Akkadian Site Builder Admin Guide

1 — Last update: 2018/11/15

Akkadian Labs

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Introduction

Akkadian Site Builder™ is is a day 1 provisioning solution for Cisco Unified Communications Manager (CUCM). It's a provisioning solution capable of quickly deploying new sites or dial plan configurations in CUCM.

1. Requirements and Limitations

The following sections provide information about the requirements that your system must meet, and limitations that apply when you install or upgrade Akkadian Site Builder.

1.1. Virtual Machine Requirements

Akkadian Site Builder is a Linux based Virtual Appliance supported on VMware ESXi.

Supported Versions of VMware vSphere ESXi = 5.0 U1, 5.1, 5.5, 6.0, and 6.5

The recommended server requirements for are:

vCPU	vRAM	vDISK	vNIC
2	8	1 × 8 GB	1

- Applications servers are defined as configured applications servers in Provisioning Manager and are not related to the number of servers with a cluster.
- · Minimum of 2000 MHz reserved

1.2. Application Support

Provisioning Manager provides support for the following applications:

Application	Versions
Cisco Unified Communications Manager	10.x – 12.x

1.3. Browser Support

Site Builder is supported using the following browsers:

- Microsoft Internet Explorer 11+
- Microsoft Edge 39+
- Mozilla Firefox 53+
- Chrome 50+

1.4. Network Requirements

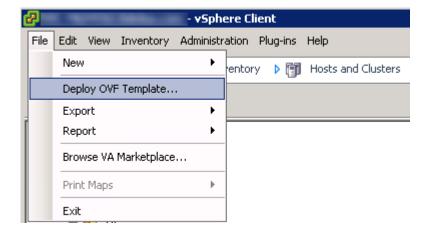
Akkadian Site Builder communicates on the following ports:

Traffic	Port	Direction
Application Web Access	HTTPS:443	Inbound —> Provisioning Manager
Communication to Cisco Communications Manager	HTTPS:8443	Outbound Provisioning Manager —> CUCM
FTP between application and backup server	TCP Port 21	Outbound Provisioning Manager —> SFTP Server
Secure FTP between application and backup server	TCP Port 22	Outbound Provisioning Manager —> SFTP Server
SMTP to mail server	TCP Port 25	Outbound Provisioning Manager —> SMTP Server
LDAP	TCP/UDP Ports 389/ 3268	Outbound Provisioning Manager —> LDAP Server
Network Time Protocol (NTP)	UDP Port 123	Outbound Provisioning Manager —> NTP Server

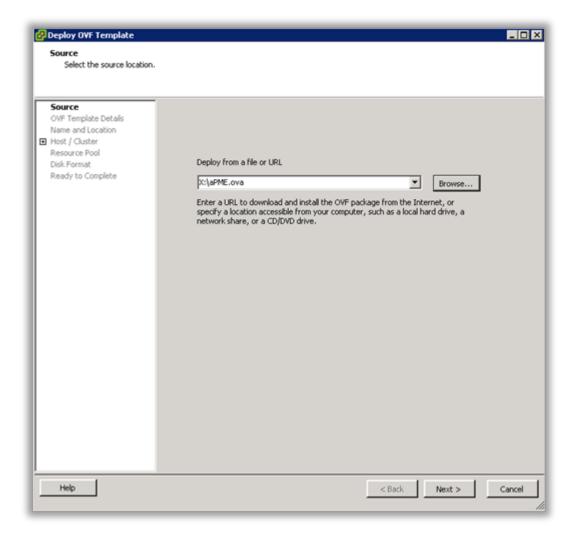
2. Virtual Appliance Deployment

Akkadian Site Builder is deployed as a virtual appliance on VMware ESXi versions 5.x and above. The steps below will help guide you through the process of deploying the virtual appliance; however, you should understand VMware or contact your VMware administrator for assistance.

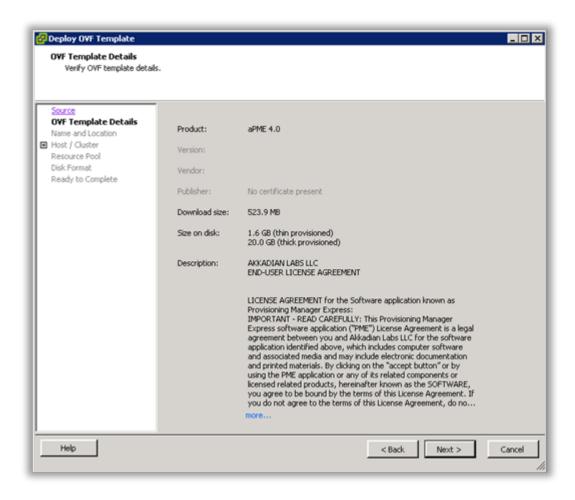
- 1. Download the latest akkadian Site Builder OVA to a location accessible by the vSphere client.
- 2. From the vSphere client select **Deploy OVF Template** from the **File** menu.



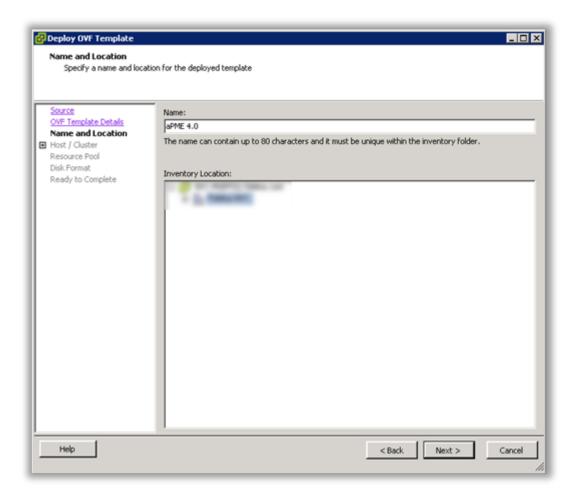
3. Select the OVA from computer or network location and click Next to continue.



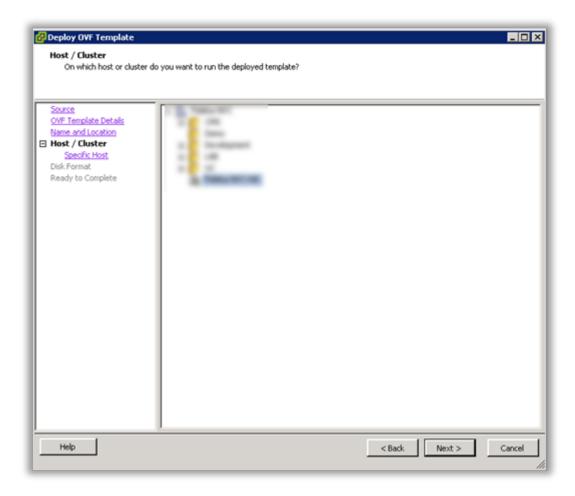
4. Review the License Agreement and click **Next** to continue.



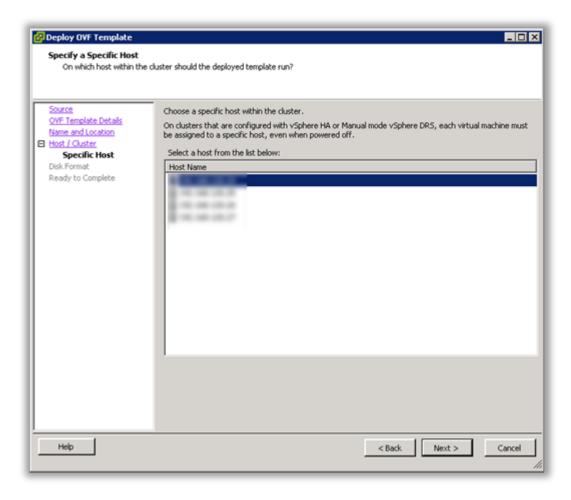
5. Specify the name and location for the VMware machine and click Next to continue.



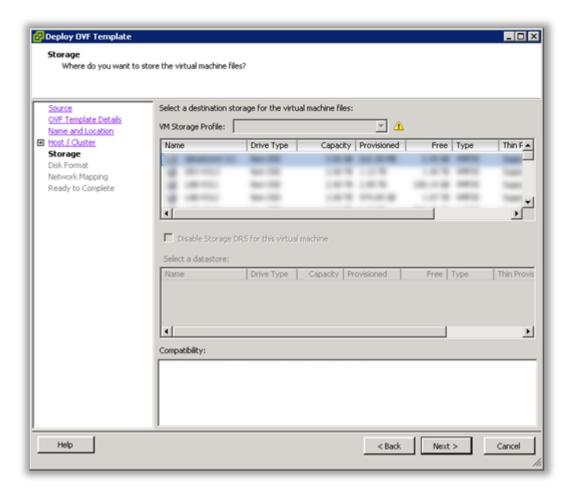
6. Specify the VMware Host / Cluster and click **Next** to continue.



