Citrix Software Upgrade Workflow Guide

Trademarks

Contact Information

AppViewX, Inc.

500 Yale Avenue North, Suite 100

Seattle, WA 98109

Tel: +1 (206) 207 7541

Email: info@appviewx.com

Web: www.appviewx.com

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Contents

Citrix Software Upgrade Workflow

The *Citrix Software Upgrade* workflow upgrades the major and minor versions of Citrix. Also, the user will get a report with the object details before and after the upgrade.

Prerequisites

To run this workflow in your environment, the following prerequisites must be met:

- Software image for the upgrade must either be available on the AppViewX server or in the SFTP server.
- The device must have bash access.
- Free AppViewX or AVX 12.3.0 has been downloaded and installed.
- An Citrix device has been added to AppViewX as a managed device.

Compatible Software Versions

The application provisioning automation temples have been validated for the following software versions:

- AppViewX – Free AppViewX and AVX 12.3.0
- ServiceNow – Eureka, Istanbul, and Jakarta
- Citrix – version 11, 12, and 13

Limitations

- This workflow will work only for the Citrix devices from version 11 onwards.
- A downgrade to version 9 is not supported.
- The upgrade has been tested only on versions 10, 11, and 12 and an incremental upgrade is recommended.

Log In to AppViewX

Log in to the AppViewX web interface. The standard format for a login URL is:
`http://hostname:portnumber`

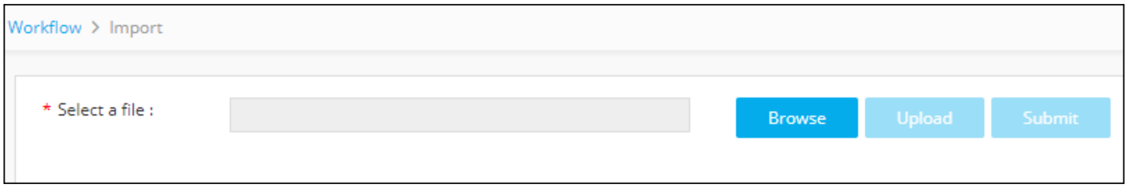
The hostname and port number are configured during deployment, with the default port number set to 5004 and the default web credentials set to `admin/AppViewX@123`.

Note: It is recommended that you access AppViewX using Internet Explorer, Firefox, or Google Chrome.

Import Visual Workflows

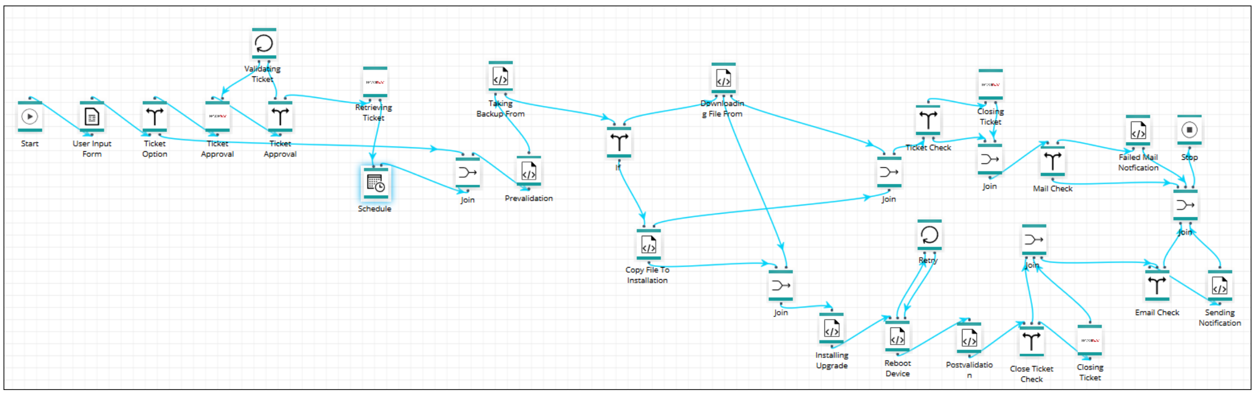
Note: Free AppViewX comes preloaded with visual workflows. You will only need to use the following import instructions when newer versions of the workflows become available.

