



7 Service provisioning

Overview

Purpose This chapter describes the service provisioning possibilities of the *Navis™ AnyMedia®* Element Management System (NAM) - 24 Channel R2.1. It addresses the following topics:

- Screen navigation
- Service provisioning (telephony)
- Service provisioning (data)
- Modification of Subscriber Identifier.

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Service provisioning (telephony)

Overview

Purpose Service provisioning (deactivation) means the setting of those parameters needed to provide service to (or disconnect service from) an individual end customer. For distribution ports, such parameters include those that specify a T0 cross-connection between a logical DS0 on a VRT/VB (virtual remote terminal / virtual bank) and an end-customer's physical port, and the parameters which can be set on the port. Service provisioning is typically initiated by a service order, although unprovisioning is sometimes also needed for maintenance purposes or for re-configuration of an existing network, e.g., load balancing.

Note that if the *AnyMedia* Access System is using an ACE COMDAC, some provisioning operations have to be done on the NE in advance *via the GSI* as described in [“Required provisioning procedure on the GSI when using an ACE COMDAC” \(7-6\)](#) before service provisioning with the NAM can be started.

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Required provisioning procedure on the GSI when using an ACE COMDAC

Overview If the *AnyMedia* Access System is equipped with an ACE COMDAC two types of provisioning operations must be completed before narrowband services can be provided via the *Navis™ AnyMedia®* Element Management System (NAM):

- **Capacity activation**
Before any narrowband service can be activated via the NAM, the following capacity activation procedures have to be performed *via the GSI*:
 - Change the configuration of the AFM mode in order to provide ACE COMDAC support.
 - Set up the OAM&P channel by provisioning a VP on the AFM for carrying the control channel (CVPT) and by creating on the ACE COMDAC a communication in-band interface cross-connection between an ATM control virtual channel and an in-band IP interface channel.
 - Set up bearer channels for DS1 circuit emulated feeders by provisioning VP cross-connections (BVPTs) on the AFM and by provisioning DS1 logical ports (framed path terminations) as a group of 4 logical DS1 feeders.

These operations must be performed *via the GSI* as described below before service provisioning via the NAM is started. For some of them the GSI has to be connected to the AFM and for others to the ACE COMDAC. The order of the steps described below avoids unnecessary connects and disconnects to and from the AFM and the ACE COMDAC.

Note that the NAM R2.1 will *not* support capacity activation.

- **Service activation**
Assuming that the capacity activation procedures on the GSI have been completed as described below, service activation can be started via the NAM. Service activation procedures which are required to bring a narrowband subscriber line into service when

using an ACE COMDAC are supported by the NAM R2.1 as in previous releases because the ACE COMDAC implements the standard service interface to the LDS/LE, i.e. TR008 and GR303. The NAM R2.1 supports all narrowband services that are supported by NE release 1.9.2.

Capacity activation on the GSI

- 1 Use the GSI (connected to the AFM) to provision the AFM configuration to the **ATM COMDAC and xDSL** mode as described in the Commands and Procedures (363-211-100, TU-700).
- 2 Use the GSI (connected to the AFM) to assign one feeder VP on the AFM for establishing the VP cross-connection (CVPT) for the NB ATM Operations Channel with a predefined ATM traffic profile and add a threshold profile as described in the Commands and Procedures (363-211-100, TU-700).
- 3 Use the GSI (connected to the AFM) to provision on the AFM VP cross-connections for bearer channels (BVPTs) from one of the two VPT groups to the ACE COMDAC and add an ATM traffic profile and a threshold profile as described in the Commands and Procedures (363-211-100, TU-750). The NAM will manage only default profiles.
Note that the NAM will display these cross-connections on the **Cross-connection List** window, but it will not be allowed to edit them.
- 4 Use the GSI (connected to the ACE COMDAC) to create on the ACE COMDAC a communication in-band interface cross-connection between an ATM control virtual channel and an in-band IP interface channel (NB ATM Operations Channel) as described in the Commands and Procedures (363-211-100, TU-5224).
It defines which control virtual path termination and ATM virtual channel identifier shall be used to transport the payload of the in-band IP interface towards the ATM network.

-
- 5 Use the GSI (connected to the ACE COMDAC) to provision DS1 logical ports (framed path terminations) as a group of 4 logical DS1 feeders (up to five groups are supported) as described in the Commands and Procedures (363-211-100, TU-5185).

A framed path termination terminates the TDM signal which is transported via an circuit emulation service interworking function (CES IWF) in an ATM bearer virtual channel. Once created a framed path termination can serve a logical link to provide payload bandwidth to the system.

-
- 6 Use the GSI (connected to the ACE COMDAC) to provision an interworking function cross-connection between an ATM bearer channel and a framed path termination as described in the Commands and Procedures (363-211-100, TU-5185).

It defines which bearer virtual path termination and ATM virtual channel identifier shall be used to transport the payload of the framed path termination towards the ATM network.

END OF STEPS

Result

When all these steps have been done via the GSI, the NAM is able to activate narrowband services on an *AnyMedia* Access System with an ACE COMDAC in the same way as in NAM release 1.9.2 and as described in the following sections.

Note that the procedure above describes only a part of the procedures required for the initial system turn-up for an ACE COMDAC. For details refer to the Commands and Procedures (363-211-100).

