

# Arrow Connect Device Management - Firmware Management Guide

## Introduction

Arrow Connect Firmware Management provides flexible and secure firmware management that can be used by both OEMs and Enterprise customers alike. It is fully integrated with Arrow Connect multi-tenancy and hierarchy enabling fine-grained device management and control.

Let's take a look at how to create a firmware Schedule update job. Before that, first, we need to set the hardware Product mapping under Asset Type.

## Firmware Management - Asset Type Mapping

- Go to the Arrow Connect Device Management Home Page and Click on **Configuration Asset Types**
- Click on your Asset Type.

Asset Types

Name	Description	Asset Category	Editable	Enabled	In Use	Last Modified	Last Modified By
Demo Asset Type	Demo Asset Type Description	GATEWAY	Yes	Yes	No	05/09/2019 03:14:10 PM	mehaboob.perur@arrow.com

- Click on **Firmware Management** menu link on the left side panel and select appropriate Hardware Manufacturer, Product & Version and then Click on **Save** button

Demo Asset Type ✓

Firmware Management

Hardware Category: GATEWAY

Hardware Manufacturer: Demo HW Manufacturer

Hardware Product: Demo HW Product

Hardware Version: Demo HW Version

Save

## Firmware Management - Schedule Update

- Go to the Arrow Connect Device Management Home Page and Click on **Firmware Management Schedule Update**
- Select **Asset Type** and targeted **New Firmware Version**, then click on **Find** button

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DEMO - PARENT TENANT  
DEMO - PRODUCTION

Step 1 of 4

Create Job

Asset Selection

Asset Types  
Demo Asset Type

New Firmware version  
Demo SW Product 1.0.1

Find

Filters

Asset Name

Eligible Assets

10 items per page

Select this page Select all 0 records Clear selection

Asset	UID	Type	Group	Owner	Firmware Version	Last Firmware Change
No eligible assets were found						

Showing 0 to 0 of 0 assets

1/1

Add Selected

- Check assets which need to be upgraded in **Eligible Assets** section and Click **Add Selected**

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Step 1 of 4

Create Job

Asset Selection

Asset Types  
Demo Asset Type

New Firmware version  
Demo SW Product 1.0.1

Find

Filters

Asset Name

UID

GROUP

Eligible Assets

10 items per page

Select this page Select all 3 records Clear selection

Asset	UID	Type	Group	Owner	Firmware Version	Last Firmware Change
<input checked="" type="checkbox"/> Demo-Gateway-1	demo-gateway-1	Demo Asset Type	---		Demo SW Product 1.0.0	---
<input checked="" type="checkbox"/> Demo-Gateway-2	demo-gateway-2	Demo Asset Type	---		Demo SW Product 1.0.0	---
<input type="checkbox"/> Demo-Gateway-3	demo-gateway-3	Demo Asset Type	---		Demo SW Product 1.0.0	---

Showing 1 to 3 of 3 assets

1/1

Add Selected

- Review added assets in the **Selected Assets** section and click on **Next** button

Selected Assets

10 items per page

Select this page Select all 2 records Clear selection

Asset	UID	Type	Group	Owner	Firmware Version	Last Firmware Change
<input type="checkbox"/> Demo-Gateway-1	demo-gateway-1	Demo Asset Type	---		Demo SW Product 1.0.0	---
<input type="checkbox"/> Demo-Gateway-2	demo-gateway-2	Demo Asset Type	---		Demo SW Product 1.0.0	---

Showing 1 to 2 of 2 assets

1/1

Remove Selected

Next


- Enter Job Name and select **On Demand** checkbox if the job needs to be run on demand or select schedule by selecting appropriate **Date /Time** and **Time Zone**, and enter **Comments**. Click on **Next** button

Step 2 of 4

**Job Name**

Demo Job

**Scheduling**

☒ On Demand  On Demand Job

OR

**Date / Time**

**Time Zone**

America/Chicago

**Comments (500 character max)**

(Or)

Step 2 of 4

**Job Name**


Demo Job

**Scheduling**


☐ On Demand

OR

**Date / Time**

05/13/2019 01:00:00 PM 

**Time Zone**

America/Chicago 

**Comments (500 character max)**

Demo Comments

**Scheduled Job**

Back Next

- Select **Notifications** and enter **Email** address to receive it.
  - **Send When Submitted** - An email notification will be sent to the provided email address when the job is submitted.
  - **Send When Started** - An email notification will be sent to the provided email address when the job is started.
  - **Send When Completed** - An email notification will be sent to the provided email address when the job is completed.


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Step 3 of 4

**Create Job**


**Notification**

☒ Send when submitted 

☒ Send when started

☒ Send when completed

**Email**

demo@ateest.com 

Enter email addresses separated by a comma.