1. Click the (Menu) button.
2. Navigate to **Workflow > Studio**.
3. Click the (**Import**) button in the Command bar.



4. To import a workflow, complete the following sub-steps:
    a. Click the **Browse** button.
    b. Select the zip file containing one or more workflows, then click **Upload**.
    c. In the table at the bottom of the *Import* page, select the check box beside the unzipped workflow file.
    d. Click **Submit** to deploy the workflow into your AppViewX environment.

The *Citrix Software Upgrade* workflow is shown in the image below:

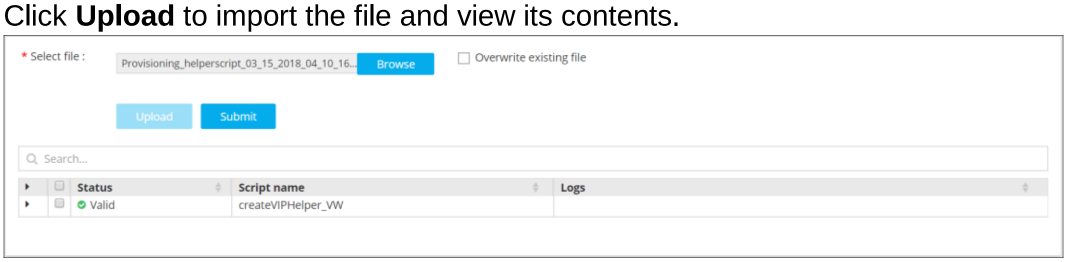


Import Helper Scripts

Note: Free AppViewX comes preloaded with helper scripts. You will only need to use the following import instructions when newer versions of the helper scripts become available.

To import a helper script, complete the following steps:

1. In the navigation menu on the left-hand side of the AppViewX screen, navigate to **Workflow > Studio**.
2. Click on the (**Helper script**) button. The *Helper script library* screen appears.
3. Click the (**Import**) button.
4. Click **Browse** and select the helper script zip file you want to import.
5. Click **Upload** to import the file and view its contents.

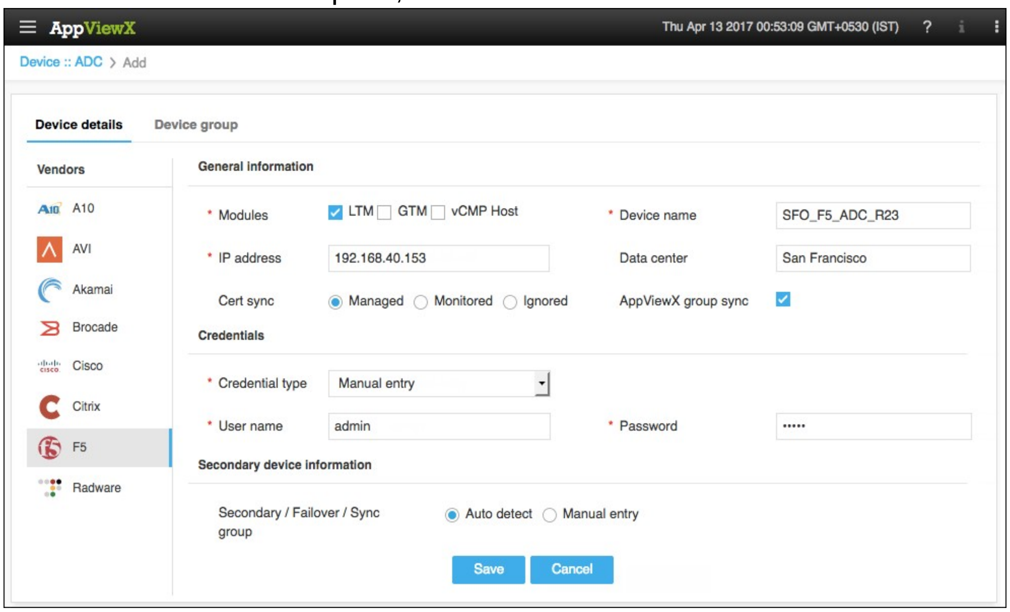


Note: Select the checkbox **Overwrite existing file**, only if the names of the new script file that you are trying to upload and the existing script file are the same.

6. In the table at the bottom of the Import page, select the check boxes beside each of the helper scripts.
7. Click **Submit** to deploy them into your AppViewX environment.

