



XIQ-SE JAMF ES Group

Sync Workflows

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Introduction

This document provides instructions for installing and using the JAMF ES Group Sync Workflows within XIQ-SE. The solution consists of two separate workflows:

- **JAMF_Computer_Sync**: Queries the JAMF API to retrieve records for Mac laptops.
- **JAMF_Mobile_Sync**: Queries the JAMF API to retrieve records for iOS devices.

Each workflow extracts the MAC addresses from the respective JAMF device records. Simultaneously, they perform Northbound Interface (NBI) queries to obtain the current list of MAC addresses associated with their corresponding End-System (ES) Groups in XIQ-SE.

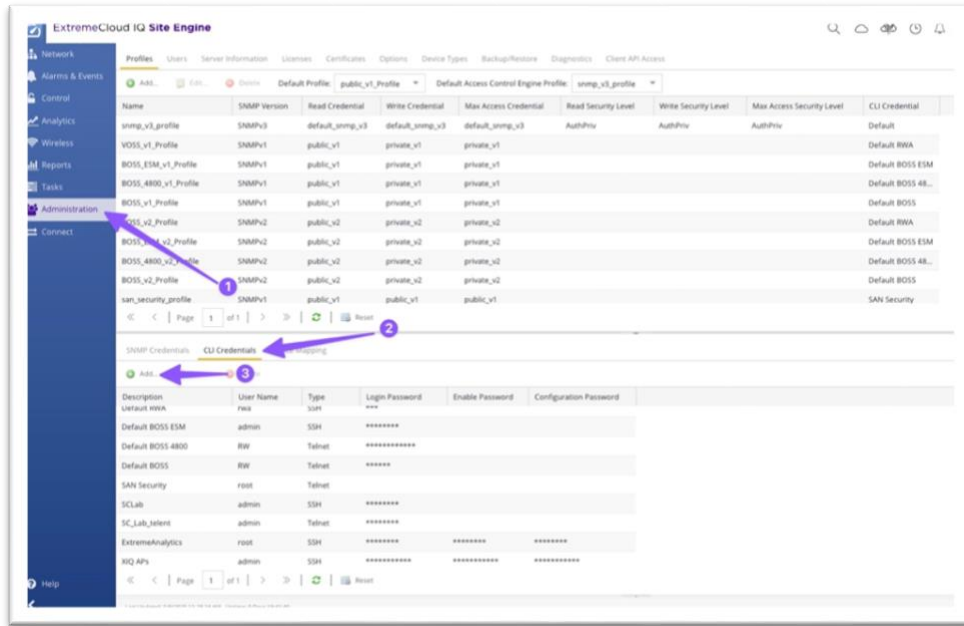
 **Important:** Each workflow must be mapped to a **separate ES Group** in XIQ-SE. This is necessary to prevent the two workflows from overwriting each other's data during synchronization.

The script compares the MAC address lists from JAMF and XIQ-SE and automatically updates the appropriate ES Group by adding or removing MAC addresses, ensuring each group reflects the accurate set of devices registered in JAMF.

Add JAMF Credentials to XIQ-SE

To perform the necessary API call and retrieve device data, each Workflow must first generate an API token. This is accomplished by submitting JAMF credentials to the `/v1/auth/token` endpoint. For enhanced security, these JAMF credentials can be securely stored within the Site Engine Profiles.

- Go to **Administration** on the left
- Select **CLI Credentials** in the bottom pane
- Select **Add**



- Enter a description
- JAMF username
- JAMF password

Note: leave the type as SSH, you do not need to enter anything for the Enable or Configuration password

