Avaya Definity CM2.0 using T1 QSIG to Cisco Unified Communications Manager 6.0 and Cisco Emergency Responder 2.0

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July 11, 2007 Initial version

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Introduction

The following is an Application Note for E911 Interoperability of a Cisco Unified Communications Manager (CUCM) 6.0 and Cisco Emergency Responder 2.0 to an Avaya Definity G3 CM 2.0 PBX via a Cisco Media Module CMM T1-QSIG trunk. The CUCM system is connected to a simulated E911 PSAP (Public Safety Answering Point) via a Cisco 3845 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 T1 QSIG trunk using Cisco WS-SVC-CMM-6T1 MGCP gateway and connection to E911 PSAP using a Cisco 3825 H323 gateway via a CAMA trunk.

Network Topology

Figure 1. Network Topology or Test Setup

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 Hardware
- Cisco 3825 Gateway with VIC2-4FXO (CAMA trunk)
- Cisco WS-SVC-CMM-6T1 Communications Media Module (inserted into cat6K)
- Cisco Cat6K switch
- Cisco Unified Communications Manager server
- Cisco Emergency Responder server
- AVAYA Definity PBX

Software Requirements

- Cisco IOS Software release “c3825-ipvoice-mz.124-11.T”
- Cisco IOS Software release "wscmm-ipvoicek9-mz.124-11.T"
- PBX Software: G3si MV1.1
- Cisco Unified Communications Manager 6.0
- Cisco Emergency Responder 2.0

Features

Supported Features

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

Configuring Cisco Communications Manager

Partitions
### Calling Search Space

**Find and List Calling Search Spaces**

<table>
<thead>
<tr>
<th>CSS Name</th>
<th>Description</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULLCSS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhoneCSS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Status**

- 2 records found

- Add New
- Select All
- Clear All
- Delete Selected
Phone Configuration - Microsoft Internet Explorer

Phone Configuration

- Protocol Specific Information
  - Packet Capture Mode
  - Packet Capture Duration
  - Presence Group
  - Device Security Profile
  - SUBSCRIBE Calling Search Space
  - Unattended Port
  - Requires CTMF Exception
  - MFC1000 Disabled

- Certification Authority Proxy Function (CAPF) Information
  - Certificate Operation
  - Authentication Mode
  - Authentication String
  - Certificate Operation Status: None

- Expansion Module Information
  - Module 1 Load Name
  - Module 2 Load Name

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### Directory Number Configuration - Cisco Unified CM Administration

#### Call Forward and Call Pickup Settings

<table>
<thead>
<tr>
<th>Policy</th>
<th>Voice Mail</th>
<th>Destination</th>
<th>Calling Search Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward All</td>
<td></td>
<td></td>
<td>Use System Default</td>
</tr>
<tr>
<td>Secondary Calling Search Space for Forward All</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward Busy Internal</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward BusyExternal</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward No Answer Internal</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward No Answer External</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward No Coverage Internal</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward No Coverage External</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward on CTI Failure</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward Unregistered Internal</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Forward Unregistered External</td>
<td></td>
<td></td>
<td>&lt; None &gt;</td>
</tr>
</tbody>
</table>

**No Answer Ring Duration (seconds):**

**Call Pickup Group:**

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

**Line Settings for All Devices**

- Hold Reversion Ring Duration (seconds)
- Hold Reversion Notification Interval (seconds)

**Line 1 on Device SEP008A116B829**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display (Internal Caller ID)</td>
<td>10130035</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.
### Directory Number Configuration

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCII Display (Internal Caller ID)</td>
<td>Kate Marquez</td>
</tr>
<tr>
<td>Line Text Label</td>
<td>Kate Marquez</td>
</tr>
<tr>
<td>ASCII Line Text Label</td>
<td>Kate Marquez</td>
</tr>
<tr>
<td>External Phone Number Mask</td>
<td></td>
</tr>
<tr>
<td>Visual Message Waiting Indicator Value</td>
<td></td>
</tr>
<tr>
<td>Ring Setting (Phone Idle)</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Ring Setting (Phone Active)</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Call Pickup Group Alert Setting (Phone Idle)</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Call Pickup Group Alert Setting (Phone Active)</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Monitoring Calling Search Space</td>
<td></td>
</tr>
</tbody>
</table>

