



**NORTEL**

Nortel Media Gateway 7480/15000

# Non-switched Service Configuration Management

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NN10600-781

Document status: Standard  
Document issue: 7.2S1  
Document date: October 2006  
Product release: PCR7.2  
Job function: Operations  
Type: NTP  
Language type: U.S English

Sourced in Canada and the United States of America.

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# Contents

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<b>New in this release</b>	<b>5</b>
Features	5
Other changes	5
<b>Non-switched Media Gateway configuration task flow</b>	<b>6</b>
<b>Configuring the Nsta configuration</b>	<b>9</b>
<b>Creating links from TDM FPs to NSTA (VSP)</b>	<b>11</b>
Creating a link from a DS3 TDM FP to NSTA (VSP)	13
Creating a link from an E1 TDM FP to NSTA (VSP)	15
Creating a link from an STM-1/OC3 TDM FP to NSTA (VSP)	16
<b>Creating virtual connections for non-switched Media Gateway</b>	<b>18</b>
Configuring the ATM interface for non-switched Media Gateway using PVCs	20
Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using active access points	22
Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using passive access points	25
Configuring the ATM interface for non-switched Media Gateway using ATM SPVCs	27
<b>Configuring services for non-switched Media Gateway</b>	<b>30</b>
<b>Signaling configuration for non-switched Media Gateway</b>	<b>32</b>
Configuring common channel signaling	34
Configuring channel associated signaling	37
Configuring clear channel data to transport signaling	40
<b>Configuring clear channel data for non-switched Media Gateway</b>	<b>43</b>
<b>Configuring echo cancellation for non-switched Media Gateway</b>	<b>45</b>
<b>Voice band data configuration for non-switched Media Gateway</b>	<b>47</b>
Configuring fax and modem rates	49
Configuring fax idle suppression	51

<b>Configuring packet delay variation tolerance for non-switched Media Gateway</b>	<b>52</b>
<b>Congestion management configuration for non-switched Media Gateway</b>	<b>54</b>
Configuring voice compression rates	56
Configuring silence suppression	58
Configuring congestion management thresholds	60
<b>Monitoring non-switched Media Gateway</b>	<b>62</b>
Displaying operational and statistics attributes for non-switched Media Gateway	63
Displaying OSI states for non-switched Media Gateway	66

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## New in this release

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The following sections detail what is new in the *Nortel Media Gateway 7480/15000 Non-switched Service Configuration Management (NN10600-781)* NTP for PCR 7.2:

- [Features \(page 5\)](#)
- [Other changes \(page 5\)](#)

### Features

There were no feature changes made to this document.

### Other changes

There were no other changes made to this document.

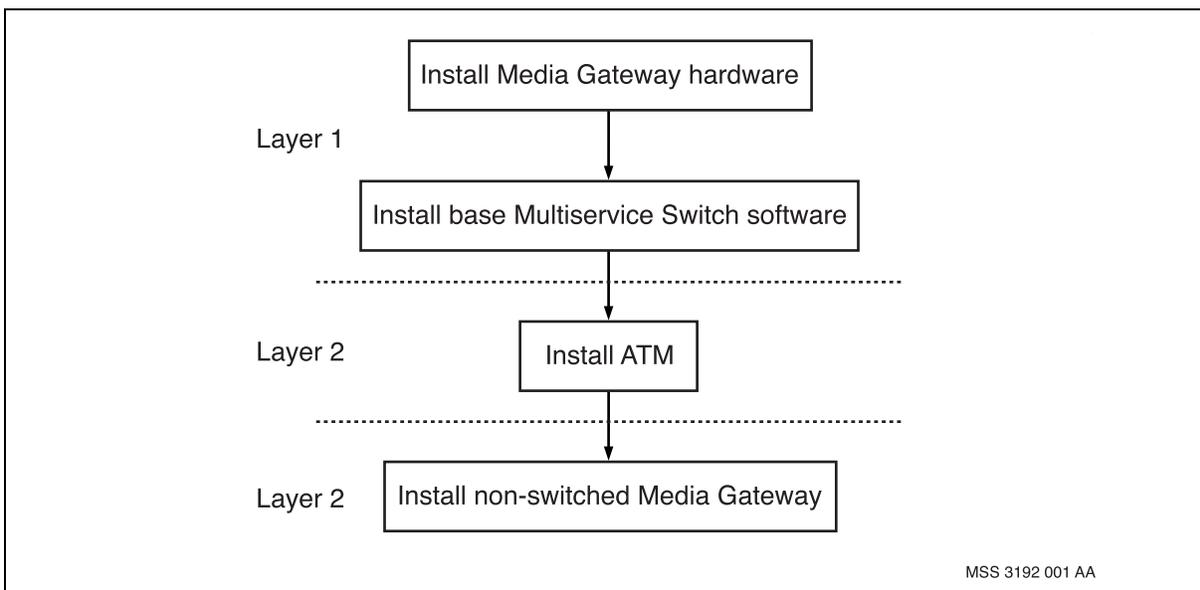
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# Non-switched Media Gateway configuration task flow

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The non-switched Media Gateway configuration task flow is based on the Open Systems Interconnection (OSI) reference model. This book deals with non-switched Media Gateway configuration in Nortel Multiservice Switch networks at the Transport Layer. See the figure [Non-switched Media Gateway on Multiservice Switch configuration according to the OSI reference model](#) (page 6).

## Non-switched Media Gateway on Multiservice Switch configuration according to the OSI reference model



## Prerequisites to non-switched Media Gateway configuration

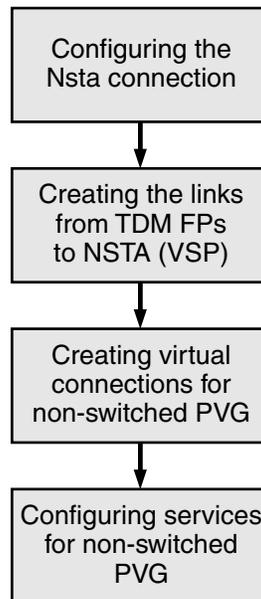
- Install the required Media Gateway hardware. See the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780) and *Nortel Multiservice Switch 15000/20000 Installation, Maintenance, and Upgrade – Hardware* (NN10600-130) or *Nortel Multiservice Switch 7400 Installation, Maintenance, and Upgrade – Hardware* (NN10600-175).

- Configure the required base Multiservice Switch node software. See the *Nortel Multiservice Switch 7400/15000/20000 Installation – Software* (NN10600-270).
- Configure the required ATM software. See the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780) and *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710)
- Install the Media Gateway software. See the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780), *Nortel Multiservice Switch 7400/15000/20000 Configuration* (NN10600-550), and *Nortel Multiservice Switch 7400/15000/20000 Installation – Software* (NN10600-270).
- See the non-switched Media Gateway functionality section in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

## Non-switched Media Gateway configuration tasks

For a detailed view of the sequence of tasks you perform to configure non-switched Media Gateway in Multiservice Switch networks, see the figure [Non-switched MG configuration task flow \(page 8\)](#). Each box in the task flow represents a task that comprises one or more procedures. Each task has a corresponding section in this guide that contains the relevant procedures. To link to any task, go to the list that follows the task flow.

### Non-switched MG configuration task flow



PPT 3343 001 AA

#### Navigation links

- [Configuring the Nsta configuration \(page 9\)](#)
- [Creating links from TDM FPs to NSTA \(VSP\) \(page 11\)](#)
- [Creating virtual connections for non-switched Media Gateway \(page 18\)](#)
- [Configuring services for non-switched Media Gateway \(page 30\)](#)

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# Configuring the Nsta configuration

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Configure the *NarrowbandServicesTrunkOverATM (Nsta)* and *Connection (Conn)* components to establish the *BasicRateGroup* and the attributes necessary to configure non-switched Media Gateway services and the link to ATM.

## Prerequisites

- Perform the prerequisites required for this task. See [Prerequisites to non-switched Media Gateway configuration \(page 6\)](#).

## Procedure steps

---

Step	Action
1	Add the <i>NarrowbandServicesTrunkOverATM (Nsta)</i> component. You need one <i>Nsta</i> for each voice services FP:  <b>add Nsta/&lt;n&gt;</b>
2	Add an AAL2 connection beneath the <i>Nsta</i> component:  <b>add Nsta/&lt;n&gt; Connection/&lt;m&gt;</b>

---

**Attention:** The system automatically adds the subcomponents *BasicRateGroup/0 (Brag)* and *NailedupAdaptionPoint (Nap)*. The system dynamically creates a *BasicRateChannel (Brac)* component for each *Connection* component identified by the system when you activate the provisioning changes.

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**Attention:** You can configure a different instance value for the *Brag* component if you delete *Brag/0* and add a new instance. You can configure only one *Brag* component for each *Connection* component.

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--End--

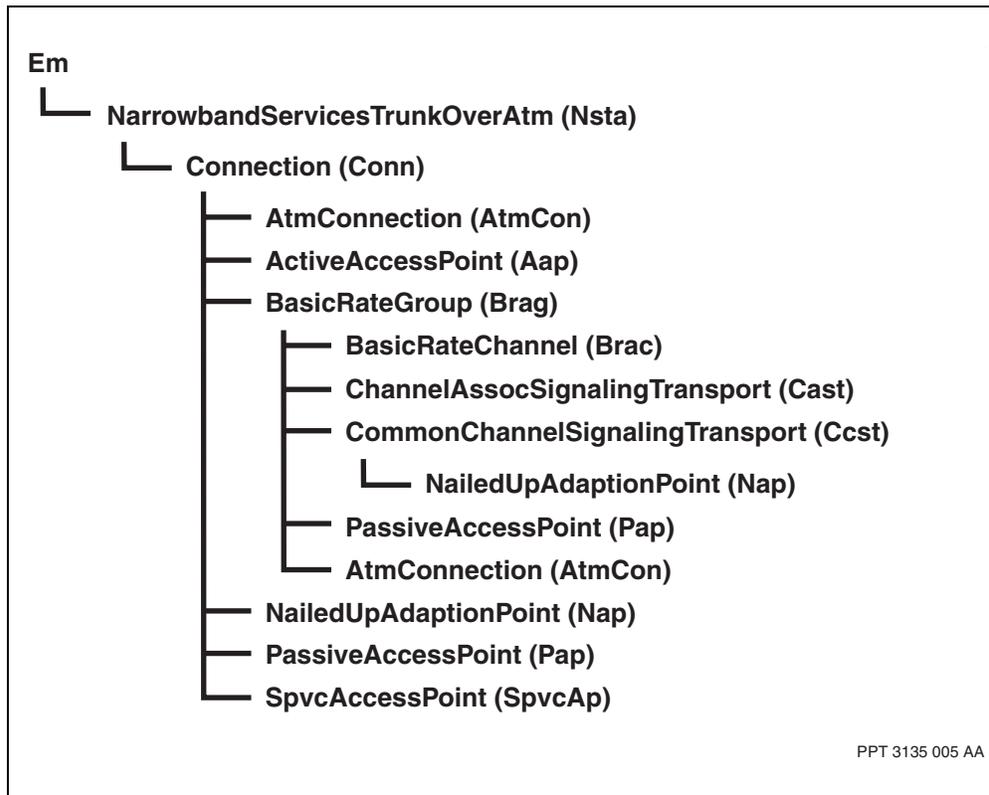
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component

## Procedure job aid

### Configuring Nsta Connection component hierarchy



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# Creating links from TDM FPs to NSTA (VSP)

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Create links from the TDM FPs to the narrowband services trunk over ATM (NSTA), also known as the voice services processor (VSP). For information about configuring the ATM part of the connection, see [Creating virtual connections for non-switched Media Gateway task flow \(page 18\)](#).