Add CLI Credential

Description:
JAMF_API_User

User Name:
tismith+api@extremenetworks.com

Type:
SSH

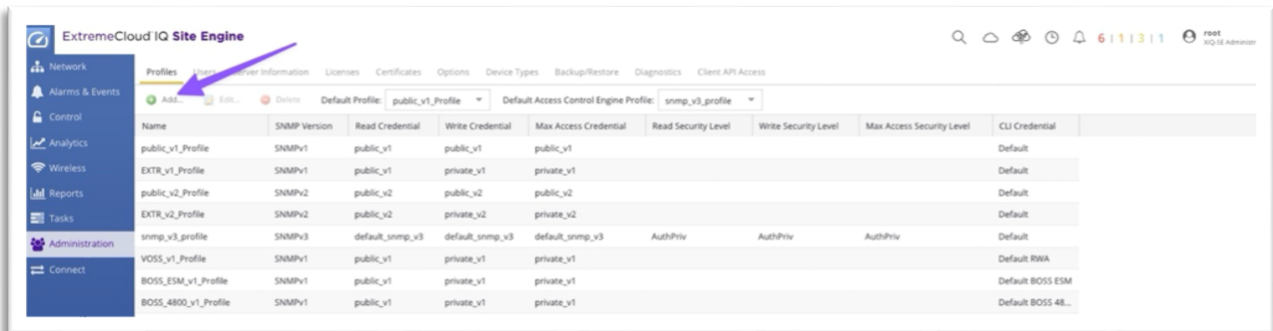
Login Password:

Enable Password:

Configuration Password:

Save
Cancel

- Select **Add** in the top pane to create the Profile



- Give the **profile** the name JAMF_API
- For CLI Credentials, select the **CLI Credentials** you just created.



The screenshot shows a dialog box titled "Add Profile" with a close button (X) in the top right corner. The dialog contains several fields:

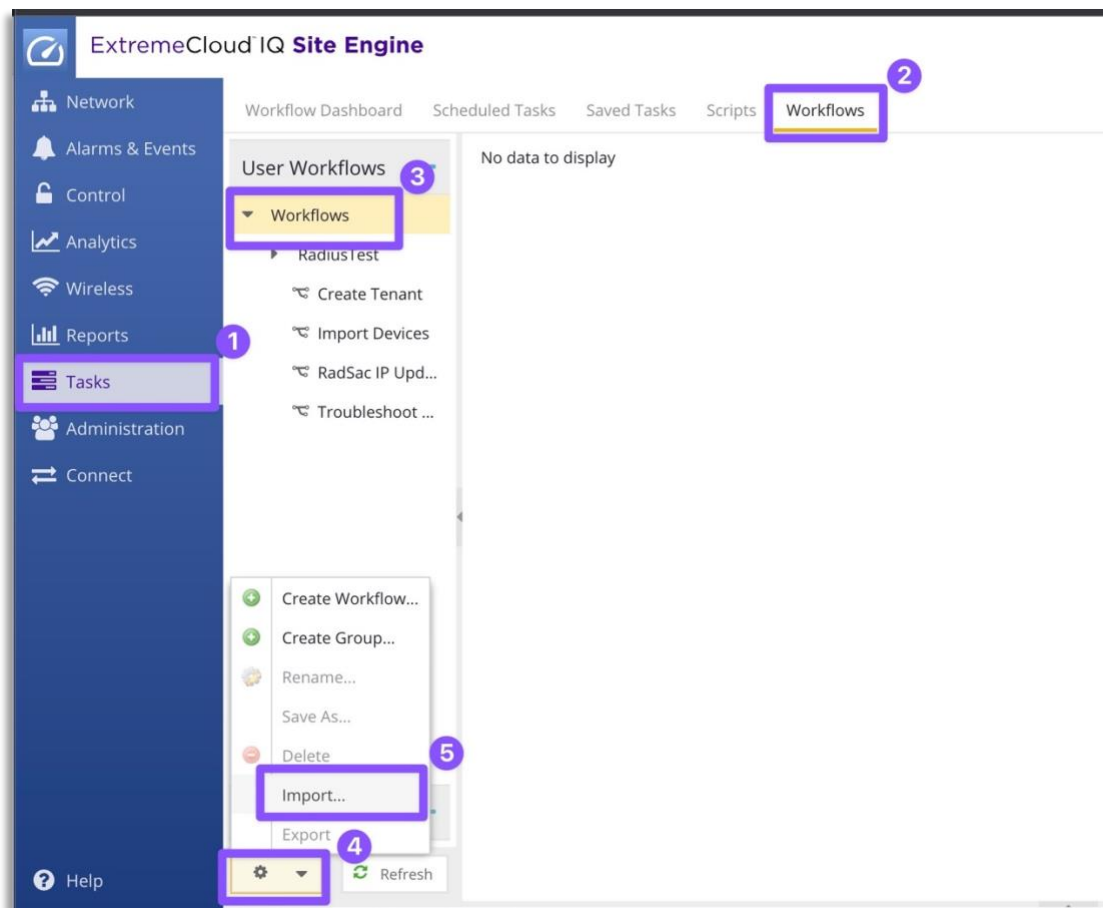
- Profile Name:** A text input field containing "JAMF_API". A blue arrow points to this field.
- SNMP Version:** A dropdown menu showing "SNMPv1".
- Read:** A dropdown menu showing "public_v1".
- Write:** A dropdown menu showing "(No Access)".
- Vlax Access:** A dropdown menu showing "(No Access)".
- CLI Credential:** A dropdown menu showing "JAMF_API_User". A blue arrow points to this field.