---

### Multiple Call/Call Waiting Settings on Device SEP8800A11680539

- **Note**: The range for selecting the Max. Number of Calls is 1-209.
- **Max. Number of Calls**: 4
- **Busy Trigger**: 2 (Lower than or equal to Max. Calls)

---

### Forwarded Call Information Display on Device SEP8800A11680539

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

---

### Users Associated with Line

- **Associate End Users**

---

* indicates required item.
# CTI Route Points

## Cisco Unified CM Administration

### Find and List CTI Route Points

<table>
<thead>
<tr>
<th>Device Name</th>
<th>Description</th>
<th>Device Pool</th>
<th>Calling Search Space</th>
<th>Partition</th>
<th>Extension</th>
<th>Status</th>
<th>IP Address</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP4031</td>
<td></td>
<td>Default</td>
<td>PKICCS</td>
<td>Phones</td>
<td>951</td>
<td>Registered with CM-BARIZA</td>
<td>172.20.110.254</td>
<td></td>
</tr>
<tr>
<td>RP4031</td>
<td></td>
<td>Default</td>
<td>PKICCS</td>
<td>Phones</td>
<td>951</td>
<td>Registered with CM-BARIZA</td>
<td>172.20.110.254</td>
<td></td>
</tr>
</tbody>
</table>
## CTI Route Point 911

### Device Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>Registered with Cisco Unified Communications Manager CM-BARZA</td>
</tr>
<tr>
<td>IP Address</td>
<td>172.20.110.254</td>
</tr>
<tr>
<td>Device Poip</td>
<td>BP911</td>
</tr>
<tr>
<td>Common Device Configuration</td>
<td>MobileCommonDeviceConfig1</td>
</tr>
<tr>
<td>Calling Search Space</td>
<td>EMUCSS</td>
</tr>
<tr>
<td>Location</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>User Locale</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Media Resource Group List</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Network Hold DTM Audio Source</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>User Hold DTM Audio Source</td>
<td>&lt; None &gt;</td>
</tr>
</tbody>
</table>

### Association Information

- Line [1] - Add a new CTI
- Line [1] - 911 in Phones

---

* indicates required item.
### Directory Number Configuration

#### Directory Number Information
- **Directory Number**: 911
- **Route Partition**: Phones
- **Description**:
- **Alerting Name**:
- **ASCII Alerting Name**:
- **Associated Devices**: 9011
- **Dissociate Devices**:

#### Directory Number Settings
- **Voice Mail Profile**: (Choose <Name> to use system default)
- **Calling Search Space**: EMICSS
- **Presence Group**: Standard Presence group
- **User Hold MNH Audio Source**: (Choose <Name> to use system default)
- **Network Hold MNH Audio Source**: (Choose <Name> to use system default)

#### AAR Settings
<table>
<thead>
<tr>
<th>AAR</th>
<th>Value Mail</th>
<th>AAR Destination Mask</th>
<th>AAR Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Call Forward and Call Pickup Settings
<table>
<thead>
<tr>
<th>Call Forward</th>
<th>Call Pickup</th>
<th>Voice Mail</th>
<th>Destination</th>
<th>Calling Search Space</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Local Inter</td>
</tr>
</tbody>
</table>
### Multiple Call/Call Waiting Settings on Device R911

**Note:** The range to select the Max Number of calls is 1-100000.

- **Maximum Number of Calls**
  - Value: 5000
- **Busy Triggers**
  - Value: 4500
  - Class: less than or equal to Max. Calls

### Forwarded Call Information Display on Device R911

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

### Users Associated with Line

- **Associate End Users**

- **Save**
- **Delete**
- **Reset**
- **Add User**

---

- * indicates required item.
- ** indicates changes to Line or Directory Number settings require restart.

[Done]
### Device Information
- **IP Address**: 172.20.110.294
- **Device Name**: BPHEL913
- **Device Pool**: BPHEL913
- **Common Device Configuration**: MobileCommonDeviceConfig1
- **Location**: PBX
- **User Locale**: < None >
- **Media Resource Group List**: < None >
- **Network Hold PDH Audio Source**: < None >
- **User Hold PDH Audio Source**: < None >

### Association Information
- **Line 1**: 913190000001 in P241
- **Line 2**: Add a new DN

---

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### Directory Number Configuration - Microsoft Internet Explorer

#### Calling Search Space Activation Policy
- **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**
- **Forward Unregistered Internal**
- **Forward Unregistered External**

