Cisco Enterprise Service Automation 1.0 User Guide

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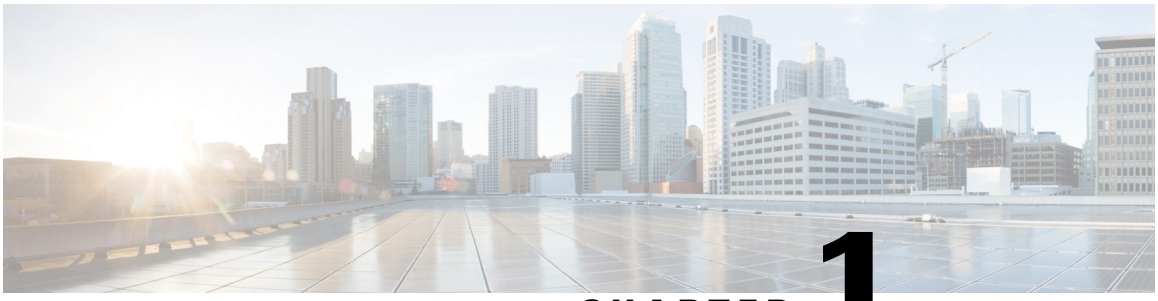


CHAPTER 1

Overview

Introduction to Cisco Enterprise Service Automation

Cisco Enterprise Service Automation is an orchestration and management application that allows enterprise IT operation teams to design, provision, and manage virtual and physical branch networks. ESA orchestrates the components required for branch provisioning by integrating with APIC EM and manages the nodes provisioned via Prime Infrastructure. IT operators can choose a predefined service catalog from the ESA user interface and map it to a physical network location where services are to be deployed.

ESA is not a standalone application. It operates collaboratively with Cisco Prime Infrastructure and APIC-EM to provision and deploy the configuration and services on the enterprise network infrastructure.

ESA manages the full life cycle of virtual network services by providing the following:

- **Design**
  - Standardization of site design through the creation of templates for the branch and campus
  - Policy definition based on business priorities
  - Custom or prescriptive designs
- **Provisioning**
  - Zero-touch deployment model
  - Automated orchestration of virtual and physical network services
  - Service chaining
- **Management**
  - Health monitoring of platform and network services
  - Dynamic scaling of services
  - Service deployment

- **Virtual Network Functions(VNFs)**

  VNFs are the network services needed to run a network. Cisco Enterprise Network Function Virtualization (NFV) includes the following services:

  - Routing (ISRv)
  - Firewall (ASAv and NGFW)
  - Application acceleration (vWAAS)
  - Third Party VNFs (Windows, Linux)

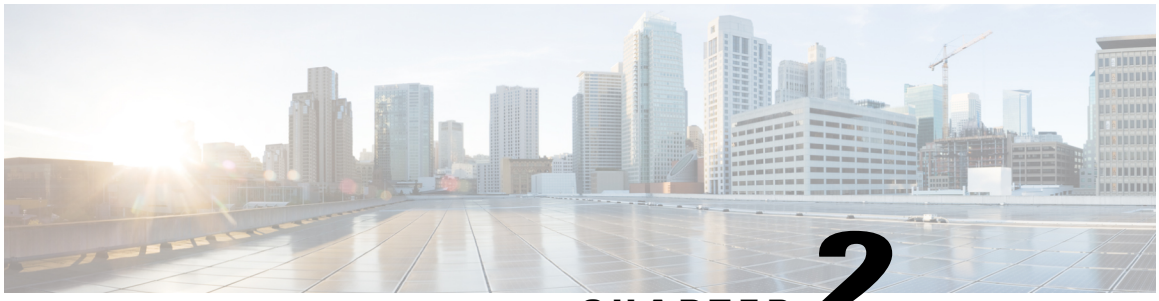
Enterprise Service Automation Organization

The Enterprise Service Automation web interface is organized into a lifecycle workflow that includes the high-level task areas described in Table 1: Enterprise Service Automation Task Areas, on page 2. This document follows the same general organization.

