Nortel CS1000 R 4.0 using T1 QSIG to Cisco Unified Communications Manager 5.1.2 and Cisco Emergency Responder 2.0.

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Introduction

The following is an Application Note for E911 Interoperability of a Cisco Unified Communications Manager (CUCM) 5.1.2 and Cisco Emergency Responder (CER) 2.0 to a Nortel CS1000 R 4.0 via a Cisco 3825 T1-QSIG trunk as MGCP gateway. The CUCM system is connected to a simulated E911 Public Safety Answering Point (PSAP) via a Cisco 3825 w/ CAMA trunk registered using H323.

The Network Topology diagram shows the test set-up for interoperability between the Cisco Unified Communications Manager and Cisco Emergency Responder connected to the PBX via a Cisco 3825 (MGCP gateway) T1 QSIG trunk and connected to E911 PSAP using a Cisco 3825 H323 gateway via a CAMA trunk.

This Application Note uses the C3825 IOS-voice-gateway, however other Cisco voice gateways are also an option to use since the voice gateway implementation does not depend on the platform. Here is a list of Cisco Products capable of voice gateway functionality: Care must be taken when selecting a voice gateway platform depending of the capacity required for the intended deployments

Cisco 2800 Series Integrated Services Routers
Cisco 3800 Series Integrated Services Routers
Cisco 2600XM Series Multiservice Platforms
Cisco 3700 Series Routers

Network Topology
Limitations

Unique DID numbers must be used to associate with each Emergency Response Location to allow the return call if the 911 caller is disconnected.
Each available calling party that might dial 911 from the PBX side must have that calling party number configured in the Manually Configured Phones screen of the Cisco Emergency Responder.

System Components

Hardware Requirements

- Cisco 3825 Gateway with VIC2-4FXO (CAMA trunk)
- Cisco 3825 Gateway with VWIC-2MFT-T1 (QSIG)
- Cisco Cat3500 switch
- Cisco Unified Communications Manager server
- Cisco Emergency Responder server
- Nortel CS1000 PBX

Software Requirements

- IOS Software release “C3825-ipvoiceK9-m.12.4 (15)T1”
- IOS Software release “C3825-ADVENTERPRISEK9_IVS-M .12.4(11).T1
- Cisco Unified Communications Manager 5.1.2
- Cisco Emergency Responder 2.0
- PBX Software: Release 4.0

Features

Key features supported

- Calling Number
- E911 ERL DID number passed to PSAP
- Incoming DID calling to disconnected 911 originating caller

Conclusion

Test emergency 911 call from a PBX digital station was routed to the T1 QSIG trunk, of the Cisco Voice MGCP gateway, and was correctly associated to the appropriate Emergency Response Location. The call was connected through the Cisco 3825 CAMA trunk to the PSAP Emulator. The Emergency Response Location associated the ten digit DID call back number (ELIN) correctly and sent it to the PSAP, audio connection was also achieved. The PBX digital station was then disconnected.

A return call was originated from an incoming trunk (PSTN side) in the same Cisco Unified Communications Manager Partition. The number dialed was the DID digits of the 10 digit call back number sent to the PSAP on the previous 911 call (ELIN number). The call was routed through to the PBX digital station that had originated the E911 call. The call was disconnected and an alternate trunk was used to dial the same DID number and the call was routed through, again, to the PBX digital station that had originated the E911 call.

Test emergency 911 calls were made from each PBX digital station and Cisco IP phone. All calls were confirmed to select its associated Emergency Response Location and the associated 10 digit DID call back number. In each case, the call was disconnected and the call back number was confirmed to reach the phone that had originated the E911 call.

Emergency 911 calls made from a Nortel CS1000 PBX utilizing a T1 QSIG trunk configured as ISO, associates with the correct Emergency Response Location and routes to the associated PSAP with the correctly formatted 10 digit DID call back number.

The call back DID number routes the return call to the correct phone that had originated the E911 call from the PBX digital phone.
**Configuration**

**Configuring Cisco Communications Manager**

**Partitions**
Phone Partition

<table>
<thead>
<tr>
<th>Status</th>
<th>Ready</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition Information</td>
<td></td>
</tr>
<tr>
<td>Name*</td>
<td>Phones</td>
</tr>
<tr>
<td>Description</td>
<td>Phones</td>
</tr>
<tr>
<td>Time Schedule</td>
<td>Not Selected</td>
</tr>
<tr>
<td>Time Zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Originating Device</td>
</tr>
</tbody>
</table>

- indicates required item.
E911 Partition

Calling Search Space
### Calling Search Space Configuration

**Status**
- Status: Ready

**Calling Search Space Information**
- **Name**: Phonescss
- **Description**: phonescss

**Route Partitions for this Calling Search Space**
- **Available Partitions**: E911
- **Selected Partitions**: Phones

---

* indicates required item.
**Selected Partitions are ordered by highest priority*
CSS E911

Cisco Unified CallManager Administration

Status: Ready

Calling Search Space Information

Name: E911css
Description: E911css

Route Partitions for this Calling Search Space

Available Partitions

Selected Partitions

- indicates required item.
CUCM IP phones
### Protocol Specific Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet Capture Mode</td>
<td>None</td>
</tr>
<tr>
<td>Packet Capture Duration</td>
<td>0</td>
</tr>
<tr>
<td>Presence Groups</td>
<td>Standard Presence group</td>
</tr>
<tr>
<td>Device Security Profile</td>
<td>Cisco 7961 - Standard SCCP Non-Secure Profile</td>
</tr>
<tr>
<td>SUBSCRIBE Calling Search Space</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Unattended Port</td>
<td>False</td>
</tr>
<tr>
<td>Require DTMF Reception</td>
<td>False</td>
</tr>
<tr>
<td>RFC2833 Disabled</td>
<td>False</td>
</tr>
</tbody>
</table>

### Certification Authority Proxy Function (CAPF) Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate Operation</td>
<td>No Pending Operation</td>
</tr>
<tr>
<td>Authentication Mode</td>
<td>By Null String</td>
</tr>
<tr>
<td>Authentication String</td>
<td></td>
</tr>
<tr>
<td>Key Size (Bits)</td>
<td>1024</td>
</tr>
<tr>
<td>Operation Completes By</td>
<td>2007 5 6 12 (YYYY/MM/DD:HH)</td>
</tr>
<tr>
<td>Certificate Operation Status: None</td>
<td></td>
</tr>
</tbody>
</table>

Note: Security Profile Contains Additional CAPF Settings.

