Connection` resource that was modified.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the connection was modified.

### 2.7.10 ConnectionRemoved

Indicates that a connection was removed.

- This message shall indicate that a resource of type `Connection` was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Connection '<Arg1>' was removed from fabric '<Arg2>'."

1. *string*: The `Id` of the connection.
  - This argument shall contain the value of the `Id` property of the `Connection` resource that was removed.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the connection was removed.

### 2.7.11 DegradedDownstreamLinkEstablished

Indicates that a switch's downstream connection is established but is in a degraded state.

- This message shall indicate that a switch's downstream connection is established but that the link state is degraded.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' downstream link is established on port '<Arg2>', but is running in a degraded state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the downstream port.

### 2.7.12 DegradedInterswitchLinkEstablished

Indicates that a switch's interswitch connection is established but is in a degraded state.

- This message shall indicate that a switch's interswitch connection is established but that the link state is degraded.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' interswitch link is established on port '<Arg2>', but is running in a degraded state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the interswitch port.



### 2.7.13 DegradedUpstreamLinkEstablished

Indicates that a switch's upstream connection is established but is in a degraded state.

- This message shall indicate that a switch's upstream connection is established but that the link state is degraded.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' upstream link is established on port '<Arg2>', but is running in a degraded state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the upstream port.

### 2.7.14 DownstreamLinkDropped

Indicates that a switch's downstream connection has gone down.

- This message shall indicate that a switch's downstream connection has gone down.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' downstream link has gone down on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the downstream port.

### 2.7.15 DownstreamLinkEstablished

Indicates that a switch's downstream connection is established.

- This message shall indicate that a switch's downstream connection is established.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' downstream link is established on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the downstream port.

### 2.7.16 DownstreamLinkFlapDetected

Indicates that a switch's downstream connection is highly unstable.

- This message shall indicate that a switch's downstream connection was repeatedly established and dropped.  
This message shall not be repeated more than once in any 24-hour period.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' downstream link on port '<Arg2>' was established and dropped <Arg3> times in the last <Arg4> minutes."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the downstream port that is flapping.
3. *number*: The number of times the link has flapped.
  - This argument shall contain the count of uplink establishment/disconnection cycles.

4. *number*: The number of minutes over which the link has flapped.
  - This argument shall contain the number of minutes over which link flapping activity was detected.

### 2.7.17 EndpointCreated

Indicates that an endpoint was created or discovered.

- This message shall indicate that a resource of type `Endpoint` was created or discovered.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Endpoint '<Arg1>' was created in fabric '<Arg2>'."

1. *string*: The `Id` of the endpoint.
  - This argument shall contain the value of the `Id` property of the `Endpoint` resource that was created.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the endpoint was created.

### 2.7.18 EndpointModified

Indicates that an endpoint was modified.

- This message shall indicate that a resource of type `Endpoint` was modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Endpoint '<Arg1>' in fabric '<Arg2>' was modified."

1. *string*: The `Id` of the endpoint.
  - This argument shall contain the value of the `Id` property of the `Endpoint` resource that was modified.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the endpoint was modified.

### 2.7.19 EndpointRemoved

Indicates that an endpoint was removed.

- This message shall indicate that a resource of type `Endpoint` was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Endpoint '<Arg1>' was removed from fabric '<Arg2>'."

1. *string*: The `Id` of the endpoint.
  - This argument shall contain the value of the `Id` property of the `Endpoint` resource that was removed.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the endpoint was removed.

### 2.7.20 InterswitchLinkDropped

Indicates that a switch's interswitch connection has gone down.

- This message shall indicate that a switch's interswitch connection has gone down.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' interswitch link has gone down on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the interswitch port.

### 2.7.21 InterswitchLinkEstablished

Indicates that a switch's interswitch connection is established.

- This message shall indicate that a switch's interswitch connection is established.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' interswitch link is established on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the interswitch port.

### 2.7.22 InterswitchLinkFlapDetected

Indicates that a switch's interswitch connection is highly unstable.

- This message shall indicate that a switch's interswitch connection was repeatedly established and dropped. This message shall not be repeated more than once in any 24-hour period.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' interswitch link on port '<Arg2>' was established and dropped <Arg3> times in the last <Arg4> minutes."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the interswitch port that is flapping.
3. *number*: The number of times the link has flapped.
  - This argument shall contain the count of uplink establishment/disconnection cycles.

4. *number*: The number of minutes over which the link has flapped.
  - This argument shall contain the number of minutes over which link flapping activity was detected.

### 2.7.23 MaxFrameSizeExceeded

Indicates that the maximum transmission unit (MTU) for the link was exceeded.

- This message shall indicate that packets were dropped due to the maximum transmission unit (MTU) frame size being exceeded. This message shall not be emitted more than once in any 24-hour period of time.

Version Added: 1.0.0

Severity: Warning

Resolution: Ensure that path MTU discovery is enabled and functioning correctly.

Message and Arguments: "MTU size on switch '<Arg1>' port '<Arg2>' is set to <Arg3>. One or more packets with a larger size were dropped."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource in which one or more packets were dropped.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource in which one or more oversized packets were received.
3. *number*: The MTU size.
  - This argument shall contain the MTU size.

### 2.7.24 MediaControllerAdded

Indicates that a media controller was added.

- This message shall indicate that a resource of type `MediaController` was added.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Media controller '<Arg1>' was added to chassis '<Arg2>'."

1. *string*: The `Id` of the media controller.
  - This argument shall contain the value of the `Id` property of the `MediaController` resource that

was added.

2. *string*: The `Id` of the chassis.
  - This argument shall contain the value of the `Id` property of the `Chassis` resource in which the media controller was added.

### 2.7.25 MediaControllerModified

Indicates that a media controller was modified.

- This message shall indicate that a resource of type `MediaController` was modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Media controller '<Arg1>' in chassis '<Arg2>' was modified."

1. *string*: The `Id` of the media controller.
  - This argument shall contain the value of the `Id` property of the `MediaController` resource that was modified.
2. *string*: The `Id` of the chassis.
  - This argument shall contain the value of the `Id` property of the `Chassis` resource in which the media controller was modified.

### 2.7.26 MediaControllerRemoved

Indicates that a media controller was removed.

- This message shall indicate that a resource of type `MediaController` was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Media controller '<Arg1>' was removed from chassis '<Arg2>'."

1. *string*: The `Id` of the media controller.
  - This argument shall contain the value of the `Id` property of the `MediaController` resource that was removed.
2. *string*: The `Id` of the chassis.

- This argument shall contain the value of the `Id` property of the `Chassis` resource in which the media controller was removed.

### 2.7.27 PortAutomaticallyDisabled

Indicates that a switch's port was automatically disabled.

- This message shall indicate that a switch's port was automatically disabled, such as by the service.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' was automatically disabled."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the disabled port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that was disabled.

### 2.7.28 PortAutomaticallyEnabled

Indicates that a switch's port was automatically enabled.

- This message shall indicate that a switch's port was automatically enabled, such as by the service.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' was automatically enabled."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the enabled port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that was enabled.



### 2.7.29 PortDegraded

Indicates that a switch's port is in a degraded state.

- This message shall indicate that a port has entered a degraded state.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' is in a degraded state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the degraded port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that has entered a degraded state.

### 2.7.30 PortFailed

Indicates that a switch's port has become inoperative.

- This message shall indicate that a port has become inoperative. This message shall not be issued when a port is manually disabled.

Version Added: 1.0.0

Severity: Critical

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' has failed and is inoperative."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the failed port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that has failed.

### 2.7.31 PortManuallyDisabled

Indicates that a switch's port was manually disabled.

- This message shall indicate that a switch's port was manually disabled, such as by a network administrator.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' was manually disabled."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the disabled port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that was disabled.

### 2.7.32 PortManuallyEnabled

Indicates that a switch's port was manually enabled.

- This message shall indicate that a switch's port was manually enabled, such as by a network administrator.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' was manually enabled."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the enabled port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that was enabled.

### 2.7.33 PortOK

Indicates that a switch's port has returned to a functional state.

- This message shall indicate that a port has returned to a functional state.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' port '<Arg2>' has returned to a functional state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource with the functional port.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that has returned to a functional state.

### 2.7.34 SwitchDegraded

Indicates that a switch is in a degraded state.

- This message shall indicate that a switch has entered a degraded state.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' is in a degraded state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource that has entered a degraded state.

### 2.7.35 SwitchFailed

Indicates that a switch has become inoperative.

- This message shall indicate that a switch has become inoperative.

Version Added: 1.0.0

Severity: Critical

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' has failed and is inoperative."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the switch that has failed.

### 2.7.36 SwitchOK

Indicates that a switch has returned to a functional state.

- This message shall indicate that a switch has returned to a functional state.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' has returned to a functional state."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource that has returned to a functional state.

### 2.7.37 UpstreamLinkDropped

Indicates that a switch's upstream connection has gone down.

- This message shall indicate that a switch's upstream connection has gone down.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' upstream link has gone down on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the upstream port.

### 2.7.38 UpstreamLinkEstablished

Indicates that a switch's upstream connection is established.

- This message shall indicate that a switch's upstream connection is established.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Switch '<Arg1>' upstream link is established on port '<Arg2>'."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the upstream port.

### 2.7.39 UpstreamLinkFlapDetected

Indicates that a switch's upstream connection is highly unstable.

- This message shall indicate that a switch's upstream connection was repeatedly established and dropped. This message shall not be repeated more than once in any 24-hour period.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "Switch '<Arg1>' upstream link on port '<Arg2>' was established and dropped <Arg3> times in the last <Arg4> minutes."

1. *string*: The `Id` of the switch.
  - This argument shall contain the value of the `Id` property of the `Switch` resource.
2. *string*: The `Id` of the port.
  - This argument shall contain the value of the `Id` property of the `Port` resource that represents the upstream port that is flapping.
3. *number*: The number of times the link has flapped.
  - This argument shall contain the count of uplink establishment/disconnection cycles.

4. *number*: The number of minutes over which the link has flapped.
  - This argument shall contain the number of minutes over which link flapping activity was detected.

## 2.7.40 ZoneCreated

Indicates that a zone was created.

- This message shall indicate that a resource of type `Zone` was created.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Zone '<Arg1>' was created in fabric '<Arg2>'."

1. *string*: The `Id` of the zone.
  - This argument shall contain the value of the `Id` property of the `Zone` resource that was created.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the zone was created.

## 2.7.41 ZoneModified

Indicates that a zone was modified.

- This message shall indicate that a resource of type `Zone` was modified.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Zone '<Arg1>' in fabric '<Arg2>' was modified."

1. *string*: The `Id` of the zone.
  - This argument shall contain the value of the `Id` property of the `Zone` resource that was modified.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the zone was modified.

## 2.7.42 ZoneRemoved

Indicates that a zone was removed.

- This message shall indicate that a resource of type `Zone` was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Zone '<Arg1>' was removed from fabric '<Arg2>'."

1. *string*: The `Id` of the zone.
  - This argument shall contain the value of the `Id` property of the `Zone` resource that was removed.
2. *string*: The `Id` of the fabric.
  - This argument shall contain the value of the `Id` property of the `Fabric` resource in which the zone was removed.

## 2.8 HeartbeatEvent 1.1.1

This registry defines the messages to use for periodic heartbeat, also known as 'keep alive', events.

Message	Severity	Description
<a href="#">RedfishServiceFunctional</a>	OK	An event sent periodically upon request to indicate that the Redfish service is functional.
<a href="#">RedfishServiceShuttingDown</a>	OK	Indicates that the Redfish service is shutting down and will no longer accept requests.
<a href="#">RedfishServiceStarted</a>	OK	Indicates that the Redfish service started and is ready to accept requests.

### 2.8.1 RedfishServiceFunctional

An event sent periodically upon request to indicate that the Redfish service is functional.

- This message shall indicate that the Redfish service is functional. This message shall only be sent if specifically requested by an event destination during the creation of a subscription using the `HeartbeatIntervalMinutes` property.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Redfish service is functional."

## 2.8.2 RedfishServiceShuttingDown

Indicates that the Redfish service is shutting down and will no longer accept requests.

- This message shall indicate that the Redfish service is shutting down and is no longer able to service requests.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Redfish service is shutting down."

## 2.8.3 RedfishServiceStarted

Indicates that the Redfish service started and is ready to accept requests.

- This message shall indicate that the Redfish service started and is fully functional.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Redfish service started."

## 2.9 JobEvent 1.1.1

This registry defines the messages for job related events.

Message	Severity	Description
<a href="#">JobCancelled</a>	Warning	A job was cancelled.
<a href="#">JobCompletedException</a>	Warning	A job has completed with warnings or errors.



Message	Severity	Description
<a href="#">JobCompletedOK</a>	OK	A job has completed.
<a href="#">JobProgressChanged</a>	OK	A job has changed progress.
<a href="#">JobRemoved</a>	Warning	A job was removed.
<a href="#">JobResumed</a>	OK	A job has resumed.
<a href="#">JobStarted</a>	OK	A job has started.
<a href="#">JobSuspended</a>	Warning	A job was suspended.
<a href="#">JobValidateException</a>	Warning	A job validation has completed with warnings or errors.
<a href="#">JobValidatedOK</a>	OK	A job validation has completed.
<a href="#">JobValidationBypassed</a>	OK	A job has been queued without validation.
<a href="#">JobValidationStarted</a>	OK	A job validation has been started.

### 2.9.1 JobCancelled

A job was cancelled.

- This message shall indicate that a job was cancelled and the `JobState` property transitioned to `Cancelled`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' was cancelled."

- string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that was cancelled.

### 2.9.2 JobCompletedException

A job has completed with warnings or errors.

- This message shall indicate that a job has completed and the `JobState` property transitioned to `Exception`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has completed with warnings or errors."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that has completed with warnings or errors.

### 2.9.3 JobCompletedOK

A job has completed.

- This message shall indicate that a job has completed and the `JobState` property transitioned to `Completed`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has completed."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that has completed.

### 2.9.4 JobProgressChanged

A job has changed progress.

- This message shall indicate that a job has changed progress.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has changed to progress <Arg2> percent complete."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that has changed progress.

2. *number*: The percent completion of the job.
  - This argument shall contain the percent completion of the job that has changed progress and shall be a value from 0 to 100.

### 2.9.5 JobRemoved

A job was removed.

- This message shall indicate that a job was removed.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' was removed."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that was removed.

### 2.9.6 JobResumed

A job has resumed.

- This message shall indicate that a job has resumed and the `JobState` property transitioned to `Running` from `Suspended`, `Interrupted`, or `UserIntervention`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has resumed."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that has resumed.

### 2.9.7 JobStarted

A job has started.

- This message shall indicate that a job has started as the `JobState` property transitions to `Starting` or

Running .

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has started."

1. *string*: The `Id` of the job that started.
  - This argument shall contain the value of the `Id` property of the `Job` resource that has started.

## 2.9.8 JobSuspended

A job was suspended.

- This message shall indicate that a job was suspended and the `JobState` property transitioned to `Suspended` , `Interrupted` , or `UserIntervention` .

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' was suspended."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the `Job` resource that was suspended.

## 2.9.9 JobValidateException

A job validation has completed with warnings or errors.

- This message shall indicate that a job self-validation has completed and the `JobState` property transitioned to `Invalid` .

Version Added: 1.1.0

Severity: Warning

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has completed validation with warnings or errors."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the job resource that has completed self-validation with warnings or errors.

### 2.9.10 JobValidatedOK

A job validation has completed.

- This message shall indicate that a job self-validation has completed and the `JobState` property transitioned to `Queued`.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has been validated."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the job resource that has been validated.

### 2.9.11 JobValidationBypassed

A job has been queued without validation.

- This message shall indicate that a job is in the execution queue and the `JobState` property transitioned to `Queued` without validation.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' has been queued without validation."

1. *string*: The `Id` of the job.
  - This argument shall contain the value of the `Id` property of the job resource that has been bypassed validation.

### 2.9.12 JobValidationStarted

A job validation has been started.

- This message shall indicate that a job has started self-validation as the `JobState` property transitions to `Validation`.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The job with Id '<Arg1>' is under validation."

1. *string*: The `Id` of the job that is being validated.
  - This argument shall contain the value of the `Id` property of the job resource that is being validated.

## 2.10 License 1.0.4

This registry defines the license status and error messages.

Message	Severity	Description
<a href="#">DaysBeforeExpiration</a>	OK	Indicates the number of days remaining on a license before expiration.
<a href="#">Expired</a>	Warning	Indicates that a license has expired and its functionality was disabled.
<a href="#">GracePeriod</a>	Warning	Indicates that a license has expired and entered its grace period.
<a href="#">InstallFailed</a>	Critical	Indicates that the service failed to install the license.
<a href="#">InvalidLicense</a>	Critical	Indicates that the license was not recognized, is corrupted, or is invalid.
<a href="#">LicenseInstalled</a>	OK	Indicates that a license was installed.
<a href="#">NotApplicableToTarget</a>	Critical	Indicates that the license is not applicable to the target.
<a href="#">TargetsRequired</a>	Critical	Indicates that one or more targets need to be specified with the license.