At the bottom right of the dialog are two buttons: "Save" (highlighted in blue) and "Cancel".

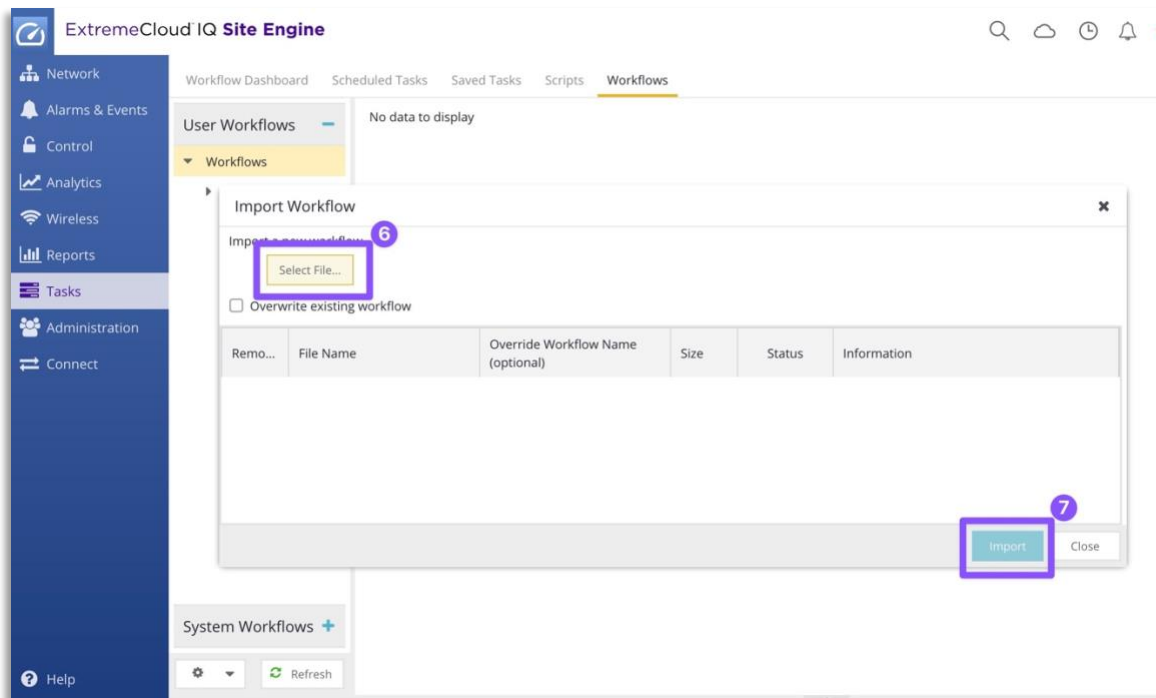
Installing the JAMF ES Group Sync Workflows

The JAMF ES Group Sync Workflows can be imported into a XIQ-SE appliance.