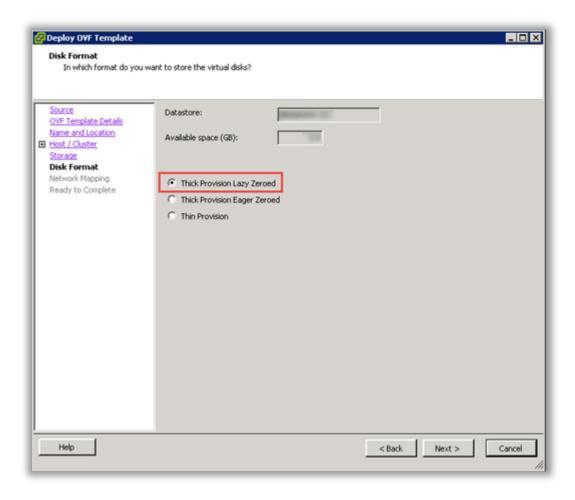
7. Specify a host within the cluster and click Next to continue.



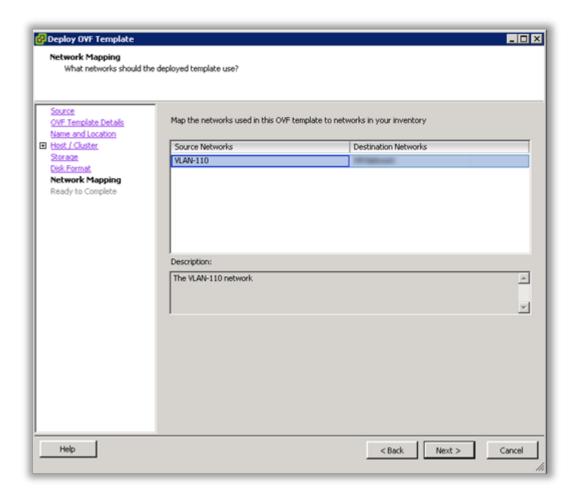
8. Specify the storage location for the virtual machine and click Next to continue.



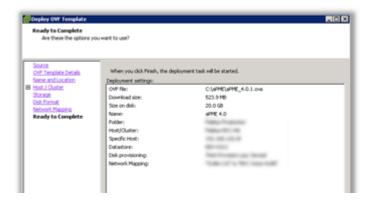
9. Select Thick Provision Lazy Zeroed and click Next to continue.



10. Select the Destination Network for the virtual machine and click Next to continue.



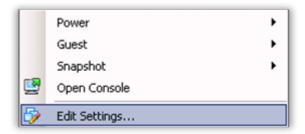
11. Verify the virtual machine settings. The initial OVA deploys with 2 vCPU and 8GB Memory. Depending on your system requirements, you may need to adjust the virtual CPU and Memory settings. Please refer to the <u>virtual machine requirements</u> to determine the appropriate settings for your environment.



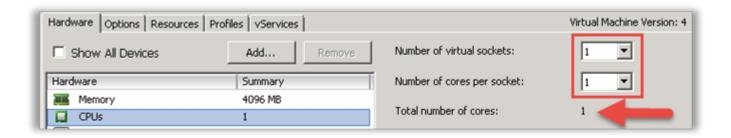
12. Click OK to complete the deployment.



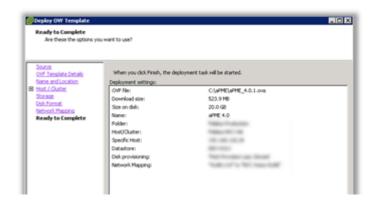
13. To adjust the virtual machine CPU and Memory, locate the newly deployed virtual machine in vCenter, right click on the virtual machine and select Edit Settings.



14. On the Hardware tab, select CPU and adjust the setting to provide the required number of cores for your environment.



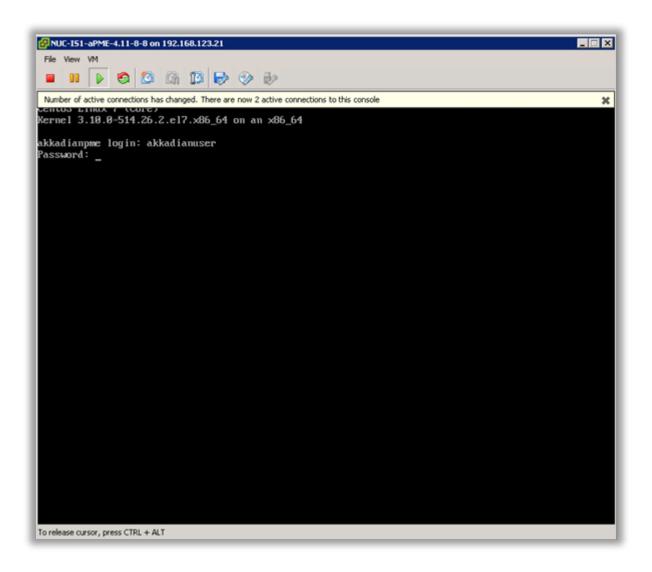
15. After adjusting the CPU, click on Memory and adjust the settings to provide the required resources for your environment. When completed, click OK to commit the changes.



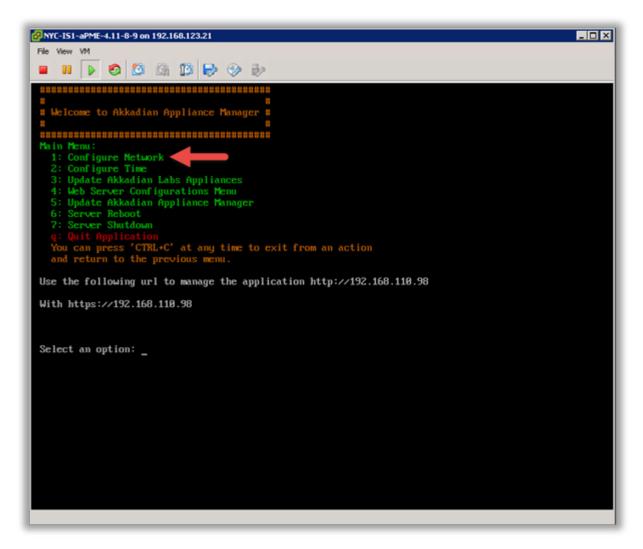
- 16. Power on the virtual machine and proceed.
- 17. Locate the virtual machine in vSphere and open a console.
- 18. When the server boot process is complete, the system will arrive at a login prompt. Login using:

Username – akkadianuser

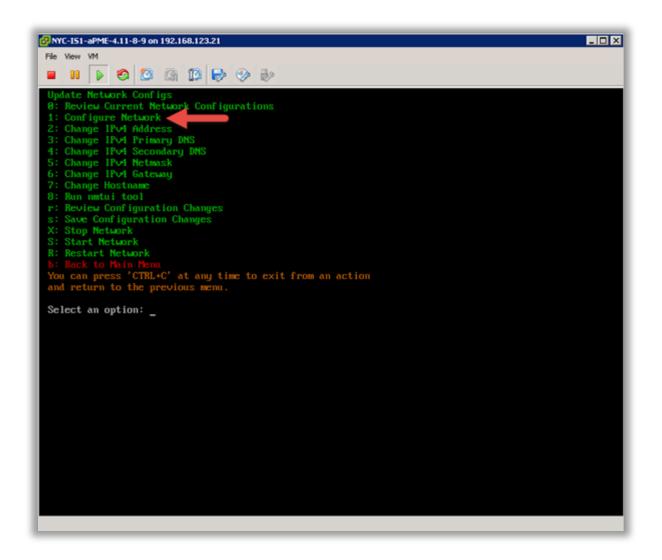
Password - akkadianpassword



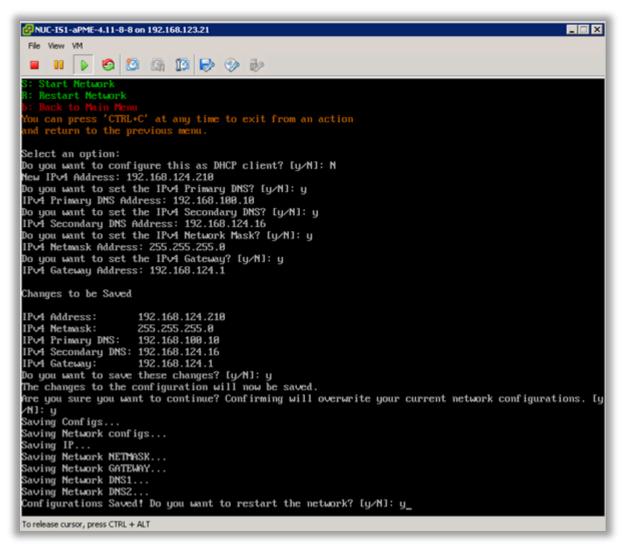
19. From the Akkadian Appliance Manager main menu, select option 1 to Configure Network.



