



Integrating  
Cisco Unity Connection  
with  
Cisco Unified CME-as-SRST

|   |    |
|---|----|
| Introduction.....   | 3  |
| Requirements .....  | 3  |
| Components Used .....   | 3  |
| Conventions .....   | 3  |
| Integrating Cisco Unity Connection with Cisco CME-as-SRST ..... | 3  |
| Cisco Unity Connection Configuration .....                      | 4  |
| Cisco Unified Communications Manager Express Configuration..... | 13 |
| Caveat(s) .....   | 16 |

## Introduction

This document provides a sample configuration to integrate Cisco Communications Manager Express 4.0 or later operating in SRST mode (CME-as-SRST) and Cisco Unity Connection 2.0 or later in your telephony network.

## Requirements

Cisco recommends that you have knowledge of Cisco Unified Communications Manager Express, SRST and Cisco Unity Connection.

## Components Used

The information in this document is based on the following:

- Cisco Unified Communications Manager Express 4.0 or later
- Cisco Unity Connection 7.0 or later

The information in this document was created from the devices in a specific lab environment. If your network is live, make sure that you understand the potential impact of any changes that you make.

## Conventions

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

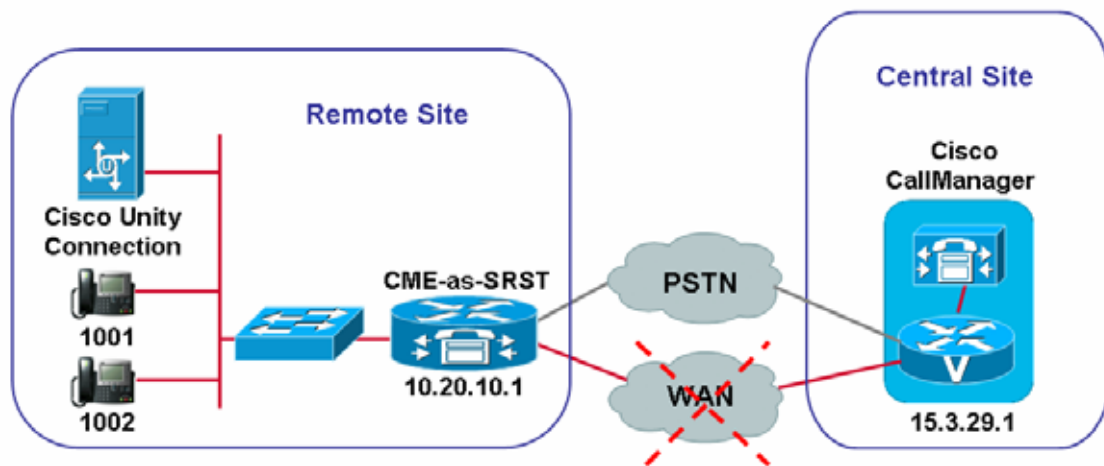
## Integrating Cisco Unity Connection with Cisco CME-as-SRST

This feature will be active under the following conditions:

- Cisco Unity Connection server is located at the remote site and registered with the Cisco Unified Communications Manager at the central site. When the WAN link fails, the phones fall back to the CME-as-SRST device. Cisco Unity Connection can also fall back to the CME-as-SRST device hence providing the remote site users with the capability to have access to their voicemail with MWI during WAN outage.

Figure 1 shows the network topology with the Cisco Unified Communications Manager at the central site along with the Cisco Unity Connection and Cisco Unified Communications Manager Express operating in SRST mode at the remote site.