#### No Answer Ring Duration (seconds)
- **Call Pickup Group**

#### MLPP Alternate Party Settings
- **Target (Destination)**
- **MLPP Calling Search Space**
- **MLPP No Answer Ring Duration (seconds)**

#### Line Settings for All Devices
- **Hold Reversion Ring Duration (seconds)**
- **Hold Reversion Notification Interval (seconds)**

#### Line 1 on Device RPELEN913
- **Display Internal Caller ID**
- **ASCII Display (Internal Caller ID)**
- **External Show**

**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.
### Directory Number Configuration

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calling Search Space Activation Policy</td>
<td>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, Forward Unregistered Internal, Forward Unregistered External</td>
</tr>
<tr>
<td>No Answer Ring Duration (seconds)</td>
<td>&lt; None &gt;</td>
</tr>
</tbody>
</table>

### MLPP Alternate Party Configuration

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

### Line Settings for All Devices

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold Reversion Ring Duration (seconds)</td>
<td>Setting the Hold Reversion Ring Duration to zero will disable the feature</td>
</tr>
<tr>
<td>Hold Reversion Notification Interval (seconds)</td>
<td>Setting the Hold Reversion Notification Interval to zero will disable the feature</td>
</tr>
</tbody>
</table>

### Line 1 on Device CERSec1

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display (Internal Caller ID)</td>
<td>Display text for 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.</td>
</tr>
<tr>
<td>ASCII Display (Internal Caller ID)</td>
<td></td>
</tr>
<tr>
<td>Line Text Label</td>
<td></td>
</tr>
</tbody>
</table>
## Multiple Call/Call Waiting Settings on Device CDRRec1

**Note:** The range to select the Max Number of calls is 1-209

- **Maximum Number of Calls**: 4
- **Busy Trigger**: 2 (Less than or equal to Max. Calls)

## Forwarded Call Information Display on Device CDRRec1

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

## Users Associated with Line

- Associate End Users

**Notes:**
- * indicates required item.
- ** indicates changes to Line or Directory Number settings require restart.
### 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>10.211</td>
<td>ELIN</td>
<td>EN1</td>
<td>172.16.0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.211</td>
<td>ELIN</td>
<td>EN1</td>
<td>172.16.0.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.211</td>
<td>EN1</td>
<td>EN1</td>
<td>172.16.0.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20XXX</td>
<td>Phones</td>
<td>EN1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40XX</td>
<td>ELIN</td>
<td>EN1</td>
<td>14.0.0.100/80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41000X</td>
<td>ELIN</td>
<td>EN1</td>
<td>172.20.3.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42XXX</td>
<td>ELIN</td>
<td>EN1</td>
<td>172.20.3.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70XXX</td>
<td>ELIN</td>
<td>EN1</td>
<td>172.20.3.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.X</td>
<td>Phones</td>
<td>EN1</td>
<td>58.0.51.000124000278399AE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Route Pattern 11911

### Route Pattern Configuration - Microsoft Internet Explorer

#### Status
- **Update successful**

#### Pattern Definition
- **Route Pattern**: 11911
- **Route Partition**: E911
- **Description**: 
- **Numbering Plan**: Not Selected
- **Route Filter**: 
- **PSTN Precedence**: Default
- **Gateway/Route List**: 172.20.0.24
- **Route Option**: Route this pattern
- **Call Classification**: Offnet

#### Calling Party Transformations
- **Use Calling Party's External Phone Number Mask**: 
- **Calling Party Transform Mask**: 
- **Calling Line ID Presentation**: Default
- **Calling Name Presentation**: Default

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

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

#### ISDN Network-Specific Facilities Information Element
- **Network Service Protocol**: PST/IN2
- **Carrier Identification Code**: 
- **Foreign Exchange Selection**: Foreign Exchange

*— in datas required item.