- Go to the **Tasks** tab on the left
- Select the **Workflows** tab
- Select either the **Workflows** folder or a **subfolder**
- Click the **gear** on the bottom and select **import**



- Choose **Select Files** and locate the **.xwf** file
- Click **Import**

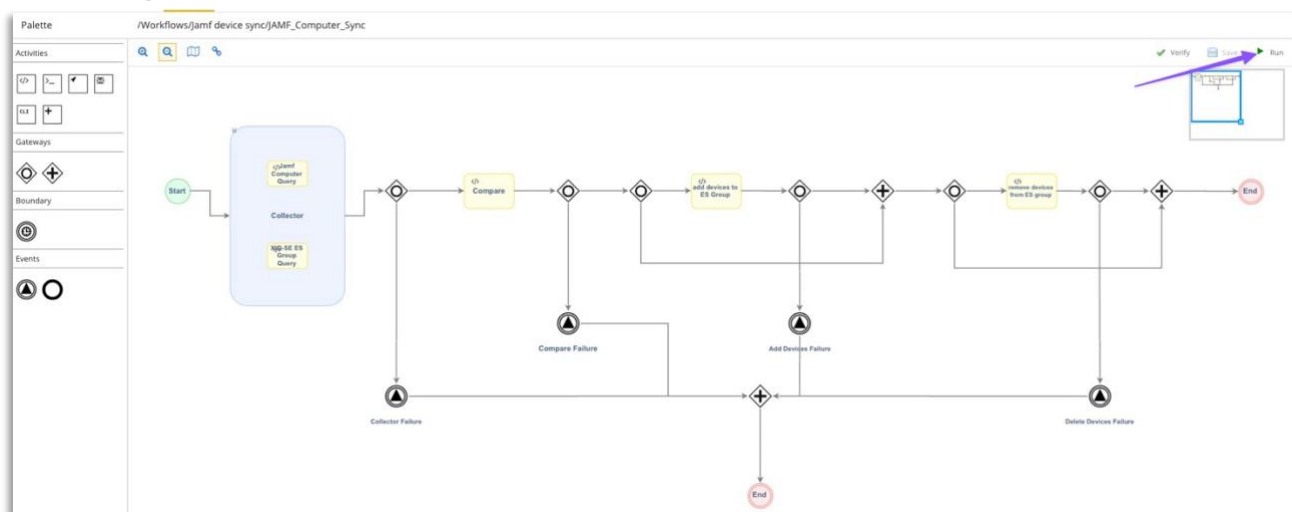


- Repeat for both Workflows

Running the JAMF ES Group Sync Workflows

Each workflow can be run by clicking **run** in the workflow window. The workflows function the same way.

Running the Workflow



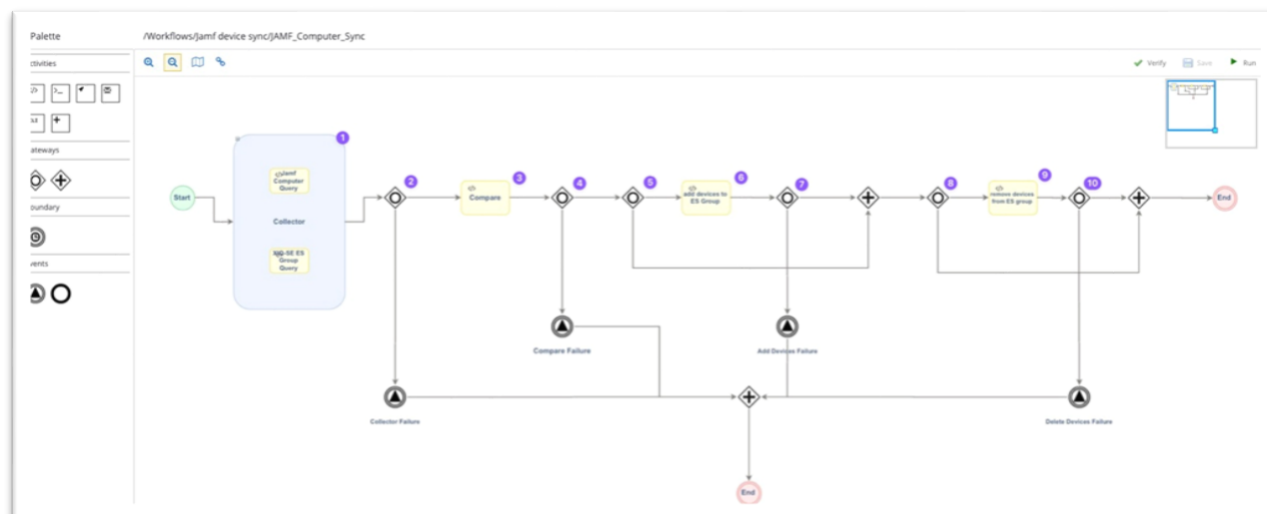
- Enter the JAMF server name (your organization name), and the name of the End-Systems Group you would like to sync.