### 2.10.1 DaysBeforeExpiration

Indicates the number of days remaining on a license before expiration.

- This message shall indicate the number of days remaining on a license before expiration.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The license '<Arg1>' will expire in <Arg2> days."

1. *string*: The name of the license.
  - This argument shall contain the human readable identifier of the license.
2. *number*: The number of days before the license expires.
  - This argument shall contain the number of days before the license expires.

### 2.10.2 Expired

Indicates that a license has expired and its functionality was disabled.

- This message shall indicate that a license has expired and its functionality was disabled.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The license '<Arg1>' has expired."

1. *string*: The name of the license.
  - This argument shall contain the human readable identifier of the license.

### 2.10.3 GracePeriod

Indicates that a license has expired and entered its grace period.

- This message shall indicate that a license has expired and entered its grace period.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The license '<Arg1>' has expired, <Arg2> day grace period before licensed functionality is disabled."

1. *string*: The name of the license.
  - This argument shall contain the human readable identifier of the license.
2. *number*: The number day of grace period.
  - This argument shall contain the number day of grace period for the licensed functionality.

#### 2.10.4 InstallFailed

Indicates that the service failed to install the license.

- This message shall indicate that the service failed to install the license.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Failed to install the license. Reason: <Arg1>."

1. *string*: The reason for the license installation failure.
  - This argument shall contain the reason for the license installation failure.

#### 2.10.5 InvalidLicense

Indicates that the license was not recognized, is corrupted, or is invalid.

- This message shall indicate that the content of the license was not recognized, is corrupted, or is invalid.

Version Added: 1.0.0

Severity: Critical

Resolution: Verify the license content is correct and resubmit the request.

Message and Arguments: "The content of the license was not recognized, is corrupted, or is invalid."

#### 2.10.6 LicenseInstalled

Indicates that a license was installed.

- This message shall indicate that a license was installed. Existing licenses may have been updated or otherwise



affected by the installation.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The license '<Arg1>' was installed."

1. *string*: The name of the license.
  - This argument shall contain the human readable identifier of the license.

### 2.10.7 NotApplicableToTarget

Indicates that the license is not applicable to the target.

- This message shall indicate that the license is not applicable to the target.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the license compatibility or applicability to the specified target.

Message and Arguments: "The license is not applicable to the target."

### 2.10.8 TargetsRequired

Indicates that one or more targets need to be specified with the license.

- This message shall indicate that one or more targets need to be specified with the license.

Version Added: 1.0.0

Severity: Critical

Resolution: Add AuthorizedDevices to Links and resubmit the request.

Message and Arguments: "The license requires targets to be specified."

## 2.11 LogService 1.1.0

This registry defines the messages for log service related events.

Message	Severity	Description
<a href="#">DiagnosticDataCollected</a>	OK	Indicates that diagnostic data was collected due to a client invoking the <code>CollectDiagnosticData</code> action.
<a href="#">LogCleared</a>	OK	Indicates that the log was cleared.

### 2.11.1 DiagnosticDataCollected

Indicates that diagnostic data was collected due to a client invoking the `CollectDiagnosticData` action.

- This message shall indicate that diagnostic data was collected due to a client invoking the `CollectDiagnosticData` action.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "'<Arg1>' diagnostic data collected."

1. *string*: The value of the `DiagnosticDataType` parameter.
  - This argument shall contain the value of the `DiagnosticDataType` parameter provided by the client when the `CollectDiagnosticData` action was invoked.

### 2.11.2 LogCleared

Indicates that the log was cleared.

- This message shall indicate that the log was cleared.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Log '<Arg1>' was cleared."

1. *string*: The name or identifier of the log.
  - This argument shall contain contain a string that identifies or describes the log.

## 2.12 ManagerEvent 1.0.0

This registry defines messages to be used by a service to indicate conditions or configuration changes related to a manager. The affected manager may provide the Redfish service.

Message	Severity	Description
<a href="#">ManagerReset</a>	OK	Indicates that a manager reset occurred.
<a href="#">ManagerResetWatchdogTimer</a>	Warning	Indicates that a manager reset occurred due to a watchdog timer action.
<a href="#">ManagerSwitchedToBackupSoftwareImage</a>	Warning	Indicates that a manager switched to a backup software image.

### 2.12.1 ManagerReset

Indicates that a manager reset occurred.

- This message shall indicate that a manager reset occurred.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Manager `\<Arg1\>` performed a '<Arg2>' type of reset."

1. *string*: The name or identifier of the manager that was reset.
  - This argument shall contain a string that identifies the affected manager.
2. *string*: The type of reset that occurred.
  - This argument shall contain the type of reset that occurred. This argument shall contain one of the values of the `ResetType` enumeration from the `Resource` schema.

### 2.12.2 ManagerResetWatchdogTimer

Indicates that a manager reset occurred due to a watchdog timer action.

- This message shall indicate that a manager reset occurred due to a watchdog timer action.

Version Added: 1.0.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Manager \<Arg1\> performed a '<Arg2>' type of reset due to watchdog timer action."

1. *string*: The name or identifier of the manager that was reset.
  - This argument shall contain a string that identifies the affected manager.
2. *string*: The type of reset that occurred.
  - This argument shall contain the type of reset that occurred. This argument shall contain one of the values of the `ResetType` enumeration from the `Resource` schema.

### 2.12.3 ManagerSwitchedToBackupSoftwareImage

Indicates that a manager switched to a backup software image.

- This message shall indicate that a manager is using a backup software image.

Version Added: 1.0.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Manager \<Arg1\> switched to a backup software image."

1. *string*: The name or identifier of the manager.
  - This argument shall contain a string that identifies the affected manager.

## 2.13 NetworkDevice 1.1.1

This registry defines the messages for networking devices.

Message	Severity	Description
<a href="#">CableInserted</a>	OK	Indicates that a network cable was inserted.
<a href="#">CableRemoved</a>	OK	Indicates that a network cable was removed.
<a href="#">ConnectionDropped</a>	OK	Indicates that a network connection was dropped.
<a href="#">ConnectionEstablished</a>	OK	Indicates that a network connection was established.
<a href="#">ConnectionSpeedLow</a>	Warning	Indicates that a network connection is operating at a speed below the specified threshold.
<a href="#">DegradedConnectionEstablished</a>	Warning	Indicates that a network connection was established, but at an unexpectedly low link speed.

Message	Severity	Description
<a href="#">LinkFlapDetected</a>	Warning	Indicates that a network connection is highly unstable.

### 2.13.1 CableInserted

Indicates that a network cable was inserted.

- This message shall indicate that a network cable was inserted. This message shall not be sent for a backplane connection.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A network cable was inserted into network adapter '<Arg1>' port '<Arg2>'."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain a string that identifies or describes the location or physical context of the network adapter into which a cable was plugged.
2. *string*: The name or identifier of the network port.
  - This argument shall contain a string that identifies or describes the location or physical context of the network port into which a cable was plugged.

### 2.13.2 CableRemoved

Indicates that a network cable was removed.

- This message shall indicate that a network cable was removed. This message shall not be sent for a backplane connection.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A cable was removed from network adapter '<Arg1>' port '<Arg2>'."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain a string that identifies or describes the location or physical

context of the network adapter from which a cable was unplugged.

2. *string*: The name or identifier of the network port.
  - This argument shall contain a string that identifies or describes the location or physical context of the network port from which a cable was unplugged.

### 2.13.3 ConnectionDropped

Indicates that a network connection was dropped.

- This message shall indicate that the link for a network connection is no longer intact.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The connection is no longer active for network adapter '<Arg1>' port '<Arg2>' function '<Arg3>'."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain a string that identifies or describes the location or physical context of the network adapter from which a connection was dropped.
2. *string*: The name or identifier of the network port.
  - This argument shall contain a string that identifies or describes the location or physical context of the network port from which a connection was dropped.
3. *string*: The name or identifier of the network function.
  - This argument shall contain a string that identifies or describes the location or physical context of the network device function from which a connection was dropped.

### 2.13.4 ConnectionEstablished

Indicates that a network connection was established.

- This message shall indicate that the link for a network connection is newly established.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A network connection was established for network adapter '<Arg1>' port '<Arg2>' function '<Arg3>'."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain a string that identifies or describes the location or physical context of the network adapter to which a connection was established.
2. *string*: The name or identifier of the network port.
  - This argument shall contain a string that identifies or describes the location or physical context of the network port to which a connection was established.
3. *string*: The name or identifier of the network function.
  - This argument shall contain a string that identifies or describes the location or physical context of the network device function to which a connection was established.

### 2.13.5 ConnectionSpeedLow

Indicates that a network connection is operating at a speed below the specified threshold.

- This message shall indicate that a network connection is operating at a link speed lower than the specified threshold.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the network equipment and cabling for this connection.

Message and Arguments: "The network adapter '<Arg1>' port '<Arg2>' function '<Arg3>' is operating at a link speed of <Arg4> Gbps which is below the specified threshold of <Arg5> Gbps."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain a string that identifies or describes the location or physical context of the associated network adapter.
2. *string*: The name or identifier of the network port.
  - This argument shall contain a string that identifies or describes the location or physical context of the associated network port.
3. *string*: The name or identifier of the network function.
  - This argument shall contain a string that identifies or describes the location or physical context of the associated network device function.
4. *number*: The current link speed (Gbps).
  - This argument shall contain the current connection speed (Gbps).
5. *number*: The alert threshold (Gbps).
  - This argument shall contain the value of the threshold that triggered this message.

### 2.13.6 DegradedConnectionEstablished

Indicates that a network connection was established, but at an unexpectedly low link speed.

- This message shall indicate that a network connection is newly established but that the link speed is lower than provisioned for the channel.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "A degraded network connection was established for network adapter '<Arg1>' port '<Arg2>' function '<Arg3>'."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain contain a string that identifies or describes the location or physical context of the network adapter to which a connection was established.
2. *string*: The name or identifier of the network port.
  - This argument shall contain contain a string that identifies or describes the location or physical context of the network port to which a connection was established.
3. *string*: The name or identifier of the network function.
  - This argument shall contain contain a string that identifies or describes the location or physical context of the network device function to which a connection was established.

### 2.13.7 LinkFlapDetected

Indicates that a network connection is highly unstable.

- This message shall indicate that a network connection was repeatedly established and dropped. This message shall not be repeated more than once in any 24-hour period.

Version Added: 1.0.0

Severity: Warning

Resolution: Contact the network administrator for problem resolution.

Message and Arguments: "The network connection for network adapter '<Arg1>' port '<Arg2>' function '<Arg3>' was established and dropped '<Arg4>' times in the last '<Arg5>' minutes."

1. *string*: The name or identifier of the network adapter.
  - This argument shall contain contain a string that identifies or describes the location or physical context of the associated network adapter.
2. *string*: The name or identifier of the network port.
  - This argument shall contain contain a string that identifies or describes the location or physical context of the associated network port.



3. *string*: The name or identifier of the network function.
  - This argument shall contain a string that identifies or describes the location or physical context of the associated network device function.
4. *number*: The number of times the link has flapped.
  - This argument shall contain be a number representing the count of link establishment/disconnection cycles.
5. *number*: The number of minutes over which the link has flapped.
  - This argument shall contain be a number representing the number of minutes over which link flapping activity was detected.

## 2.14 Platform 1.3.2

This registry defines messages for compute platforms, covering topics related to processor, memory, and I/O device connectivity.

Message	Severity	Description
<a href="#">DeviceAssemblyDataInaccessible</a>	Warning	Indicates that the assembly data, historically 'FRU data', for a device is inaccessible.
<a href="#">DeviceAssemblyDataMalformed</a>	Warning	Indicates that the assembly data, historically 'FRU data', for a device is malformed, such as due to a checksum error.
<a href="#">DeviceBootTimeout</a>	Critical	Indicates that a device encountered a boot timeout.
<a href="#">DeviceDisabled</a>	Warning	Indicates that a device was disabled or halted.
<a href="#">DeviceInRecovery</a>	Critical	Indicates that a device is not operating properly and entered recovery mode to restore firmware or critical data to a state of integrity.
<a href="#">DeviceManagementInterfaceError</a>	OK	Indicates that the management interface for a device encountered an error.
<a href="#">DeviceManagementInterfaceUnresponsive</a>	OK	Indicates that the management interface for a device is unresponsive.
<a href="#">DeviceMissing</a>	Critical	Indicates that the device has asserted Device Missing
<a href="#">DeviceSecureBootFailure</a>	Critical	Indicates that a device encountered a secure boot failure.
<a href="#">DeviceWatchdogTimeout</a>	Critical	Indicates that a device encountered a watchdog timeout.
<a href="#">MemoryContainedError</a>	Warning	Indicates that a memory device detected an uncorrectable error, but contained it.
<a href="#">MemoryRowRemappingError</a>	Critical	Indicates that a memory device encountered a row remapping failure.
<a href="#">MemoryRowRemappingPending</a>	Warning	Indicates that row remapping is pending for a memory device.
<a href="#">MemoryUncorrectableError</a>	Critical	Indicates that a memory device detected an uncorrectable error and the error was not contained.

Message	Severity	Description
<a href="#">NVRAMClearAsserted</a>	Warning	Indicates that the 'NVRAM Clear' jumper or switch is currently asserted.
<a href="#">OperatingSystemCrash</a>	Critical	Indicates the operating system was halted due to a catastrophic error.
<a href="#">PCIeIncorrectLinkSpeed</a>	Critical	Indicates that a PCIe device did not train to its expected link speed.
<a href="#">PCIeIncorrectLinkWidth</a>	Critical	Indicates that a PCIe device did not train to its expected link width.
<a href="#">PCIeLinkDown</a>	Critical	Indicates that a PCIe device lost its link with the upstream interface.
<a href="#">PCIeLinkRestored</a>	Critical	Indicates that a PCIe device restored its link with the upstream interface.
<a href="#">PCIeLinkSpeedChange</a>	Critical	Indicates that a PCIe link speed changed at runtime.
<a href="#">PCIeLinkTrainingError</a>	Critical	Indicates that a PCIe device could not establish a link with the upstream interface.
<a href="#">PCIeLinkWidthChange</a>	Critical	Indicates that a PCIe link width changed at runtime.
<a href="#">PCIeUncorrectableError</a>	Critical	Indicates that a PCIe device detected an uncorrectable error.
<a href="#">PlatformError</a>	Warning	Indicates that a platform error occurred.
<a href="#">PlatformErrorAtLocation</a>	Warning	Indicates that a platform error occurred and device or other location information is available.
<a href="#">PlatformReset</a>	OK	Indicates that the platform reset occurred.
<a href="#">PlatformResetWatchdogTimer</a>	Warning	Indicates that the platform reset occurred due to a watchdog timer action.
<a href="#">PowerBrake</a>	Warning	Indicates that a power brake is applied to a component or equipment.
<a href="#">SecurityBypassAsserted</a>	Warning	Indicates that the 'Security Bypass' jumper or switch is currently asserted.
<a href="#">UnhandledExceptionDetectedAfterReset</a>	Critical	Indicates that an unhandled exception caused the platform to reset.
<a href="#">VoltageRegulatorFault</a>	Critical	Indicates that a voltage regulator has faulted.

### 2.14.1 DeviceAssemblyDataInaccessible

Indicates that the assembly data, historically 'FRU data', for a device is inaccessible.

- This message shall indicate that the assembly data for a device is inaccessible.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Unable to access the assembly data for device '<Arg1>'."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.2 DeviceAssemblyDataMalformed

Indicates that the assembly data, historically 'FRU data', for a device is malformed, such as due to a checksum error.

- This message shall indicate that the assembly data for a device is malformed, such as due to a checksum error.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Malformed assembly data detected for device '<Arg1>'."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.3 DeviceBootTimeout

Indicates that a device encountered a boot timeout.

- This message shall indicate that a device encountered a boot timeout.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Device '<Arg1>' encountered a boot timeout."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.4 DeviceDisabled

Indicates that a device was disabled or halted.

- This message shall indicate that a device was disabled or halted.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Device '<Arg1>' was disabled or halted."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.5 DeviceInRecovery

Indicates that a device is not operating properly and entered recovery mode to restore firmware or critical data to a state of integrity.

- This message shall indicate that a device is not operating properly and entered recovery mode, such as defined by the OCP Secure Firmware Recovery specification, to restore firmware or critical data to a state of integrity.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Device '<Arg1>' entered recovery mode due to: <Arg2>."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.
2. *string*: The reason the device entered recovery mode.
  - This argument shall contain a string that describes the reason the device entered recovery mode.

### 2.14.6 DeviceManagementInterfaceError

Indicates that the management interface for a device encountered an error.

- This message shall indicate that the management interface for a device encountered an error.

Version Added: 1.3.0

Severity: OK

Resolution: Check additional diagnostic data if available.

Message and Arguments: "The management interface for device '<Arg1>' encountered the error: <Arg2>."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.
2. *string*: The error encountered on the management interface of the device.
  - This argument shall contain a string that describes error encountered on the management interface of the device.