20. Select option 1 to configure the network setting.

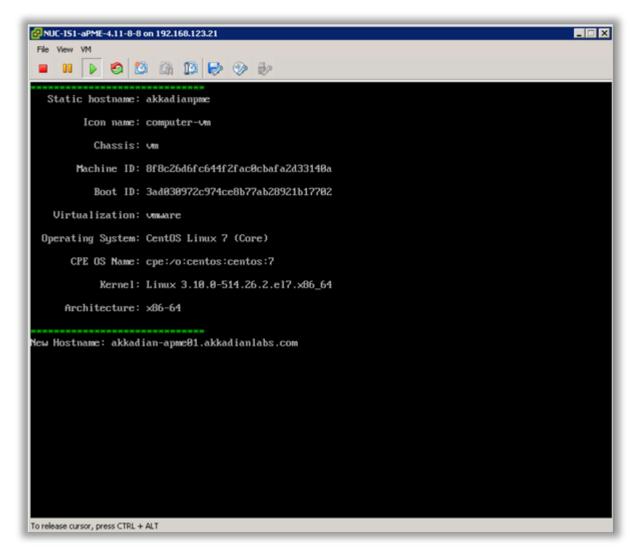


21. Follow the prompt to configure the network settings for your environment.

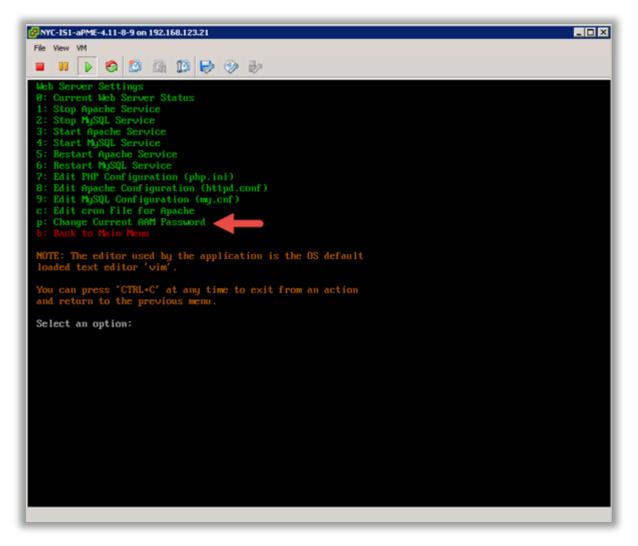


22. Select option 7 from the network configuration menu to configure the hostname. It is recommended the hostname is entered using the fully qualified domain name.

Example – servername.yourdomain.com



- 23. Optionally you may configure the server time by selecting option 2 form the configure network menu.
- 24. It is recommended you change the default Akkadian Appliance Manager password by selecting option 4 (Web Server Configuration Menu) from the main menu and then selecting "p" (Change Current AAM Password").

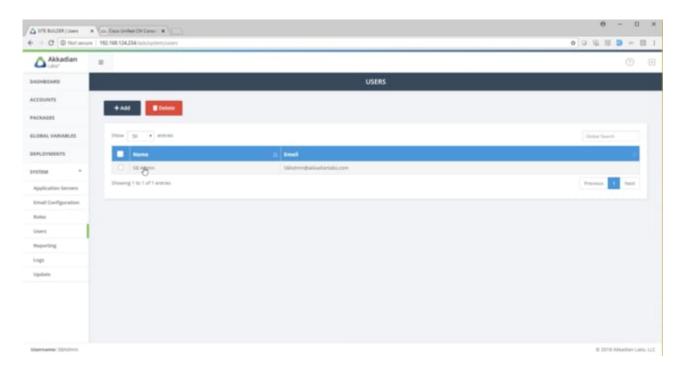


- 25. When all configurations are complete, select "s" from the network configuration menu to save the configuration and restart the network.
- 26. From the main menu, select Reboot Server to finalize the configuration.
- 27. When the system returns to the login prompt, the Akkadian Site Builder virtual appliance deployment is complete and can be accessed by going to https://{Server IP or Name}/asb.

3. Initial Configuration

After completing the installation, Akkadian Site Builder requires some basic configuration before you can begin provisioning. Written documentation during the beta will be limited and instead will be provided using videos.

Please view the following video to learn how to get started with the Akkadian Site Builder Beta.

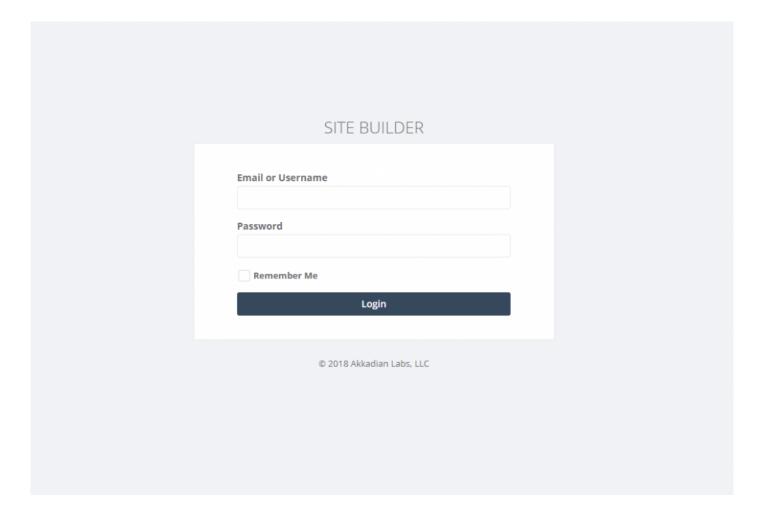


3.1 Logging in for the First Time

- 1. In a browser, navigate to HTTPS://{Server IP or NAME}/asb
- 2. Log in using the default credentials:

Username - SBAdmin

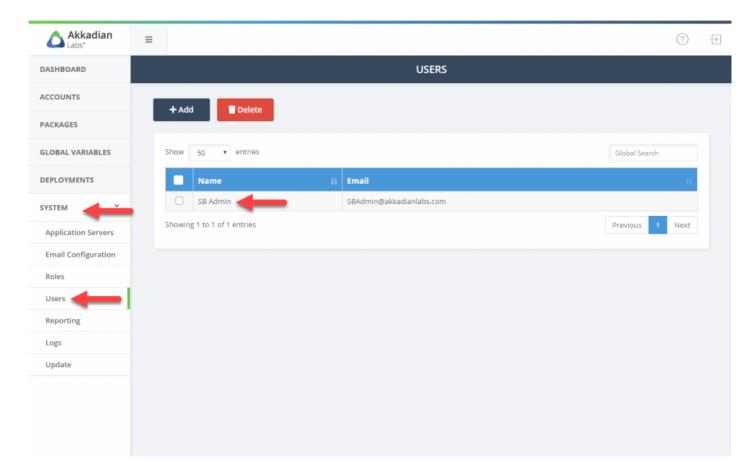
Password – SBAdmin123 (Case sensitive)



3.1.1 Changing the Default Password

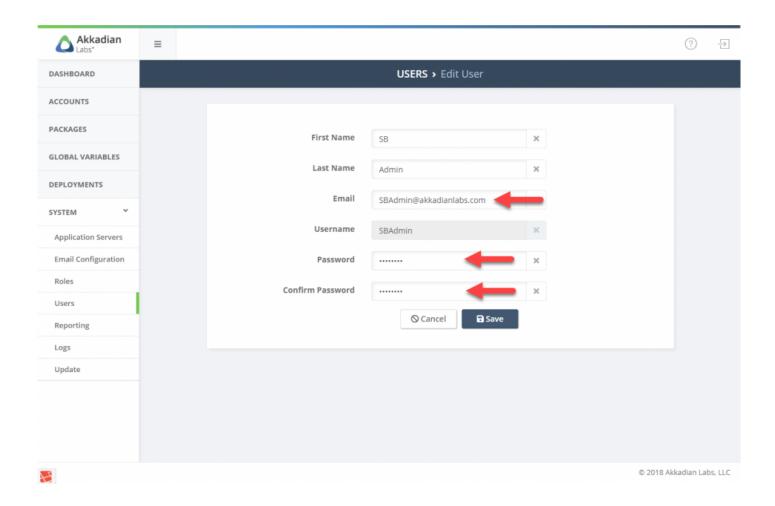
It is highly recommended that you change the default SBAdmin password and set a valid email address for password recovery.

1. Click on "System" to expand the menu. Then click on "Users:.



1. Click on the SB Admin user to

Please ensure the SBAdmin email address is valid for a successful password recovery!



4. System Configuration

4.1 Application Servers

Application Servers are the targets for Site Builder Package deployment. Akkadian Site Builder currently supports the following Cisco UC applications:

Cisco Unified Communications Manager

This section will guide you through the process of configuring applications servers in Site Builder.

4.1.1 Cisco Unified Communication Manager

Akkadian Site Builder integrates into a CUCM cluster using the AXL Web Service, which is typically running on the Publisher node.