**Figure 1 – Network Topology**

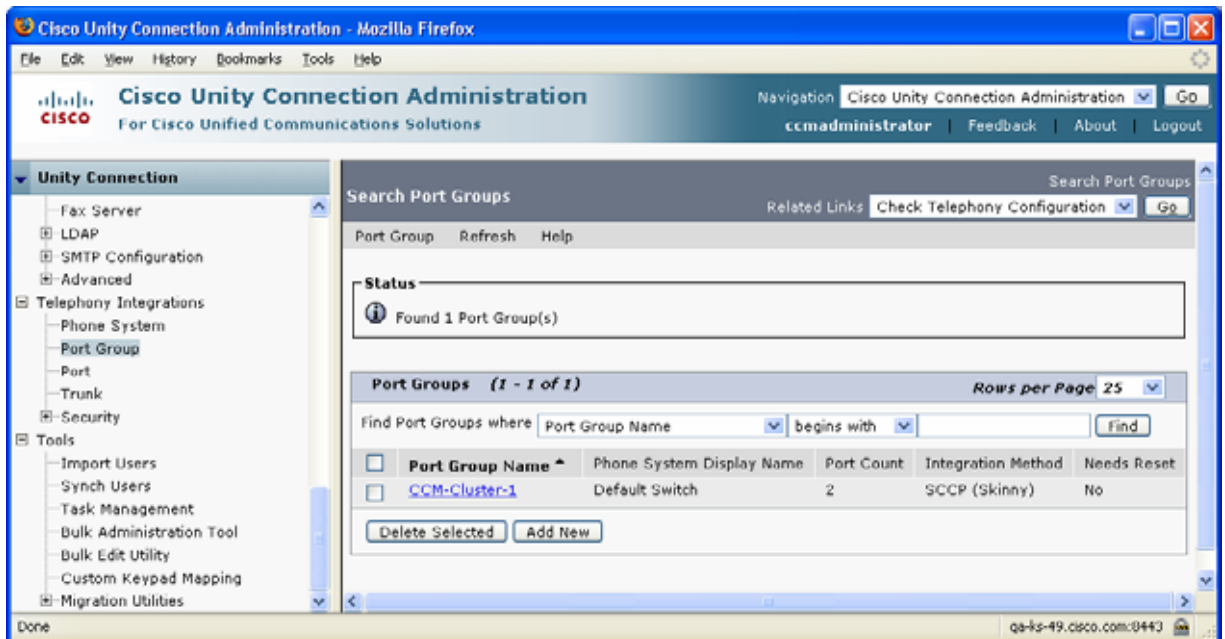


Complete the below steps to integrate Cisco Unity Connection with Cisco Unified Communications Manager Express operating in SRST mode.

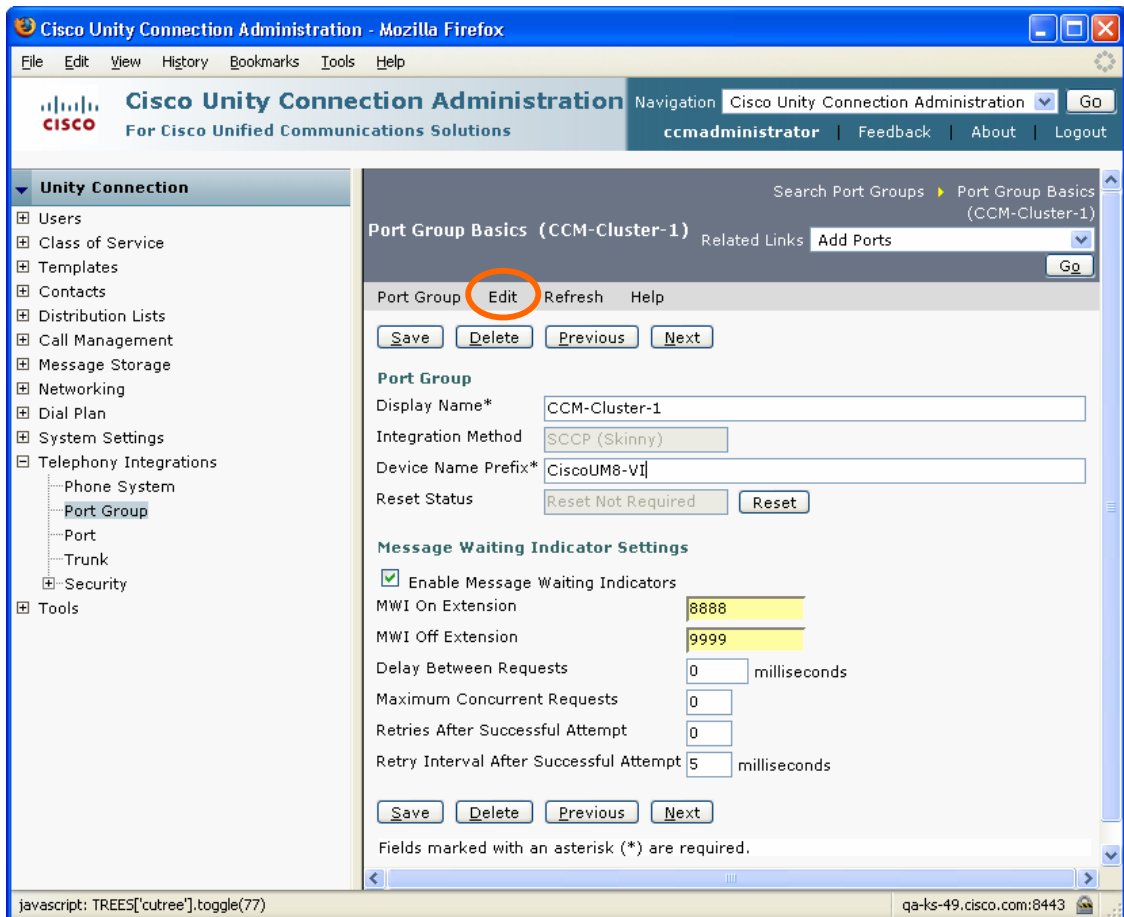
### ***Cisco Unity Connection Configuration***