□

Virtual remote terminals and cross-connections

Supported VRTs/VBs The following figures shows conceptual diagrams of the cross-connections between the physical (DS1 and subscriber) ports of the *AnyMedia* Access System and the VRTs/VBs.

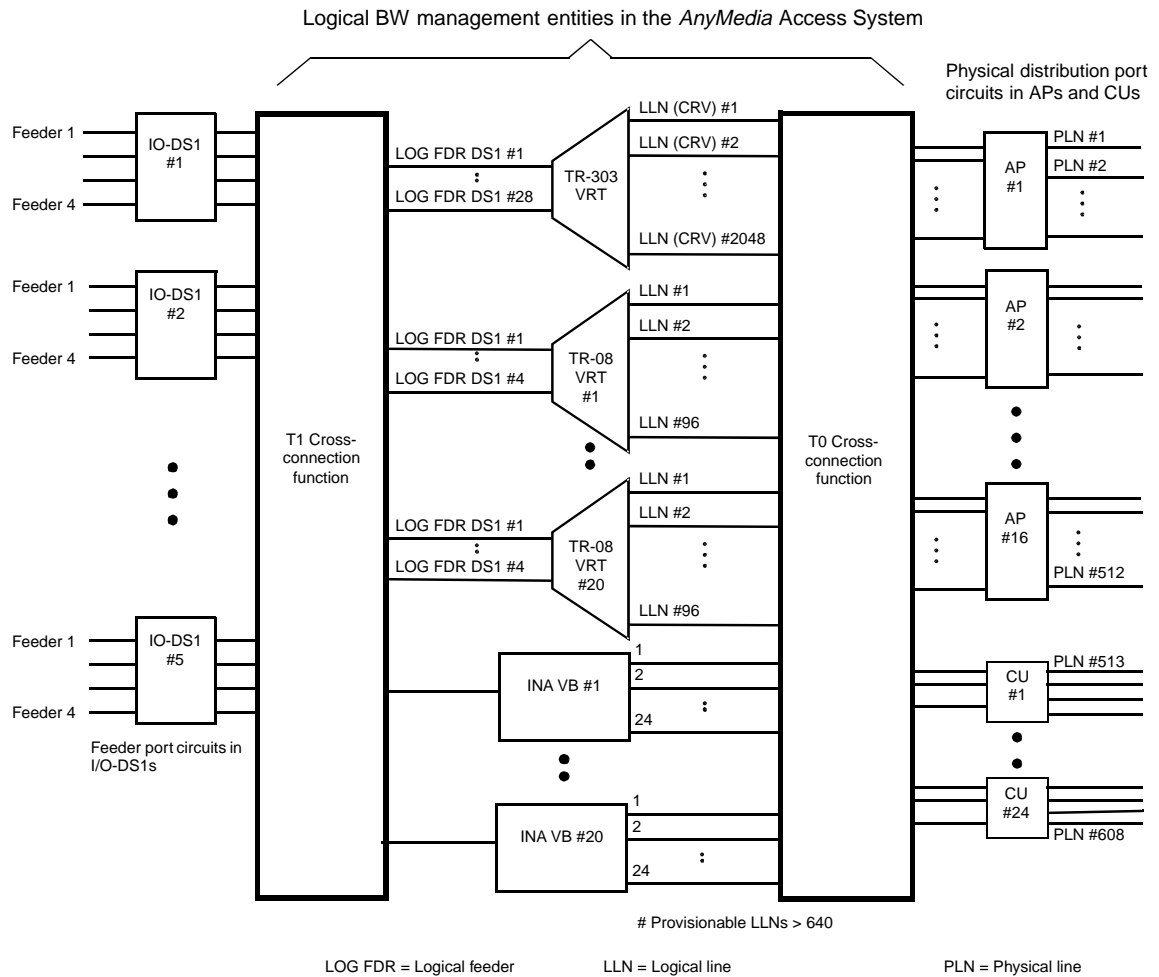
The *AnyMedia* Access System supports

- up to 3 TR-303 VRTs
- up to 20 TR-08 VRTs
- and up to 20 INA VBs

in any combination not exceeding 20 feeder DS1s. In NE R1.x narrowband releases the traffic on network side is transported via IO_DS1 packs where the traditional DLC signals are transported within physical DS1 links across a TDM network. For NE R2.1 release IO_DS1 packs are not used. Instead an ACE COMDAC is used, which provides circuit emulation for the DS1 links. The traditional DLC signals are transported within the ATM cell stream across an ATM network.