Table 1: Enterprise Service Automation Task Areas

Task Area	Description	Users
Devices	Add and view devices— allows you to add or upload devices to ESA that are yet to be provisioned on the branches. You can map the serial numbers to the profiles for uniquely identifying the devices before provisioning.	Administrator, Profile Manager
Branches	Add and view branches—allows you to add and provision the branches and provides a map and table view of branch information.	Administrator, Profile Manager, Approver
Profiles	Add and view profiles—allows you to create and provision reusable design templates for network branches, use predefined or matching templates and view the branch profile status.	Administrator, Profile Manager, Approver

Task Area	Description	Users
Configuration	Perform all management operations such as adding Data Center profiles, assigning IP addresses, managing groups, configuring system setup, adding users and roles, system backup, managing certificates, managing Network Knowledge Pack (NKP), synchronizing external or internal changes.	Administrator
Deployments	Allows you to view the deployment status, offline deployments and diagnose errors.	Administrator, Profile Manager
Information	Provides information about audit logs, system health, system logs, system metrics and notifications, and track the user.	Administrator



CHAPTER 2

Getting Started

Configuring System Settings

To deploy the services and functions for enterprise branch networks in Enterprise Service Automation, you need to configure the system settings.

Setting Up the Initial Configuration

You can do the initial system setup before logging into the homepage. For more details, see Logging into Enterprise Service Automation section in Cisco Enterprise Service Automation 1.0 Quick Start Guide.

To configure the system settings after logging into the application, do the following:

Step 1 Choose **Configuration** > **System Configuration** from the navigation menu.

Step 2 To configure an SNMP Server for approval notifications and status alerts, enter the following information**: Host Name, Port, Mail Server Username, Password, From** email address, and then Click **Save**.

Step 3 To configure the approval workflow for the defined branch profiles:

a) Click **Workflow** tab and choose the following options:

- **Enable Email for Workflow**
- **Branch Profile Workflow Auto Approve**
- **Branch Profile Workflow Approver**

Note To select Branch Profile Workflow Approver, it is required to create user(s) and their roles in User Management under Configuration after logging into Enterprise Service Automation application.

b) Click **Save** .

Step 4 To add external controllers:

a) Click **APIC-EM** tab and enter the following information:

- Name—User-defined name for the server.
- User Name—This is APIC-EM communication username.
- Password—This is APIC-EM communication password.
- Protocol—Https protocol for secure communication.
- Host—IP address of the server.
- Port—Port number of the server.

b) Click **Save**.

c) Click **Prime Infrastructure** tab and enter the following information:

- Name—User-defined name for the server.
- User Name—This is Prime Infrastructure communication username.
- Password—This is Prime Infrastructure communication password.
- Protocol—Https protocol for secure communication.
- Host—IP address of the server.
- Port—Port number of the server.
- Broker User Name—This xmpBroker is a static name from Prime Infrastructure.
- Broker Password—The xmpBroker password that is generated from Prime Infrastructure through JMS. To get xmpBroker password, See Pre-requisites section in Enterprise Service Automation 1.0 Quick Start Guide.

d) Click **Save**.

Note
- Prime Infrastructure and APIC-EM should be installed before installing Enterprise Service Automation.
- Once ESA is installed, it will automatically add Prime Infrastructure and APIC-EM ane enable JMS on Prime Infrastructure. Installation script restarts Prime Infrastructure to enable JMS.
- To check whether these external systems are up and running, click **Check Connection** under APIC-EM and Prime Infrastructure tabs.

Step 5 (Optional) To display customized notifications on the login page, enter the **Login disclaimer** and click **Save**.

Step 6 To ensure system security, check the appropriate **Password Policy rules** and click **Submit**.

Managing Groups

In Enterprise Service Automation, you can map a particular network configuration profile to a region and populate each site in the region with the common attributes, thus forming a regional hierarchy. By default, ESA displays a group hierarchy. However, you can also customize the group hierarchy. You can choose the group hierarchy to configure and provision the branch profiles. That is, a group can be associated with a custom profile while creating a branch profile. The components in the branch profile that are assigned to a particular group, inherits the common properties automatically, thus avoids the need to define the predefined attributes for individual components being provisioned.

To add or customize the group hierarchy, follow these steps:

Step 1 Choose **Configuration** > **Group Management** from the navigation menu.

Step 2 Choose an existing node from the hierarchy and click **Add Node**.

Step 3 Choose the new node to add the parameters.

Step 4 Edit the default **Name**, if required.