### Expansion Module Information
### Expansion Module Information
- Module 1: <None>
- Module 1 Load Name: 
- Module 2: <None>
- Module 2 Load Name: 

### External Data Locations Information (Leave blank to use default)
- Directory: 
- Messages: 
- Services: 
- Authentication Server: 
- Proxy Server: 
- Idle: 
- Idle Timer (seconds): 

### Extension Information
- Enable Extension Mobility: 
- Log In Profile: -- Not Selected --
- Log In User ID: <None>
- Log In Time: <None>
- Log Out Time: <None>

### MLPP Information
- MLPP Domain: <None>
- MLPP Indication*: Default
- MLPP Preemption*: Default

### Secure Shell Information
- Secure Shell User: 

---

This page contains information about expansion modules, external data locations, extension information, and MLPP information. It is part of a larger document, possibly related to network or system configurations.
<table>
<thead>
<tr>
<th>Feature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Access*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Span to PC Port*</td>
<td>Disabled</td>
</tr>
<tr>
<td>Logging Display*</td>
<td>PC Controlled</td>
</tr>
<tr>
<td>Load Server</td>
<td></td>
</tr>
<tr>
<td>Recording Tone*</td>
<td>Disabled</td>
</tr>
<tr>
<td>Recording Tone Local Volume*</td>
<td>160</td>
</tr>
<tr>
<td>Recording Tone Remote Volume*</td>
<td>50</td>
</tr>
<tr>
<td>Recording Tone Duration</td>
<td></td>
</tr>
<tr>
<td>RTCP*</td>
<td>Disabled</td>
</tr>
<tr>
<td>100 ms Soft Key Timer</td>
<td></td>
</tr>
<tr>
<td>Auto Call Select*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Log Server</td>
<td></td>
</tr>
<tr>
<td>Advertise G.722 Codec*</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Wideband Headset UI Control*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Wideband Handset UI Control*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Wideband Headset*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Wideband Handset*</td>
<td></td>
</tr>
<tr>
<td>Peer Firmware Sharing*</td>
<td>Disabled</td>
</tr>
<tr>
<td>Cisco Discovery Protocol (CDP): Switch Port*</td>
<td>Enabled</td>
</tr>
<tr>
<td>Cisco Discovery Protocol (CDP): Port*</td>
<td>Enabled</td>
</tr>
</tbody>
</table>

Note: Security Profile Contains Addition CAP Settings.
### AAR Group
- None

### User Hold MON Audio Source
- None

### Network Hold MON Audio Source
- None

### Auto Answer
- Auto Answer Off

#### Call Forward and Call Pickup Settings

<table>
<thead>
<tr>
<th>Voice Mail</th>
<th>Destination</th>
<th>Calling Search Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward All</td>
<td>&lt; None &gt;</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Secondary Calling Search Space for Forward All</td>
<td>&lt; None &gt;</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward Busy Internal</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward Busy External</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward No Answer Internal</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward No Answer External</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward No Coverage Internal</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward No Coverage External</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>Forward on CTI Failure</td>
<td>or</td>
<td>or</td>
</tr>
<tr>
<td>No Answer Ring Duration (seconds)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MLPP Alternate Party Settings

<table>
<thead>
<tr>
<th>Target (Destination)</th>
<th>MLPP Calling Search Space</th>
<th>MLPP No Answer Ring Duration (seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; None &gt;</td>
<td></td>
</tr>
</tbody>
</table>

### Line 1 on Device SEP00170EE67E8E

<table>
<thead>
<tr>
<th>Display (Internal Caller ID)</th>
<th>ASCII Display (Internal Caller ID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER SCCP 3011</td>
<td>GER SCCP 3011</td>
</tr>
</tbody>
</table>

Display text for a line appearance is intended for displaying text such as a name instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.
### NLPP No Answer Ring Duration (seconds)

<table>
<thead>
<tr>
<th>Line 1 on Device SEP00170EE67E8E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display (Internal Caller ID)</td>
</tr>
<tr>
<td>ASCII Display (Internal Caller ID)</td>
</tr>
<tr>
<td>Line Text Label</td>
</tr>
<tr>
<td>ASCII Line Text Label</td>
</tr>
<tr>
<td>External Phone Number Mask</td>
</tr>
<tr>
<td>Message Waiting Lamp Policy*</td>
</tr>
<tr>
<td>Ring Setting (Phone Idle)*</td>
</tr>
<tr>
<td>Ring Setting (Phone Active)*</td>
</tr>
</tbody>
</table>

* Applies to this line when any line on the phone has a call in progress.

### Multiple Call/Call Waiting Settings on Device SEP00170EE67E8E

<table>
<thead>
<tr>
<th>Note: The range to select the Max Number of calls ID: 1-200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Busy Trigger*</td>
</tr>
<tr>
<td>Maximum Number of Calls*</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

(Less than or equal to Max. Calls)

### Forwarded Call Information Display on Device SEP00170EE67E8E

- Caller Name
- Caller Number
- Redirected Number
- Dialed Number

* Indicates required item.

** Changes to Line or Directory Number settings require restart.
# Cisco Unified CallManager Administration

## Directory Number Configuration

### Status
Status: Ready

### Directory Number Information
- **Directory Number**: 911
- **Route Partition**: Phones
- **Description**
- **Alerting Name**
- **ASCII Alerting Name**
- **Associated Devices**
  - RP911
  - Edit Device
  - Edit Line Appearance
- **Disassociate Devices**

### Directory Number Settings
- **Voice Mail Profile**
  - < None >
- **Calling Search Space**
  - E911css
- **Presence Group**
  - Standard Presence group

### Presence Group
- **Standard Presence group**
- **AAR Group**
  - < None >
- **User Hold MOH Audio Source**
  - < None >
- **Network Hold MOH Audio Source**
  - < None >

### Call Forward and Call Pickup Settings

<table>
<thead>
<tr>
<th>Voice Mail</th>
<th>Destination</th>
<th>Calling Search Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward All</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward Busy Internal</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward Busy External</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward No Answer Internal</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward No Answer External</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward No Coverage Internal</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward No Coverage External</td>
<td>912</td>
<td>E911css</td>
</tr>
<tr>
<td>Forward on CTI Failure</td>
<td>912</td>
<td>E911css</td>
</tr>
</tbody>
</table>