T1 cross-connections for NE R1.x narrowband releases T1 cross-connections provide feeder bandwidth to VRTs and VBs. A maximum of 20 T1 cross-connections to IO_DS1 feeders can be

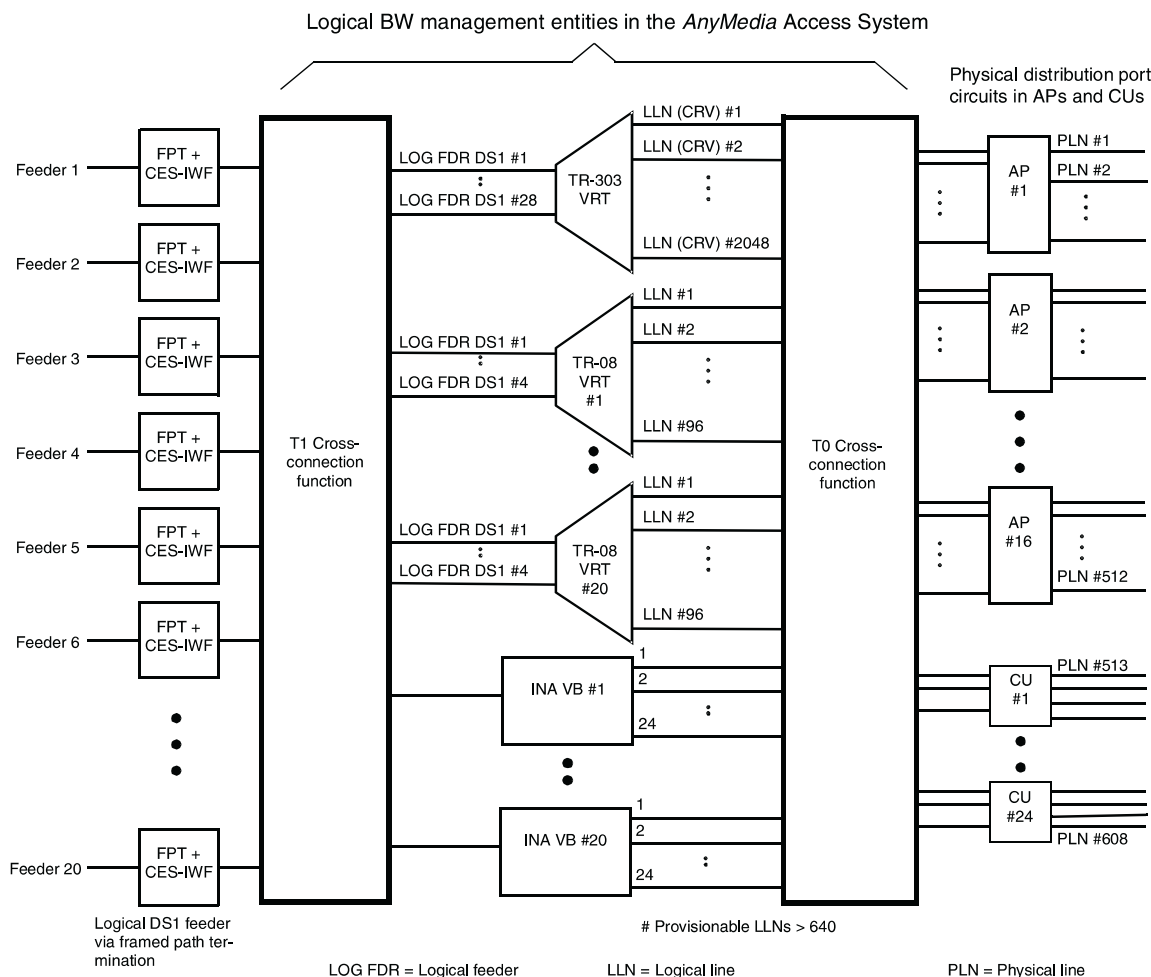
created; they are limited by the maximum number of physical DS1 feeder ports in the system.



**T1 cross-connections for
NE R2.2 release**

T1 cross-connections provide feeder bandwidth to VRTs and VBs. A maximum of 20 T1 cross-connections to circuit emulated DS1 feeders

can be created; they are limited by the maximum number of logical DS1 feeder ports in the system.



T0 cross-connections T0 cross-connections link a distribution port (a tip/ring pair) to a VRT or VB. A maximum of 769 T0 cross-connections (768 + one for the ROC, ROC only for NE R1.x narrowband releases); 1537 (NE R1.7.2, LPS104); 1921 (NE R1.7.2, LPS105) can be created in the *AnyMedia* Access System; they are limited by the maximum number of distribution ports in the system.

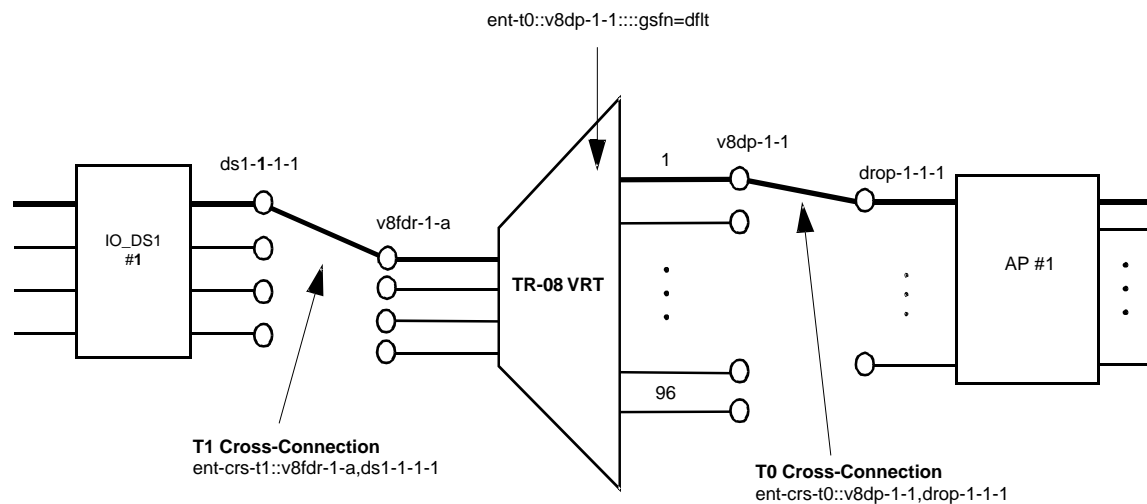
DS0 data Each logical DS0 may contain provisioning data for its associated physical subscriber line. In addition, the DS0 data for locally switched services and ISDN lines on the TR-303 VRT can be administered by the LDS through its EOC. When a physical subscriber line is T0 cross-connected to a VRT or VB, it takes over the characteristics