1. Log into Cisco Unity Connection Administration (commonly referred to as “the SA”) using an administrative account

2. Click on Telephony Integrations → Port Group



3. Select an SCCP (Skinny) port group that is part of a CCM cluster to which you would like to add CCME-as-SRST support. In this example, we select the CCM-Cluster-1 port group (which happens to be the only one available in this example), the resulting screen is shown below.



4. Click on Edit → Servers, the resulting screen is shown below.

The screenshot displays the Cisco Unity Connection Administration web interface in Mozilla Firefox. The page title is "Cisco Unity Connection Administration - Mozilla Firefox". The main header includes the Cisco logo and "Cisco Unity Connection Administration For Cisco Unified Communications Solutions". The navigation menu shows "Cisco Unity Connection Administration" and "Go". The user is logged in as "ccmadministrator".

The left sidebar shows the "Unity Connection" menu with options like Users, Class of Service, Templates, Contacts, Distribution Lists, Call Management, Message Storage, Networking, Dial Plan, System Settings, and Telephony Integrations. Under Telephony Integrations, "Port Group" is selected.

The main content area is titled "Edit Servers". It includes a search bar for "Port Groups" (Port Group Basics (CCM-Cluster-1)) and a "Related Links" section with "Check Telephony Configuration". Below this are buttons for "Port Group", "Edit", "Refresh", and "Help". The "Edit" button is circled in orange. There is also a "Save" button.

The "Cisco Unified Communications Manager Servers" section contains a table with columns: Order, IP Address or Host Name, Port, TLS Port, and Server Type. The table lists three servers:

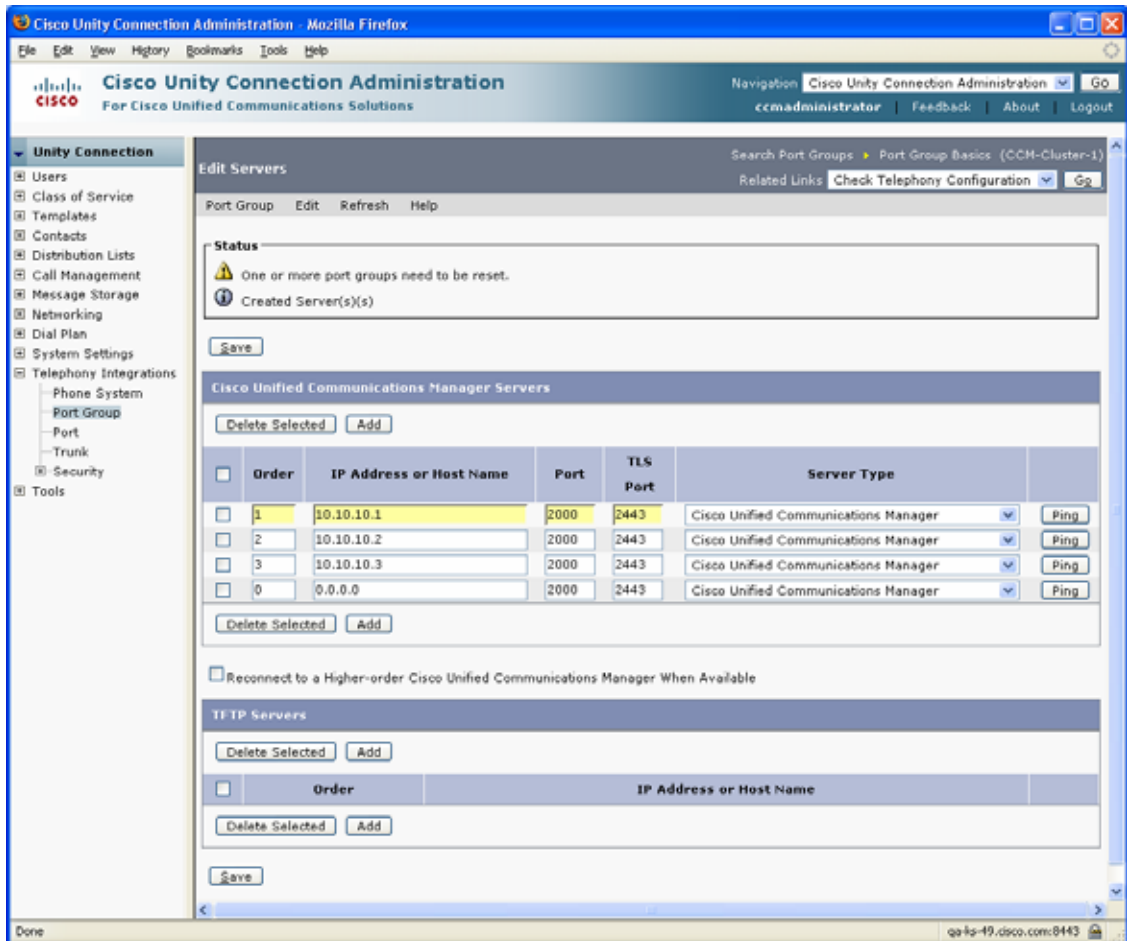
| Order | IP Address or Host Name | Port | TLS Port | Server Type                          |
|-------|-------------------------|------|----------|--------------------------------------|
| 1     | 10.10.10.1              | 2000 | 2443     | Cisco Unified Communications Manager |
| 2     | 10.10.10.2              | 2000 | 2443     | Cisco Unified Communications Manager |
| 3     | 10.10.10.3              | 2000 | 2443     | Cisco Unified Communications Manager |

Below the table are "Delete Selected" and "Add" buttons. There is also a checkbox for "Reconnect to a Higher-order Cisco Unified Communications Manager When Available".

The "TFTP Servers" section has a table with columns: Order and IP Address or Host Name. It also includes "Delete Selected" and "Add" buttons.

At the bottom of the page, there is a "Save" button and a status bar showing "Done" and "qa-19.disco.com:8443".

- In the Cisco Communications Manager Servers section, click on Add, the resulting screenshot is shown below





- A new server line item will appear. For the Order field, enter a number higher in value than the highest existing value. Smaller Order values represent Cisco Communications Manager publishers, larger Order values indicate Cisco Call Manager subscribers. In this example, you would change the default Order value of “0” to “4”

The screenshot shows the Cisco Unity Connection Administration web interface in Mozilla Firefox. The page title is "Cisco Unity Connection Administration" and the user is logged in as "ccmadministrator". The left sidebar shows a navigation tree with "Unity Connection" expanded, and "Port Group" selected under "Telephony Integrations".

The main content area is titled "Edit Servers" and includes a "Status" section with a warning icon and the message: "One or more port groups need to be reset. Created Server(s)(s)". Below this is a "Save" button.

The "Cisco Unified Communications Manager Servers" section contains a table with the following data:

| <input type="checkbox"/> | Order | IP Address or Host Name | Port | TLS Port | Server Type                          |                                     |
|--------------------------|-------|-------------------------|------|----------|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> | 1     | 10.10.10.1              | 2000 | 2443     | Cisco Unified Communications Manager | <input type="button" value="Ping"/> |
| <input type="checkbox"/> | 2     | 10.10.10.2              | 2000 | 2443     | Cisco Unified Communications Manager | <input type="button" value="Ping"/> |
| <input type="checkbox"/> | 3     | 10.10.10.3              | 2000 | 2443     | Cisco Unified Communications Manager | <input type="button" value="Ping"/> |
| <input type="checkbox"/> | 4     | 0.0.0.0                 | 2000 | 2443     | Cisco Unified Communications Manager | <input type="button" value="Ping"/> |

Below the table are "Delete Selected" and "Add" buttons, and a checkbox labeled "Reconnect to a Higher-order Cisco Unified Communications Manager When Available".

