# AMS Asset Monitor

Fleet Manager



EMERSON

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**Patents**

The product(s) described in this manual are covered under existing and pending patents.

# Contents

# 1 General

## 1.1 About this manual

This manual contains information and step-by-step instructions for updating multiple AMS Asset Monitors at once.

This operating manual applies for AMS Asset Monitors with a hardware revision and firmware version listed in Table 1-1. See type plate for hardware revision level. The firmware version is displayed in the status overview of the system.

**Table 1-1: Hardware revision and firmware version**

| Component | Hardware revision | Firmware version |
|-----------|-------------------|------------------|
| AMS Asset Monitor | 13 and later | 3.x |

See Table 1-2 for a list of documents referred to in this operating manual.

**Table 1-2: Referenced documents**

| MHM Number | Document name |
|------------|---------------|
| MHM-97924-PBF | Operating Manual AMS Asset Monitor |
| AMS-SEC-PSG-001 | AMS Product Security Documentation |

## 1.2 Symbols

**Note**
This symbol marks passages that contain important information.

**⚠ CAUTION**

This symbol marks operations that can lead to malfunctions or faulty measurements, but will not damage the device.

## 1.3 Technical support

You may need to ship this product for return, replacement, or repair to an Emerson Product Service Center. Before shipping this product, contact Emerson Product Support to obtain a Return Materials Authorization (RMA) number and receive additional instructions.

**Product Support**

Emerson provides a variety of ways to reach your Product Support team to get the answers you need when you need them:

| | |
|---|---|
| **Phone** | Toll free 800.833.8314 (U.S. and Canada) |
| | +1.512.832.3774 (Latin America) |

|      |                                           |
|------|-------------------------------------------|
|      | +63.2702.1111 (Asia Pacific, Europe, and Middle East) |
| **Email** | Guardian.GSC@Emerson.com             |
| **Web**   | http://www.emerson.com/en-us/contact-us |

To search for documentation, visit http://www.emerson.com.

To view toll free numbers for specific countries, visit http://www.emersonprocess.com/technicalsupport.

**Note**

If the equipment has been exposed to a hazardous substance, a Material Safety Data Sheet (MSDS) must be included with the returned materials. An MSDS is required by law to be available to people exposed to specific hazardous substances.

# 2     Update and backup multiple AMS Asset Monitors at once

Update multiple AMS Asset Monitors within a network at once using AMS Asset Monitor - Fleet Manager. Use the backup and restore function of Fleet Manager to create a backup of single or multiple AMS Asset Monitors and to restore AMS Asset Monitors using the created backup files.

**Note**
Use the migration firmware file **AMSAssetMonitor_v2.x_to_v3.y.z.fwp**[1] to update AMS Asset Monitors with firmware version 2.x to version 3.y.z. Emerson recommends updating from version 2.3.3 or 2.3.4 to version 3.y.z.

After the update to version 3.y.z, firmware files with the extension *.swu** are required.

Fleet Manager can scan up to 1000 IP addresses to find AMS Asset Monitors.

**System requirements**

- Standard Business/Office PC or laptop

- Connection to the network the AMS Asset Monitors are connected to.

- Operating system: any variants of Microsoft Windows 10 and Microsoft Windows 11