This section will guide you through the process of preparing CUCM for integration and configuring CUCM as an Application Server in Site Builder.

4.1.1.1 Preparing CUCM

Two items are required on Cisco Unified Communications Manager to allow access via the AXL API:

- 1. The Cisco AXL Web Service must be activated and started
- 2. An Application user with with required privileges

The Cisco AXL Web Service is disabled by default on some versions of Cisco Unified Communications Manager. The service must be activated to enable AXL API access.

*To activate the AXL Web Service: *

- 1. Browse to the CUCM Serviceability page on https:///ccmservice
- 2. Tools > Service Activation
- 3. Select the Publisher node
- 4. Scroll down to Database and Admin Services
- 5. Check the box for Cisco AXL Web Service and click Save

Database and Admin Services		
	Service Name	Activation Status
✓	Cisco AXL Web Service	Activated

To create CUCM Application User:

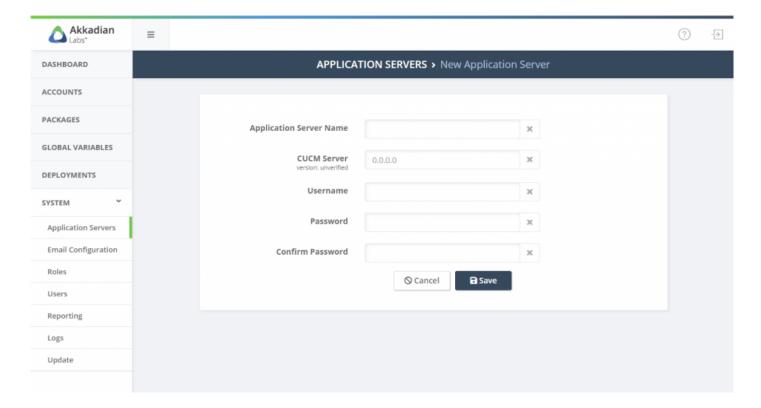
- 1. From the Cisco Unified Communications Manager Administration Web page, select Application User from the User Management menu, and then click Add New.
- 2. In the User ID field, enter a name for the account.
- 3. In the Password and Confirm Password fields, type a password for the new user and then click Save.
- 4. Navigate down the page to Permissions Information.
- 5. Click Add to Access Control Group and then click Find.
- 6. Select the following Groups:
 - Standard TabSync User
 - Click Add Selected
 - · Click Save



4.1.1.2 CUCM Integration

To add a Cisco Unified Communications Manager Application Server:

- 1. Select Application Servers from the System menu
- 2. On the menu, click Add
- 3. Complete the required fields
- 4. Click Save
- 5. Repeat this process for additional integrations

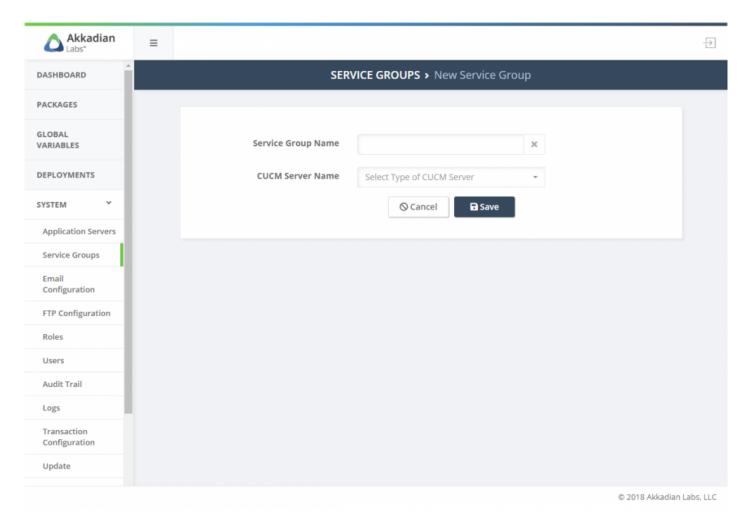


4.2 Service Groups

Service Groups group application servers into a logical contain for provisioning. Once created, Service Groups cannot be modified or deleted as they are tied to the license.

To add a Service Group:

- 1. Select Service Groups from the System menu
- 2. On the menu, click Add
- 3. Enter the Service Group Name
- 4. Select the application server
- 5. Click Save
- 6. Repeat this process for additional Service Groups



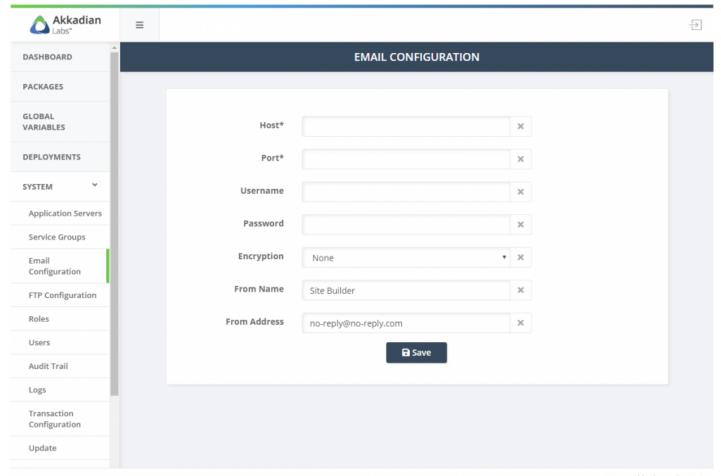
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4.3 Email Configuration

Email configuration is optional, but is required for several features, such as notifications and password recovery.

To configure email:

- 1. Select Email Configuration from the System menu
- 2. On the menu, click Add
- 3. Configure the required fields to connect to your email server
- 4. Click Save



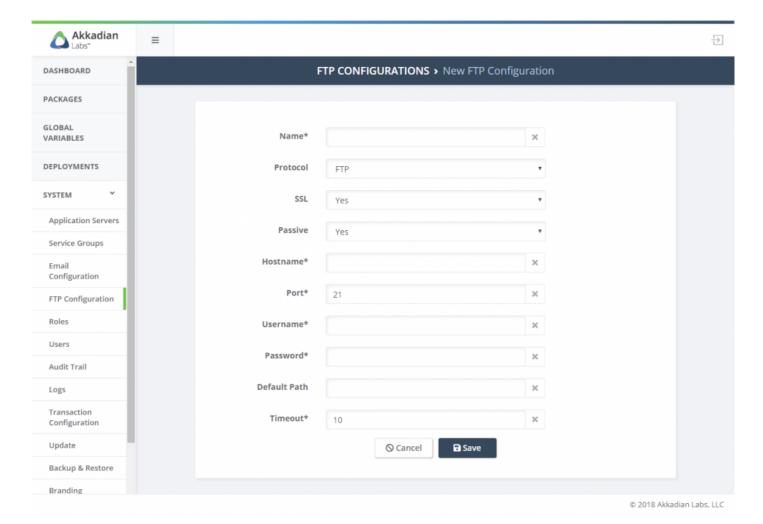
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4.4 FTP Configuration

FTP configuration is optional, but is required for several features, such automatic back and log archiving.

To configure FTP:

- 1. Select FTP Configuration from the System menu
- 2. On the menu, click Add
- 3. Configure the required fields to connect to your ftp server
- 4. Click Save
- 5. Repeat the process to add additional FTP locations



4.5 Roles

Roles are used to provide users access to features by using routes. Each role can contain multiple routes.

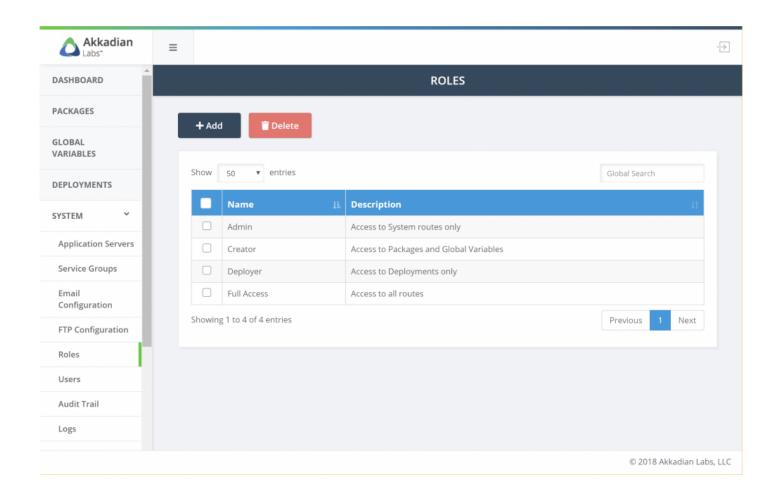
The system contains four default roles:

Role	Description
Admin	Access to System routes only
Creator	Access to Packages and Global Variables
Deployer	Access to Deployments only
Full Access	Access to all routes

The default roles can be modified or deleted or additional roles may be created.