- Enter desired job Expiration minutes or click Set Max button for maximum expiration minutes and Click Next button
  - Minimum expiration minutes requires is 1 minute and the maximum is 525,600 minutes.
  - The default value is 10080 minutes

**Expiration**

10080 minutes Set Max

Minimum of 1 minute and a maximum of 525,600 minutes. The default value is 7 calendar days.

Back Next

- Review the job details in **Job Summary** screen and click **Submit** button

**Job Summary** Step 4 of 4

Job Name	Requester	Assets	Asset Type	Hardware Version	New Firmware version	Schedule
Demo Job	Mehaboob K Perur	2	Demo Asset Type	Demo HW Version	Demo SW Product 1.0.1	On Demand

**Comment:**  
Demo Comments

Make Changes Submit

- Once the job is submitted, it will be listed in the Job Summary screen under **PENDING** tab.

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**Filters**  
Requester 0  
Mehaboob K Perur  
Asset Type 0  
Demo Asset Type

**Job Summary**

**PENDING 1** **IN PROGRESS 0** **PROCESSED 0**

10 items per page

Job Name	Requester	Assets	Asset Type	Hardware Version	New Firmware Version	Schedule
<a href="#">Demo Job</a>	Mehaboob K Perur	2	Demo Asset Type	Demo HW Version	Demo SW Product 1.0.1	On Demand

Showing 1 to 1 of 1 jobs

< 1/1 >

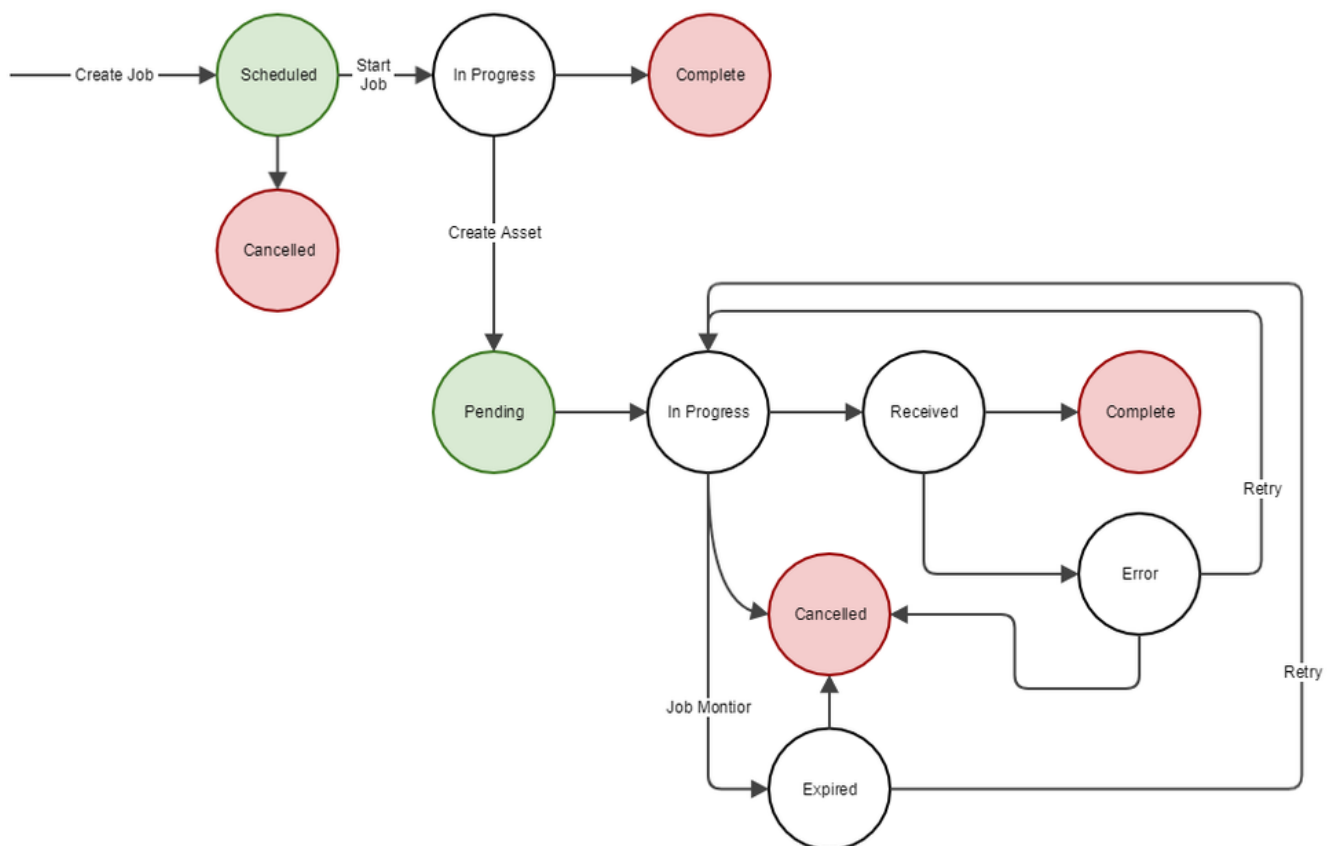
- If it is a scheduled job, it will be get started automatically and move to **IN PROGRESS** tab here or If it is an **On Demand** job, then we

have click on the Job Name and then click on **Update Now** button.