Step 5 Click **Add Row** below appropriate node and enter the required parameter details.

Note The variable name provided in the required details should match with the variable name in the template.

Step 6 Click **Save**.

Step 7 Click **Edit** icon on the right side to edit the parameters of the node and click **Save**, if required.

Note You can also delete the node, collapse and expand all nodes.

Managing Users and Roles

In Enterprise Service Automation, you can manage users and roles by creating custom users based on Role Based Authorization and control (RBAC) model. Before adding users, you should refer to the defined tasks for the user so that the users can be assigned to the appropriate roles while adding.

To add a user, follow these steps:

Step 1 Choose **Configuration** > **User Management**.

Step 2 To view the roles to add users, click **Roles** tab.

Note The roles along with appropriate set of tasks are listed accordingly. If you want to delete a role, choose the appropriate role, click **Delete** and then click **Save**.

Step 3 To add users, click **Users** tab and click **Add User**.

Step 4 Enter the required details and click **Save**.

The **Users** tab displays the list of users added to the system, from where you can edit the user details.

Adding Credential Profiles

Credential profiles are the set of credentials that are applied to a device or a group of devices, instead of entering them manually for each device. These credential profiles are added to Enterprise Service Automation and configured to devices and virtual network functions during branch provisioning.

To add a credential profile, follow these steps:

Step 1 Choose **Configuration** > **Credential Profile** from the navigation menu.

Step 2 Click **Add Credential Profile**.

Step 3 Enter the Profile Name and Description under the **General Parameters**.

Note The maximum length for the credential profile name must be 32 characters.

Step 4 Choose any one of the following:

- **SNMP—**Choose the appropriate **Version** and enter the credentials and required values.

  Note ASAv configuration does not support SNMP version 3 during provisioning.

- **Telnet/SSH Parameters—**Choose the **Protocol** and enter the credentials and required values.

Step 5 Click **Save**.

Once these credential profiles are added, they are listed in Credentials Profiles page and the corresponding configurations are added to the existing templates.

Note Make sure that at least one credential profile is created to initiate the branch provisioning.

Managing Certificates

To run the Enterprise Service Automation application, you need signed SSL certificates for secured data transmission. Certificates can be self-signed by the server that presents it or can be digitally signed by a third-party recognized certificate authority(CA) that your system already trusts. When you launch the ESA application, a self-signed SSL certificate gets validated and is pre-installed into the system. When external systems, such as APIC-EM and Prime Infrastructure, are added to ESA application, self-signed certificates from those systems are automatically downloaded and added to the system. You can also manually add third-party signed certificate, in case of new certificate request or expiry of the certificate. Third-party signed certificate issued by CA is automatically trusted in web browsers and assures that you have been verified by a trusted third-party.

Note Make sure that the right certificates are installed into the system and that validation is enabled for security. It is not recommended to bypass certificate validation.

To add a third-party signed certificate, follow these steps:

Step 1 Choose **Configuration** > **Certificate Management**.

Step 2 Upload or drag and drop a valid file from your computer.

Step 3 Click **Import**.

Adding Network Knowledge Packs

Enterprise Service Automation supports Network Knowledge Packs (NKPs) that are defined and prepackaged within the system. It includes cisco validated topology designs (templates) that are used while adding branch profiles to provision the virtual branches.

To add additional network knowledge packs, follow these steps:

Step 1 Choose **Configuration** > **NKP Management** from the navigation menu.

Step 2 Upload or drag and drop a ESA certified NKP file from your computer.

Step 3 Click **Import**.
These knowledge packs are added to the configuration template list. While adding branch profile, you can choose the matching template from the list based on relevance factor.

Synchronizing Changes Manually

In Prime Infrastructure, the changes in CLI templates and database indexes are automatically synchronized in Enterprise Service Automation application every 24 hours. In case of any disk failure or index file movement or file corruption or deployment failure, you can manually synchronize database indexes in ESA through its intuitive user interface.

To manually synchronize the internal or external changes in Prime Infrastructure:

Step 1 Choose **Configuration** > **Manual Sync** from the navigation menu.

Step 2 Click **Sync Indexes** to synchronize the database search indexes.

Step 3 Click **Sync CLI Templates** to synchronize the CLI templates for configuring the parameters.