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### PSAP Gateway configuration (CAMA TRUNK)

#### Gateway Configuration - Microsoft Internet Explorer

- **Status:** Status Ready

#### Device Information

<table>
<thead>
<tr>
<th>Product</th>
<th>H.323 Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Protocol</td>
<td>H.225</td>
</tr>
<tr>
<td>Registration</td>
<td>Unknown</td>
</tr>
<tr>
<td>IP Address</td>
<td>172.20.8.26</td>
</tr>
<tr>
<td>Device Name</td>
<td>172.20.8.26</td>
</tr>
<tr>
<td>Description</td>
<td>172.20.8.26</td>
</tr>
<tr>
<td>Device Pool</td>
<td>Default</td>
</tr>
<tr>
<td>Common Device Configuration</td>
<td>Use System Default</td>
</tr>
<tr>
<td>Call Classification</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Media Resource Group List</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Packet Capture Mode</td>
<td>None</td>
</tr>
<tr>
<td>Packet Capture Duration</td>
<td>0</td>
</tr>
<tr>
<td>Location</td>
<td>Hub NMS</td>
</tr>
<tr>
<td>AAA Group</td>
<td>&lt; None &gt;</td>
</tr>
<tr>
<td>Tunneld Protocol</td>
<td>None</td>
</tr>
<tr>
<td>Signaling Port</td>
<td>1720</td>
</tr>
</tbody>
</table>

- **Media Termination Point Required**
- **Wait for Far End H.245 Terminal Capability Set**
- **Path Replacement Support**
- **Transmit UFP-0 for Calling Party Name**
- **GKTR 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

<table>
<thead>
<tr>
<th>MLPP Domain</th>
<th>&lt; None &gt;</th>
</tr>
</thead>
</table>

- **MLPP Indication** - Not available on this device
- **MLPP Preemption** - Not available on this device

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Cisco Communications Manager User

### User Information

<table>
<thead>
<tr>
<th>User ID*</th>
<th>carts1h</th>
<th>Edit Credential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password</td>
<td>^$%^&amp;<em>()_+-=[]{}@#$%^&amp;</em>()_+-=[]{}</td>
<td></td>
</tr>
<tr>
<td>Confirm Password</td>
<td>^$%^&amp;<em>()_+-=[]{}@#$%^&amp;</em>()_+-=[]{}</td>
<td></td>
</tr>
<tr>
<td>PIN</td>
<td>^$%^&amp;<em>()_+-=[]{}@#$%^&amp;</em>()_+-=[]{}</td>
<td></td>
</tr>
<tr>
<td>Confirm PIN</td>
<td>^$%^&amp;<em>()_+-=[]{}@#$%^&amp;</em>()_+-=[]{}</td>
<td></td>
</tr>
<tr>
<td>Last name*</td>
<td>Carts</td>
<td></td>
</tr>
<tr>
<td>Middle name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone Number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manager User ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User Locale</td>
<td>&lt; None &gt;</td>
<td></td>
</tr>
<tr>
<td>Associated PC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digest Credentials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confirm Digest Credentials</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Device Associations

<table>
<thead>
<tr>
<th>Controlled Devices</th>
<th>CE1S2, CPE3, RP1, RP2, RP3</th>
<th>Device Association</th>
</tr>
</thead>
</table>

### Extension Mobility

<table>
<thead>
<tr>
<th>Available Profiles</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

---

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# T1-QSIG Gateway

## Gateway Configuration - Microsoft Internet Explorer

### Status

- Status: Ready

### Device Information

- **Product**: Cisco MGCP T1 Gateway
- **Gateway**: tony.anon
- **Device Protocol**: Digital Access PRI
- **Registration**: Registered with Cisco Unified Communications Manager CM-8427A
- **IP Address**: 172.20.2.253
- **End-Point Name**: S1D1.0@tony.anon
- **Description**: SLIC33-1@tony.anon
- **Device Pool**: Default
- **Common Device Configuration**: MigratedCommonDeviceConfig
- **Call Classification**: Use System Default
- **Network/Domain**: < None >
- **Media Resource Group List**: < None >
- **Location**: Hub_Name
- **AAA Group**: < None >
- **Load Information**: 
  - Transmit UTF-8 for Calling Party Name

### Multilevel Precedence and Preemption (MPLP) Information

- **MPLP Domain**: < None >
- **MPLP Indication**: Not available on this device
- **MPLP Preemption**: Not available on this device

### Interface Information

- **PRI Protocol Type**: PRI ISUP QSIG T1
- **Protocol Side**: Up
- **Channel Selection Order**: Bottom Up
- **Channel IE Type**: Ternisian
- **PCM Type**: p-mute
- **Delay for First Restart (2/8 sec<tds)>**: 32

---

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Page 38 of 71
Route Pattern to QSIG Trunk

Note: For detailed information regarding QSIG interoperability between CCM and NEC PBX go to:

SNMP service must be active

<table>
<thead>
<tr>
<th>Performance and Monitoring Services</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>
</tbody>
</table>
Configuring Cisco Emergency Responder

Cisco Communications Manager Details

### Modify Cisco Unified Communications Manager Cluster

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTI Manager IP</td>
<td>172.20.110.254</td>
</tr>
<tr>
<td>CTI Manager User Name</td>
<td>certest</td>
</tr>
<tr>
<td>CTI Manager Password</td>
<td>********</td>
</tr>
<tr>
<td>Backup CTI Manager 1</td>
<td></td>
</tr>
<tr>
<td>Backup CTI Manager 2</td>
<td></td>
</tr>
<tr>
<td>Telephony Port Begin Address</td>
<td>4250</td>
</tr>
<tr>
<td>Number of Telephony Ports</td>
<td>2</td>
</tr>
</tbody>
</table>

### Secure Connection Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Secure Connection</td>
<td><strong>false</strong></td>
</tr>
<tr>
<td>FTP Server IP Address</td>
<td>null</td>
</tr>
<tr>
<td>FTP Server Port</td>
<td>69</td>
</tr>
<tr>
<td>Backup FTP Server IP Address</td>
<td>null</td>
</tr>
<tr>
<td>CAIP Server IP Address</td>
<td>null</td>
</tr>
<tr>
<td>CAIP Server Port</td>
<td>3304</td>
</tr>
<tr>
<td>Instance ID for Publisher</td>
<td>null</td>
</tr>
<tr>
<td>Secure Authentication String for Publisher</td>
<td>null</td>
</tr>
</tbody>
</table>

### Cisco Unified Communications Manager Clusters

<table>
<thead>
<tr>
<th>IP Address</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.20.110.254</td>
<td>Add/Remove</td>
</tr>
</tbody>
</table>

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Page 42 of 71
### Cisco Emergency Responder Server group

**Cisco Emergency Responder Administration**  
For Cisco Unified Communications Solutions

**Cisco ER Group Settings**

**Specify server group attributes**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco ER Group Name</td>
<td>CERServerGroup</td>
</tr>
<tr>
<td>Heartbeat Count</td>
<td>5</td>
</tr>
<tr>
<td>Heartbeat Interval (in sec)</td>
<td>60</td>
</tr>
<tr>
<td>Adhere Call Wait (in sec)</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

#### 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>911</td>
</tr>
<tr>
<td>Route Point for Standby Cisco ER Server</td>
<td>912</td>
</tr>
<tr>
<td>PSAP Callback Route Point Pattern *</td>
<td>913</td>
</tr>
<tr>
<td>ELIN Digit Strip Pattern *</td>
<td>913</td>
</tr>
<tr>
<td>UDP Port Range *</td>
<td>30300</td>
</tr>
<tr>
<td>IP Type of service ( 80-TCP ) *</td>
<td>80-802</td>
</tr>
<tr>
<td>Onsite Alert Prompt Repeat Count *</td>
<td>0</td>
</tr>
<tr>
<td>Use IP Address from call signaling</td>
<td></td>
</tr>
</tbody>
</table>

- * indicates required item

- Update Settings
- Cancel Changes
Server Settings

Server Settings for CERServerGroup

**Status**
- Ready

**Select Server**
- Publisher (primary)

**Modify Server Settings**
- Publisher: CER
- Host Name: CER

### Debug Package List

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CER_DATABASE</td>
<td></td>
</tr>
<tr>
<td>CER_REMOTEDATE</td>
<td></td>
</tr>
<tr>
<td>CER_PHONEHORIZONTALENGINE</td>
<td></td>
</tr>
<tr>
<td>CER_ONSTALEERT</td>
<td></td>
</tr>
<tr>
<td>CER_CALLENGINE</td>
<td></td>
</tr>
</tbody>
</table>

### Trace Package List

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>CER_DATABASE</td>
<td></td>
</tr>
<tr>
<td>CER_REMOTEDATE</td>
<td></td>
</tr>
<tr>
<td>CER_PHONEHORIZONTALENGINE</td>
<td></td>
</tr>
<tr>
<td>CER_ONSTALEERT</td>
<td></td>
</tr>
<tr>
<td>CER_CALLENGINE</td>
<td></td>
</tr>
</tbody>
</table>