The "TFTP Servers" section is currently empty, with "Delete Selected" and "Add" buttons.

A "Save" button is located at the bottom of the page.

- For the IP Address or Host Name field, enter the DNS or IP address of the CCME-as-SRST router. It is assumed that the IP address is 10.20.10.1 for this example

The screenshot shows the Cisco Unity Connection Administration web interface. The main content area is titled "Edit Servers" and displays the configuration for a port group named "Port Group Basics (CCM-Cluster-1)".

**Status:** One or more port groups need to be reset. Created Server(s)(s)

**Cisco Unified Communications Manager Servers:**

| Order | IP Address or Host Name | Port | TLS Port | Server Type                          |      |
|-------|-------------------------|------|----------|--------------------------------------|------|
| 1     | 10.10.10.1              | 2000 | 2443     | Cisco Unified Communications Manager | Ping |
| 2     | 10.10.10.2              | 2000 | 2443     | Cisco Unified Communications Manager | Ping |
| 3     | 10.10.10.3              | 2000 | 2443     | Cisco Unified Communications Manager | Ping |
| 4     | 10.20.10.1              | 2000 | 2443     | Cisco Unified Communications Manager | Ping |

**TFTP Servers:**

| Order | IP Address or Host Name |
|-------|-------------------------|
|       |                         |

The interface also includes a "Save" button at the bottom and a "Reconnect to a Higher-order Cisco Unified Communications Manager When Available" checkbox.

8. Change the Server Type to Cisco Communications Manager Express and click Save to save your changes.

The screenshot shows the Cisco Unity Connection Administration web interface in Mozilla Firefox. The page title is "Cisco Unity Connection Administration" and the user is logged in as "ccmadministrator". The left sidebar shows a navigation tree with "Telephony Integrations" expanded to "Port Group". The main content area is titled "Edit Servers" and shows a "Port Group Basics (CCM-Cluster-1)" configuration. A status message indicates that one or more port groups need to be reset and that servers have been created. Below this, there is a table of "Cisco Unified Communications Manager Servers".

| <input type="checkbox"/> | Order | IP Address or Host Name | Port | TLS Port | Server Type                                  |      |
|--------------------------|-------|-------------------------|------|----------|--|------|
| <input type="checkbox"/> | 1     | 10.10.10.1              | 2000 | 2443     | Cisco Unified Communications Manager         | Ping |
| <input type="checkbox"/> | 2     | 10.10.10.2              | 2000 | 2443     | Cisco Unified Communications Manager         | Ping |
| <input type="checkbox"/> | 3     | 10.10.10.3              | 2000 | 2443     | Cisco Unified Communications Manager         | Ping |
| <input type="checkbox"/> | 4     | 10.20.10.1              | 2000 | 2443     | Cisco Unified Communications Manager Express | Ping |

Below the table, there is a checkbox for "Reconnect to a Higher-order Cisco Unified Communications Manager When Available" which is currently unchecked. There are also sections for "TFTP Servers" and "Save" buttons.

9. Click on Edit → Port Group Basics

The screenshot displays the Cisco Unity Connection Administration web interface in Mozilla Firefox. The browser title is "Cisco Unity Connection Administration - Mozilla Firefox". The page header includes the Cisco logo and "Cisco Unity Connection Administration For Cisco Unified Communications Solutions". The navigation bar shows "Navigation Cisco Unity Connection Administr ccmadministrator | Feedback | All".

The left sidebar is titled "Unity Connection" and contains a tree view with the following items: Users, Class of Service, Templates, Contacts, Distribution Lists, Call Management, Message Storage, Networking, Dial Plan, System Settings, and Telephony Integrations. Under "Telephony Integrations", there are sub-items: Phone System, Port Group (highlighted), Port, Trunk, and Security. At the bottom of the sidebar is "Tools".