**Note**
All AMS Asset Monitors that are to be updated with Fleet Manager must have at least the basic configuration (see Operating Manual AMS Asset Monitor for details about the basic configuration).
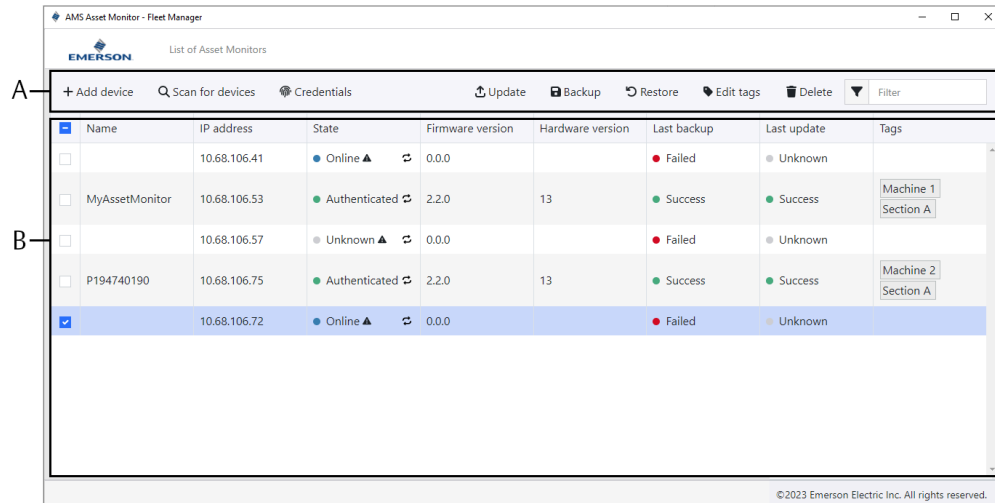
**Download and installation**

1. Go to Guardian (https://guardian.emerson.com) and download the Fleet Manager setup in the AMS Asset Monitor section.

2. Start the setup and follow the instructions.

3. Start Fleet Manger.

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1   *y* and *z* are place holder for the version to which the AMS Asset Monitor is updated.

## Overview

**Figure 2-1: Overview Fleet Manager**



A. *Toolbar*

B. *List of AMS Asset Monitors including several version and state information*

Toolbar elements:

| | |
|---|---|
| **Add device** | Click **Add device** to add a single AMS Asset Monitor to the list. |
| **Scan for devices** | Click **Scan for devices** to add all AMS Asset Monitors within a specific IP address range to the list. |
| **Credentials** | Click **Credentials** to enter login data for AMS Asset Monitors selected from the list. This command is available if at least one AMS Asset Monitor is selected. |
| **Update** | Click **Update** to update the firmware of selected AMS Asset Monitors. This command is available if at least one AMS Asset Monitor is selected. |
| **Backup** | Click **Backup** to create a backup file of selected AMS Asset Monitors. See Operating Manual AMS Asset Monitor for the data contained in the backup file and for further details. Ensure that you have logged in with credentials of a user who is allowed to backup AMS Asset Monitors otherwise it is not possible to create a backup. |
| **Restore** | Click **Restore** to restore a selected AMS Asset Monitor. Ensure that you have logged in with credentials of a user who is allowed to restore AMS Asset Monitors otherwise it is not possible to restore a backup file. |
| **Edit tags** | Click **Edit tags** to add tags to selected AMS Asset Monitors or to edit already existing tags. Use tags to reduce the list of AMS Asset Monitors to all AMS Asset Monitors with the same tag. |
| **Delete** | Click **Delete** to remove selected AMS Asset Monitors from the list. |
| **Filter** | Use the **Filter** function to search for AMS Asset Monitors with specific tags. |

**Column description of the AMS Asset Monitor list.**

Click the column header to sort the content in descending or ascending order.

| | |
|---|---|
| **Checkboxes** | To select an AMS Asset Monitor, place a checkmark in the box in the row of the AMS Asset Monitor to be selected. To select all AMS Asset Monitors place a checkmark in the box in the list header. |
| **Name** | Name of the AMS Asset Monitor entered in the system configuration. |
| **IP address** | IP address of the AMS Asset Monitor entered in the system configuration. |
| **State** | State of the connection to the AMS Asset Monitor. |

**Table 2-1: Connection state**

| State | Meaning |
|---|---|
| Online | The AMS Asset Monitor is online but the login credentials are missing. Missing or invalid credentials are indicated by a triangle symbol ⚠ next to the state. The indicator in front of the state is blue. |
| Authenticated | The AMS Asset Monitor is online and valid credentials have been entered. The indicator in front of the state is green. |
| Unknown | The state of the AMS Asset Monitor is not known. The AMS Asset Monitor might be offline. The indicator in front of the state is gray. |

Click the refresh button ⟳ to refresh the state indication of the AMS Asset Monitor.

