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# Cisco Smart+Connected Meeting Spaces ™ Installation Guide

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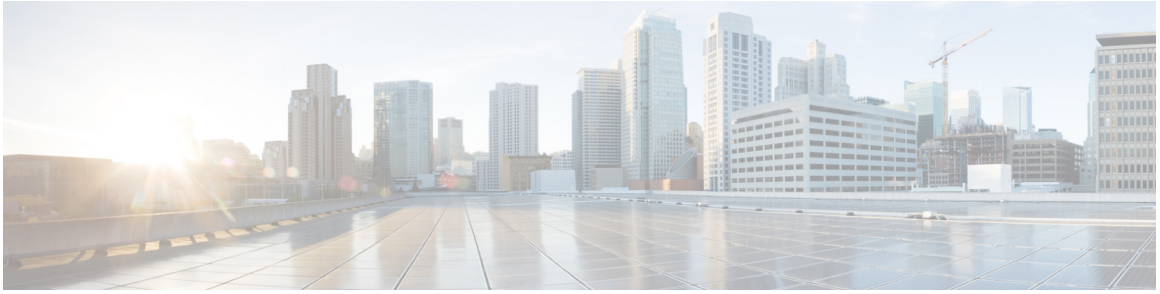
*Cisco Smart+Connected Meeting Spaces* ™ Installation Guide



# Preface

This preface describes the audience, organization, and conventions of the Cisco Smart+Connected Meeting Spaces ™ Installation Guide, and provides information on the related documentation.



## Audience

This guide is intended for system administrators who install, configure, and maintain the Cisco Smart+Connected Meeting Spaces™ (Smart+Connected MS) application.

## Organization

| Title | Description |
|---|---|
| Chapter 1, “Getting Started” | Describes information on the architecture, prerequisites, and deployment models of the Smart+Connected MS application. |
| Chapter 2, “Installing the Smart+Connected MS” | Describes how to install and deploy the Smart+Connected MS application by using the Oracle database and JBoss application server. |
| Chapter 3, “Configuring the Smart+Connected MS Application” | Describes how to configure the Smart+Connected MS application after installation. |

# Document Conventions

| Convention | Indication |
|---|---|
| **Boldface** | Commands, command options, and keywords are in boldface. |
| *Italics* | Arguments for which you supply values are in italics. |
| Option > Option | Used to describe a series of menu options. |
| `courier` font | Terminal sessions and information the system displays appear in courier font. |

**Note** Means *reader take note*. Notes contain helpful suggestions or references to material not covered in this guide.

# Related Documentation

- *Cisco Smart+Connected Meeting Spaces User Guide*
- *Cisco Smart+Connected Spaces User Guide*
- *Cisco Smart+Connected Meeting Spaces Administrator Guide*
- *Cisco Smart+Connected Meeting Spaces Customization Guide*
- *Cisco Service Delivery Platform Installation Guide*
- *Cisco Service Delivery Platform User Guide*
- *Release Notes for Cisco Smart+Connected Meeting Spaces*

# Obtaining Documentation and Submitting a Service Request

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# Getting Started

This chapter provides information on the architecture, prerequisites, and deployment models of the Cisco Smart+Connected Meeting Spaces (Smart+Connected MS) application.



## Overview

The Smart+Connected MS is a solution that leverages the Cisco Service Delivery Platform (SDP). The solution allows you to easily access information about conference/TelePresence (TP) rooms and the enterprise by using digital signage/IEC, kiosks, room panels, IP phones, and the web portal. For example, you can easily view information, such as meeting details, room availability, news, energy consumption data, energy saving tips, and so on.

The application also allows you to book conference/TP rooms instantly using touchscreen signage, kiosks, room panels, and IP phones, manage conference room resources, and report the issues, if any, in the conference rooms. The automatic energy saving settings lead to reduced power consumption and contribute to the eco-friendly policies of the organization. In case of any mishaps, emergency notifications are sent out to the users through IP phones and signage.

The Smart+Connected MS leads to enhanced enterprise communication as the updated meeting room information is widely available and easily accessible to employees. It also leads to better resource management and energy savings which translate to reduced energy bills and more environment-friendly corporate practices.

The Smart+Connected MS solution allows the end user to do the following:

- Using Digital Signage/IEC
  - Book conference/TP rooms.
  - View detailed floor plans with the locations of the conference rooms.
  - View the conference room schedule in different views—Building level, Floor level, and Conference Room level.

  - Cisco Smart+Connected Emergency Notifications™ (Smart+Connected EN)—Displays the notifications and exit routes on the digital signage in times of an emergency and sends audio and visual notifications on the Cisco IP phones during a crisis.
  - Cisco Smart+Connected Information Signage™ (Smart+Connected IS)—Displays the general information and news on the digital signage.
  - Cisco Smart+Connected Green Advisor™ (Smart+Connected GA)—Displays energy consumption data, energy saving tips, and green information.
- Using Smart+Connected MS Kiosks
  - Book conference rooms and TP rooms.
  - Check into any available workspace/office.
  - View the overall conference/TP room and workspace availability on all floors of all of the buildings in the organization and book/check into any of these spaces.
  - View the neighborhoods/zones on a floor.
  - Viewing the new stories enabled for the building.
  - Access the floor plans for any building in the enterprise to view the locations and availability of the conference room/TP rooms and workspaces.
  - Search for the available conference rooms and TP rooms based on your requirements such as the features available, seating capacity, location, and time and book them.
  - Search for the people within the enterprise.

**Note** You can also perform all these tasks by using the web portal.

- Using Kiosk Web Portal (In addition to the above mentioned features that you can access using kiosks)
  - Locate the workspace you have checked into.
  - View the building, floor, and name of the workspace you have checked into.
  - Choose not to display your current check in location.

**Note** This option is available only if it is configured by the administrator.

  - Check out from the workspace that you have occupied.
  - Login and logout of the kiosk web portal.
- Using IP Phones
  - Quickly book the conference/TP room wherever the IP phone is located based on the room availability.
  - Control the meeting room devices and equipment.
  - Save energy by manually releasing a room for the duration it is unoccupied, in addition to the energy savings made when the solution automatically releases the room due to non-occupancy and puts equipment in energy savings mode.
  - Configure multiple devices to suit your meeting and presentation needs using a single menu selection.

  - Create a case to notify the facilities team of any issues/problems that might be present in the conference room, and convey the same to the others in the organization by sending messages to the IP phone in the room. Once the case is created, the facilities team of the building can try to resolve the fault.

- Using the Smart+Connected MS web portal
  - Search for the available conference/TP rooms based on your requirements such as room setup, room size, location, and so on and book them. Rooms that closely meet your search criteria are displayed if no exact match is found.
  - View the current and upcoming meetings that you are part of or have organized.
  - Accept, decline, or tentatively accept meeting invites.
  - View all the scheduled meetings as a day, week, or month based calendar view.
  - Book conference rooms easily by holding down the mouse key and dragging across the required time slot in the calendar view.
  - Book conference rooms instantly using the Quick Booking option. Reservation is made simpler as you can key in the number of participants. Booking duration options range from 15 (the default duration being 30 minutes) to 60 minutes. Location is by default the one specified in your Preferences.
  - Use the detailed booking option where you can request for change in the room setup, book equipment, add meeting agenda and notes, and so on.
  - Edit the details of the meetings you have organized.
  - Save drafts of the bookings and edit them later.
  - Save your preferred settings such as favorite rooms, location, and time zone.
- Using Room Panels
  - View the conference/TP room schedule and availability/occupancy status.
  - Book conference/TP rooms.
  - Confirm conference/TP room occupancy.
  - Release conference/TP rooms.

In addition, the solution can help in energy savings by automatically switching devices to a standby mode when the meeting room is unoccupied and based on the configuration, turn them back on before the actual occupancy.

As an administrator, you have to manage the overall configuration, maintenance, and content creation for the Smart+Connected MS solution through a web portal. You have to add locations and devices, create users, and associate devices to locations for the solution in the SDP. For more information on performing these tasks, see the *Cisco Service Delivery Platform User Guide* and *Cisco Service Delivery Platform Installation Guide*. After the locations are added, and the devices are associated to them in the SDP, they are available in the Smart+Connected MS portal. You can select a location and associate a configuration to it. The features such as fault messages, device control options, signage menu messaging, and room booking that are added to the configuration can be accessed by the end user from the Cisco IP phones at the location.

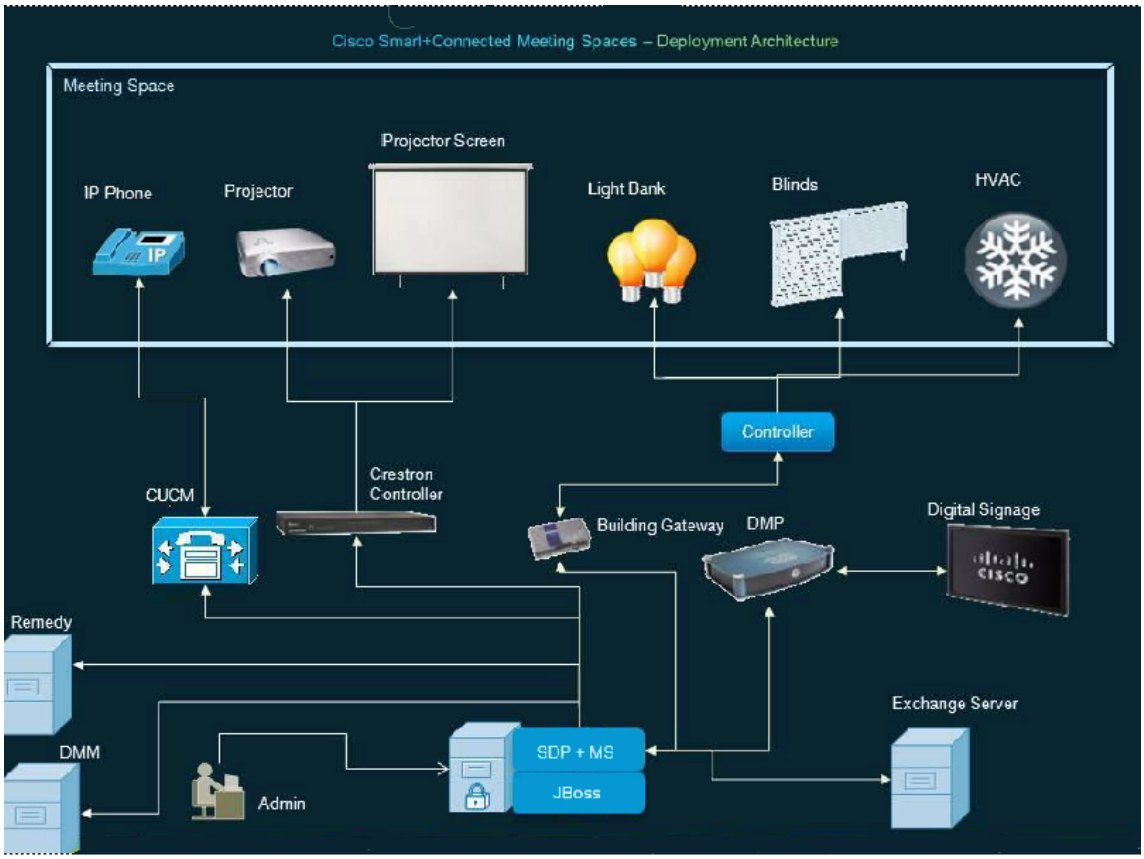
# System Architecture

The Smart+Connected MS application communicates with the following:

- Microsoft Exchange—To book meetings and retrieve meeting details.
- Building Management System (BMS)—To control and monitor devices, such as lights, blinds, and air conditioners.
- Content Management System (CMS)—To store the application data.
- Crestron Controller—To control projectors and projector screens.
- Digital Media Player (DMP) and Cisco Interactive Experience Client (IEC)—To display meeting details, notifications, general information, news, energy consumption data, energy saving tips, and so on, on the digital signages.
- Remedy—To raise trouble tickets for the conference room issues.

The Smart+Connected MS application leverages the SDP. For more information on the SDP, see the *Cisco Service Delivery Platform User Guide*.

***Figure 1-1 System Architecture***



# List of Acronyms and Abbreviations

*Table 1-1 List of Acronyms and Abbreviations*

| Acronym | Expansion |
|---|---|
| MS | Meeting Spaces |
| APR | Acoustic Pulse Recognition |
| CMS | Content Management System |
| CPU | Central Processing Unit |
| CTI | Computer Telephony Integration |
| CUCM | Cisco Unified Communications Manager |
| DB | Database |
| DMP | Digital Media Player |
| DMM | Digital Media Manager |
| DBMS | Database Management System |
| EWS | Exchange Web Services |
| HDD | Hard Disk Drive |
| HTTP | Hypertext Transfer Protocol |
| IEC | Cisco Interactive Experience Client |
| JDBC | Java Database Connectivity |
| JDK | Java Development Kit |
| JMS | Java Message Service |
| JNDI | Java Naming and Directory Interface |
| JTAPI | Java Telephony Application Programming Interface |
| LAN | Local Area Network |
| LDAP | Light Weight Directory Access Protocol |
| MAC | Media Access Control |
| NIC | Network Interface Card |
| NTP | Network Time Protocol |
| OS | Operating System |
| RAM | Random-access Memory |
| RAC | Real Application Cluster |
| RDBMS | Relational Database Management Systems |
| RHEL | Red Hat Enterprise Linux |
| S+CC | Smart+Connected Communities |
| SDP | Service Delivery Platform |
| SNMP | Simple Network Management Protocol |

*Table 1-1 List of Acronyms and Abbreviations (Continued)*

| Acronym | Expansion |
|---|---|
| SP | Service Pack |
| SQL | Structured Query Language |
| UCS | Unified Computing System |
| UI | User Interface |
| VM | Virtual Machine |

# System Requirements

Before installing the Smart+Connected MS application, ensure that all the system requirements are met.

*Table 1-2 System Requirements*

| Software/Hardware | Smart+Connected MS & DS |
|---|---|
| Operating System | Red Hat Enterprise Linux (RHEL) 5.5 (64-bit) or 6.3 (64-bit) |
| Hardware - For Application Server and Database<br>Note:<br>• This requirement is for one VM (for example, colocated) or one physical machine.<br>• For a non-cluster setup, you need two VMs—one for the application server and another for the database. Also, each VM must meet the requirements that are mentioned here.<br>• For a cluster setup, the hardware requirements are based on the deployment scenario and user requirements. | Minimum requirements are:<br>• Hard Disc Space—200 GB<br>• RAM—Minimum configuration of 4 GB or above<br>• Processor<br>– 2 vCPU dual core for Virtual Machine (VM)<br>– Intel x86/II386 Architecture for physical machines<br>– Certified on Cisco UCS B-Series and C-Series with Intel CPUs. |
| Crestron A/V integration (if applicable) | • Separate host or VM with Windows 2008 R2 Standard SP1 or Windows 7<br>• IIS 7.5 with .NET framework 3.5 or higher |
| Browser | • Mozilla Firefox Version 18.0.x<br>• Microsoft Internet Explorer Versions 9.0<br>• Google Chrome Version 24.0 and 26.0 |
| Database | Oracle Enterprise Edition 11g R2 (11.2.0.2) with character set configured to UTF8.<br>For more information on how to install the Oracle database, see the Oracle documentation. |
| Application Server | JBoss 6.0 |

*Table 1-2 System Requirements (Continued)*

| Software/Hardware | Smart+Connected MS & DS |
|---|---|
| Java Development Kit (JDK) | Oracle JDK 1.6.0_24 |
| Exchange Server | • Microsoft Exchange Server 2007 SP3<br>• Microsoft Exchange Server 2010 SP1, SP2<br>Exchange Web Services (EWS) integration is supported using only the BasicAuth authentication scheme. This needs to be configured in the Microsoft Internet Information Services.<br>• For conference room mailboxes, the 'AutomateProcessing' property must be set to 'AutoAccept' so that recurring meeting updates are sent correctly to the solution through notifications.<br>• For user mailboxes, 'AddOrganizerToSubject' and 'DeleteSubject' must be set to $false. If this is not done, then the meeting organizer's name appears in the Subject field instead of meeting subject.<br>Impersonation rights are required on the conference room mailboxes and user mailboxes for the service account. This allows the service account to connect to the Exchange server and retrieve meeting details from the conference room mailboxes and the user mailboxes.<br>For more information on Exchange impersonation, see:<br>• Exchange 2007:<br>http://msdn.microsoft.com/en-us/library/bb204095(EXCHG.80).aspx<br>• Exchange 2010:<br>http://msdn.microsoft.com/en-us/library/bb204095.aspx |
| Trouble Ticketing | BMC Remedy Version 7.5 |
| Audio/Visual | The certified Crestron controllers that have been tested with the .NET SDK are:<br>• MC2E (one controller for one projector)<br>• PRO2 (one controller for two projectors)<br>However, the Crestron Control System with Ethernet port supports the Crestron .NET SDK, and therefore can be integrated with the solution. |
| Mediation Gateway | Tridium with Obix Versions 3.5.34, 3.7.x |
| Digital Media Player (DMP) | DMP 4400:<br>• Firmware 5.1 for http<br>• Firmware 5.2 for https<br>• Firmware 5.3 for https |
| Cisco Interactive Experience Client (IEC) | IEP-4632-HW-K9:<br>• Firmware 4.155.393 |

*Table 1-2 System Requirements (Continued)*

| Software/Hardware | Smart+Connected MS & DS |
|---|---|
| Digital Media Manager (DMM) | Version 5.2.1 |
| Digital Signage | • 42 inch<br>• 47 inch<br>• 55 inch<br>**Note** Ensure that the aspect ratio of the signage screens is 16:9. |
| Touchscreen | The Smart+Connected MS application is certified on the eLO Touchscreen APR technology model. However, DMP 4400G also supports other touchscreen overlays.<br>For more information on other touchscreen overlays of DMP 4400G, see:<br>http://www.cisco.com/en/US/docs/video/digital_media_systems/dmscompat3.html#wp1100911<br>**Note** For information about the touchscreen models supported for IEC, see: http://www.cisco.com/en/US/products/ps12435/products_data_sheets_list.html |
| IP Phone Model | • Touchscreen: 7975 and 9971<br>• Non-Touchscreen: 7962 and 9951 |
| Call Manager | • Cisco Call Manager Version 7.1<br>• Cisco Call Manager Version 8.x<br>• Cisco Call Manager Version 9.x<br>The audio notification feature does not work with Cisco Call Manager 7.1. |
| Emergency Notification System | • Cisco JTAPI<br>• Singlewire InformaCast |
| LDAP | • Active Directory<br>– Windows 2008 Version 6.0<br>– Windows 2003 Version 5.2 R2 |
| Service Delivery Platform (SDP) | Cisco SDP 2.0.2 |
| Language | U.S. English<br>The Smart+Connected MS & DS application provides multi-language support. Although U.S. English is the language that is supported out-of-the-box, other languages can be supported by doing necessary configurations. |

# Deployment Models

You can install and deploy the Smart+Connected MS application using one of the following deployment models:

- Colocated Server Setup—The database and the S+CC application are installed on a single server.
- Non-Cluster Server Setup—The database and the application server are installed on two different instances, either on a physical or a virtual machine.
- Cluster Server Setup—The database and the application server are installed on separate dedicated servers or on a cluster of servers. This setup provides high availability.

**Note** This document describes the installation process in the colocated/non-cluster and cluster server setups.

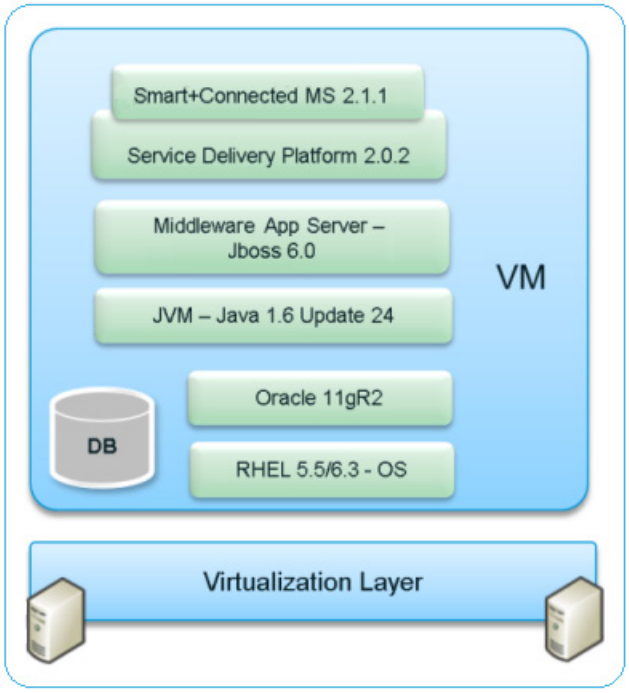
- Colocated Server Setup, page 1-9
- Non-cluster Server Setup, page 1-10
- Cluster Server Setup, page 1-11

## Colocated Server Setup

In a colocated deployment, all the functionalities and layers of the application reside on a single server.