### 2.14.7 DeviceManagementInterfaceUnresponsive

Indicates that the management interface for a device is unresponsive.

- This message shall indicate that the management interface for a device is unresponsive.

Version Added: 1.3.0

Severity: OK

Resolution: Check additional diagnostic data if available.

Message and Arguments: "The management interface for device '<Arg1>' is unresponsive."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.8 DeviceMissing

Indicates that the device has asserted Device Missing

- This message shall be used to indicate the device has asserted Device Missing

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "The Device <Arg1> state changed to absent. "

1. *string*: Indicates the device component Id that asserted this message
  - The argument shall contain the device component Id that asserted this message

### 2.14.9 DeviceSecureBootFailure

Indicates that a device encountered a secure boot failure.

- This message shall indicate that a device encountered a secure boot failure.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Device '<Arg1>' encountered a secure boot failure."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.10 DeviceWatchdogTimeout

Indicates that a device encountered a watchdog timeout.

- This message shall indicate that a device encountered a watchdog timeout.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Device '<Arg1>' encountered a watchdog timeout."

1. *string*: The name or identifier of the device.
  - This argument shall contain a string that identifies or describes device.

### 2.14.11 MemoryContainedError

Indicates that a memory device detected an uncorrectable error, but contained it.

- This message shall indicate that a memory device detected an uncorrectable error, but contained it.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "Memory device '<Arg1>' contained an uncorrectable error."

1. *string*: The name or identifier of the memory device.

- This argument shall contain a string that identifies or describes the `Memory` resource.

### 2.14.12 MemoryRowRemappingError

Indicates that a memory device encountered a row remapping failure.

- This message shall indicate that a memory device encountered a row remapping failure.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "Memory device '<Arg1>' encountered a row remapping failure."

1. *string*: The name or identifier of the memory device.
  - This argument shall contain a string that identifies or describes the `Memory` resource.

### 2.14.13 MemoryRowRemappingPending

Indicates that row remapping is pending for a memory device.

- This message shall indicate that row remapping is pending for a memory device.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "Row remapping is pending for memory device '<Arg1>'."

1. *string*: The name or identifier of the memory device.
  - This argument shall contain a string that identifies or describes the `Memory` resource.

### 2.14.14 MemoryUncorrectableError

Indicates that a memory device detected an uncorrectable error and the error was not contained.

- This message shall indicate that a memory device detected an uncorrectable error and the error was not contained.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "Memory device '<Arg1>' detected an uncorrectable error."

1. *string*: The name or identifier of the memory device.
  - This argument shall contain a string that identifies or describes the `Memory` resource.

### 2.14.15 NVRAMClearAsserted

Indicates that the 'NVRAM Clear' jumper or switch is currently asserted.

- This message shall indicate that the 'NVRAM Clear' jumper or switch is currently asserted.

Version Added: 1.1.0

Severity: Warning

Resolution: Turn off the 'NVRAM Clear' jumper or switch.

Message and Arguments: "'NVRAM Clear' is currently on."

### 2.14.16 OperatingSystemCrash

Indicates the operating system was halted due to a catastrophic error.

- This message shall indicate that an unhandled exception caused a compute platform to crash or otherwise halt.

Version Added: 1.0.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "An operating system crash occurred."

### 2.14.17 PCIeIncorrectLinkSpeed

Indicates that a PCIe device did not train to its expected link speed.

- This message shall indicate that a PCIe device did not train to its expected link speed.

Version Added: 1.3.0



Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' did not train to its expected link speed."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.18 PCIeIncorrectLinkWidth

Indicates that a PCIe device did not train to its expected link width.

- This message shall indicate that a PCIe device did not train to its expected link width.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' did not train to its expected link width."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.19 PCIeLinkDown

Indicates that a PCIe device lost its link with the upstream interface.

- This message shall indicate that a PCIe device lost its link with the upstream interface.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' lost its link."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.20 PCIeLinkRestored

Indicates that a PCIe device restored its link with the upstream interface.

- This message shall indicate that a PCIe device restored its link with the upstream interface.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' restored its link."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.21 PCIeLinkSpeedChange

Indicates that a PCIe link speed changed at runtime.

- This message shall indicate that a PCIe link speed changed at runtime.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' detected a runtime speed change to <Arg2> Gbps."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.
2. *number*: The new link speed (Gbps).
  - This argument shall contain the new link speed (Gbps).

### 2.14.22 PCIeLinkTrainingError

Indicates that a PCIe device could not establish a link with the upstream interface.

- This message shall indicate that a PCIe device could not establish a link with the upstream interface.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' could not train its link."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.23 PCIeLinkWidthChange

Indicates that a PCIe link width changed at runtime.

- This message shall indicate that a PCIe link width changed at runtime.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' detected a runtime speed change to <Arg2> Gbps."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.
2. *number*: The new link width.
  - This argument shall contain the new link width.

### 2.14.24 PCIeUncorrectableError

Indicates that a PCIe device detected an uncorrectable error.

- This message shall indicate that a PCIe device detected an uncorrectable error.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "PCIe device '<Arg1>' detected an uncorrectable error."

1. *string*: The name or identifier of the PCIe device.
  - This argument shall contain a string that identifies or describes the `PCIeDevice` resource.

### 2.14.25 PlatformError

Indicates that a platform error occurred.

- This message shall indicate that a platform error occurred.

Version Added: 1.0.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "A platform error occurred."

### 2.14.26 PlatformErrorAtLocation

Indicates that a platform error occurred and device or other location information is available.

- This message shall indicate that a platform error occurred with specific device identification information available.

Version Added: 1.0.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "A platform error occurred at location '<Arg1>'."

1. *string*: The device description or location where the error occurred.
  - This argument shall contain a description of the device or location where the error occurred.

### 2.14.27 PlatformReset

Indicates that the platform reset occurred.

- This message shall indicate that a platform reset occurred.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "A platform performed a '<Arg1>' type of reset."

1. *string*: The type of reset that occurred.
  - This argument shall contain the type of reset that occurred. This argument shall contain one of the values of the `ResetType` enumeration from the `Resource` schema.

### 2.14.28 PlatformResetWatchdogTimer

Indicates that the platform reset occurred due to a watchdog timer action.

- This message shall indicate that a platform reset occurred due to a watchdog timer action.

Version Added: 1.2.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "A platform performed a '<Arg1>' type of reset due to watchdog timer action."

1. *string*: The type of reset that occurred.
  - This argument shall contain the type of reset that occurred. This argument shall contain one of the values of the `ResetType` enumeration from the `Resource` schema.

### 2.14.29 PowerBrake

Indicates that a power brake is applied to a component or equipment.

- This message shall indicate that a power brake is applied to a component or equipment.

Version Added: 1.3.0

Severity: Warning

Resolution: Check additional diagnostic data if available.

Message and Arguments: "A power brake is applied to '<Arg1>'."

1. *string*: The name or identifier of the component or equipment.
  - This argument shall contain a string that identifies or describes the component or equipment.

### 2.14.30 SecurityBypassAsserted

Indicates that the 'Security Bypass' jumper or switch is currently asserted.

- This message shall indicate that the 'Security Bypass' or 'Password Bypass' jumper or switch is currently asserted.

Version Added: 1.1.0

Severity: Warning

Resolution: Turn off the 'Security Bypass' jumper or switch.

Message and Arguments: "'Security Bypass' is currently on."

### 2.14.31 UnhandledExceptionDetectedAfterReset

Indicates that an unhandled exception caused the platform to reset.

- This message shall indicate that an unhandled exception caused a compute platform to reset. The exception was detected after the reset occurred.

Version Added: 1.0.0

Severity: Critical

Resolution: Check additional diagnostic data if available.

Message and Arguments: "An unhandled exception caused a platform reset."

### 2.14.32 VoltageRegulatorFault

Indicates that a voltage regulator has faulted.

- This message shall indicate that a voltage regulator has faulted.

Version Added: 1.3.0

Severity: Critical

Resolution: Check additional diagnostic data if available. Check the platform and connectors for any faults.

Message and Arguments: "Voltage regulator '<Arg1>' has faulted."

1. *string*: The name or identifier of the voltage regulator.
  - This argument shall contain a string that identifies or describes the voltage regulator.

## 2.15 Power 1.2.0

This registry defines messages related to electrical measurements and power distribution equipment.

Message	Severity	Description
<a href="#">BreakerFault</a>	Critical	Indicates that a circuit breaker has an internal fault.
<a href="#">BreakerReset</a>	OK	Indicates that a circuit breaker reset.
<a href="#">BreakerTripped</a>	Critical	Indicates that a circuit breaker tripped.
<a href="#">ChassisPoweredOff</a>	OK	Indicates that the power state of a chassis changed to off.
<a href="#">ChassisPoweredOn</a>	OK	Indicates that the power state of a chassis changed to on.
<a href="#">CircuitPoweredOff</a>	OK	Indicates that a circuit was powered off.
<a href="#">CircuitPoweredOn</a>	OK	Indicates that a circuit was powered on.
<a href="#">CurrentAboveLowerCriticalThreshold</a>	Warning	Indicates that a current reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">CurrentAboveLowerFatalThreshold</a>	Critical	Indicates that a current reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">CurrentAboveUpperCautionThreshold</a>	Warning	Indicates that a current reading is above the upper caution threshold.
<a href="#">CurrentAboveUpperCriticalThreshold</a>	Critical	Indicates that a current reading is above the upper critical threshold.
<a href="#">CurrentAboveUpperFatalThreshold</a>	Critical	Indicates that a current reading is above the upper fatal threshold.
<a href="#">CurrentBelowLowerCautionThreshold</a>	Warning	Indicates that a current reading is below the lower caution threshold.
<a href="#">CurrentBelowLowerCriticalThreshold</a>	Critical	Indicates that a current reading is below the lower critical threshold.
<a href="#">CurrentBelowLowerFatalThreshold</a>	Critical	Indicates that a current reading is below the lower fatal threshold.
<a href="#">CurrentBelowUpperCriticalThreshold</a>	Warning	Indicates that a current reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">CurrentBelowUpperFatalThreshold</a>	Critical	Indicates that a current reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">CurrentCritical</a>	Critical	Indicates that a current reading exceeds an internal critical level.
<a href="#">CurrentNoLongerCritical</a>	Warning	Indicates that a current reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">CurrentNormal</a>	OK	Indicates that a current reading is now within normal operating range.

Message	Severity	Description
<a href="#">CurrentWarning</a>	Warning	Indicates that a current reading exceeds an internal warning level.
<a href="#">FrequencyAboveLowerCriticalThreshold</a>	Warning	Indicates that a frequency reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">FrequencyAboveUpperCautionThreshold</a>	Warning	Indicates that a frequency reading is above the upper caution threshold.
<a href="#">FrequencyAboveUpperCriticalThreshold</a>	Critical	Indicates that a frequency reading is above the upper critical threshold.
<a href="#">FrequencyBelowLowerCautionThreshold</a>	Warning	Indicates that a frequency reading is below the lower caution threshold.
<a href="#">FrequencyBelowLowerCriticalThreshold</a>	Critical	Indicates that a frequency reading is below the lower critical threshold.
<a href="#">FrequencyBelowUpperCriticalThreshold</a>	Warning	Indicates that a frequency reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">FrequencyCritical</a>	Critical	Indicates that a frequency reading exceeds an internal critical level.
<a href="#">FrequencyNoLongerCritical</a>	Warning	Indicates that a frequency reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">FrequencyNormal</a>	OK	Indicates that a frequency reading is now within normal operating range.
<a href="#">FrequencyWarning</a>	Warning	Indicates that a frequency reading exceeds an internal warning level.
<a href="#">LineInputPowerFault</a>	Warning	Indicates a fault on an electrical power input.
<a href="#">LineInputPowerRestored</a>	OK	Indicates that an electrical power input was restored to normal operation.
<a href="#">LossOfInputPower</a>	Warning	Indicates a loss of power at an electrical input.
<a href="#">OutletPoweredOff</a>	OK	Indicates that an outlet was powered off.
<a href="#">OutletPoweredOn</a>	OK	Indicates that an outlet was powered on.
<a href="#">PowerAboveLowerCriticalThreshold</a>	Warning	Indicates that a power reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">PowerAboveLowerFatalThreshold</a>	Critical	Indicates that a power reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">PowerAboveUpperCautionThreshold</a>	Warning	Indicates that a power reading is above the upper caution threshold.
<a href="#">PowerAboveUpperCriticalThreshold</a>	Critical	Indicates that a power reading is above the upper critical threshold.
<a href="#">PowerAboveUpperFatalThreshold</a>	Critical	Indicates that a power reading is above the upper fatal threshold.
<a href="#">PowerBelowLowerCautionThreshold</a>	Warning	Indicates that a power reading is below the lower caution threshold.
<a href="#">PowerBelowLowerCriticalThreshold</a>	Critical	Indicates that a power reading is below the lower critical threshold.
<a href="#">PowerBelowLowerFatalThreshold</a>	Critical	Indicates that a power reading is below the lower fatal threshold.



Message	Severity	Description
<a href="#">PowerBelowUpperCriticalThreshold</a>	Warning	Indicates that a power reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">PowerBelowUpperFatalThreshold</a>	Critical	Indicates that a power reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">PowerCritical</a>	Critical	Indicates that a power reading exceeds an internal critical level.
<a href="#">PowerDistributionGroupCritical</a>	Critical	Indicates that a power distribution group has a critical status.
<a href="#">PowerDistributionGroupNormal</a>	OK	Indicates that a power distribution group has returned to normal operations.
<a href="#">PowerDistributionGroupWarning</a>	Warning	Indicates that a power distribution group has a warning status.
<a href="#">PowerNoLongerCritical</a>	Warning	Indicates that a power reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">PowerNormal</a>	OK	Indicates that a power reading is now within normal operating range.
<a href="#">PowerSupplyFailed</a>	Critical	Indicates that a power supply has failed.
<a href="#">PowerSupplyGroupCritical</a>	Critical	Indicates that a power supply group has a critical status.
<a href="#">PowerSupplyGroupNormal</a>	OK	Indicates that a power supply group has returned to normal operations.
<a href="#">PowerSupplyGroupWarning</a>	Warning	Indicates that a power supply group has a warning status.
<a href="#">PowerSupplyInserted</a>	OK	Indicates that a power supply was inserted or installed.
<a href="#">PowerSupplyPredictiveFailure</a>	Warning	Indicates that the power supply predicted a future failure condition.
<a href="#">PowerSupplyRemoved</a>	OK	Indicates that a power supply was removed.
<a href="#">PowerSupplyRestored</a>	OK	Indicates that a power supply was repaired or restored to normal operation.
<a href="#">PowerSupplyWarning</a>	Warning	Indicates that a power supply has a warning condition.
<a href="#">PowerWarning</a>	Warning	Indicates that a power reading exceeds an internal warning level.
<a href="#">VoltageAboveLowerCriticalThreshold</a>	Warning	Indicates that a voltage reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">VoltageAboveLowerFatalThreshold</a>	Critical	Indicates that a voltage reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">VoltageAboveUpperCautionThreshold</a>	Warning	Indicates that a voltage reading is above the upper caution threshold.
<a href="#">VoltageAboveUpperCriticalThreshold</a>	Critical	Indicates that a voltage reading is above the upper critical threshold.
<a href="#">VoltageAboveUpperFatalThreshold</a>	Critical	Indicates that a voltage reading is above the upper fatal threshold.
<a href="#">VoltageBelowLowerCautionThreshold</a>	Warning	Indicates that a voltage reading is below the lower caution threshold.

Message	Severity	Description
<a href="#">VoltageBelowLowerCriticalThreshold</a>	Critical	Indicates that a voltage reading is below the lower critical threshold.
<a href="#">VoltageBelowLowerFatalThreshold</a>	Critical	Indicates that a voltage reading is below the lower fatal threshold.
<a href="#">VoltageBelowUpperCriticalThreshold</a>	Warning	Indicates that a voltage reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">VoltageBelowUpperFatalThreshold</a>	Critical	Indicates that a voltage reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">VoltageCritical</a>	Critical	Indicates that a voltage reading exceeds an internal critical level.
<a href="#">VoltageNoLongerCritical</a>	Warning	Indicates that a voltage reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">VoltageNormal</a>	OK	Indicates that a voltage reading is now within normal operating range.
<a href="#">VoltageWarning</a>	Warning	Indicates that a voltage reading exceeds an internal warning level.

### 2.15.1 BreakerFault

Indicates that a circuit breaker has an internal fault.

- This message shall indicate that a fault was detected within a circuit breaker. The power state of the circuit may not be known.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the breaker hardware and replace any faulty components.

Message and Arguments: "Fault detected in breaker '<Arg1>'."

1. *string*: The name or identifier of the circuit.
  - This argument shall contain a string that identifies or describes the `Circuit` resource or the location of the circuit breaker.

### 2.15.2 BreakerReset

Indicates that a circuit breaker reset.

- This message shall indicate that a circuit breaker reset. The power state may depend on any policy applicable to the circuit or resource.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Breaker '<Arg1>' reset."