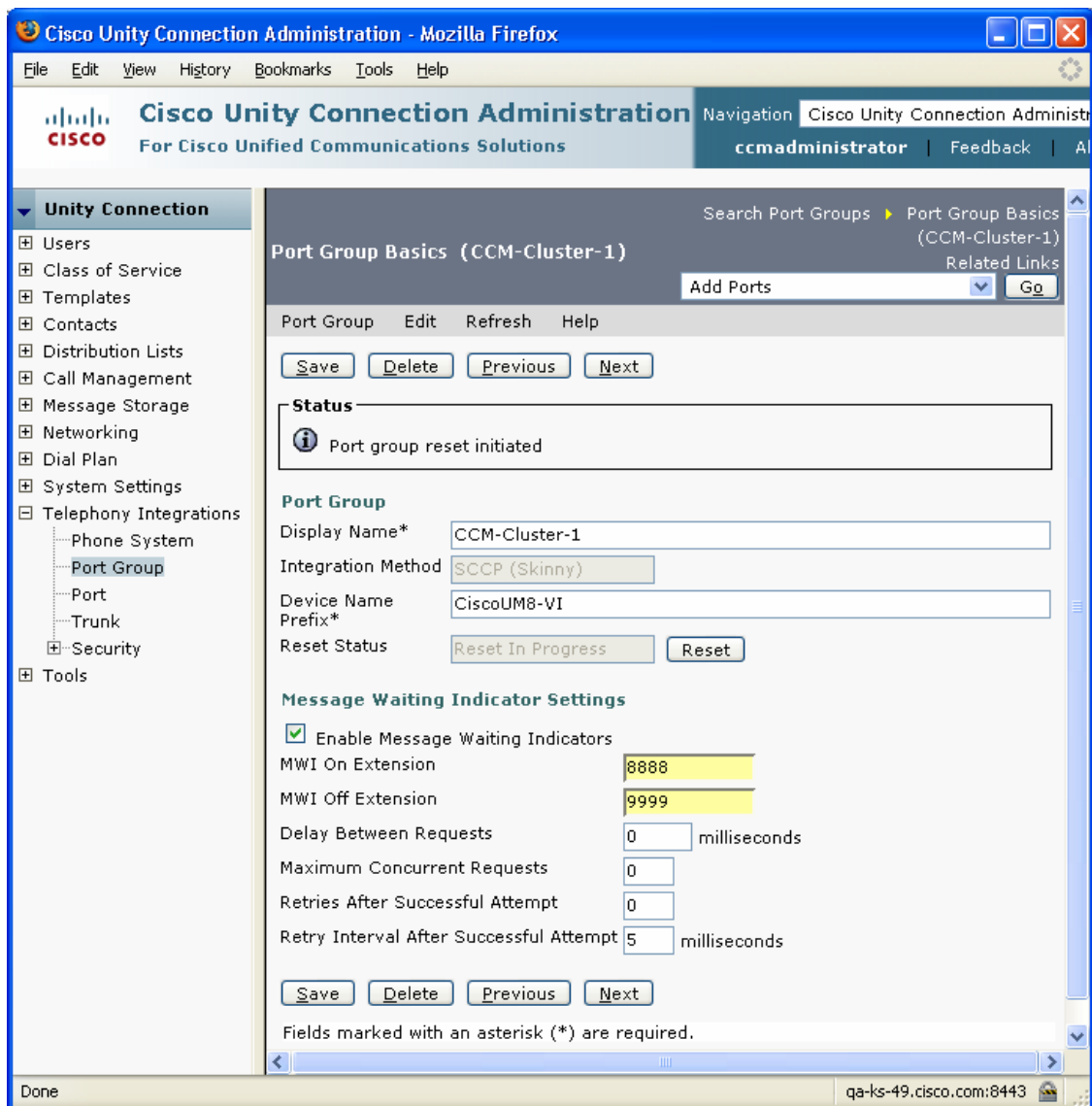
The main content area is titled "Port Group Basics (CCM-Cluster-1)". It features a search bar for "Port Groups" and a dropdown menu for "Port Group Basics (CCM-Cluster-1)". Below this is a "Related Links" section with an "Add Ports" button and a "Go" button. A secondary navigation bar includes "Port Group", "Edit", "Refresh", and "Help".