- **Call Pickup Group**
  - < None >

### MLPP Alternate Party Settings
- **Target (Destination)**
- **MLPP Calling Search Space**
  - < None >
- **MLPP No Answer Ring Duration (seconds)**

### Line 1 on Device RP911
- **Display Internal Caller ID**
- **ASCII Display**

---

Display text for a line appearance is intended for displaying text such as a name instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.
Note: A Backup CER server was not used during testing therefore CTI route point for 912 was not created.
CTI Port
### Directory Number Configuration

**Status**
- Status: Ready

**Directory Number Information**
- Directory Number: 6050
- Route Partition: Phones
- Description: 
- Alerting Name: 
- ASCII Alerting Name: CERSec1
- Associated Devices: CERSec1
- Dissociate Devices: 

**Directory Number Settings**
- Voice Mail Profile: <None>
- Calling Search Space: <None> (Choose <None> to use system default)
- Presence Group: Standard Presence group
- AAR Group: <None>
- User Hold MOH Audio Source: <None>
- Network Hold MOH Audio Source: <None>

**Call Forward and Call Pickup Settings**
- Forward All: 
- Secondary Calling Search Space for Forward All: 
- Forward Busy Internal: 
- Forward Busy External: 
- Forward No Answer Internal: 
- Forward No Answer External: 
- Forward No Coverage Internal: 
- Forward No Coverage External: 
- Forward on CTI Failure: 
- No Answer Ring Duration (seconds): <None>
- Call Pickup Group: 
- Calling Search Space: <None>

**MLPP Alternate Party Settings**
- Target (Destination): 
- MLPP Calling Search Space: <None>
- MLPP No Answer Ring Duration (seconds): 

**Line 1 on Device CERSec1**
- Display (Internal Caller ID): 
  - Display text for a line appearance is intended for displaying text such as a name instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.
## Route Patterns for ELINs

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
<th>Partition</th>
<th>Route Filter</th>
<th>Associated Device</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-911</td>
<td></td>
<td>E911</td>
<td></td>
<td>172.20.192.102</td>
<td>b</td>
</tr>
<tr>
<td>11-911</td>
<td></td>
<td>E911</td>
<td></td>
<td>172.20.192.102</td>
<td>b</td>
</tr>
<tr>
<td>12-911</td>
<td></td>
<td>E911</td>
<td></td>
<td>172.20.192.102</td>
<td>b</td>
</tr>
<tr>
<td>3333</td>
<td>NEC route 4xxx</td>
<td></td>
<td></td>
<td>172.20.192.102</td>
<td>b</td>
</tr>
<tr>
<td>4xxx</td>
<td></td>
<td></td>
<td></td>
<td>81/830/DS1-0981-3823</td>
<td>b</td>
</tr>
</tbody>
</table>
Route Pattern 11911

<table>
<thead>
<tr>
<th>Pattern Definition</th>
<th>Route Pattern*</th>
<th>11.911</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route Partition*</td>
<td></td>
<td>E911</td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbering Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route Filter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLPP Precedence*</td>
<td></td>
<td>Default</td>
</tr>
<tr>
<td>Gateway/Route List</td>
<td></td>
<td>172.20.102.102</td>
</tr>
<tr>
<td>Route Option</td>
<td></td>
<td>Route this pattern</td>
</tr>
<tr>
<td>Call Classification*</td>
<td></td>
<td>Offline</td>
</tr>
<tr>
<td>Allow Device Override</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require Forced Authorization Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authorization Level*</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Require Client Matter Code</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Route Pattern 13911

#### Pattern Definition
- **Route Pattern**: 13911
- **Route Partition**: E911
- **Description**: Not Selected
- **Numbering Plan**: <None>
- **Route Filter**: <None>
- **MLLP Precedence**: Default
- **Gateway/Route List**: 172.20.192.102
- **Route Option**: Route this pattern
- **Call Classification**: OffNet
- **Allow Device Override**: Off
- **Provide Outside Dial Tone**: Off
- **Allow Overlap Sending**: Off
- **Urgent Priority**: Off
- **Require Forced Authorization Code**: Off
- **Authorization Level**: 0
- **Require Client Matter Code**: Off

#### Calling Party Transformations
- **Use Calling Party's External Phone Number Mask**: Off
- **Calling Party Transform Mask**: \_
- **Prefix Digits (Outgoing Calls)**: \_
- **Calling Line ID Presentation**: Allowed
- **Calling Name Presentation**: Default

#### Connected Party Transformations
- **Connected Line ID Presentation**: Default
- **Connected Name Presentation**: Default

#### Called Party Transformations
- **Discard Digits**: PreDet
- **Called Party Transform Mask**: \_
- **Prefix Digits (Outgoing Calls)**: \_

#### ISDN Network-Specific Facilities Information Element
- **Network Service Protocol**: PRI N2
- **Carrier Identification Code**: <Not Configurable>
- **Network Service Selection**: Foreign Exchange
- **Service Parameter Name**: Foreign Exchange

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Translation Pattern for ELINs

Cisco Unified CallManager Administration

Translation Pattern Configuration

- Status: Ready
- Translation Pattern: 468527XXXX
- Partition: E911
- Numbering Plan: < None >
- Route Filter: < None >
- MLFP Precedence: Default
- Calling Search Space: E911css
- Route Option: Route this pattern
- Calling Party Transformations:
  - Use Calling Party's External Phone Number Mask
  - Calling Party Transform Mask

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### MLPP Precedence
- Default

### Called Party Transformations
- Discard Digits: None
- Called Party Transform Mask
- Prefix Digits (Outgoing Calls): 

### Connected Party Transformations
- Connected Line ID Presentation: Default
- Connected Name Presentation: Default
### PSAP Gateway configuration (CAMA TRUNK)

![Gateway Configuration Interface](image)

#### Device Information
- **Product:** H.323 Gateway
- **Device Protocol:** H.225
- **Registration:** Unknown
- **IP Address:** 172.26.192.102
- **Device Name:** 172.26.192.102
- **Description:** 172.26.192.102
- **Device Pool:** Default
- **Call Classification:** Use System Default
- **Media Resource Group List:** < None >
- **Packet Capture Mode:** None
- **Packet Capture Duration:** 0
- **Location:** Hub
- **AAR Group:** < None >
- **Tunneled Protocol:** None
- **Signaling Port:** 1720

#### Tunneled Protocol
- **Signaling Port:** 1720
- **Protocol Required:** None
- **Media Termination Point Required:** False
- **RTP Video Call As Audio:** False
- **Wait for Far End H.245 Terminal Capability Set:** False
- **Path Replacement Support:** False
- **Transmit UTF-8 for Calling Party Name:** False
- **SRTT Allowed:** When this flag is checked, IPSec needs to be configured in the network to provide end to end security. Failure to do so will expose keys and other information.