1. *string*: The name or identifier of the circuit.
  - This argument shall contain a string that identifies or describes the `Circuit` resource or the location of the circuit breaker.

### 2.15.3 BreakerTripped

Indicates that a circuit breaker tripped.

- This message shall indicate that a circuit breaker tripped due to an over-current condition or an electrical fault.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the circuit and connected devices, and disconnect or replace any faulty devices.

Message and Arguments: "Breaker '<Arg1>' has tripped."

1. *string*: The name or identifier of the circuit.
  - This argument shall contain a string that identifies or describes the `Circuit` resource or the location of the electrical fault.

### 2.15.4 ChassisPoweredOff

Indicates that the power state of a chassis changed to off.

- This message shall indicate that the value of the `PowerState` property of a `Chassis` resource changed to `off`.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "<Arg1> \<Arg2\> powered off."

1. *string*: The type or product category of the chassis.

- This argument shall contain a string that describes the chassis type or the product category of the `Chassis` resource. For some resources, the value of `ChassisType`, such as `Rack`, may provide an appropriate description, while other resources, such as servers with `ChassisType` values of `RackMount`, `StandAlone`, `Blade`, or `Sled` could all be better described as a `Server`.
- 2. *string*: The name or identifier for the chassis.
  - This argument shall contain a string that identifies or describes the `Chassis` resource.

### 2.15.5 ChassisPoweredOn

Indicates that the power state of a chassis changed to on.

- This message shall indicate that the value of the `PowerState` property of a `Chassis` resource changed to `On`.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "<Arg1> \<Arg2\> powered on."

1. *string*: The type or product category of the chassis.
  - This argument shall contain a string that describes the chassis type or the product category of the `Chassis` resource. For some resources, the value of `ChassisType`, such as `Rack`, may provide an appropriate description, while other resources, such as servers with `ChassisType` values of `RackMount`, `StandAlone`, `Blade`, or `Sled` could all be better described as a `Server`.
2. *string*: The name or identifier for the chassis.
  - This argument shall contain a string that identifies or describes the `Chassis` resource.

### 2.15.6 CircuitPoweredOff

Indicates that a circuit was powered off.

- This message shall indicate that the value of the `PowerState` property of a `Circuit` resource changed to `off`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Circuit '<Arg1>' powered off."

1. *string*: The name or identifier of the circuit.

- This argument shall contain a string that identifies or describes the `Circuit` resource.

### 2.15.7 CircuitPoweredOn

Indicates that a circuit was powered on.

- This message shall indicate that the value of the `PowerState` property of a `Circuit` resource changed to `on`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Circuit '<Arg1>' powered on."

1. *string*: The name or identifier of the circuit.
  - This argument shall contain a string that identifies or describes the `Circuit` resource.

### 2.15.8 CurrentAboveLowerCriticalThreshold

Indicates that a current reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a current reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the current violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or

`LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.9 CurrentAboveLowerFatalThreshold

Indicates that a current reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a current reading, previously below the fatal threshold, no longer violates the lower fatal threshold. However, the current violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.15.10 CurrentAboveUpperCautionThreshold

Indicates that a current reading is above the upper caution threshold.

- This message shall indicate that a current reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` OR `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.15.11 CurrentAboveUpperCriticalThreshold

Indicates that a current reading is above the upper critical threshold.

- This message shall indicate that a current reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.12 CurrentAboveUpperFatalThreshold

Indicates that a current reading is above the upper fatal threshold.

- This message shall indicate that a current reading violates an upper fatal threshold. If the reading originates from

a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.13 CurrentBelowLowerCautionThreshold

Indicates that a current reading is below the lower caution threshold.

- This message shall indicate that a current reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` OR `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or



`LowerCautionUser` properties of the `Sensor` resource.

### 2.15.14 CurrentBelowLowerCriticalThreshold

Indicates that a current reading is below the lower critical threshold.

- This message shall indicate that a current reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.15 CurrentBelowLowerFatalThreshold

Indicates that a current reading is below the lower fatal threshold.

- This message shall indicate that a current reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the current reading.

- This argument shall contain a string that identifies or describes the location or physical context of the current reading.
- 2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
- 3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.15.16 CurrentBelowUpperCriticalThreshold

Indicates that a current reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a current reading, previously above the critical threshold, no longer violates the upper critical threshold. However, the current violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.17 CurrentBelowUpperFatalThreshold

Indicates that a current reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a current reading, previously above the fatal threshold, no longer violates the upper fatal threshold. However, the current violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.18 CurrentCritical

Indicates that a current reading exceeds an internal critical level.

- This message shall indicate that a current reading violates an internal critical level. This message shall be used for current-related properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The current-related properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes exceeds the critical level."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.

### 2.15.19 CurrentNoLongerCritical

Indicates that a current reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a current reading no longer violates an internal critical level but still exceeds an internal warning level. This message shall be used for current-related properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The current-related properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes no longer exceeds the critical level."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.

### 2.15.20 CurrentNormal

Indicates that a current reading is now within normal operating range.

- This message shall indicate that a current reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes is within normal operating range."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in ampere units.
  - This argument shall contain the current in ampere units.

### 2.15.21 CurrentWarning

Indicates that a current reading exceeds an internal warning level.

- This message shall indicate that a current reading violates an internal warning level. This message shall be used for current-related properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The current-related properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Current '<Arg1>' reading of <Arg2> amperes exceeds the warning level."

1. *string*: The name or identifier of the current reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the current reading.
2. *number*: The current in amperes.
  - This argument shall contain the current in amperes.

### 2.15.22 FrequencyAboveLowerCriticalThreshold

Indicates that a frequency reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a frequency reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the frequency violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or

`LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.23 FrequencyAboveUpperCautionThreshold

Indicates that a frequency reading is above the upper caution threshold.

- This message shall indicate that a frequency reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz units.
  - This argument shall contain the frequency in hertz units.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.15.24 FrequencyAboveUpperCriticalThreshold

Indicates that a frequency reading is above the upper critical threshold.

- This message shall indicate that a frequency reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz units.
  - This argument shall contain the frequency in hertz units.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.25 FrequencyBelowLowerCautionThreshold

Indicates that a frequency reading is below the lower caution threshold.

- This message shall indicate that a frequency reading violates an lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz units.
  - This argument shall contain the frequency in hertz units.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.15.26 FrequencyBelowLowerCriticalThreshold

Indicates that a frequency reading is below the lower critical threshold.

- This message shall indicate that a frequency reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz units.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.27 FrequencyBelowUpperCriticalThreshold

Indicates that a frequency reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a frequency reading, previously above the critical threshold, no longer violates the upper critical threshold. However, the frequency violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz units.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.



### 2.15.28 FrequencyCritical

Indicates that a frequency reading exceeds an internal critical level.

- This message shall indicate that a frequency reading violates an internal critical level. This message shall be used for frequency properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The frequency properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz exceeds the critical level."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz.

### 2.15.29 FrequencyNoLongerCritical

Indicates that a frequency reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a frequency reading no longer violates an internal critical level but still exceeds an internal warning level. This message shall be used for frequency properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The frequency properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz no longer exceeds the critical level."

1. *string*: The name or identifier of the frequency reading.

- This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
- 2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz.

### 2.15.30 FrequencyNormal

Indicates that a frequency reading is now within normal operating range.

- This message shall indicate that a frequency reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz is within normal operating range."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the frequency reading.
2. *number*: The hertz frequency.
  - This argument shall contain the frequency in hertz units.

### 2.15.31 FrequencyWarning

Indicates that a frequency reading exceeds an internal warning level.

- This message shall indicate that a frequency reading violates an internal warning level. This message shall be used for frequency properties or `Sensor` resources that implement boolean trip points for a warning limit, such as from hardware mechanisms with no threshold value. The frequency properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Frequency '<Arg1>' reading of <Arg2> hertz exceeds the warning level."

1. *string*: The name or identifier of the frequency reading.
  - This argument shall contain a string that identifies or describes the location or physical context of

the frequency reading.

2. *number*: The frequency in hertz.
  - This argument shall contain the frequency in hertz.

### 2.15.32 LineInputPowerFault

Indicates a fault on an electrical power input.

- This message shall indicate that a power fault was detected at an electrical input. The equipment may not be able to produce output power.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the electrical power input and connections.

Message and Arguments: "Line input power fault at '<Arg1>'."

1. *string*: The name or identifier of the electrical input or equipment.
  - This argument shall contain a string that identifies or describes a `PowerSupply`, `Circuit`, `PowerDistribution`, or `Chassis` resource.

### 2.15.33 LineInputPowerRestored

Indicates that an electrical power input was restored to normal operation.

- This message shall indicate that an electrical power input was repaired, reconnected, or otherwise returned to normal operation.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Line input power at '<Arg1>' was restored."

1. *string*: The name or identifier of the electrical input or equipment.
  - This argument shall contain a string that identifies or describes a `PowerSupply`, `Circuit`, `PowerDistribution`, or `Chassis` resource.

### 2.15.34 LossOfInputPower

Indicates a loss of power at an electrical input.

- This message shall indicate that a loss of power was detected at an electrical input.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the electrical power input and connections.

Message and Arguments: "Loss of input power at '<Arg1>'."

1. *string*: The name or identifier of the electrical input or equipment.
  - This argument shall contain a string that identifies or describes a `PowerSupply` , `Circuit` , `PowerDistribution` , Or `Chassis` resource.

### 2.15.35 OutletPoweredOff

Indicates that an outlet was powered off.

- This message shall indicate that the value of the `PowerState` property of an `Outlet` resource changed to `Off` .

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Outlet '<Arg1>' powered off."

1. *string*: The name or identifier of the outlet.
  - This argument shall contain a string that identifies or describes the `Outlet` resource.

### 2.15.36 OutletPoweredOn

Indicates that an outlet was powered on.

- This message shall indicate that the value of the `PowerState` property of an `Outlet` resource changed to `On` .

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Outlet '<Arg1>' powered on."

1. *string*: The name or identifier of the outlet.
  - This argument shall contain a string that identifies or describes the `Outlet` resource.

### 2.15.37 PowerAboveLowerCriticalThreshold

Indicates that a power reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a power reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the power violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.38 PowerAboveLowerFatalThreshold

Indicates that a power reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a power reading, previously below the fatal threshold, no longer violates the lower fatal threshold. However, the power violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.15.39 PowerAboveUpperCautionThreshold

Indicates that a power reading is above the upper caution threshold.

- This message shall indicate that a power reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.15.40 PowerAboveUpperCriticalThreshold

Indicates that a power reading is above the upper critical threshold.

- This message shall indicate that a power reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.41 PowerAboveUpperFatalThreshold

Indicates that a power reading is above the upper fatal threshold.

- This message shall indicate that a power reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of

the power reading.

2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.42 PowerBelowLowerCautionThreshold

Indicates that a power reading is below the lower caution threshold.

- This message shall indicate that a power reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` OR `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` OR `LowerCautionUser` properties of the `Sensor` resource.

### 2.15.43 PowerBelowLowerCriticalThreshold

Indicates that a power reading is below the lower critical threshold.

- This message shall indicate that a power reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` OR `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical



Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

#### 2.15.44 PowerBelowLowerFatalThreshold

Indicates that a power reading is below the lower fatal threshold.

- This message shall indicate that a power reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

#### 2.15.45 PowerBelowUpperCriticalThreshold

Indicates that a power reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a power reading, previously above the critical threshold, no longer violates the upper critical threshold. However, the power violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

## 2.15.46 PowerBelowUpperFatalThreshold

Indicates that a power reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a power reading, previously above the fatal threshold, no longer violates the upper fatal threshold. However, the power violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.

- This argument shall contain the power in watts.
- 3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.47 PowerCritical

Indicates that a power reading exceeds an internal critical level.

- This message shall indicate that a power reading violates an internal critical level. This message shall be used for power properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The power properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts exceeds the critical level."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.

### 2.15.48 PowerDistributionGroupCritical

Indicates that a power distribution group has a critical status.

- This message shall indicate that a power distribution group is operating in a critical state.

Version Added: 1.2.0

Severity: Critical

Resolution: Check the electrical connections and power equipment related to this power distribution group.

Message and Arguments: "Power distribution group '<Arg1>' is in a critical state."

1. *string*: The name or identifier of the power distribution group.
  - This argument shall contain a string that identifies or describes the group of `PowerDistribution`

resources.

### 2.15.49 PowerDistributionGroupNormal

Indicates that a power distribution group has returned to normal operations.

- This message shall indicate that a power distribution group has returned to a normal operating state.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "Power distribution group '<Arg1>' is operating normally."

1. *string*: The name or identifier of the power distribution group.
  - This argument shall contain a string that identifies or describes the group of `PowerDistribution` resources.

### 2.15.50 PowerDistributionGroupWarning

Indicates that a power distribution group has a warning status.

- This message shall indicate that a power distribution group is operating with a warning status or in a non-redundant state due to a fault or a change in configuration.

Version Added: 1.2.0

Severity: Warning

Resolution: Check the electrical connections and power equipment related to this power distribution group.

Message and Arguments: "Power distribution group '<Arg1>' is in a warning state."

1. *string*: The name or identifier of the power distribution group.
  - This argument shall contain a string that identifies or describes the group of `PowerDistribution` resources.

### 2.15.51 PowerNoLongerCritical

Indicates that a power reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a power reading no longer violates an internal critical level but still exceeds an

internal warning level. This message shall be used for power properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The power properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts no longer exceeds the critical level."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.

## 2.15.52 PowerNormal

Indicates that a power reading is now within normal operating range.

- This message shall indicate that a power reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts is within normal operating range."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.

## 2.15.53 PowerSupplyFailed

Indicates that a power supply has failed.

- This message shall indicate that a power supply has failed.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the power supply hardware and replace any faulty component.

Message and Arguments: "Power supply '<Arg1>' has failed."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.

### 2.15.54 PowerSupplyGroupCritical

Indicates that a power supply group has a critical status.

- This message shall indicate that a power supply group is operating in a critical state.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Power supply group '<Arg1>' is in a critical state."

1. *string*: The name or identifier of the power supply group.
  - This argument shall contain a string that identifies or describes the group of `PowerSupply` resources.

### 2.15.55 PowerSupplyGroupNormal

Indicates that a power supply group has returned to normal operations.

- This message shall indicate that a power supply group has returned to a normal operating state.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Power supply group '<Arg1>' is operating normally."

1. *string*: The name or identifier of the power supply group.
  - This argument shall contain a string that identifies or describes the group of `PowerSupply`

resources.

### 2.15.56 PowerSupplyGroupWarning

Indicates that a power supply group has a warning status.

- This message shall indicate that a power supply group is operating with a warning status or in a non-redundant state due to a fault or a change in configuration.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "Power supply group '<Arg1>' is in a warning state."

1. *string*: The name or identifier of the power supply group.
  - This argument shall contain a string that identifies or describes the group of `PowerSupply` resources.

### 2.15.57 PowerSupplyInserted

Indicates that a power supply was inserted or installed.

- This message shall indicate that a power supply was inserted or installed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Power supply '<Arg1>' was inserted."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.

### 2.15.58 PowerSupplyPredictiveFailure

Indicates that the power supply predicted a future failure condition.

- This message shall indicate a power supply predicted a future failure condition, but the power supply remains functional.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the power supply hardware and replace any faulty component.

Message and Arguments: "Power supply '<Arg1>' has a predicted failure condition."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.

### 2.15.59 PowerSupplyRemoved

Indicates that a power supply was removed.

- This message shall indicate that a power supply was removed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Power supply '<Arg1>' was removed."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.

### 2.15.60 PowerSupplyRestored

Indicates that a power supply was repaired or restored to normal operation.

- This message shall indicate that a power supply was repaired, replaced, or otherwise returned to normal operation.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Power supply '<Arg1>' was restored."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.



### 2.15.61 PowerSupplyWarning

Indicates that a power supply has a warning condition.

- This message shall indicate that a power supply has a warning condition but continues to supply output power.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the power supply hardware and replace any faulty component.

Message and Arguments: "Power supply '<Arg1>' has a warning condition."

1. *string*: The name or identifier of the power supply.
  - This argument shall contain a string that identifies or describes the `PowerSupply` resource.

### 2.15.62 PowerWarning

Indicates that a power reading exceeds an internal warning level.

- This message shall indicate that a power reading violates an internal warning level. This message shall be used for power properties or `Sensor` resources that implement boolean trip points for a warning limit, such as from hardware mechanisms with no threshold value. The power properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Power '<Arg1>' reading of <Arg2> watts exceeds the warning level."

1. *string*: The name or identifier of the power reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the power reading.
2. *number*: The power in watts.
  - This argument shall contain the power in watts.

### 2.15.63 VoltageAboveLowerCriticalThreshold

Indicates that a voltage reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that a voltage reading, previously below the lower critical threshold, no longer violates the lower critical threshold. However, the voltage violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is now above the <Arg3> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.64 VoltageAboveLowerFatalThreshold

Indicates that a voltage reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that a voltage reading, previously below the fatal threshold, no longer violates the lower fatal threshold. However, the voltage violates at least one lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is now above the <Arg3> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.15.65 VoltageAboveUpperCautionThreshold

Indicates that a voltage reading is above the upper caution threshold.