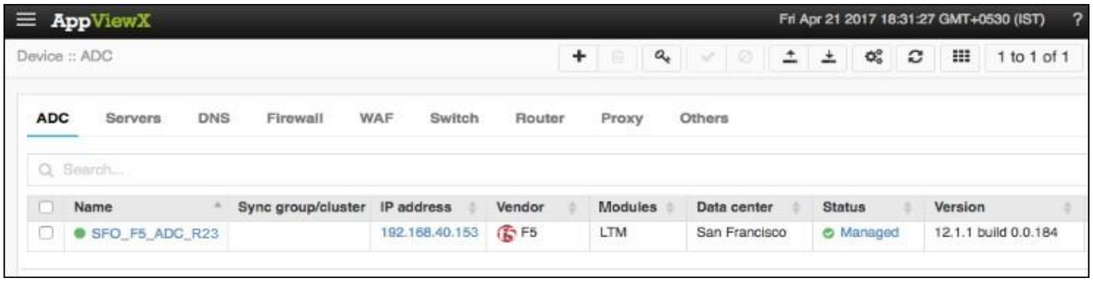
Add an ADC Device: F5 LTM

1. In the navigation menu on the left-hand side of the AppViewX screen, navigate to **Inventory > Device**.
2. On the *Device* screen, click the **ADC** tab if it is not already visible.
3. Click the + (**Add**) button in the Command bar.
4. On the *Add* screen that opens, click to select **F5** as the ADC vendor.



5. Select the module to be managed on the ADC device.
6. Create a **Device name** that is specific to AppViewX and that will identify the device in the AppViewX inventory.
7. Enter the **management IP address** of the device.
8. (Optional) Specify a **Data center location** if you want to have the option later to filter devices based on their location.
9. In the **Cert sync** field, select the radio button for the kind of synchronization relationship you want to establish between SSL certificates on the ADC device and AppViewX: **Managed**, **Monitored**, or **Ignored**.
10. (Optional) Select the **AppViewX group sync** check box if you need AppViewX to sync the configuration changes from an active to standby F5 ADC device. This is required in older F5 versions like v10. The latest versions of F5 sync automatically.
11. Select a **Credential type** from the dropdown menu.
12. Enter the **User name** and **Password** that are associated with the credentials.
13. **Note:** The user you enter in the **User name** field must have advanced shell access.

14. Select **Auto detect** to automatically detect and add secondary or failover devices or sync groups to the ADC device inventory.
15. Click **Save** to save the new ADC device on the ADC tab.