The screenshot shows the Arrow Connect Firmware Management interface. The top navigation bar includes 'Arrow Connect', 'ASSETS', 'FIRMWARE MANAGEMENT BETA', 'CONFIGURATION', and 'DEVELOPER HUB'. The left sidebar has 'Demo Job', 'Assets', and 'Audit Logs'. The main content area is titled 'Job - Demo Job' and shows 'On Demand' status. It includes a 'Details' section with fields like 'New Firmware', 'Asset Type', '# of Assets', 'Scheduled', and 'Status'. A large circular progress indicator shows '0% COMPLETE'. To the right is a 'Progress' section with a table showing '% Completed', 'Started', 'Completed', and 'Duration'. At the top right of the main content area, there are buttons for 'Update Now', 'Edit', and 'Cancel'. A red arrow points to the 'Update Now' button.

- Once the **Update Now** button, assets move through different states until it ends up in Final status as **Completed** or **Cancelled**.
- Job details and Progress is shown on this screen.
- Below flow diagram will give more understanding of Firmware Management job flow.

#### Firmware Management Job and Asset transactions - State Diagram:



- Click on **Asset** tab to see the status on each asset transaction in the job. Each status tab will show the transactions in that respective status and number of transactions in that tab is shown beside the status tab name.

**Job - Demo Job**  
On Demand

ALL 2 PENDING 0 IN PROGRESS 2 RECEIVED 0 COMPLETE 0 CANCELLED 0 EXPIRED 0 FAILED 0

Updating to Demo SW Product 1.0.1

Assets

10 items per page

Mark as Failed Retry Cancel

Asset	UID	Status	Started	Minutes Remaining	Retries
Demo-Gateway-1 Demo SW Product 1.0.0	demo-gateway-1	INPROGRESS	06/05/2019 10:39 AM	10079	0
Demo-Gateway-2 Demo SW Product 1.0.0	demo-gateway-2	INPROGRESS	06/05/2019 10:39 AM	10079	0

Showing 1 to 2 of 2 assets

- Click on **Audit Logs** tab to see the different operations performed on Assets involved in the Firmware upgrade job.

**Audit Logs**

10 items per page

Search

Action	Who	Date/Time	Log
Sent Command To Gateway	Mehaboob K Perur	6/5/2019 10:39:25 AM	demo-gateway-2 Demo-Gateway-2 N/A
Temp Token Created	Mehaboob K Perur	6/5/2019 10:39:25 AM	demo-gateway-2 Demo-Gateway-2 N/A
Asset In Progress	Mehaboob K Perur	6/5/2019 10:39:25 AM	demo-gateway-2 Demo-Gateway-2 N/A
Sent Command To Gateway	Mehaboob K Perur	6/5/2019 10:39:25 AM	demo-gateway-1 Demo-Gateway-1 N/A

## Firmware Management - Job Summary

Job Summary screen displays all firmware upgrade jobs in different tabs such as **PENDING**, **IN PROGRESS** and **PROCESSED** depending on the status of the job.

- All scheduled jobs or On-demand jobs which are not started yet will be displayed in the **PENDING** tab.
- When a job is started and in progress then it will be displayed in the **IN PROGRESS** tab.
- All completed jobs will be displayed in the **PROCESSED** tab.
- User can filter the jobs in each with Requester and Asset Type filters available on the left panel in Job summary screen.

**Job Summary**


PENDING 0 IN PROGRESS 1 PROCESSED 0

10 items per page

Job Name	Requester	Assets	Asset Type	Hardware Version	New Firmware Version	Schedule
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## Firmware Management - Available Updates


Available updates screen displays all the assets in the application instance which are eligible for updates. Available Firmware Versions column shows that list of firmware versions with a hyperlink and when a user clicks then the user will be redirected to Schedule update screen with all the eligible assets prefiltered for the firmware version.

 **Arrow Connect™**

ASSETS


FIRMWARE MANAGEMENT BETA

CONFIGURATION

DEVELOPER HUB 

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DEMO - PRODUCTION

### Available Updates

Asset Type	Assets	Hardware Version	Firmware Version	Available Firmware Versions
Demo Asset Type	1	Demo HW Version	Demo SW Product 1.0.0	<a href="#">Demo SW Product 1.0.1</a> 
1 eligible group				