- This message shall indicate that a voltage reading violates an upper caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperCaution` OR `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is above the <Arg3> upper caution threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.15.66 VoltageAboveUpperCriticalThreshold

Indicates that a voltage reading is above the upper critical threshold.

- This message shall indicate that a voltage reading violates an upper critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of

the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is above the <Arg3> upper critical threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

## 2.15.67 VoltageAboveUpperFatalThreshold

Indicates that a voltage reading is above the upper fatal threshold.

- This message shall indicate that a voltage reading violates an upper fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is above the <Arg3> upper fatal threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.68 VoltageBelowLowerCautionThreshold

Indicates that a voltage reading is below the lower caution threshold.

- This message shall indicate that a voltage reading violates a lower caution threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is below the <Arg3> lower caution threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.15.69 VoltageBelowLowerCriticalThreshold

Indicates that a voltage reading is below the lower critical threshold.

- This message shall indicate that a voltage reading violates a lower critical threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is below the <Arg3> lower critical threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of

the voltage reading.

2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.15.70 VoltageBelowLowerFatalThreshold

Indicates that a voltage reading is below the lower fatal threshold.

- This message shall indicate that a voltage reading violates a lower fatal threshold. If the reading originates from a `Sensor` resource, the message shall indicate that the value of the `Reading` property is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in `OriginOfCondition`.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is below the <Arg3> lower fatal threshold."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.15.71 VoltageBelowUpperCriticalThreshold

Indicates that a voltage reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that a voltage reading, previously above the critical threshold, no longer violates the upper critical threshold. However, the voltage violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is now below the <Arg3> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.15.72 VoltageBelowUpperFatalThreshold

Indicates that a voltage reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that a voltage reading, previously above the fatal threshold, no longer violates the upper fatal threshold. However, the voltage violates at least one upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is now below the <Arg3> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.
3. *number*: The threshold value.
  - This argument shall contain the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.15.73 VoltageCritical

Indicates that a voltage reading exceeds an internal critical level.

- This message shall indicate that a voltage reading violates an internal critical level. This message shall be used for voltage properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The voltage properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts exceeds the critical level."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.

### 2.15.74 VoltageNoLongerCritical

Indicates that a voltage reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that a voltage reading no longer violates an internal critical level but still violates an internal warning level. This message shall be used for voltage properties or `Sensor` resources that implement boolean trip points for a critical limit, such as from hardware mechanisms with no threshold value. The voltage properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts no longer exceeds the critical level."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.



2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.

### 2.15.75 VoltageNormal

Indicates that a voltage reading is now within normal operating range.

- This message shall indicate that a voltage reading has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts is within normal operating range."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.
  - This argument shall contain the voltage in volts.

### 2.15.76 VoltageWarning

Indicates that a voltage reading exceeds an internal warning level.

- This message shall indicate that a voltage reading violates an internal warning level. This message shall be used for voltage properties or `Sensor` resources that implement boolean trip points for a caution limit, such as from hardware mechanisms with no threshold value. The voltage properties or `Sensor` resources may contain readable thresholds that coexist with this unspecified trip point.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resource listed in OriginOfCondition.

Message and Arguments: "Voltage '<Arg1>' reading of <Arg2> volts exceeds the warning level."

1. *string*: The name or identifier of the voltage reading.
  - This argument shall contain a string that identifies or describes the location or physical context of the voltage reading.
2. *number*: The voltage in volts.

- This argument shall contain the voltage in volts.

## 2.16 ResourceEvent 1.4.3

This registry defines the messages to use for resource events.

Message	Severity	Description
<a href="#">AggregationSourceDiscovered</a>	OK	Indicates that a new aggregation source was discovered.
<a href="#">LicenseAdded</a>	OK	Indicates that a license was added.
<a href="#">LicenseChanged</a>	Warning	Indicates that a license has changed.
<a href="#">LicenseExpired</a>	Warning	Indicates that a license has expired.
<a href="#">PropertyValueModifiedByClient</a>	OK	Indicates that the value of a property was modified by a client.
<a href="#">ResourceChanged</a>	OK	Indicates that one or more resource properties have changed. This is not used whenever there is another event message for that specific change, such as when only the state has changed.
<a href="#">ResourceCreated</a>	OK	Indicates that all conditions of a successful creation operation were met.
<a href="#">ResourceErrorThresholdCleared</a>	OK	Indicates that a specified resource property has cleared its error threshold. Examples of this are drive I/O errors or network link errors.
<a href="#">ResourceErrorThresholdExceeded</a>	Critical	Indicates that a specified resource property has exceeded its error threshold. Examples of this are drive I/O errors or network link errors.
<a href="#">ResourceErrorsCorrected</a>	OK	Indicates that a specified resource property has corrected errors. Examples of this are drive I/O errors or network link errors.
<a href="#">ResourceErrorsDetected</a>	Warning	Indicates that a specified resource property has detected errors. Examples of this are drive I/O errors or network link errors.
<a href="#">ResourcePaused</a>	OK	Indicates that the power state of a resource has changed to paused.
<a href="#">ResourcePoweredOff</a>	OK	Indicates that the power state of a resource has changed to powered off.
<a href="#">ResourcePoweredOn</a>	OK	Indicates that the power state of a resource has changed to powered on.
<a href="#">ResourcePoweringOff</a>	OK	Indicates that the power state of a resource has changed to powering off.
<a href="#">ResourcePoweringOn</a>	OK	Indicates that the power state of a resource has changed to powering on.
<a href="#">ResourceRemoved</a>	OK	Indicates that all conditions of a successful remove operation were met.
<a href="#">ResourceSelfTestCompleted</a>	OK	Indicates that a self-test has completed.

Message	Severity	Description
<a href="#">ResourceSelfTestFailed</a>	Critical	Indicates that a self-test has failed. Suggested resolution may be provided as OEM data.
<a href="#">ResourceStateChanged</a>	OK	Indicates that the state of a resource has changed.
<a href="#">ResourceStatusChangedCritical</a>	Critical	Indicates that the health of a resource has changed to Critical.
<a href="#">ResourceStatusChangedOK</a>	OK	Indicates that the health of a resource has changed to OK.
<a href="#">ResourceStatusChangedWarning</a>	Warning	Indicates that the health of a resource has changed to Warning.
<a href="#">ResourceVersionIncompatible</a>	Warning	Indicates that an incompatible version of software was detected. Examples of this are after a component or system-level software update.
<a href="#">ResourceWarningThresholdCleared</a>	OK	Indicates that a specified resource property has cleared its warning threshold. Examples of this are drive I/O errors or network link errors. Suggested resolution may be provided as OEM data.
<a href="#">ResourceWarningThresholdExceeded</a>	Warning	Indicates that a specified resource property has exceeded its warning threshold. Examples of this are drive I/O errors or network link errors. Suggested resolution may be provided as OEM data.
<a href="#">TestMessage</a>	OK	A test message used to validate event delivery mechanisms.
<a href="#">URIForResourceChanged</a>	OK	Indicates that the URI for a resource has changed. Examples of this are physical component replacement or redistribution.

### 2.16.1 AggregationSourceDiscovered

Indicates that a new aggregation source was discovered.

- This message shall indicate an aggregation source was discovered in the network or host. The `OriginOfCondition` property shall contain a link to the matching `ConnectionMethod` resource, if known.

Version Added: 1.2.0

Severity: OK

Resolution: The aggregation source is available to the service and can be identified using the identified connection method.

Message and Arguments: "An aggregation source of connection method '<Arg1>' located at '<Arg2>' was discovered."

- string*: The connection method of the discovered aggregation source.
  - This argument shall contain a value from the `ConnectionMethodType` enumeration defined in the

`ConnectionMethod` schema that describes connection method of the discovered aggregation source.

2. *string*: The location of the discovered aggregation source, such as an IP address or service entry point.
  - This argument shall contain the location of the discovered aggregation source, such as an IP address or service entry point.

### 2.16.2 LicenseAdded

Indicates that a license was added.

- This message shall indicate that a license was added.

Version Added: 1.0.0

Severity: OK

Resolution: See vendor specific instructions for specific actions.

Message and Arguments: "A license for '<Arg1>' was added. The following message was returned: '<Arg2>'."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant resource or service affected by the software license.
2. *string*: The message returned from the license validation process.
  - This argument shall contain the message returned from the license validation process or software.

### 2.16.3 LicenseChanged

Indicates that a license has changed.

- This message shall indicate that a license has changed.

Version Added: 1.0.0

Severity: Warning

Resolution: See vendor specific instructions for specific actions.

Message and Arguments: "A license for '<Arg1>' has changed. The following message was returned: '<Arg2>'."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant resource or service affected by the software license.

2. *string*: The message returned from the license validation process.
  - This argument shall contain the message returned from the license validation process or software.

### 2.16.4 LicenseExpired

Indicates that a license has expired.

- This message shall indicate that a license has expired.

Version Added: 1.0.0

Severity: Warning

Resolution: See vendor specific instructions for specific actions.

Message and Arguments: "A license for '<Arg1>' has expired. The following message was returned: '<Arg2>'."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant resource or service affected by the software license.
2. *string*: The message returned from the license validation process.
  - This argument shall contain the message returned from the license validation process or software.

### 2.16.5 PropertyValueModifiedByClient

Indicates that the value of a property was modified by a client.

- This message shall indicate that the value of a property was modified by a client. For example, DHCPEnabled property was assigned the value `true` by a client.

Version Added: 1.4.0

Severity: OK

Resolution: No resolution is required.

Message and Arguments: "The property <Arg1> was assigned the value '<Arg2>' due to modification by a client."

1. *string*: The name of the property.
  - This argument shall contain the name of the property. The value should follow RFC6901-defined JSON pointer notation rules.
2. *string*: The value assigned for property.
  - This argument shall contain the value assigned for property.

### 2.16.6 ResourceChanged

Indicates that one or more resource properties have changed. This is not used whenever there is another event message for that specific change, such as when only the state has changed.

- This message shall indicate that one or more resource properties have changed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "One or more resource properties have changed."

### 2.16.7 ResourceCreated

Indicates that all conditions of a successful creation operation were met.

- This message shall indicate that all conditions of a successful creation operation were met.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource was created successfully."

### 2.16.8 ResourceErrorThresholdCleared

Indicates that a specified resource property has cleared its error threshold. Examples of this are drive I/O errors or network link errors.

- This message shall indicate that a specified resource property has cleared its error threshold.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource property <Arg1> has cleared the error threshold of value <Arg2>."

1. *string*: The name of the property.
  - This argument shall contain the name of the relevant property from a Redfish resource.
2. *number*: The value of the threshold.
  - This argument shall contain the value of the relevant error threshold.

### 2.16.9 ResourceErrorThresholdExceeded

Indicates that a specified resource property has exceeded its error threshold. Examples of this are drive I/O errors or network link errors.

- This message shall indicate that a specified resource property has exceeded its error threshold.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "The resource property <Arg1> has exceeded error threshold of value <Arg2>."

1. *string*: The name of the property.
  - This argument shall contain the name of the relevant property from a Redfish resource.
2. *number*: The value of the threshold.
  - This argument shall contain the value of the relevant error threshold.

### 2.16.10 ResourceErrorsCorrected

Indicates that a specified resource property has corrected errors. Examples of this are drive I/O errors or network link errors.

- This message shall indicate that a specified resource property has corrected errors.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource property <Arg1> has corrected errors of type '<Arg2>'."

1. *string*: The name of the property.
  - This argument shall contain the name of the relevant property from a Redfish resource.
2. *string*: The type of error encountered.
  - This argument shall contain a description of the type of error encountered.

### 2.16.11 ResourceErrorsDetected

Indicates that a specified resource property has detected errors. Examples of this are drive I/O errors or network link errors.

- This message shall indicate that a specified resource property has detected errors.

Version Added: 1.0.0

Severity: Warning

Resolution: Resolution is dependent upon error type.

Message and Arguments: "The resource property <Arg1> has detected errors of type '<Arg2>'."

1. *string*: The name of the property.
  - This argument shall contain the name of the relevant property from a Redfish resource.
2. *string*: The type of error encountered.
  - This argument shall contain a description of the type of error encountered.

### 2.16.12 ResourcePaused

Indicates that the power state of a resource has changed to paused.

- This message shall indicate that the value of the PowerState property of a resource has changed to **Paused**.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource '<Arg1>' was paused."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.

### 2.16.13 ResourcePoweredOff

Indicates that the power state of a resource has changed to powered off.

- This message shall indicate that the value of the PowerState property of a resource has changed to **off**.



Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource '<Arg1>' has powered off."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.

### 2.16.14 ResourcePoweredOn

Indicates that the power state of a resource has changed to powered on.

- This message shall indicate that the value of the PowerState property of a resource has changed to `on`.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource '<Arg1>' has powered on."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.

### 2.16.15 ResourcePoweringOff

Indicates that the power state of a resource has changed to powering off.

- This message shall indicate that the value of the PowerState property of a resource has changed to `PoweringOff`. This message should not be used if the PowerState transition to `off` will occur immediately.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource '<Arg1>' is powering off."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.

### 2.16.16 ResourcePoweringOn

Indicates that the power state of a resource has changed to powering on.

- This message shall indicate that the value of the PowerState property of a resource has changed to `PoweringOn`. This message should not be used if the PowerState transition to `on` will occur immediately.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource '<Arg1>' is powering on."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.

### 2.16.17 ResourceRemoved

Indicates that all conditions of a successful remove operation were met.

- This message shall indicate that all conditions of a successful remove operation were met.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource was removed successfully."

### 2.16.18 ResourceSelfTestCompleted

Indicates that a self-test has completed.

- This message shall indicate that a self-test has completed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A self-test has completed."

### 2.16.19 ResourceSelfTestFailed

Indicates that a self-test has failed. Suggested resolution may be provided as OEM data.

- This message shall indicate that a self-test has failed.

Version Added: 1.0.0

Severity: Critical

Resolution: See vendor specific instructions for specific actions.

Message and Arguments: "A self-test has failed. The following message was returned: '<Arg1>'."

1. *string*: The self-test error message.
  - This argument shall contain the error message received as a result from the self-test.

### 2.16.20 ResourceStateChanged

Indicates that the state of a resource has changed.

- This message shall indicate that the value of the State property of a resource has changed.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The state of resource '<Arg1>' has changed to <Arg2>."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.
2. *string*: The state of the resource.
  - This argument shall contain the value of the `State` property for the relevant Redfish resource. The values shall be used from the definition of the `State` enumeration in the `Resource` schema.

### 2.16.21 ResourceStatusChangedCritical

Indicates that the health of a resource has changed to Critical.

- This message shall indicate that the health of a resource has changed to Critical.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "The health of resource '<Arg1>' has changed to <Arg2>."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.
2. *string*: The state of the resource.
  - This argument shall contain the value of the `Health` property for the relevant Redfish resource. The values shall be used from the definition of the `Health` enumeration in the `Resource` schema.

## 2.16.22 ResourceStatusChangedOK

Indicates that the health of a resource has changed to OK.

- This message shall indicate that the health of a resource has changed to OK.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of resource '<Arg1>' has changed to <Arg2>."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.
2. *string*: The state of the resource.
  - This argument shall contain the value of the `Health` property for the relevant Redfish resource. The values shall be used from the definition of the `Health` enumeration in the `Resource` schema.

## 2.16.23 ResourceStatusChangedWarning

Indicates that the health of a resource has changed to Warning.

- This message shall indicate that the health of a resource has changed to Warning.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The health of resource '<Arg1>' has changed to <Arg2>."

1. *string*: The relevant resource.
  - This argument shall contain the name of the relevant Redfish resource.
2. *string*: The state of the resource.
  - This argument shall contain the value of the `Health` property for the relevant Redfish resource. The values shall be used from the definition of the `Health` enumeration in the `Resource` schema.

## 2.16.24 ResourceVersionIncompatible

Indicates that an incompatible version of software was detected. Examples of this are after a component or system-level software update.

- This message shall indicate that an incompatible version of software was detected.

Version Added: 1.0.0

Severity: Warning

Resolution: Compare the version of the resource with the compatible version of the software.

Message and Arguments: "An incompatible version of software '<Arg1>' was detected."

1. *string*: The name of the software component.
  - This argument shall contain the name of the relevant software component or package. This might include both name and version information.

## 2.16.25 ResourceWarningThresholdCleared

Indicates that a specified resource property has cleared its warning threshold. Examples of this are drive I/O errors or network link errors. Suggested resolution may be provided as OEM data.

- This message shall indicate that a specified resource property has cleared its warning threshold.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The resource property <Arg1> has cleared the warning threshold of value <Arg2>."

1. *string*: The name of the property.

- This argument shall contain the name of the relevant property from a Redfish resource.
- 2. *number*: The value of the threshold.
  - This argument shall contain the value of the relevant error threshold.