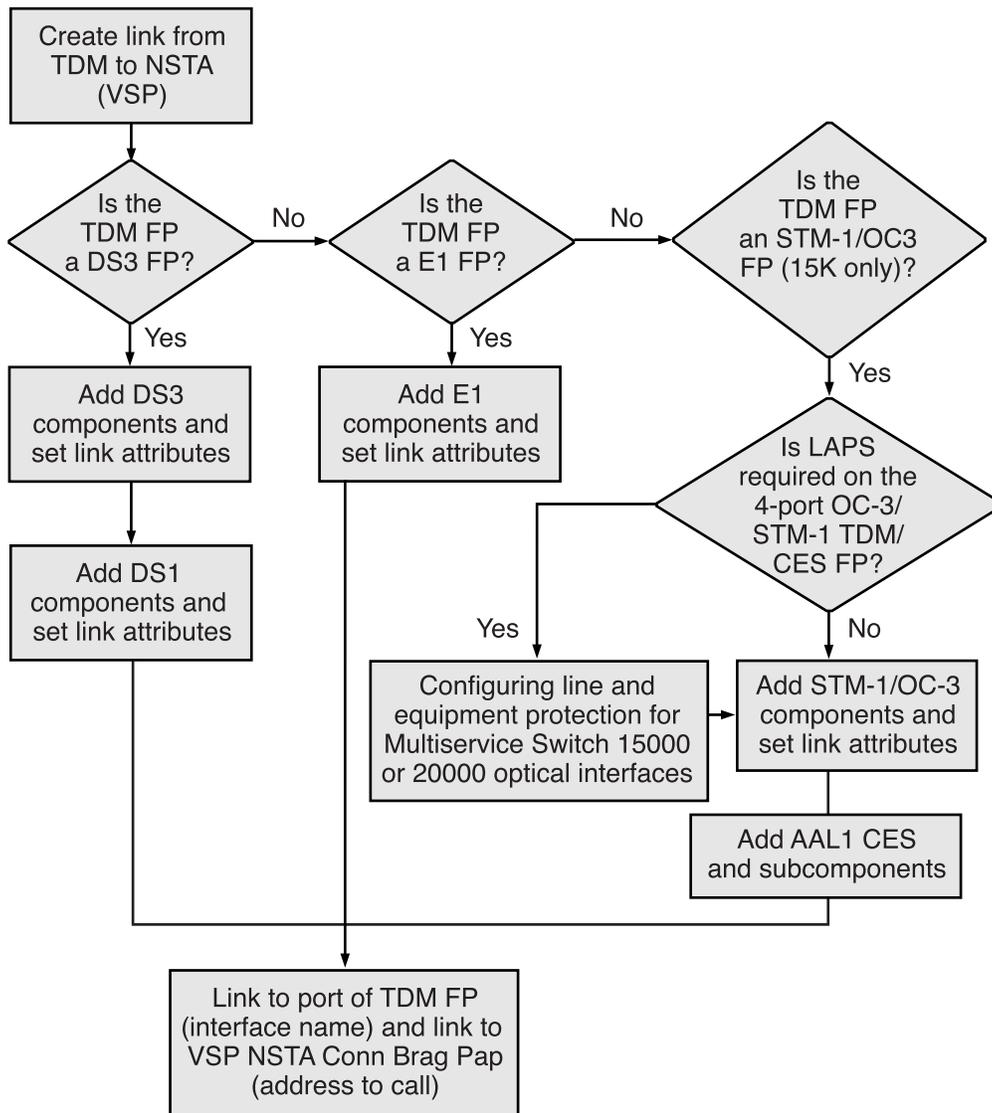
- [Prerequisites to creating links from TDM FPs to NSTA \(VSP\) \(page 11\)](#)
- [Creating links from TDM FPs to NSTA \(VSP\) task flow \(page 12\)](#)

## Prerequisites to creating links from TDM FPs to NSTA (VSP)

- The logical processor types and logical processors required for Media Gateway are installed and configured as described in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).
- For supporting information for the procedures in this section, see *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).
- This task may require the provisioning of line automatic protection switching (LAPS) for the 4-port OC-3/STM-1 Ch TDM/CES FP. If you choose this configuration you will need the procedure “Configuring line and equipment protection for Multiservice Switch 15000 and Multiservice Switch 20000 optical interfaces” in *Nortel Multiservice Switch 7400/15000/20000 Configuration* (NN10600-550).

## Creating links from TDM FPs to NSTA (VSP) task flow

This task flow shows you the sequence of procedures you perform to create links from TDM FPs to NSTA (VSP). To link to any procedure, go to the list that follows the task flow.



MSS 3189 001 AA

### Creating links from TDM FPs to NSTA (VSP) task flow

- [Creating a link from a DS3 TDM FP to NSTA \(VSP\) \(page 13\)](#)
- [Creating a link from an E1 TDM FP to NSTA \(VSP\) \(page 15\)](#)
- “Configuring line and equipment protection for Multiservice Switch 15000 and Multiservice Switch 20000 optical interfaces” in *Nortel Multiservice Switch 7400/15000/20000 Configuration (NN10600-550)*
- [Creating a link from an STM-1/OC3 TDM FP to NSTA \(VSP\) \(page 16\)](#)

## Creating a link from a DS3 TDM FP to NSTA (VSP)

Create a link from DS3 TDM FPs to NSTA to associate the Nsta services to an interface on the 2-port DS3 TDM FP.

### Prerequisites

- The logical processor types and logical processors for the DS3 FP have been configured as described in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

Step	Action
1	Set the card's <i>cardtype</i> attribute to <i>2pDS3cAal</i> .
2	Add to the associated LP any required interface components. For the 2-port DS3C TDM, you would add <i>DS3</i> and <i>DS1</i> components under the LP component.  <b>add Lp/&lt;p&gt; DS3/&lt;x&gt; DS1/&lt;y&gt;</b>
3	Set the <i>clockingSource</i> attribute of the DS1 tributary port to module.  <b>set Lp/&lt;o&gt; DS3/&lt;x&gt; DS1/&lt;y&gt; clockingSource module</b>
4	Connect the NSTA AAL2 connection to a port.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 interfaceName Lp/&lt;p&gt; &lt;path&gt;</b>
5	Link the <i>Nsta</i> component to the logical processor you defined for the voice services FP.  <b>set Nsta/&lt;n&gt; linktoserver lp/&lt;p&gt; vsp</b>

--End--

### Variable definitions

Variable	Value
<m>	is the value for the <i>Connection</i> component.
<n>	is the value for the <i>Nsta</i> component
<p>	is the value for the LP
<path>	is the path for the DS1 channel, for example, DS3/0 DS1/1 Channel/0.

(1 of 2)

Creating links from TDM FPs to NSTA (VSP)

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<b>Variable</b>	<b>Value</b>
<x>	is the value of the DS3
<y>	is the value of the DS1
(2 of 2)	

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## Creating a link from an E1 TDM FP to NSTA (VSP)

Create a link from an E1 TDM FPs to NSTA to associate the Nsta services to an interface on the 32-port E1 TDM FP.

### Prerequisites

- The logical processor types and logical processors for the E1 FP have been configured as described in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

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Step	Action
1	Set the card's <i>cartype</i> attribute to <i>32pE1Aal</i> .
2	Add to the associated LP any required interface components. For a 32-port E1 TDM FP, you would add the <i>E1</i> component under the <i>Lp</i> component.  <code>set Lp/&lt;p&gt; E1/&lt;x&gt;</code>
3	Connect the Nsta AAL2 connection to a port on the 32-port E1 TDM FP.  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 interfaceName Lp/&lt;p&gt; &lt;path&gt;</code>
4	Link the <i>Nsta</i> component to the logical processor you defined for the voice services FP.  <code>set Nsta/&lt;n&gt; linktoserver lp/&lt;p&gt; vsp</code>

---

--End--

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### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<p>	is the value for the LP
<path>	is the path for the E1 channel, for example, E1/8 Channel/0
<x>	is the value for the E1 instance

## Creating a link from an STM-1/OC3 TDM FP to NSTA (VSP)

Create a link from an STM-1/OC3 FPs to NSTA to associate the Nsta services to an interface on the 4-port OC-3/STM-1 Ch TDM/CES FP.

### Prerequisites

- The logical processor types and logical processors for the STM-1/OC3 FP have been configured as described in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

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Step	Action
1	Set the card's <i>cardtype</i> attribute to <i>4pOC3ChSmlr</i> .
2	Add to the associated LP the AAL1 CES components and subcomponents. <b>set lp/&lt;p&gt; sdh/&lt;z&gt; vc4/0 vc12/&lt;k.1,m&gt;</b>
3	For the 4-port OC-3/STM-1Ch TDM/CES FP, connect the AAL1CES component to the port. <b>set aal1ces/x interfacename lp/q sdh/&lt;z&gt; vc4/0 vc12/&lt;k,1,m&gt; E1 chan/0</b>
4	For the 4-port OC-3/STM-1Ch TDM/CES FP, add an aep component under the AAL1CES component. <b>add aal1ces/&lt;x&gt; aep</b>
5	For the 4-port OC-3/STM-1Ch TDM/CES FP, set the aep component <b>set aal1ces/&lt;x&gt; aep addresstocall &lt;v&gt;</b>
<hr/> <b>Attention:</b> Ensure the <i>trafficChannelIdentifierList</i> under the <i>NSTA Conn Brag</i> has the equivalent number of AAL2 channels to the number of timeslots under the <i>E1 chan/0 timeslot</i> list or under the <i>DS1 chan/0 timeslot</i> list. <hr/>	
6	Link the <i>Nsta</i> component to the logical processor you defined for the voice services FP. <b>set Nsta/&lt;n&gt; linktoserver lp/&lt;p&gt; vsp</b>

---

--End--

---

### Variable definitions

Variable	Value
<k,l,m>	are the instance of the low order path
<m>	is the value for the Connection component
<n>	is the value for the <i>Nsta component</i>
<p>	is the value for the logical processor of an FP.
<path>	is the path for the DS1 or E1 channel, for example, DS3/0 DS1/1 Channel/0 or E1/8 Channel/0
<v>	is the <i>Pap</i> localaddress value
<x>	is the instance number of the <i>aal1ces</i> component
<z>	is the value of the port

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# Creating virtual connections for non-switched Media Gateway

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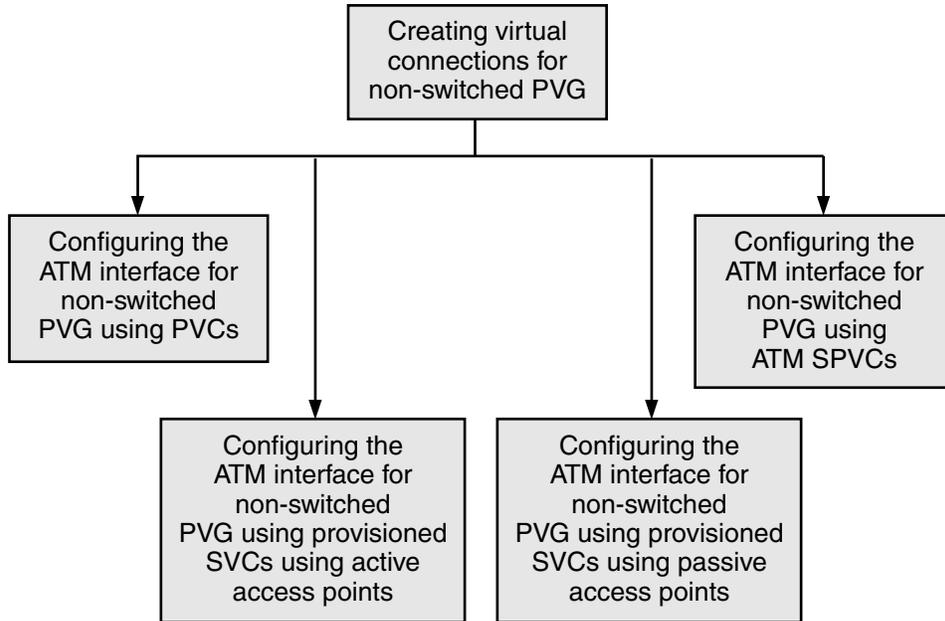
Create the ATM virtual connections required for non-switched Media Gateway. For information about configuring the TDM and VSP parts of the connection, see [Creating links from TDM FPs to NSTA \(VSP\) \(page 11\)](#).