To add additional roles:

- 1. Select Roles from the System menu
- 2. On the menu, click Add
- 3. Configure the role name
- 4. Optionally provide a description for the role
- 5. Add one or more routes to the role
- 6. Click Save
- 7. Repeat the process to add additional roles



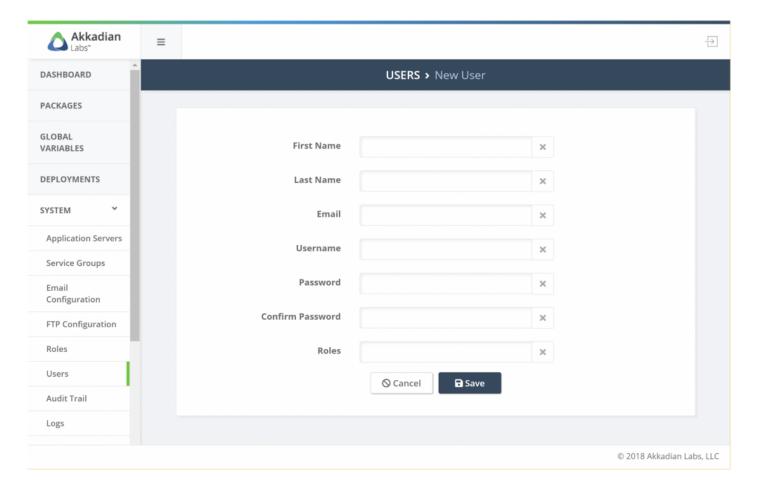
4.6 Users

Site builder supports adding one or more users depending on the license. Users can be assigned one or more roles.

The system has one built-in user SBAdmin.

To add additional users:

- 1. Select Users from the System menu
- 2. On the menu, click Add
- 3. Configure the required fields
- 4. Click Save
- 5. Repeat the process to add additional users

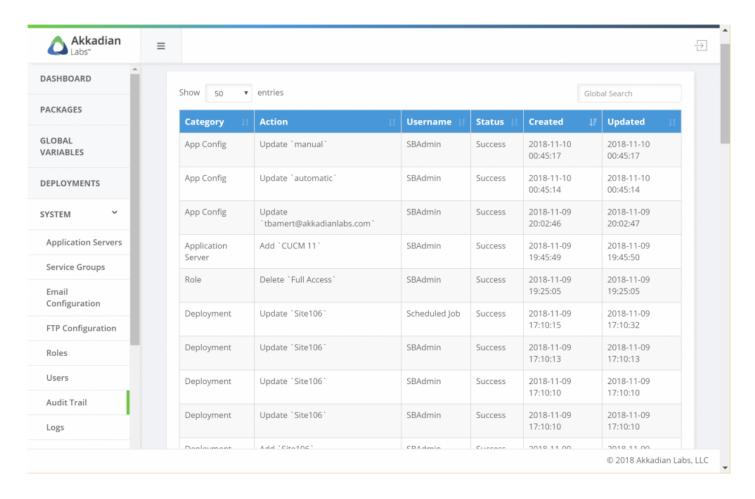


4.7 Audit Trail

The Audit Trail provides a list of all the user transactions that have been executed in Site Builder.

To view the Audit Trail:

- 1. Select Audit Trail from the System menu
- 2. User Global Search to locate a transaction



4.8 Audit Configuration

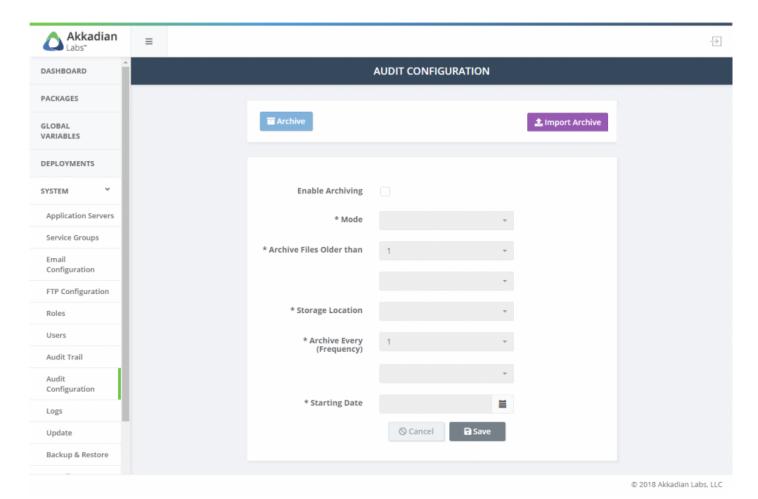
The Audit Configuration is used to enable archiving of audit logs. It is recommended that you enable audit archiving to reduce disk space consumption.



Archiving cannot be enabled until an FTP server has been configured.

To enable Audit Archiving:

- 1. Select Audit Configuration from the System menu
- 2. Click the enable
- 3. Configure the required fields
- 4. Click Save



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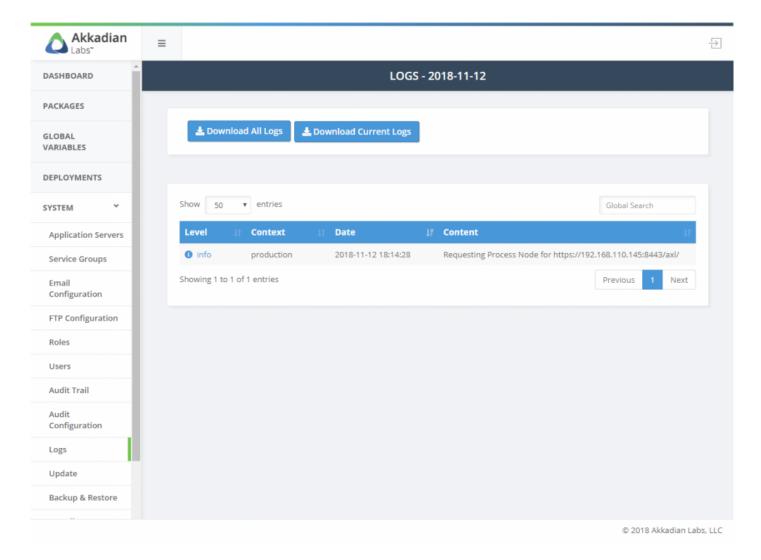
4.9 Logs

Logs contained detailed information regarding all transactions in Site Builder and are critical for troubleshooting.

The Audit Trail provides a list of all the user transactions that have been executed in Site Builder.

To view logs:

- Select Logs from the System menu
- 2. User Global search to locate a specific log transaction
- 3. Click Download All Logs to collect all logs from the system
- 4. Click **Download Current Logs** to collect the logs from the last day

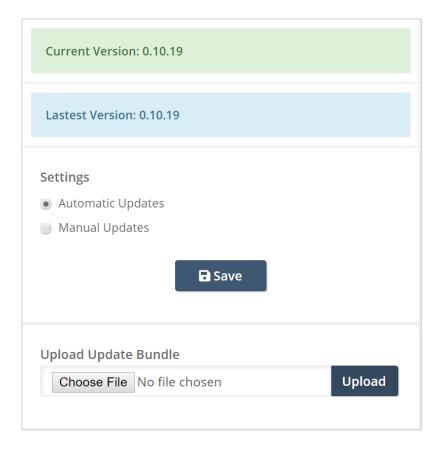


4.10 Update

Site Builder updates can be applied manually or automatically. By default, the system is configured for manual updates, which will download the update, but it will not be automatically applied. Automatic updates will download and automatically apply the update. In order to download the update, both the manual and automatic methods require the system to have Internet access, but updates can also be downloaded and applied manually.