**Update Settings**
- Update Settings
- Cancel Changes

* indicates required item

---

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Page 45 of 71
## ERLs List

### Find ERL Data

**Status:**
- Ready

**ERL Search Parameters**
- Find ERL where
  - ERL Name
  - contains
- Find and show 20 items per page

### ERLs (1-4 of 4)

<table>
<thead>
<tr>
<th>ERL Name</th>
<th>Route/Translation Pattern—E164</th>
<th>Onsite Alert E164</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>109311-#000</td>
<td>hasman</td>
<td>cisco</td>
<td>csa</td>
<td>ce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 1</td>
<td>109311-6666274</td>
<td>hasman</td>
<td>bizء eks</td>
<td>csa</td>
<td>ce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 2</td>
<td>113311-6666294</td>
<td>hasman</td>
<td>good</td>
<td>csa</td>
<td>ce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 3</td>
<td>113311-6666274</td>
<td>hasman</td>
<td>cisco</td>
<td>csa</td>
<td>ce</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Configure Default ERL
- Add New ERL

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### ERL Information for Test 1

**ERL Settings**
- **ERL Name**: Test 1
- **Description**: 
- **Test ERL (Used for Synthetic Testing)**: 

**ELIN Settings**
- **Route/Translation pattern**: 10911
  - **Add**: 
  - **Update**: 
  - **Remove**: 10911-4085274200
- **ELIN**: 4085274200
  - **Add**: 
  - **Update**: 
  - **Remove**: 

**Onsite Alert Settings**
- **Available Onsite Alert IDs**: 
  - **Add**: 
  - **Remove**: 
- **Onsite Alert IDs for the ERL**: 

**ERL Address**
- **ALI Details**: 
  - **Edit ALI**: 

---

* indicates required item
### ERL Information for test 2

<table>
<thead>
<tr>
<th><strong>ERL Settings</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ERL Name</strong></td>
<td>test 2</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Test ERL (Used for Synthetic Testing)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ELIN Settings</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route/Translation pattern</strong></td>
<td>11911</td>
</tr>
<tr>
<td><strong>ELIN</strong></td>
<td>4005274201</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Onsite Alert Settings</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available Onsite Alert IDs</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Onsite Alert IDs for the ERL</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ERL Address</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALI Details</strong></td>
<td></td>
</tr>
</tbody>
</table>

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

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

### FLIN Settings
- **Route/Translation pattern**
  - **13911**
  - **FLIN 4085274203**

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

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

---

* indicates required item

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LAN Switch identifying

- **Status**: Please enter any change for the current LAN Switch.

**LAN Switch Details**
- **Switch Host Name / IP Address**: 172.20.0.20
- **Description**:  
- **Enable CMX-based Phone Tracking**: ✔

Update | Cancel Changes | Locate Switch-Ports

**LAN Switches**
- **Add LAN Switch**

**172.20.0.20**

<table>
<thead>
<tr>
<th>Switch Host Name / IP Address</th>
<th>Edit</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>172.20.0.20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* indicates required items
### Switch Port Details

<table>
<thead>
<tr>
<th>Switch Port Details</th>
<th>172.20.0.20</th>
<th>3/20</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/21</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/22</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/23</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/24</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/25</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/26</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/27</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/28</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/29</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/30</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/31</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/32</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/33</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/34</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/35</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/36</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/37</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/38</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/39</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/40</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/41</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/42</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/43</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/44</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/45</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/46</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/47</td>
<td>View</td>
</tr>
<tr>
<td></td>
<td>172.20.0.20</td>
<td>3/48</td>
<td>View</td>
</tr>
</tbody>
</table>
### Defining Manual Phones (PBX Stations)

The image shows a screenshot of a Cisco Emergency Responder Administration interface. The interface is for Cisco Unified Communications Solutions and is used for managing manual phones (PBX stations).

#### Manual Phone Search Parameters

- **Phone Number**: Select the phone number to search for.
- **Contains**: Enter the string to search for.
- **Find**: Click to perform the search.
- **Show All**: Select the number of items per page to display.

#### Manually Configured Phones

<table>
<thead>
<tr>
<th>Line Number</th>
<th>Extension</th>
<th>IP Address</th>
<th>MAC Address</th>
<th>Location</th>
<th>Edit</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>4059</td>
<td>test 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4054</td>
<td>test 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Add New Manual Phone**: Button to add a new manual phone record.