defined by the DS0 data for the corresponding logical port (e.g., if a line from a PROG2W LPA380 AP is cross-connected to a logical port that is provisioned for POTS service, it provides a loop-start interface; if the line is then cross-connected to a logical port that is provisioned for foreign exchange (FX) service, it provides a ground-start interface).

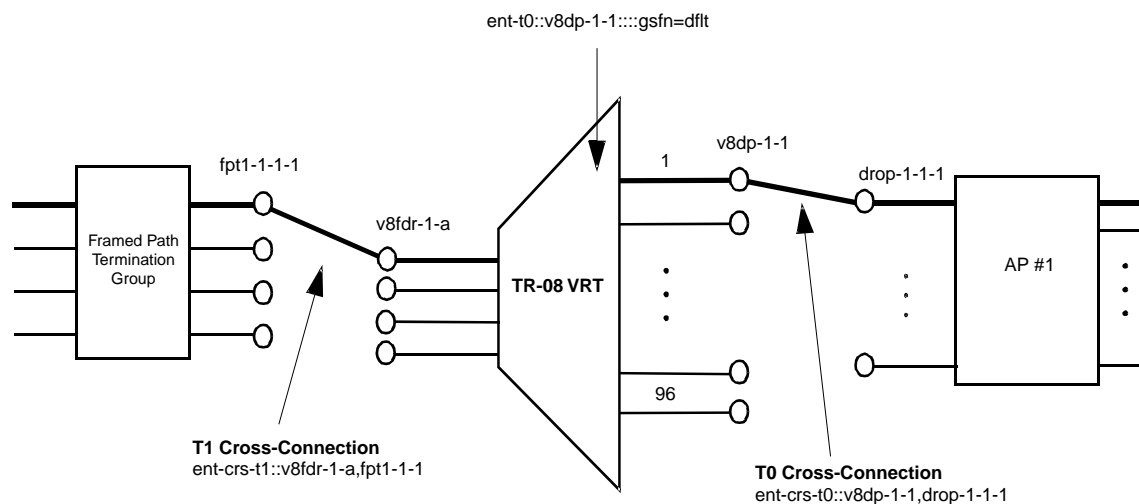
Logical configuration The NE logical configuration supports a combined maximum of 672 DS0 records among all VRTs and VBs. This number exceeds the total number of physical subscriber lines that the system supports.

Physical ports The physical ports of the *AnyMedia* Access System provide feeder DS1 connections and subscriber tip/ring pairs. The physical ports are associated with IO-DS1 FAC100 packs for NE R1.x narrowband releases and APs or with circuit emulated DS1 feeders for NE R2.1 release and APs respectively.

Service provisioning Service provisioning for voice frequency (VF) services requires that feeder and distribution ports be associated with a VRT/VB through T1 and T0 cross-connections, respectively, and that T0 provisioning data be entered for the desired service. Finally, the required physical packs must be equipped. The following figure represents the composite provisioning data required to bring a single subscriber line into service on a TR-08 VRT, assuming an NE R1.x narrowband release.



The following figure shows the same data as above, but assuming an NE R2.2



Port assignment

As mentioned above the *AnyMedia* Access System may contain up to 3 TR-303 VRTs and/or up to 20 TR-08 VRTs and INA VBs in any combination, subject to the limit imposed by the 20 available DS1 network interfaces. A physical distribution port may be assigned to only 1 logical line on 1 VRT or INA VB; similarly, a logical line can be assigned to only 1 physical distribution port.

TR-303 VRT

The single TR-303 VRT can support any number of physical lines up to the full 608, 768 (from R1.7.0 NE on) or 1920 (from R1.7.2 NE on) line maximum capacity of the *AnyMedia* Access System. The logical lines are identified by call reference values (CRVs), which may be any of 672 integer values from 1 to 2048. A physical distribution port in the system can be assigned to any CRV of TR-303 VRT.

TR-303 VRT includes full access concentration between its logical line DS0s and available time slots on the feeder DS1s (24 time slots) associated with the VRT (full access means that if there is an available feeder time slot it is possible to assign a logical line DS0 to that time slot). For time slot management TR303 VRT supports the following process:

Dynamic time slot assignment: a time slot assignment made via the timeslot management channel (TMC) for locally-switched application. This time slot assignment/de assignment is done on a per call basis under control of the LDS.