To configure the system for automatic updates:

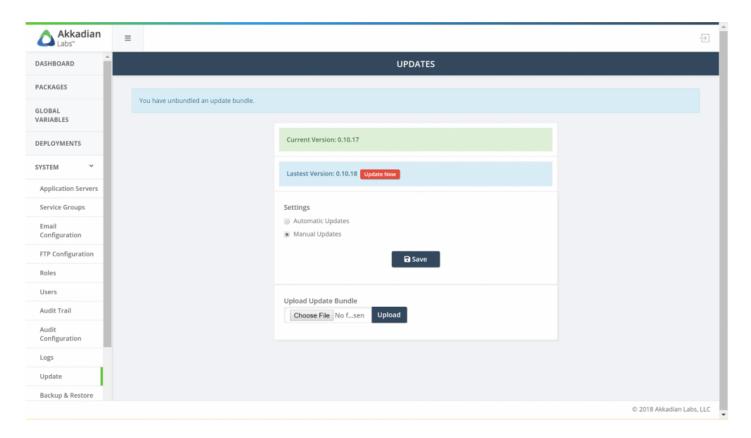
- 1. Log into Site Builder with Admin privileges
- 2. Select Update from the System menu
- 3. Select the Automatic Updates option and click Save



To manually apply an update:

- 1. If necessary, download the update
- 2. Log into Site Builder with Admin privileges

- 3. Select Update from the System menu
- 4. In the Upload Update Bundle section, click Choose File
- 5. Select the update bundle
- 6. Click **Upload** to transfer the file to the sever
- 7. Once the file has uploaded, click Update Now



4.11 Backup & Restore

The Backup and Restore section provides the ability to:

- · Perform manual backups
- · Schedule backups
- · Restore backups
- · Manage scheduled backups

To perform a manual backup:

- 1. Select Backup & Restore from the System menu
- 2. Click the Backup & Download button



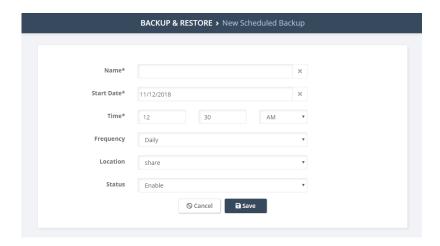
The system will be backed up and the file saved to your local computer

To schedule a backup:



Please note an FTP location must be configured before configuring a scheduled backup

- 1. Select Backup & Restore from the System menu
- 2. Click the Schedule New Backup button
- Complete the required fields
- 4. Click Save
- Repeat the process to add additional scheduled backups



Managing scheduled backups:



Please note the **Scheduled Backups Actions** button will remain disabled until you select an existing backup schedule.

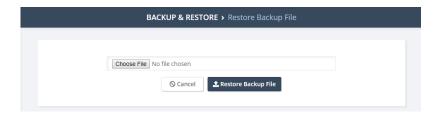
- 1. Select Backup & Restore from the System menu
- 2. Select an existing backup schedule Schedule New Backup button
- Select multiple backup schedules to update more than one schedule.
- 1. Click the Scheduled Backups Actions
- 2. Choose an action (Run Now, Enable, Disable or Delete)



To restore from backup:

- 1. Select Backup & Restore from the System menu
- 2. Click the Restore button

- 3. Click Choose File and select the appropriate backup file
- 4. Click *Restore Backup File *

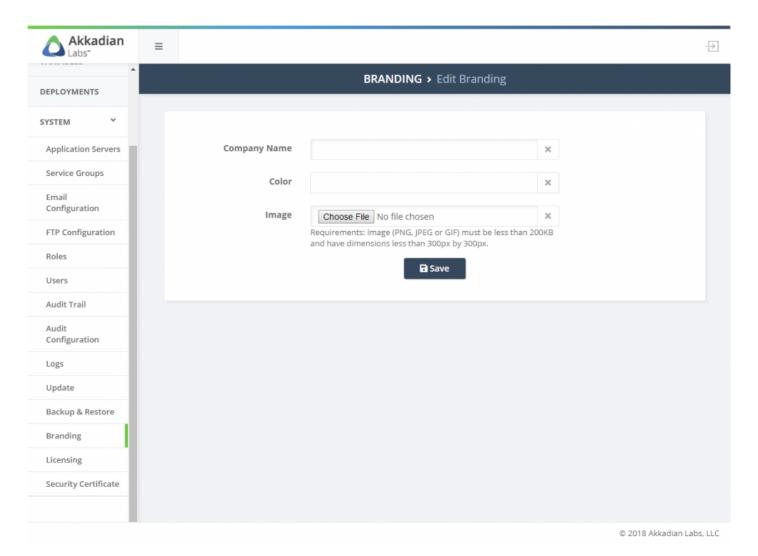


4.12 Branding

Branding can be used to update Site Builder with your company name, logo and colors.

To enable branding:

- 1. Select Branding from the System menu
- 2. Configure the required fields
- 3. Click Save



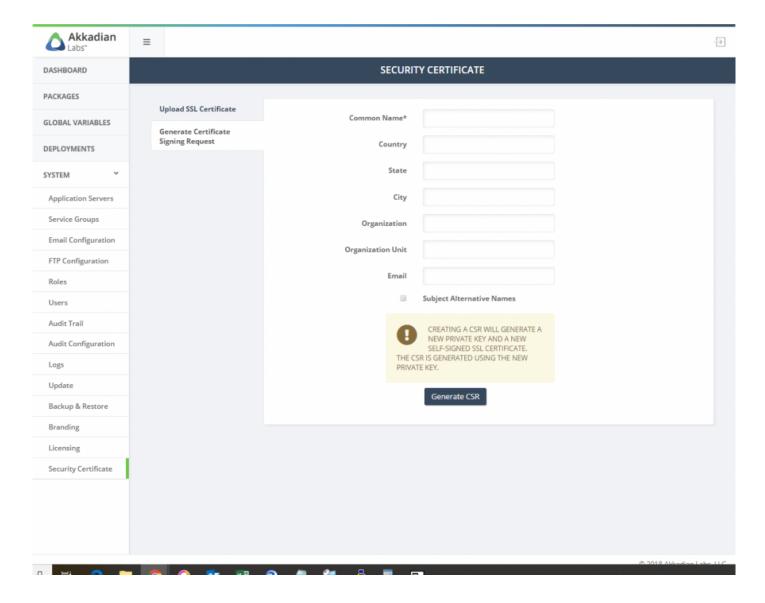
4.13 Security Certificates

Site Builder is deployed with a self-signed SSL certificate, but optionally can be configured with a certificate from a private or public certificate authority.

Site Builder supports SSL certificates generated using its own private key or using an external private key.

Method 1 - Use Site Builder's private key

- 1. Select Security Certificate from the System menu
- 2. Select the Generate Certificate Signing Request tab
- 3. Complete the Certificate Signing Request form
 - The common name must match the fully qualified domain name of the server.
- 1. When complete, click Generate CSR
- 2. Download the CSR file
- 3. On your Certificate Authority, generate a certificate using the CSR



- 1. Select the Upload SLL Certificate tab
- Click Choose File to the right of SSL Certificate and upload the certificate generate by your certificate authority



Uploading a Private Key is not necessary as the certificate was generated using Provisioning Manager's private key

- 3. If the certificate was generated using a Public Certificate Authority, click **Upload Certificate** to complete the process
- 4. If the certificate was generated using an Internal Certificate Authority, select the **Use Internal**Certificate Authority (CA) check box
- 5. Upload the Root Certificate from your Internal CA

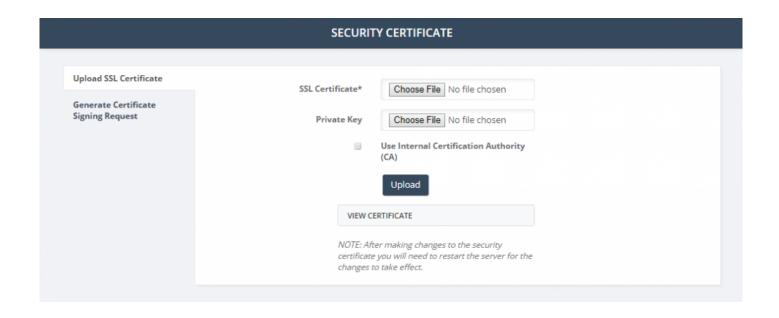
6. Click Upload Certificate to complete the process



Site Builder must be restarted for the changes to take affect. This can be done using the Appliance Manager CLI or using VMWare tools.

Method 2 – Use an external private key

- 1. Select Security Certificate from the System menu
- 2. Select the Generate Certificate Signing Request tab
- 3. Complete the Certificate Signing Request form
 - The common name must match the fully qualified domain name of the server.
- 1. When complete, click Generate CSR
- 2. Download the CSR file
- 3. On your Certificate Authority, generate a certificate using the downloaded CSR
- 4. Select the Upload SSL Certificate tab
- Click Choose File to the right of SSL Certificate and upload the certificate generate by your certificate authority
- Click Choose File to the right of Private Key and upload the private key from your certificate authority
- If the certificate was generated using a Public Certificate Authority, click Upload Certificate to complete the process
- 8. If the certificate was generated using an Internal Certificate Authority, select the **Use Internal**Certificate Authority (CA) check box
- 9. Upload the Root Certificate from your Internal CA
- 10. Click Upload Certificate to complete the process

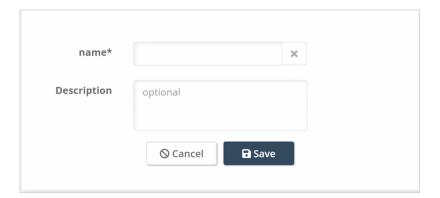


5. Global Variables

Global Variables are used to provide placeholders in template and packages. At the time of deployment, the user will be prompted to input data for each Global Variable in the package.