Running System Backup

You can run the system backup to recover and restore the critical data in the system. Backups should be done on a regular basis to avoid data loss.

To run a system backup:

Step 1 Choose **Configuration** > **System Backup** from the navigation menu.

Step 2 Click **Run Backup**.
The Application Backup page shows the following details: **Backup Time**, **Size of the data**, **Status**. You can also download .ENC file in the **Actions** column to view the backup details.

Adding Devices to Enterprise Service Automation

To provision branches and branch profiles on your network, you need to add devices to the system. Enterprise Service Automation works with PI (Prime Infrastructure) and APIC-EM (Application Policy Infrastructure Controller) to automate the deployment of new devices (along with its pre-configured information) on your network. Thus, the device is pre-provisioned automatically.

Adding Single Device

To add a single device, follow these steps:

Step 1 Choose **Devices** > **Add Devices** from the navigation menu.

Step 2 Click **Add Single Device**.

Step 3 Enter the required information and click **Save**.

Adding Bulk Devices

To add bulk devices, follow these steps:

Step 1 Choose **Devices** > **Add Devices** from the navigation menu.

Step 2 Upload or drag and drop a valid CSV file from your computer on the **Add Devices** page

Note To view the sample CSV template, click **Download sample template file** on the **Add Devices** page.

Step 3 Click **Import**.

Adding Branches to Enterprise Service Automation

Enterprise Service Automation supports simultaneous provisioning of multiple branches through its intuitive graphical user interface. To provision branches on the enterprise network, you need to add the branches with its location specifications to the network. You can manually add single branch or multiple branches simultaneously.

Adding Single Branch

To add a single branch location to the network, follow these steps:

Step 1 Choose **Branches** > **Add Branches** from the navigation menu.

Step 2 Click **Add Single Branch**.

Step 3 Enter the required details and click **Save**.
A single branch with its specifications is added and visualized in the geographical map and table.

Adding Multiple Branches

To add multiple branches simultaneously to the network, follow these steps:

Step 1 Choose **Branches** > **Add Branches** from the navigation menu.

Step 2 Upload or drag and drop a valid CSV file from your computer on the **Add Branches** page.

Note To view the sample CSV template, click **Download sample template file** on the **Add Branches** page.

Step 3 Click **Import**.
Once done, the added branch locations are visualized in the geographical map and table.

Adding Branch Profiles to Enterprise Service Automation

A profile is a template or reusable pattern that is used to define your branch for deployment. To automate the deployment, you can create custom profiles based on the predefined matching templates. Predefined templates are cisco validated topologies based on prescriptive designs that are available through Prime Infrastructure.

Adding Profile with Physical Devices

To add a branch profile with physical components, follow these steps:

Step 1 Choose **Profiles** > **Create New Profile** from the navigation menu.

Step 2 Drag the physical device icon into the design area.

Step 3 Drag the arrows from the devices to connect.
On the right side of the design area, the matching templates from NKPs are displayed.

Note You can only choose templates from pre-defined NKPs. You cannot customize the profiles.

Step 4 Click **View** to view the matching template that are 100 % relevant to the created profile in the design area.
The template shows the topology diagram, recommended devices and best practices.

Note The template that matches 100% is indicated in green. The less relevant matching templates are indicated in orange.

Step 5 Click **Use Template**.

Step 6 Click **Name** field to edit the default profile name.

Step 7 To custom configure the components in the topology diagram:

a) Select the component from the topology diagram.

b) Choose the **Group** from the drop-down list and click **Apply Group Selection**.

Note Selecting or changing the group will apply or override the configuration parameters that are applied to the profile.

c) Choose the **Device** type for the selected component from the drop-down list.

d) Choose the **Config** for the selected Device type from the drop-down list.

Note It is required to add configuration templates in Prime Infrastructure and to synchronize with ESA by adding the attribute 'ESA'.

The selected configuration details are listed, which you can expand further and enter the mandatory parameters and credentials, if required.

Note Network Knowledge Packs built within Enterprise Service Automation gives the basic configuration for deploying the branch profile. By default, the basic configuration is selected. Physical NKPs are designed assuming that the HUB site is provisioned with IWAN application of APIC-EM, that is integrated with ESA.