- [Creating virtual connections for non-switched Media Gateway task flow \(page 18\)](#)

## Creating virtual connections for non-switched Media Gateway task flow

This task flow shows you the sequence of procedures you perform to create virtual connections for non-switched Media Gateway. To link to any procedure, go to the list that follows the task flow.

**Creating virtual connections for non-switched Media Gateway task flow**



PPT 3189 002 AA

**Navigation links**

- [Configuring the ATM interface for non-switched Media Gateway using PVCs \(page 20\)](#)
- [Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using active access points \(page 22\)](#)
- [Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using passive access points \(page 25\)](#)
- [Configuring the ATM interface for non-switched Media Gateway using ATM SPVCs \(page 27\)](#)

## Configuring the ATM interface for non-switched Media Gateway using PVCs

Create the PVC virtual channel connections (VCCs) and link them to the ports on the ATM FPs in the shelf. For additional information about how to configure ATM connections, see *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM (NN10600-710)*.

### Procedure steps

Step	Action
1	Add an ATM interface. <b>add AtmIf/&lt;n&gt;</b>
2	Add a VCC to the ATM interface. <b>add AtmIf/&lt;n&gt; Vcc/&lt;VPI.VCI&gt;</b>  Permitted values depend on the connection map for the <i>AtmIf</i> component. You may need to edit the <i>ConnectionAdministrator</i> or <i>ConnectionMapping</i> component. See <i>Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals (NN10600-700)</i> .
3	Add a <i>NailedUpEndPoint</i> component to the VCC. <b>add AtmIf/&lt;n&gt; Vcc/&lt;VPI.VCI&gt; Nep</b>
4	Configure ATM traffic management. <b>set AtmIf/&lt;n&gt; Vcc/&lt;VPI.VCI&gt; Vcd Tm &lt;attribute&gt; &lt;attributevalue&gt;</b>  Set the traffic management attributes as required. For more information, see the traffic management section in the <i>Nortel Media Gateway 7480/15000 Technology Fundamentals (NN10600-780)</i> .
5	Link the ATM interface to an ATM port. <b>set AtmIf/&lt;n&gt; interfaceName lp/&lt;m&gt; &lt;port&gt;</b>
6	Optionally, if you plan to oversubscribe the connection pool capacity for the ATM interface, edit the connection administrator to accommodate the appropriate bandwidth. <b>set AtmIf/&lt;n&gt; Ca bandwidthPool 1 &lt;percentage&gt;</b>
7	Add a permanent access point to the AAL2 connection. <b>add Nsta/&lt;p&gt; Connection/&lt;r&gt; Nap</b>
8	Map a <i>Nap</i> component to a <i>Nep</i> component. <b>set Nsta/&lt;p&gt; Connection/&lt;r&gt; Nap atmConnection AtmIf/&lt;n&gt; Vcc/&lt;VPI.VCI&gt; Nep</b>

- 9 Configure signaling. For details, see [Configuring services for non-switched Media Gateway \(page 30\)](#).
- 

--End--

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## Variable definitions

Variable	Value
<n>	is the instance value of the <i>AtmIf</i> component and can be any value from 1 to 1024
<VPI,VCI>	is the instance value of the VCC. The VPI value can be from 0 to 255. The VCI value can be from 32 to 65535
<attribute>	is any of the configurable attributes
<attributevalue>	is a permitted value for the attribute
<m>	is the LP number
<port>	is the port type and instance value, for example, <i>E1/1</i> or <i>Sonet/0 Path/0</i> or <i>DS3/0</i> . If the FP is channelized, include the channel instance as well, for example, <i>DS1/1 Channel/0</i> .
<percentage>	is the percentage of the pool, between 0 and 1000, that is reserved for pool1. For more information about bandwidth pools, see <i>Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals (NN10600-700)</i>
<p>	is the value for the <i>Nsta</i> component
<r>	is the value for a <i>Connection</i> component

## Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using active access points

Create basic ATM interfaces, link them to the ports on the ATM FPs in the shelf, and configure bearer channels to use ATM provisioned SVCs with active access points. For additional information about how to configure ATM connections for Nortel Multiservice Switch networks, see *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710).

### Prerequisites

- The ATM network and the ATM interfaces must be configured to provide switched ATM connections (provisioned SVCs or SPVCs). Refer to *Nortel Multiservice Switch 7400/15000/20000 Fundamentals – ATM Routing and Signalling* (NN10600-702) for a description of switched ATM connections. See *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710) for procedures on configuring the connections.

### Procedure steps

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Step	Action
1	Add an ATM interface. <b>add AtmIf/&lt;n&gt;</b>
2	Link the ATM interface to an ATM port. <b>set AtmIf/&lt;n&gt; interfaceName lp/&lt;m&gt; &lt;port&gt;</b>
3	Optionally, if you plan to oversubscribe the connection pool capacity for the ATM interface, edit the <i>ConnectionAdministrator</i> component to accommodate the appropriate bandwidth. <b>set AtmIf/&lt;n&gt; Ca bandwidthPool 1 &lt;percentage&gt;</b>
4	Add an active access point to the AAL2 connection. <b>add Nsta/&lt;p&gt; Connection/&lt;r&gt; Aap</b>
5	Specify the ATM service category. <b>set Nsta/&lt;p&gt; Connection/&lt;r&gt; Aap atmServiceCategory &lt;cat&gt;</b>
6	Specify the peak cell rate. <b>set Nsta/&lt;p&gt; Connection/&lt;r&gt; Aap pcr &lt;p_cell_rate&gt;</b>
7	Specify the sustained cell rate. <b>set Nsta/&lt;p&gt; Connection/&lt;r&gt; Aap scr &lt;s_cell_rate&gt;</b>
8	Specify the maximum burst size. <b>set Nsta/&lt;p&gt; Connection/&lt;r&gt; Aap mbs &lt;max_burst_size&gt;</b>
9	Specify the retry limit.

---

```
set Nsta/<p> Connection/<r> Aap limit <max_retry>
```

- 10 Configure signaling. For details, see [Configuring services for non-switched Media Gateway \(page 30\)](#).

--End--

## Variable definitions

Variable	Value
<n>	is the instance value of the <i>AtmIf</i> component and can be any value from 1 to 1024
<VPI,VCI>	is the instance value of the VCC. The VPI value can be from 0 to 255. The VCI value can be from 32 to 65535
<attribute>	is any of the configurable attributes
<cat>	is either <i>constantBitRate</i> or <i>rtVariableBitRate</i> (the value <i>rtVariableBitRate</i> is recommended for real-time voice data through the <i>Nsta Conn</i> component)
<attributevalue>	is a permitted value for the attribute
<m>	is the LP number
<port>	is the port type and instance value, for example, <i>E1/1</i> or <i>Sonet/0 Path/0</i> or <i>DS3/0</i> . If the FP is channelized, include the channel instance as well, for example, <i>DS1/1 Channel/0</i> .
<percentage>	is the percentage of the pool, between 0 and 1000, that is reserved for pool1. For more information about bandwidth pools, see <i>Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals</i> (NN10600-700)
<p>	is the value for the <i>Nsta</i> component
<r>	is the value for a <i>Connection</i> component
<p_cell_rate>	is a number representing the peak cell rate
<s_cell_rate>	is a number representing the sustained cell rate. It must be zero if the ATM service category is <i>constantBitRate</i> . It must not be zero if the ATM service category is something other than <i>constantBitRate</i> . The number of the sustained cell rate must not equal the number of the peak cell rate.

(1 of 2)

Variable	Value
<max_burst_size>	is a number representing the maximum burst size. It must be zero if the ATM service category is <i>constantBitRate</i> . It must not be zero if the ATM service category is something other than <i>constantBitRate</i> .
<max_retry>	is a number representing the maximum number of retry rounds the application tries to connect to the far end before setting an alarm and forcing manual intervention. A value of 0 indicates that the application tries indefinitely to connect to the far end.
(2 of 2)	

## Configuring the ATM interface for non-switched Media Gateway using provisioned SVCs using passive access points

Create basic ATM interfaces, link them to the ports on the ATM FPs in the shelf, and configure bearer channels to use ATM provisioned SVCs with passive access points. For additional information about how to configure ATM connections for Nortel Multiservice Switch networks, see *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710).

### Prerequisites

- The ATM network and the ATM interfaces must be configured to provide switched ATM connections (provisioned SVCs or SPVCs). See *Nortel Multiservice Switch 7400/15000/20000 Fundamentals – ATM Routing and Signalling* (NN10600-702) for a description of switched ATM connections. See *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710) for procedures on configuring the connections.

### Procedure steps

---

Step	Action
1	Add an ATM interface. <b>add AtmIf/&lt;n&gt;</b>
2	Link the ATM interface to an ATM port. <b>set AtmIf/&lt;n&gt; interfaceName lp/&lt;m&gt; &lt;port&gt;</b>
3	Optionally, if you plan to oversubscribe the connection pool capacity for the ATM interface, edit the <i>ConnectionAdministrator</i> component to accommodate the appropriate bandwidth. <b>set AtmIf/&lt;n&gt; Ca bandwidthPool 1 &lt;percentage&gt;</b>
4	Add a passive access point to the AAL2 connection. <b>add Nsta/&lt;p&gt; Connection/&lt;r&gt; Pap</b>
5	Configure signaling. For details, see <a href="#">Configuring services for non-switched Media Gateway</a> (page 30).

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--End--

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### Variable definitions

Variable	Value
<n>	is the instance value of the <i>AtmIf</i> component and can be any value from 1 to 1024
<m>	is the LP number
<port>	is the port type and instance value, for example, <i>E1/1</i> or <i>Sonet/0 Path/0</i> or <i>DS3/0</i> . If the FP is channelized, include the channel instance as well, for example, <i>DS1/1 Channel/0</i> .
<percentage>	is the percentage of the pool, between 0 and 1000, that is reserved for pool1. For more information about bandwidth pools, see <i>Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals</i> (NN10600-700)
<p>	is the value for the <i>Nsta</i> component
<r>	is the value for a <i>Connection</i> component

## Configuring the ATM interface for non-switched Media Gateway using ATM SPVCs

Create basic ATM interfaces, link them to the ports on the ATM FPs in the shelf, and configure SPVCs. For additional information about how to configure ATM connections for Nortel Multiservice Switch networks, see *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710).