This is the simplest form of the deployment, where the database and the application are installed on the same instance and the setup is self-contained. This is suitable for small enterprises.

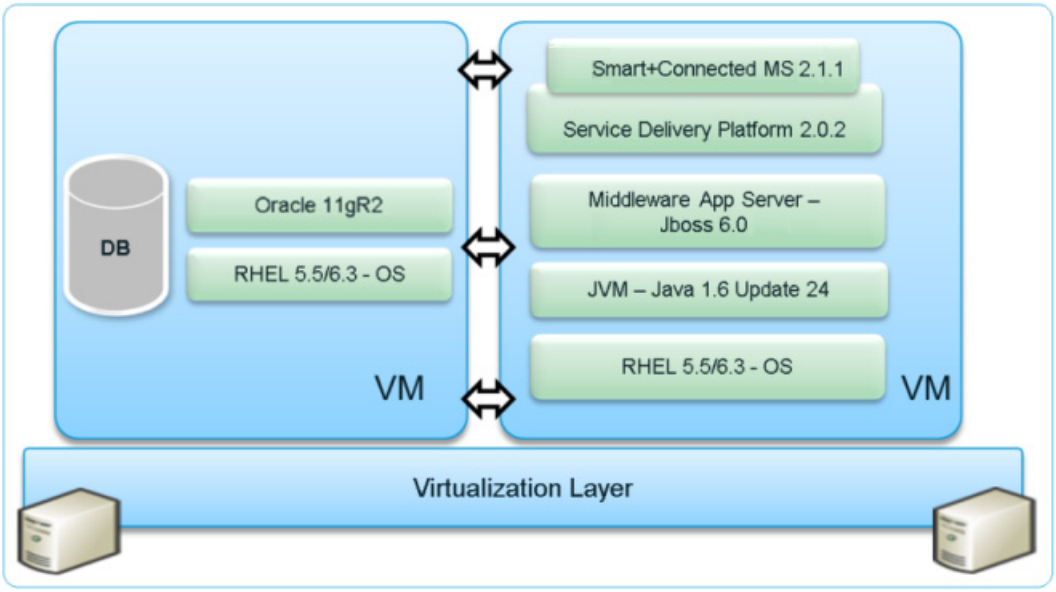
*Figure 1-2 Colocated Server Setup*



## Non-cluster Server Setup

In this setup, the database and the application server are installed on two different instances—either on a physical or a virtual machine. This is a common server setup method for the enterprise installations. The database is setup on one instance and the application server, SDP, and the S+CC application are installed and set up on a second instance.

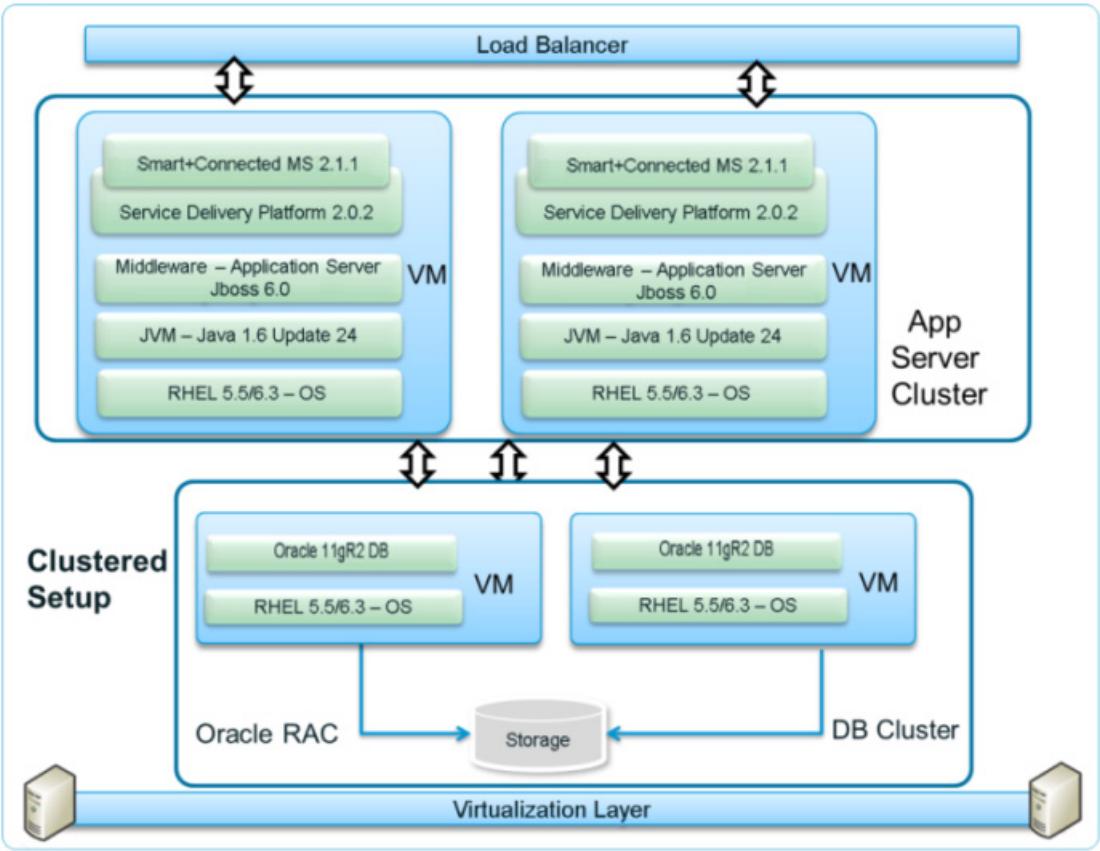
*Figure 1-3 Non-Cluster Server Setup*



## Cluster Server Setup

A cluster setup consists of multiple nodes that run an application simultaneously and work together to provide increased scalability, reliability, and high availability. In a distributed cluster setup, the solution is deployed on the multiple nodes of a cluster.

*Figure 1-4 Cluster Server Setup*



# Deployment Flowchart

The deployment flowchart describes the procedure to deploy the solution and ensure a successful installation.

Figure 1-5 displays the deployment flowchart for a colocated/non-cluster server setup.

***Figure 1-5 Deployment Flowchart - Colocated/Non-cluster Server Setup***

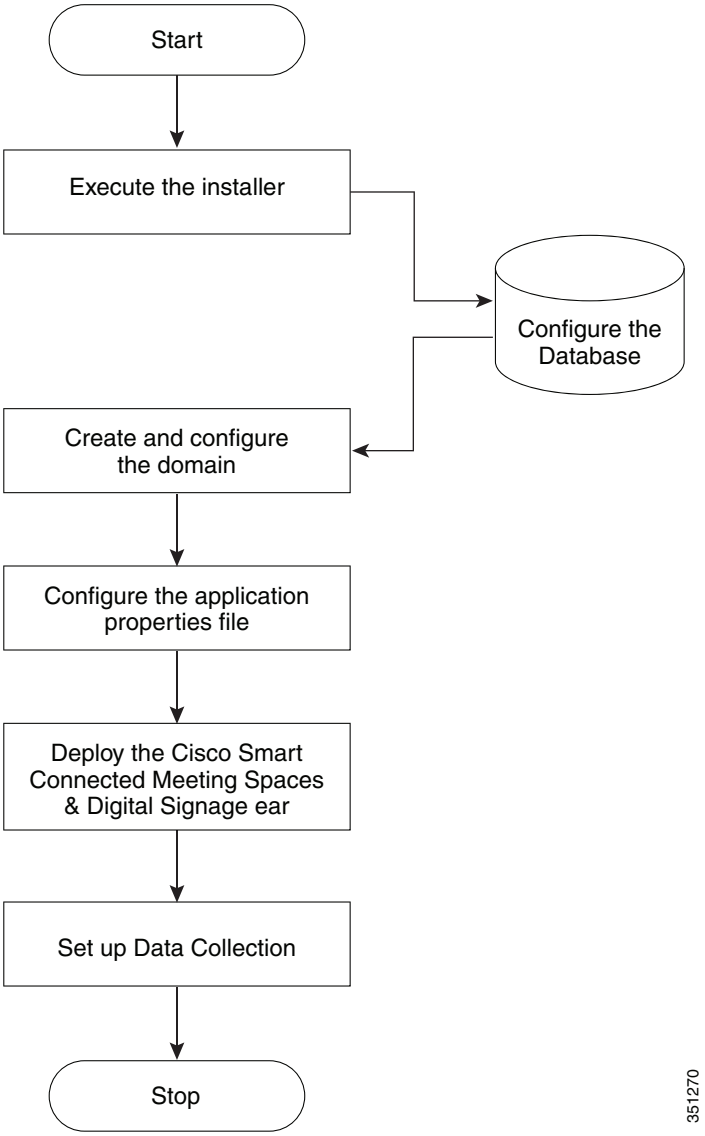
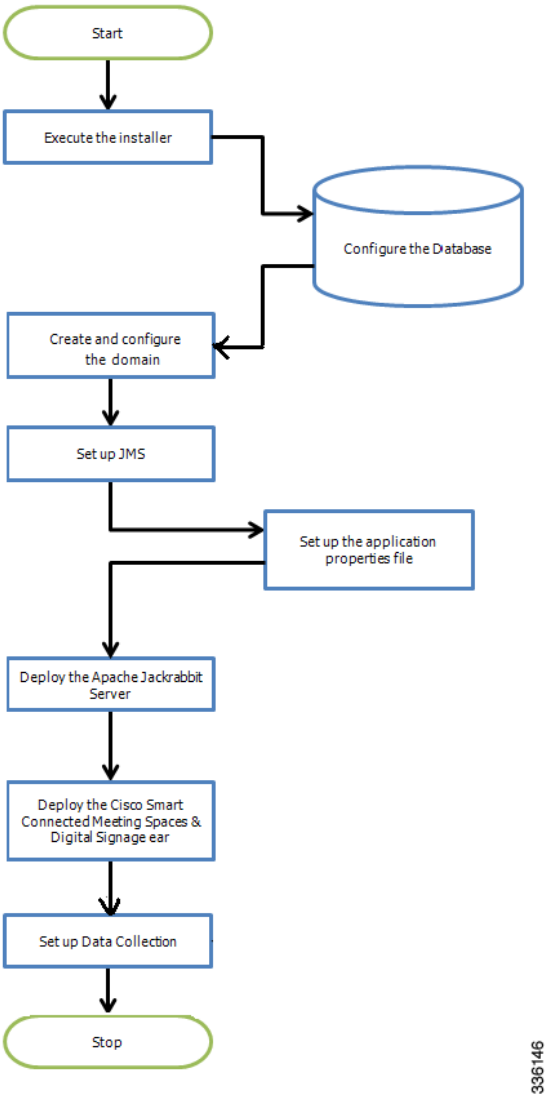


Figure 1-6 displays the deployment flowchart for a cluster server setup.

***Figure 1-6 Deployment Flowchart - Cluster Server Setup***



CHAPTER 2

# Installing the Smart+Connected MS

This chapter describes how to install and deploy the Cisco Smart+Connected Meeting Spaces (Smart+Connected MS) application by using the Oracle database and JBoss application server.



The Smart+Connected MS installation can be initiated only after the Cisco Service Platform Delivery (SDP) is set up and the database scripts for the SDP have been executed.

After successfully installing the Smart+Connected MS application, you can configure the application by performing tasks that are listed in Chapter 3, "Configuring the Smart+Connected MS Application".

## Prerequisites



### Gathering Required Information

Prior to beginning the installation, you must gather the following information:

- Database Details:
  - Database SID
  - Database IP address or the DNS hostname
  - Database port number. The default port number is 1521.
  - Database schema username
  - Database schema password
  - SSH credentials
- Application Server Details:
  - Location of the *<JBOSS_INSTALL_LOCATION>* directory, if the JBoss server has been pre-installed. The *<JBOSS_INSTALL_LOCATION>* directory is the complete path where the JBoss application server is installed. Ensure that the $*JBOSS_HOME* environment variable is set to the *<JBOSS_INSTALL_LOCATION>* directory.

- Location of the <*JDK_INSTALL_LOCATION*> directory if the JDK has been pre-installed. The <*JDK_INSTALL_LOCATION*> directory is the complete path where you have installed JDK. Ensure that the $*JAVA_HOME* environment variable is set to the <*JDK_INSTALL_LOCATION*> directory and the PATH environment variable includes the $*JAVA_HOME*/bin folder.
- SSH credentials

## Verifying Network Configurations

Verify the following network configurations:

- All machines in the setup are in the same network domain.
- All machines are in the same LAN.
- All machines are configured to be on the same locale.
- System time is synchronized on all machines by using the Network Time Protocol (NTP).
- All the interface components within the application are accessible over the network.

# Installing on a Colocated or Non-Cluster Server Setup

To install the Smart+Connected MS application on a colocated or non-cluster server setup, perform the following steps:

# Installing the Application

The Smart+Connected MS installation package consists of an executable file (install.bin) that is located on the product DVD.

Before you begin the installation, do the following:

- Copy the installer file to a local directory.
- Ensure that the <*JAVA_HOME*> environment variable is set to the location at which the JDK is installed and the PATH environment variable includes the <*JAVA_HOME*>/bin folder.

To install the application, perform the following steps:

**Step 1** From the product DVD, run the installer:

**a.** In a terminal session, navigate to the directory that contains the installer and give execute permission to the install.bin file.

**b.** Enter the following command:

```
chmod u+x install.bin
```

**c.** Enter the following command:

```
./install.bin
```

Alternatively, use the installer that is available in the e-delivery package.

The Smart Plus Connected Communities - Introduction screen appears.

**Step 2** Click **Next**.

The License Agreement screen appear.

**Step 3** Choose **I accept the terms of the License Agreement**, and click **Next**.

The Choose Install Folder screen appears.

**Step 4** Click **Choose** to select the directory where you want the applications to be installed. Alternatively, you can enter the path manually.

**Note** The location where you install the Smart+Connected MS application is referred as <*MS_INSTALL_DIRECTORY*> in this guide.

**Step 5** (Optional) Click **Restore Default Folder** if you want to revert to the default directory.

**Step 6** Click **Next**.

The Pre-Installation Summary screen appears.

**Step 7** Click **Install**.

After the installation is complete, the Install Complete screen appears.

**Step 8** Click **Done** to complete the installation process.

**Step 9** Navigate to the directory that you had selected during installation, and verify that the following directories have been created:

- pkg-apps
- pkg-clientsamples
- pkg-jackrabbit
- pkg-jars

- pkg-jbosswsjars
- pkg-properties
- pkg-scripts
- pkg-templates

# Configuring the Database



## Requirements

You must configure a database for the Smart+Connected MS environment. To configure the Smart+Connected MS database, verify the following requirements:

- Ensure that Oracle is installed on your database server, and is ready for use.

  This document does not include information on how to set up the Oracle database. For more information, see the Oracle documentation.
- Ensure that you have provided the 'ALL' privilege to the Oracle database.
- Ensure that the following SDP database SQL scripts are already executed:
  - setup-sdp-base.sql
  - setup-sdp-types.sql

  For more information on how to execute the SDP database SQL scripts, see the "Executing Database Scripts" section on page 2-6.

## About Database Scripts

A few database scripts are created after you install the Smart+Connected MS application. These database scripts are used to create the tables or objects that are necessary for the successful operation of the Smart+Connected MS application. Before you execute the database scripts, ensure that you are connected to the database schema on which the database scripts are to be executed.

## SDP Database Scripts

The SDP database scripts are available at the following directory on the server where you have installed the SDP application:

<*SDP_INSTALL_DIRECTORY*>/sdp/

***Table 2-1 SDP Database Script - Details***

| Script | Description |
|---|---|
| `clean-sdp-objects.sql` | Cleans all SDP-related objects from the user schema if an instance of SDP was running earlier. Executing this script is not necessary if you are installing the SDP for the first time. |
| `setup-sdp-base.sql` | • Creates the tables, constraints, sequences, and indexes.<br>• Loads only the basic data that is required to bootstrap the application.<br>• Enables the local database authentication.<br>• Creates a user with the default username/password as superadmin/superadmin.<br>• Adds the locations that are defined in the seed data.<br>• Grants access rights to the locations to SuperAdmin (super administrator). |
| `setup-sdp-types.sql` | Loads the device types and device properties data. |

## MS Application Database Scripts

The Smart+Connected MS database scripts are available at the following directory in the system where you have installed the application:

<*MS_INSTALL_DIRECTORY*>pkg-scripts

These scripts create the appropriate Smart+Connected MS database objects in the database.

*Table 2-2 Smart+Connected MS Database Script - Details*

| Script | Description |
|---|---|
| `clean-Smart_Connected_Meeting_Spaces_and_Digital_Signage-objects.sql` | Cleans all the Smart+Connected MS related objects from the user schema. Executing this script is not necessary if you are installing the application for the first time. |
| `clean-common-objects.sql` | Cleans all the Smart+Connected MS and the Cisco Smart+Connected Personalized Spaces (Smart+Connected PS) related objects from the user schema. Executing this script is not necessary if you have not installed either of the two applications earlier.<br>**Note** Run this script only once as part of either the Smart+Connected MS or the Smart+Connected PS installation. |
| `setup-common-base.sql` | • Creates the tables, constraints, sequences, and indexes that are common to the Smart+Connected MS and Smart+Connected PS applications.<br>• Loads the basic data that is required to bootstrap the applications.<br>**Note** To install the MS and PS applications, run the clean-common-objects.sql and setup-common-base.sql scripts, followed by the PS scripts, and finally the MS scripts. |
| `setup-Smart_Connected_Meeting_Spaces_and_Digital_Signage-base.sql` | • Creates the tables, constraints, sequences, and indexes.<br>• Loads the basic data that is required to bootstrap the application. |
| `setup-Smart_Connected_Meeting_Spaces_and_Digital_Signage-base_ko.sql` | • Creates the tables, constraints, sequences, and indexes.<br>• Loads the basic data that is required to bootstrap the application in Korean. |

## Executing Database Scripts

To execute the Smart+Connected MS database scripts, perform the following steps:

**Step 1** From the application install directory, copy the pkg-scripts folder to a location on the database machine.

You can access the pkg-scripts folder from the following location:

<*MS_INSTALL_DIRECTORY*>/pkg-scripts, where <*MS_INSTALL_DIRECTORY*> is the location at which the Smart+Connected MS & DS application is installed.

**Step 2** Navigate to the <*MS_INSTALL_DIRECTORY*>/pkg-scripts folder on the database machine.

**Step 3** Connect to SQL*Plus:

a. In a terminal session, enter **sqlplus**.

b. Press **Enter**.

**Step 4** Enter the database username and password.

**Step 5** For an English setup, enter

```
@<MS_INSTALL_DIRECTORY>/pkg-scripts/setup-Smart_Connected_Meeting_Spaces_and_Digital_Signage-base.SQL
```

For a Korean setup, enter

```
@<MS_INSTALL_DIRECTORY>/pkg-scripts/setup-Smart_Connected_Meeting_Spaces_and_Digital_Signage-base_ko.SQL
```

**Step 6** Press **Enter**.

The database objects are created in your schema for the Smart+Connected MS application.

**Note** When you run the database scripts, a log file is automatically generated and saved in the Scripts folder. You must check this log file to ensure that there are no errors logged. If the log file displays errors, these errors must be corrected before you proceed with the installation.

# Creating JBoss Profile

After configuring the database, you need to create a profile in the JBoss server for running the Smart+Connected MS application.

To create a profile in the JBoss server, perform the following steps:

**Step 1** Download jboss-6.0.0.Final.zip.

JBoss is open-source, and you can download it from the Internet. For example:

http://sourceforge.net/projects/jboss/files/JBoss/JBoss-6.0.0.Final/jboss-as-distribution-6.0.0.Final.zip/download

**Step 2** Create a folder named ‘jboss’, and unzip the jboss-6.0.0.Final.zip file into that folder.

**Step 3** Open the terminal and set the *$JBOSS_HOME* and *$JAVA_HOME* environment variables by entering the following commands:

```
$ export JAVA_HOME=<JDK_INSTALL_LOCATION>
$ export JBOSS_HOME=<JBOSS_INSTALL_LOCATION>
```

Where, <*JBOSS_INSTALL_LOCATION*> is the complete path where the unzipped jboss-6.0.0 files are available and <*JDK_INSTALL_LOCATION*> is the complete path where you have installed jdk1.6.0_24.