Semi-permanent time slot assignment: a time slot assignment made via the embedded operation channel (EOC) for providing a dedicated voice/data path. This time slot assignment/de assignment is done on a per service order basis. The LDS will manage the semi-permanent cross-connections in the TR-303 VRT.

TR-08 VRT A TR-08 VRT supports up to 96 physical lines. The logical lines are identified by logical line numbers (LLNs), which are integer values ranging from 1 to 96. A physical distribution port may be assigned to any LLN within any TR-08 VRT. There is a fixed mapping between TR-08 LLN number and the TR-08 feeder DS0 used for the circuit. This allows the FAST to make the cross-connection between the TR-08 physical port and the feeder DS0 without explicitly provisioning the feeder DS0 to be used.

INA VB An INA VB supports a maximum of 24 physical lines. The logical lines are numbered from 1 to 24. A physical distribution port may be assigned to any logical line within any INA VB.

There is a fixed mapping between the INA LLN number and the INA feeder DS0 used for the circuit. This allows the *AnyMedia* Access System to make the cross-connection between the INA physical port and the feeder DS0 without explicitly provisioning the feeder DS0 to be used. The access identifier (AID) of an INA logical line and its INA feeder DS0 are the same.

For more information refer to the network elements documentation.



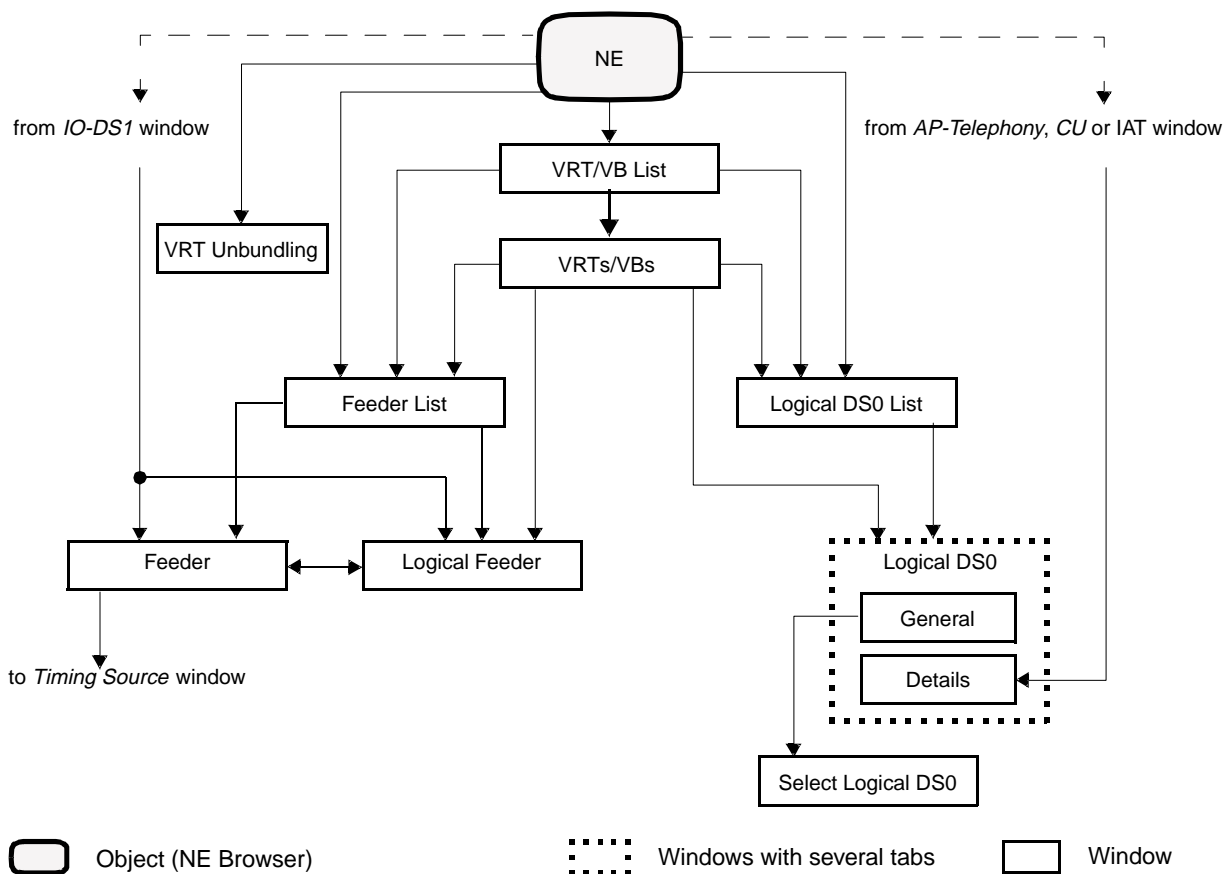
Screen navigation

Screen navigation The following figure shows an overview of the screen navigation for service provisioning.

The arrows represent the order in which the windows can be opened.

Example To open the **Logical DS0** list

- select **NE** in the NE Browser and **List** → **Logical DS0** via the cursor menu.



Network interface

Overview

Purpose This section provides an overview of the VRT/VB provisioning.