---

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### Modify Manual Phone

**Status**

Please enter any change for the current Manual Phone

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line Number</td>
<td>4954</td>
</tr>
<tr>
<td>MAC Address</td>
<td></td>
</tr>
<tr>
<td>IP Address</td>
<td></td>
</tr>
<tr>
<td>Phone Type</td>
<td></td>
</tr>
<tr>
<td>Version</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>ERL Name</td>
<td>Test1</td>
</tr>
</tbody>
</table>

* indicates required item

**Buttons**

- Update
- Cancel Changes
- Add next Manual phone

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Page 54 of 71
Cisco CUCM Cisco IOS Gateway MGCP Configuration for QSIG Connectivity

thoncm@sh run

Building configuration...

Current configuration : 2077 bytes

!

version 12.4
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname tonycmm
!
boot-start-marker
boot system bootflash:wscmm-ipvoicek9-mz.124-11.T.bin
boot-end-marker
!
logging buffered 1000000
no logging console
enable password cisco
!
no aaa new-model
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
!
!
no ip domain lookup
ip host CM-BARZA 172.20.110.254
multilink bundle-name authenticated
!
isdn switch-type primary-qsig
!
!
!
!
!
!
!
!
!
controller T1 1/0
  pri-group timeslots 1-24 service mgcp

controller T1 1/1

controller T1 1/2

controller T1 1/3

controller T1 1/4

controller T1 1/5

interface GigabitEthernet1/0
  ip address 172.20.8.253 255.255.255.0
  no ip proxy-arp
  no negotiation auto
  no keepalive

interface Serial1/0:23
  no ip address
  encapsulation hdlc
  no logging event link-status
  isdn switch-type primary-qsig
  isdn incoming-voice voice
  isdn bind-l3 ccm-manager
  no cdp enable
! ip default-gateway 172.20.8.1
ip route 0.0.0.0 0.0.0.0 172.20.8.1
!
no ip http server
no ip http secure-server
!
!
control-plane
!
!
voice-port 1/0:23
!
ccm-manager mgcp
ccm-manager music-on-hold
ccm-manager config server CM-BARZA
ccm-manager config
!
mgcp
mgcp call-agent CM-BARZA 2427 service-type mgcp version 0.1
mgcp dtmf-relay voip codec all mode out-of-band
mgcp rtp unreachable timeout 1000 action notify
mgcp modem passthrough voip mode nse
mgcp package-capability rtp-package
no mgcp package-capability res-package
mgcp package-capability sst-package
mgcp package-capability pre-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
transport output all
line vty 0 4
exec-timeout 0 0
password cisco
login
transport input all
transport output all
!
!
end

TonyCMM#

Cisco 3825 IOS Gateway H323 configuration for CAMA trunk connectivity

CAMA_GW#sh run
Building configuration...

Current configuration : 1241 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname CAMA_GW
!
boot-start-marker
boot-end-marker
!
enable password cisco
no aaa new-model
ip cef
!
!
!
!
!
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!

multilink bundle-name authenticated
!
voice-card 0
no dspfarm
!
!
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!
!
!
!
interface GigabitEthernet0/0
  ip address 172.20.8.26 255.255.255.0
  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
  
ip route 0.0.0.0 0.0.0.0 172.20.8.1
  
ip http server
  no ip http secure-server

control-plane
  
voice-port 0/2/0
  signal cama KP-0-NPA-NXX-XXXX-ST
  dial-type mf
  timing hookflash-out 500
  description CAMA
  
voice-port 0/2/1

voice-port 0/3/0
!
voice-port 0/3/1
!
!
!
!
!
dial-peer voice 911 pots
  destination-pattern 911
  no digit-strip
  port 0/2/0
  forward-digits all
!
dial-peer voice 999 voip
  description Call-in PSTN simulation
  destination-pattern .T
  session target ipv4:172.20.110.254
!
!
!
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
CAMA voice-port config

CAMA_GW#sh voice port 0/2/0

Foreign Exchange Office 0/2/0 Slot is 0, Sub-unit is 2, 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 0
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

CAMA_GW#

CAT6k configuration
Console> (enable) sh snmp
SNMP:                      Enabled
RMON:                       Disabled
Extended RMON Netflow Enabled : None.
Memory usage limit for new RMON entries: 85 percent
EngineId: 00:00:00:09:00:01:97:31:c8:00:00:00
Chassis Alias:
Traps Enabled: None
Port Traps Enabled: None