Step 8 Click **Save and Submit for Approval**.
The request is sent to the approver to approve or can be auto-approved by the system depending upon the configured workflow settings. Also, the branch profile is added to the system and shown on the available profiles.

Adding Profile with Virtual Network Functions(VNFs)

To add a branch profile to Enterprise Network Functions Virtualization Infrastructure Software(NFVIS):

Step 1 Choose **Profiles** > **Create New Profile** from the navigation menu.

Step 2 Drag the hosting platform, such as UCS E series, UCS C series, ENCS into the design area.

Step 3 Drag the appropriate Virtual Network Functions (VNFs), such as router, NGFW, WAAS and third-party VNFs.

Step 4 Depending on the services, drag the arrows to connect the Virtual Network Functions to the respective networks.
On the right side of the design area, the matching templates from NKPs are displayed.

Note You can only choose templates from pre-defined NKPs. You cannot customize the profiles except 3rd party VNFs(Linux or Windows).

Step 5 Click **View** to view the matching template that are 100 % relevant to the created profile in the design area.
The template shows the topology diagram, recommended Devices and Best Practices.

Note The template that matches 100% is indicated in green. The less relevant matching templates are indicated in orange and yellow.

Step 6 Click **Use Template**.

Step 7 Click the**Name** field to edit the default profile name.

Step 8 To custom configure the components in the topology diagram:

a) Select the component (VNF or Hosting platform) from the topology diagram.
b) Choose the **Group** from the drop-down list and click **Apply Group Selection**.
c) Choose the **Device** for the selected component from the drop-down list.
d) Choose the configuration for the selected Device from the drop-down list.
The selected configuration details are listed, which you can expand further to enter the required parameters.

Note The above steps are common for configuring the VNFs and hosting platform. In case of VNFs, you are required to do the following steps.

e) Choose the **Image location** from the drop-down list.

Note The image location can be a URL of a HTTP server or a link path if pre-loaded through NfV Portal (For example: file:///data/intdatastore/uploads/<imagename.tar.gz>). If images are uploaded to Prime Infrastructure's Virtual Repository and Prime Infrastructure has proper DNS configured, this path will be loaded onto ESA automatically.

f) Choose the **Image Profile** from the drop-down list.

Step 9 Click **Save and Submit for Approval**.
The request is sent to the approver to approve or can be auto-approved by the system depending upon the configured workflow settings. Also, the branch profile is added to the system and shown on the available profiles.

Provisioning Branches

Enterprise Service Automation allows simultaneous provisioning of multiple branches and the required network services. This allows time taken to provision multiple branches to be drastically reduced and also ensures consistent configuration. After branch locations and branch profiles have been added to the system and approved, you can quickly and easily provision branches by mapping them to appropriate branch profiles.

Provisioning Single Branch

You can provision a single branch by mapping it to the created profile using map view and table view.

To provision a single branch, follow these steps:

Step 1 Choose **Branches** > **Branch Map View**.

Note To provision a branch from the **Table view**, select the branch location from **Branch Management** page and click **Map to Profile** in the **Actions** column. In case of many branches listed, you can use search function in the top right-hand corner of the Branch Management page to view a specific branch.

Step 2 Select a branch location from the map that you want to provision. The branch location details window is shown on the right side.

Note You can use search function in the top right-hand corner of the Branch Management page to view a specific branch. You can also use advanced search feature to view the branches based on its provisioning status.

Step 3 Click **Provision Branch**.

Step 4 To map to profile, select a **Branch Profile** to assign to the selected branch location and click **Next**.
The summary of the deployment is shown.

Step 5 Click **Next**.

Step 6 Choose **Prime Infrastructure Server** and **APIC-EM Controller** from the drop-down list.

Step 7 Choose the appropriate **Group** from the drop-down list and click **Apply Group Selection**.

Step 8 Click **Next** .

Step 9 To configure the required parameters, do any one of the following:

a) To configure the required parameters offline:

1. Click **Download**.
2. Fill-in the required parameters in the excel file.
3. Upload or drag and drop the file and click **Import**.