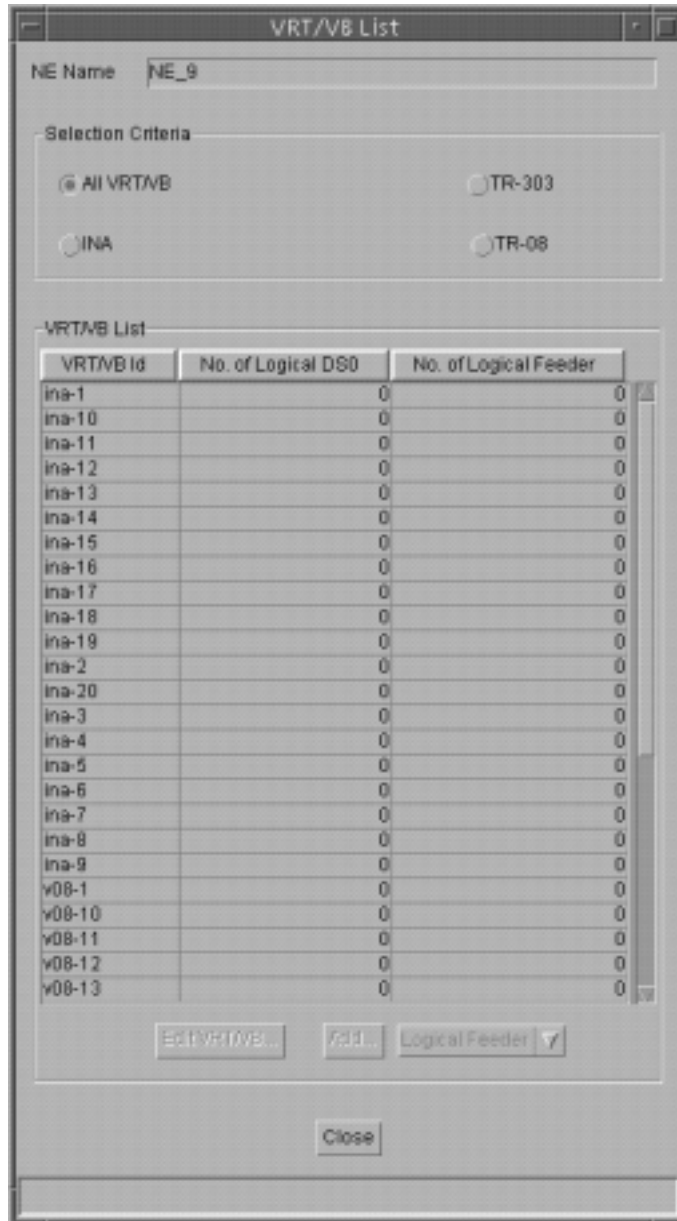
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VRT/VB List window

General This window displays the VRT/VB id list based on a selection criterion. It provides access to the VRT/VBs windows for addition or deletion of logical DS0 and/or logical feeder and for modifying the VRT/VB specific parameters (if applicable).



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Selection Criterion	<p>Radio buttons are used to define the list that will be displayed in the field VRT/VB List.</p> <p>Selected criterion is All: The list will display all VRT/VB ids.</p> <p>Selected criterion is TR-303 (not possible for R1.2.3) or TR-08 or INA: In these cases, only the VRT/VB ids of the selected type will be displayed.</p>
VRT/VB List	<p>This field contains a table displaying VRT/VB information. This information is presented in a 3-column table. The table is sorted by VRT/VB Id. A scroll bar allows navigation through the table.</p> <p>Rows in the table can be selected to edit, VRT/VBs and to add logical DS0 and logical feeder through the use of the corresponding buttons described below.</p> <ul style="list-style-type: none"> • VRT/VB Id: Lists all ids of the VRT/VB defined by the selection criterion. Double clicking on any row will cause the VRT/VB window to be displayed. • Number of Logical DS0: Informs about the number of already defined logical DS0 for this VRT. • Number of Logical Feeder: Informs about the number of already defined logical feeder for this VRT. <p>The Edit VRT/VB... button is enabled if a VRT/VB is selected. It provides access to one of the VRT/VB windows (TR303 or TR08 or INA).</p> <p>Depending on the right-hand side option menu provides the Add button access to different windows: Logical Feeder window, Logical DS0 window.</p>



Use the VRT/VB List

Procedure Complete the following procedure to use the VRT/VB list.

1 Select **NE** in the **NE Browser** and **List** → **VRT/VB** via the menu bar. The **VRT/VB List** window pops up.

2 Use the radio buttons to choose a desired VRT/VB type.

3

If you want to ...	then ...
edit the selected VRT/VB	click on Edit VRT/VB.... The corresponding VRT/VB window pops up (cf. “VRT-TR303 window” (7-20) or “VRT-TR08 window ” (7-26) or “VB-INA window” (7-29)).
add a logical feeder	select the desired VRT/VB id in the list and click on Add Logical Feeder . The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
add a logical DS0	select the desired VRT/VB id in the list and click on Add Logical DS0 . The Logical DS0 window pops up (cf. “Logical DS0 window ” (7-61)).