Community-Access     Community-String
----------------     --------------------
read-only            public
read-write           private
read-write-all       secret

Additional-                      Access-
Community-String     Access-Type    Number  View
-------------------- -------------- ------- -----------------------------------
Trap-Rec-Address Trap-Rec-Community Trap-Rec-Port Trap-Rec-Owner Trap-Rec-Index
---------------- ------------------ ------------- -------------- --------------

Console> (enable) sh cdp
CDP : enabled
Message Interval : 60
Hold Time    : 180
Version      : V2
Device Id Format : Other

Console> (enable)

set interface sc0 109 172.20.8.20/255.255.255.0 172.20.8.255

---

### Configuring the AVAYA Definity PBX

**DS1 CIRCUIT PACK**

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display ds1 1a12</strong></td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td>01A12</td>
</tr>
<tr>
<td>Bit Rate:</td>
<td>1.544</td>
</tr>
<tr>
<td>Line Compensation:</td>
<td>1</td>
</tr>
<tr>
<td>Signaling Mode:</td>
<td>isdn-pri</td>
</tr>
<tr>
<td>Connect:</td>
<td>pbx</td>
</tr>
<tr>
<td>TN-C7 Long Timers?</td>
<td>n</td>
</tr>
<tr>
<td>Interworking Message:</td>
<td>PROGress</td>
</tr>
<tr>
<td>Interface Companding:</td>
<td>mulaw</td>
</tr>
<tr>
<td>Idle Code:</td>
<td>11111111</td>
</tr>
<tr>
<td>Name:</td>
<td>T1 to CCW</td>
</tr>
<tr>
<td>Line Coding:</td>
<td>b8zs</td>
</tr>
<tr>
<td>Framing Mode:</td>
<td>esf</td>
</tr>
<tr>
<td>Interface:</td>
<td>peer-master</td>
</tr>
<tr>
<td>Peer Protocol:</td>
<td>Q-SIG</td>
</tr>
<tr>
<td>Side:</td>
<td>a</td>
</tr>
<tr>
<td>CRC?</td>
<td>n</td>
</tr>
<tr>
<td>DCP/Analog Bearer Capability:</td>
<td>3.1KHz</td>
</tr>
<tr>
<td>Slip Detection?</td>
<td>y</td>
</tr>
<tr>
<td>Near-end CSU Type:</td>
<td>other</td>
</tr>
</tbody>
</table>
### SIGNALING GROUP

**display signaling-group 12**

<table>
<thead>
<tr>
<th>SIGNALING GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Number: 12</td>
</tr>
<tr>
<td>Associated Signing? y</td>
</tr>
<tr>
<td>Primary D-Channel: 01A1224</td>
</tr>
<tr>
<td>Trunk Group for NCA TSC: 12</td>
</tr>
<tr>
<td>Supplementary Service Protocol: b</td>
</tr>
</tbody>
</table>

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display trunk-group 12

TRUNK GROUP

Group Number: 12  Group Type: isdn  CDR Reports: y
Group Name: QSIG to CN-Neptune  COR: 1  TN: 1  TAG: 612
Direction: two-way  Outgoing Display? y  Carrier Medium: PRI/BRI
Dial Access? y  Busy Threshold: 99  Night Service:
Queue Length: 0  Auth Code? n  TestCall ITC: rest
Service Type: tie  Far End Test Line No:
TestCall BCC: 4

TRUNK PARAMETERS

Codeset to Send Display: 0  Codeset to Send National IFs: 6
Max Message Size to Send: 260  Charge Advice: none
Supplementary Service Protocol: b  Digit Handling (in/out): embloc/embloc

Trunk Hunt: ascend

QSIG Value-Added? y
Digital Loss Group: 13

Calling Number - Delete:  Insert:  Numbering Format: unk-unk
Bit Rate: 1200  Synchronization: async  Duplex: Full
Disconnect Supervision - In? y  Out? y
Answer Supervision Timeout: 0

display trunk-group 12

INCOMING CALL HANDLING TREATMENT

Service/ Called Called Del Insert Per Call Night
Feature Len Number
CNP/BN Serv
### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMA</td>
<td>Analog “Centralized Automatic Message Accounting” E911 Trunk</td>
</tr>
<tr>
<td>PSAP</td>
<td>Public Service Answering Point</td>
</tr>
</tbody>
</table>
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