You can also create a schedule for the workflow to run. You can save it as a task and schedule the workflow to run.

Scheduling a Task

1. Select Enable for Schedule Task
2. Name the Schedule Task
3. Set the frequency you want the workflow to run. You could run hourly or Daily
4. Click Schedule Task

How the Workflows work

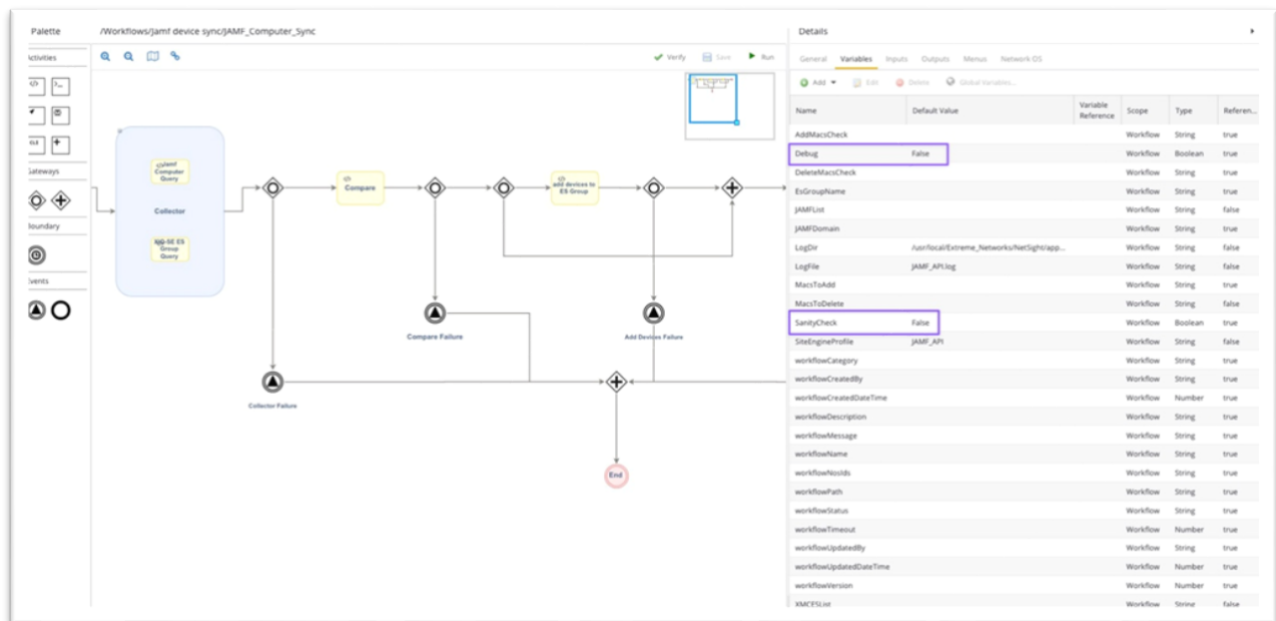


1. **Collector** – The first section consists of 2 scripts that run simultaneously.
 - **Jamf <Computer or Mobile> Sync** – Using the Jamf Pro API, this script collects the MAC addresses of Mac Computers or Mobile devices from JAMF and saves the list to the **JAMFList** variable.
 - **XIQ-SE ES Group Query** – Using the NBI Query, this script will collect the MAC addresses in the End-Systems group from Control and saves the list to the **XMCESList** variable.
2. Gateway – If either Collector scripts fail, the Collector Failure Alert will occur, and the workflow will end.
3. **Compare** – This script will load and compare the **JAMFList** and **XMCESList** variables. This script will look for MAC addresses that need to be added or removed from the ES Group.
 - If MAC addresses need to be added to the ES Group, the **AddMacsCheck** variable is set to true, and the addresses to be added are put in the **MacsToAdd** variable.
 - If MAC addresses need to be removed from the ES Group, the **DeleteMacsCheck** is set to true, and the addresses to be removed are put in the **MacsToDelete** variable.
4. Gateway – If the Compare script fails, the Compare Failure Alert will occur, and the workflow will end.