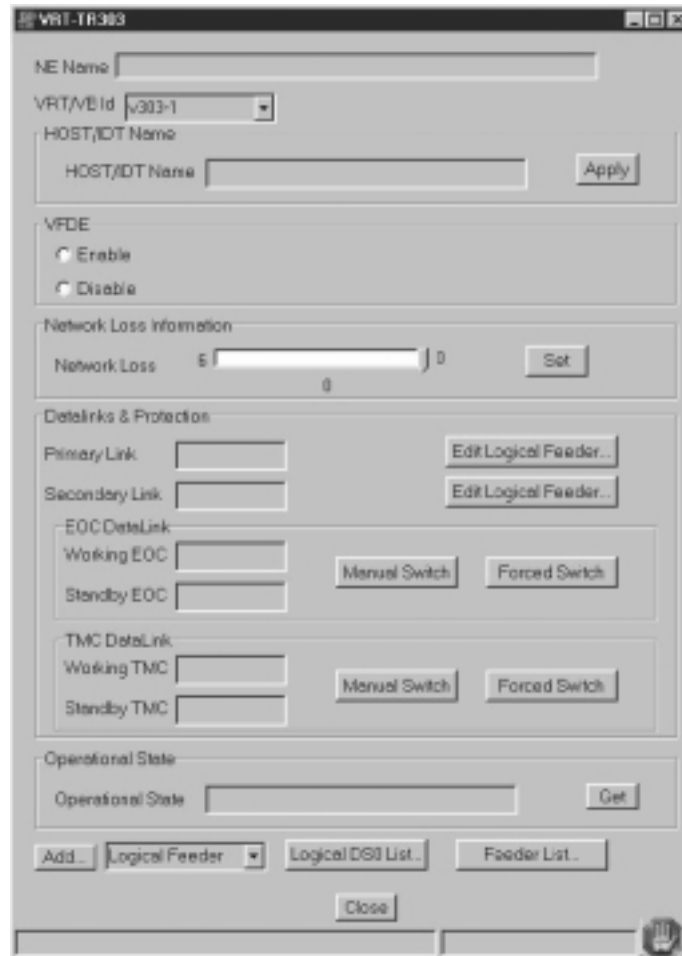
4 Click on **Close** to exit the window.

END OF STEPS



VRT-TR303 window

General This window provides access to the lists of feeders and logical DS0s, as well as allows addition of logical feeders and logical DS0s to the selected VRT-TR303. It also displays (on demand) the VRT operational state. This window shows also the VFDE state (enable or disable) and datalink protection information.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
VRT/VB Id	This option menu lists all VRT/VB ids of the selected type.
HOST/IDT Name	<p>HOST/IDT Name: This editable text field displays the Host/IDT label assigned to the selected TR-303.</p> <p>Apply: This button sets the new Host/IDT value associated to the TR-303 Network Interface.</p>
VFDE	Two radio buttons (Enable / Disable) are used to modify the VFDE status.
Datalinks & Protection	<p>Primary Link, Secondary Link: Displays the logical feeder id of the primary and secondary link. These entries are available if logical feeder id is present. Possible values are: v3fdr-{1, 3}-{1, 28}.</p> <p>The Edit Logical Feeder... buttons provide access to the Logical Feeder window to change the timing reference.</p> <p>EOC Datalink:</p> <ul style="list-style-type: none"> • Working / Standby EOC: Displays the logical feeder id used by the working/standby EOC (embedded operations channel). Possible values: v3eoc-{1, 3}-{1, 2}. • Manual Switch: This button performs a manual switch between working and standby EOCs. It is available only if both working and standby EOCs are present and the standby path is not out of service. • Forced Switch: This button performs a forced switch between working and standby EOCs. It is available only if both working and standby EOCs are present and regardless of the service condition of the standby path.

Parameters/Buttons	Description
Datalinks & Protection (continued)	<p>TMC Datalink:</p> <ul style="list-style-type: none"> • Working / Standby TMC: Displays the Logical feeder id used by the working/standby TMC (Timeslot Management Channel). Possible values: v3tmc-{1, 3}-{1, 2}. • Manual Switch: This button performs a manual switch between working and standby TMCs. It is available only if both working and standby TMCs are present. • Forced Switch: This button performs a forced switch between working and standby TMCs. It is available only if both working and standby TMCs are present.
Network Loss Information	<p>The Network Loss slider can be used to define the network loss value. Possible values: 0 ... 6 in steps of 1. Devault value: 0 dB.</p> <p>The Set button is used to set the network loss value.</p>
Operational State	<p>The Operational State shows the VRT/VB service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Get button retrieves the VRT/VB service state.</p>

Parameters/Buttons	Description
Command Buttons	<p>Three buttons provide access to other windows:</p> <p>Depending on the right-hand side option menu provides the Add button access to different windows: “Logical Feeder window” (7-48) , “Logical DS0 window ” (7-61).</p> <p>Feeder List...: This button provides access to the “Feeder List window” (7-35).</p> <p>Logical DS0 List...: This button provides access to the “Logical DS0 List window” (7-56).</p>



Modify the VRT-TR303

General The **VRT-TR303** window can be reached only from the **VRT/VB List** window via **Edit VRT/VB...** button.

Procedure Complete the following procedure to modify the VRT-TR303.