#### Multilevel Precedence and Preemption (MLPP) Information
- **MLPP Domain:** < None >
- **MLPP Indication:** Not available on this device
- **MLPP Preemption:** Not available on this device

#### Call Routing Information - Inbound Calls
- **Significant Digits:** All
- **Calling Search Space:** E911css
- **AAR Calling Search Space:** None
- **Prefix DN:**
- **Redirecting Number IE Delivery - Inbound:**
- **Enable Inbound FastStart:**
Cisco Unified Communications Manager User
### Manager User ID
- **Department**: 
- **User Locals**: <None>
- **Associated PC**: 
- **Digest Credentials**: 
- **Confirm Digest Credentials**: 

### Device Associations
- **Controlled Devices**: CERSoc1, RFS11, RPELISH3

#### Extension Mobility
- **Available Profiles**: 
- **Controlled Profiles**: 
- **Default Profile**: Not Selected
- **Presence Group**: Standard Presence group

#### Presence Group
- **SUBSCRIBE Calling Search Space**: <None>
- **Allow Control of Device from CTI**: 

### Directory Number Associations
- **Primary Extension**: <None>

### CAPF Information
- **Associated CAPF Profiles**: 

### Permissions Information
- **Groups**: Standard CTI Allow Calling Number Modification, Standard CTI Enabled
- **Roles**: Standard CTI Allow Calling Number Modification, Standard CTI Enabled

---

1. * indicates required item.
T1-QSIG Gateway

Cisco Unified CallManager Administration

Gateway Configuration

Status

Gateway Details
- Product: Cisco 3825
- Gateway: R3-3825
- Protocol: MGCP
- Domain Name: R3-3825
- Description: MGCP 3825
- Cisco Unified CallManager Group: Default

Configured Slots, VICs and Endpoints
- Module in Slot 0: < None >
- Module in Slot 1: NI-MIDV
- Subunit 0: VWC-2MFT-T1
- Module in Slot 2: < None >

Product Specific Configuration Layout

- Global ISDN Switch Type: N2
- Switchback Timing: Graceful
- Switchback uptime-delay (min): 10
- Switchback schedule (hh:mm): 12:00
- Type of DTMF Relay: Current GW Config
- Fax mode: FAX Relay
- Modem Passthrough: Enable

Related Links
- Back To Find/List

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### Gateway Configuration

**Status**
- Status: Ready

**Device Information**
- Product: Cisco MGCP T1 Port
- Gateway: RI-3823
- Device Protocol: Digital Access PRI
- Registration: Registered with Cisco Unified CallManager CM-Titanic
- IP Address: 172.30.102.21
- End-Point Name: SU0/DS1-0@RI-3823
- Description: SU0/DS1-0@MGCP 3823
- Device Port: Default
- Call Classification: Use System Default
- Network Locale: < None >
- Packet Capture Mode: None
- Packet Capture Duration: 0
- Media Resource Group List: < None >
- Location: Hub_None
- AAR Group: < None >
- Load Information:

**Multilevel Precedence and Preemption (MLPP) Information**
- MLPP Domain: < None >
- MLPP Indication: Off
- MLPP Preemption: Disabled

**Interface Information**
- PRI Protocol Type*: PRI ISO QSIG T1
- Protocol Side*: Network
- Channel Selection Order*: Bottom Up
- Channel #: Type*: Timerslot Number
- PCM Type*: μ-law
- Delay for first restart (1/8 sec ticks)* **32**
- Delay between restarts (1/8 sec ticks)* **4**
- Inhibit restarts at PRI initialization
- Enable status poll
- Unattended Port

**Call Routing Information - Inbound Calls**
- Significant Digits*: All
- Calling Search Space: Phoness
- AAR Calling Search Space: < None >
- Prefix DN:

**Call Routing Information - Outbound Calls**
Route Pattern to QSIG Trunk

<table>
<thead>
<tr>
<th>Route Pattern</th>
<th>2XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route Partition</td>
<td>None</td>
</tr>
<tr>
<td>Description</td>
<td>Route to Nortel cs191 2213 14 Avaya 2800 05</td>
</tr>
<tr>
<td>Numbering Plan</td>
<td>Not Selected</td>
</tr>
<tr>
<td>Route Filter</td>
<td>None</td>
</tr>
<tr>
<td>MLPP Precedence</td>
<td>Default</td>
</tr>
<tr>
<td>Gateway/Route List</td>
<td>S1/SU6/DS1-0@R-3925</td>
</tr>
<tr>
<td>Route Option</td>
<td>Route this pattern, Block this pattern, No Error</td>
</tr>
<tr>
<td>Call Classification</td>
<td>OffNet</td>
</tr>
<tr>
<td>Other Options</td>
<td>Allow Device Override, Provide Outside Dial Tone, Allow Overlap Sending, Urgent Priority, Require Forced Authorization Code, Authorization Level, Require Client Matter Code</td>
</tr>
</tbody>
</table>
Note: For detailed information regarding QSIG interoperability between CUCM and Nortel CS1000 PBX go to: http://www.cisco.com/warp/public/779/largeent/avvid/interoperability/flash/portal.html

SNMP service must be active

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Activation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Serviceability Reporter</td>
<td>Activated</td>
</tr>
<tr>
<td>Cisco CallManager SNMP Service</td>
<td>Activated</td>
</tr>
<tr>
<td>Cisco CDR Provider</td>
<td>Activated</td>
</tr>
<tr>
<td>Cisco Certificate Authority Proxy Function</td>
<td>Activated</td>
</tr>
<tr>
<td>Cisco DirSync</td>
<td>Activated</td>
</tr>
</tbody>
</table>
Cisco Emergency Responder Server group