### Prerequisites

- The ATM network and the ATM interfaces must be configured to provide switched ATM connections (provisioned SVCs or SPVCs). See *Nortel Multiservice Switch 7400/15000/20000 Fundamentals – ATM Routing and Signalling* (NN10600-702) for a description of switched ATM connections. See *Nortel Multiservice Switch 7400/15000/20000 Configuration – ATM* (NN10600-710) for procedures on configuring the connections.

### Procedure steps

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Step	Action
1	Add an ATM interface. <b>add AtmIf/ &lt;n&gt;</b>
2	Link the ATM interface to an ATM port. <b>set AtmIf/ &lt;n&gt; interfaceName lp/ &lt;m&gt; &lt;port&gt;</b>
3	Optionally, if you plan to oversubscribe the connection pool capacity for the ATM interface, edit the <i>ConnectionAdministrator</i> component to accommodate the appropriate bandwidth. <b>set AtmIf/ &lt;n&gt; Ca bandwidthPool 1 &lt;percentage&gt;</b>
4	Add a SPVC access point to the AAL2 connection. <b>add Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp</b>
5	Specify the remote address of the ATM interface to call. <b>set Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp addrToCall &lt;rem_addr&gt;</b>
6	Specify the remote VPI VCI combination of the ATM interface to call. <b>set Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp rVpiVci &lt;VPI.VCI&gt;</b>
7	Specify the ATM service category. <b>set Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp service &lt;cat&gt;</b>
8	Specify the peak cell rate. <b>set Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp pcr &lt;p_cell_rate&gt;</b>
9	Specify the sustained cell rate. <b>set Nsta/ &lt;p&gt; Connection/ &lt;r&gt; SpvcAp scr &lt;s_cell_rate&gt;</b>

---

- 10 Specify the maximum burst size.  
**set Nsta/<p> Connection/<r> SpvcAp mbs <max\_burst\_size>**
- 11 Specify the retry limit.  
**set Nsta/<p> Connection/<r> SpvcAp limit <max\_retry>**
- 12 Configure signaling. For details, see [Configuring services for non-switched Media Gateway \(page 30\)](#).

--End--

## Variable definitions

Variable	Value
<n>	is the instance value of the <i>AtmIf</i> component and can be any value from 1 to 1024
<VPI,VCI>	is the instance value of the VCC. The VPI value can be from 0 to 255. The VCI value can be from 32 to 65535
<attribute>	is any of the configurable attributes
<cat>	is either <i>constantBitRate</i> or <i>rtVariableBitRate</i> (the value <i>rtVariableBitRate</i> is recommended for real-time voice data through the <i>Nsta Conn</i> component)
<attributevalue>	is a permitted value for the attribute
<m>	is the LP number
<port>	is the port type and instance value, for example, <i>E1/1</i> or <i>Sonet/0 Path/0</i> or <i>DS3/0</i> . If the FP is channelized, include the channel instance as well, for example, <i>DS1/1 Channel/0</i> .
<percentage>	is the percentage of the pool, between 0 and 1000, that is reserved for pool1. For more information about bandwidth pools, see <i>Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals</i> (NN10600-700)
<p>	is the value for the <i>Nsta</i> component
<r>	is the value for a <i>Connection</i> component
<p_cell_rate>	is a number representing the peak cell rate
<s_cell_rate>	is a number representing the sustained cell rate. It must be zero if the ATM service category is <i>constantBitRate</i> . It must not be zero if the ATM service category is something other than <i>constantBitRate</i> . The number of the sustained cell rate must not equal the number of the peak cell rate.
(1 of 2)	

Variable	Value
<max_burst_size>	is a number representing the maximum burst size. It must be zero if the ATM service category is <i>constantBitRate</i> . It must not be zero if the ATM service category is something other than <i>constantBitRate</i> .
<max_retry>	is a number representing the maximum number of retry rounds the application tries to connect to the far end before setting an alarm and forcing manual intervention. A value of 0 indicates that the application tries indefinitely to connect to the far end.
<rem_addr>	is the address of the remote ATM interface

(2 of 2)

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# Configuring services for non-switched Media Gateway

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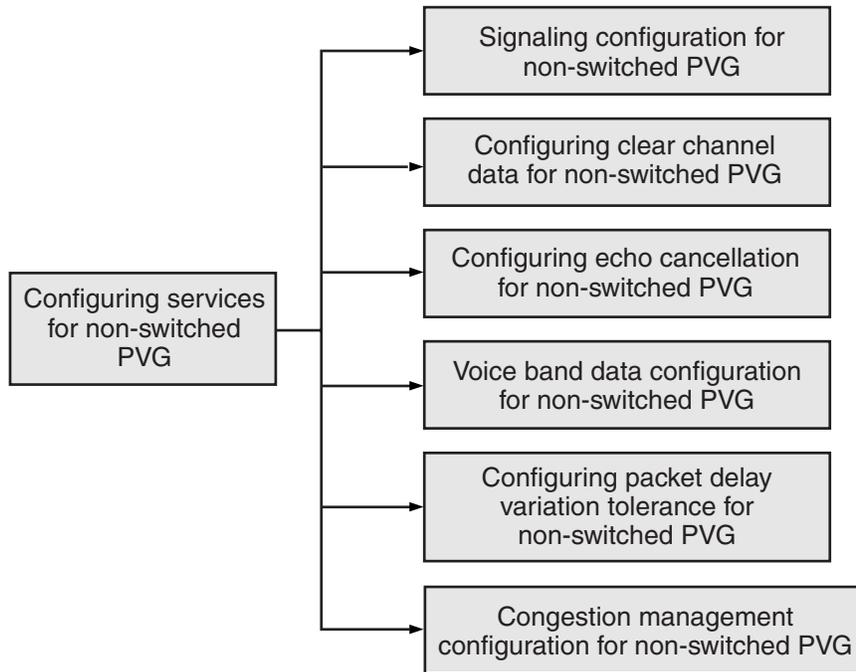
Configure services for non-switched Media Gateway to define Media Gateway behavior for services such as, signaling, clear channel data, echo cancellation, voice band data, packet delay variation tolerance, and congestion management.

- [Configuring services for non-switched Media Gateway task flow \(page 30\)](#)

## **Configuring services for non-switched Media Gateway task flow**

This task flow shows you the sequence of procedures you perform to configure services for non-switched Media Gateway. To link to any procedure, go to the list that follows the task flow.

### Configuring services for non-switched Media Gateway task flow



PPT 3192 003 AA

### Navigation links

- [Signaling configuration for non-switched Media Gateway \(page 32\)](#)
- [Configuring clear channel data for non-switched Media Gateway \(page 43\)](#)
- [Configuring echo cancellation for non-switched Media Gateway \(page 45\)](#)
- [Voice band data configuration for non-switched Media Gateway \(page 47\)](#)
- [Configuring packet delay variation tolerance for non-switched Media Gateway \(page 52\)](#)
- [Congestion management configuration for non-switched Media Gateway \(page 54\)](#)

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# Signaling configuration for non-switched Media Gateway

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Configure signaling for non-switched Media Gateway to define the type of signaling in the network.

- [Prerequisites to signaling configuration for non-switched Media Gateway \(page 32\)](#)
- [Signaling configuration for non-switched Media Gateway task flow \(page 33\)](#)

## Prerequisites to signaling configuration for non-switched Media Gateway

- See the sections on signaling and unswitched trunks in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).
- Supporting information for configuring signaling for non-switched Media Gateway: For each *Connection* component, you can configure signaling. Media Gateway provides three signaling choices: common channel signaling (CCS), channel associated signaling (CAS), or unswitched trunks. For overview information about signaling, see the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780). If you do not configure any signaling, all the channels for the Media Gateway connection are automatically unswitched and therefore unmonitored. Because the system does not monitor signaling, unswitched trunks do not suppress idle channels. Regardless of the type of signaling you configure, you can specify that a number of channels are to be carried as clear channel data. The *ccdTimeslotList* attribute of the *Brag* component enables you to specify which time slots you want the system to carry as clear channel data. The system transports these time slots as clear channel data, regardless of the signaling monitoring status (enabled or disabled for the Media Gateway connection), and regardless of the type of information transported on that time slot.

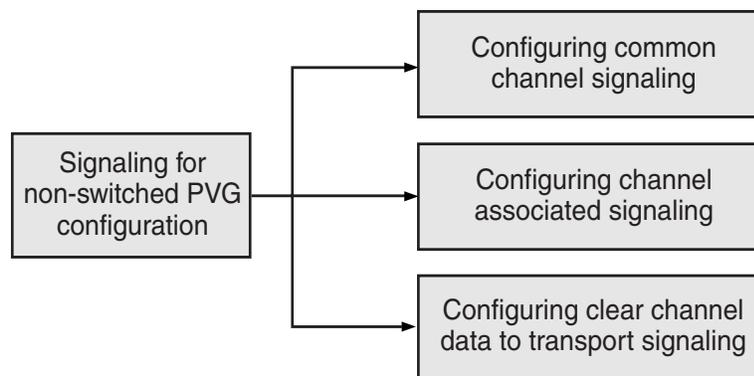
**Attention:** CCST traffic is not supported on the 12mVspAal FP. The Ccst or Cast components are also not available if provisioned SVCs, provisioned SPVCs, or the 4-port OC-3/STM-1Ch TDM/CES FP are used.

---

## Signaling configuration for non-switched Media Gateway task flow

This task flow shows you the sequence of procedures you perform to configure signaling for non-switched Media Gateway. To link to any procedure, go to the list that follows the task flow.

### Signaling configuration for non-switched Media Gateway task flow



PPT 3192 004 AA

### Navigation links

- [Configuring common channel signaling \(page 34\)](#)
- [Configuring channel associated signaling \(page 37\)](#)
- [Configuring clear channel data to transport signaling \(page 40\)](#)

## Configuring common channel signaling

Configure common channel signaling to define how signaling information is passed through the network.

### Prerequisites

- Supporting information for configuring common channel signaling: To configure common channel signaling (CCS) for each non-switched Media Gateway connection, you must create and configure the *Ccst* component and then create and map a *Ccst Nap* component to a separate ATM VCC. The *timeslot* attribute of the *Ccst* component specifies which time slot carries the signaling information. By default, Media Gateway sets the *timeslot* attribute to *autoConfigure*, which means that the type of TDM interface determines the signaling time slot. For DS1 interfaces, the system uses time slot 24. For E1 interfaces, the system uses time slot 16. For CCS, you must set the *lineType* attribute for DS1 ports to *d4* or *esf*. You must set the *linetype* attribute for E1 ports to *ccs*.

---

**Attention:** CCST traffic is not supported on the 12mVspAal FP. The *Ccst* components are also not available if provisioned SVCs, provisioned SPVCs, or the 4-port OC-3/STM-1Ch TDM/CES FP are used.