The configuration area contains several sections:

- Status:** A warning icon indicates "One or more port groups need to be reset." An information icon indicates "Updated Port Group".
- Port Group:** Fields include "Display Name\*" (CCM-Cluster-1), "Integration Method" (SCCP (Skinny)), "Device Name Prefix\*" (CiscoUM8-VI), and "Reset Status" (Reset Required) with a "Reset" button.
- Message Waiting Indicator Settings:** Includes a checked checkbox for "Enable Message Waiting Indicators". Fields for "MWI On Extension" (8888) and "MWI Off Extension" (9999) are highlighted in yellow. Other fields include "Delay Between Requests" (0 milliseconds), "Maximum Concurrent Requests" (0), "Retries After Successful Attempt" (0), and "Retry Interval After Successful Attempt" (5 milliseconds).

At the bottom of the configuration area are "Save", "Delete", "Previous", and "Next" buttons. The browser status bar at the bottom shows "Done" and the address "qa-ks-49.cisco.com:8443".

10. Press the Reset button to have the changes take effect.



## Cisco Unified Communications Manager Express Configuration

1. Enable CME-as-SRST mode on the CME and configure the voicemail pilot number (6000, in this example).

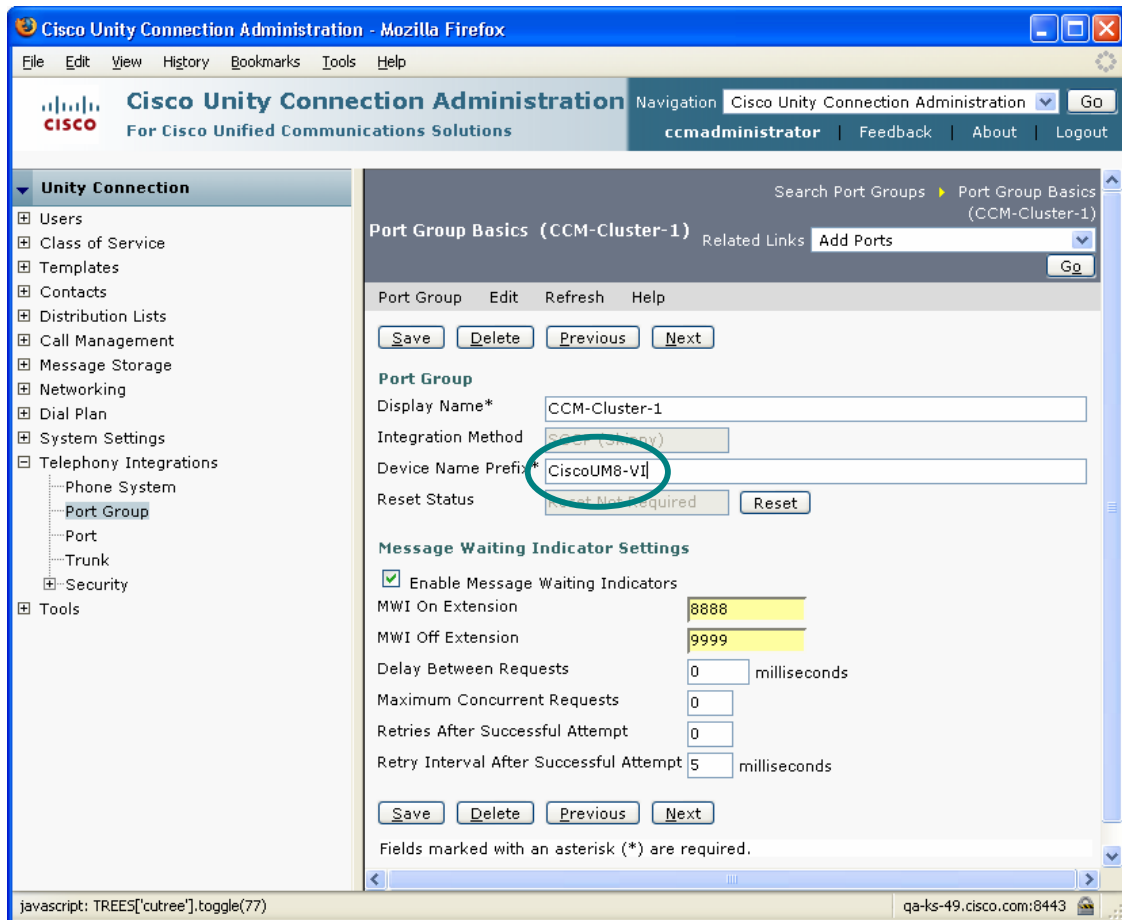
```
telephony-service
srst mode auto-provision { none | all | dn }
voicemail 6000
```

```
max-ephones 20
max-dn 30
ip source-address 10.10.11.9 port 2000
system message Cisco Unified CME-as-SRST
```