5. Gateway – If the **AddMacsCheck** variable is set to true by the add devices to ES Group script will run; otherwise, the Workflow will bypass the script and proceed to step 8.
6. **Add devices to ES Group** – This script will add all devices in the MacsToAdd variable to the ES Group.
7. Gateway – If the add devices to ES Group script fails, the Add Devices Failure Alert will occur, and the workflow will end.

8. Gateway – If the **DeleteMacsCheck** variable is set to true by the remove devices to ES Group script will run; otherwise, the Workflow will bypass the script.
9. **Remove devices from ES Group** – This script will remove all devices in the MacsToDelete variable from the ES Group.
10. Gateway – If the remove devices from ES Group script fails, the Delete Devices Failure Alert will occur, and the workflow will end.

Testing the JAMF ES Group Sync Workflows

The **Debug** and **SanityCheck** variables help test and troubleshoot the JAMF ES Group Sync Workflows in XIQ-SE. When Debug is on, the scripts print extra details, like API results and logs, to help spot issues or check the process. The SanityCheck variable, when enabled, stops the workflows from changing MAC addresses in XIQ-SE ES Groups and instead shows the JSON data that would be sent, letting you review changes safely. Together, they make testing and fixing the workflows easier and safer.



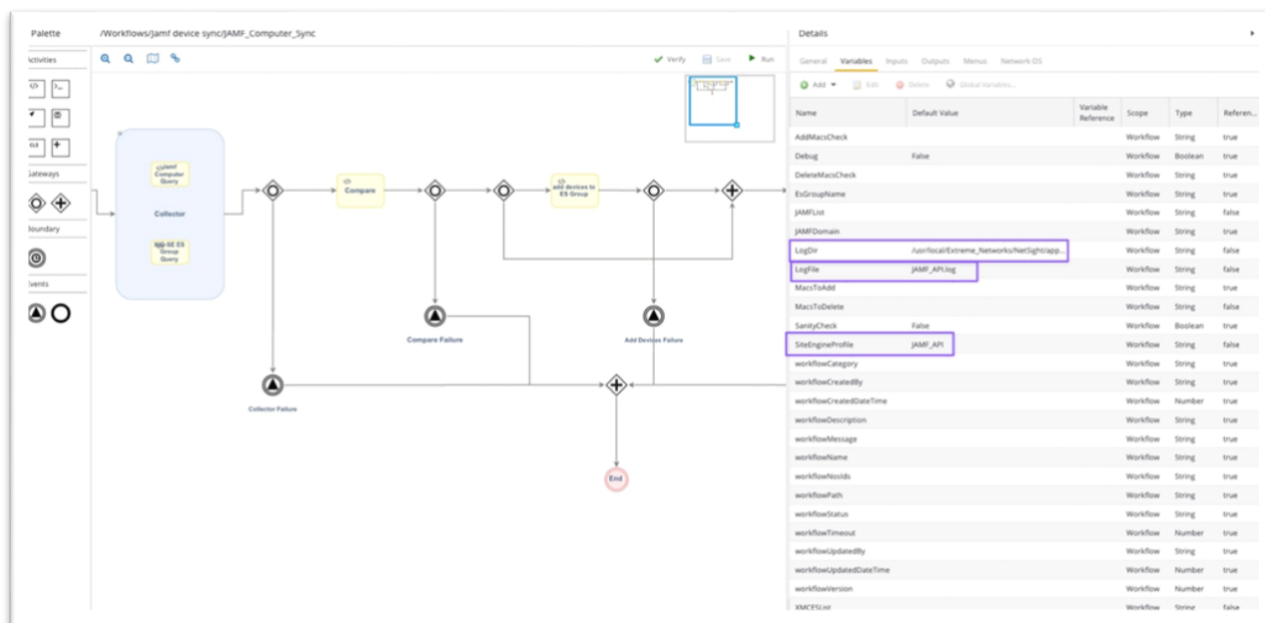
Advanced Setup for the JAMF ES Group Sync Workflows