---

### Procedure steps

Step	Action
1	<p>Add a <i>CommonChannelSignalingTransport (Ccst)</i> component to an <i>Nsta Connection</i> component.</p> <pre>add Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 Ccst</pre>
2	<p>Set the configurable attributes for the <i>Ccst</i> component.</p> <pre>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 Ccst &lt;attribute&gt; &lt;attribute value&gt;</pre> <p>If you set the <i>ccsMonitoring</i> attribute to <i>enabled</i>, the connection uses all time slots. If you set the <i>ccsMonitoring</i> attribute to <i>disabled</i>, you can delete time slots from the connection. Nortel Multiservice Switch Media Gateway software does not support CCS monitoring for E1 or OC3/STM-1 interfaces.</p>
3	<p>If you do not want to use all time slots, you must remove channel identifiers (CID) from the <i>cidList</i> attribute.</p> <pre>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 cidList ~&lt;t&gt;</pre> <p>If you delete time slots from the <i>cidList</i> attribute, you must also delete time slots from the channel on the FP. This is done by modifying the <i>timeslot</i> attribute of the appropriate port and channel. For example:</p> <pre>set lp/&lt;x&gt; &lt;port&gt; chan/0 timeslot ~&lt;tt&gt;</pre>

Signaling configuration for non-switched Media Gateway

---

- 4 Add a *Nap* component beneath the *Ccst* component.  
**add Nsta/<n> Connection/<m> Brag/0 Ccst Nap**
- 5 Add a VCC to carry the signaling for the Media Gateway connection.  
**add AtmIf/<p> Vcc/<VPI.VCI>**  

Permitted values depend on the connection map for the *AtmIf* component. You may have to edit the *ConnectionAdministrator* or *ConnectionMapping* components. For details, see *Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals* (NN10600-700).
- 6 Configure ATM traffic management.  
**set AtmIf/<p> Vcc/<VPI.VCI> Vcd Tm <attribute>  
<attributevalue>**
- 7 Add a *NailedUpEndPoint* component to the VCC.  
**add AtmIf/<p> Vcc/<VPI.VCI> Nep**
- 8 Connect the *Ccst Nap* component to the VCC.  
**set Nsta/<n> Connection/<m> Brag/0 Ccst Nap  
atmConnection AtmIf/<p> Vcc/<VPI.VCI> Nep**

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--End--

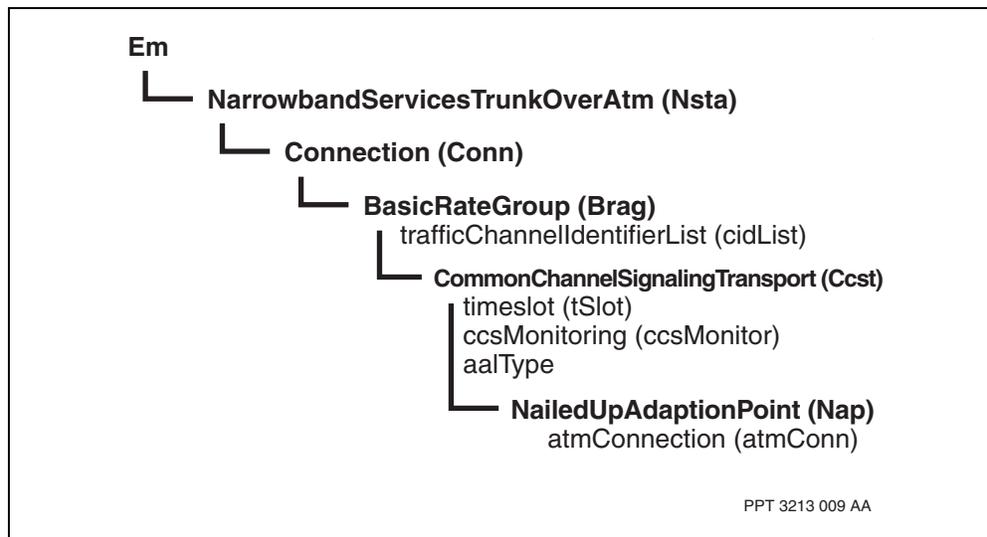
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component
<attribute>	is any of the configurable attributes
<attributevalue>	is a permitted value for that attribute
<t>	is a value assigned to a time slot you want to remove. The default mapping for time slots is fixed as explained in <i>Nortel Media Gateway 7480/15000 Technology Fundamentals</i> (NN10600-780). Ensure that the number of time slots and the channel identifiers to which they are mapped match the device on the far end.
<x>	is the LP number
<port>	is the port type and instance value, for example <i>E1/1</i> or <i>DS3/1 DS1/1</i>
<tt>	is a the value of the time slot you want to delete
<p>	is the value of an <i>Atmlf</i> component
<VPI,VCI>	is the instance value of the VCC. The VPI value can be from 0 to 255. The VCI value can be from 32 to 65,535

## Procedure job aid

### Configuring common channel signaling component hierarchy



## Configuring channel associated signaling

Configure channel associated signaling to define how signaling information is passed through the network.

### Prerequisites

- Supporting information for configuring channel associated signaling: For channel associated signaling (CAS) with AB signaling, the *lineType* attribute for the DS1 port must be set to *d4Cas*. For CAS with ABCD signaling, the *lineType* attribute for the DS1 port must be set to *esfCas*. E1 CAS information is transported in time slot 16. For E1 interfaces Media Gateway transports CAS information as clear channel data. Therefore, to configure Media Gateway to support E1 CAS, configure time slot 16 as a clear channel data channel. Clear channel data channels are transported at 64 kbit/s.

---

**Attention:** The Cast component is not available for DS1 or E1 interfaces if provisioned SVCs, provisioned SPVCs, or the 4-port OC-3/STM-1Ch TDM/CES FP are used.

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**Attention:** The 4-port OC-3/STM-1Ch TDM/CES FP can only be configured for DS1 or E1, it cannot support both interface types at the same time.

---

### Procedure steps

---

Step	Action
1	Add a <i>ChannelAssociatedsignalingTransport (Cast)</i> component to an <i>Nsta Connection</i> component.  <b>add Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 Cast</b>
2	Set configurable CAS attributes.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 Cast &lt;attribute&gt; &lt;attributevalue&gt;</b>  If you leave the <i>casMonitoring</i> attribute set to enabled (enabled is the default setting) the system adds the <i>CasStats</i> component under the <i>Brac</i> component when you activate the provisioning.
3	If you do not want to use all time slots, remove channel identifiers (CID) from the <i>cidList</i> attribute.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/0 cidList ~&lt;t&gt;</b>  If you delete time slots from the <i>cidList</i> attribute, you must also delete time slots from the channel on the FP. This is done by modifying the <i>timeslot</i> attribute of the appropriate port and channel. For example:

Signaling configuration for non-switched Media Gateway

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- 4**      **set lp/<x> <port> chan/0 timeslot ~<tt>**  
For CAS signaling for E1 interfaces, specify the time slot for clear channel data channel.
- set Nsta/<n> Connection/<m> Brag/0 ccdTimeslotList  
<ccdList\_value>**

---

**--End--**

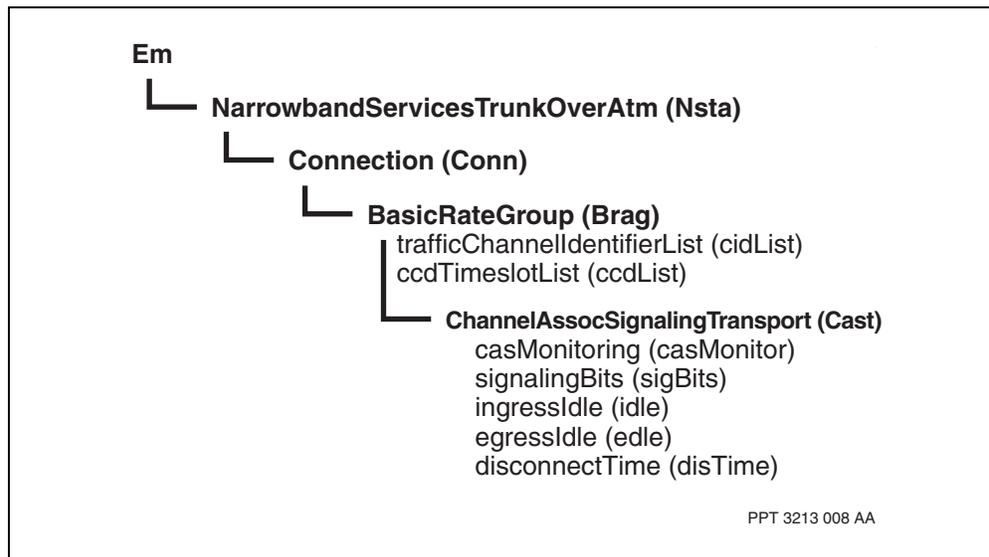
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### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component
<attribute>	is any of the configurable attributes
<attributevalue>	is a permitted value for that attribute
<t>	is a value assigned to a time slot you want to remove. The default mapping for time slots is fixed as explained in <i>Nortel Media Gateway 7480/15000 Technology Fundamentals</i> (NN10600-780). Ensure that the number of time slots and the channel identifiers to which they are mapped match the device on the far end.
<x>	is the LP number
<port>	is the port type and instance value, for example <i>E1/1</i> or <i>DS3/1 DS1/1</i>
<tt>	is a the value of the time slot you want to delete
<ccdList_value>	is the value of the <i>ccdTimeslotList</i> attribute. There is no default value. For E1, use timeslot 15, 16, or 31.

### Procedure job aid

#### Configuring channel associated signaling component hierarchy



## **Configuring clear channel data to transport signaling**

Configure clear channel data to define non-switched Media Gateway signaling using clear channel data timeslots.

### **Prerequisites**

- See the section on data calls in the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

## Procedure steps

---

Step	Action
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---

- |   |   |
|---|---|
| 1 | Set the timeslots to be transported as clear channel data:<br><b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0<br/>ccdTimeslotList &lt;ccdList_value&gt;</b> |
|---|---|
- 

**Attention:** The number of timeslots specified in <ccdList\_value> cannot exceed the number specified in <trafficChannelIdentifierList> or the number specified in <clrDataMaxChan\_value>.

---

- |   |   |
|---|---|
| 2 | Set the maximum number of channels permitted to transport clear data during congestion:<br><b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0<br/>ccsClearDataMaxChannels &lt;clrDataMaxChan_value&gt;</b> |
|---|---|
- 

--End--

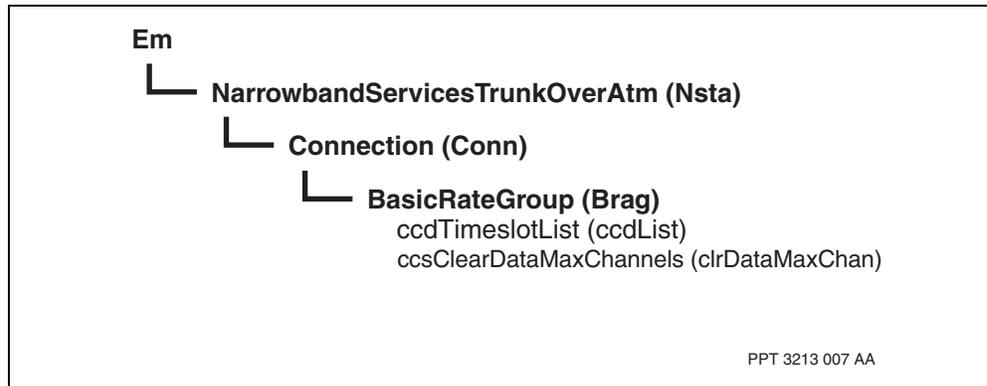
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component
<ccdList_value>	is the value for the <i>ccdTimeslotList</i> attribute. There is no default value.
<clrDataMaxChan_value>	is the value for the <i>ccsClearDataMaxChannels</i> attribute. The default is 0.