### 2.16.26 ResourceWarningThresholdExceeded

Indicates that a specified resource property has exceeded its warning threshold. Examples of this are drive I/O errors or network link errors. Suggested resolution may be provided as OEM data.

- This message shall indicate that a specified resource property has exceeded its warning threshold.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The resource property <Arg1> has exceeded its warning threshold of value <Arg2>."

1. *string*: The name of the property.
  - This argument shall contain the name of the relevant property from a Redfish resource.
2. *number*: The value of the threshold.
  - This argument shall contain the value of the relevant error threshold.

### 2.16.27 TestMessage

A test message used to validate event delivery mechanisms.

- This message shall indicate a test of an event delivery mechanism, such as the creation of a LogEntry resource or an event transmission.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Test message."

### 2.16.28 URIForResourceChanged

Indicates that the URI for a resource has changed. Examples of this are physical component replacement or redistribution.

- This message shall indicate that the URI for a resource has changed.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The URI for the resource has changed."

## 2.17 SensorEvent 1.1.0

This registry defines messages used for general events related to Sensor resources.

Message	Severity	Description
<a href="#">InvalidSensorReading</a>	Warning	Indicates that the service received an invalid reading from a sensor.
<a href="#">ReadingAboveLowerCriticalThreshold</a>	Warning	Indicates that a sensor reading is no longer below the lower critical threshold but is still outside of normal operating range.
<a href="#">ReadingAboveLowerFatalThreshold</a>	Critical	Indicates that a sensor reading is no longer below the lower fatal threshold but is still outside of normal operating range.
<a href="#">ReadingAboveUpperCautionThreshold</a>	Warning	Indicates that a sensor reading is above the upper caution threshold.
<a href="#">ReadingAboveUpperCriticalThreshold</a>	Critical	Indicates that a sensor reading is above the upper critical threshold.
<a href="#">ReadingAboveUpperFatalThreshold</a>	Critical	Indicates that a sensor reading is above the upper fatal threshold.
<a href="#">ReadingBelowLowerCautionThreshold</a>	Warning	Indicates that a sensor reading is below the lower caution threshold.
<a href="#">ReadingBelowLowerCriticalThreshold</a>	Critical	Indicates that a sensor reading is below the lower critical threshold.
<a href="#">ReadingBelowLowerFatalThreshold</a>	Critical	Indicates that a sensor reading is below the lower fatal threshold.
<a href="#">ReadingBelowUpperCriticalThreshold</a>	Warning	Indicates that a sensor reading is no longer above the upper critical threshold but is still outside of normal operating range.
<a href="#">ReadingBelowUpperFatalThreshold</a>	Critical	Indicates that a sensor reading is no longer above the upper fatal threshold but is still outside of normal operating range.
<a href="#">ReadingCritical</a>	Critical	Indicates that a sensor reading exceeds an internal critical level.
<a href="#">ReadingNoLongerCritical</a>	Warning	Indicates that a sensor reading no longer exceeds an internal critical level but still exceeds an internal warning level.
<a href="#">ReadingWarning</a>	Warning	Indicates that a sensor reading exceeds an internal warning level.
<a href="#">SensorConnected</a>	OK	Indicates that an external sensor was connected.

Message	Severity	Description
<a href="#">SensorDisconnected</a>	Warning	Indicates that an external sensor was disconnected.
<a href="#">SensorFailure</a>	Warning	Indicates that the service cannot communicate with a sensor or detected a failure.
<a href="#">SensorReadingNormalRange</a>	OK	Indicates that a sensor reading is now within normal operating range.
<a href="#">SensorRestored</a>	OK	Indicates that a sensor was repaired or communications were restored. It may also indicate that the service is receiving valid data from a sensor.

### 2.17.1 InvalidSensorReading

Indicates that the service received an invalid reading from a sensor.

- This message shall indicate that the service received invalid data while attempting to update the value of the `Reading` property in a `Sensor` resource.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the sensor hardware or connection.

Message and Arguments: "Invalid reading received from sensor '<Arg1>'."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.

### 2.17.2 ReadingAboveLowerCriticalThreshold

Indicates that a sensor reading is no longer below the lower critical threshold but is still outside of normal operating range.

- This message shall indicate that the value of the `Reading` in a `Sensor` resource, previously below the threshold, is now above the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties. However, the value of the `Reading` property is still below at least one `Reading` property of another lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in `RelatedItem`.



Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is now above the <Arg4> lower critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerCritical` Or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.17.3 ReadingAboveLowerFatalThreshold

Indicates that a sensor reading is no longer below the lower fatal threshold but is still outside of normal operating range.

- This message shall indicate that the value of the `Reading` in a `Sensor` resource, previously below the threshold, is now above the value of the `Reading` property within the `LowerFatal` property. However, the value of the `Reading` property is still below at least one `Reading` property of another lower threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is now above the <Arg4> lower fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.

- This argument shall contain a number that equals the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.17.4 ReadingAboveUpperCautionThreshold

Indicates that a sensor reading is above the upper caution threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is above the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in `RelatedItem`.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is above the <Arg4> upper caution threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperCaution` or `UpperCautionUser` properties of the `Sensor` resource.

### 2.17.5 ReadingAboveUpperCriticalThreshold

Indicates that a sensor reading is above the upper critical threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is above the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in `RelatedItem`.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is above the <Arg4> upper critical threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperCritical` or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.17.6 ReadingAboveUpperFatalThreshold

Indicates that a sensor reading is above the upper fatal threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is above the value of the `Reading` property within the `UpperFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is above the <Arg4> upper fatal threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.17.7 ReadingBelowLowerCautionThreshold

Indicates that a sensor reading is below the lower caution threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is below the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is below the <Arg4> lower caution threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerCaution` or `LowerCautionUser` properties of the `Sensor` resource.

### 2.17.8 ReadingBelowLowerCriticalThreshold

Indicates that a sensor reading is below the lower critical threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is below the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is below the <Arg4> lower critical threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerCritical` or `LowerCriticalUser` properties of the `Sensor` resource.

### 2.17.9 ReadingBelowLowerFatalThreshold

Indicates that a sensor reading is below the lower fatal threshold.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource is below the value of the `Reading` property within the `LowerFatal` property.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is below the <Arg4> lower fatal threshold."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerFatal` property of the `Sensor` resource.

### 2.17.10 ReadingBelowUpperCriticalThreshold

Indicates that a sensor reading is no longer above the upper critical threshold but is still outside of normal operating range.

- This message shall indicate that the value of the `Reading` in a `Sensor` resource, previously above the threshold, is now below the value of the `Reading` property within the `UpperCritical` Or `UpperCriticalUser` properties. However, the value of the `Reading` property is still above at least one `Reading` property of another upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in `RelatedItem`.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is now below the <Arg4> upper critical threshold but remains outside of normal range."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperCritical` Or `UpperCriticalUser` properties of the `Sensor` resource.

### 2.17.11 ReadingBelowUpperFatalThreshold

Indicates that a sensor reading is no longer above the upper fatal threshold but is still outside of normal operating range.

- This message shall indicate that the value of the `Reading` in a `Sensor` resource, previously above the threshold, is now below the value of the `Reading` property within the `UpperFatal` property. However, the value of the `Reading` property is still above at least one `Reading` property of another upper threshold and is not within the normal operating range.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in `RelatedItem`.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is now below the <Arg4> upper fatal threshold but remains outside of normal range."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.
4. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperFatal` property of the `Sensor` resource.

### 2.17.12 ReadingCritical

Indicates that a sensor reading exceeds an internal critical level.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource exceeds the value of an internal critical level. This message shall be used for `Sensor` resources that do not contain readable critical threshold values, such as boolean trip points or similar hardware mechanisms. This message shall not be used if the `Reading` property within a corresponding critical threshold is available.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) exceeds the critical level."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.

### 2.17.13 ReadingNoLongerCritical

Indicates that a sensor reading no longer exceeds an internal critical level but still exceeds an internal warning level.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource no longer exceeds the

value of an internal critical level, but the value still exceeds an internal warning level. This message shall be used for `Sensor` resources that do not contain readable critical threshold values, such as boolean trip points or similar hardware mechanisms. This message shall not be used if the `Reading` property within a corresponding critical threshold is available.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) no longer exceeds the critical level."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.

## 2.17.14 ReadingWarning

Indicates that a sensor reading exceeds an internal warning level.

- This message shall indicate that the value of the `Reading` property in a `Sensor` resource exceeds the value of an internal warning level. This message shall be used for `Sensor` resources that do not contain readable caution threshold values, such as boolean trip points or similar hardware mechanisms. This message shall not be used if the `Reading` property within a corresponding caution threshold is available.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the resources listed in RelatedItem.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) exceeds the warning level."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.



3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.

### 2.17.15 SensorConnected

Indicates that an external sensor was connected.

- This message shall indicate that an external sensor was connected.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Sensor '<Arg1>' was connected."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.

### 2.17.16 SensorDisconnected

Indicates that an external sensor was disconnected.

- This message shall indicate that an external sensor was disconnected.

Version Added: 1.1.0

Severity: Warning

Resolution: Check the sensor connection or re-connect the sensor.

Message and Arguments: "Sensor '<Arg1>' was disconnected."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.

### 2.17.17 SensorFailure

Indicates that the service cannot communicate with a sensor or detected a failure.

- This message shall indicate that the service is unable to communicate with a sensor or otherwise detected a fault condition with the sensor.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the sensor hardware or connection.

Message and Arguments: "Sensor '<Arg1>' failed."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.

### 2.17.18 SensorReadingNormalRange

Indicates that a sensor reading is now within normal operating range.

- This message shall indicate that the value of the `Reading` property within a `Sensor` resource has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Sensor '<Arg1>' reading of <Arg2> (<Arg3>) is within normal operating range."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.
2. *number*: The reading of the sensor.
  - This argument shall contain a number that equals the value of the `Reading` property of the `Sensor` resource.
3. *string*: The reading units of measure.
  - This argument shall contain a string that equals the value of the `ReadingUnits` property of the `Sensor` resource. Unitless readings should use `count`.

### 2.17.19 SensorRestored

Indicates that a sensor was repaired or communications were restored. It may also indicate that the service is receiving valid data from a sensor.

- This message shall indicate that the service is able to communicate with a sensor that had previously failed, or the sensor was repaired or replaced.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Sensor '<Arg1>' was restored."

1. *string*: The name or identifier of the sensor.
  - This argument shall contain a string that identifies or describes the `Sensor` resource.

## 2.18 ServiceCommunications 1.0.1

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This registry defines messages to be used by a service to indicate communication problems with clients or other services.

Message	Severity	Description
<a href="#">ConnectionRefused</a>	Critical	Indicates that a connection to the remote service was refused.
<a href="#">ConnectionTimeout</a>	Critical	Indicates that a connection to the remote service timed out.
<a href="#">HTTPFailure</a>	Critical	Indicates that an HTTP failure code was returned.
<a href="#">NameResolutionFailure</a>	Critical	Indicates that DNS or other name resolution failed on the indicated name.

### 2.18.1 ConnectionRefused

Indicates that a connection to the remote service was refused.

- This message shall indicate that a connection to the remote service was refused.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the settings on the remote service or the port settings.

Message and Arguments: "The connection to '<Arg1>:<Arg2>' was refused."

1. *string*: The network name of the service that refused the connection.
  - This argument shall contain the network name of the remote service that refused the connection.
2. *number*: The port number that was refused.
  - This argument shall contain the port number that was refused.

### 2.18.2 ConnectionTimeout

Indicates that a connection to the remote service timed out.

- This message shall indicate that a connection to the remote service timed out.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the settings on the remote service or the port settings.

Message and Arguments: "The connection to '<Arg1>:<Arg2>' timed out."

1. *string*: The network name of the service that timed out.
  - This argument shall contain the network name of the remote service that timed out.
2. *number*: The port number that timed out.
  - This argument shall contain the port number that timed out.

### 2.18.3 HTTPFailure

Indicates that an HTTP failure code was returned.

- This message shall indicate that an HTTP failure code was returned.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the payload settings and the remote service for errors.

Message and Arguments: "Received HTTP status code <Arg1> from '<Arg2>'."

1. *number*: The HTTP status code that was returned.
  - This argument shall contain the HTTP status code indicating an error that was returned. This argument should contain a value in the 4xx or 5xx range.
2. *string*: The network name of the service that returned the status code.
  - This argument shall contain the network name of the remote service that returned the status code.

### 2.18.4 NameResolutionFailure

Indicates that DNS or other name resolution failed on the indicated name.

- This message shall indicate that DNS or other name resolution failed on the indicated name.

Version Added: 1.0.0

Severity: Critical

Resolution: Check your name server settings or the name provided.

Message and Arguments: "There was an error resolving the name '<Arg1>'."

1. *string*: The network name that could not be resolved.
  - This argument shall contain the network name of the remote service that could not be resolved.

## 2.19 StorageDevice 1.5.1

This registry defines the messages for storage devices.

Message	Severity	Description
BatteryCharging	Warning	A battery charging condition was detected.
BatteryFailure	Critical	A battery failure condition was detected.
BatteryMissing	Critical	A battery missing condition was detected.
BatteryOK	OK	The health of a battery has changed to OK.
BlockSecurityIDFailed	Warning	The TCG-defined command to block establishment of a security ID failed.
BlockSecurityIDIssued	OK	The TCG-defined command to block establishment of a security ID was issued.
BlockSecurityIDRemoved	OK	TCG-defined commands to block establishment of a security ID are no longer being sent to a drive.
ControllerDegraded	Warning	A storage controller degraded condition was detected.
ControllerFailure	Critical	A storage controller failure was detected.
ControllerOK	OK	The storage controller health has changed to OK.
ControllerPasswordAccepted	OK	The storage controller password was entered.
ControllerPasswordRequired	Critical	The storage controller requires a password.
ControllerPortDegraded	Warning	A controller port degraded condition was detected.
ControllerPortFailure	Critical	A controller port failure condition was detected.
ControllerPortOK	OK	The health of a controller port has changed to OK.

Message	Severity	Description
<a href="#">ControllerPreviousError</a>	Warning	A storage controller error was detected prior to reboot.
<a href="#">DriveFailure</a>	Critical	A drive failure condition was detected.
<a href="#">DriveFailureCleared</a>	OK	A previously detected failure condition on a drive was cleared.
<a href="#">DriveInserted</a>	OK	A drive was inserted.
<a href="#">DriveMissing</a>	Critical	A drive missing condition was detected.
<a href="#">DriveMissingCleared</a>	OK	A previous drive missing condition was cleared.
<a href="#">DriveOK</a>	OK	The health of a drive has changed to OK.
<a href="#">DriveOffline</a>	Critical	A drive offline condition was detected.
<a href="#">DriveOfflineCleared</a>	OK	A drive offline condition was cleared.
<a href="#">DrivePredictedMediaLifeLow</a>	Warning	The drive media predicted life left is low.
<a href="#">DrivePredictiveFailure</a>	Warning	A predictive drive failure condition was detected.
<a href="#">DrivePredictiveFailureCleared</a>	OK	A previously detected predictive failure condition on a drive was cleared.
<a href="#">DriveRemoved</a>	Critical	A drive was removed.
<a href="#">VolumeDegraded</a>	Warning	The storage controller has detected a degraded volume condition.
<a href="#">VolumeFailure</a>	Critical	The storage controller has detected a failed volume condition.
<a href="#">VolumeOK</a>	OK	A volume health has changed to OK.
<a href="#">VolumeOffline</a>	Critical	The storage controller has detected an offline volume condition.
<a href="#">VolumeOffline</a>	Critical	The storage controller has detected an offline volume condition.
<a href="#">VolumeOfflineCleared</a>	OK	The storage controller has detected an online volume condition.
<a href="#">VolumeRebuilding</a>	Warning	The storage controller is in the process of rebuilding the volume as part of a repair process. Performance might be degraded while the rebuild is in progress.
<a href="#">VolumeReconfiguring</a>	Warning	The storage controller is in the process of reconfiguring the volume as part of adding new drives or changing RAID levels. Performance might be degraded while the reconfiguration is in progress.
<a href="#">WriteCacheDataLoss</a>	Critical	The write cache is reporting loss of data in posted-writes memory.
<a href="#">WriteCacheDegraded</a>	Critical	The write cache state is degraded.
<a href="#">WriteCacheProtected</a>	OK	A storage controller write cache state is in protected mode.
<a href="#">WriteCacheTemporarilyDegraded</a>	Warning	The write cache state is temporarily degraded.

### 2.19.1 BatteryCharging

A battery charging condition was detected.

- This message shall indicate a battery is below the required capacity and is charging.

Version Added: 1.1.0

Severity: Warning

Resolution: None. There may be reduced performance and features while the battery is charging.

Message and Arguments: "A charging condition for the battery located in '<Arg1>' was detected."

1. *string*: The location of the battery.
  - This argument shall contain the battery location.

### 2.19.2 BatteryFailure

A battery failure condition was detected.

- This message shall indicate a battery failure condition was detected.