The Workflow will save any changes to the ES Group in a log file. These 2 Variables can be changed to change the location of the log file.

3. LogDir ==>
/usr/local/Extreme_Networks/NetSight/appdata/logs/scripting/JAMF_Sync
4. LogFile ==> JAMF_API.log

You can also change the name of the Site Engine Profile to be used.

- SiteEngineProfile==> JAMF_API



Alerting

If there are failures in any of the scripts in the workflow an alert should be created. The Event Title will either be “JAMF Computer Sync Failure” or “JAMF Mobile Sync Failure”

The Event Sources is set to XIQ-SE and Event Subcomponent is ‘JAMF Workflow’

The Event message will identify which script had the issue. Each event starts with “JAMF Sync Error: “

Signal Configuration

Signal Type: Event

Event Title: JAMF Computer Sync Failure

Event Category: Workflows

Event Source: XIQ-SE

Event Subcomponent: JAMF Workflow

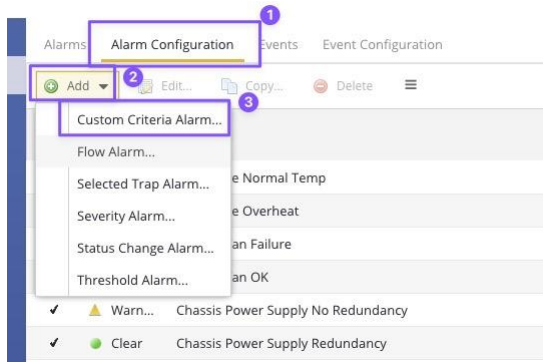
Event Severity: Warning

Event Message: JAMF Sync Error: The Collector in the workflow failed to Collect the JAMF devices or Site Engine ES Group devices. Check Workflow for more details.

Severity	Event Type	Category	Date/Time	Source	Subcomponent	Client	User	Type	Event	Information
✓	Console	Workflows	6/11/2025 10:24:09 AM	---	---	Workflow Desi...	root	Event	Workflow Success	Workflow completed with errors [Workflows/jamf d...
✓	Console	Workflows	6/11/2025 10:24:09 AM	XIQ-SE	JAMF Workflow	---	root	Event	JAMF Computer Sync Failure	The Collector in the workflow failed to Collect the JA...
✓	Console	Workflows	6/11/2025 10:24:05 AM	---	---	Workflow Desi...	root	Event	Workflow Start	Starting workflow=Workflows/jamf device sync(JAM...
✓	Syslog	---	6/11/2025 10:23:22 AM	Unifi-Switch	---	---	---	Event	---	74acb91b4c9f1USW-24-PoE-7.1.26+15869: mcad: mc...