<table>
<thead>
<tr>
<th>Specify server group attributes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco ER Group Name *</td>
<td>ERServerGroup</td>
</tr>
<tr>
<td>Peer TCP Port *</td>
<td>17001</td>
</tr>
<tr>
<td>Heart beat Count *</td>
<td>3</td>
</tr>
<tr>
<td>Heart beat Interval (in sec) *</td>
<td>30</td>
</tr>
<tr>
<td>Active Call Time out (in min) *</td>
<td>180</td>
</tr>
<tr>
<td>SMTP Mail Server</td>
<td></td>
</tr>
<tr>
<td>Source Mail ID</td>
<td></td>
</tr>
<tr>
<td>System Administrator Mail ID</td>
<td></td>
</tr>
<tr>
<td>SysLog</td>
<td>disable</td>
</tr>
<tr>
<td>Syslog Server</td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td></td>
</tr>
</tbody>
</table>

* indicates required item. ** required if SMTP Mail Server is configured. *** required if SysLog is enabled.
### Telephony Settings

#### Status
- Ready

#### Specify telephony attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route Point for Primary Cisco ER Server</td>
<td>111</td>
</tr>
<tr>
<td>Route Point for Standby Cisco ER Server</td>
<td>912</td>
</tr>
<tr>
<td>PGAP Callback Route Point Pattern</td>
<td>913</td>
</tr>
<tr>
<td>ELIN Digit Strip Pattern</td>
<td>913</td>
</tr>
<tr>
<td>UDP Port Begin</td>
<td>32000</td>
</tr>
<tr>
<td>Inter Cisco ER Group Route Pattern</td>
<td>0x40</td>
</tr>
<tr>
<td>IP Type of service (0x-ff)</td>
<td></td>
</tr>
<tr>
<td>Onsite Alert Prompt Repeat Count</td>
<td>2</td>
</tr>
</tbody>
</table>

- Use IP Address from call signaling: [Enable](#) (Effective only for Cisco Unified Communications Manager 6.0 and above)

- Update Settings: [Update Settings](#)
- Cancel Changes: [Cancel Changes](#)

* indicates required item
### Server Settings

#### Server Settings for CERServerGroup

- **Status:**
  - Ready

#### Select Server

- **Publisher** (primary)

#### Modify Server Settings

**Server Name:** Publisher

**Host Name:** CER

**Debug Package List**
- CER_DATABASE
- CER_REMOTEUPDATE
- CER_PHONETRACKINGENGINE
- CER_ONSITEALERT
- CER_CALLENGINE

**Trace Package List**
- CER_DATABASE
- CER_REMOTEUPDATE
- CER_PHONETRACKINGENGINE
- CER_ONSITEALERT
- CER_CALLENGINE

* indicates required item

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### ERLs List

**Find ERL Data**

Status

Updated successfully.

**ERL Search Parameters**

Find ERL where ERL Name contains

and show 20 items per page

---

<table>
<thead>
<tr>
<th>ERL</th>
<th>Route/Translation Pattern--EGLN</th>
<th>Onsite Alert Ids.</th>
<th>Street Name</th>
<th>Community Name</th>
<th>State</th>
<th>Edit</th>
<th>Copy</th>
<th>Delete</th>
<th>Audit Trail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default</td>
<td>100911--4000</td>
<td></td>
<td>tasman</td>
<td>cisco</td>
<td>ca</td>
<td></td>
<td></td>
<td></td>
<td>view...</td>
</tr>
<tr>
<td>Test 1</td>
<td>10911--4088272...</td>
<td></td>
<td>tasman</td>
<td>big sky</td>
<td>ca</td>
<td></td>
<td></td>
<td></td>
<td>view...</td>
</tr>
<tr>
<td>Test 2</td>
<td>11911--4088272...</td>
<td></td>
<td>tasman</td>
<td>cisco</td>
<td>ca</td>
<td></td>
<td></td>
<td></td>
<td>view...</td>
</tr>
<tr>
<td>Test 3</td>
<td>13911--4088273...</td>
<td></td>
<td>tasman</td>
<td>cisco</td>
<td>ca</td>
<td></td>
<td></td>
<td></td>
<td>view...</td>
</tr>
</tbody>
</table>

---

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# ERL 1

## Cisco Emergency Responder Administration

### ERL Information for Test 1

#### ERL Settings

<table>
<thead>
<tr>
<th>ERL Name</th>
<th>Test 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Test ERL (Used for Synthetic Testing)</td>
<td>☐</td>
</tr>
</tbody>
</table>

#### ELIN Settings

<table>
<thead>
<tr>
<th>Route/Translation pattern</th>
<th>10911-4985272213</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELIN</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Add</th>
<th>Update</th>
<th>Remove</th>
</tr>
</thead>
</table>

#### Onsite Alert Settings

<table>
<thead>
<tr>
<th>Available Onsite Alert IDs</th>
<th>Onsite Alert IDs for the ERL</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Add</th>
<th>Remove</th>
</tr>
</thead>
</table>

#### ERL Address

<table>
<thead>
<tr>
<th>ALI Details</th>
<th>Edit ALI</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Update</th>
<th>Copy</th>
<th>Cancel Changes</th>
<th>Close</th>
</tr>
</thead>
</table>

* indicates required item
### ERL Information for test 3

**ERL Settings**
- **ERL Name**: test 3
- **Description**: (blank)
- **Test ERL (Used for Synthetic Testing)**: [ ]

**ELIN Settings**
- **Route/Translation pattern**: (blank)
- **ELIN**: (blank)
- **Route/Translation pattern**: 13911--4085273011
- **ELIN**: (blank)

**Onsite Alert Settings**
- **Available Onsite Alert IDs**: (blank)
- **Onsite Alert IDs for the ERL**: (blank)

**ERL Address**
- **ALI Details**: (blank)

* indicates required item
LAN Switch identifying

```
LAN Switch Details
<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please enter any change for the current LAN Switch</td>
</tr>
</tbody>
</table>

LAN Switch Details
<table>
<thead>
<tr>
<th>Switch Host Name / IP Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.20.230.250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable CAM based Phone Tracking</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Update</th>
<th>Cancel Changes</th>
<th>Locate Switch-Ports</th>
</tr>
</thead>
</table>

LAN Switches
<table>
<thead>
<tr>
<th>Switch Host Name / IP Address</th>
<th>Edit</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.20.230.250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* indicates required item
```
### Switch Port Details