| | |
|---|---|
| **Firmware version** | Firmware version of the AMS Asset Monitor. An authentication is required to receive the version from the AMS Asset Monitor. |
| **Hardware version** | Hardware version of the AMS Asset Monitor. An authentication is required to receive the version from the AMS Asset Monitor. |
| **Last backup** | Details of backups. |

**Table 2-2: Backup state**

| State | Meaning |
|---|---|
| Success | A backup was created successfully. The indicator in front of the state is green. |

**Table 2-2: Backup state** *(continued)*

| State | Meaning |
|---|---|
| Failed | Creation of a backup was not possible. This could be caused by missing credentials or credentials of a user without permission to create a backup (roles without permission: Operator, Observer, OPC UA user, and AMS Machine Works user). The indicator in front of the state is red. |
| Unknown | No information about backups available. The indicator in front of the state is gray. |

**Last update**   Details of firmware updates

**Table 2-3: Update state**

| State | Meaning |
|---|---|
| Success | A firmware update was executed successfully. The indicator in front of the state is green. |
| Failed | A firmware update failed. This could be caused by missing credentials or credentials of a user without permission for firmware updates (roles without permission: Observer, OPC UA user, and AMS Machine Works user). The indicator in front of the state is red. |
| Unknown | No information about firmware updates available. The indicator in front of the state is gray. |

**Tags**   Tags defined for the AMS Asset Monitor. Click a tag to reduce the list to all AMS Asset Monitors with the same tag.

A message in the upper right corner of Fleet Manager indicates if a task such as restore or device scan has been executed successfully or not (see Figure 2-2). The message contains the state of the task and the name of the AMS Asset Monitor. Messages disappear automatically, or close a message by clicking the **x**.
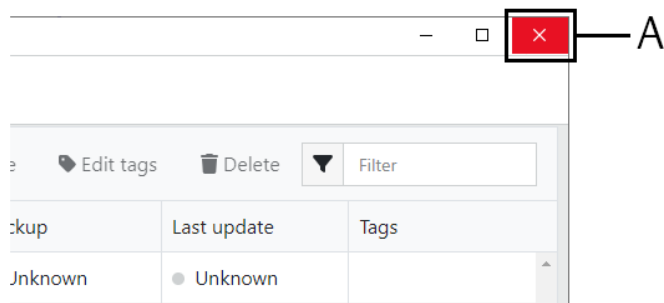
**Figure 2-2: Feedback task execution**
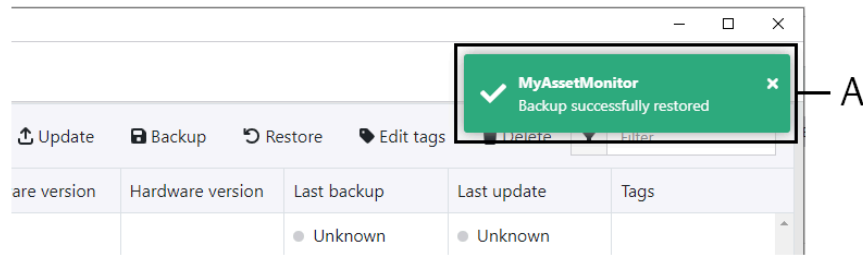


A. Messages

### Close

Click the **X** in the upper right corner to close Fleet Manager. The list of detected AMS Asset Monitors is automatically saved and available at the next Fleet Manager start.

**Figure 2-3: Close button**



A. Button to close Fleet Manager

## 2.1      Add device

Follow the steps to add a single AMS Asset Monitor with known IP address to the list.

### Procedure

1. Click **Add device** to open the dialog for adding an AMS Asset Monitor.

**Figure 2-4: Dialog for adding an AMS Asset Monitor**



A. IP address
B. Username
C. Password
D. Store credentials
E. Buttons

2. Enter IP address and login data. Place a checkmark in the box next to **Store credentials** to keep the login data in Fleet Manager. So it is not necessary to enter the login data after restarting Fleet Manager.

> **Note**
> Ensure that the user whose credentials are to be entered has the required permissions to update the firmware or to create a backup. User roles without such permissions are:
> - Operator
> - Observer
> - OPC UA user
> - AMS Machine Works user

The login data is deleted when the AMS Asset Monitor is removed from the list.