**Note** You can also add the preceding commands to the user’s profile script so that the *$JBOSS_HOME* and *$JAVA_HOME* environment variables are automatically set up during login.

**Step 4** Navigate to the server directory in *$JBOSS_HOME* by entering the following command:

```
cd $JBOSS_HOME/server
```

**Step 5** Copy the 'default' directory with the name 'solutions' by entering the following command:

```
cp -R default solutions
```

The 'solutions' directory is created under the $*JBOSS_HOME*/server directory. The 'solutions' directory is used as the Smart+Connected MS & DS application profile.

**Step 6** Copy the Smart_Connected_Meeting_Spaces_and_Digital_Signage.ear file, which is available in <*MS_INSTALL_DIRECTORY*>/pkg-apps, to the *$JBOSS_HOME*/server/solutions/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-apps/Smart_Connected_Meeting_Spaces_and_Digital_Signage.e
ar $JBOSS_HOME/server/solutions/deploy
```

**Step 7** Create a datasource file so that the Smart+Connected MS & DS application communicates with the database machine:

**a.** Create the oracle-ds.xml file under the 'solutions/deploy' folder and the SDP application with the following text:

```
<?xml version="1.0" encoding="UTF-8"?>
<datasources>
<local-tx-datasource>
<jndi-name>jdbc/scc</jndi-name>
<connection-url>jdbc:oracle:thin:@IPaddress:1521/DBName</connection-url>
<driver-class>oracle.jdbc.OracleDriver</driver-class>
<user-name>DBusername</user-name>
<password>DBpassword</password>
<min-pool-size>10</min-pool-size>
<max-pool-size>50</max-pool-size>
</local-tx-datasource>
</datasources>
```

**b.** Replace the following text with their actual values in the text that you had added in Step 7 a.:

- 'IPaddress' with the database server IP address or DNS hostname
- 'DBName' with the database name
- '1521' with the database port number if changed during the Oracle installation
- 'DBusername' with the database schema username
- 'DBpassword' with the database schema password

**c.** Save the file.

**Step 8** Update the run.conf file to increase the memory:

**a.** Open the run.conf file available in *$JBOSS_HOME*/bin and search for the following text:

```
JAVA_OPTS="-Xms128m -Xmx512m -XX:MaxPermSize=256m -Dorg.jboss.resolver.warning=true
-Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000"
```

Replace with the following text:

```
JAVA_OPTS="-Xms256m -Xmx1024m -XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true
-Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000"
```

**b.** Save the file.

# Setting Up Port

In a non-cluster setup, the Smart+Connected MS application is deployed on a single node of a virtual machine and the database resides in a different virtual machine (VM). In a colocated setup, both the solution and the database reside on the same VM. You must change the following default port values that the application listens to, in order to avoid port conflicts:

- JBoss web HTTP connector socket value. By default, the 'HttpConnector' value is 8080.
- Listening socket for the naming service. By default, the 'Port' value is 1099.

To set up a port for the Smart+Connected MS application, perform the following steps:

**Step 1** Open the following file:

*$JBOSS_HOME*/server/solutions/conf/bindingservice.beans/META-INF/bindings-jboss-beans.xml

**Step 2** Search for the port number 8080 that has the ‘bindingName’ value as ‘HttpConnector’ and replace with a port number that is not in use, for example 7159.

After changing the value, the text is displayed as follows:

```
<bean class="org.jboss.services.binding.ServiceBindingMetadata">
  <property name="serviceName">jboss.web:service=WebServer</property>
  <property name="bindingName">HttpConnector</property>
  <property name="port">7159</property>
  <property name="description">JBoss Web HTTP connector socket; also drives the values
for the HTTPS and AJP sockets</property>
</bean>
```

**Step 3** Search for the port number 1099 that has the 'bindingName' value as 'Port' and replace with a port number 1199.

After changing the value, the text is displayed as follows:

```
<bean class="org.jboss.services.binding.ServiceBindingMetadata">
  <property name="serviceName">jboss:service=Naming</property>
  <property name="bindingName">Port</property>
  <property name="port">1199</property>
  <property name="description">The listening socket for the Naming service</property>
</bean>
```

**Note** While changing the default port values, ensure that you do not change any other port number apart from the 'HttpConnector' and 'Port' values for the property name 'bindingName'.

**Step 4** Save the file.

# Setting Up Security Configuration

You need to set up the security configuration in the Smart+Connected MS application for the following:

- JBoss 6 uses the HornetQ JMS engine for enterprise grade messaging. For the application to avail the Jboss messaging feature, making changes to the queue configuration file is not enough. To avoid possible authentication related errors, you would need to disable JMS security in both the Smart+Connected MS application and the SDP server.

- To authenticate the LDAP users of the Smart+Connected MS & DS application.

To set up security configuration, perform the following steps:

**Step 1** To disable the JMS message security for the SDP server:

**a.** In a file browser, navigate to the *$JBOSS_HOME*/server/<*SDP_PROFILE_DIR*>/deploy/hornetq folder, and open the hornetq-configuration.xml file.

Where, <*SDP_PROFILE_DIR*> is the SDP JBoss profile directory

**b.** In the hornetq-configuration.xml file, add the following after the </security-settings> end tag to disable the JMS message security:

```
<security-enabled>false</security-enabled>
```

**Note** The value of the JMS message security is set to 'true' by default.

**c.** Save the file.

The JMS message security is now set to false.

**Step 2** To disable the JMS message security for the Smart+Connected MS & DS application:

**a.** In the *$JBOSS_HOME*/server/solutions/deploy/hornetq/hornetq-configuration.xml file, add the tag `<security-enabled>false</security-enabled>` after the `</security-settings>` end tag.

**b.** Save the file.

The JMS message security is now set to false.

**Step 3** To enable the LDAP authentication for the application users:

**a.** In the *$JBOSS_HOME*/server/solutions/conf/login-config.xml file, search for the following text:

```
<application-policy name="JBossWS">
 <authentication>
   <login-module code="org.jboss.security.auth.spi.UsersRolesLoginModule"
     flag="required">
     <module-option
name="usersProperties">props/jbossws-users.properties</module-option>
     <module-option
name="rolesProperties">props/jbossws-roles.properties</module-option>
     <module-option name="unauthenticatedIdentity">anonymous</module-option>
   </login-module>
 </authentication>
</application-policy>
```

**b.** Add the following text after the preceding text:

```
<application-policy name="SDP">
<authentication>
  <login-module code="com.cisco.sdp.core.security.authn.module.ProxyLoginModule"
    flag="sufficient">
    <module-option
name="loginModuleClass">com.cisco.sdp.core.security.authn.module.SDPDataSourceLoginMod
ule</module-option>
    <module-option name="jndiName">java:jdbc/scc</module-option>
    <module-option name="debug">true</module-option>
  </login-module>
  <login-module code="com.cisco.sdp.core.security.authn.module.ProxyLoginModule"
    flag="sufficient">
    <module-option
name="loginModuleClass">com.cisco.sdp.core.security.authn.module.ldap.SDPLdapLoginModu
le</module-option>
    <module-option name="jndiName">java:jdbc/scc</module-option>
```

```
    <module-option
name="initialContextFactory">com.sun.jndi.ldap.LdapCtxFactory</module-option>
            <module-option
name="connectionURL">ldap://ldap.example.com:389</module-option>
            <module-option
name="connectionUsername">uid=name1,ou=people,ou=com</module-option>
            <module-option name="connectionPassword">password123</module-option>
            <module-option name="authentication">simple</module-option>
            <module-option
name="userBase">ou=active,ou=employees,ou=people,o=example.com</module-option>
            <module-option
name="userSearchMatching">sAMAccountName={0}</module-option>
            <module-option name="userSearchSubtree">true</module-option>
            <module-option name="debug">true</module-option>
</authentication>
</application-policy>

<application-policy name="SDP-REPORTING">
 <authentication>
   <login-module code="com.cisco.sdp.core.security.authn.module.ProxyLoginModule"
     flag="sufficient">
     <module-option
name="loginModuleClass">com.cisco.sdp.core.security.authn.module.SDPDataSourceLoginMod
ule</module-option>
     <module-option name="jndiName">java:jdbc/scc</module-option>
     <module-option name="debug">true</module-option>
   </login-module>
   <login-module code="com.cisco.sdp.core.security.authn.module.ProxyLoginModule"
     flag="sufficient">
     <module-option
name="loginModuleClass">com.cisco.sdp.core.security.authn.module.ldap.SDPLdapLoginModu
le</module-option>
     <module-option name="jndiName">java:jdbc/scc</module-option>
     <module-option
name="initialContextFactory">com.sun.jndi.ldap.LdapCtxFactory</module-option>
             <module-option
name="connectionURL">ldap://ldap.example.com:389</module-option>
             <module-option
name="connectionUsername">uid=name1,ou=people,ou=com</module-option>
             <module-option name="connectionPassword">password1</module-option>
             <module-option name="authentication">simple</module-option>
             <module-option
name="userBase">ou=active,ou=employees,ou=people,o=example.com</module-option>
             <module-option
name="userSearchMatching">sAMAccountName={0}</module-option>
             <module-option name="userSearchSubtree">true</module-option>
             <module-option name="debug">true</module-option>
   </login-module>
   <login-module code="org.jboss.security.ClientLoginModule" flag="required"
></login-module>
 </authentication>
</application-policy>
```

c. Replace the following LDAP server and LDAP user details with their actual values in the text that you added in Step 3 b.:

- connectionURL
- connectionUsername
- connectionPassword
- authentication
- userBase

- userSearchMatching
- userSearchSubtree

**Note** If LDAP does not require authentication or uses anonymous bind, the connectionUsername and connectionPassword values can be left blank.

**d.** Save the file.

The LDAP configuration is complete.

The JMS message security is now set to false.

# Setting Up Java Messaging Service (JMS)

The Smart+Connected MS application uses Java Messaging Service (JMS) for asynchronous tasks. You need to set up JMS.


- Creating a Connection Factory, page 2-12
- Creating an Event Topic, page 2-14
- Configuring an Event Topic, page 2-14
- Creating Queues, page 2-15


## Creating a Connection Factory

You need to create a connection factory in the SDP and Smart+Connected MS application.


- Creating a Connection Factory in the SDP, page 2-12
- Creating a Connection Factory in the Smart+Connected MS, page 2-13


### Creating a Connection Factory in the SDP

You need to create a connection factory in the SDP for the Smart+Connected MS application to work properly.

To create a connection factory in the SDP, perform the following steps:

**Step 1** Navigate to the *$JBOSS_HOME*/server/<*SDP_PROFILE_DIR*>/deploy/hornetq directory, and open the hornetq-jms.xml file.

Where, <*SDP_PROFILE_DIR*> is the SDP JBoss profile directory.

**Step 2** In the hornetq-jms.xml file, search for the following text:

```
<connection-factory name="NettyConnectionFactory">
      <connectors>
         <connector-ref connector-name="netty"/>
      </connectors>
      <entries>
         <entry name="/ConnectionFactory"/>
         <entry name="/XAConnectionFactory"/>
      </entries>
   </connection-factory>
```

**Step 3** Replace '/ConnectionFactory' with '/SDPXAConnectionFactory' as follows:

```
<entries>
    <entry name="/SDPXAConnectionFactory"/>
    <entry name="/XAConnectionFactory"/>
</entries>
```

**Step 4** Save the file.

The connection factory is created in the SDP.

## Creating a Connection Factory in the Smart+Connected MS

To create a connection factory in the Smart+Connected MS, perform the following steps:

**Step 1** Navigate to the *$JBOSS_HOME*/server/solutions/deploy/hornetq folder, and open the hornetq-jms.xml file.

**Step 2** In the hornetq-jms.xml file, search for the following text:

```
<connection-factory name="NettyConnectionFactory">
      <connectors>
         <connector-ref connector-name="netty"/>
      </connectors>
      <entries>
         <entry name="/ConnectionFactory"/>
         <entry name="/XAConnectionFactory"/>
      </entries>
   </connection-factory>
```

**Step 3** Replace '/ConnectionFactory' with 'SDPXAConnectionFactory' as follows:

```
<entries>
    <entry name="/SDPXAConnectionFactory"/>
    <entry name="/XAConnectionFactory"/>
</entries>
```

**Step 4** In the hornetq-jms.xml file, search for the following text:

```
<connection-factory name="InVMConnectionFactory">
  <connectors>
     <connector-ref connector-name="in-vm"/>
  </connectors>
  <entries>
     <entry name="java:/ConnectionFactory"/>
     <entry name="java:/XAConnectionFactory"/>
  </entries>
</connection-factory>
```

**Step 5** Replace '/ConnectionFactory' with 'SDPXAConnectionFactory' as follows:

```
<entries>
    <entry name="java:/SDPXAConnectionFactory"/>
    <entry name="java:/XAConnectionFactory"/>
</entries>
```

**Step 6** Add the below text before the <queue name="DLQ"> tag:

```
<connection-factory name="sspConnectionFactory">
      <connectors>
         <connector-ref connector-name="in-vm"/>
      </connectors>
```

```
        <entries>
           <entry name="/sspConnectionFactory"/>
           <entry name="/XAConnectionFactory"/>
        </entries>
     </connection-factory>

    <connection-factory name="dataCollectionConnectionFactory">
        <connectors>
           <connector-ref connector-name="in-vm"/>
        </connectors>
        <entries>
           <entry name="/dataCollectionConnectionFactory"/>
           <entry name="/XAConnectionFactory"/>
        </entries>
     </connection-factory>
```

The connection factory for the Smart+Connected MS is created.

**Step 7** Save the file.

## Creating an Event Topic

You need to create an event topic in the SDP server.

To create an event topic, perform the following steps in the SDP server:

**Step 1** Navigate to the *$JBOSS_HOME*/server/*<SDP_PROFILE_DIR>*/deploy/hornetq folder, and open the hornetq-jms.xml file.

Where, *<SDP_PROFILE_DIR>* is the SDP JBoss profile directory.

**Step 2** In the hornetq-jms.xml file, search for the following text:

```
<queue name="ExpiryQueue">
     <entry name="/queue/ExpiryQueue"/>
  </queue>
```

**Step 3** At the end of the preceding text, add an entry for "/jms/sdp.event.Topic" as follows:

```
<topic name="sdp.event.Topic">
<entry name="/jms/sdp.event.Topic"/>
</topic>
```

**Step 4** Save the file.

An event topic is created in the SDP server.

## Configuring an Event Topic

After creating an event topic in the SDP, perform the following steps to configure events in the SDP server:

**Step 1** In a file browser, navigate to *$JBOSS_HOME*/bin, and open the run.sh file for the SDP profile.

**Step 2** In the run.sh file, search for the following text:

```
JAVA_OPTS="${JAVA_OPTS:--Dprogram.name=$PROGNAME}
-DANTLR_USE_DIRECT_CLASS_LOADING=true -Dshared.dir=$JBOSS_HOME/shared
-Dcom.sun.xml.bind.v2.bytecode.ClassTailor.noOptimize=true
-Dsdp.af.cache.root=$JBOSS_HOME/server/default/tmp"
```

**Step 3** Add the following command line to the text that you have searched for:

```
"-Dsdp.event.config.mode=global"
```

After adding the command line, the text is displayed as follows:

```
JAVA_OPTS="${JAVA_OPTS:--Dprogram.name=$PROGNAME}
-DANTLR_USE_DIRECT_CLASS_LOADING=true -Dshared.dir=$JBOSS_HOME/shared
-Dcom.sun.xml.bind.v2.bytecode.ClassTailor.noOptimize=true
-Dsdp.af.cache.root=$JBOSS_HOME/server/default/tmp -Dsdp.event.config.mode=global"
```

**Step 4** Save the file.

## Creating Queues

You need to create queues in the Smart+Connected MS application server.

To create queues, perform the following steps in the Smart+Connected MS application server:

**Step 1** Navigate to the *$JBOSS_HOME*/server/solutions/deploy/hornetq folder, and open the hornetq-jms.xml file.

**Step 2** In the hornetq-jms.xml file, search for the following text:

```
<queue name="ExpiryQueue">
     <entry name="/queue/ExpiryQueue"/>
  </queue>
```

**Step 3** After the preceding text, add the following text:

```
<queue name="insertUsageQueue">
  <entry name="/jms/insertUsageQueue"/>
</queue>

<queue name="callbackExchangeQueue">
  <entry name="/jms/callbackExchangeQueue"/>
</queue>

<queue name="emailCaseManagementQueue">
  <entry name="/jms/emailCaseManagementQueue"/>
</queue>

<queue name="dataCollectionQueue">
  <entry name="/jms/dataCollectionQueue"/>
</queue>

<queue name="emailPoisonQueue">
  <entry name="/jms/emailPoisonQueue"/>
</queue>
```

**Step 4** Save the file.

The JMS queues for the Smart+Connected MS application are created.

# Setting Up Library

JBoss requires the Oracle library for connecting to the Oracle database. To set up the library, copy the following jar files to the *$JBOSS_HOME*/server/solutions/lib folder:

- ojdbc14.jar—Available at the <*MS_INSTALL_DIRECTORY*>/pkg-jars location on the server where the Smart+Connected MS has been installed.
- sdp-authmodules.jar—Available at the <*SDP_INSTALL_DIRECTORY*>/sdp/bin/jars location on the server where the SDP has been installed.
- datacollection.jar—Available at the <*MS_INSTALL_DIRECTORY*>/pkg-jars location on the server where the Smart+Connected MS has been installed.

**Note** For cluster deployment, copy the jar files to the *$JBOSS_HOME*/server/all/lib folder on the Node 1 and Node 2 servers.

# Setting Up Quartz

The Smart+Connected MS application uses Quartz the enterprise scheduler. To set up Quartz, remove the quartz-ra.rar under the *$JBOSS_HOME*/server/solutions/deploy folder to make the use of Quartz from the ear.

**Note** For cluster deployment, the folder path is *$JBOSS_HOME*/server/all/deploy.

# Configuring Logging

For the application to log the information and error messages to the correct log files, you need to configure the logging.properties file. To configure logging in the JBoss server, perform the following steps:

**Step 1** Create the 'SCMS_Log' folder in the <*MS_INSTALL_DIRECTORY*>, and provide the read and write permissions to the users who run the JBoss profile for the Smart+Connected MS application.

**Step 2** Navigate to the $JBOSS_HOME/server/solutions/deploy directory, and open the ‘jboss-logging.xml’ file in a text editor.

**Step 3** Below the existing ‘periodic-rotating-file-handler’ tag, add the following text:

```
<periodic-rotating-file-handler
       file-name="<MS_INSTALL_DIRECTORY>/SCMS_Log/MS_Server.log"
       name="SDPFILEHANDLER"
       autoflush="true"
       append="true"
       suffix=".yyyy-MM-dd">
    <error-manager>
       <only-once/>
    </error-manager>
    <formatter>
       <pattern-formatter pattern="%d %-5p [%c] (%t) %s%E%n"/>
    </formatter>
</periodic-rotating-file-handler>
```

For example:

```
<periodic-rotating-file-handler
         file-name="/home/scc-qa/solutions/SCMS_Log/MS_Server.log"
         name="SDPFILEHANDLER"
         autoflush="true"
         append="true"
         suffix=".yyyy-MM-dd">
      <error-manager>
         <only-once/>
      </error-manager>
      <formatter>
         <pattern-formatter pattern="%d %-5p [%c] (%t) %s%E%n"/>
      </formatter>
  </periodic-rotating-file-handler>
```

The logs are created after the application is up and running at the location that you had specified in the 'file-name' attribute.

**Step 4** Search for the following text:

```
<root-logger>
   <!-- Set the root logger priority via a system property, with a default value. -->
   <level name="${jboss.server.log.threshold:INFO}"/>
   <handlers>
      <handler-ref name="CONSOLE"/>
      <handler-ref name="FILE"/>
   </handlers>
</root-logger>
```

Replace the text as follows:

```
<root-logger>
   <!-- Set the root logger priority via a system property, with a default value. -->
   <level name="${jboss.server.log.threshold:INFO}"/>
   <handlers>
      <handler-ref name="CONSOLE"/>
      <handler-ref name="FILE"/>
      <handler-ref name="SDPFILEHANDLER"/>
   </handlers>
</root-logger>
```

**Step 5** Save the ‘jboss-logging.xml’ file.

Logging is configured for the Smart+Connected MS application.

# Configuring the Properties Files



## Updating the Properties Files

To update the application.properties, dc.properties, LDAP.properties, logging.properties, ehcacheconfig, and cleWebexAdapterConfig-MC.properties files, perform the following steps:

**Step 1** Copy the properties files from <*MS_INSTALL_DIRECTORY*> to a local directory.

**a.** Create a folder with a name 'ms_config' under the directory in which the Smart+Connected MS application is set up, and assign the read and write permissions.

**b.** Open a terminal and navigate to <*MS_INSTALL_DIRECTORY*>/pkg-properties, where <*MS_INSTALL_DIRECTORY*> is the location at which the Smart+Connected MS application is installed.

**c.** Copy the application.properties.sample file to the <*MS_INSTALL_DIRECTORY*>/ms_config directory with the target file name as application.properties.

For example: cp application.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/application.properties

**d.** Copy the directory datacollection to the <*MS_INSTALL_DIRECTORY*>/ms_config location.

For example: cp -r datacollection <*MS_INSTALL_DIRECTORY*>/ms_config

**e.** Copy the LDAP.properties.sample file to the <*MS_INSTALL_DIRECTORY*>/ms_config location with the target file name as LDAP.properties.

For example: cp LDAP.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/LDAP.properties

**f.** Copy the logging.properties.sample file to the location <*MS_INSTALL_DIRECTORY*>/ms_config with the target file name as logging.properties.

For example: cp logging.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/logging.properties

**g.** Copy the ehcacheconfig.xml file to the <*MS_INSTALL_DIRECTORY*>/ms_config location.

For example: cp ehcacheconfig.xml<*MS_INSTALL_DIRECTORY*>/ms_config

**h.** Copy the cleWebexAdapterConfig-MC.properties.sample file to the location <*MS_INSTALL_DIRECTORY*>/ms_config with the target file name as cleWebexAdapterConfig-MC.properties.

For example: cp cleWebexAdapterConfig-MC.properties.sample<*MS_INSTALL_DIRECTORY*>/ms_config/

cleWebexAdapterConfig-MC.properties

**Note** You do not need to modify the properties in the timezone.properties and quartz files. You can use the default values provided for the properties in these files.

**Step 2** Update the application.properties file:

**a.** Modify the properties as follows:

| | |
|---|---|
| energysavings_batch_limit | Size of groups in which the total conference rooms will be divided for the energy savings to be performed in batches. You can change the default value as per your requirement. |
| minutes | Time slots displayed on IP phones for booking meetings. The minimum limit is 30. |

| | |
|---|---|
| IB_JMSPROVIDER_URL | jnp://<*MS Appserver IP Address or hostname*>:<*MS Appserver port number*><br>For example, IB_JMSPROVIDER_URL=jnp://10.65.111.54:1199 |
| IB_userName | MS JBoss profile admin userid.<br>For example, IB_userName=admin |
| IB_password | MS JBoss profile admin password.<br>For example, IB_password=admin |
| SDP_JMSPROVIDER_URL | jnp://<*SDP APP server IP Address or hostname*>:<*SDP Appserver port number*><br>For example, SDP_JMSPROVIDER_URL=jnp://10.65.111.54:1099 |
| SDP_userName | SDP JBoss profile admin user ID.<br>For example, SDP_userName=admin |
| SDP_password | SDP JBoss profile admin password.<br>For example, SDP_password=admin |
| emission_factor | Carbon emission factor per 1 kWh<br>For example, 0.00068956d |
| carbon_unit | Unit for measuring the carbon emission. |
| flighthr_Co2E | Number of flight hours saved and the reduction in carbon emission due to TelePresence usage. |
| pageSize | Number of saved drafts displayed per view in the Smart+Connected MS user portal. |
| working_hours | Number of working hours for a day in the enterprise. |
| REMINDERS:<br>• showReminder1<br>• showReminder2<br>• showReminder3<br>• showReminder4 | Number of minutes before the meeting when reminders will be send to all the invitees. |
| skin_name | Name of the skin folder for the MS user portal.<br>For example, skin_name=red |
| maps_theme | Color of the theme that appears for the kiosk interface. The default color is grey. You can change it to blue. |

| | |
|---|---|
| ms_serviceurl | http://*<MS Appserver IP Address or hostname>:<MS Appserver port number>/services/webcalendarservices/confDetails*<br>For example, http://10.104.18.196:7010/services/webcalendarservices/confDetails |
| ps_serviceurl | http://*<PS Appserver IP Address or hostname>:<PS Appserver port number>/ipsapp*<br>For example, http://10.104.18.196:8000/ipsapp |
| availablesoon | Time in minutes to change the status of the workspaces and rooms to available soon.<br>For example, 25<br>**Note** The default availablesoon time is 60 minutes. You can change it as per your requirement. The status color changes to yellow for the soon-to-be-available conference/TP rooms and worskpaces for this duration. |
| cronTriggerExpression | Time at which the LDAP user details will be synchronized with the Smart+Connected MS application.<br>For example, 0 04 13 * * ?<br>**Note** The default cronTriggerExpression time is 12 am. You can change it as per your requirement. |
| user_preference_required | Show/hide the 'Do not publish my location' check box in the kiosk web portal.<br>For example, ‘yes’ if you want to display the check box. |

**b.** Save and close the file.

**Step 3** Update the dc.properties file:

**a.** Modify the properties as follows:

| | |
|---|---|
| datacollection.useTridiumWatch | To use Tridium as a watch, set the value as True. If the value is false, Tridium will be history based. |
| datacollection.scheduler.interval | Interval in minutes for history based data collection. |
| datacollection.batch.size | Number of data collection points from which data is gathered at a time. |
| datacollection.unitxml.path | *<MS_INSTALL_DIRECTORY>*/ms_config/datacollection/unit.xml<br>For example, datacollection.unitxml.path=/home/scc-qa/ms_config/datacollection/unit.xml |

| | |
|---|---|
| datacollection.jms.jndi | JNDI for the data collection JMS. |
| datacollection.jms.connectionfactory | Connection factory for the data collection JMS. |
| datacollection.jms.initialContext | Class name for the JMS initial context. |
| datacollection.jms.providerUrl | jnp**://<***MS Appserver IP Address or hostname>:<MS Appserver port number>*<br>For example, datacollection.jms.providerUrl=jnp://10.65.111.54:1199 |
| datacollection.jms.securityPrincipal | MS JBoss admin console user name.<br>For example, datacollection.jms.securityPrincipal=admin |
| datacollection.jms.securityCredentials | MS JBoss admin console password.<br>For example, datacollection.jms.securityCredentials=admin |
| datacollection.data.precision | Data precision for the data collected by the BMS. For example, 0.00 |

**b.** Save and close the file.

**Step 4** Update the LDAP.properties file:

**a.** Modify the properties as follows:

***Table 2-3 LDAP Properties***

| Property Name | Description |
|---|---|
| ldap.host.name (Mandatory) | The hostname of the LDAP server. |
| ldap.host.port (Mandatory) | The port number of the LDAP server. |
| ldap.users.DN (Mandatory | The base DN to be used for doing a LDAP search. |
| ldap.user.id (Mandatory | The attribute to identify a user. |
| ldap.user.fullname | The attribute to identify the full name of the user. |
| ldap.user.firstname | The attribute to identify the first name of the user. |
| ldap.user.firstname.defaultvalue | The default value to be used if the attribute for first name is invalid. |
| ldap.user.lastname | The attribute to identify the last name of the user. |
| ldap.user.lastname.defaultvalue | The default value to be used if the attribute for the last name is invalid. |
| ldap.user.title | The attribute to identify the title of the user. |
| ldap.user.email | The attribute to identify the e-mail ID of the user. |
| ldap.user.mobile | The attribute to identify the mobile number of the user. |
| ldap.user.telephonenumber | The attribute to identify the telephone number of the user. |

*Table 2-3 LDAP Properties (Continued)*

| Property Name | Description |
|---|---|
| ldap.user.email.defaultValue | The default value to be used if the attribute for the e-mail ID is invalid. |
| ldap.user.companyname | The attribute to identify the name of the company in which the user is employed. |
| ldap.bind.pwd (Mandatory | The bind password in case of a non-anonymous bind. |
| ldap.bind.username (Mandatory | The bind username in case of a non-anonymous bind. |
| ldap.user.companyname.defaultValue | The default value to be used if the attribute for the company name is invalid. |
| ldap.ssl.enabled | This attribute indicates if a connection is to be made over SSL (such as, ldap) or not. The value should be set to true, in case access is over SSL. |
| ldap.common.name | The attribute to identify the common name of the user (first name+last name). |
| ldap.user.number | The attribute to identify the employee number of the user. |
| ldap.user.empid | The attribute to identify the employee ID of the user. |
| ldap.user.designation | The attribute to identify the designation of the user. |
| ldap.user.businessUnit | The attribute to identify the business unit which the user is a part of. |
| ldap.user.photo | The attribute to identify the user's photo that is uploaded in the active directory. The photo has to be of the size 350*420 pixel. |
| ldap.user.employeeid | The attribute to identify the employee ID of the user. |
| ldap.user.nickname | The attribute to identify the nickname of the user, if any. |
| ldap.user.departmentno | The attribute to identify the department of the enterprise with which the user is associated. |
| ldap.user.departmentname | The attribute to identify the name of the department with which the user is associated. |
| ldap.user.managerempno | The attribute to identify the employee ID of the user's manager. |
| ldap.user.managername | The attribute to identify the name of the user's manager. |
| ldap.user.employeetype | The attribute to identify whether the nature of the user's employment is permanent or contractual. |
| ldap.user.worktype | The attribute to identify whether the worker has been assigned a location or is a mobile worker. |

*Table 2-3 LDAP Properties (Continued)*

| Property Name | Description |
|---|---|
| ldap.user.publishmobile | This attribute indicates if the user's mobile number is to be displayed or not. The value should be set to yes, if the user's mobile number is to be displayed. |
| ldap.user.publishpager | This attribute indicates if the user's pager number is to be displayed or not. The value should be set to yes, if the user's pager number is to be displayed. |
| ldap.user.functional_unit | The attribute to identify the functional unit of the enterprise with which the user is associated. |
| ldap.user.building | The attribute to identify the building where the user is seated, if a location is assigned to the user. |
| ldap.user.contractcompany | The attribute to identify the name of the vendor company, if the user is a contract employee. |
| ldap.user.initial | The attribute to identify the initials of the user. |
| ldap.user.floor | The attribute to identify the floor where the user is seated, if a location is assigned to the user. |
| ldap.user.mailstop | The attribute to identify the central location where the mails are sent. |
| ldap.user.checkedInStatus | The attribute to identify the check-in status of the user. |
| ldap.user.publishloc | This attribute indicates if the user's location is to be displayed or not. The value should be set to yes, if the user's location is to be displayed. |
| ldap.user.pager | The attribute to identify the user's pager number. |
| ldap.user.spaceid | The attribute to identify the workspace where the user is seated, if a location is assigned to the user. |
| ldap.user.spacepolicy | This attribute is for future enhancements in the solution. You can leave this value blank. |
| ldap.user.checkedInLocation | The attribute to identify the location where the user has checked in. |
| ldap.user.vpdesc | The attribute to identify the vice president of the enterprise where the user is employed. |
| ldap.user.snr_vpdesc | The attribute to identify the senior vice president of the enterprise where the user is employed. |
| ldap.user.managermail | The attribute to identify the e-mail ID of the user's manager. |
| ldapUrl (Mandatory | The LDAP URL to access the active directory. |
| ldapBase | The base DN to be used for doing a LDAP search. |
| ldapUserName (Mandatory) | The bind username in case of a non-anonymous bind. |

*Table 2-3 LDAP Properties (Continued)*

| Property Name | Description |
|---|---|
| ldapMaxReturnSize (Mandatory) | The maximum number of users whose details will be fetched in one batch from the LDAP. |
| ldap.user.isroom (Mandatory) | The attribute to identify if the resource is a user or a room. |

**Note** You can modify only the mandatory properties listed in Table 2-3. Modify the non-mandatory properties if required.

b. Save and close the file.

**Step 5** Modify the logging.properties file to update the directory in which the Smart+Connected MS log file needs to be generated:

a. Create the 'ms_log' folder under <*MS_INSTALL_DIRECTORY*> directory, and provide the read and write access.

b. Search for the line starting with `java.util.logging.FileHander.pattern` and replace it as follows:

```
java.util.logging.FileHandler.pattern=<MS_INSTALL_DIRECTORY>/ms_log/MS-%u.log
```

**Note** By default, the logging level is set to SEVERE for the modules and can be customized as per your requirements.

c. Save and close the file.

**Step 6** Modify the ehcacheconfig.xml file to identify the cache configurations:

a. Search for the following text:

```
<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=manual,
rmiUrls=//<MS server IP address or hostname>:<Any free port that is above 1024. For
example, 4001>/sampleCache11|=//<MS server IP address or hostname>:4001/sampleCache12">
```

b. Replace with:

```
<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=manual,
rmiUrls=//<MS managed server IP address or hostname>:4001/ipphone.cache|//<MS managed
server IP address or hostname>:4001/subscription.cache|//<MS managed server IP address or
hostname>:4001/locationproperty.cache|//<MS managed server IP address or
hostname>:4001/timezone.cache|//<MS managed server IP address or
hostname>:4001/equipment.cache|//<MS managed server IP address or
hostname>:4001/iec.cache"/>
```

**Step 7** Update the cleWebexAdapterConfig-MC.properties file:

**a.** Modify the mandatory properties as follows:

| | |
|---|---|
| WEBEX_SITE_ID | For example, 98765432 |
| WEBEX_SITE_NAME | For example, abcorp |
| WEBEX_PARTNER_ID | For example, 123ci |
| WEBEX_XML_SERVER_URL | For example, https://abcorp/WBXService/XMLService |
| WEBEX_USER | For example, WEBEX_USER=genuser |
| WEBEX_PASSWORD | For example, WEBEX_PASSWORD=Hilly!23 |
| WEBEX_TIMEZONE | For example, EST |

**b.** You can retain the default values for the following properties:

- WEBEX_ADMIN_USER
- WEBEX_ADMIN_PASSWORD
- TEMPLATE_PATH
- AUTH_TEMPLATE_NAME
- CREATE_USER_TEMPLATE_NAME
- UPDATE_USER_TEMPLATE_NAME
- RESET_PASSWORD_TEMPLATE_NAME
- DELETE_USER_TEMPLATE_NAME
- USER_MAPPING_TEMPLATE_NAME
- GET_USER_TEMPLATE_NAME
- CREATE_CONF_TEMPLATE_NAME
- UPDATE_CONF_TEMPLATE_NAME
- GET_CONF_SESSION_KEYS_TEMPLATE_NAME
- GET_CONF_TEMPLATE_NAME
- DELETE_CONF_TEMPLATE_NAME
- CONF_MAPPING_TEMPLATE_NAME
- GET_HOST_URL_TEMPLATE_NAME
- GET_JOIN_URL_TEMPLATE_NAME
- GET_RECORDING_URL_TEMPLATE_NAME
- GET_RECORDING_URL_SESSION_TEMPLATE_NAME
- DELETE_RECORDING_TEMPLATE_NAME
- CREATE_CONF_ATTENDEE_TEMPLATE_NAME
- SERVREASON
- SERVRESULT

- TICKET
- SUCCESS
- WEBEXID_ALREADY_EXISTS
- SESSIONKEY
- HOSTURL
- JOINURL
- CONFID
- OWNER
- SUBJECT
- CONFSTARTTIME
- CONFSTARTTIMEZONE
- DURATION
- PRESENTERS
- ATTENDEES
- PARTICIPANT_ID
- PARTICIPANT_EMAIL
- OCCURENCES
- BODY
- ROLE
- DAYINWEEK
- DAY_IN_MONTH
- MONTH_IN_YEAR
- WEEK_IN_MONTH
- DAY
- EPSESSION
- EPSESSIONKEY
- SERVTOTAL
- SERVRETURNED
- STREAM_URL
- CONF_STATUS
- USER_FIRSTNAME
- USER_LASTNAME
- USER_WEBEXID
- USER_EMAIL
- USER_REG_DATE
- USER_TYPE
- USER_PASSWORD
- USER_ACCOUNT_ID

- RECORDING_ID
- RECORDING_NAME
- RECORDING_CREATE_TIME
- RECORDING_STREAM_URL
- RECORDING_DOWNLOAD_URL
- RECORDING_CONFERENCE_ID
- RECORDING_TIMEZONE_ID
- RECORDING_HOST_ID
- RECORDING_DURATION

**c.** Save and close the file.

## Setting up Webex

To configure the WebEx setup for the Smart+Connected MS user portal, perform the following steps:

**Step 1** Navigate to the WebEx properties file in the Smart_Connected_Meeting_Spaces_and_Digital_Signage.ear using the following path:

*<MS_INSTALL_DIRECTORY>*/pkg-apps/calendar.war/WEB-INF/classes/cleWebexAdapterConfig-MC.properties

**Step 2** Replace the cleWebexAdapterConfig-MC.properties file in the ear with the cleWebexAdapterConfig-MC.properties file you updated in the "Updating the Properties Files" section on page 2-17.

## Setting up Data Collection

To collect data from a Building Management System (BMS), you need to provide information on the data points and the corresponding metadata in the SSP_DEVICE_PROPERTY_METADATA table. The device components are controlled by metadata and the metadata units defined in SSP_DEVICE_PROPERTY_METADATA table.

Every device added in the SDP has a set of properties. Each property has a unique property id. If you need historic trending for these properties, you must configure the metadata for the properties in the SSP_DEVICE_PROPERTY_METADATA table.

***Table 2-4 Metadata Properties***

| Property | Purpose |
|---|---|
| METADATA_ID | Primary key field of the table. |
| PROPERTY_VALUE_ID | Used to derive the id from the SSP_DEVICE_PROPERTY table which is unique across all the devices. It should be added in the SSP_DEVICE_PROPERTY_METADATA table. |

*Table 2-4 Metadata Properties (Continued)*

| Property | Purpose |
|---|---|
| TRENDABLE | If the trendable property is set to one, the data collector collects data for the property at the specified trend frequency. |
| TREND_FREQUENCY | Used to set the rate of data collection. Unit of measurement is minutes. The minimum value that can be provided is one minute. |
| UNIT_CONFIG | Unit of the data stored in the collection table in the database. |
| UNIT_MEASURED | Used to set the value of the unit of the data measured in BMS gateway. For example, water is measured in cubic meters. |
| MONITORABLE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| CUMULATIVE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| SCHEDULABLE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| CONTROLLABLE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| REPORTABLE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| ALARMABLE | Not applicable for the Smart+Connected MS application. Therefore, the value must be set to zero. |
| IS_NUMERIC | For a string property, the value is zero and the data gets collected in SSP_DATA_COLL_VAR table. For a numeric property, the value is one and the data gets collected in SSP_DATA_COLL table. |
| THRESHOLD | The threshold value is set only when it is cumulative and is based on UNIT_CONFIG value. After the threshold value is reached, the energy meter reading is reset. |

# Setting up Run Parameters

To set up run parameters, perform the following steps:

**Step 1** Navigate to *$JBOSS_HOME*/bin, copy the ‘run.sh’ file, and create a file with the name ‘run_solutions.sh’.

**Step 2** Configure the properties (quartz, data collection, application, LDAP, ehcacheconfig, timezone):

**a.** In the run_solutions.sh file, search for the following text:

```
JAVA_OPTS="$JAVA_OPTS -DANTLR_USE_DIRECT_CLASS_LOADING=true
-Dsdp.event.config.mode=global”
```

**b.** Add the following text at the end of the searched text before the (”):

```
-Dorg.quartz.properties=<path of the quartz.properties file>/quartz.properties
-DDataCollectionPropertyFilePath=<path of the dc.properties file>/dc.properties
-Dapplication.properties.filepath=<path of the application.properties
file>/application.properties
```

```
-Dcom.cisco.sdp.ldap.configfilepath=<path of the LDAP.properties file>/LDAP.properties
-Dib.cache.config=<path of the ehcacheconfig.xml file>/ehcacheconfig.xml
-Dtimezone.properties.filepath=<path of the
timezone.propertiesfile>/timezone.properties
```

For example:

```
-Dorg.quartz.properties=/home/scc-qa/ms_config/quartz.properties
-DDataCollectionPropertyFilePath=/home/scc-qa/ms_config/dc.properties
-Dapplication.properties.filepath=/home/scc-qa/ms_config/application.properties
-Dcom.cisco.sdp.ldap.configfilepath=/home/scc-qa/ms_config/LDAP.properties
-Dib.cache.config=/home/scc-qa/ms_config/ehcacheconfig.xml
-Dtimezone.properties.filepath=/home/scc-qa/ms_config/timezone.properties
```

**Step 3** After adding the command line, the text is displayed as follows:

```
set JAVA_OPTS=-Dprogram.name=%PROGNAME% -
DANTLR_USE_DIRECT_CLASS_LOADING=true -
Dorg.quartz.properties=<MS_INSTALL_DIRECTORY>/ms_config/quartz.properties -
DDataCollectionPropertyFilePath=<MS_INSTALL_DIRECTORY>/ms_config/dc.properties -
Dapplication.properties.filepath=<MS_INSTALL_DIRECTORY>/ms_config/application.properti
es -
Dcom.cisco.sdp.ldap.configfilepath=<MS_INSTALL_DIRECTORY>/ms_config/LDAP.properties
Dib.cache.config=<MS_INSTALL_DIRECTORY>/ms_config/ehcacheconfig.xml
Dtimezone.properties.filepath=<MS_INSTALL_DIRECTORY>/ms_config/timezone.properties
-Dsdp.event.config.mode=global -Xms256m -Xmx1024m
-XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true
Dsun.rmi.dgc.client.gcInterval=3600000 -
Dsun.rmi.dgc.server.gcInterval=3600000
%JAVA_OPTS%
```

**Step 4** Save and close the run_solutions.sh file.

# Setting up Apache Jackrabbit

The Apache Jackrabbit server is an open-source content repository for the Java platform, and the Smart+Connected MS & DS application uses the Apache Jackrabbit to store content.

To set up Jackrabbit, perform the following steps:

**Step 1** Copy the jackrabbit-jca-2.2.12.rar file that is available in <*MS_INSTALL_DIRECTORY*>/pkg-jackrabbit to *$JBOSS_HOME*/server/<*server_name*>/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jackrabbit-jca-2.2.12.rar
$JBOSS_HOME/server/<server_name>/deploy
```

**Step 2** Copy the jcr-2.0.jar file that is available in <*MS_INSTALL_DIRECTORY*>/pkg-jackrabbit to *$JBOSS_HOME*/common/lib directory by entering the following command:

```
Cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jcr-2.0.jar $JBOSS_HOME/common/lib
```

**Step 3** Copy the jcr-ds.xml file that is available in <*MS_INSTALL_DIRECTORY*>/pkg-jackrabbit to *$JBOSS_HOME*/server/<*server_name*>/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jcr-ds.xml
$JBOSS_HOME/server/<server_name>/deploy
```

# Importing SSL Certificates

You must import SSL certificates for the Cisco Unified Communications Manager (CUCM). You may require to import SSL certificates for the Cisco Digital Media Player (DMP) and Light Weight Directory Access Protocol (LDAP).

Before you begin importing SSL certificates, ensure that you obtain the certificates from CUCM, DMP, and LDAP, and store the certificates in a directory on the application server.

To import SSL certificates, perform the following steps:

**Step 1** Using a terminal session, navigate to the $*JAVA_HOME*/bin directory, where the $*JAVA_HOME* environment variable is set to the <*JDK_INSTALL_LOCATION*> directory.

**Step 2** Enter the following command:

```
./keytool -import -alias <Alias Name>  -file <certificate file name with complete path>
-keystore $JAVA_HOME/jre/lib/security/cacerts -storepass changeit
```

Where, <*certificate file name with complete path*> is the certificate file name with a complete directory path where you store your certificates. The <*Alias Name*> is the unique alias name provided to the certificate.

For example:

```
./keytool -import -alias CM  -file /home/scc-qa/CM115.cer -keystore
/home/scc-qa/Desktop/jdk1.6.0_24/jre/lib/security/cacerts -storepass changeit
```

**Note** If you have installed JDK using an RPM bundle, then you need the SUDO access to add the certificate to the keystore.

A message prompts you to trust this certificate.

**Step 3** Choose **Yes**, and press **Enter**.

The certificates are imported.

**Step 4** In the *$JBOSS_HOME*/bin/run_solutions.sh file, append the JAVA_OPTS line just before (") with the following line:

```
-Djavax.net.ssl.trustStore=$JAVA_HOME/jre/lib/security/cacerts
-Djavax.net.ssl.trustStorePassword=changeit
```

After adding the command line, the text is displayed as follows:

```
set JAVA_OPTS=-Dprogram.name=%PROGNAME% -
DANTLR_USE_DIRECT_CLASS_LOADING=true -
Dorg.quartz.properties=<MS_INSTALL_DIRECTORY>/ms_config/quartz.properties -
DDataCollectionPropertyFilePath=<MS_INSTALL_DIRECTORY>/ms_config/dc.properties -
Dapplication.properties.filepath=<MS_INSTALL_DIRECTORY>/ms_config/application.properti
es -
Dcom.cisco.sdp.ldap.configfilepath=<MS_INSTALL_DIRECTORY>/ms_config/LDAP.properties
Dib.cache.config=<MS_INSTALL_DIRECTORY>/ms_config/ehcacheconfig.xml
Dtimezone.properties.filepath=<MS_INSTALL_DIRECTORY>/ms_config/timezone.properties
-Dsdp.event.config.mode=global -Xms256m
-Xmx1024 -XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true
-Dsun.rmi.dgc.client.gcInterval=3600000 -
Dsun.rmi.dgc.server.gcInterval=3600000
-Djavax.net.ssl.trustStore=/usr/java/default/jre/lib/security/cacerts
-Djavax.net.ssl.trustStorePassword=changeit”
 %JAVA_OPTS%
```

**Step 5** Save the run_solutions.sh file.

# Starting the JBoss Server

To start the JBoss application server for the Smart+Connected MS application, perform the following steps:

**Step 1** Ensure that:

- SDP is up and running without any binding offset value.
- The *$JAVA_HOME* environment variable is set to the location in which JDK is installed.
- The *$JBOSS_HOME* environment variable is set to the complete path where the unzipped jboss-6.0.0 files are available.

**Step 2** Using a terminal, navigate to the *$JBOSS_HOME*/bin directory, and run the following command:

```
./run_solutions.sh -c solutions -Djboss.service.binding.set=ports-01 -b 0.0.0.0
```

The JBoss application server starts. After the server initialization is complete, an output similar to the following is listed:

```
2012-11-20 11:41:31,360 INFO  [org.apache.coyote.http11.Http11Protocol] (Thread-2)
Starting Coyote HTTP/1.1 on http-0.0.0.0-7259
```

The port value that appears in the output is the value obtained by adding the HttpConnector port value (which you had set up in "Setting Up Port" section on page 2-9) and the "ports-01" offset value in the bindings-jboss-beans.xml file (which is 100 by default).

# Assigning Roles and Locations to the IB User

To access the Smart+Connected MS application, you need to assign roles and locations to the 'IBUser'. 'IBUser' is the default user that is created with the seed data.

You can assign roles and locations by performing the following tasks in the SDP:

- Assigning the InfoBundle Manager role to 'IBUser'.
- Assigning specific locations to the InfoBundle Manager role.

To assign roles and locations to 'IBUser' in the SDP, perform the following steps:

**Step 1** Log in into the SDP application.

For more information on how to log in to the SDP application, see the *Cisco Service Delivery Platform Administrator Guide*.

**Step 2** To assign the InfoBundle Manager role to 'IBUser', do the following:

**a.** Click the **Users & Roles** tab.

The List of Users area displays the 'IBUser'.

**b.** In the User Name column, click 'IBUser', and in the View User page, click **Edit**.

The Edit User page appears.

c. In the Assign Roles and Locations area, click **Assign New Role**.

The Select Roles for the Users dialog box appears. The Available Roles box lists the InfoBundle Manager role.

d. In the Available Roles column, select the InfoBundle Manager role, and click **Add**.

e. Click **Assign and Close**.

The InfoBundle Manager role is assigned to 'IBUser' along with the associated permissions.

f. Click **Save**.

**Step 3** To assign specific locations to the InfoBundle Manager role, do the following:

a. Ensure that the locations that you want to assign to the InfoBundle Manager role is already added in SDP.

b. In the Assigned Locations column of the Assign Roles and Locations area, click **Assign Locations** next to the InfoBundle Manager role.

The Assign Locations dialog box appears with a location hierarchy. The location hierarchy lists the locations for which you have been assigned permissions.

c. In the location hierarchy, select a location that you want to associate to the InfoBundle Manager.

You can use shortcut tools to search and select a location in the location hierarchy.

d. Click **Assign**.

The selected location is assigned to the InfoBundle Manager.

e. Click **Save**.

# Creating and Assigning Webcalendar Roles

To create users and assign Webcalendar User roles, perform the following steps:

**Step 1** Log in into the SDP application.

For more information on how to log in to the SDP application, see the *Cisco Service Delivery Platform User Guide*.

**Step 2** Choose **Users and Roles > Create a User**.

The Create User page appears.

**Step 3** Enter the user details and click **Save**.

For more information on how to create users, see the *Cisco Service Delivery Platform User Guide*.

**Step 4** To assign the Webcalendar User role, do the following:

a. Click the **Users & Roles** tab.

The List of Users area displays all the users.

b. In the User Name column, click the specific user, and in the View User page, click **Edit**.

The Edit User page appears.

c. In the Assign Roles and Locations area, click **Assign New Role**.

The Select Roles for the Users dialog box appears. The Available Roles box lists the Webcalendar User role.

d. In the Available Roles column, select the Webcalendar User role, and click **Add**.

e. Click **Assign and Close**.

The Webcalendar User role is assigned along with the associated permissions.

f. Click **Save**.

# Accessing the Application and Verifying the Installation

To access the Smart+Connected MS application and to verify the installation, perform the following steps:

**Step 1** In a web browser, type the application server URL, http://*<host>*:*<port>*/solutions.

Where *<host>* is the IP address or DNS hostname of the host on which the JBoss application server is set up and *<port>* is the value that appears in the output after starting the JBoss server.

**Note** The 'port' value is obtained by adding the HttpConnector port value (which you had set up in "Setting Up Port" section on page 2-9) and the "ports-01" offset value in the bindings-jboss-beans.xml file (which is 100 by default).

**Step 2** Press **Enter**.

The Smart+Connected MS login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS application, and click **Login**.

Your default login credentials are:

- Username—superadmin
- Password—superadmin

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide.*

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Meeting Spaces User Guide*.

# Accessing the Web Calendar

After performing all the installation tasks, you can access the Smart+Connected MS web calendar.

To access the Smart+Connected MS web calendar, perform the following steps:

**Step 1** In a web browser, type the URL http://*<host>*:*<port>*/calendar/.

Where *<host>* is the IP address or DNS hostname of the host on which the JBoss application server is set up and *<port>* is the value that appears in the output after starting the JBoss server.

**Step 2** Press **Enter**.

The Smart+Connected MS web calendar login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS web calendar, and click **Login**.

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide.*

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Meeting Spaces User Guide*.

## Accessing the Kiosk Web Portal

After performing all the installation tasks, you can access the Smart+Connected MS kiosk web portal.

To access the Smart+Connected MS kiosk web portal, perform the following steps:

**Step 1** In a web browser, type the URL http://<*host*>:<*port*>/spaces/.

Where <*host*> is the IP address or DNS hostname of the host on which the JBoss application server is set up and <*port*> is the value that appears in the output after starting the JBoss server.

**Step 2** Press **Enter**.

The Smart+Connected MS kiosk web portal login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS kiosk web portal, and click **Login**.

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide.*

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Spaces User Guide*.

# Installing on a Cluster Server Setup

To install the Smart+Connected MS application on a cluster server setup, perform the following steps:

1. About Clustering, page 2-35
1. Installing the Application, page 2-36
2. Configuring Audio Notification to the Cisco IP Phone, page 2-36
3. Configuring the Database, page 2-36
4. Configuring the JBoss Profile, page 2-37
5. Setting up Port, page 2-38
6. Setting up Security Configuration, page 2-38
7. Setting up Java Messaging Service (JMS), page 2-38
8. Setting up Library, page 2-38
9. Setting up Quartz, page 2-38

# About Clustering

A JBoss server cluster consists of multiple JBoss server instances running simultaneously and working together to provide increased scalability, reliability, and high availability. A cluster appears to the clients to be a single JBoss server instance. The server instances that constitute a cluster can run on the same machine or are usually located on different machines. You can increase a cluster's capacity by adding additional server instances to the cluster on an existing machine or on different machines. Each server instance in a cluster must run on the same JBoss version.

An example of clustered deployment in a distributed environment is explained below. It has the following constituents:

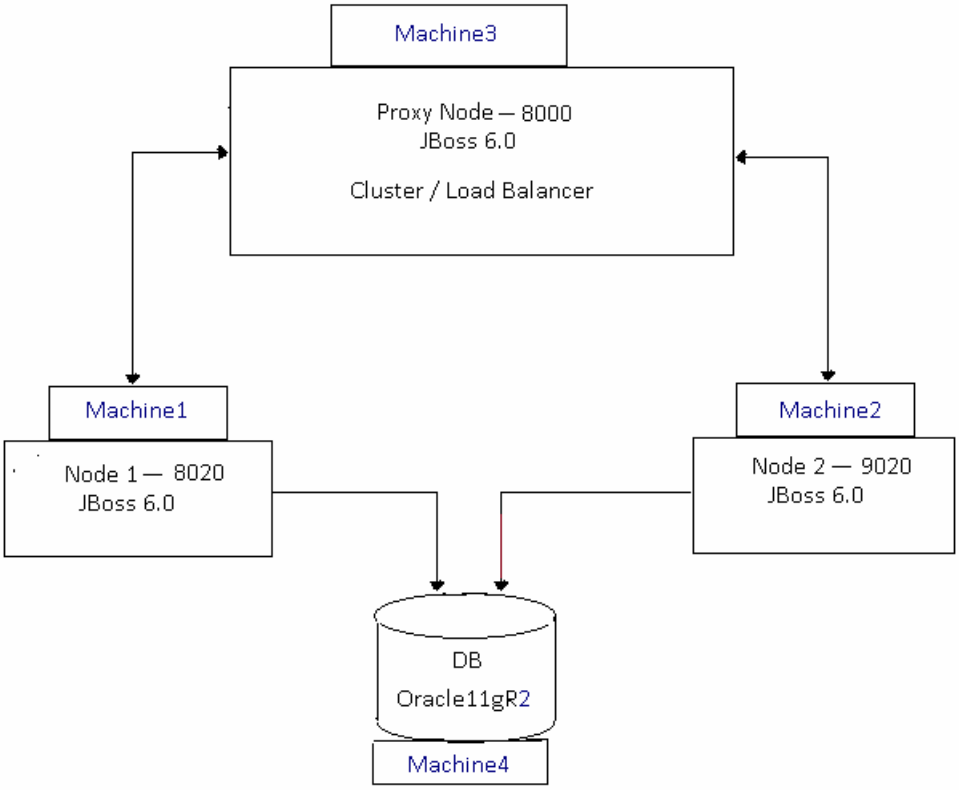
- Database is non-clustered.
- Application servers are clustered.
- Three virtual machines host the application servers.
- One virtual machine hosts the administrative server and a proxy server. This proxy server acts as a software load balancer.
- Application is deployed on two machines—Machine 1 and Machine 2—that has two managed servers.

You can modify this setup based on your requirement, such as the number of managed servers, port numbers, and so on.

An example of cluster setup is as follows:

- Machine 1: JBoss Managed Server 1 (JBoss 6.0)
- Machine 2: JBoss Managed Server 2 (JBoss 6.0)
- Machine 3: JBoss Admin Server and HTTP Proxy Server (JBoss 6.0)
- Machine 4: Database Server (Oracle Database 11gR2)

*Figure 2-1 Example of a Clustering Setup*




# Installing the Application

You need to install the Smart+Connected MS application on the Node 1 and Node 2 servers.

For information on how to install the Smart+Connected MS application, see the "Installing the Application" section on page 2-3.

# Configuring Audio Notification to the Cisco IP Phone

You need to configure audio notification to the Cisco IP phone on the Node 1 and Node 2 servers.

For information on how to configure audio notification to the Cisco IP phone, see the in "Configuring Audio Notification to IP Phone" section on page 3-3 in Chapter 3, "Configuring the Smart+Connected MS Application".

# Configuring the Database

For information on how to configure the database, see the "Configuring the Database" section on page 2-4.

# Configuring the JBoss Profile

You need to configure the JBoss profile on the Node 1 and Node 2 servers for a cluster deployment.

To configure the JBoss profile, perform the following steps on both the Node 1 and Node 2 servers:

**Step 1** Download the jboss-6.0.0.Final.zip file.

JBoss is open-source, and you can download it from the Internet. For example:

http://sourceforge.net/projects/jboss/files/JBoss/JBoss-6.0.0.Final/jboss-as-distribution-6.0.0.Final.zip/download

**Step 2** Create a folder named 'jboss', and unzip the jboss-6.0.0.Final.zip file into it.

**Step 3** Set the $*JBOSS_HOME* and $*JAVA_HOME* environment variables by entering the following commands:

```
$ export JAVA_HOME=<JDK_INSTALL_LOCATION>
$ export JBOSS_HOME=<JBOSS_INSTALL_LOCATION>
```

Where, <*JBOSS_INSTALL_LOCATION*> is the complete path where the unzipped jboss-6.0.0 files are available and <*JDK_INSTALL_LOCATION*> is the complete path where you have installed jdk1.6.0_24.

**Note** You can also add the preceding commands to the user's profile script so that the $*JBOSS_HOME* and $*JAVA_HOME* environment variables are automatically set up during login.

**Step 4** Copy the Smart_Connected_Meeting_Spaces_and_Digital_Signage.ear file, available in <*MS_INSTALL_DIRECTORY*>pkg-apps, to the $*JBOSS_HOME*/server/all/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-apps/
Smart_Connected_Meeting_Spaces_and_Digital_Signage.ear $JBOSS_HOME/server/all/deploy
```

**Step 5** Create a datasource file so that the Smart+Connected MS application communicates with the database machine:

**a.** Create the oracle-ds.xml file under the 'all/deploy' folder with the following text:

```
<?xml version="1.0" encoding="UTF-8"?>
<datasources>
<local-tx-datasource>
<jndi-name>jdbc/scc</jndi-name>
<connection-url>jdbc:oracle:thin@IPaddress:1521/schemaName</connection-url>
<driver-class>oracle.jdbc.OracleDriver</driver-class>
<user-name>DBusername</user-name>
<password>DBpassword</password>
<min-pool-size>10</min-pool-size>
<max-pool-size>50</max-pool-size>
</local-tx-datasource>
</datasources>
```

**b.** Replace the following text with their actual values in the text that you had added in Step 5 a.:

- 'IPaddress' with the database server IP address or DNS hostname
- 'schemaName' with the database name
- '1521' with the database port number, if changed during the Oracle installation
- 'DBusername' with the database schema username
- 'DBpassword' with the database schema password

c. Save the file.

**Step 6** Update the run.conf file to increase the memory:

a. Open the run.conf file available in *$JBOSS_HOME*/bin and search for the following text:

```
JAVA_OPTS="-Xms128m -Xmx512m -XX:MaxPermSize=256m -Dorg.jboss.resolver.warning=true
-Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000"
```

Replace with the following text:

```
JAVA_OPTS="-Xms256m -Xmx1024m -XX:MaxPermSize=512m -Dorg.jboss.resolver.warning=true
-Dsun.rmi.dgc.client.gcInterval=3600000 -Dsun.rmi.dgc.server.gcInterval=3600000"
```

b. Save the file.

# Setting up Port

You need to set up a port for the Smart+Connected MS application by changing the default port values on the Node 1 and Node 2 servers.

For more information on how to set up the port, see the "Setting Up Port" section on page 2-9.

# Setting up Security Configuration

You need to set up security configuration on the Node 1 and Node 2 servers for the following:

- Disabling the JMS message security, its value is set to 'true' by default.
- Authenticating LDAP users of the Smart+Connected MS application.

For more information on how to set up security configuration on the Node 1 and Node 2 servers, see the "Setting Up Security Configuration" section on page 2-9.

# Setting up Java Messaging Service (JMS)

For more information on how to set up JMS on the Node 1 and Node 2 servers, see the "Setting Up Java Messaging Service (JMS)" section on page 2-12.

# Setting up Library

For more information on setting up library, see the "Setting Up Library" section on page 2-16.

# Setting up Quartz

For more information on how to set up Quartz, see the "Setting Up Quartz" section on page 2-16.

# Configuring Logging

For more information on how to configure logging on the Node 1 and Node 2 servers, see the "Configuring Logging" section on page 2-16.

# Configuring the Cluster Server Setup



## Installing mod_cluster on the Proxy Node

The mod_cluster is an httpd-based load balancer that uses a communication channel for forwarding requests from httpd to a set of application server nodes. The application server nodes use this connection to transmit the server-side load balance factors and events back to httpd using a set of HTTP methods.