#### Switch Port Search Parameters

Find ports where: **All** □ **Any** □ ERL Name □ contains □

Find □ show □ per page

#### Switch Ports (1 to 48 of 48)

<table>
<thead>
<tr>
<th>ERL Name</th>
<th>Switch IP Address</th>
<th>DNName</th>
<th>Location</th>
<th>Phone Extension</th>
<th>Phone IP Address</th>
<th>Phone Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/1</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/2</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/3</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/4</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/5</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/6</td>
<td>View</td>
<td>3011</td>
<td>172.20.230.21</td>
<td>Cisco 7961</td>
</tr>
<tr>
<td></td>
<td>172.20.230.250</td>
<td>Fa0/7</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switch</td>
<td>Port Details</td>
<td>View</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>--------------</td>
<td>------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/8</td>
<td>View</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/9</td>
<td>View</td>
<td></td>
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</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/10</td>
<td>View</td>
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</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/11</td>
<td>View</td>
<td></td>
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</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/12</td>
<td>View</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/13</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/14</td>
<td>View</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/15</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/16</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/17</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/18</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/19</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/20</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/21</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/22</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/23</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/24</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/25</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/26</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/27</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/28</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Switch Port Details</td>
<td>Export</td>
<td>Import</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/29</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/30</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/31</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/32</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/33</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/34</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/35</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/36</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/37</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/38</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/39</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/40</td>
<td>View</td>
<td></td>
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</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/41</td>
<td>View</td>
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<td>172.20.230.250</td>
<td>Fa0/42</td>
<td>View</td>
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<tr>
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<td>Fa0/43</td>
<td>View</td>
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<tr>
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<td>Fa0/44</td>
<td>View</td>
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<tr>
<td>172.20.230.250</td>
<td>Fa0/45</td>
<td>View</td>
<td></td>
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<td></td>
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<tr>
<td>172.20.230.250</td>
<td>Fa0/46</td>
<td>View</td>
<td></td>
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<td></td>
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<tr>
<td>172.20.230.250</td>
<td>Fa0/47</td>
<td>View</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>172.20.230.250</td>
<td>Fa0/48</td>
<td>View</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Defining Manual Phones (PBX Stations)

Cisco Emergency Responder Administration
For Cisco Unified Communications Solutions

Find and List Manually Configured Phones

Status
Ready

Manual Phone Search Parameters
Find manual phones where Line Number contains ▼ and show 20 ▼ Items per page

Manually Configured Phones (1 - 2 of 2)

<table>
<thead>
<tr>
<th>Line Number</th>
<th>ERL Name</th>
<th>IP Address</th>
<th>MAC Address</th>
<th>Location</th>
<th>Edit</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2213</td>
<td>Test 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2214</td>
<td>Test 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Add new Manual phone

Add new Manual phone

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## Modify Manual Phone

**Status**
Please enter any change for the current Manual Phone

<table>
<thead>
<tr>
<th>Modify Manual Phone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line Number</strong></td>
<td>2213</td>
</tr>
<tr>
<td><strong>MAC Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>IP Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Phone Type</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Version</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ERL Name</strong></td>
<td>Test 1</td>
</tr>
</tbody>
</table>

* indicates required item

## Modify Manual Phone

**Status**
Please enter any change for the current Manual Phone

<table>
<thead>
<tr>
<th>Modify Manual Phone</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Line Number</strong></td>
<td>2214</td>
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<tr>
<td><strong>MAC Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>IP Address</strong></td>
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</tr>
<tr>
<td><strong>Phone Type</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Version</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ERL Name</strong></td>
<td>test 2</td>
</tr>
</tbody>
</table>

Update  Cancel Changes  Add new Manual phone
Cisco CMM IOS Gateway MGCP Configuration for QSIG Connectivity

Ri-3825#sh ver
Cisco IOS Software, 3800 Software (C3825-IPVOICEK9-M), Version 12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 11:23 by prod_rel_team

ROM: System Bootstrap, Version 12.3(11r)T2, RELEASE SOFTWARE (fc1)

Ri-3825 uptime is 4 weeks, 6 days, 23 hours, 15 minutes
System returned to ROM by reload at 17:08:17 UTC Tue Jul 24 2007
System image file is "flash:c3825-ipvoicek9-mz.124-15.T1.bin"

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco 3825 (revision 1.0) with 224256K/37888K bytes of memory.
Processor board ID FTX0946A1BT
2 Gigabit Ethernet interfaces
48 Serial interfaces
2 Channelized T1/PRI ports
2 Voice FXS interfaces
DRAM configuration is 64 bits wide with parity enabled.
479K bytes of NVRAM.
62720K bytes of ATA System CompactFlash (Read/Write)

Configuration register is 0x2102

**Ri-3825#sh run**

Building configuration...

Current configuration : 2419 bytes

```
! version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Ri-3825
!
boot-start-marker
boot-end-marker
!
enable password cisco
!
no aaa new-model
network-clock-participate slot 1
no network-clock-participate slot 2
network-clock-select 1 T1 1/0/0
voice-card 0
no dspfarm
!
voice-card 1
dspfarm
!
voice-card 2
no dspfarm
!
```
ip cef
!
!
!
!
no ip domain lookup
ip host CM-Titanic 172.20.140.254 >========Active Host
ip host CM-SPURS 172.20.192.254
multilink bundle-name authenticated
!
isd switch-type primary-qsig
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
archive
log config
hidekeys
!
!
controller T1 1/0/0
framing esf
linecode b8zs
pri-group timeslots 1-24 service mgcp
!
controller T1 1/0/1
shutdown
framing esf
linecode b8zs
cablelength short 399
pri-group timeslots 1-24 service mgcp
interface GigabitEthernet0/0
ip address 172.20.192.21 255.255.255.0
duplex auto
speed auto
media-type rj45
!

interface GigabitEthernet0/1
no ip address
shutdown
duplex auto
speed auto
media-type rj45
!

interface Serial1/0/0:23
no ip address
encapsulation hdlc
isdn switch-type primary-qsig
isdn timer T310 120000
isdn protocol-emulate network
isdn incoming-voice voice
isdn bind-l3 ccm-manager
no cdp enable
!