## Procedure job aid

### Configuring clear channel data signaling component hierarchy



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# Configuring clear channel data for non-switched Media Gateway

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Configure clear channel data to define the number of timeslots to be transported as clear channel data.

## Prerequisites

- See the section about data calls in the *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

## Procedure steps

---

Step	Action
1	Set the timeslots to be transported as clear channel data:  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 ccdTimeslotList &lt;ccdList_value&gt;</code>
2	Set the maximum number of channels permitted to transport clear data during congestion:  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 ccsClearDataMaxChannels &lt;clrDataMaxChan_value&gt;</code>

---

**Attention:** The number of timeslots specified in <ccdList\_value> cannot exceed the number specified in <trafficChannelIdentifierList> or the number specified in <clrDataMaxChan\_value>.

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--End--

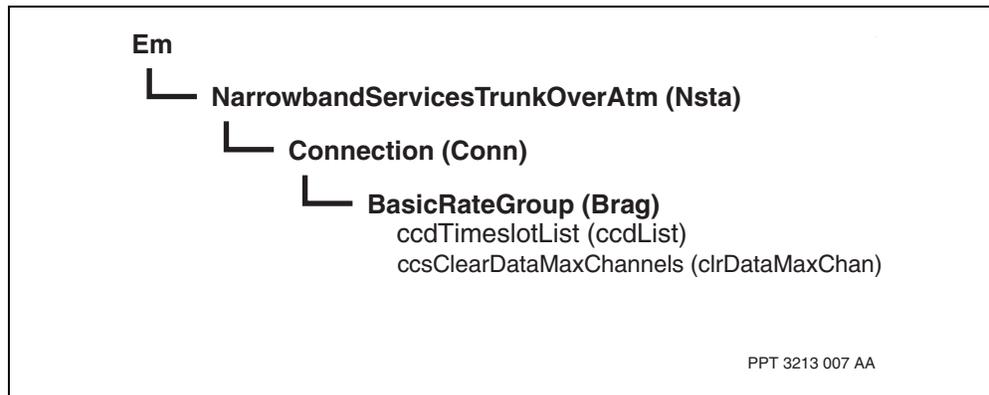
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component
<ccdList_value>	is the value for the <i>ccdTimeslotList</i> attribute. There is no default value.
<clrDataMaxChan_value>	is the value for the <i>ccsClearDataMaxChannels</i> attribute. The default is 0.

## Procedure job aid

### Configuring clear channel data component hierarchy



---

# Configuring echo cancellation for non-switched Media Gateway

---

Configure echo cancellation to define how Media Gateway deals with echo within the network.

## Prerequisites

- See the sections on echo cancellation for non-switched Media Gateway and echo canceller options in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

## Procedure steps

---

Step	Action
1	Set the value for echo cancellation that determines whether echo cancellation will be on or off when a 2100Hz tone is detected:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 echoCancellation &lt;eCan_value&gt;</b>
2	Set the value for the minimum echo return loss expected on the line.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 minimumEchoReturnLoss &lt;minEchoRetLoss_value&gt;</b>
3	Set the comfort noise generation as enabled or disabled. If the <i>echoCancellation</i> attribute is set to disabled this attribute has no affect.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 echoCancelComfortNoiseGeneration &lt;eCanComNoiseGen_value&gt;</b>

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--End--

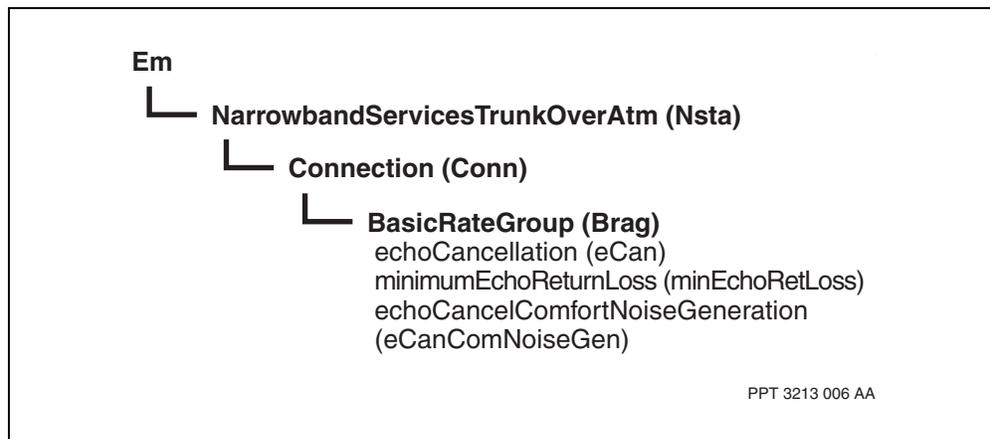
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for the <i>Connection</i> component
<eCan_value>	is the value for the <i>echoCancellation</i> attribute. The default value is g165Mode.
<minEchoRetLoss_value>	is the value for the <i>minimumEchoReturnLoss</i> attribute. The default value is 6 dB.
<eCanComNoiseGen_value>	is the value for the <i>echoCancelComfortNoiseGeneration</i> attribute. The default value is enabled.

## Procedure job aid

### Configuring echo cancellation component hierarchy



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# Voice band data configuration for non-switched Media Gateway

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Configure voice band data to determine how non-switched Media Gateway will handle data calls.

- [Prerequisites to voice band data configuration \(page 47\)](#)
- [Voice band data configuration task flow \(page 47\)](#)

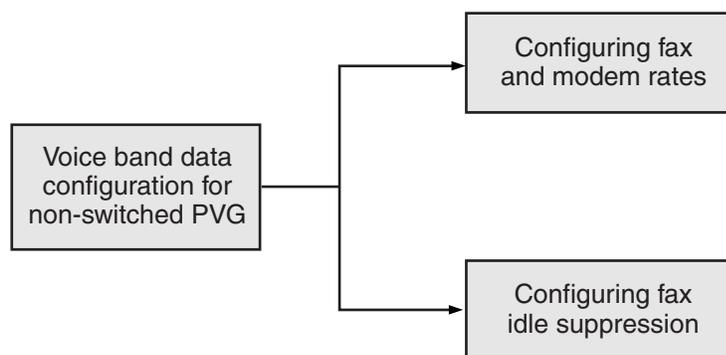
## Prerequisites to voice band data configuration

- See the section on fax and modem calls in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780)

## Voice band data configuration task flow

This task flow shows you the sequence of procedures you perform to configure voice band data. To link to any procedure, go to the list that follows the task flow.

### Voice band data configuration for non-switched Media Gateway task flow



PPT 3192 005 AA

## Navigation links

- [Configuring fax and modem rates \(page 49\)](#)

- [Configuring fax idle suppression \(page 51\)](#)

## Configuring fax and modem rates

Configure fax and modem rates to define how non-switched Media Gateway deals with data calls during compression situations.

### Procedure steps

---

Step	Action
1	Set the value for the encoding algorithm to be used for AAL2 channels when a 2100Hz tone is detected:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 tone2100Rate &lt;toneRate_value&gt;</b>
2	Set the maximum number of voice band data channels that are permitted at modem rate during congestion:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 voicebandDataMaxChannels &lt;vbdMaxChan_value&gt;</b>

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--End--

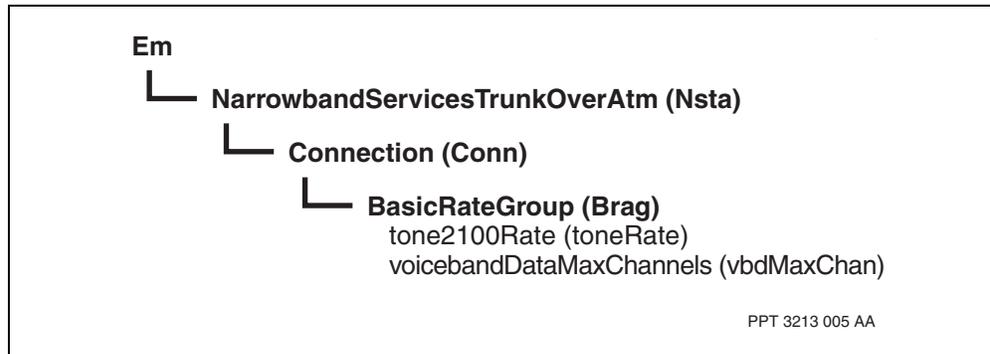
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### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for the <i>Connection</i> component
<toneRate_value>	is the value for the <i>tone2100Rate</i> attribute. The default value is 64kG711.
<vbdMaxChan_value>	is the value for the <i>voicebandDataMaxChannels</i> attribute. The default value is 12.

### Procedure job aid

#### Configuring fax and modem rates component hierarchy



## Configuring fax idle suppression

Configure fax idle suppression to reduce the amount of bandwidth used during fax transmission.

### Prerequisites

- See the section on silence suppression in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

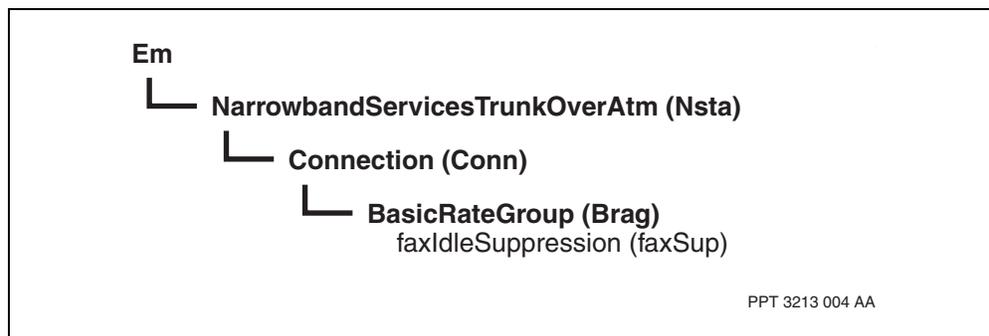
Step	Action
1	Set the value for fax idle suppression:  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 faxIdleSuppression &lt;faxSup_value&gt;</code>
--End--	

### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for the <i>Connection</i> component
<faxSup_value>	is the value for the <i>faxIdleSuppression</i> attribute. The default value is enabled.

### Procedure job aid

#### Configuring fax idle suppression component hierarchy



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# Configuring packet delay variation tolerance for non-switched Media Gateway

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Configure packet delay variation tolerance to determine the size of the packet buffer and the amount of delay before data transmission.