Version Added: 1.1.0

Severity: Critical

Resolution: Ensure all cables are properly and securely connected. Replace the failed battery.

Message and Arguments: "A failure condition for the battery located in '<Arg1>' was detected."

1. *string*: The location of the battery.
  - This argument shall contain the battery location.

### 2.19.3 BatteryMissing

A battery missing condition was detected.

- This message shall indicate a battery that is required by the configuration is missing.

Version Added: 1.1.0

Severity: Critical

Resolution: Attach the battery. Ensure all cables are properly and securely connected.

Message and Arguments: "The battery located in '<Arg1>' is missing."

1. *string*: The location of the battery.
  - This argument shall contain the battery location.

## 2.19.4 BatteryOK

The health of a battery has changed to OK.

- This message shall indicate a battery health has changed to OK.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of the battery located in '<Arg1>' has changed to OK."

1. *string*: The location of the battery.
  - This argument shall contain the battery location.

## 2.19.5 BlockSecurityIDFailed

The TCG-defined command to block establishment of a security ID failed.

- This message shall indicate that the TCG-defined command to block establishment of a security ID failed when issued to a drive.

Version Added: 1.4.0

Severity: Warning

Resolution: Update the drive firmware or replace the drive.

Message and Arguments: "The TCG-defined command to block establishment of a security ID failed when issued to the drive located in '<Arg1>'."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.



### 2.19.6 BlockSecurityIDIssued

The TCG-defined command to block establishment of a security ID was issued.

- This message shall indicate that the TCG-defined command to block establishment of a security ID was issued to a drive.

Version Added: 1.4.0

Severity: OK

Resolution: None.

Message and Arguments: "The TCG-defined command to block establishment of a security ID was issued to the drive located in '<Arg1>'."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.7 BlockSecurityIDRemoved

TCG-defined commands to block establishment of a security ID are no longer being sent to a drive.

- This message shall indicate that the TCG-defined command to block establishment of a security ID are no longer sent to a drive.

Version Added: 1.4.0

Severity: OK

Resolution: None.

Message and Arguments: "The TCG-defined command to block establishment of a security ID are no longer sent to the drive located in '<Arg1>'."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.8 ControllerDegraded

A storage controller degraded condition was detected.

- This message shall indicate that a storage controller degraded condition was detected.

Version Added: 1.1.0

Severity: Warning

Resolution: Reseat the storage controller in the PCI slot. Update the controller to the latest firmware version. If the issue persists, replace the controller.

Message and Arguments: "A degraded condition for the storage controller located in '<Arg1>' was detected due to reason '<Arg2>'."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.
2. *string*: The reason for the degraded controller.
  - This argument shall contain the reason for the degraded controller.

### 2.19.9 ControllerFailure

A storage controller failure was detected.

- This message shall indicate that a storage controller failure condition was detected due to a hardware, communication, or firmware failure.

Version Added: 1.0.0

Severity: Critical

Resolution: Reseat the storage controller in the PCI slot. Update the controller to the latest firmware version. If the issue persists, replace the controller.

Message and Arguments: "A failure condition for the storage controller located in '<Arg1>' was detected."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.10 ControllerOK

The storage controller health has changed to OK.

- This message shall indicate that the storage controller health has changed to OK.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of the storage controller located in '<Arg1>' has changed to OK."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.11 ControllerPasswordAccepted

The storage controller password was entered.

- This message shall indicate that the storage controller password was accepted. Normally this is used by storage controllers that require a controller password during boot to unlock encrypted volumes or drives.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "A password was entered for the storage controller located in '<Arg1>'."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.12 ControllerPasswordRequired

The storage controller requires a password.

- This message shall indicate that the storage controller requires a password. Normally this is used by storage controllers that require a controller password during boot to unlock encrypted volumes or drives.

Version Added: 1.1.0

Severity: Critical

Resolution: Enter the controller password.

Message and Arguments: "The storage controller located in '<Arg1>' requires a password."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.13 ControllerPortDegraded

A controller port degraded condition was detected.

- This message shall indicate a controller port degraded condition was detected.

Version Added: 1.1.0

Severity: Warning

Resolution: Ensure all cables are properly and securely connected. Replace faulty cables.

Message and Arguments: "A degraded condition for the controller port located in '<Arg1>' was detected due to reason '<Arg2>'."

1. *string*: The location of the controller port.
  - This argument shall contain the controller port location.
2. *string*: The reason for the degraded controller port.
  - This argument shall contain the reason for the degraded controller port.

### 2.19.14 ControllerPortFailure

A controller port failure condition was detected.

- This message shall indicate a controller port failure condition was detected.

Version Added: 1.1.0

Severity: Critical

Resolution: Ensure all cables are properly and securely connected. Replace faulty cables.

Message and Arguments: "A failure condition for the controller port located in '<Arg1>' was detected."

1. *string*: The location of the controller port.
  - This argument shall contain the controller port location.

### 2.19.15 ControllerPortOK

The health of a controller port has changed to OK.

- This message shall indicate a controller port health has changed to OK.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of the controller port located in '<Arg1>' has changed to OK."

1. *string*: The location of the controller port.
  - This argument shall contain the controller port location.

### 2.19.16 ControllerPreviousError

A storage controller error was detected prior to reboot.

- This message shall indicate that an unreported storage controller error condition was detected prior to reboot.

Version Added: 1.1.0

Severity: Warning

Resolution: Update the controller to the latest firmware version. If the issue persists, replace the controller.

Message and Arguments: "A previous error condition for the storage controller located in '<Arg1>' was detected due to '<Arg2>'."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.
2. *string*: The reason for error.
  - This argument shall contain the reason for failure.

### 2.19.17 DriveFailure

A drive failure condition was detected.

- This message shall indicate a drive failure condition was detected due to a drive not installed correctly or failed.

Version Added: 1.0.0

Severity: Critical

Resolution: Ensure all cables are properly and securely connected. Ensure all drives are fully seated. Replace the defective cables, drive, or both.

Message and Arguments: "A failure condition for the drive located in '<Arg1>' was detected."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.18 DriveFailureCleared

A previously detected failure condition on a drive was cleared.

- This message shall indicate a failure condition on a drive was cleared, but any predictive failure or other conditions remain.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A failure condition for the drive located in '<Arg1>' was cleared."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.19 DriveInserted

A drive was inserted.

- This message shall indicate a drive was inserted.

Version Added: 1.0.0

Severity: OK

Resolution: If the drive is not properly displayed, attempt to refresh the cached data.

Message and Arguments: "The drive located in '<Arg1>' was inserted."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.20 DriveMissing

A drive missing condition was detected.

- This message shall indicate a drive that is required by the configuration is missing. This message shall exist any time a volume is degraded or failed due to a missing drive.

Version Added: 1.1.0

Severity: Critical

Resolution: Ensure all cables are properly and securely connected. Ensure all drives are fully seated. Replace the defective cables, drive, or both. Delete the volume if it is no longer needed.

Message and Arguments: "A missing condition for the drive located in '<Arg1>' was detected."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.21 DriveMissingCleared

A previous drive missing condition was cleared.

- This message shall indicate a previous drive missing condition was cleared.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "A missing condition for the drive located in '<Arg1>' was cleared."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.22 DriveOK

The health of a drive has changed to OK.

- This message shall indicate a drive health has changed to OK.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of the drive located in '<Arg1>' has changed to OK."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.23 DriveOffline

A drive offline condition was detected.

- This message shall indicate a drive offline condition was detected. This may occur when a drive is unconfigured, encrypted by a foreign controller, offline during a background operation, or unsupported.

Version Added: 1.1.0

Severity: Critical

Resolution: If the drive is unconfigured or needs an import, configure the drive. If the drive operation is in progress, wait for the operation to complete. If the drive is not supported, replace it.

Message and Arguments: "An offline condition for the drive located in '<Arg1>' was detected."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.24 DriveOfflineCleared

A drive offline condition was cleared.

- This message shall indicate a drive offline condition was cleared.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "An offline condition for the drive located in '<Arg1>' was cleared."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

### 2.19.25 DrivePredictedMediaLifeLow

The drive media predicted life left is low.

- This message shall indicate a drive media predicted life left level is below a user or vendor-defined threshold.

Version Added: 1.3.0



Severity: Warning

Resolution: Replace the drive before the predicted media life left reaches 0%.

Message and Arguments: "The drive located at \<Arg1\> has a predicted media life left of <Arg2> percent and is below the specified threshold of <Arg3> percent."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.
2. *number*: The percent of predicted media life left.
  - This argument shall contain the value of PredictedMediaLifeLeft for this drive.
3. *number*: The alert threshold.
  - This argument shall contain the value of the threshold that triggered this message.

## 2.19.26 DrivePredictiveFailure

A predictive drive failure condition was detected.

- This message shall indicate a drive predictive failure condition was detected.

Version Added: 1.0.0

Severity: Warning

Resolution: If this drive is not part of a fault-tolerant volume, first back up all data, then replace the drive and restore all data afterward. If this drive is part of a fault-tolerant volume, replace this drive as soon as possible as long as the volume health is OK.

Message and Arguments: "A predictive failure condition for the drive located in '<Arg1>' was detected."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

## 2.19.27 DrivePredictiveFailureCleared

A previously detected predictive failure condition on a drive was cleared.

- This message shall indicate a predictive failure condition on a drive was cleared, but any other failure conditions remain.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "A predictive failure condition for the drive located in '<Arg1>' was cleared."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

## 2.19.28 DriveRemoved

A drive was removed.

- This message shall indicate a drive was removed.

Version Added: 1.0.0

Severity: Critical

Resolution: If the drive is still displayed, attempt to refresh the cached data.

Message and Arguments: "The drive located in '<Arg1>' was removed."

1. *string*: The location of the drive.
  - This argument shall contain the drive location.

## 2.19.29 VolumeDegraded

The storage controller has detected a degraded volume condition.

- This message shall indicate a volume degraded condition was detected due to one or more drives not installed correctly, missing, or failed.

Version Added: 1.0.0

Severity: Warning

Resolution: Ensure all cables are properly and securely connected. Replace failed drives.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is degraded."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.30 VolumeFailure

The storage controller has detected a failed volume condition.

- This message shall indicate a volume failure condition was detected due to one or more drives not installed correctly, missing, or failed.

Version Added: 1.0.0

Severity: Critical

Resolution: Ensure all cables are properly and securely connected. Ensure all drives are fully seated and operational.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' has failed."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.31 VolumeOK

A volume health has changed to OK.

- This message shall indicate a volume health has changed to OK.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The health of volume '<Arg1>' that is attached to the storage controller located in '<Arg2>' has changed to OK."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.32 VolumeOffline

The storage controller has detected an offline volume condition.

- This message shall indicate a volume offline condition was detected. This may occur if the volume configuration is not supported or needs to be imported.

Version Added: 1.1.0

Severity: Critical

Resolution: Use storage software to enable, repair, or import the volume. You may also delete or move volume back to the original controller.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is offline."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.33 VolumeOffline

The storage controller has detected an offline volume condition.

- This message shall indicate a volume offline condition was detected. This may occur if the volume configuration is not supported or needs to be imported.

Version Added: 1.2.0

Severity: Critical

Resolution: Use storage software to enable, repair, or import the volume. You may also delete or move volume back to the original controller.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is offline."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.34 VolumeOfflineCleared

The storage controller has detected an online volume condition.

- This message shall indicate a volume online condition was detected.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is online."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.35 VolumeRebuilding

The storage controller is in the process of rebuilding the volume as part of a repair process. Performance might be degraded while the rebuild is in progress.

- This message shall indicate that the storage controller is in the process of rebuilding the volume as part of a repair process. Performance might be degraded while the rebuild is in progress.

Version Added: 1.5.0

Severity: Warning

Resolution: Wait for the volume rebuild to complete.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is being rebuilt."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.36 VolumeReconfiguring

The storage controller is in the process of reconfiguring the volume as part of adding new drives or changing RAID levels. Performance might be degraded while the reconfiguration is in progress.

- This message shall indicate that the storage controller is in the process of reconfiguring the volume as part of adding new drives or changing RAID levels. Performance might be degraded while the reconfiguration is in progress.

Version Added: 1.5.0

Severity: Warning

Resolution: Wait for the volume reconfiguration to complete.

Message and Arguments: "The volume '<Arg1>' attached to the storage controller located in '<Arg2>' is being reconfigured."

1. *string*: The identifier of the volume.
  - This argument shall contain an identifier for the volume. The identifier may contain `Id` , `Name` , `Identifiers` , `LogicalUnitNumber` , or other data used to uniquely identify the volume.
2. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.37 WriteCacheDataLoss

The write cache is reporting loss of data in posted-writes memory.

- This message shall indicate the write cache is reporting loss of data in posted-writes cache memory due to loss of battery power when the server lost power or a hardware error.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the controller resource properties to determine the cause of the write cache data loss.

Message and Arguments: "The write cache on the storage controller located in '<Arg1>' has data loss."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.38 WriteCacheDegraded

The write cache state is degraded.

- This message shall indicate the write cache state degraded due to a missing battery or hardware failure.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the controller to determine the cause of write cache degraded state, such as a missing battery or hardware failure. This condition typically requires manual intervention to resolve.

Message and Arguments: "The write cache state on the storage controller located in '<Arg1>' is degraded."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.39 WriteCacheProtected

A storage controller write cache state is in protected mode.

- This message shall indicate a controller write cache state is in protected mode.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The write cache state on the storage controller located in '<Arg1>' is in protected mode."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

### 2.19.40 WriteCacheTemporarilyDegraded

The write cache state is temporarily degraded.

- This message shall indicate write cache state temporarily degraded due to battery charging or data recovery rebuild operation pending.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the controller to determine the cause of write cache temporarily degraded state, such as a battery is charging or a data recovery rebuild operation is pending. Wait for the condition causing the temporarily degraded state to resolve itself.

Message and Arguments: "The write cache state on the storage controller located in '<Arg1>' is temporarily degraded."

1. *string*: The location of the storage controller.
  - This argument shall contain the storage controller location.

## 2.20 TaskEvent 1.0.5

This registry defines the messages for task related events.

Message	Severity	Description
<a href="#">TaskAborted</a>	Critical	A task has completed with errors.
<a href="#">TaskCancelled</a>	Warning	A task was cancelled.
<a href="#">TaskCompletedOK</a>	OK	A task has completed.
<a href="#">TaskCompletedWarning</a>	Warning	A task has completed with warnings.
<a href="#">TaskPaused</a>	Warning	A task was paused.
<a href="#">TaskProgressChanged</a>	OK	A task has changed progress.
<a href="#">TaskRemoved</a>	Warning	A task was removed.
<a href="#">TaskResumed</a>	OK	A task was resumed.
<a href="#">TaskStarted</a>	OK	A task has started.

### 2.20.1 TaskAborted

A task has completed with errors.

- This message shall indicate that a task has completed with errors and the `TaskState` property transitioned to `Exception`.

Version Added: 1.0.0

Severity: Critical



Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' has completed with errors."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that has completed with errors.

## 2.20.2 TaskCancelled

A task was cancelled.

- This message shall indicate that work on a task has halted prior to completion due to an explicit request. The `TaskState` property transitioned to `Cancelled`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "Work on the task with Id '<Arg1>' was halted prior to completion due to an explicit request."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that was halted.

## 2.20.3 TaskCompletedOK

A task has completed.

- This message shall indicate that a task has completed and the `TaskState` property transitioned to `Completed`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' has completed."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that has completed.

## 2.20.4 TaskCompletedWarning

A task has completed with warnings.

- This message shall indicate that a task has completed with warnings and the `TaskState` property transitioned to `Completed`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' has completed with warnings."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that has completed with warnings.

## 2.20.5 TaskPaused

A task was paused.

- This message shall indicate that a task was paused and the `TaskState` property transitioned to `Suspended` or `Interrupted`.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' was paused."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that was paused.

## 2.20.6 TaskProgressChanged

A task has changed progress.

- This message shall indicate that a task has changed progress.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' has changed to progress <Arg2> percent complete."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that has changed progress.
2. *number*: The percent completion of the task.
  - This argument shall contain the percent completion of the task that has changed progress.

## 2.20.7 TaskRemoved

A task was removed.

- This message shall indicate that a task was removed.

Version Added: 1.0.0

Severity: Warning

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' was removed."

1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that was removed.

## 2.20.8 TaskResumed

A task was resumed.

- This message shall indicate that a task has resumed and the `TaskState` property transitioned to `Running` from `Suspended` OR `Interrupted`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' was resumed."

- 1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that was resumed.

2.20.9 TaskStarted

A task has started.

- This message shall indicate that a task has started as the `TaskState` property transitions to `Starting` or `Running`.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The task with Id '<Arg1>' has started."

- 1. *string*: The `Id` of the task.
  - This argument shall contain the value of the `Id` property of the `Task` resource that has started.

2.21 Telemetry 1.1.1

This registry defines the messages for telemetry related events.