2. Configure the ephone-dn's for the Cisco Unity Connection VM ports on the CME-as-SRST. Make sure that the number of VM ports configured on the CME-as-SRST is same as what is configured in the Cisco Unity integration for this cluster (CCM-CME-as-SRST, in the example)

```
!
ephone-dn 11
  number 6000
  no huntstop
!
!
ephone-dn 12
  number 6000
  preference 1
  no huntstop
!
!
ephone-dn 13
  number 6000
  preference 2
  no huntstop
!
!
ephone-dn 14
  number 6000
  preference 3
!
```

3. Configure the ephone's on the CME-as-SRST and assign the vm-device-id names accordingly. Make sure that the vm-device-id names match with the Cisco Communications Manager device name on the Cisco Unity Connection for this cluster (CCM-CME-as-SRST, in this example). To find the voice ports' device name prefix log into Cisco Unity Connection Administration, then navigate to Telephony Integrations → Port Group and select the appropriate Port Group, the screenshot below shows where the device name prefix can be found:



```
!  
ephone 1  
  vm-device-id CiscoUM8-VI1  
  button 1:11  
!  
ephone 2  
  vm-device-id CiscoUM8-VI2  
  button 1:12  
!  
ephone 3  
  vm-device-id CiscoUM8-VI3  
  button 1:13  
!  
ephone 4  
  vm-device-id CiscoUM8-VI4  
  button 1:14
```

4. Configure the MWI on and off ephone-dn's. The MWI on and off numbers on CME-as-SRST should be same as the MWI on and off numbers configured in the Cisco Unity Connection Integration for this cluster.

```
!  
ephone-dn 15  
  number 1061  
  mwi on  
!  
ephone-dn 16  
  number 1062  
  mwi off  
!
```

### **Caveat(s)**

- MWI has to be resynchronized from the Unity Connection server whenever a failover happens from CCM to CME-as-SRST or vice versa. To resynchronize the MWI for all subscribers, log into Unity Connection Administration and navigate to Telephony Integrations → Phone System and select the appropriate phone system (the phone system associated with the port group where the SRST changes were made). Press the Run next to “Synchronize All MWIs on This Phone System.”



Cisco Unity Connection Administration - Mozilla Firefox

File Edit View History Bookmarks Tools Help

**Cisco Unity Connection Administration** For Cisco Unified Communications Solutions

Navigation Cisco Unity Connection Administration Go

ccadministrator | Feedback | About | Logout

**Unity Connection**

- Users
- Class of Service
- Templates
- Contacts
- Distribution Lists
- Call Management
- Message Storage
- Networking
- Dial Plan
- System Settings
- Telephony Integrations
  - Phone System**
  - Port Group
  - Port
  - Trunk
- Security
- Tools

Search Phone Systems Phone System Basics (Default Switch)

Related Links Add Port Group Go

Phone System Edit Refresh Help

Save Delete Previous Next

**Phone System**

Phone System Name\* Default Switch

Default TRAP Switch

**Message Waiting Indicators**

Send Message Counts

Use Same Port for Enabling and Disabling MWIs

Force All MWI Off for this Phone System

Run Synchronize All MWIs on This Phone System

**Call Loop Detection by Using DTMF**

Enable for Supervised Transfers

Enable for Forwarded Message Notification Calls (by Using DTMF)

DTMF Tone To Use A

Guard Time 2500 milliseconds

**Call Loop Detection by Using Extension**

Enable for Forwarded Message Notification Calls (by Using Extension)

**Phone View Settings**

Enable Phone View

CTI Phone Access User Name

CTI Phone Access Password

**Outgoing Call Restrictions**

Enable outgoing calls

Disable all outgoing calls immediately

Disable all outgoing calls between

Beginning Time: 01 00 AM

Ending Time: 01 00 AM

Save Delete Previous Next

Fields marked with an asterisk (\*) are required.

Done qa-ks-49.cisco.com:8443