To install mod_cluster on the proxy node, perform the following steps:

**Step 1** Create a directory in your local system where you want to install the mod_cluster binary bundle.

**Step 2** Download the Linux 64-bit mod_cluster 1.1.0 bundle.

The mod_cluster is open-source, and you can download it from the Internet. For example:

```
http://www.jboss.org/mod_cluster/downloads.html
```

**Step 3** Save and untar the mod_cluster binary bundle in the directory that you had created in Step 1.

The directory where you have extracted the mod_cluster bundle is referred as *<MOD_CLUSTER_HOME>*.

**Step 4** Navigate to the *<MOD_CLUSTER_HOME>*/opt/jboss/httpd/sbin folder and run the “installhome.sh” file.

The httpd now runs on port “8000”.

**Step 5** To allow the cluster nodes in the network to communicate with the proxy, perform the following:

**a.** Navigate to the following location:

```
<MOD_CLUSTER_HOME>/opt/jboss/httpd/httpd/conf/
```

**b.** Open the httpd.conf file and search for the following text:

```
<Directory />
    Order deny,allow
    Deny from all
</Directory>
```

**c.** Replace the default values in the searched text as follows:

```
<Directory />
    Order deny,allow
    Allow from all
</Directory>
```

**d.** Save the file.

**Note** By default, mod_cluster communicates only with the server instances that run on localhost. Step 5 should be performed to allow mod_cluster to communicate with the proxy.

**Step 6** To modify the directory access for Manager Module, perform the following:

**a.** Navigate to the following location:

```
<MOD_CLUSTER_HOME>/opt/jboss/httpd/httpd/conf/
```

**b.** Open the httpd.conf file and search for the following text:

```
<IfModulemanager_module>
  Listen 127.0.0.1:6666
ManagerBalancerNamemycluster
<VirtualHost 127.0.0.1:6666>
<Directory />
     Order deny,allow
     Allow from all
</Directory>

KeepAliveTimeout 300
MaxKeepAliveRequests 0
    #ServerAdvertise on http://@IP@:6666
AdvertiseFrequency 5
    #AdvertiseSecurityKey secret
    #AdvertiseGroup @ADVIP@:23364

<Location /mod_cluster_manager>
SetHandlermod_cluster-manager
       Order deny,allow
       Deny from all
Allow from 127.0.0
</Location>

</VirtualHost>
</IfModule>
```

**c.** Replace the directory access of the Manager Module in the <Location /mod_cluster_manager> element as follows:

```
<Location /mod_cluster_manager>
SetHandlermod_cluster-manager
       Order deny,allow
       Allow from all
</Location>
```

After replacing, the text is displayed as follows:

```
<IfModulemanager_module>
  Listen 127.0.0.1:6666
ManagerBalancerNamemycluster
<VirtualHost 127.0.0.1:6666>
<Directory />
     Order deny,allow
     Allow from all
</Directory>

KeepAliveTimeout 300
MaxKeepAliveRequests 0
    #ServerAdvertise on http://@IP@:6666
AdvertiseFrequency 5
    #AdvertiseSecurityKey secret
    #AdvertiseGroup @ADVIP@:23364

<Location /mod_cluster_manager>
SetHandlermod_cluster-manager
       Order deny,allow
       Allow from all
</Location>

</VirtualHost>
</IfModule>
```

d. Save and close the file.

## Configuring Cluster on Nodes

To ensure high availability, you must configure cluster on the nodes. To configure cluster on nodes, perform the following steps on the Node 1 and Node 2 servers:

**Step 1** Update the server.xml file:

a. Navigate to the *$JBOSS_HOME*/server/solutions/deploy/jbossweb.sar folder, and open the server.xml file.

b. In the server.xml file, search for the following text:

```
<Engine name=”jboss.web” defaultHost=”localhost”>
```

c. Add jvmRoute to the Engine “jboss.web”. For example:

– For Node 1:

```
<Engine name=”jboss.web” defaultHost=”localhost” jvmRoute=”node1”>
```

– For Node 2:

```
<Engine name=”jboss.web” defaultHost=”localhost” jvmRoute=”node2”>
```

d. In the server.xml file, uncomment the following valve, which is commented by default:

```
<Valve className="org.jboss.web.tomcat.service.sso.ClusteredSingleSignOn" />
```

**Note** The valve is uncommented to enable single sign on across web applications deployed on all the hosts in a cluster.

e. In the server.xml file, set the HTTP port, for example, 8020 for Node 1 and 9020 for Node 2:

1. Search for the following text:

```
<!-- A HTTP/1.1 Connector on port 8080 -->
<Connector protocol="HTTP/1.1" port="${jboss.web.http.port}"
address="${jboss.bind.address}"
redirectPort="${jboss.web.https.port}" />
```

2. Replace the port=”${jboss.web.http.port}” with port=”8020” for Node 1 and port=”9020” for Node 2.

f. Save the server.xml file.

**Step 2** Add the proxy hostname and port in the proxyList:

a. In a file browser, navigate to the $*JBOSS_HOME*/server/solutions/deploy/mod_cluster.sar/META_INF folder.

b. Open the mod_cluster-jboss-beans.xml file and search for the following text:

```
<property name="proxyList">
```

c. Add proxies in the proxyList property as follows:

```
<property name="proxyList">${jboss.mod_cluster.proxyList:address:port}</property>
```

**Note** In the proxyList property format, the "address:port" refers to the host IP address and port where the proxy is running. The port number is 8000 that you had configured in Step 4 in the "Installing mod_cluster on the Proxy Node" section on page 2-39.

**d.** Save the mod_cluster-jboss-beans.xml file.

# Configuring the Properties Files



## Updating the Properties Files

To update the application.properties, dc.properties, LDAP.properties, logging.properties, cleWebexAdapterConfig-MC.properties, and ehcacheconfig.xml files, perform the following steps:

**Step 1** Copy the properties files from <*MS_INSTALL_DIRECTORY*> to a local directory.

**a.** Create a folder with the name 'ms_config' under the directory in which the Smart+Connected MS & DS application is set up, and assign the read and write permissions.

**b.** Open a terminal and navigate to <*MS_INSTALL_DIRECTORY*>/pkg-properties, where <*MS_INSTALL_DIRECTORY*> is the location at which the Smart+Connected MS & DS application is installed.

**c.** Copy the application.properties.sample file to the <*MS_INSTALL_DIRECTORY*>/ms_config directory with the target file name as application.properties.

For example: cp application.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/application.properties

**d.** Navigate to <*MS_INSTALL_DIRECTORY*>/pkg-properties/ and copy the directory datacollection to the <*MS_INSTALL_DIRECTORY*>/ms_config location.

For example: cp -r datacollection <*MS_INSTALL_DIRECTORY*>/ms_config

**e.** Copy the LDAP.properties.sample file to the <*MS_INSTALL_DIRECTORY*>/ms_config location with the target file name as LDAP.properties.

For example: cp LDAP.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/LDAP.properties

**f.** Navigate to <*MS_INSTALL_DIRECTORY*>/pkg-properties/logging and copy the logging.properties.sample file to the location <*MS_INSTALL_DIRECTORY*>/ms_config with the target file name as logging.properties.

For example: cp logging.properties.sample <*MS_INSTALL_DIRECTORY*>/ms_config/logging.properties

**g.** Navigate to <*MS_INSTALL_DIRECTORY*>/pkg-properties and copy the cleWebexAdapterConfig-MC.properties.sample file to the location <*MS_INSTALL_DIRECTORY*>/ms_config with the target file name as cleWebexAdapterConfig-MC.properties.

For example: cp cleWebexAdapterConfig-MC.properties.sample<*MS_INSTALL_DIRECTORY*>/ms_config/ cleWebexAdapterConfig-MC.properties

**h.** Navigate to <MS_INSTALL_DIRECTORY>/pkg-properties/ and copy the ehcacheconfig.xml file to the <*MS_INSTALL_DIRECTORY*>/ms_config location.

For example: cp ehcacheconfig.xml<*MS_INSTALL_DIRECTORY*>/ms_config

**Note** You do not need to modify the properties in the timezone.properties and quartz files. You can use the default values provided for the properties in these files.

**Step 2** Update the application.properties file:

**a.** Modify the properties as follows:

| | |
|---|---|
| energysavings_batch_limit | Size of groups in which the total conference rooms will be divided for the energy savings to be performed in batches. You can change the default value as per your requirement. |
| minutes | Time slots displayed on IP phones for booking meetings. The minimum limit is 30. |
| IB_JMSPROVIDER_URL | jnp://<*MS managed server IP Address or hostname*>:<*MS managed server port number*><br>For example,<br>• For managed server 1: IB_JMSPROVIDER_URL=jnp://10.65.111.54:8020<br>• For managed server 2: IB_JMSPROVIDER_URL=jnp://10.65.111.55:9020 |
| IB_userName | MS JBoss profile admin userid<br>For example, IB_userName=admin |
| IB_password | MS JBoss profile admin password<br>For example, IB_password=admin |
| SDP_JMSPROVIDER_URL | jnp://<*SDP APP server IP Address or hostname*>:<*SDP Appserver port number*><br>For example, SDP_JMSPROVIDER_URL=jnp://10.65.111.56:7001 |
| SDP_userName | SDP JBoss profile admin userid<br>For example, SDP_userName=admin |
| SDP_password | SDP JBoss profile admin password<br>For example, SDP_password=admin |

| | |
|---|---|
| emission_factor | Carbon emission factor per 1 kWh.<br>For example, 0.00068956d |
| carbon_unit | Unit for measuring the carbon emission. |
| flighthr_Co2E | Number of flight hours saved and the reduction in carbon emission due to TelePresence usage. |
| pageSize | Number of saved drafts displayed per view in the Smart+Connected MS user portal. |
| working_hours | Number of working hours for a day in the enterprise. |
| REMINDERS:<br>• showReminder1<br>• showReminder2<br>• showReminder3<br>• showReminder4 | Number of minutes before the meeting when reminders will be send to all the invitees. |
| skin_name | Name of the skin folder for the MS user portal<br>For example, skin_name=red |
| maps_theme | Color of the theme for the floor maps displayed on the kiosk. The default color is grey. You can change it to blue. |
| ms_serviceurl | http://*<MS managed server IP Address or hostname>:<MS managed server port number>*/services/webcalendarservices/confDetails<br>For example,<br>• For managed server 1: ms_serviceurl=http://10.65.111.54:8020/services/webcalendarservices/confDetails<br>For managed server 2: ms_serviceurl=http://10.65.111.55:9020/services/webcalendarservices/confDetails |
| ps_serviceurl | http://*<PS Appserver IP Address or hostname>:<PS Appserver port number>/ipsapp*<br>• For managed server 1: ps_serviceurl=http://10.104.18.195:8000/ipsapp<br>• For managed server 2: ps_serviceurl=http://10.104.18.196:9000/ipsapp |

| | |
|---|---|
| availablesoon | Time in minutes to change the status of the workspaces and rooms to available soon.<br>For example, 25 |

**Note** The default availablesoon time is 60 minutes. You can change it as per your requirement. The status color changes to yellow for the soon-to-be-available conference/TP rooms and workspaces for this duration.

| | |
|---|---|
| cronTriggerExpression | The time at which the LDAP user details will be synchronized with the Smart+Connected MS application.<br>For example, 0 04 13 * * ? |

**Note** The default cronTriggerExpression time is 12 am. You can change it as per your requirement.

| | |
|---|---|
| user_preference_required | Show/hide the 'Do not publish my location' check box in the kiosk web portal.<br>For example, yes |

**b.** Save and close the file.

**Step 3** Update the dc.properties file:

**a.** Modify the properties as follows:

| | |
|---|---|
| datacollection.useTridiumWatch | To use Tridium as a watch, set the value as True. If the value is false, Tridium will be history based. |
| datacollection.scheduler.interval | Interval in minutes for history based data collection. |
| datacollection.batch.size | Number of data collection points from which data is gathered at a time. |
| datacollection.unitxml.path | *<MS_INSTALL_DIRECTORY>*/ms_config/datacollection/unit.xml<br>For example, datacollection.unitxml.path=/home/scc-qa/ms_config/datacollection/unit.xml |
| datacollection.jms.jndi | JNDI for the data collection JMS. |
| datacollection.jms.connectionfactory | Connection factory for the data collection JMS. |
| datacollection.jms.initialContext | Class name for the JMS initial context. |

| | |
|---|---|
| datacollection.jms.providerUrl | jnp://*<MS managed server IP Address or hostname>*:*<MSmanaged server port number>*<br>For example,<br>• For Managed Server1: datacollection.jms.providerUrl=jnp://10.65.111.54:8020<br>• For Managed Server2: datacollection.jms.providerUrl=jnp://10.65.111.55:9020 |
| datacollection.jms.securityPrincipal | MS JBoss admin console user name<br>For example, datacollection.jms.securityPrincipal=admin |
| datacollection.jms.securityCredentials | MS JBoss admin console password<br>For example, datacollection.jms.securityCredentials=admin |
| datacollection.data.precision | Data precision for the data collected by the BMS.<br>For example, 0.00 |

**b.** Save and close the file.

**Step 4** Update the LDAP.properties file. For more information, see Step 4 in the "Updating the Properties Files" section on page 2-17.

**Step 5** Modify the logging.properties file to update the directory in which the MS application log file needs to be generated. For more information, see Step 5 in the "Updating the Properties Files" section on page 2-17.

**Step 6** Modify the ehcacheconfig.xml file to identify the cache configurations:

**a.** Search for the following text:

```
<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=manual,
rmiUrls=//server1:4001/sampleCache11|=//server2:4001/sampleCache12">
```

**b.** Replace with:

```
<cacheManagerPeerProviderFactory
class="net.sf.ehcache.distribution.RMICacheManagerPeerProviderFactory"
properties="peerDiscovery=manual,
rmiUrls=//<MS managed server IP address or hostname>:40001/ipphone.cache|//<MS managed
server IP address or hostname>:4001/subscription.cache|//<MS managed server IP address or
hostname>:4001/locationproperty.cache|//<MS managed server IP address or
hostname>:4001/timezone.cache|//<MS managed server IP address or
hostname>:4001/equipment.cache|//<MS managed server IP address or
hostname>:4001/iec.cache"/>
```

For example:

- For Managed Server1:

  MS managed server IP address or hostname=Managed Server2 IP Address or hostname
- For Managed Server2:

  MS managed server IP address or hostname=Managed Server1 IP Address or hostname

**Step 7** Update the cleWebexAdapterConfig-MC.properties file:

**a.** Modify the properties as follows:

| | |
|---|---|
| WEBEX_SITE_ID | For example, WEBEX_SITE_ID=98765432 |
| WEBEX_SITE_NAME | For example, WEBEX_SITE_NAME=abcorp |
| WEBEX_PARTNER_ID | For example, WEBEX_PARTNER_ID=123ci |
| WEBEX_XML_SERVER_URL | WEBEX_XML_SERVER_URL=https://abcorp/WBXService/XMLService |
| WEBEX_USER | For example, WEBEX_USER=genuser |
| WEBEX_PASSWORD | For example, WEBEX_PASSWORD=Hilly!23 |
| WEBEX_TIMEZONE | For example, EST |

**b.** You can retain the default values for the other properties in the cleWebexAdapterConfig-MC.properties file. For more information, see the Step 7 b. in the "Updating the Properties Files" section on page 2-17.

**c.** Save and close the file.

## Setting up WebEx

To configure the WebEx setup for the Smart+Connected MS user portal, perform the following steps:

**Step 1** Navigate to the WebEx properties file in the Smart_Connected_Meeting_Spaces_and_Digital_Signage.ear using the following path:

*<MS_INSTALL_DIRECTORY>*/pkg-apps/calendar.war/WEB-INF/classes/cleWebexAdapterConfig-MC.properties

**Step 2** Replace the cleWebexAdapterConfig-MC.properties file in the ear with the cleWebexAdapterConfig-MC.properties file you updated in the "Configuring the Properties Files" section on page 2-42.

## Setting up Data Collection

You must set up data collection to gather the data which the Green Advisor module in Smart+Connected MS uses to display reports. For information on how to set up data collection, see the "Setting up Data Collection" section on page 2-27.

# Setting Up Apache Jackrabbit

The Apache Jackrabbit server is an open-source content repository for the Java platform, and the Smart+Connected MS application uses the Apache Jackrabbit to store content.

To set up Jackrabbit, perform the following steps:

**Step 1** Copy the jackrabbit-jca-2.2.12.rar file that is available in *<MS_INSTALL_DIRECTORY>*/pkg-jackrabbit to the *$JBOSS_HOME*/server/*<server_name>*/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jackrabbit-jca-2.2.12.rar
$JBOSS_HOME/server/<server_name>/deploy
```

**Step 2** Copy the jcr-2.0.jar file that is available in *<MS_INSTALL_DIRECTORY>*/pkg-jackrabbit to *$JBOSS_HOME*/common/lib directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jcr-2.0.jar $JBOSS_HOME/common/lib
```

**Step 3** Copy the jcr-ds.xml file that is available in *<MS_INSTALL_DIRECTORY>*/pkg-jackrabbit to *$JBOSS_HOME*/server/*<server_name>*/deploy directory by entering the following command:

```
cp <MS_INSTALL_DIRECTORY>/pkg-jackrabbit/jcr-ds.xml
$JBOSS_HOME/server/<server_name>/deploy
```

**Step 4** Repeat Step 1 through Step 3 on the Node 2 server.

# Configuring the Jackrabbit Repository

You need to configure the Jackrabbit repository for the application to use the Jackrabbit content management system. To configure the Jackrabbit repository, provide the DB host IP address, DB port number (default 1521), DB schema name, MS schema username, and MS schema password.

To configure the Jackrabbit repository for clustering, perform the following steps on the Node 1 and Node 2 servers:

**Step 1** Navigate to the *$JBOSS_HOME*/bin/jackrabbit directory, and open the repository.xml file.

**Step 2** Search for the below text:

```
<FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
<param name="path" value="${rep.home}/repository"/>
</FileSystem>
```

Replace with:

```
<FileSystem class="org.apache.jackrabbit.core.fs.db.DbFileSystem">
   <param name="driver" value="oracle.jdbc.driver.OracleDriver"/>
   <param name="url" value="jdbc:oracle:thin:@<db host IP address>:<db port
number>/<db schemaName>"/>
   <param name="schema" value="oracle"/>
   <param name="user" value="<schema username>"/>
   <param name="password" value="<schema password>"/>
   <param name="schemaObjectPrefix" value="F_1_"/>
</FileSystem>
```

**Step 3** Search for the below text:

```
<DataStore class="org.apache.jackrabbit.core.data.FileDataStore"/>
```

Replace with:

```
<DataStore class="org.apache.jackrabbit.core.data.db.DbDataStore">
<param name="url" value="jdbc:oracle:thin:@<db host IP address>:<db port number>/<db
schemaName>"/>
<param name="user" value="<schema username>"/>
<param name="password" value="<schema password>"/>
<param name="databaseType" value="oracle"/>
<param name="driver" value="oracle.jdbc.driver.OracleDriver"/>
<param name="minRecordLength" value="1024"/>
<param name="copyWhenReading" value="true"/>
<param name="tablePrefix" value=""/>
<param name="schemaObjectPrefix" value="D_1_"/>
<param name="schemaCheckEnabled" value="true"/>
</DataStore>
```

**Step 4** Search for the below text:

```
<PersistenceManager
class="org.apache.jackrabbit.core.persistence.pool.DerbyPersistenceManager">
<param name="url" value="jdbc:derby:${wsp.home}/db;create=true"/>
<param name="schemaObjectPrefix" value="${wsp.name}_"/>
</PersistenceManager>
```

Replace with:

```
<PersistenceManager
class="org.apache.jackrabbit.core.persistence.pool.PostgreSQLPersistenceManager">
<param name="url" value="jdbc:oracle:thin:@<db host IP address>:<db port number>/<db
schemaName>"/>
<param name="schema" value="oracle"/>
<param name="user" value="<schema username>"/>
<param name="password" value="<schema password>"/>
<param name="schemaObjectPrefix" value="W_1_"/>
</PersistenceManager>
```

**Step 5** Search for the below text:

```
<PersistenceManager
class="org.apache.jackrabbit.core.persistence.pool.DerbyPersistenceManager">
<param name="url" value="jdbc:derby:${rep.home}/version/db;create=true"/>
<param name="schemaObjectPrefix" value="version_"/>
</PersistenceManager>
```

Replace with:

```
<PersistenceManager
class="org.apache.jackrabbit.core.persistence.pool.PostgreSQLPersistenceManager">
   <param name="url" value="jdbc:oracle:thin:@<db host IP address>:<db port
number>/<db schemaName>"/>
   <param name="schema" value="oracle"/>
   <param name="user" value="<schema username>"/>
   <param name="password" value="<schema password>"/>
   <param name="schemaObjectPrefix" value="V_1_"/>
</PersistenceManager>
```

**Step 6** Add the following text at the end of the preceding text:

```
<Cluster id ="node1" syncDelay = "1000">
       <Journal class="org.apache.jackrabbit.core.journal.DatabaseJournal">
       <param name="driver" value="oracle.jdbc.driver.OracleDriver"/>
       <param name="url" value="jdbc:oracle:thin:@<db host IP address>:<db port
number>/<db schemaName>"/>
       <param name="schema" value="oracle"/>
       <param name="user" value="<schema username>"/>
```

```
        <param name="password" value="<schema password>3"/>
        <param name="schemaObjectPrefix" value="C_1_"/>
        </Journal>
    </Cluster>
```

**Note** Change the cluster ID accordingly for each node. For example, “node1” for the Node 1 server, “node2” for the Node 2 server, so on.