## Prerequisites

- See the section on packet delay variation tolerance and the de-jitter buffer in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

## Procedure steps

---

Step	Action
1	Set the capacity of the packet delay variation buffer:  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 buffersize &lt;bufsize_value&gt;</code>
2	Set the initial delay that occurs before any data is transmitted:  <code>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 packetDelayVariationTolerance &lt;pdvt_value&gt;</code>

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--End--

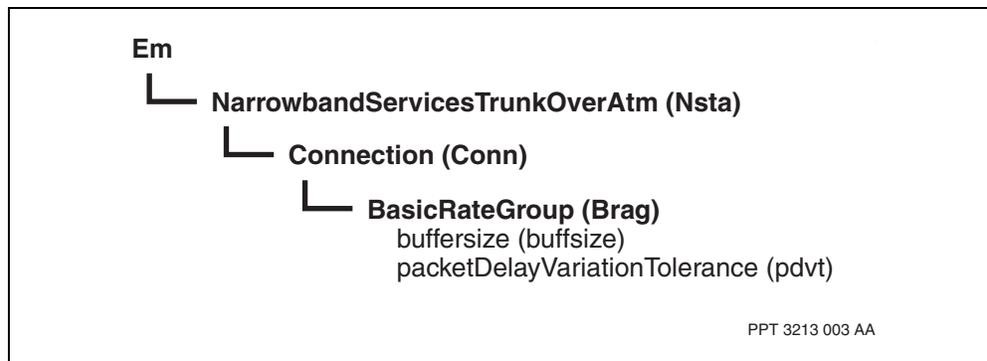
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## Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for a <i>Connection</i> component
<bufsize_value>	is the value for the <i>bufsize</i> attribute. The default value is 40 msec, however, Nortel Networks recommends a value of 50 msec on all connections to reduce the risk of overflow.
<pdvt_value>	is the value of the <i>packetDelayVariationTolerance</i> attribute. The default is 20 msec.

## Procedure job aid

### Configuring packet delay variation tolerance component hierarchy



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# Congestion management configuration for non-switched Media Gateway

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Configure congestion management to define voice compression rates and silence suppression levels.

- [Prerequisites to congestion management configuration \(page 54\)](#)
- [Congestion management configuration task flow \(page 54\)](#)

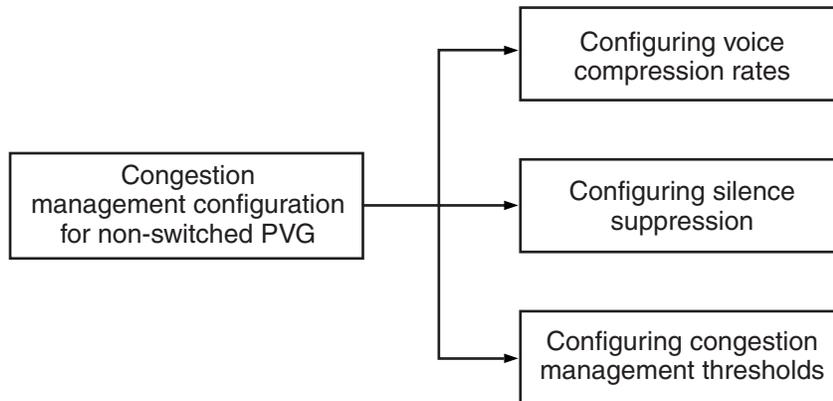
## Prerequisites to congestion management configuration

- See the sections on congestion management, voice compression and silence suppression in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).
- Set the maximum number of clear channel data channels and voice band data for congestion management see [Configuring clear channel data for non-switched Media Gateway \(page 43\)](#) and [Configuring fax and modem rates \(page 49\)](#).

## Congestion management configuration task flow

This task flow shows you the sequence of procedures you perform to configure congestion management. To link to any procedure, go to the list that follows the task flow.

### Congestion management configuration for non-switched Media Gateway task flow



PPT 3192 006 AA

#### Navigation links

- [Configuring voice compression rates \(page 56\)](#)
- [Configuring silence suppression \(page 58\)](#)
- [Configuring congestion management thresholds \(page 60\)](#)

## Configuring voice compression rates

Configure voice rates to define how non-switched Media Gateway deals with voice calls during compression situations.

### Prerequisites

- You must set the value for the *maxVoiceRate* attribute to be equal or higher than the value for the *minVoiceRate* attribute.
- Configuring the *dtmfTransport* attribute is required because the 8kG729AB rate cannot reliably transport DTMF tones.
- See the sections on considerations for congestion management for non-switched Media Gateway, voice compression for non-switched Media Gateway in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

---

Step	Action
1	Set the value for the maximum voice rate, this attribute selects the encoding algorithm to be used on voice channels:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 maxVoiceRate &lt;maxVRate_value&gt;</b>

---

**Attention:** The attribute values for this procedure can be found in the table [Compression rates and attribute values \(page 57\)](#).

---

- |   |   |
|---|---|
| 2 | Set the value for the minimum voice rate, this attribute selects the encoding algorithm to be used during periods of congestion:<br><br><b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0<br/>minVoiceRate &lt;minVRate_value&gt;</b> |
| 3 | Set how DTMF tones are handled during voice compression:<br><br><b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0<br/>dtmfTransport &lt;dtmf_value&gt;</b>  |
- 

--End--

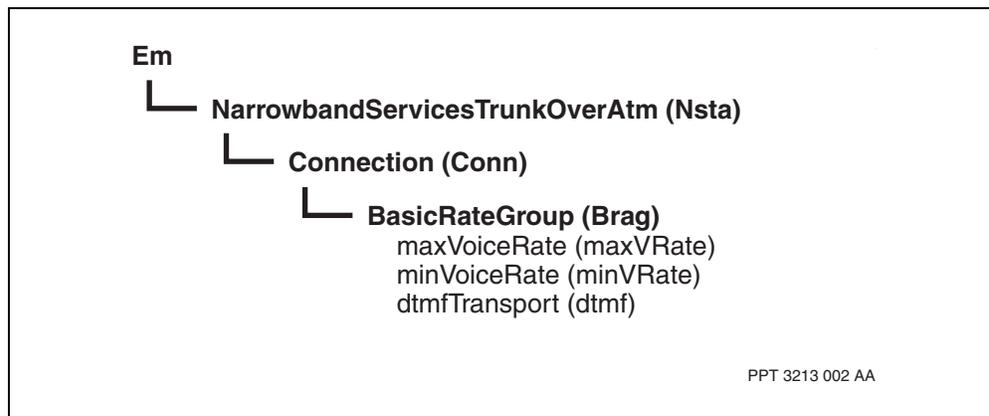
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### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for the <i>Connection</i> component
<maxVRate_value>	is the value for the <i>maxVoiceRate</i> attribute. The default value is 32kG726.
<minVRate>	is the value for the <i>minVoiceRate</i> attribute. The default value is 16kG726.
<dtmf_value>	is the value for the <i>dtmfTransport</i> attribute. There is no default value.

### Procedure job aid

#### Configuring voice rates component hierarchy



#### Compression rates and attribute values

Attributes	Compression Rates		
	G.711	G.726	G.729 Annex A and B
<i>maxVoiceRate</i>	64kG711	32kG726, 24kG726, 16kG726	8kG729AB
<i>minVoiceRate</i>	64kG711	32kG726, 24kG726, 16kG726	8kG729AB
<i>dtmfTransport</i>	disabled	disabled	upspeed
<b>Attention:</b> The <i>maxVoiceRate</i> attribute must be equal to or higher than the value for the <i>minVoiceRate</i> attribute.			
<b>Attention:</b> The compression rate of 16kG726 should only be used under periods of congestion. DTMF tones cannot be reliably transported at this rate and voice quality can be poor.			

## Configuring silence suppression

Configure silence suppression to define when suppression will be applied, the maximum level for silence suppression, and the amount of time before silence suppression is applied.

### Prerequisites

- See the section on silence suppression in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

---

Step	Action
1	Set the value for silence suppression to specify when silence suppression is performed:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 silenceSuppression &lt;silSup_value&gt;</b>
2	Set the value for the silence suppression threshold to specify the level above which silence suppression is not performed:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 silenceSuppressionThreshold &lt;silSupThresh_value&gt;</b>
3	Set the value for the amount of time a timeslot speech path is left alone before suppression is applied:  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; BasicRateGroup/0 silenceDetectionHangOverTime &lt;silDetTime_value&gt;</b>

---

--End--

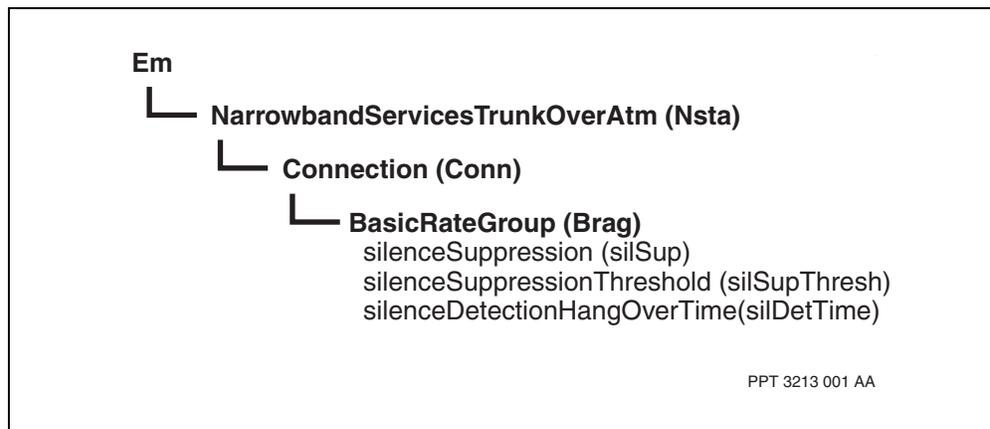
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### Variable definitions

Variable	Value
<n>	is the value for the <i>Nsta</i> component
<m>	is the value for the <i>Connection</i> component
<silSup_value>	is the value for the <i>silenceSuppression</i> attribute. The default value is enabled.
<silSupTresh_value>	is the value for the <i>silenceSuppressionThreshold</i> attribute. The default value is -40.
<silDetTime_value>	is the value for the <i>silenceDetectionHangOverTime</i> attribute. The default value is 200 msec.

### Procedure job aid

#### Configuring silence suppression component hierarchy



## Configuring congestion management thresholds

Configure congestion management thresholds to define the threshold levels for when congestion management will be applied.

### Prerequisites

- See the section on congestion management in *Nortel Media Gateway 7480/15000 Technology Fundamentals* (NN10600-780).

### Procedure steps

---

Step	Action
1	Specify the cell rate above which the most severe congestion management measures will take effect.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; pcrHighCongThreshold &lt;phct_level&gt;</b>
2	Specify the upper cell rate threshold of normally acceptable operation for the PCR-based congestion control mechanism.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; pcrLowCongThreshold &lt;plct_level&gt;</b>
3	Specify how often the cell rate is sampled by the PCR congestion management algorithm.  <b>set Nsta/&lt;n&gt; Connection/&lt;m&gt; basicTrafficManagementInterval &lt;basTrafManInt_level&gt;</b>

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--End--

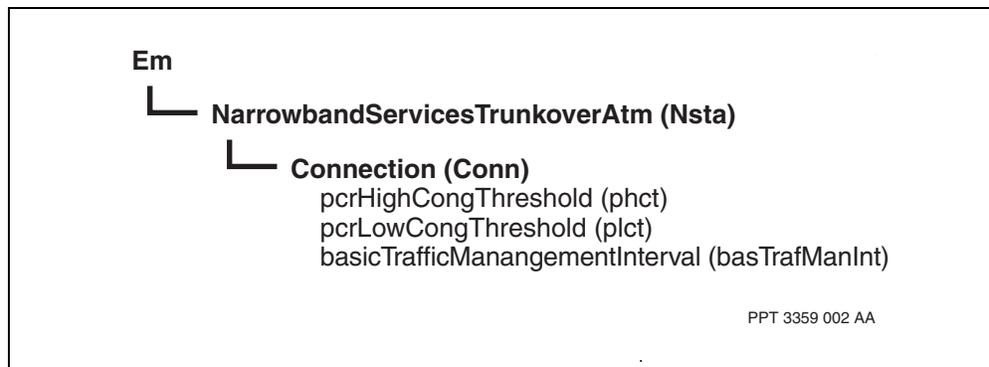
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### Variable definitions

Variable	Value
<basTrafManInt_level>	is the value for the <i>basicTrafficManagementInterval</i> attribute. The default value is 100 msec. The value range is 50-100 msec.
<m>	is the value for the <i>Connection</i> component
<n>	is the value for the <i>Nsta</i> component
<phct_level>	is the value for the <i>pcrHighCongThreshold</i> attribute. The default value is 90%. The value range is 50-100%.
<plct_level>	is the value for the <i>pcrLowCongThreshold</i> attribute. The default value is 80%. The value range is 10-100%.