Note For offline deployments, you can also save the deployment process to resume later in the workflow by providing the deployment name. Choose **Deployments** > **Offline Deployments** to select the deployment name and click **Resume** in the **Actions** column.

b) To manually configure the parameters for each component in the template:

1. Click **Provision Manually**.
2. Select a component from the topology diagram to configure the parameters.
3. To configure the VNFs:
   a. Choose a **Credential Profile** from the drop-down list.
   b. Enter the **Prime Infrastructure VNF Management IP** address.

      Note Credential Profile and Management IP is not applicable to all the VNFs. It is applicable only to VNFs that are managed in Prime Infrastructure.

   c. Expand the Device Config to enter the required parameters.
4. To configure the hosting platform:

a Choose the **Serial Number** from the drop-down list.

b Expand the **UCS Credential Config** to enter the credentials.

Note You can provision with default UCS credentials or create a new user/password. You cannot update password on any UCS user profile in provisioning.

Step 10 Click **Provision Branch**.

Note You can also track the branch provisioning status that are in progress as Enterprise Service Automation uses APIC-EM and NFVIS at the branch to know the VNFs chaining together and fully provision them.

Provisioning Multiple Branches

You can also provision multiple branches simultaneously by mapping it to created profile.

To provision multiple branches, follow these steps:

Step 1 Choose **Profiles** > **Available Profiles**.

Step 2 Choose the profile that you want to map to branches and click **Map to Branch** in the **Actions** column.

Step 3 Select one or more branches to assign to the selected profile and click **Next.**
The summary of the deployment is shown.

Step 4 Click **Next** .

Step 5 Choose **Prime Infrastructure Server** and **APIC-EM Controller** for the assigned branch(es) from the drop-down list.

Step 6 Choose the appropriate **Group** for the assigned branch(es) from the drop-down list, click **Apply Group Selection**.

Step 7 Click **Next**.

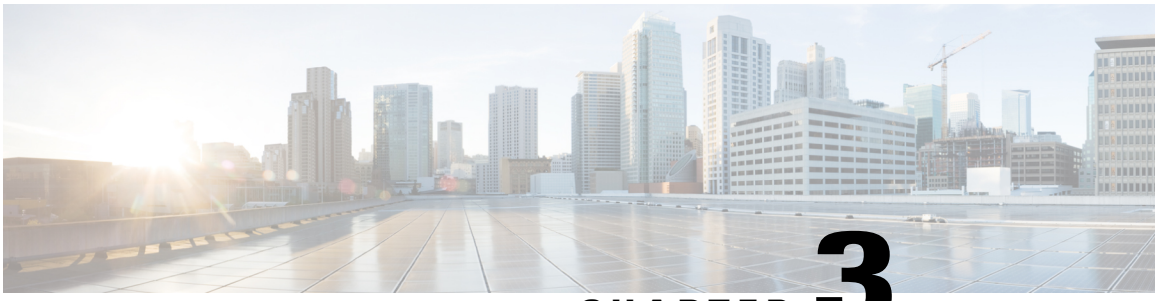
Step 8 To configure the required parameters offline:

a) Click **Download**.
Note Enterprise Service Automation supports multi-branch provisioning only through Download excel option to fill in network parameters.

b) Fill-in the required parameters in the excel file.

c) Upload or drag and drop the file and click **Import**.
Note For offline deployments, you can also save the deployment process to resume later in the workflow by providing the deployment name. Choose **Deployments** > **Offline Deployments** to select the deployment name and click **Resume** in the **Actions** column.

Step 9 Click **Provision Branch**.



CHAPTER 3

Managing Devices and Branches

Managing Devices

Enterprise Service Automation allows you to manage the devices added to the system. From the **Devices** > **Device Management** page, you can add, view, edit or delete the devices.

You can also view the device details by clicking **View All Devices** in the dashboard of the Enterprise Service Automation home page.

Device Management page contains device management functions that are described in Table 2: Tasks and their Description, on page 18.

Table 2: Tasks and their Description

Navigation Path	Task	Description
Devices > **Device Management** > **Actions** column	View	You can view the detailed Device information, such as Platform, Hostname, Management IP Address, Family, and Vendor.
	View Details in PI	You can view the device details in Prime Infrastructure. The Prime Infrastructure login page will appear, in which you need to enter the Username and Password and click **Login**. **Note** You can view the device details in PI inventory only for the device(s) with 'Provisioned' status.
	Edit	You can edit the branch by filling-in the required parameters and click **Save**. **Note** You cannot edit the details for the device(s) that are already assigned or provisioned.
	Delete	You can delete the device that is not assigned or provisioned.
	Remote display	You can cross-launch the VNC console for the virtual device(s), where you can configure or troubleshoot. **Note** This option is not applicable for physical devices.