To add Global Variables:

- 1. Select Global Variables from the left navigation menu
- 2. On the menu, click Add
- 3. Enter a global variable Name
- 4. Optionally enter a global variable Description
- 5. Click Save



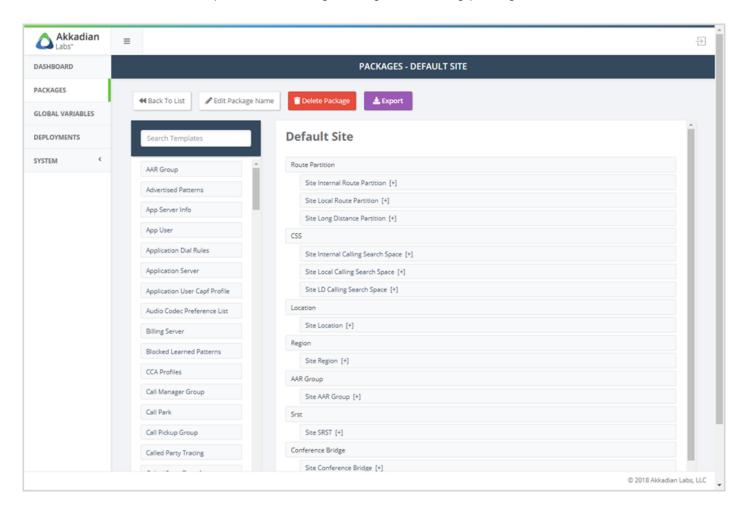
6. Packages

Packages are grouping of one more more provisioning templates. Packages can be used to deploy single item or an entire site or dial plan withing Communications Manager.

Before you begin configuring packages, it is best to spend some time planning. There are a few things you should think about before you begin the configuration process:

- 1. Does the package require Global Variables? If so, config the GVs first.
- 2. The template order matters! Creating the package in the right order makes things much easier. Site Builder does try an handle much of the logic, but creating dependencies first makes things much easier.

This section will describe the process of adding, editing and deleting packages.

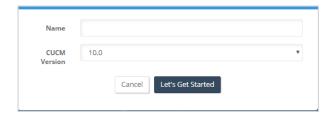


6.1 Adding Packages

Packages are required for deployment in Site Builder. Packages can be used in single or bulk deployments.

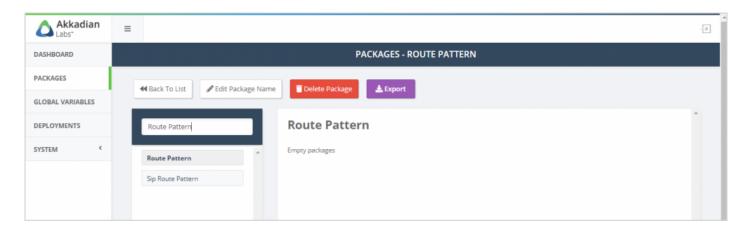
To add a Package:

- 1. Select Package from the left navigation menu
- 2. On the menu, click +New
- 3. Enter the Package Name and CUCM Version



Note that packages are not backwards compatible with older version of CUCM, but can be deployed up to 3 major version forward. For example, if a package is created for CUCM 10.x, it will be deploy-able on CUCM 10-12, but a version 11.5 package cannot be deployed on CUCM 10.x

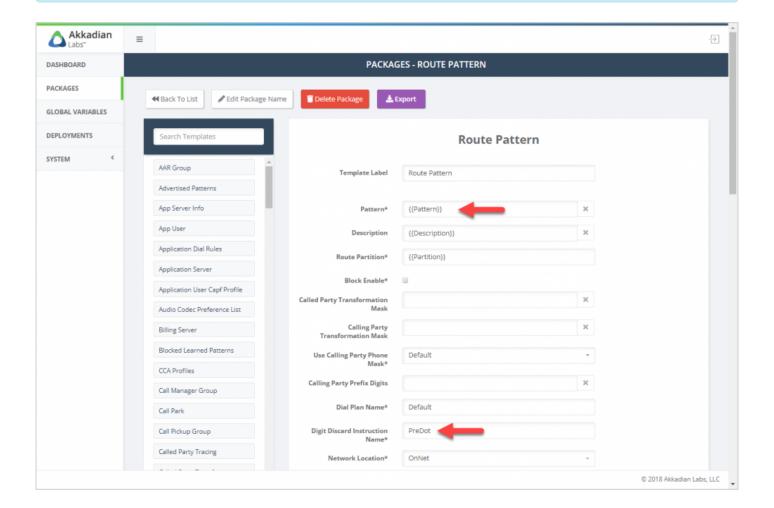
4. Select the first Template from the list to add it to the Package



5. Configure the selected Template



Input fields on templates can be populated with Global Variables or static text. In the example below, we will be prompted for Pattern, Description & Partition at deployment, but Digit Discard Instruction Name is statically configured to PreDot. Any data inputted must match exactly to the data in CUCM.



- 6. Click Add Template to add the Template to the package
- 7. Repeat this process to add additional Templates

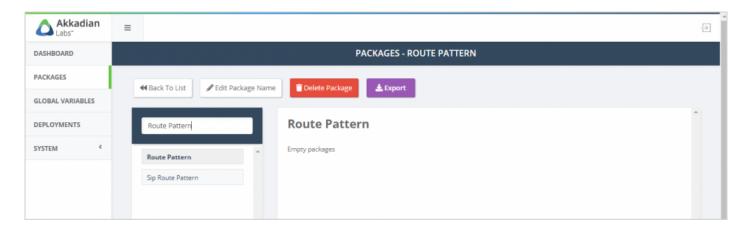
6.2 Editing Packages

To edit a Package:

- 1. Select Package from the left navigation menu
- 2. In the list, click on the package name
- 3. When the package opens, you can:
 - Add additional templates to package
 - · Edit existing templates in package
 - · Delete existing templates from package

To add a template to an existing package:

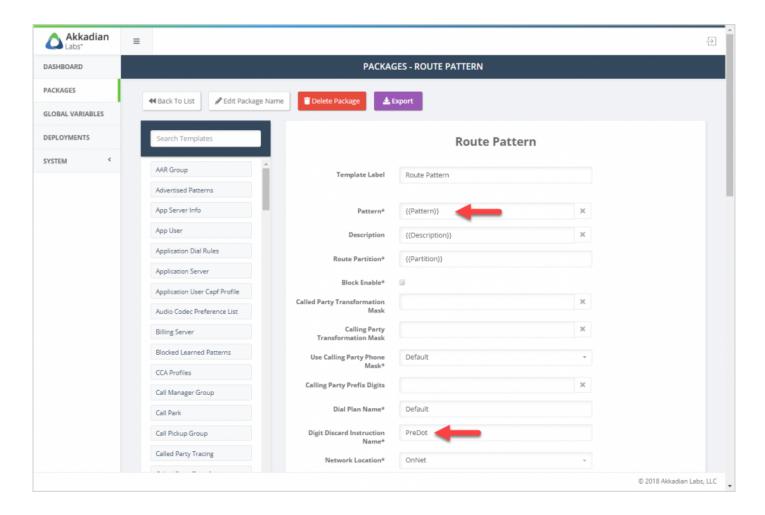
1. Select the first Template from the list to add it to the Package



2. Configure the selected Template



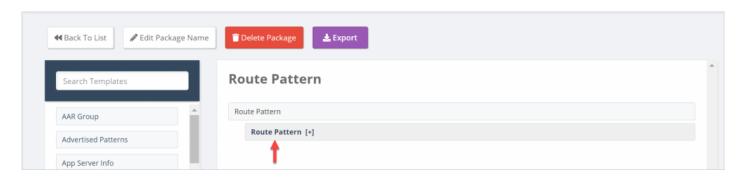
Input fields on templates can be populated with Global Variables or static text. In the example below, we will be prompted for Pattern, Description & Partition at deployment, but Digit Discard Instruction Name is statically configured to PreDot. Any data inputted must match exactly to the data in CUCM.