3. Click **Add** to add the AMS Asset Monitor to the list. Click **Cancel** to close the dialog without adding an AMS Asset Monitor.

## 2.2      Scan for devices

Follow the steps to add multiple AMS Asset Monitors within the same network to the list. Fleet Manager can scan up to 1000 IP addresses to find AMS Asset Monitors.

**Procedure**

1. Click **Scan for devices** to open the dialog for scanning a defined IP address range for AMS Asset Monitors and adding the found AMS Asset Monitors to the list.

**Figure 2-5: Scan for devices dialog**
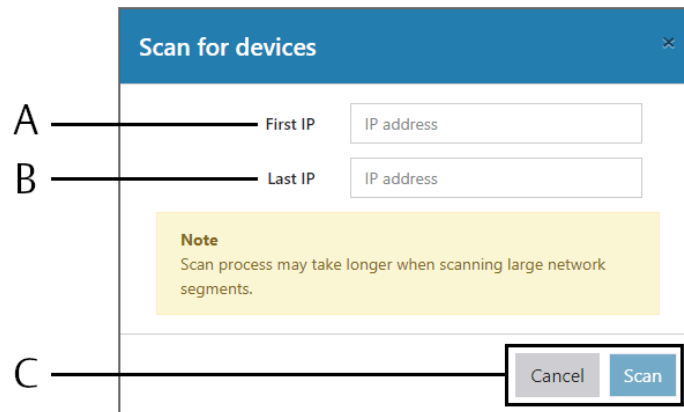


A. First IP
B. Last IP
C. Buttons

2. To define the IP address range for the scan, enter the start IP address in **First IP** and the end IP address in **Last IP**. Click **Scan** to start the scan process.

   The time needed for the scan depends on the address range. The larger the range, the longer the scan takes. The scan progress is displayed in the tool bar.

**Figure 2-6: Scan progress indication**
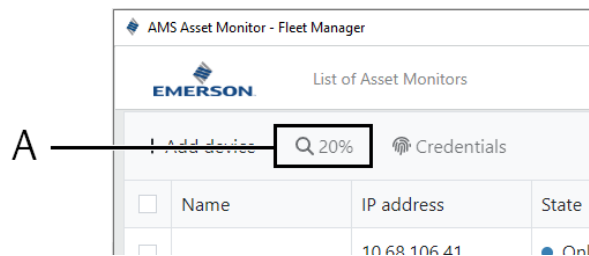


A. Scan progress

The detected AMS Asset Monitors are added to the list. Enter the login data of the newly found AMS Asset Monitors as described in Credentials.

# 2.3 Credentials

Follow the steps to enter credentials for a single AMS Asset Monitor or for multiple AMS Asset Monitors with the same credentials.
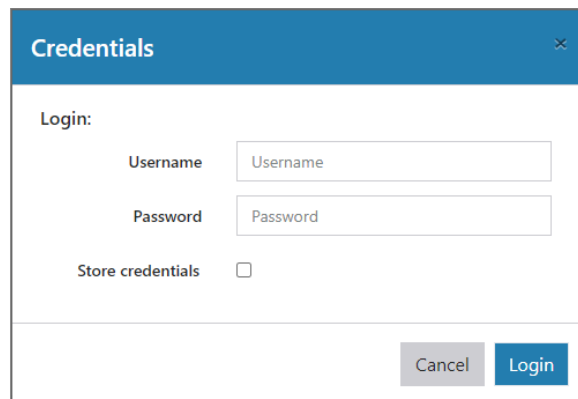
**Note**

Ensure that the user whose credentials are to be entered has the required permissions to update the firmware or to create a backup. User roles without such permissions are:

- Operator
- Observer
- OPC UA user
- AMS Machine Works user

**Procedure**

1. Place a checkmark in the box in the row of AMS Asset Monitors to select them for entering credentials, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2. Click **Credentials** to open the dialog for entering the credentials for the selected AMS Asset Monitors.