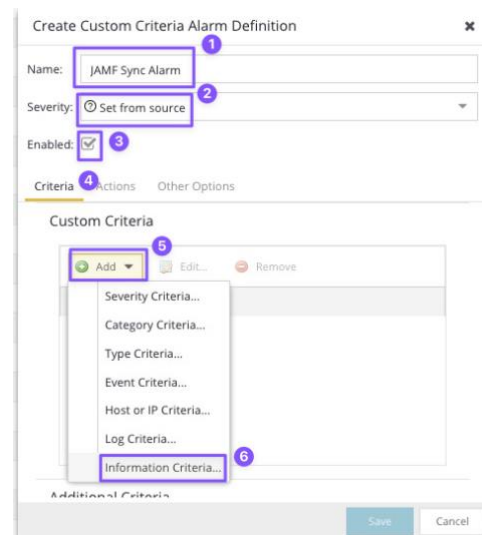
Building an Alarm from the Event

Under Alarm configuration, you can add a Custom Criteria Alarm.

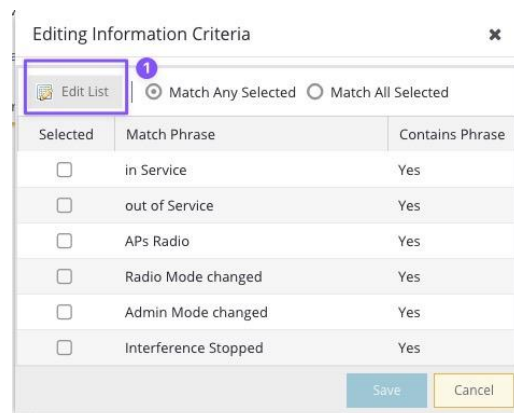


In this window you will want to

1. name the alarm
2. set the severity
 - a. The Workflow will set the Severity to "Warning" but can be overwritten here.
3. check the box to enable the alarm
4. Add a Custom Criteria to search the Information Criteria.



This will open a window, select the Edit List button.



Here you can add the Phrase “JAMF Sync Error:” This is included in each message of the Events.

Editing Text Phrase entry

1 Add Remove

Match Phrase	Contains Phrase
in Service	Yes
out of Service	Yes
APs Radio	Yes

2 Contains Does not contain

Text Phrase: JAMF Sync Error:

3 Save Cancel

After you've added that to the list. Scroll down and check that Phrase and click Save.

Editing Information Criteria

Edit List Match Any Selected Match All Selected

Selected	Match Phrase	Contains Phrase
<input type="checkbox"/>	user 'kyle' authenticated	Yes
<input type="checkbox"/>	Ghost Port State Detected	Yes
<input type="checkbox"/>	Configurations Are Different	Yes
<input type="checkbox"/>	PoE on port	Yes
<input type="checkbox"/>	PoE on port(s)	Yes
<input checked="" type="checkbox"/>	JAMF Sync Error:	Yes

1

2 Save Cancel

Then Back in the Alarm Definition select Actions. This will let you configure the Alarm to email a group when this Alarm is triggered. You will then have the Alarm showing under Alarm Configuration.

Create Custom Criteria Alarm Definition

Name: JAMF Sync Alarm

Severity: Set from source

Enabled: ☒

Criteria Actions Other Options

+ Add Edit... Remove Test

Email Action...
Syslog Action...
Trap Action...
Custom Action...
Task Action...
External Workflow Action...

Max Count: 5

Add Email Action

Destination: Helpdesk Edit Email Lists... Save Cancel

☐ Override Content Show Keywords...

Subject: ExtremeCloud IQ - Site Engine \$severity Alarm: \$alarmName

Body: Device: \$deviceIp
Severity: \$severity
Message: \$message

Save Cancel

Alarms Alarm Configuration Events Event Configuration										
+ Add Edit... Copy... Delete										
Ena...	Severity	Name ↑	Type	Device Groups	Action	Limit Enabled	Max Co...	Reset Interval	Clearing Alarms	
✓	Set fr...	JAMF Sync Alarm	Custom Criteria		Send Email to Helpdesk email list					