- 3. Click Add Template to add the Template to the package
- 4. Repeat this process to add additional Templates

To edit a template in an existing package:

1. In the package click on the template name

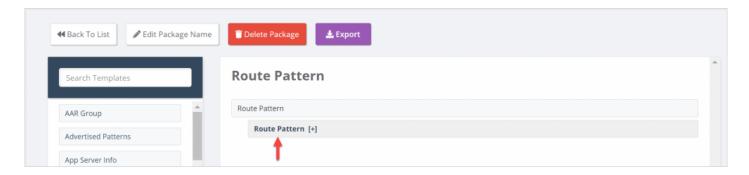


2. Update the desired fields

- 3. Scroll to the bottom of the template and click Save Template
- 4. Repeat this process of additional templates

To delete a template from an existing package:

1. In the package click on the template name

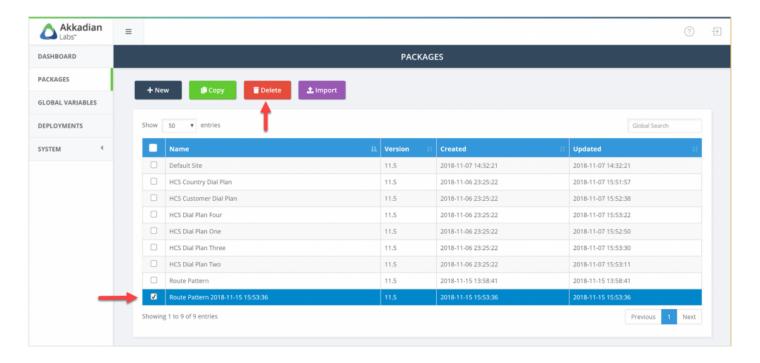


- 2. Scroll to the bottom of the template and click Delete Template
- 3. Repeat this process of additional templates

6.3 Deleting Packages

To edit a package:

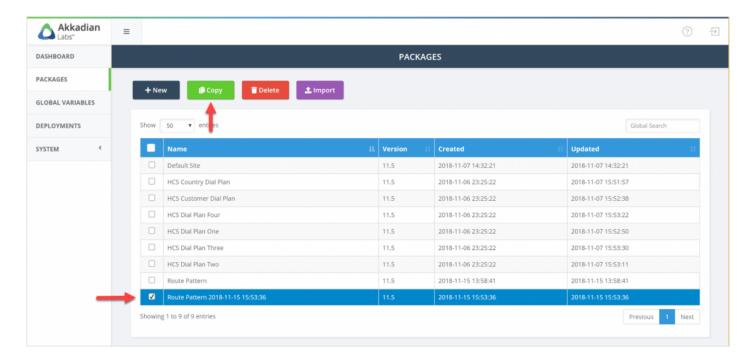
- 1. Select Package from the left navigation menu
- 2. In the list, select the package
- 3. Click the Delete button



6.4 Copying Packages

To copy a package:

- 1. Select Package from the left navigation menu
- 2. In the list, select the package
- 3. Click the Copy button

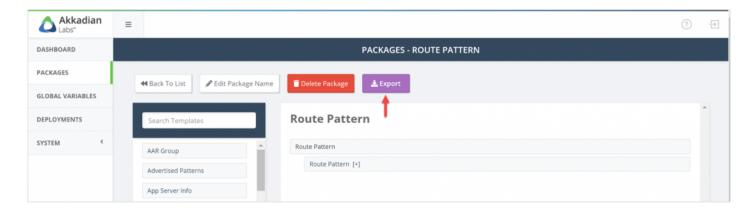


6.5 Exporting Packages

Packages can be exported and imported into other Site Builder systems.

To export a package:

- 1. Select Package from the left navigation menu
- 2. In the list, click on the package name
- 3. Click the Export button



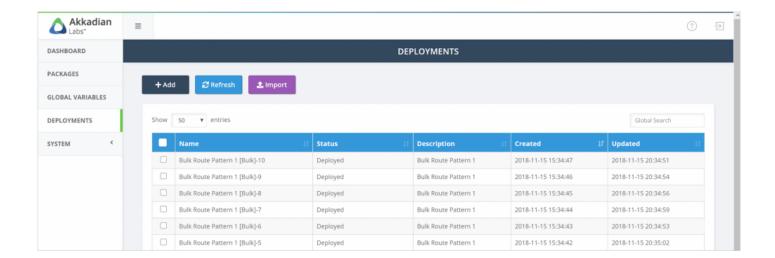
7. Deployments

Deployments are used to deploy packages. Before running a deployment the following must be configured:

- · Application Server
- · Service Group
- Package



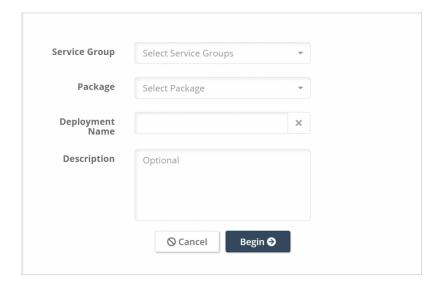
Deployments can be used to deploy a package once or in bulk.



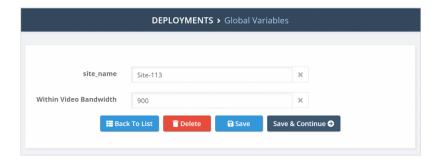
7.1 Running Deployments

To run a deployment

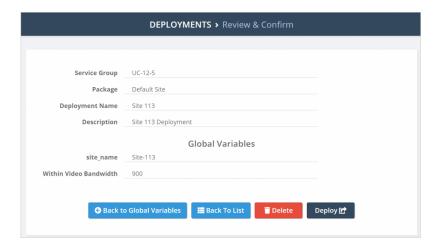
- 1. Select **Deployments** from the left navigation menu
- 2. On the menu, click Add
- 3. Select the Service Group for the deployment
- 4. Select the Package to deploy
- 5. Enter a Deployment Name
- 6. Optionally enter a **Deployment Description**
- 7. Click Begin



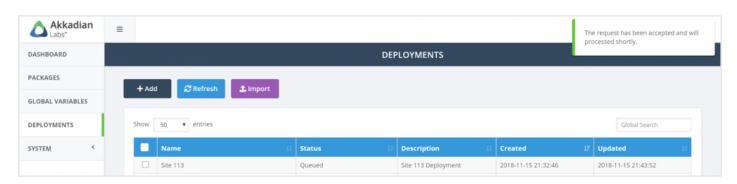
8. Input the data for any Global Variables



- 9. Click Save & Continue
- 10. Review the setting and then click **Deploy**



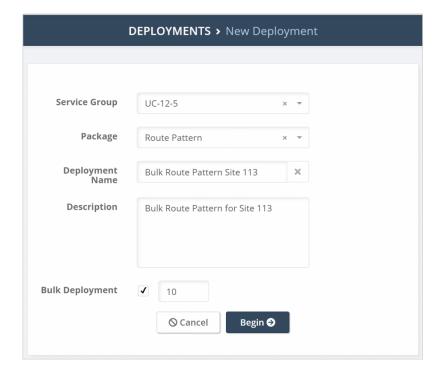
11. The deployment will be submitted to the queue and then processed



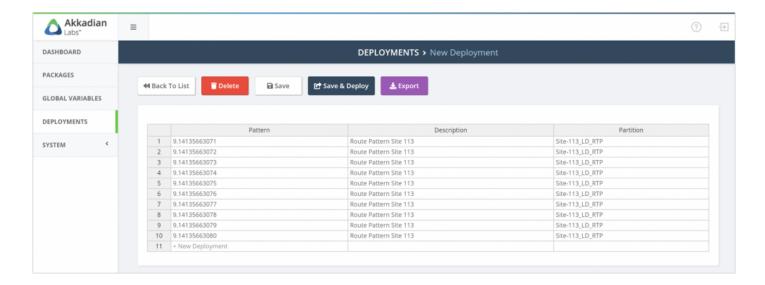
7.2 Running Bulk Deployments

To run a bulk deployment

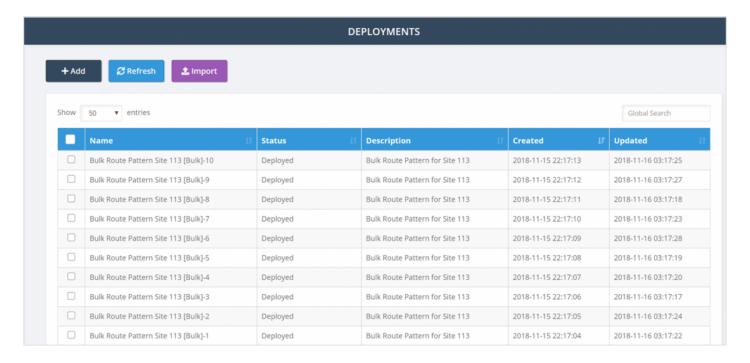
- 1. Select **Deployments** from the left navigation menu
- 2. On the menu, click Add
- 3. Select the Service Group for the deployment
- 4. Select the Package to deploy
- 5. Enter a Deployment Name
- 6. Optionally enter a **Deployment Description**
- 7. Check the Bulk Deployment checkbox
- 8. Click Begin



9. Input the data for any Global Variables



- 10. Click Save & Deploy
- 11. The deployment will be submitted to the queue and then processed

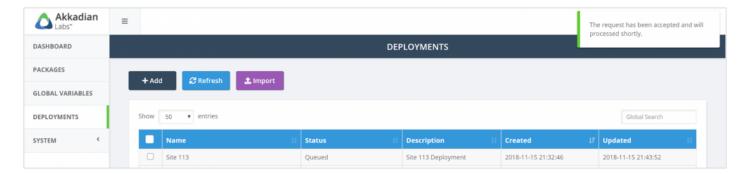


7.3 Rolling Back a Deployment

A deployment may be rolled back for any reason. The rollback will remove all data that was provisioned by deployment.

To rollback a deployment:

- 1. Select **Deployments** from the left navigation menu
- 2. Select or search for the deployment in the list



- 3. Click on the deployment name of view the details
- 4. Click the Rollback button to roll back the deployment
- 5. Confirm the rollback operation

Note that rollbacks are permanent and cannot be reversed.