**Figure 2-7: Credentials dialog**



3. Enter username and password. Place a checkmark in the box **Store Credentials** to store the credentials in Fleet Manager to avoid entering credentials again when starting the tool the next time.

4. Click **Login** to add the credentials to the selected AMS Asset Monitors.

   Successful entered credentials for the selected AMS Asset Monitors are indicate with **Authenticated** in the **State** column. Invalid credentials are indicated with a triangle symbol ⚠.

# 2.4    Update

> ⚠ **CAUTION**
>
> Any work on the system may impair asset health monitoring and machine protection.

Follow the steps to update the firmware of a single AMS Asset Monitor or of multiple AMS Asset Monitors.

The update process automatically creates a backup of the AMS Asset Monitors to be updated. This backup file is used to restore the configuration of the AMS Asset Monitors at the end of the firmware update process.

**Note**

Information on updating the firmware of installed CHARMs can be found in the AMS Asset Monitor operating manual.

**Prerequisites**

You need an AMS Asset Monitor firmware file with the extension *.swu.

The currently installed firmware version of the AMS Asset Monitors to be updated may be different.

**Procedure**

1.  Place a checkmark in the box in the row of AMS Asset Monitors to select them for updating the firmware, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2.  Click **Update** to open the dialog for updating the firmware of the selected AMS Asset Monitors.

**Figure 2-8: Firmware update dialog**
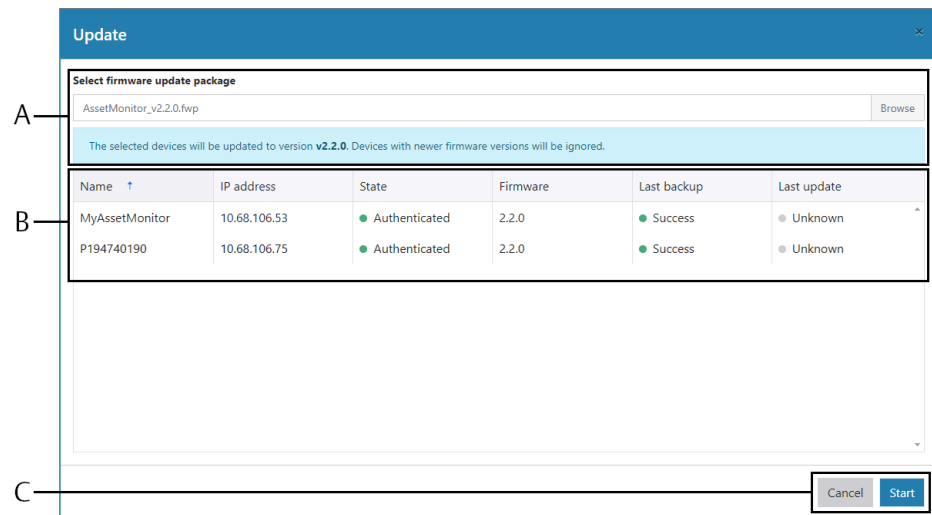


A.  *Firmware file selection*
B.  *List of selected AMS Asset Monitors*
C.  *Buttons*

3.  Click **Browse** to open the file browser.

4.  Go to the storage location of the firmware file and select it.

    Information about the selected firmware version appears below the selected firmware file. AMS Asset Monitors with a newer firmware version than the selected