Message	Severity	Description
<a href="#">TelemetryDataCreated</a>	OK	Indicates that a telemetry data resource was created.
<a href="#">TriggerDiscreteConditionMet</a>	OK	Indicates that a discrete trigger condition is met.
<a href="#">TriggerNumericAboveLowerCritical</a>	Warning	Indicates that a numeric metric reading is no longer below the lower critical trigger threshold, but is still outside of normal operating range.
<a href="#">TriggerNumericAboveUpperCritical</a>	Critical	Indicates that a numeric metric reading is above the upper critical trigger threshold.
<a href="#">TriggerNumericAboveUpperWarning</a>	Warning	Indicates that a numeric metric reading is above the upper warning trigger threshold.
<a href="#">TriggerNumericBelowLowerCritical</a>	Critical	Indicates that a numeric metric reading is below the lower critical trigger threshold.
<a href="#">TriggerNumericBelowLowerWarning</a>	Warning	Indicates that a numeric metric reading is below the lower warning trigger threshold.

Message	Severity	Description
<a href="#">TriggerNumericBelowUpperCritical</a>	Warning	Indicates that a numeric metric reading is no longer above the upper critical trigger threshold, but is still outside of normal operating range.
<a href="#">TriggerNumericReadingNormal</a>	OK	Indicates that a numeric metric reading is now within normal operating range.

### 2.21.1 TelemetryDataCreated

Indicates that a telemetry data resource was created.

- This message shall indicate that a telemetry data resource was created.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "Telemetry data '<Arg1>', containing type '<Arg2>', was created."

- string*: The name of the telemetry data.
  - This argument shall contain a string that identifies `TelemetryData` resource.
- string*: The type of telemetry data
  - This argument shall contain the value of the `TelemetryDataType` property or `OEMTelemetryDataType` property from the `TelemetryData` resource.

### 2.21.2 TriggerDiscreteConditionMet

Indicates that a discrete trigger condition is met.

- This message shall indicate that the `Value` of the `DiscreteTriggers` property in a `Triggers` resource is equal to the monitored discrete metric value. The severity of the event shall be the same as `Severity` property in the related `Triggers` resource.

Version Added: 1.0.0

Severity: OK

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' has the value '<Arg2>', which meets the discrete condition of trigger '<Arg3>'"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *string*: The discrete value of the metric.
  - This argument shall contain a number that equals the discrete value of the metric reading.
3. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.3 TriggerNumericAboveLowerCritical

Indicates that a numeric metric reading is no longer below the lower critical trigger threshold, but is still outside of normal operating range.

- This message shall indicate that a numeric value of a monitored metric, previously below the threshold, is now above the `Reading` property within the `LowerCritical` property in a `Triggers` resource. However, the value of the metric is still below the `Reading` property within the `LowerWarning` property and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is now above the <Arg3> lower critical threshold of trigger '<Arg4>' but remains outside of normal range"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerCritical` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.4 TriggerNumericAboveUpperCritical

Indicates that a numeric metric reading is above the upper critical trigger threshold.

- This message shall indicate that a numeric value of a monitored metric is above the `Reading` property within the `UpperCritical` property in a `Triggers` resource.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is above the <Arg3> upper critical threshold of trigger '<Arg4>'"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperCritical` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.5 TriggerNumericAboveUpperWarning

Indicates that a numeric metric reading is above the upper warning trigger threshold.

- This message shall indicate that a numeric value of a monitored metric is above the `Reading` property within the `UpperWarning` property in a `Triggers` resource`.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is above the <Arg3> upper warning threshold of trigger '<Arg4>'"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperWarning` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.

- This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.6 TriggerNumericBelowLowerCritical

Indicates that a numeric metric reading is below the lower critical trigger threshold.

- This message shall indicate that a numeric value of a monitored metric is below the `Reading` property within the `LowerCritical` property in a `Triggers` resource`.

Version Added: 1.0.0

Severity: Critical

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is below the <Arg3> lower critical threshold of trigger '<Arg4>'"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerCritical` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.7 TriggerNumericBelowLowerWarning

Indicates that a numeric metric reading is below the lower warning trigger threshold.

- This message shall indicate that a numeric value of a monitored metric is below the `Reading` property within the `LowerWarning` property in a `Triggers` resource`.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is below the <Arg3> lower warning threshold of trigger '<Arg4>'"



1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `LowerWarning` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.8 TriggerNumericBelowUpperCritical

Indicates that a numeric metric reading is no longer above the upper critical trigger threshold, but is still outside of normal operating range.

- This message shall indicate that a numeric value of a monitored metric, previously above the threshold, is now below the `Reading` property within the `UpperCritical` property in a `Triggers` resource. However, the value of the metric is still above the `Reading` property within the `UpperWarning` property and is not within the normal operating range.

Version Added: 1.0.0

Severity: Warning

Resolution: Check the condition of the metric that reported the trigger.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is now below the <Arg3> upper critical threshold of trigger '<Arg4>' but remains outside of normal range"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *number*: The threshold value.
  - This argument shall contain a number that equals the value of the `Reading` property within the `UpperCritical` property of the `Triggers` resource.
4. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

### 2.21.9 TriggerNumericReadingNormal

Indicates that a numeric metric reading is now within normal operating range.

- This message shall indicate that a numeric value of a monitored metric in a `Triggers` resource has returned to its normal operating range.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Metric '<Arg1>' value of <Arg2> is within normal operating range of trigger '<Arg3>'"

1. *string*: The metric name.
  - This argument shall contain a string that identifies or describes the metric.
2. *number*: The value of the metric.
  - This argument shall contain a number that equals the value of the metric reading.
3. *string*: The telemetry trigger name.
  - This argument shall contain a string that identifies or describes the `Triggers` resource.

## 2.22 Update 1.3.0

This registry defines the update status and error messages.

Message	Severity	Description
<a href="#">ActivateFailed</a>	Critical	Indicates that the component failed to activate the image.
<a href="#">AllTargetsDetermined</a>	OK	Indicates that all target resources or devices for an update operation were determined by the service.
<a href="#">ApplyFailed</a>	Critical	Indicates that the component failed to apply an image.
<a href="#">ApplyingOnComponent</a>	OK	Indicates that a component is applying an image.
<a href="#">AwaitToActivate</a>	OK	Indicates that the resource or device is waiting for an action to proceed with activating an image.
<a href="#">AwaitToUpdate</a>	OK	Indicates that the resource or device is waiting for an action to proceed with installing an image.
<a href="#">InstallingOnComponent</a>	OK	Indicates that a component is installing an image.
<a href="#">NoTargetsDetermined</a>	OK	Indicates that no target resource or device for an image was determined for update.
<a href="#">OperationTransitionedToJob</a>	OK	Indicates that the update operation transitioned to a job for managing the progress of the operation.
<a href="#">TargetDetermined</a>	OK	Indicates that a target resource or device for an image was determined for update.

Message	Severity	Description
<a href="#">TransferFailed</a>	Critical	Indicates that the service failed to transfer an image to a component.
<a href="#">TransferringToComponent</a>	OK	Indicates that the service is transferring an image to a component.
<a href="#">UpdateInProgress</a>	OK	Indicates that an update is in progress.
<a href="#">UpdateNotApplicable</a>	Warning	Indicates that the update was not applicable to the resource or device.
<a href="#">UpdateSkipped</a>	OK	Indicates that an image was applicable to a resource or device, but the update was skipped due to policies in the service.
<a href="#">UpdateSkippedSameVersion</a>	OK	Indicates that a resource or device update was skipped because the same version is already installed.
<a href="#">UpdateSkippedVersionTooLow</a>	OK	Indicates that a resource or device update was skipped because the version of the provided image was lower than the minimum required version.
<a href="#">UpdateSuccessful</a>	OK	Indicates that a resource or device was updated.
<a href="#">VerificationFailed</a>	Critical	Indicates that the service or component failed to verify an image.
<a href="#">VerifyingAtComponent</a>	OK	Indicates that a component is verifying an image.

### 2.22.1 ActivateFailed

Indicates that the component failed to activate the image.

- This message shall indicate that the component failed to activate the image.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Activation of image '<Arg1>' on '<Arg2>' failed."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target activating the image.
  - This argument shall contain the URI of the resource or a unique name of the component activating the image.

### 2.22.2 AllTargetsDetermined

Indicates that all target resources or devices for an update operation were determined by the service.

- This message shall indicate that all target resources or devices for an update operation were determined by the service.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "All the target devices to be updated were determined."

### 2.22.3 ApplyFailed

Indicates that the component failed to apply an image.

- This message shall indicate that the component failed to apply an image.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Installation of image '<Arg1>' to '<Arg2>' failed."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target applying the image.
  - This argument shall contain the URI of the resource or a unique name of the component applying the image.

### 2.22.4 ApplyingOnComponent

Indicates that a component is applying an image.

- This message shall indicate that a component is applying an image.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Image '<Arg1>' is being applied on '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target applying the image.
  - This argument shall contain the URI of the resource or a unique name of the component applying the image.

### 2.22.5 AwaitToActivate

Indicates that the resource or device is waiting for an action to proceed with activating an image.

- This message shall indicate that the resource or device is waiting for an action to proceed with activating an image.

Version Added: 1.0.0

Severity: OK

Resolution: Perform the requested action to advance the update operation.

Message and Arguments: "Awaiting for an action to proceed with activating image '<Arg1>' on '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target awaiting for an action to activate the image.
  - This argument shall contain the URI of the resource or a unique name of the component awaiting for an action to activate the image.

### 2.22.6 AwaitToUpdate

Indicates that the resource or device is waiting for an action to proceed with installing an image.

- This message shall indicate that the resource or device is waiting for an action to proceed with installing an image.

Version Added: 1.0.0

Severity: OK

Resolution: Perform the requested action to advance the update operation.

Message and Arguments: "Awaiting for an action to proceed with installing image '<Arg1>' on '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target awaiting for an action to install the image.
  - This argument shall contain the URI of the resource or a unique name of the component awaiting for an action to install the image.

### 2.22.7 InstallingOnComponent

Indicates that a component is installing an image.

- This message shall indicate that a component is installing an image.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Image '<Arg1>' is being installed on '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target installing the image.
  - This argument shall contain the URI of the resource or a unique name of the component installing the image.

### 2.22.8 NoTargetsDetermined

Indicates that no target resource or device for an image was determined for update.

- This message shall indicate that no target resource or device for an image was determined for update.

Version Added: 1.1.0

Severity: OK

Resolution: None.

Message and Arguments: "No target device will be updated with image '<Arg1>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.9 OperationTransitionedToJob

Indicates that the update operation transitioned to a job for managing the progress of the operation.

- This message shall indicate that the update operation transitioned to a job for managing the progress of the operation.

Version Added: 1.0.0

Severity: OK

Resolution: Follow the referenced job and monitor the job for further updates.

Message and Arguments: "The update operation has transitioned to the job at URI '<Arg1>'."

1. *string*: The job URI.
  - This argument shall contain the URI of the `Job` resource that is managing the progress of the update operation.

### 2.22.10 TargetDetermined

Indicates that a target resource or device for an image was determined for update.

- This message shall indicate that a target resource or device for an image was determined for update.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "The target device '<Arg1>' will be updated with image '<Arg2>'."

1. *string*: The URI or name of the target that will be updated.
  - This argument shall contain the URI of the resource or a unique name of the device that will be updated.
2. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.11 TransferFailed

Indicates that the service failed to transfer an image to a component.

- This message shall indicate that the service failed to transfer an image to a component.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Transfer of image '<Arg1>' to '<Arg2>' failed."

1. *string*: The identifier for the image, or the filename of the image if an identifier cannot be determined.
  - This argument shall contain the identifier for the image. If the identifier cannot be determined, this argument shall contain the filename of the image.
2. *string*: The URI or name of the target receiving the image.
  - This argument shall contain the URI of the resource or a unique name of the component receiving the image.

### 2.22.12 TransferringToComponent

Indicates that the service is transferring an image to a component.

- This message shall indicate that the service is transferring an image to a component.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Image '<Arg1>' is being transferred to '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target receiving the image.
  - This argument shall contain the URI of the resource or a unique name of the component receiving the image.



### 2.22.13 UpdateInProgress

Indicates that an update is in progress.

- This message shall indicate that an update is in progress.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "An update is in progress."

### 2.22.14 UpdateNotApplicable

Indicates that the update was not applicable to the resource or device.

- This message shall indicate that the update was not applicable to the resource or device.

Version Added: 1.2.0

Severity: Warning

Resolution: None.

Message and Arguments: "Image '<Arg1>' was not applicable to device '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target device.
  - This argument shall contain the URI of the resource or a unique name of the device.

### 2.22.15 UpdateSkipped

Indicates that an image was applicable to a resource or device, but the update was skipped due to policies in the service.

- This message shall indicate that an image was applicable to a resource or device, but the update was skipped due to policies in the service. Services should use the `UpdateSkippedSameVersion` message if the update was skipped due to the version of the image and the version on the device are the same. Services should use the `UpdateSkippedVersionTooLow` message if the update was skipped because the image version is lower than the minimum requirement.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "Device '<Arg1>' skipped the update with image '<Arg2>'."

1. *string*: The URI or name of the device that skipped the update.
  - This argument shall contain the URI of the resource or a unique name of the device that skipped the update.
2. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.16 UpdateSkippedSameVersion

Indicates that a resource or device update was skipped because the same version is already installed.

- This message shall indicate that a resource or device update was skipped because the same version is already installed. If reinstallation of this version is required, clients may use the `ForceUpdate` parameter with the update action.

Version Added: 1.2.0

Severity: OK

Resolution: None.

Message and Arguments: "Device '<Arg1>' skipped the update with image '<Arg2>' because the same version is already installed."

1. *string*: The URI or name of the device that skipped the update.
  - This argument shall contain the URI of the resource or a unique name of the device that skipped the update.
2. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.17 UpdateSkippedVersionTooLow

Indicates that a resource or device update was skipped because the version of the provided image was lower than the minimum required version.

- This message shall indicate that a resource or device update was skipped because the version of the provided image was lower than the minimum required version. Some reasons include a security version requirements or

hardware compatibility checks.

Version Added: 1.3.0

Severity: OK

Resolution: None.

Message and Arguments: "Device '<Arg1>' skipped the update with image '<Arg2>' due to the minimum version requirement."

1. *string*: The URI or name of the device that skipped the update.
  - This argument shall contain the URI of the resource or a unique name of the device that skipped the update.
2. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.18 UpdateSuccessful

Indicates that a resource or device was updated.

- This message shall indicate that a resource or device was updated.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Device '<Arg1>' successfully updated with image '<Arg2>'."

1. *string*: The URI or name of the device that was updated.
  - This argument shall contain the URI of the resource or a unique name of the device that was updated.
2. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.

### 2.22.19 VerificationFailed

Indicates that the service or component failed to verify an image.

- This message shall indicate that the service or component failed to verify an image. Some examples of image verification failure include: invalid signature, invalid checksum, or unknown image format.

Version Added: 1.0.0

Severity: Critical

Resolution: None.

Message and Arguments: "Verification of image '<Arg1>' at '<Arg2>' failed."

1. *string*: The identifier for the image, or the filename of the image if an identifier cannot be determined.
  - This argument shall contain the identifier for the image. If the identifier cannot be determined, this argument shall contain the filename of the image.
2. *string*: The URI or name of the target verifying the image.
  - This argument shall contain the URI of the resource or a unique name of the component verifying the image.

### 2.22.20 VerifyingAtComponent

Indicates that a component is verifying an image.

- This message shall indicate that a component is verifying an image.

Version Added: 1.0.0

Severity: OK

Resolution: None.

Message and Arguments: "Image '<Arg1>' is being verified at '<Arg2>'."

1. *string*: The identifier for the image.
  - This argument shall contain the identifier for the image.
2. *string*: The URI or name of the target verifying the image.
  - This argument shall contain the URI of the resource or a unique name of the component verifying the image.

### 3 ANNEX A (informative) Change log

Version	Date	Description
2025.4	2025-12-04	Document build from Redfish message registries in DSP8011 release 2025.4.
2025.3	2025-09-04	Document build from Redfish message registries in DSP8011 release 2025.3.
2025.2	2025-05-01	Document build from Redfish message registries in DSP8011 release 2025.2.
2025.1	2025-02-05	Document build from Redfish message registries in DSP8011 release 2025.1.
2024.4	2024-11-27	Document build from Redfish message registries in DSP8011 release 2024.4.
2024.3	2024-08-01	Document build from Redfish message registries in DSP8011 release 2024.3.
2024.1	2024-04-02	Document build from Redfish message registries in DSP8011 release 2024.1.
2023.3	2023-11-30	Document build from Redfish message registries in DSP8011 release 2023.3.
2023.2	2023-08-03	Document build from Redfish message registries in DSP8011 release 2023.2.
2023.1	2023-04-06	Document build from Redfish message registries in DSP8011 release 2023.1.
2022.3	2022-12-08	Document built from Redfish message registries in DSP8011 release 2022.3.
2022.2	2022-08-04	Document built from Redfish message registries in DSP8011 release 2022.2.
2022.1	2022-04-07	Document built from Redfish message registries in DSP8011 release 2022.1.