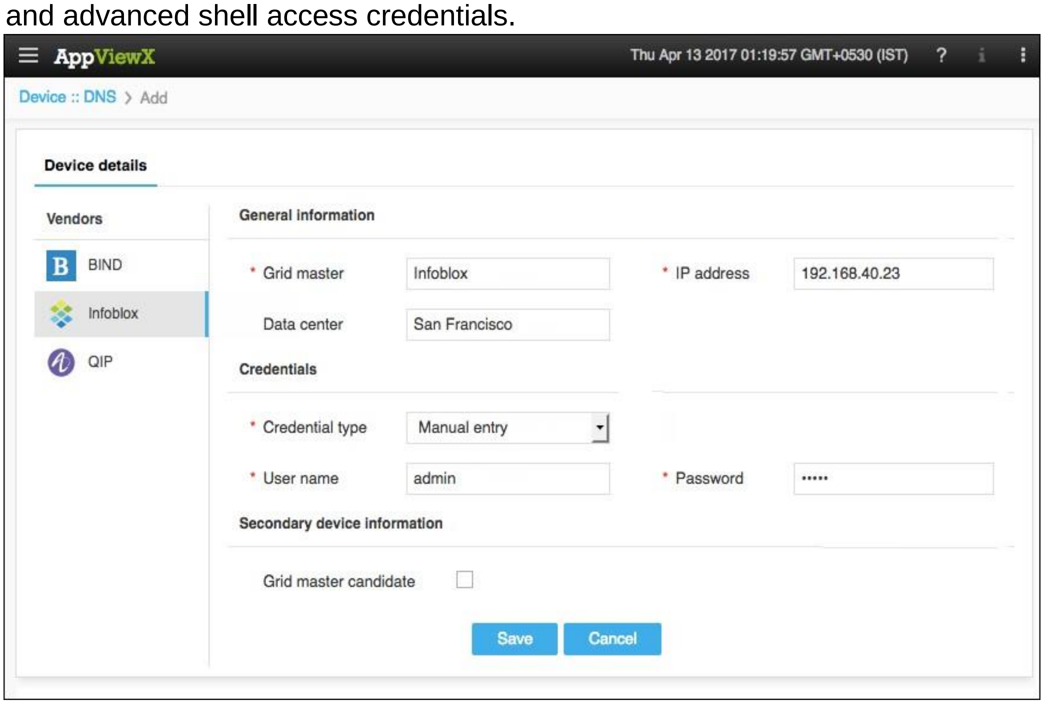


The device will display one of the following statuses:

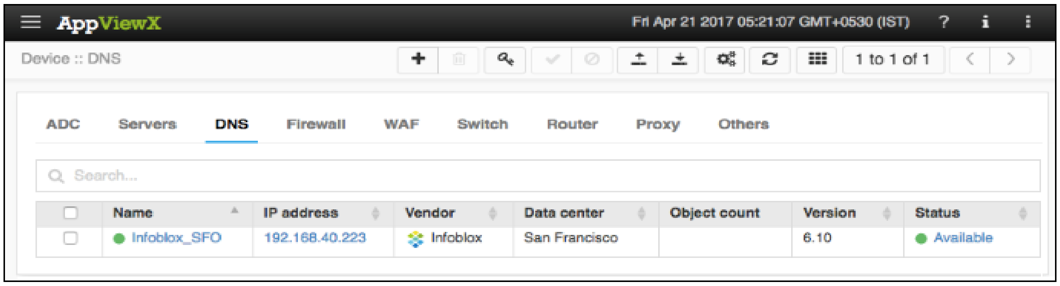
- **In Progress** – Device configuration fetch is in progress.
- **Managed** - Device configurations are fetched and parsed successfully. This is the status a successfully added ADC device should have.
- **Unresolved** – Unable to communicate with device, due to invalid login credentials.
- **Failed** – Device configuration fetch failed, due to unsupported version.

Add an IPAM Device: Infoblox

1. In the navigation menu on the left-hand side of the AppViewX screen, navigate to **Inventory > Device**.
2. Click the **DNS** tab.
3. Click the + (**Add**) button in the Command bar.
4. On the *Add* page that appears, click to select **Infoblox** and enter the device's IP address and advanced shell access credentials.