interface Serial1/0/1:23
no ip address
encapsulation hdlc
shutdown
isdn switch-type primary-qsig
isdn incoming-voice voice
isdn bind-l3 ccm-manager
no cdp enable
! ip route 0.0.0.0 0.0.0.0 172.20.192.1!
!
!
ip http server
no ip http secure-server
!
!
!
control-plane
!
!
!
voice-port 1/0/0:23
!
voice-port 1/0/1:23
!
voice-port 2/0/0
!
voice-port 2/0/1
!
ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server CM-Titanic
ccm-manager config
!
mgep
mgep call-agent CM-Titanic 2427 service-type mgcp version 0.1
mgep dtmf-relay voip codec all mode out-of-band
mgep rtp unreachable timeout 1000 action notify
mgep modem passthrough voip mode nse
mgep package-capability rtp-package
mgep package-capability sst-package
mgep package-capability pre-package
no mgep package-capability res-package
no mgcp package-capability fxr-package
no mgcp timer receive-rtcp
mgcp sdp simple
mgcp fax t38 inhibit
mgcp rtp payload-type g726r16 static
!
mgcp profile default
!
!
!
!
!
!
line con 0
  password cisco
  login
  stopbits 1
line aux 0
  stopbits 1
line vty 0 4
  password cisco
  login
!
scheduler allocate 20000 1000
!
end

Cisco 3825 IOS Gateway H323 configuration for CAMA trunk connectivity

Router#sh ver
Cisco IOS Software, 3800 Software (C3825-ADVENTERPRISEK9_IVS-M), Version 12.4(11
)T1, RELEASE SOFTWARE (fc5)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 25-Jan-07 17:16 by prod_rel_team
ROM: System Bootstrap, Version 12.3(11r)T2, RELEASE SOFTWARE (fc1)
Router uptime is 1 week, 3 days, 17 hours, 23 minutes
System returned to ROM by power-on

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Page 61 of 80
System image file is "flash:c3825-adventerprisek9 ivs-mz.124-11.T1.bin"
This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at: http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco 3825 (revision 1.0) with 223232K/38912K bytes of memory.
Processor board ID FTX0946A1BV
2 Gigabit Ethernet interfaces
24 Serial interfaces
1 Channelized T1/PRI port
1 Virtual Private Network (VPN) Module
2 Voice FXO interfaces
2 Voice FXS interfaces
DRAM configuration is 64 bits wide with parity enabled.
479K bytes of NVRAM.
62720K bytes of ATA System CompactFlash (Read/Write)

Configuration register is 0x2102
Router#sh run
Building configuration...

Current configuration : 2545 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Router
!
boot-start-marker
boot system flash:c3825-adventerprisek9_ivs-mz.124-11.T1.bin
boot-end-marker
!
logging buffered 10000000
no logging console
enable password cisco
!
no aaa new-model
no network-clock-participate slot 1
voice-card 0
dspfarm
dsp services dspfarm
!
voice-card 1
dspfarm
!

ip cef
!
!
!
!
!
multilink bundle-name authenticated
!

isdn switch-type primary-dms100
!
!
!

voice service voip
  allow-connections h323 to h323============H323 protocol
  allow-connections h323 to sip
  allow-connections sip to h323
  allow-connections sip to sip
h323
sip
!
!
!
!
!
!

voice class codec 1
  codec preference 1 g729r8
!
!
!
!
!
!
!
controller T1 1/0/0
  framing esf
linecode b8zs
pri-group timeslots 1-24
!
interface GigabitEthernet0/0
ip address 172.20.192.102 255.255.255.0
duplex auto
speed auto
media-type rj45
no keepalive
!
interface GigabitEthernet0/1
no ip address
shutdown
duplex auto
speed auto
media-type rj45
no keepalive
!
interface Serial1/0/0:23
no ip address
encapsulation hdlc
isdn switch-type primary-dms100
isdn incoming-voice voice
no cdp enable
!
ip default-gateway 172.20.192.1
ip route 0.0.0.0 0.0.0.0 0.0.0.0 172.20.192.1
!
ip http server
no ip http secure-server
!
control-plane
!
!
voice-port 0/0/0 => CAMA signaling
    signal cama KP-0-NPA-NXX-XXXX-ST
    dial-type mf
    timing hookflash-out 500
    description CAMA
!
voice-port 0/0/1
!
voice-port 0/2/0
    station-id name Test Analog
    station-id number 7055
!
voice-port 0/2/1
    station-id name RI-NGUYEN
    station-id number 4085261122
    caller-id enable
!
voice-port 1/0/0:23
!
!
!
sccp local GigabitEthernet0/0
    sccp ccm 172.20.8.254 identifier 1 version 4.1
    sccp
!
    sccp ccm group 1
        associate ccm 1 priority 1
        associate profile 1 register mtp0015f90d1590
!
    dspfarm profile 1 mtp
    codec g711ulaw
maximum sessions software 10
associate application SCCP
shutdown
!
!
dial-peer voice 911 pots
  destination-pattern 911
  no digit-strip
  port 0/0/0
  forward-digits all
!
dial-peer voice 999 voip
  description call in PSTN simulation
  destination-pattern .T
  session target ipv4:172.20.140.254
!
!
gateway
  timer receive-rtp 1200
!
sip-ua
  retry options 0
!
!
!
gatekeeper
  shutdown
!
!
line con 0
  exec-timeout 0 0
  password cisco
  login
  stopbits 1
line aux 0
stopbits 1
line vty 0 4
  exec-timeout 0 0
  password cisco
  login
line vty 5 10
  exec-timeout 0 0
  password cisco
  login
!
scheduler allocate 20000 1000
!
end
CAMA voice-port config

Router#sh voice port 0/0/0

Foreign Exchange Office 0/0/0 Slot is 0, Sub-unit is 0, Port is 0
Type of VoicePort is FXO
Operation State is DORMANT
Administrative State is UP
The Last Interface Down Failure Cause is Administrative Shutdown
Description is CAMA
Noise Regeneration is enabled
Non Linear Processing is enabled
Non Linear Mute is disabled
Non Linear Threshold is -21 dB
Music On Hold Threshold is Set to -38 dBm
In Gain is Set to 0 dB
Out Attenuation is Set to 3 dB
Echo Cancellation is enabled
Echo Cancellation NLP mute is disabled
Echo Cancellation NLP threshold is -21 dB
Echo Cancel Coverage is set to 64 ms
Echo Cancel worst case ERL is set to 6 dB
Playout-delay Mode is set to adaptive
Playout-delay Nominal is set to 60 ms
Playout-delay Maximum is set to 250 ms
Playout-delay Minimum mode is set to default, value 40 ms
Playout-delay Fax is set to 300 ms
Connection Mode is normal
Connection Number is not set
Initial Time Out is set to 10 s
Interdigit Time Out is set to 10 s
Call Disconnect Time Out is set to 60 s
Ringing Time Out is set to 180 s
Wait Release Time Out is set to 30 s
Companding Type is u-law
Region Tone is set for US
Analog Info Follows:
Currently processing none
Maintenance Mode Set to None (not in mtc mode)
Number of signaling protocol errors are 9
Impedance is set to 600r Ohm
Station name None, Station number None
Translation profile (Incoming):
Translation profile (Outgoing):