**Step 7** In the preceding steps, replace the following strings with their actual values:

- *<db host IP address>*—Database server IP address
- *<db port number>*—Database port number
- *<db schemaName>*—Schema name of the database
- *<schema username>*—Database user name
- *<schema password>*—Database user password

**Step 8** Navigate to the *$JBOSS_HOME*/bin/jackrabbit/workspaces/ directory, and delete the available default and security directories.

**Step 9** Start the proxy on the proxy node and JBoss on the Node 1 and Node 2 servers, and verify that 13 new tables and two new sequences have been created in the database.

These tables and sequences have names starting with c_1_, d_1_, f_1_, v_1_, w_1_, and so on.

# Importing SSL Certificates

You must import the SSL certificate for the Cisco Unified Communications Manager (CUCM). You may require to import SSL certificates for the Cisco Digital Media Player (DMP) and Light Weight Directory Access Protocol (LDAP).

For information on how to import SSL certificates on the Node 1 and Node 2 servers, see the “Importing SSL Certificates” section on page 2-30.

# Assigning Roles and Locations to IBUser

To access the Smart+Connected MS application, you need to assign roles and locations to the ‘IBUser’. ‘IBUser’ is the default user that is created with the seed data.

For more information on how to assign roles and locations to ‘IBUser’, see the “Assigning Roles and Locations to the IB User” section on page 2-31.

# Creating and Assigning Webcalendar Roles

For more information on how to create and assign webcalendar roles, see the Creating and Assigning Webcalendar Roles, page 2-32.

# Starting the Cluster and Proxy

To start the cluster and proxy, perform the following steps:

**Step 1** Start the cluster by performing the following steps on the Node 1 and Node 2 servers:

**a.** Ensure that:

- SDP is up and running without any binding offset value.
- The *$JAVA_HOME* environment variable is set to the location in which JDK is installed.
- The *$JBOSS_HOME* environment variable is set to the complete path where the unzipped jboss-6.0.0 files are available.

**b.** Using a terminal session, navigate to the *$JBOSS_HOME*/bin directory.

**c.** Enter the following command to start each node in the cluster:

```
./run_solutions.sh -c all-Djboss.service.binding.set=ports-01 -b <SERVER_IP_ADDRESS>
-g sdpPartition  -Djboss.messaging.ServerPeerID=1
```

Where, <*SERVER_IP_ADDRESS*> is the IP address of the node.

The following options are used to start each node in a cluster:

- -c—Refers to start from “all” folder.
- -b—Refers to the address used to bind the sockets to the default host namely, the localhost.
- -g—Refers to the partition name of the clusters. The default name for a JBoss AS cluster is “DefaultPartition”.
- jboss.service.binding.set—Refers to setting another JBoss instance for the Smart+Connected MS & DS application. The ports-01 bindings are obtained by taking the base bindings and by adding 100 to each port value.
- jboss.messaging.ServerPeerID—Refers to the JBoss Messaging Clustering (JBM). In JBM, each node in a cluster has a unique integer ID called the “ServerPeerID”. The “ServerPeerID” should remain the same even if the server is restarted many a times.

**Step 2** Start the proxy by performing the following steps on the proxy node:

**a.** Using a terminal session, navigate to the following location:

<*MOD_CLUSTER_HOME*>/opt/jboss/httpd/sbin

**b.** Enter the following command to start the proxy:

```
./apachectl start
```

**c.** Click **Enter**.

The application can be accessed using the proxy that runs on port “8000” by default.

**Step 3** (Optional) If you want to stop the proxy, perform the following steps on the proxy node:

**a.** Using a terminal session, navigate to the following location:

<*MOD_CLUSTER_HOME*>/opt/jboss/httpd/sbin

**b.** Enter the following command to stop the proxy:

```
./apachectl stop
```

**c.** Click **Enter**.

# Accessing the Application

To access the Smart+Connected MS application, perform the following steps:

**Step 1** In a web browser, type the URL http://*<proxy IP address>*:*<proxy port>*/solutions.

Where <proxy IP address> is the host IP address or DNS hostname of the proxy server and <proxy port> refers to the port number (default 8000) that you defined for the proxy server in Step 4 in the "Installing mod_cluster on the Proxy Node" section on page 2-39.

**Step 2** Press **Enter**.

The Smart+Connected MS login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS application, and click **Login**.

Your default login credentials are:

- Username—superadmin
- Password—superadmin

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide.*

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Meeting Spaces User Guide*.

# Accessing the Web Calendar

After performing all installation tasks, you can access the Smart+Connected MS web calendar.

To access the Smart+Connected MS web calendar, perform the following steps:

**Step 1** In a web browser, type the URL http://*<proxy IP address>*:*<proxy port>* /calendar.

Where 'proxy ip address' is the host IP address or DNS hostname of proxy server and port refers to the port number (default 8000) that you have defined for the proxy server in Step 4 in the "Installing mod_cluster on the Proxy Node" section on page 2-39.

**Step 2** Press **Enter**.

The Smart+Connected MS login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS web calendar, and click **Login**.

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide*.

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Meeting Spaces User Guide*.

# Accessing the Kiosk Web Portal

After performing all the installation tasks, you can access the Smart+Connected MS kiosk web portal.

To access the Smart+Connected MS kiosk web portal, perform the following steps:

**Step 1** In a web browser, type the URL http://*<proxy IP address>*:*<port>*/spaces/.

Where 'proxy ip address' is the host IP address or DNS hostname of proxy server and port refers to the port number (default 8000) that you have defined for the proxy server in Step 4 in the "Installing mod_cluster on the Proxy Node" section on page 2-39.

**Step 2** Press **Enter**.

The Smart+Connected MS kiosk web portal login page appears.

**Step 3** Enter the username and password for the Smart+Connected MS kiosk web portal, and click **Login**.

You can change your password by logging in to the SDP application. You can also create additional users by using the SDP application. For more information on how to assign roles and permissions to users in the SDP application, see the *Cisco Service Delivery Platform User Guide.*

For more information on how to use the Smart+Connected MS features, see the *Cisco Smart+Connected Spaces User Guide*.


# Configuring the Smart+Connected MS Application

This chapter describes the configuration tasks that you need to perform after installing the Cisco Smart+Connected Meeting Spaces (Smart+Connected MS) application.



## Configuring Services in CUCM

The Cisco Unified Communications Manager (CUCM) administrator must configure the service URL in CUCM to make the service appear on the IP phone.

To configure the services in CUCM, perform the following steps:

**Step 1** In the browser, type the CUCM URL.

**Step 2** Click **Cisco Unified Communications Manager**.

The Cisco Unified CM Administration home page appears.

**Step 3** Enter the CUCM administrator's username and password, and click **Login.**

**Step 4** Click **Device** > **Device Settings** > **Phone Services**.

**Step 5** Click **Add New**.

To add a new service, perform the following steps:

**a.** Enter the service name in the Service Name field. For example, S+CC service.

**b.** Enter the service description in the Service Description field.

**c.** Enter the service URL in the format given below:

```
http: //<host IP address>:<port>/solutions/ip-phone-comm.ip
```

For example,

```
http: //10.106.13.76:7001/solutions/ip-phone-comm.ip
```

d. From the Service Category drop-down list, choose XML Service.

e. From the Service Type drop-down list, choose Standard IP Phone Service.

f. Select the **Enable** check box.

**Step 6** Click **Save**.

**Step 7** Click **Device** > **Phone**.

The Find and List Phones page appears.

**Step 8** From the "Find Phone where" drop-down list, choose **Device Name**.

**Step 9** From the drop-down list that is adjacent to the "Find Phone where" drop-down list, choose **contains**.

**Step 10** Enter the MAC address of the IP phone for which you want to subscribe the service.

**Step 11** Click **Find**, and select the IP phone.

The Phone Configuration page appears.

**Note** Ensure that the Web Access drop-down list displays an enabled value.

**Step 12** From the Related Links drop-down list, choose **Subscribe/Unsubscribe Services**, and click **Go**.

**Step 13** Select the service name that you have provided in Step 5 a.

**Step 14** Click **Next**.

**Step 15** Click **Subscribe**.

**Step 16** Click **Reset** in the Phone Configuration page.

A device reset dialog box appears.

**Step 17** Click **Reset**.

The configured service name appears under Services in the IP Phone.

# Assigning Roles (Groups) to the Application User

The Smart+Connected MS application requires an application user to be created in CUCM for pushing the audio broadcast and text messages to the Cisco IP phone.

The application user needs the following privileges minimally to allow the Smart+Connected MS application to work properly:

- Standard CTI Enabled—This user group, which is required for all CTI applications, allows an application to connect to Cisco CallManager to access CTI functionality.
- Standard CTI Allow Control of All Devices—This user group allows an application to control or monitor any CTI-controllable device in the system.

- Standard CCM Admin Users—This grants log-in rights to Cisco Unified Communications Manager Administration. A user with only the Standard CCM Admin Users role can access Cisco Unified Communications Manager Administration but cannot make any changes.
- Standard CCMADMIN Read only— This allows an administrator to view the configuration information in Cisco Unified Communications Manager Administration page.
- Copy of Standard CCM Phone Administration which includes Service URL Page, User Web Page and Phone Services Subscribe.
- Copy of Standard Serviceability named as roles for Web Services which has only SOAP related services as read and write access.

To create and assign a role to an application user, perform the following steps:

**Step 1** In the browser, enter the URL to access the Call Manager application.

**Step 2** Click **Cisco Unified Communications Manager**.

The Cisco Unified CM Administration home page appears.

**Step 3** Enter the username and password and click **Login.**

**Step 4** Click **User Management > Application User** to create application users and assign roles to the application users that provide them the above mentioned privileges.

# Configuring Audio Notification to IP Phone

The CUCM administrator needs to configure the audio notification feature to allow the Emergency Notification (EN) messages to be pushed to the IP phone.

To configure audio notification to IP phone, perform the following steps:

**Step 1** Create an application user in Call Manager so that the solution can push the Emergency Notification (EN) content to IP Phone.

To create an application user in the Call Manager, perform the following steps:

**a.** In a browser, type the CUCM URL.

**b.** Click **Cisco Unified Communications Manager**.

The Cisco Unified CM Administration home page appears.

**c.** Enter the CUCM administrator's username and password for the Call Manager, and click **Login**.

**d.** Navigate to **User Management** > **Application User**.

**e.** Click **Add New.**

The Application User Configuration page appears.

**f.** Enter the user ID in User ID field.

**g.** Enter the password in the Password field.

**h.** Enter the confirmed password in the Confirm Password field.

**i.** From the Presence Group drop-down list, choose Standard Presence group.

**j.** In Device Information, move the desired devices from Available Devices to Controlled Devices.

k. Move the desired Available Profiles to CTI Controlled Device Profiles.

l. Under Permissions Information, click **Add to User Group.**

m. Select **Standard CTI Enabled** user group, and click **Add Selected.**

n. Click **Save**.

The roles and permission for the new user appear.

**Step 2** For pushing audio to IP phone as part of EN, you have to make a change in the server on which the Smart+Connected MS & DS application is deployed. Change the /etc/hosts file by moving the assigned IP address of the machine before the local loopback address.

For example,

```
10.78.10.143          SCC-BGL04-DV-123
127.0.0.1             SCC-BGL04-DV-123 localhost.localdomain localhost
::1                   localhost6.localdomain6 localhost6
```

**Note** The IP phones, application server, and CUCM must be on a multicast network. To verify if the application server is multi-cast run **/sbin/ifconfig** in the application server. The **MULTICAST** keyword appears in the output.

# Configuring Locations

A location is a physical space that helps you define a spacial structure in a city, organization, complex, industry, and so on. For example, the various locations for an organization can be country, city, building, campus, wing, floor, room, and so on.


- Adding Locations, page 3-4
- Editing Locations, page 3-6
- Deleting Locations, page 3-6


## Adding Locations

You can add multiple locations to the SDP application and create a location hierarchy for a city, an enterprise and so on. You can create location hierarchies beginning with the default root location that is defined during installation of the SDP application. You can also modify the name of the default root location, if required.

To add a new location to the location hierarchy, perform the following steps:

**Step 1** Log in to the SDP application.

**Step 2** Click the **Locations** tab.

The Locations page appears. The left pane displays the location hierarchy, and the right pane displays the main content area.

**Step 3** Select a location for which you want to add the child location in one of the following ways:

a. Searching for a location:

1. Click in the shortcut tools.
2. In the Search field, enter a location keyword, and click .

   The Search Results page appears with the location details.You can select the location for which you want to add the child location.

b. Expanding location hierarchy:

1. Click ▸ before a parent location.

   If the ▸ is not displayed before a parent location, the location does not have any child location.
2. Click a location for which you want to add the child location.

   Alternatively, click (**Expand Immediate Child Nodes of Selection** tool), and click a location for which you want to add the child location.

The following details are displayed for the selected location in the Location Details area:

- **Location Type**— Type of location under which the selected location has been categorized.
- **Location Name**—Name of the selected location.
- **Parent Location**—Parent of the selected location.
- Any custom property that has been setup for the location type.

**Step 4** In the main content area, click .

The Add Location page appears. The Parent Location field displays the selected parent location for which you want to add the child location.

**Step 5** Enter the following details:

- **Location Type**—From the Location Type drop-down list, choose the type of the location under which the selected location has to be categorized.
- **Location Name**— Enter the name of the location. The location name can be alpha-numeric, and you can use a maximum of 500 characters.

For certain location types, additional properties should be added.

***Table 3-1 Location Type and Properties***

| Location Type | Property | Value Description | Sample Data |
|---|---|---|---|
| Country, State, City | Timezone | Timezone of the location. | Location1 |
| Building, Floor | multicastipaddress | The IP address used to send the multicast message. | 224.0.1.43 |
| | multicastport | The port used to send the multicast message. | 31250 |
| Conference Room | confRoomId | The alias of the conference room ID in exchange. | Room1 |
| | Private Subject | If you enable this property, the subject displays ‘Booked By <organizer name>' on the IP phone and signage instead of displaying the actual subject. | Yes |
| | Private Attendees | If you enable this property, the attendee list is not displayed on the signage. | Yes |

**Step 6** Click **Save** to save the location details.

The newly added location is displayed in the location hierarchy.

# Editing Locations

After adding a location to the location hierarchy, you can modify the location name and location properties.

To modify the existing location details, perform the following steps:

**Step 1** On the Locations page, select a location for which you want to modify the location details in one of the following ways:

The following details are displayed for the selected location in the Location Details area:

- **Location Type**—Type of location under which the selected location has been categorized.
- **Location Name**—Name of the selected location.
- **Parent Location**—Parent of the selected location.

For more information on how to select a location, perform Step 1 through Step 3 in Adding Locations, page 3-4.

**Step 2** In the right pane, click .

The Edit Location page appears. The Parent Location field displays the selected parent location. The Location Type drop-down list displays the type of the selected location.

**Step 3** Modify the following fields as necessary:

- **Location Name**—Name of the selected location. The location name can be alpha-numeric, and you can use a maximum of 500 characters.
- **Edit Location Properties**—Property definitions that you defined for the location type during installation of the SDP application.

**Step 4** Click **Save** to save the location details.

The modified details are updated and displayed in the location hierarchy.

# Deleting Locations

To delete a location, perform the following steps:

**Step 1** On the Locations page, select a location that you want to delete.

The following details are displayed for the selected location in the Location Details area:

- **Location Type**—Type of location under which the selected location has been categorized.
- **Location Name**—Name of the selected location.
- **Parent Location**—Parent of the selected location.

For more information on how to select a location, perform Step 1 through Step 3 in Adding Locations, page 3-4.

**Step 2** In the right pane, click .

After a location is deleted, all the child locations, defined property definitions, and the role and device associations for the location are automatically removed from the SDP application.

# Configuring Devices

You need to configure devices to avail the building system services for the location, such as, light settings, blinds, dimmer, and audio video controller through the Smart+Connected MS application. You need to use the SDP interface to access the Devices module.

The devices type definitions, such as, lights, blinds, dimmer, and audio video controller are available as part of SDP seed data that is added when SQL scripts are executed.

- Adding Devices, page 3-7
- Deleting Devices, page 3-15
- Setting up Crestron Controller for the Projector, page 3-16

## Adding Devices

The following devices are supported by the Smart+Connected MS application:

- IP Phones
- Blinds
- Light
- Audio Video Controller
- Dimmer
- Light Occupancy Sensor
- ThermoFuser
- VRV
- VAV
- Energy Meter
- Gas Meter
- Water Meter
- Digital Media Player (DMP)
- Cisco Interactive Experience Client (IEC)

You can add any of these devices to the selected location in the location hierarchy if they are available at the location.