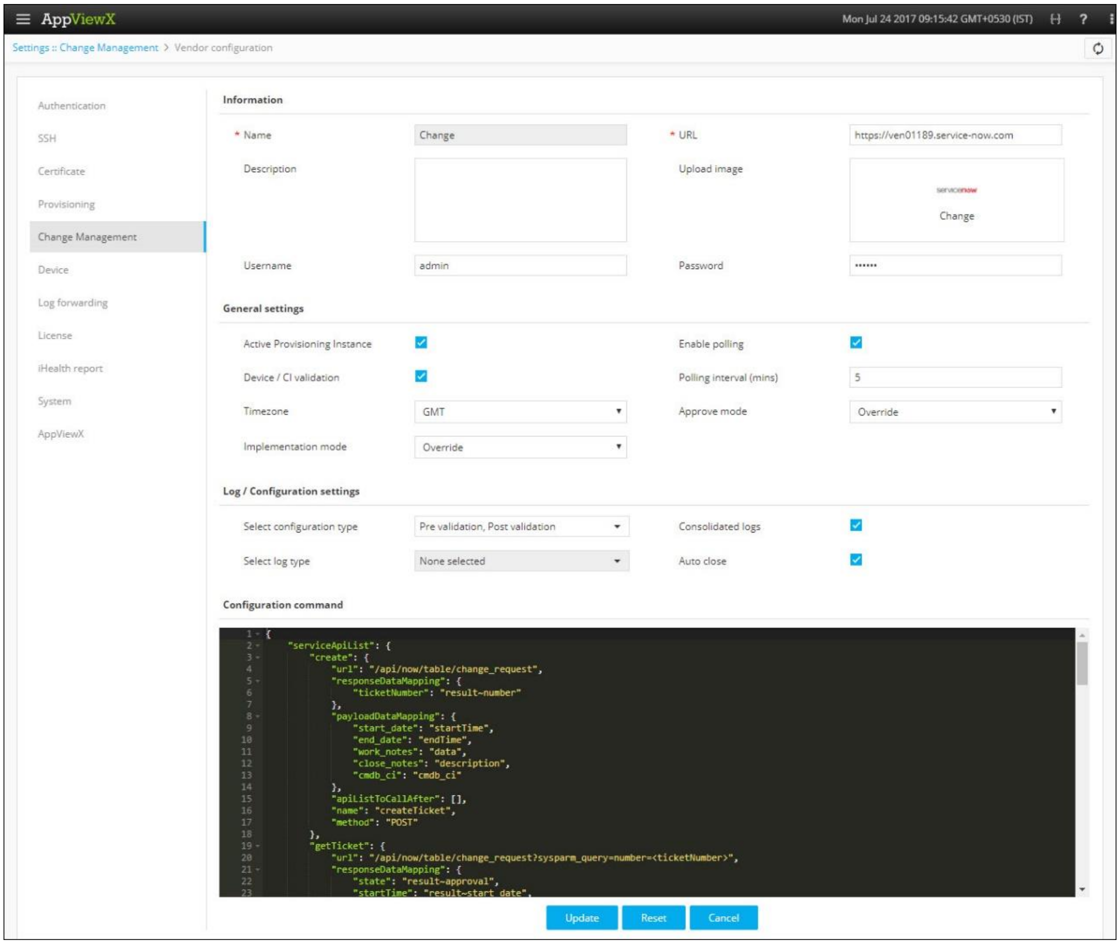


5. Click the **Save** button.
   The device status on the DNS tab changes to **Available** to indicate the successful addition of Infoblox.

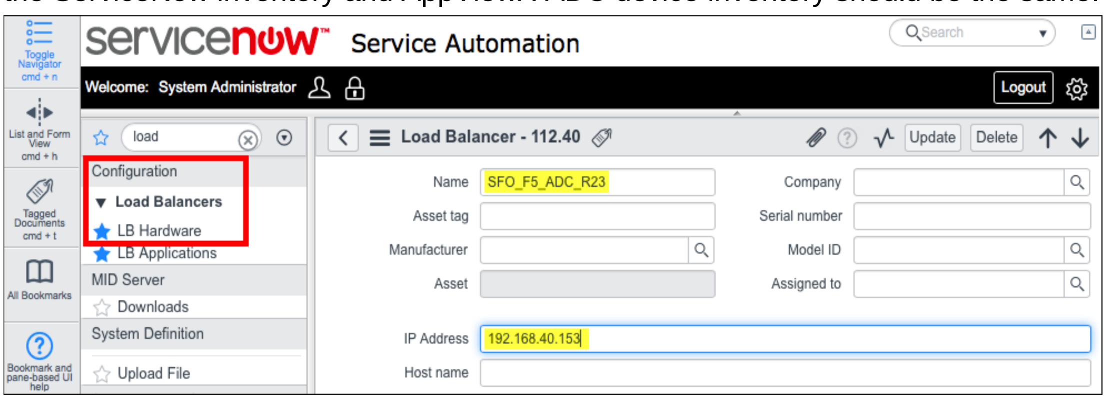


Register an ITSM Device: ServiceNow

1. In the navigation menu on the left-hand side of the AppViewX screen, navigate to **Settings**.
2. On the *Settings* page that opens, click **Change Management** in the column on the left.
3. Click the **ServiceNow** plug-in.
4. On the *Vendor configuration* screen that opens, enter a valid web URL
5. (Optional) Enter a **Description** of the vendor to help users identify it.
6. Enter the ServiceNow **username** and **password** credentials in the respective fields.
7. Click **Update** to save the changes made in the system.



8. (Optional) The F5 LTM device you are configuring should be present in the ServiceNow LB Hardware inventory. You can check this by opening ServiceNow and clicking to open the **Load Balancers > LB Hardware** section shown below. The device name used in the ServiceNow inventory and AppViewX ADC device inventory should be the same.