firmware version are ignored during the update process. A downgrade of the firmware version is not possible.
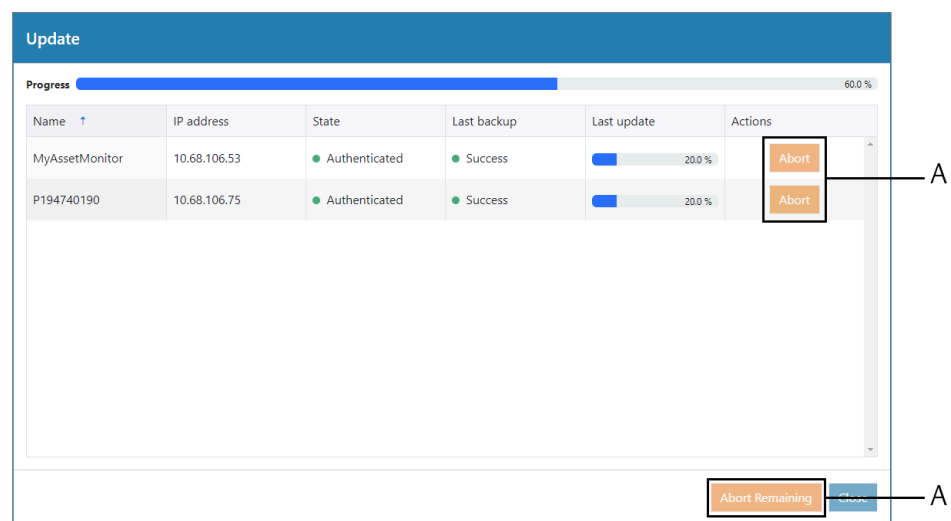
5. Click **Start** to start the update process.

> ⚠ **CAUTION**
>
> Do not interrupt the connection to the AMS Asset Monitors during the update process.

The update dialog shows the overall update progress and the update progress of the single AMS Asset Monitors.

**Figure 2-9: Firmware update in progress**



A. Abort buttons

To cancel a firmware update click **Abort** in the row of the AMS Asset Monitor whose update should be canceled. Click **Abort Remaining** to cancel the process of AMS Asset Monitors whose update is not yet completed. It is possible to cancel an update as long as the actual firmware update process has not been started.

**Note**
AMS Asset Monitors cannot respond during the update process.

6. Click **Close** to close the firmware update dialog.

A successful firmware update of the selected AMS Asset Monitors is indicated with **Success** in the **Last update** column. The new firmware version is indicated in the **Firmware version** column. An updated AMS Asset Monitor restarts automatically after the update process is finished.

## 2.5    Backup

Follow the steps to backup a single AMS Asset Monitor or multiple AMS Asset Monitors.

**Procedure**

1. Place a checkmark in the box in the row of AMS Asset Monitors to select them for creating a backup, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2. Click **Backup** to create a backup file of the selected AMS Asset Monitors.

   See Operating Manual AMS Asset Monitor for details about the created backup file.

   A successful backup creation of the selected AMS Asset Monitors is indicate with **Success** in the **Last backup** column.

## 2.6    Restore

Follow the steps to restore the configuration of a single AMS Asset Monitor.

**Procedure**

1. Place a checkmark in the box in the row of the AMS Asset Monitor to select it for restoring the configuration.

2. Click **Restore** to open the dialog for selecting a backup file.

   **Figure 2-10: Restore dialog**
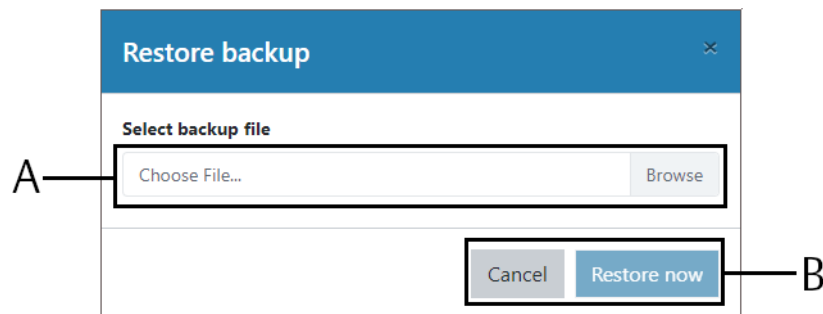
   

   A. *Backup file selection*
   B. *Buttons*

3. Click **Browse** to open a dialog to select a backup file.

4. Select a file and click **Open**.

5. Click **Restore now**.

   Whether the restore was successful or not is indicate by a message in the upper right corner of Fleet Manager.
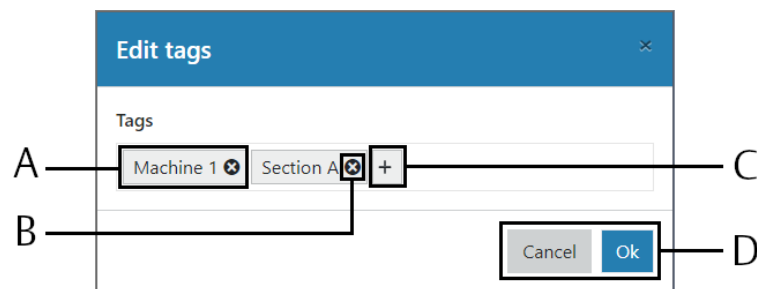
## 2.7    Tags

**Add tags**

Follow the steps to add tags to selected AMS Asset Monitors.