### Procedure job aid

#### Configuring silence suppression component hierarchy



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# Monitoring non-switched Media Gateway

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Monitor non-switched Media Gateway to display operational and statistics attributes and OSI states. Use the operational commands, unlock, lock, add, delete, display, and list, to monitor component and attribute states.

## Navigation

- [Displaying operational and statistics attributes for non-switched Media Gateway \(page 63\)](#)
- [Displaying OSI states for non-switched Media Gateway \(page 66\)](#)

## Displaying operational and statistics attributes for non-switched Media Gateway

Display operational and statistics attributes for non-switched Media Gateway to view information about the state of your node. You can display operational attributes or statistics at any time.

### Prerequisites

- For information about ATM operational attributes, see *Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals* (NN10600-700).
- For information about all Nortel Multiservice Switch components and attributes, see *Nortel Multiservice Switch 7400/15000/20000 Components Reference* (NN10600-060).
- For more information about using Multiservice Switch commands to monitor your node, see *Nortel Multiservice Switch 7400/15000/20000 Commands Reference* (NN10600-050).

### Procedure steps

---

Step	Action
------	--------

---

- |   |   |
|---|---|
| 1 | To display the names and values for all operational attributes associated with a <i>Connection</i> component, enter |
|---|---|

**display Nsta/<n> Connection/<m>**

---

**Attention:** Do not use wildcards to display the *BasicRateChannel (Brac)* component. SPM overload may occur

---

- |   |  |
|---|--|
| 2 | To display the value of a specific operational attribute for a connection, enter |
|---|--|

**display Nsta/<n> Connection/<m> <attribute>**

- |   |   |
|---|---|
| 3 | To list all of the subcomponents of a connection, enter |
|---|---|

**list Nsta/<n> Connection/<m>**

---

**--End--**

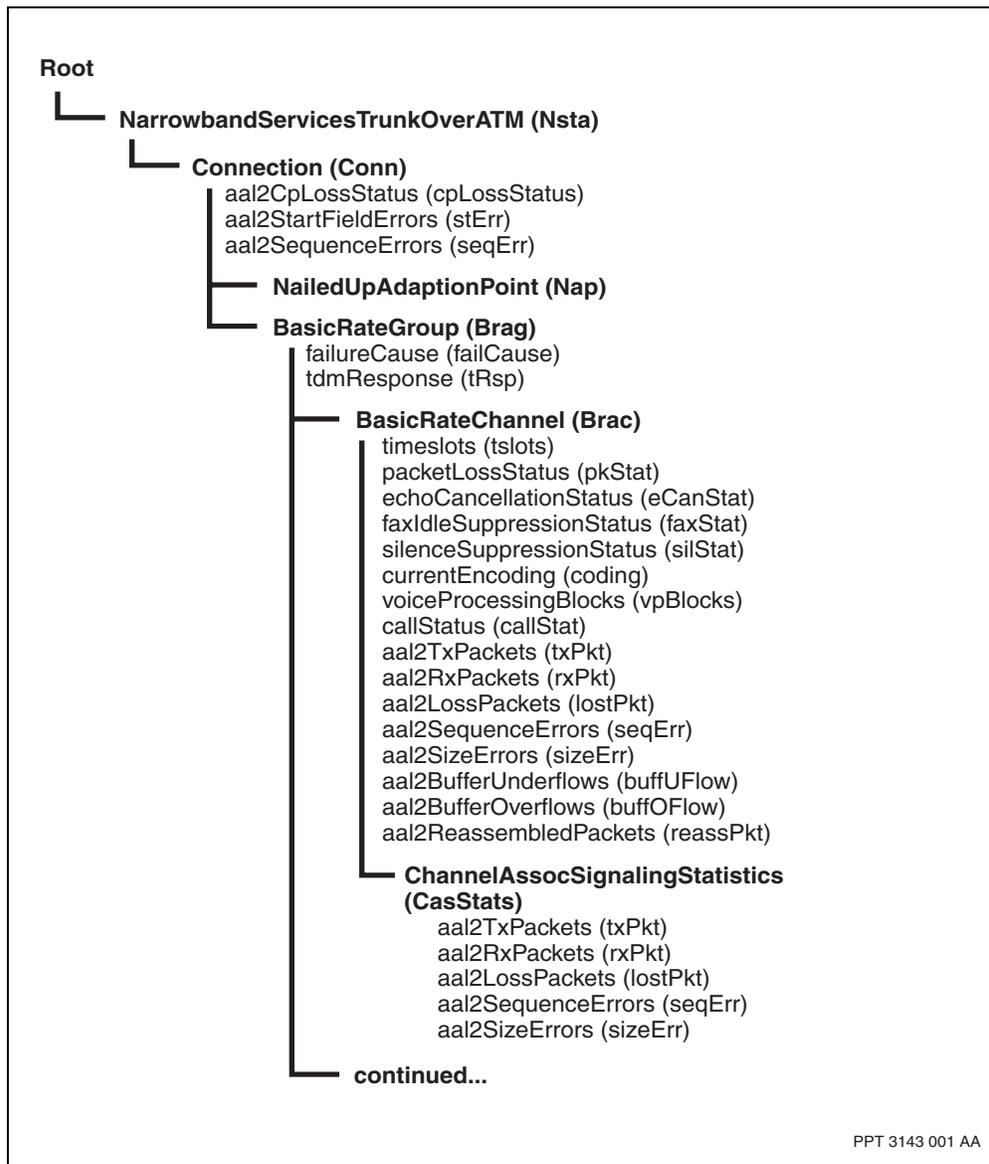
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### Variable definitions

Variable	Value
<m>	is the connection you want to display
<n>	is the instance value for the <i>Nsta</i> component

### Procedure job aid

#### Displaying operational and statistics attributes for non-switched Media Gateway component hierarchy—Part1



PPT 3143 001 AA

**on-switched Media Gateway operational and statistics attribute—Part 2**

continued...

**BasicRateGroup (Brag)**

— **ChannelAsscoSignalingTransport (Cast)**  
signalingProcessingBlock (SigProcBlock)

— **CommonChannelSignalingTransport (Ccst)**

aal2TxPackets (txPkt)  
aal2RxPackets (rxPkt)  
aal2LostPackets (losPkt)  
aal2SequenceErrors (seqErr)  
aal2SizeErrors (sizeErr)  
layer2Status (l2stat)  
hdlcTxFrames (txFrm)  
hdlcRxFrames (rxFrm)  
hdlcErroredFrames (errorFrm)  
atmRxMessages (atmRxMesg)  
atmTxMessages (atmTxMesg)  
atmErroredMessages (atmErrorMesg)  
signalingProcessingBlock

— **PassiveAccessPoint (Pap)**

expectedRemoteAddress (expectedAddr)  
localAddress (localAddr)  
svcStatus (status)  
remoteAddress (rAddr)  
lastTearDownCause (cause)  
lastTearDownDiagnostic (diagn)  
remoteChannelDetail  
remoteChannelStatus

PPT 3135 003 AA

## Displaying OSI states for non-switched Media Gateway

Display OSI states for non-switched PCG to view the component state definitions according to OSI standards. You can display the OSI state of any component that supports OSI states, at any time.

### Prerequisites

- For information about OSI states for Nortel Multiservice Switch hardware, see *Nortel Multiservice Switch 7400/15000/20000 Fundamentals – FP Reference* (NN10600-551).
- For information about OSI states for ATM components, see *Nortel Multiservice Switch 7400/15000/20000 ATM Fundamentals* (NN10600-700).

### Procedure steps

---

Step	Action
1	Display the OSI state for the <i>Nsta</i> component: <b>display Nsta/&lt;n&gt; OsiState</b>
2	Display the OSI state for a <i>Connection</i> component: <b>display Nsta/&lt;n&gt; Connection/&lt;m&gt; OsiState</b>
3	Display the OSI state for a <i>BasicRateGroup</i> ( <i>Brag</i> ) component: <b>display Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/&lt;x&gt; OsiState</b>
4	Display the OSI state for a <i>BasicRateChannel</i> ( <i>Brac</i> ) component: <b>display Nsta/&lt;n&gt; Connection/&lt;m&gt; Brag/&lt;x&gt; Brac/&lt;y&gt; OsiState</b>

---

--End--

---

### Variable definitions

Variable	Value
<m>	is the instance value of the <i>Connection</i> component
<n>	is the instance value of the <i>Nsta</i> component
<x>	is the instance value of the <i>Brag</i> component
<y>	is the channel identification of the <i>Brac</i> component

### Procedure job aid

#### State combinations for the Nsta component

Combination (Administrative, Operational, Usage)	Details
Unlocked, Disabled, Idle	The component is unlocked, but the voice services FP to which it links is disabled, or all of the <i>Connection</i> subcomponents are disabled.
Unlocked, Enabled, Active	At least one connection is configured.
Locked, Disabled, Idle	The component is locked.

#### State combinations for the Connection component

Combination (Administrative, Operational, Usage)	Details
Unlocked, Disabled, Idle	The <i>Nsta</i> component is disabled. The connection is not transferring any data or collecting any traffic statistics.
Unlocked, Enabled, Active	The connection is receiving and transmitting data. The connection is also collecting traffic statistics.  If there is no traffic for a period of time, the component remains in this state as it can still gather operational statistics.
Locked, Disabled, Idle	The component is locked. The connection carries no traffic and collects no traffic statistics.

**State combinations for the BasicRateGroup component**

<b>Combination (Administrative, Operational, Usage)</b>	<b>Details</b>
Unlocked, Disabled, Idle	Channels in the group are not being processed due to a problem in the path (for example, the <i>Channel</i> component is disabled or locked) or because the <i>Connection</i> component is locked.
Unlocked, Enabled, Active	At least one channel is carrying and processing data.
Locked, Disabled, Idle	The operator has locked the channel group.

**State combinations for the BasicRateChannel component**

<b>Combination (Administrative, Operational, Usage)</b>	<b>Details</b>
Unlocked, Disabled, Idle	The channel is not carrying traffic because the channel group is locked or disabled.
Unlocked, Enabled, Active	The channel is carrying and processing data.



Nortel Media Gateway 7480/15000

## Non-switched Service Configuration Management

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Publication: NN10600-781  
Document status: Standard  
Document issue: 7.2S1  
Document date: October 2006  
Product release: PCR7.2  
Job function: Operations  
Type: NTP  
Language type: U.S English

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