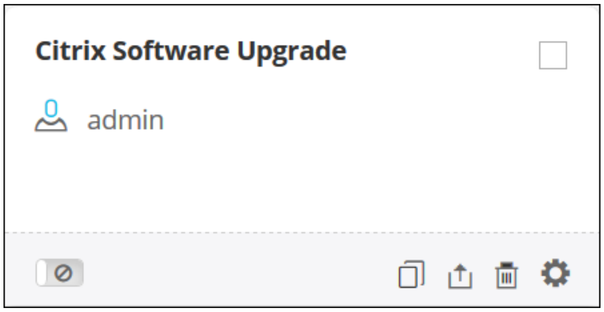


Enable a Workflow

To enable the *Create Virtual Server* workflow, complete the following steps:

1. Click the (**Menu**) button.
2. Navigate to **Workflow** > **Configurator**.

3. The *Workflow* screen opens.
4. Click the (**Select**) button on the *Create Virtual Server* workflow to enable it. If the workflow is already selected, a (**Deselect**) button appears.
5. Click the (**Enable**) button in the Command bar.
   Note: You can also enable the required workflow from the Card view by clicking the (**Disable**) button.

6. On the *Confirmation* screen that appears, click **Yes**.

Citrix Software Upgrade Workflow

To submit the *Create Virtual Server* workflow, complete the following steps:

1. Click the (**Menu**) button.
2. Navigate to **Workflow** > **Request**.

   The *Request* screen opens with **My catalog** tab displayed by default. This screen displays all enabled workflows assigned to a specific user role.

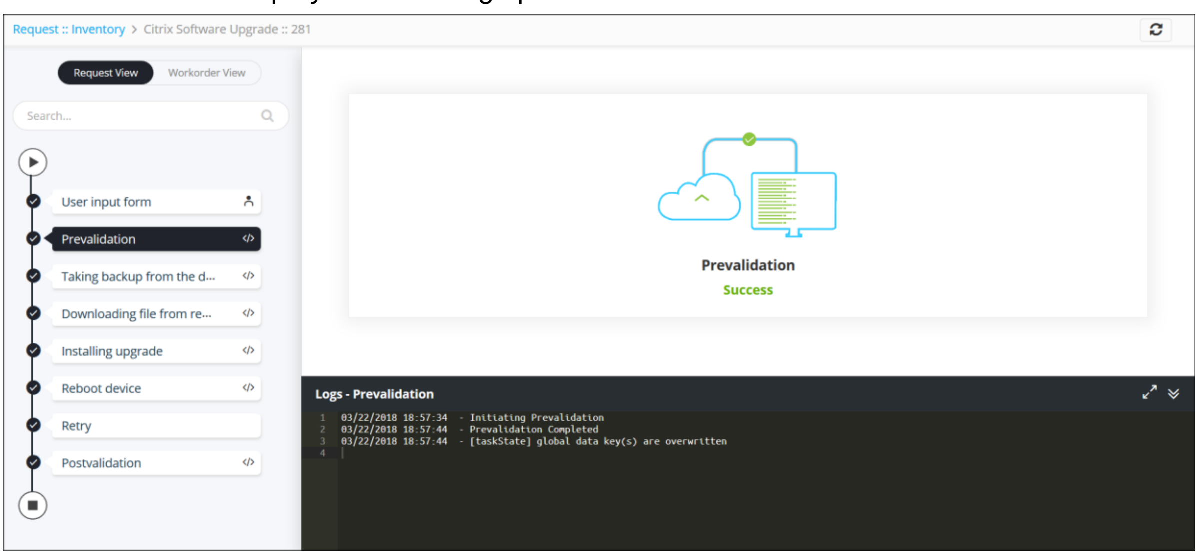
3. Click the (**Run workflow**) button from the Card view of the *F5 Software Upgrade* workflow.
4. In the **Device** field, click the (**Retrieve field values**) button to retrieve all the available Citrix devices and select the device to be upgraded from the dropdown that appears.
5. In the **Current software version** field, click (**Retrieve field values**) button to view the current version of the Citrix device selected in step 4.
6. In the **Image available location** field, select one of the following locations where the image is available:
   - Device — In the **Available image device path** box, enter a location to images that are already available in the device.
   - SFTP — Upon selecting this radio button, the following fields must be entered:
     i. **SFTP Host**
     ii. **SFTP path**
     iii. **SFTP username**
     iv. **SFTP password**
7. (Optional) In the **Email address** box, enter an email ID to which a notification must be sent after the workflow execution is complete.