Managing Branches

Enterprise Service Automation allows you to manage the branch location through maps and tables. You can add, view, edit or delete the branches and view the profile details and provisioning status.

Viewing Branches in Map View

To view the branch locations in geographical map:

1 Choose **Branches** > **Branches Map View** from the navigation menu.

The branch location color in the geographical map indicates the status of the branch as deployed, progress, error in and unknown.

Note You can also view the branches in map by clicking **View All Branches** in the dashboard of the Enterprise Service Automation home page.

2 Click the branch location that you want to view.

On the right side, you can view the topology and device details, such as Type, Name, Serial Number and IP Address, Reachability and Actions in the branch details window. By clicking the icon in Actions column, you can launch VNC console for virtual devices (this option is not applicable for physical devices).

Note You can also provision the branch and view the provisioning status in the branch details window.

Viewing Branches in Table View

You can choose **Branches** > **Branches Table View** from the navigation menu to view the branch locations in table form.

Branch Management page contains branch management functions that are described in Table 3: Tasks and their Description, on page 19.

Table 3: Tasks and their Description

Navigation Path	Task	Description
Branches > **Branch Management** > **Actions** column	View	You can view the detailed branch information, such as description, street, street 2, Zipcode/postal code, country.
	Edit	You can edit the branch that is not provisioned. Fill-in the required parameters and click **Save.**
	Delete	You can delete the branch that is not provisioned.
	Map to Profile	You can provision the branch by mapping it to a profile. **Note** For more information on branch provisioning, see Provisioning Branches, on page 13.
	View Provisioning Status	You can view the branch provisioning status. **Note** For more information on provisioning status, see Viewing Provisioning Details, on page 21.
	Profile Details	You can view the mapped profile details, such as topology diagram, associated branches, versions and workflow.

Managing Branch Profiles

Enterprise Service Automation allows you to manage the branch profiles through its intuitive user interface. From the **Profiles** > **Available Profiles** page can create, view, edit, clone or delete branch profiles, map to branches, submit profiles for approval and approve or reject the request.

You can also view the profiles by clicking **View All Profiles** in the ESA dashboard.

Table 4: Tasks and their Description, on page 20 describes the tasks that can be performed in the **Available Profiles** page.

Table 4: Tasks and their Description

Navigation Path	Task	Description
Profiles > **Available Profiles** > **Actions** column	View Profile	You can view the detailed profile information: • Topology Diagram • Associated Branches • Versions • Workflow
	Show Topology	The topology diagram of the template is shown in the profile details window.
	Map to Branch	You can provision the Profile by mapping it to one or more branches. **Note** For more details on provisioning, see Provisioning Branches, on page 13.
	Edit Profile	You can edit the custom profile that is not provisioned. Configure the required components and click **Save and Submit For Approval**.
	Clone Profile	You can create a copy of branch profile in Available Profiles page.
	Delete Profile	You can delete the branch profile that is not provisioned.
	Submit for Approval	You can submit the request for approving the branch profile.
	Approve/Reject	Based on configured workflow, you can either approve or reject the submitted branch profile request.

Viewing Provisioning Details

After the branch is successfully provisioned, you can view the deployment details that shows the summary at every logical phase. This helps in diagnosing and troubleshooting the provisioning errors that occurs during any phase.

To view the provisioning details:

Step 1 Choose **Deployments** > **Deployment Status**.
The Diagnostics page shows the following information:

- **Branch Name**- The name of the provisioned branch
- **Status**- The branch provisioning status
- **Result**- The output of branch provisioning
- **Start Time**- The time at which the branch provisioning is initiated
- **Time Taken**- Time taken to complete the provisioning process.

Step 2 To view more information on the provisioning status, click **More Details** from the **Actions** Column.
The Diagnostic Detail page displays the detailed information about the branch provisioning activity, phase by phase. Each phase has the following information:

- Serial Number
- IP Address
- Device Information
- State
- Run Status
- Result Status
- Entry Time
- Exit Time