*Table 3-2 Device Properties and Values*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| IP Phone | CP-7975G | MAC Address | MAC Address of the IP phone. | 0019305D73EF |
| | CP-9971 | MAC Address | MAC Address of the IP phone. | 0019406D74EF |
| | Non-Touch CP-9951 | MAC Address | MAC Address of the IP phone. | 0019507D75EF |
| Blinds | Generic | Open Value | Value to be set on open path to open the blinds. | 1 |
| | | Close Value | Value to be set on close path to close the blinds. | 0 |
| | | Stop Value | Value to be set on stop path to stop the blinds. | 2 |
| | | Open Path | Node path in the BMS gateway for opening the blinds. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Blinds/BO/Blind_Open_Close/ |
| | | Stop Path | Node path in the BMS gateway for stopping the blinds when the blinds are opening or closing. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Blinds/BO/Blind_Stop/ |
| | | Close Path | Node path in the BMS gateway for closing the blinds. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Blinds/BO/Blind_Open_Close/ |
| | Blinds Scene | Blinds URL | Node path in the BMS gateway for setting the blinds scenes. The scene may correspond to opening or closing the blinds. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Blinds/BO/Blind_Scene/ |
| | | Blinds Value | Value to be set on blinds URL to open or close the blinds. | 0 |
| Lights | Generic | On Value | Value to be set on On/Off URL to switch on the lights. | true |
| | | Off Value | Value to be set on On/Off URL to switch off the lights. | false |
| | | On/Off URL | Node path in the BMS gateway for switching On/Off the lights. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_HA/HallMark/BGL10/Floor_01/Conference_Room/Light_Switch/BO/Lights_ON_OFF/ |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| Audio Video Controller | Generic | Projector Screen Open Join | Join value to be sent to the Crestron Controller to bring down the projector screen. | 35 |
| | | Projector Screen Stop Join | Join value to be sent to the Crestron Controller to stop the projector screen while bringing down or moving up. | 36 |
| | | Projector Screen Close Join | Join value to be sent to the Crestron Controller to move up the projector screen. | 37 |
| | | Projector On Join | Join value to be sent to the Crestron Controller to switch on the projector. | 25 |
| | | Projector Off Join | Join value to be sent to the Crestron Controller to switch off the projector. | 26 |
| | | Signal Type | Crestron Controller signal type. Currently only digital is supported. | digital |
| | | Slot | Crestron Controller slot. | 1 |
| | | IP Address | IP address of the Crestron Controller. | 72.163.202.35 |
| | | Port | Port of the Crestron Controller. Default port is 41794. | 41794 |
| | | IP ID | IP ID of the Crestron Controller. | 3 |
| Dimmer | Generic | Min Value | Minimum luminosity value. | 0 |
| | | Max Value | Maximum luminosity value. | 100 |
| | | Dim URL | Node path in the BMS gateway for setting the dimmer luminosity. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_HA/HallMark/BGL10/Floor_01/Conference_Room/Light_Dimmer/AO/Light_Dimmer_Control/ |
| | Wattstopper Light Dimmer | Dim URL | Node path in the BMS gateway for setting the light scene. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_HA/HallMark/BGL10/Floor_01/Conference_Room/WattstopperLight_Dimmer/AO/Light_Dimmer_Control/ |
| | | Dimmer Values | Scene value to be set on the BMS gateway. | 2 |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| Light Occupancy Sensor | Generic Sensor | Sensor URL | Node path in the BMS gateway to enable or disable the sensor. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Light_Occ_Sensor/BV/OnOff_Status_Override/ |
| | | On Value | Value to be set on Sensor URL to switch on the sensor. | true |
| | | Off Value | Value to be set on Sensor URL to switch off the sensor. | false |
| | | Sensor Occupancy URL | Node path in the BMS gateway to sense the occupancy of the location. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_01/Conference_Room/Light_Occ_Sensor/BI/Occupancy_Status/ |
| | | Occupied Value | Value on the sensor whenever occupancy is detected. | true |
| | | Unoccupied Value | Value on the sensor whenever occupancy is idle for more than specified time. | false |
| ThermoFuser | Generic | Current Temperature URL | Node path in the BMS gateway for reading back the current temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_SEC/HallMark/BGL10/Floor_01/Conference_Room/Thermofuser/nvoSpaceTemp/ |
| | | Booking Status URL | Node path in the BMS gateway to set the current booking status of the conference room. If booking status is set to booked value, occupancy status is automatically set to occupied mode. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_SEC/HallMark/BGL10/Floor_01/Conference_Room/Thermofuser/nviOccCmd/ |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| | | Room Temperature URL | Node path in the BMS gateway for reading back the current room temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_SEC/HallMark/BGL10/Floor_01/Conference_Room/Thermofuser/nciSetPnts_UnOccCool/ |
| | | Temperature Offset URL | Node path in the BMS gateway for setting the offset temperature. When the offset URL is provided, the value provided by the end user, is treated as a difference from the default setpoint value. For example, when the default setpoint is set as 21 degrees and the user expectation is 20 degrees, the offset value of -1 is applied with the appropriate selection in the UI.<br>The value set as Temperature Offset URL impacts the control setpoint, to be either increased or decreased from the preset setpoint, equal to the value set as the offset. The effective setpoint is used as the reference requirement to control the temperature needs. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_SEC/HallMark/BGL10/Floor_01/Conference_Room/Thermofuser/nviSetPtOffset/ |
| | | Temperature Setpoint URL | Node path in the BMS gateway for configuring and reading back the current setpoint temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_SEC/HallMark/BGL10/Floor_01/Conference_Room/Thermofuser/nvoEffectSetPt/ |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| | | Occupied Value | Value to be set on occupancy status URL to move the device to occupied mode. | 0 |
| | | Unoccupied Value | Value to be set on occupancy status URL to move the device to un occupied mode. | 1 |
| | | Standby Value | Value to be set on occupancy status URL to move the device to standby mode. | 2 |
| | | Min Temperature Value | Minimum temperature to which the room temperature can be set. | 18 |
| | | Max Temperature Value | Maximum value of the room temperature that can be set. | 28 |
| | | Temperature Unit | Unit of temperature. | C or F |
| | | Reserved Value | Value to be set on booking status URL for occupancy. | 1 |
| | | Unreserved Value | Value to be set on booking status URL for un occupancy. | 0 |
| | | Occupancy Status URL | Node path in the BMS gateway for reading back the status for occupancy. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/Thermofuser/OccUnocc_Sts/ |
| | | Occupied Temperature URL | Node path in the BMS gateway for reading back the occupied setpoint values. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/Thermofuser/RoomTemp_OccSetpt/ |
| VRV | Generic | Current Temperature URL | Node path in the BMS gateway for reading back the current temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VAV/AV/RoomTemp_OccSetpt/ |
| | | Temperature Setpoint URL | Node path in the BMS gateway for configuring and reading back the current setpoint temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VRV/AV/SpaceTemp_Setpt/ |
| | | Min Temperature Value | Minimum temperature to which the room temperature can be set. | 18 |
| | | Max Temperature Value | Maximum temperature of the room temperature that can be set. | 28 |
| | | Temperature Unit | Unit of temperature. | C or F |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| VAV | Generic | Current Temperature URL | Node path in the BMS gateway for reading back the current temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VAV/AV/SpaceTemp_Setpt/ |
| | | Occupancy Status URL | The node path in the BMS gateway for reading back the status for occupancy. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VAV/BI/OccUnocc_Sts/ |
| | | Occupied Temperature URL | Node path in the BMS gateway for reading back the occupied setpoint value. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VAV/AV/RoomTemp_OccSetpt/ |
| | | Min Temperature Value | Minimum temperature to which the room temperature can be set. | 18 |
| | | Max Temperature Value | Maximum value of the room temperature that can be set. | 28 |
| | | Temperature Unit | Unit of temperature. | C or F |
| | | Occupied Value | Value to be set on occupancy status URL to move the device to occupied mode. | true |
| | | Unoccupied Value | Value to be set on occupancy status URL to move the device to un occupied mode. | false |
| | | Temperature Setpoint URL | Node path in the BMS gateway for configuring and reading back the current setpoint temperature. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/VAV/AV/SpaceTemp_Setpt/ |
| Energy Meter | Generic | EnergyinKWH | Node path in the BMS gateway which provides the energy reading in KWH. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_BIM/HallMark/BGL10/Floor_Ground/PMS/AV/KWH |
| Gas Meter | Generic | gasConsumed | Node path in the BMS gateway which provides the gas consumption. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_API/HallMark/BGL10/Basement/Metering/AI/Gas_Consumed |
| Water Meter | Generic | waterConsumed | Node path in the BMS gateway which provides the water consumption. | /config/Drivers/NiagaraNetwork/aliases/India_Bangalore_API/HallMark/BGL10/Basement/Metering/AI/Water_Consumed |

*Table 3-2 Device Properties and Values (Continued)*

| Device | Model | Device Property | Value Description | Sample Data |
|---|---|---|---|---|
| DMP 4400 | Generic | Username | User ID for logging in to the DMP. | admin |
| | | Touch | Touchscreen configuration in the Touch Details area:<br>• If the DMP has been configured with a signage that supports touchscreen overlay, select the Touch check box.<br>• If the DMP has been configured with a non-touch signage, keep the Touch checkbox unselected. | – |
| | | URL | The DMP URL. | https: //10.77.78.80 |
| | | Password | User password for logging in to the DMP. | Cisco123 |
| | | MAC Address | The DMP MAC address. | 00:0f:44:02:7b:48 |
| | | Locale | Locale for the DMP to use. | en_US |
| IEC | Generic | Username | User ID for logging in to the IEC. | admin123 |
| | | Touch | Touchscreen configuration in the Touch Details area:<br>• If the IEC has been configured with a signage that supports touchscreen overlay, select the Touch check box.<br>• If the IEC has been configured with a non-touch signage, keep the Touch checkbox unselected. | – |
| | | URL | The IEC URL. | https: //10.222.187.80 |
| | | Password | User password for logging in to the IEC. | Cisco321 |
| | | MAC Address | The IEC MAC address. | 00:0d:54:04:8c:53 |
| | | Locale | Locale for the IEC to use. | en_US |

To add devices to the SDP application, perform the following steps:

**Step 1** Log in to the SDP application.

For more information on how to log in to the SDP application, see the *Cisco Service Delivery Platform User Guide*.

**Step 2** Click the **Devices** tab.

The Devices page appears. The left pane displays the location hierarchy, and the right pane displays the List of Devices area.

**Step 3** Select a location for which you want to add the child location in one of the following ways:

**a.** Searching for a location:

**3.** Click in the shortcut tools.

**4.** In the Search field, enter a location keyword, and click .

The Search Results page appears with the location details. You can select the location for which you want to add the child location.

b. Expanding the location hierarchy:

1. Click ▸ next to a parent location.

   If the ▸ is not displayed next to a parent location, the location does not have any child location.

2. Click a location for which you want to add the child location.

**Step 4** In the right pane, click **Add a Device**.

The Add Device page appears. The Parent Location field displays the selected parent location with which you want to associate the device.

**Step 5** Enter the following details:

- Device Category—Category under which you want to organize the device.
- Manufacturer—Manufacturer name of the device.
- Model—Model details of the device.
- Device Name—Name of the device.

**Step 6** Click **Save**.

The newly added device is associated to the selected location.

# Deleting Devices

To delete an device from the SDP application, perform the following steps:

**Step 1** In the Devices page, select a location for which you want to modify the device details.

For more information on how to select a location, perform Step 3 in the "Adding Devices" section on page 3-7.

All devices that have been associated with the selected location are displayed.

**Step 2** Do one of the following:

- To delete a single device, choose a device that you want to delete, and click .
- To delete multiple devices, select the specific check boxes of the devices that you want to delete, and click **Delete**.

The device is removed from the SDP application.

## Setting up Crestron Controller for the Projector

To set up Crestron Controller for the projector, you must have Windows 2008 R2 server machine or Windows 7 that has IIS 7.5 with .NET Framework 3.5 or above.

To set up the Crestron Controller, perform the following steps:

**Step 1** From the Linux machine, copy the Crestron Controller ZIP file located in <*MS_HOME*>/pkg-properties/crestron to a Windows machine

**Step 2** Unzip the crestroncontroller.zip files using any archive utility.

**Step 3** Run the **inetmgr** command. The IIS manager server console appears.

**Step 4** Right-click the default web site and choose create a new virtual directory.

**Step 5** Enter the alias as **crestron**. In the physical path, choose the Crestron Controller folder that is unzipped.

**Step 6** Right-click the crestron folder under Default Web Site, choose Convert to Application, and click **OK**.

The application is created.

**Step 7** Enter the URL in a browser in the following format:

```
http: //localhost/crestron/Home.aspx?deviceIp=<deviceIP of the Crestron Controller>
&ipId=<ipID of the Crestron controller>&port=<port of the Crestron Controller>&slot=<slot
of the Crestron Controller>&type=digital&join=<join value of the Crestron Controller>
```

- deviceIP—The IP ID of the Crestron Controller.
- port—Port of the Crestron Controller.
- slot—Slot of the Crestron Controller.
- join—Value depends on the action performed on the Crestron Controller.

For example:

```
http: //localhost/crestron/Home.aspx?deviceIp=65.100.54.20&ipId=1&port=41794&slot=1&signal
Type=digital&join=62
```

A message appears indicating that the Crestron Controller is successfully set up.

# Configuring Adapters

# Adapter Description

Table 3-3 lists the adapters you must configure and the purpose these adapters serve for the functioning of the Smart+Connected MS application.

*Table 3-3 Adapter Description*

| Adapter | Description |
|---|---|
| ObixBean | Configure this adapter to interface with the Tridium BMS. |
| AudioVideoBean | Configure this adapter to interface with Crestron Controller for projector and projector screen control. |
| ExchangeBean | Configure this adapter to interface with Microsoft Exchange. |
| RemedyBean | Configure this adapter to interface with the Remedy case management system. |
| EmailBean | Configure this adapter to use e-mail based case notifications, in the absence of a case management system. |
| IPPhoneOperationBean | Configure this adapter to interface with Cisco JTAPI for sending emergency notifications. |
| DMMBean | Configure this adapter to interface with Digital Media Manager. |
| DMPBean | Configure this adapter to interface with the digital media players. |
| InformaCastBean | Configure this adapter to interface with Singewire InformaCast for sending emergency notifications. |

**Note** You must configure either the IPPhoneOperationBean or the InformaCastBean adapter depending on whether you want to use Cisco JTAPI or Singlewire InformaCast for sending emergency notifications.

# Configuring Adapter Properties

You need to configure adapter properties for the available adapters. Adapter configuration needs to be performed in the database by inserting data into the SDP_ADAPTER_PROPERTIES table.

Table 3-4 provides information on the properties of the adapters, which can be used to come up with the SQL scripts that are then to be run against the database.

*Table 3-4 Adapter Properties - Details*

| Adapter (SDP_ADAPTER_DEFN) | Defined Adapter Property (SDP_ADAPTER_PROP_DEFN) | Adapter Property (SDP_ADAPTER_PROPERTIES | Sample Value |
|---|---|---|---|
| com.cisco.cre.ssp.adapter.obix.ObixBean | username | The Obix username | admin |
| | password | The Obix password | pAsswOrd |
| | url | The Obix URL | http : // 10.76.99.4/obix |
| | obixUrl | The Obix URL | http :// 10.76.99.4/obix |
| com.cisco.cre.ssp.adapter.audiovideo.AudioVideoBean | appPath | The path of the crestron application. | /crestron/Home.aspx |
| | hostname | The IP address of the host on which the Smart+Connected MS & DS Crestron .NET component is setup on IIS. | 10.106.12.13 |
| | portNumber | The IIS port of the host on which the Smart+Connected MS & DS Crestron .NET component is setup. | 80 |

*Table 3-4 Adapter Properties - Details (Continued)*

| Adapter (SDP_ADAPTER_DEFN) | Defined Adapter Property (SDP_ADAPTER_PROP_DEFN) | Adapter Property (SDP_ADAPTER_PROPERTIES | Sample Value |
|---|---|---|---|
| com.cisco.cre.ssp.adapter.exch.bean.ExchangeBean | exch_udpserverip | The MS application server IP address/ DNS hostname | 10.106.13.15 |
| | exch_filepath | The path of the file in Exchange Server. | /apps/exchange-xml/ |
| | exch_defaulttimezone | The timezone of the Exchange Server. | Asia/Shanghai |
| | exch_domain | The domain name of the Exchange Server. | EXCH2K10 |
| | exch_host | The IP address/DNS hostname Exchange Server. | 10.106.13.143 |
| | mail.smtp.host | This property is not used currently. | – |
| | exch_url | Exchange URL | https: // 10.106.13.143/ews/exchange.asmx |
| | exch_username | The Exchange server username. | scc-qa |
| | exch_password | The Exchange server password. | Cisco_123 |
| | mail.smtp.port | This property is not used currently. | – |
| | exch_udpserverport | The MS Application server listen port. | 7001 |
| com.cisco.cre.ssp.adapter.remedy.RemedyBean | password | The Remedy user's password | WPRcreIT4 |
| | userName | The Remedy user's username. | RA_WPRIT.gen |
| | scheme | The protocol to invoke the remedy HTTP/HTTPS. | http |
| | appPath | The path of the remedy application. | /arsys/servlet/RemedyIncidentWrapper |
| | remedyurl | The Remedy server URL. | http: // alli-stg-01.cisco.com/arsys/servlet/RemedyIncidentWrapper |
| | hostName | The Remedy server IP Address/DNS hostname. | alli-stg-01.cisco.com |
| | portNumber | The Remedy Server port. | 80 |

*Table 3-4 Adapter Properties - Details (Continued)*

| Adapter (SDP_ADAPTER_DEFN) | Defined Adapter Property (SDP_ADAPTER_PROP_DEFN) | Adapter Property (SDP_ADAPTER_PROPERTIES | Sample Value |
|---|---|---|---|
| com.cisco.cre.ssp.adapter.email.bean.EmailBean | toAddress | The address to which the e-mail needs to be sent for the case management. This is usually the facilities team helpdesk mail alias. | support @ cisco.com |
| | fromAddress | The address from which the e-mail needs to be sent for the case management. Usually, this mailbox is set up as a no-reply mailbox. | noreply-sdp @ cisco.com |
| | mail.smtp.port | The SMTP Server Port. | 25 |
| | mail.smtp.host | The IP Address/ hostname of the SMTP server. | mailman.cisco.com |
| com.cisco.cre.ssp.adapter.ipphone.bean.IPPhoneOperationBean | password | The application user's password created in CUCM. For more information on the application password, see the "Assigning Roles (Groups) to the Application User" section on page 3-2. | ccmadmin |
| | username | The application username created in CUCM. For more information on the application username, see the "Assigning Roles (Groups) to the Application User" section on page 3-2. | Cisco @ 123 |
| | serviceuri | The uri of the call manager configured. | https: //10.106.6.111/realtimeservice/services/RisPort70 |
| | appusername | The application username created in CUCM. For more information on the application username, see the "Assigning Roles (Groups) to the Application User" section on page 3-2. | cisco |
| | apppassword | The application user's password created in CUCM. For more information on the application password, see the "Assigning Roles (Groups) to the Application User" section on page 3-2. | cisco |
| com.cisco.cre.ssp.adapter.dmm.DMMBean | dmm_url | The DMM URL. | https: //scc-qa-dmm-1.cisco.com:8443 |
| | dmm_username | The DMM username. | superuser |
| | dmm_domain | The domain of DMM. | scc-qa-dmm-1.cisco.com |
| | dmm_password | The DMM password. | Cisco_123 |

*Table 3-4 Adapter Properties - Details (Continued)*

| Adapter (SDP_ADAPTER_DEFN) | Defined Adapter Property (SDP_ADAPTER_PROP_DEFN) | Adapter Property (SDP_ADAPTER_PROPERTIES | Sample Value |
|---|---|---|---|
| com.cisco.cre.ssp.adapter.ipphone.bean.InformaCastBean | uri | Infomacast URL | https: //10.106.15.161:8444/InformaCast/services/MessageServiceV2?wsdl |
| | username | Infomacast username | admin |
| | password | Infomacast password | admin |

# Configuring Adapters to a Location

The adapters are configured to the specific location by mapping an adapter instance ID with the corresponding location in the SDP_ADAPTER_LOCATION_LINK table. When an adapter instance is associated to a location, the adapter instances are automatically applied to all the child locations for that location.

For a sample configuration for the ObixBean mapped to the location ID 10011, see the "Sample Adapter Configurations" section on page 3-22.

## Sample Adapter Configurations

### SDP_ADAPTER_DEFN table

This configuration is part of the seed data.

*Table 3-5 SDP_ADAPTER_DEFN table - Adapter Definition Mapped to an Adapter Definition ID*

| ADAPTER_DEFN_ID | ADAPTER | ADAPTER_JAR_LOCATION | VERSION | CREATED_BY | CREATED_DT | UPDATED_BY | UPDATED_DT | TENANT_ID |
|---|---|---|---|---|---|---|---|---|
| 10 | com.cisco.cre.ssp.adapter.obix.ObixBean | – | version1 | superadmin | 27-JUN-12 | superadmin | 27-JUN-12 | 0 |

### SDP_ADAPTER_INSTANCE

*Table 3-6 SDP_ADAPTER_INSTANCE - Adapter Definition ID Mapped to an Adapter Instance ID*

| ADAPTER_INSTANCE_ID | ADAPTER_DEFN_ID | VERSION | CREATED_BY | CREATED_DT | UPDATED_BY | UPDATED_DT | TENANT_ID |
|---|---|---|---|---|---|---|---|
| 10 | 10 | version1 | superadmin | 27-JUN-12 | superadmin | 27-JUN-12 | 0 |

### SDP_ADAPTER_LOCATION _LINK table

This table allows you to link the adapter instances with one or more locations. When an adapter is associated to a location, the adapter instances are automatically applied to all the child locations for that location.

*Table 3-7 SDP_ADAPTER_LOCATION _LINK Table - Adapter Instance ID Configured to the Preferred Location*

| ADAPTER_INSTANCE_ID | LOCATION_ID | CREATED_BY | CREATED_DT | UPDATED_BY | UPDATED_DT | TENANT_ID |
|---|---|---|---|---|---|---|
| 10 | 10011 | versions | 18-NOV-11 | versions | 18-NOV-11 | 0 |

For more information on how to configure adapters, see the *Cisco Service Delivery Platform Installation Guide*.

If you change the values in these tables, you must restart the application to enable the changes.

**Note** The IPPhoneOperationBean and the InformaCastBean adapters cannot point to the same location or the child location of either of these adapters in the sdp_adapter_location_link table.

# Integrating CUCM and InformaCast

InformaCast is an emergency notification solution by Singlewire, that can broadcast audio stream, text messages, and notifications to multiple Cisco IP phones simultaneously as a group. InformaCast can broadcast either a live, recorded, or a scheduled message on your IP network with a single click from your computer or through API calls.

To use InformaCast in a telephony environment, you have to integrate Cisco Unified Communications Manager (CUCM) and InformaCast. Also ensure that you:

- Integrate Cisco Unified Communications Manager (CUCM) and InformaCast.
- Set up a multicast network as the InformaCast broadcast works on multicast network.

**Note** You must verify that the InformaCast version and the CUCM version are compatible before you begin to integrate them.

For more information on how to configure and integrate the Cisco Unified Communications Manager (CUCM) and InformaCast, refer to the InformaCast help documentation and Singlewire online knowledge base.

# Changing the User Portal Theme

You can change the skin of the Smart+Connected MS user interface, so that the users can view the changed skin instead of the default skin. To activate a skin, you need to update the value of the key "skin_name" in the aplication.properties file. For example, skin_name=red

**Note** The value should be a valid skin folder name. It is necessary that you restart the application to enable the changes.