1.  Place a checkmark in the box in the row of AMS Asset Monitors to select them for adding tags, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2.  Click **Edit tags** to open the dialog to add and edit tags.

**Figure 2-11: Edit tags dialog**



A.  Tag
B.  Button to remove the tag
C.  Button to add a tag
D.  Buttons

3.  Click the plus button ![plus] to add a tag.
    A field for entering the tag appears.

4.  Enter a unique tag. Press the **Enter** key to add the tag.

5.  Click the plus button ![plus] again to add further tags to the selected AMS Asset Monitors.

6.  Click **OK** to add the entered tags to the selected AMS Asset Monitors and to close the dialog. Click **Cancel** to discard the entered tags.

**Use tags**

Click a tag in the **Tags** column to filter the list by all AMS Asset Monitors with the same tag.

The selected tag is added to the filter conditions displayed below the toolbar. At least one tag must be selected for the filter conditions field to be visible.

Tags can be also added to the filter conditions by entering the tag name in the search input field.

**Figure 2-12: Displayed filter conditions**
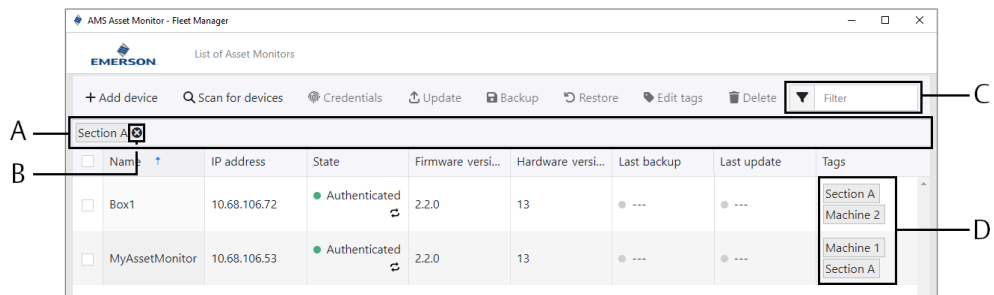


A. *Tags selected for filtering*
B. *Button to remove the tag from the filter conditions*
C. *Search input field*
D. *Available tags*

Select additional tags from the **Tags** column to further reduce the list of displayed AMS Asset Monitors.

To remove a tag form the filter conditions click the tag to be removed in the filter conditions field. The tag is removed immediately and the list of AMS Asset Monitor is adjusted accordingly.

**Delete tags**

1. Place a checkmark in the box in the row of AMS Asset Monitors to select them for editing tags, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2. Click **Edit tags** to open the dialog to add and edit tags.

   All tags assigned to the selected AMS Asset Monitors are listed.

3. To delete a tag click the ⊗ icon behind the tag to be removed. The tag is removed from the **Edit tags** dialog.

4. Click **OK** to delete the tags from the **Tags** column of the selected AMS Asset Monitors and to close the dialog. Click **Cancel** to discard the changes.

## 2.8 Delete

Follow the steps to delete a single AMS Asset Monitor from the list or multiple AMS Asset Monitors.

**Procedure**

1. Place a checkmark in the box in the row of AMS Asset Monitors to select them for deleting from the list, or place a checkmark in the box in the list header to select all AMS Asset Monitors.

2. Click **Delete**.

3. A confirmation prompt appears. Click **Confirm** to remove the selected AMS Asset Monitors from the list. The AMS Asset Monitors are deleted including their stored backups and credentials. Click **Cancel** to abort the deletion process.

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