8. In the **Available Storage** field, click the  (**Retrieve field values**) button to retrieve all the available partition details.
9. In the **Current active partition** of device, click the  (**Retrieve field values**) button to view the current partition that is active in the device.
10. In the **Take /etc backup**, select the **Yes** radio button if you want to take a backup.
11. In the **Select files which you want to backup** field, click the  (**Retrieve field values**) button to retrieve the files available for backup and select the desired files from the dropdown.
12. In the **Create ServiceNow ticket**, select the **Yes** radio button if you want to create a ServiceNow ticket.
13. In the **Time Zone** of device, click the  (**Retrieve field values**) button to retrieve the available time zones and select the desired time zone from the dropdown.
14. Schedule the upgrade window time and date using the **Start Date** and **End Date** fields. The upgrade will be triggered during this upgrade window.
15. Click the **Create SNOW ticket** button to audit the changes in ServiceNow.
16. Click **Submit** to trigger the workflow.

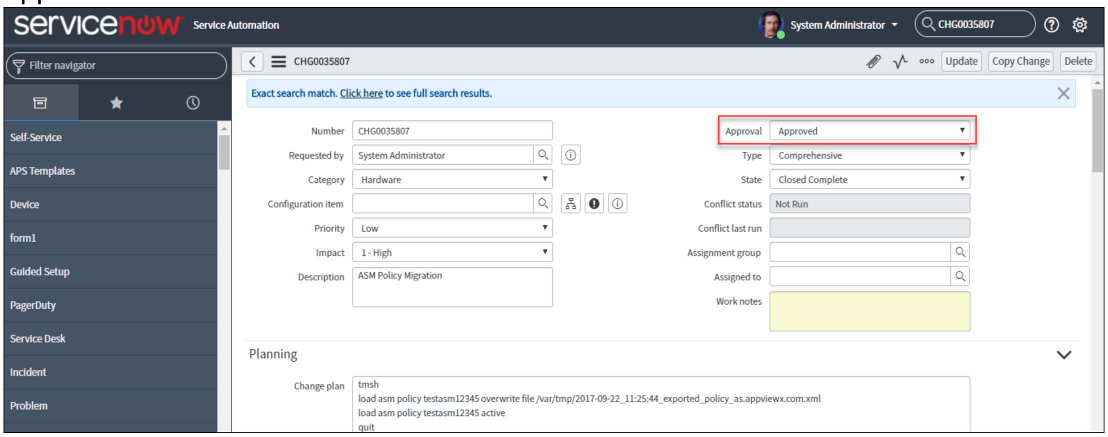
Workorder Flow

The following are the workorder tasks of *Citrix Software Upgrade* workflow.

Note: You can click each task to view its details. Wherever applicable, all logs related to the selected task are displayed in the Logs pane at the bottom of the screen.



1. **Validate Ticket Status —** To validate the ticket, log in to ServiceNow and manually approve the ticket.



2. **Prevalidation —** The pre-validation commands on the device to get the object list and details.
3. **Taking backup from the device —** Backup of the selected device files is taken in AppViewX.
4. **Downloading file from remote location —** The file in the SMTP server is uploaded to the device location.
5. **Installing upgrade —** The copied image is installed on the device.
6. **Reboot of Device —** The device is rebooted and a check is performed to ensure that the device is up.
7. **Postvalidation —** After a successful upgrade, this will check all the objects in the device and compare with the pre-validation. An email (if one was provided) is sent, if there is a mismatch in the object state, a csv file is attached along with the email.

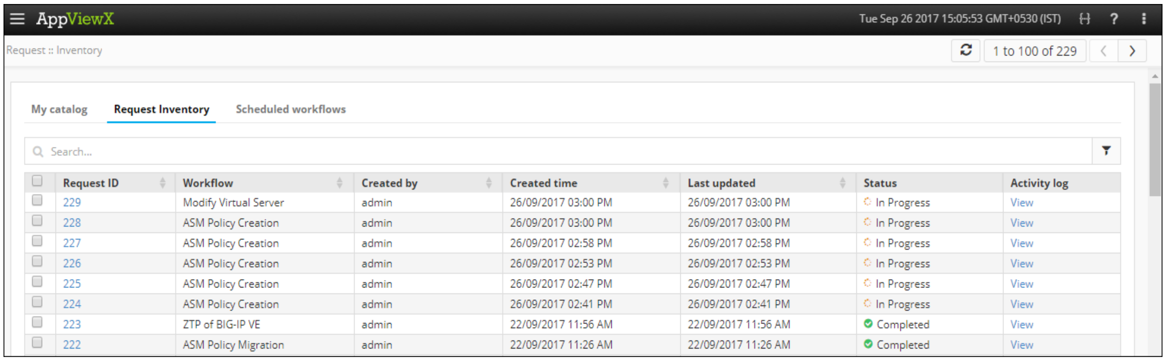
Request Inventory

To go to the Request inventory, complete the following steps:

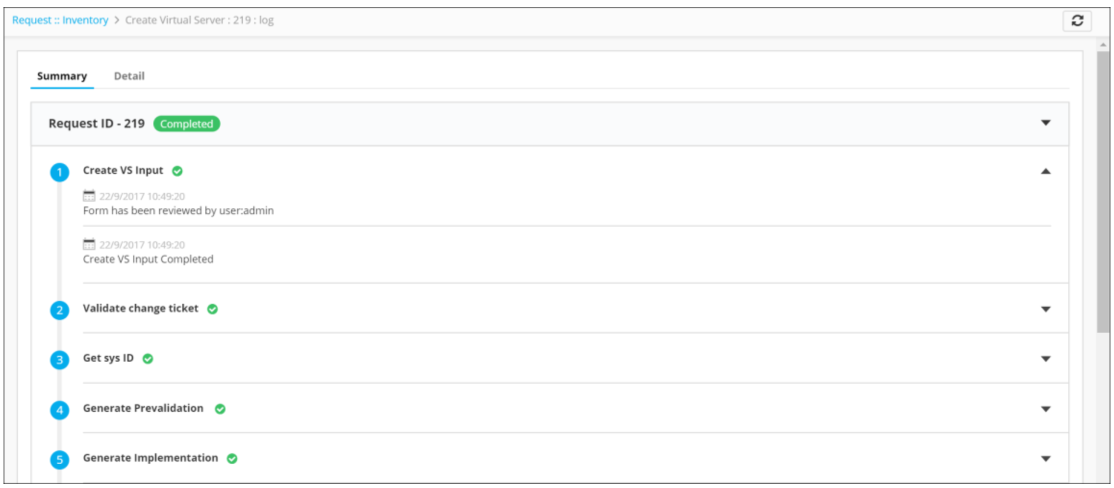
1. Click the (**Menu**) button.
2. Navigate to **Workflow** > **Request**.

   The *Request* screen opens with **My catalog** tab displayed by default.
3. Click the **Request Inventory** tab.

   This displays all workflows that have been triggered. On the **Request Inventory** screen, you can search for a request using the **Search** field and/or click the (**Filter**) button to select the options you want to use to sort the requests.



4. Click the **Request ID** of the requested workflow to view the tasks or phases of a request in a tree-view.
5. You can also view the following details of the request that are created: by whom and when the Request was created, Last updated time, Status and the Activity log.
6. Click **View** in the **Activity log** column to display the request in a stage view. In the **Summary** tab, click the (**Expand**) icon to view the details of each task. Click the **Details** tab to view log messages and other particulars of a request.



Schedule a Workflow

To schedule a workflow, complete the following steps:

1. Click the (**Menu**) button.
2. Navigate to **Workflow** > **Request**.

   The *Request* screen opens with **My catalog** tab displayed by default.
3. Click the (**Schedule workflow**) button on the respective workflow.
4. On the window that opens, select the frequency of the policy migration process: once, hourly, daily, weekly, monthly, or yearly. The remaining fields in the Scheduler region update depending on the selections you make.
5. Click **Save**.

View Scheduled Workflows

To go to the scheduled workflow screen, complete the following steps:

1. Click the (**Menu**) button.
2. Navigate to **Workflow** > **Request**.
3. The *Request* screen opens with **My catalog** tab displayed by default.
4. Click the **Scheduled workflows** tab.
5. On the Scheduled workflow screen that appears, you can perform the following tasks:
    - In the **View log** column, click **View** to display the details of a scheduled workflow.
    - Click the (Pause) or (Resume) button to temporarily stop or continue the execution of a workflow.

Troubleshooting

I cannot find the workflow in the Request Catalog

You must enable the workflow from the Configurator section. For more details on how to enable a workflow, refer to the Enable a Workflow section of this guide.