Voice card specific Info Follows:
Signal Type is cama
Cama Type is KP-0-NPA-NXX-XXXX-ST
Battery-Reversal is enabled
Number Of Rings is set to 1
Supervisory Disconnect is signal
Answer Supervision is inactive
Hook Status is On Hook
Ring Detect Status is inactive
Ring Ground Status is inactive
Tip Ground Status is inactive
Dial Out Type is mf
Digit Duration Timing is set to 75 ms
InterDigit Duration Timing is set to 65 ms
Pulse Rate Timing is set to 10 pulses/second
InterDigit Pulse Duration Timing is set to 750 ms
Percent Break of Pulse is 60 percent
GuardOut timer is 2000 ms
Minimum ring duration timer is 125 ms
Hookflash-in Timing is set to 600 ms
Hookflash-out Timing is set to 500 ms
Supervisory Disconnect Timing is set to 350 ms
OPX Ring Wait Timing is set to 6000 ms
Configuring Nortel CS1000 PBX with Succession 4.0 Software Release

The Nortel CS1000 Switch requires a substantial amount of programming and circuit card switch settings to properly install T1 PRI. It is beyond the scope of this document to provide the entire configuration, therefore the Nortel CS1000 information below is directed to Nortel techs

The switch settings and software references in this document assume a familiarity with the Nortel CS1000. It is highly recommended to have a Nortel ISDN certified technician setup the Nortel portion.

Common equipment:

```
REQ  PRT
TYPE  CEQU

CEQU
MPED  8D
SUPL  000  004  008  012
   016  032  036  040
   044  048  064  068
   072  096  V100
TDS  000
CONF  029  030  031  062
    094  095

DLQ   NUM  DCH  FRM  TMDI  LCMT  YALM  T1TE  TRSH
PRI  02   23  ESF  NO  B8S  FDL  -   00
    04   24  ESF  YES B8S DG2  0   00
    05   23  ESF  NO  B8S  FDL  -   00
    06   23  ESF  NO  B8S  FDL  -   00
    07   23  ESF  NO  B8S  FDL  -   00
PR12 11
DT12  12  13  21
MISP
```

Configure D-Channel

```
>ld 22
PT2000

REQ  prt
TYPE  adan dch 5

ADAN     DCH 5
CTYP  MSDL
CARD  05
PORT  1
DES  BARCLAYS1
USR  PRI
DCHL  5
OTBF  32
PARM RS422  DTE
DRAT  64KC
CLOK  EXT
IFC  ISGF
PINX_CUST  0
```
Configure Route Data Block

>1d 21
PT1000

REQ: prt
TYPE: rdb
CUST 0
ROUT 105

TYPE RDB
CUST 0
DMOD
ROUT 105
DES BARCLAYS1
TKTP TIE
NPID_TBL_NUM 0
ESN NO
CNVT NO
SAT NO
RCLS EXT
VTRK NO
NODE
DTRK YES
BRIP NO
DGTP PRI
ISDN YES
MODE PRA
IFC ISGF
SBN NO
PNI 00001
NCNA NO
NCRD NO
CHTY BCH
CTYP UKWN
INAC NO
ISAR NO
CPFXS YES
DAFC NO
INTC NO
DSEL VOD
PTYP PRI
AUTO NO
DNIS NO
DCDR NO
Configure Trunk

>ld 20

PT0000
REQ: prt
TYPE: tnb
TN  5 1
Software Release

>LD 22
PT2000

REQ ISS

CALL SERVER/MAIN CAB
VERSION 2121
RELEASE 4
ISSUE 00 T +
IDLE_SET_DISPLAY NORTEL

Software package Installed (Succession 4.0)
DCP                   115
PAGT                  116
CBC                   117
CCDR                  118
EMUS                  119
PLDN                  120
SCMP                  121
FTC                   125
BKI                   127
DTI2                  129
TBAR                  132
ENS                   133
FFC                   139
DCON                  140
MPO                   141
ISDN                  145
FRA                   146
ISL                   147
NTWK                  148
IEC                   149
DNXP                  150
CDRE                  151
FXS                   152
IAP3P                 153
PR12                  154
THF                   157
FGD                   158
NAS                   159
FNP                   160
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GPRI                  167
ARIE                  170
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ECCS                  173
AAA                   174
NMS                   175
EOVF                  178
HVS                   179
DNS                   180
SACP                  181
VNS                   183
OVLP                  184
EDRG                  185
FOVR                  186
SECL                  191
ORC–RVQ               192
AINS                  200
IPRA                  202
XPE                   203
XCT0                  204
XCT1                  205
MLWU                  206
N3E                   208
MLM                   209
MAID                  210
VAWU                  212
EAR                   214
ECT                   215
BRI                   216
IVR                   218
MWI                   219
MSDL                  222
FC68                  223
SSAU                  229
| BRIT            | 233 |
| FCDR            | 234 |
| BRIL            | 235 |
| MEMO            | 240 |
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| ALRM_FILTER     | 243 |
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| MAT             | 296 |
| CPP             | 301 |
| QSIG=SS         | 316 |
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| MUSBRD          | 328 |
| ESA             | 329 |
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| MC32            | 350 |
| DBA             | 351 |
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| STS_MSG         | 380 |
| CDIR            | 381 |
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| NI2NAME         | 385 |
| M3900_PROD_ENH  | 386 |
| VIR_OFF_ENH     | 387 |
| OAS             | 394 |
| ICON            | 397 |
| PCA             | 398 |
| H323_VTRK       | 399 |
| LOCX            | 400 |
| PVQM            | 401 |
| SIP             | 406 |

REQ
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMA</td>
<td>Centralized Automatic Message Accounting</td>
</tr>
<tr>
<td>PSAP</td>
<td>Public Safety Answering Point</td>
</tr>
<tr>
<td>CER</td>
<td>Cisco Emergency Responder</td>
</tr>
<tr>
<td>CUCM</td>
<td>Cisco Unified Communications Manager</td>
</tr>
</tbody>
</table>
Important Information

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