1 Use the option menu **VRT/VB id** to choose a desired VRT/VB type.

2

If you want to...	then ...
edit the VFDE state	use the radio buttons Enable / Disable . <i>Note:</i> Switching to disable will cause a warning message that this action can be service affecting. VFDE disabling of a TR303 may be service affecting. Do you want to continue? If you decide to continue, the NAM will send an allowed-VFDE message (in case of enable) or an inhibit-VFDE message (in case of disable) to the NE. The following In Progress message will be shown in the status bar: Disable/Enable VFDE launched
change the timing reference for primary and/or secondary link	click on the corresponding Edit Logical Feeder... The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
change the switch mode of EOC and/or TMC	use the corresponding buttons Manual Switch /Forced Switch .
change the network loss value	use the slider Network Loss and click on Set .
get the current service states of the VRT/VB	click on Get in the Operational State field.

If you want to...	then ...
add a logical feeder	use the option menu at the right-hand side of the Add button to choose Logical Feeder and click on Add . The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
add a logical DS0	use the option menu at the right-hand side of the Add button to choose Logical DS0 and click on Add . The Logical DS0 window pops up (cf. “Logical DS0 window ” (7-61)).
open the Feeder List window	click on Feeder List... The Feeder List window pops up (cf. “Feeder List window” (7-35)).
open the Logical DS0 List window	click on Logical DS0 List... The Logical DS0 List window pops up (cf. “Logical DS0 List window” (7-56)).

.....
3 Click on **Close** to exit the window.

END OF STEPS
.....



VRT-TR08 window

General This window provides access to the lists of feeders and logical DSOs, as well as allows addition of logical feeders and logical DSOs to the selected VRT-TR08.

The screenshot shows a window titled "VRT/VB List" with the following components:

- NE Name:** NE_9
- Selection Criteria:**
 - All VRT/VB
 - TR-303
 - INA
 - TR-08
- VRT/VB List Table:**

VRT/VB Id	No. of Logical DS0	No. of Logical Feeder
v08-1	0	0
v08-10	0	0
v08-11	0	0
v08-12	0	0
v08-13	0	0
v08-14	0	0
v08-15	0	0
v08-16	0	0
v08-17	0	0
v08-18	0	0
v08-19	0	0
v08-2	0	0
v08-20	0	0
v08-3	0	0
v08-4	0	0
v08-5	0	0
v08-6	0	0
v08-7	0	0
v08-8	0	0
v08-9	0	0
- Buttons:** Edit VRT/VB..., Add..., Logical Feeder (dropdown), Close
- Status Bar:** Reload Successful

Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
VRT/VB Id	This option menu lists all VRT/VB ids of the selected type.
Mode	This text field shows the version of the TR-08.
Network Loss Information	<p>The Network Loss slider can be used to define the network loss value. Possible values: 0 ... 6 in steps of 1. Default value: 0 dB.</p> <p>The Set button is used to set the network loss value.</p>
Operational State	<p>The Operational State shows the VRT/VB service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Get button retrieves the VRT/VB service state.</p>
Command Buttons	<p>Three buttons provide access to other windows:</p> <p>Depending on the right-hand side option menu the Add button provides access to different windows: Logical Feeder window, Logical DS0 window.</p> <p>Feeder List...: This button provides access to the Feeder List window.</p> <p>Logical DS0 List...: This button provides access to the Logical DS0 List window.</p>



Modify the VRT-TR08

General The **VRT-TR08** window can be reached only from the **VRT/VB List** window via **Edit VRT/VB...** button.

Procedure Complete the following procedure to modify the VRT-TR08.

1 Use the option menu **VRT/VB id** to choose a desired VRT/VB type.

2

If you want to ...	then ...
change the network loss value	use the slider Network Loss and click on Set .
get the current service states of the VRT/VB	click on Get in the Operational State field.
add a logical feeder	use the option menu at the right-hand side of the Add button to choose Logical Feeder and click on Add . The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
add a logical DS0	use the option menu at the right-hand side of the Add button to choose Logical DS0 and click on Add . The Logical DS0 window pops up (cf. “Logical DS0 window ” (7-61)).
open the Feeder List window	click on Feeder List... The Feeder List window pops up (cf. “Feeder List window” (7-35)).
open the Logical DS0 List window	click on Logical DS0 List... The Logical DS0 List window pops up (cf. “Logical DS0 List window” (7-56)).

3 Click on **Close** to exit the window.

END OF STEPS



VB-INA window

General This window provides access to the lists of feeders and logical DSOs, as well as allows addition of logical feeders and logical DSOs to the selected VB-INA.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
VRT/VB Id	This option menu lists all VRT/VB ids of the selected type.
Operational State	<p>The Operational State shows the VRT/VB service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Get button retrieves the VRT/VB service state.</p>
Command Buttons	<p>Three buttons provide access to other windows:</p> <p>Depending on the right-hand side option menu the Add button provides access to different windows: Logical Feeder window, Logical DS0 window.</p> <p>Feeder List...: This button provides access to the Feeder List window.</p> <p>Logical DS0 List...: This button provides access to the Logical DS0 List window.</p>



Modify the VB-INA

General The **VB-INA** window can be reached only from the **VRT/VB List** window via **Edit VRT/VB...** button.

Procedure Complete the following procedure to modify the VB-INA.

1 Use the option menu **VRT/VB id** to choose a desired VRT/VB type.

2

If you want to ...	then ...
get the current service states of the VRT/VB	click on Get in the Operational State field.
add a logical feeder	use the option menu at the right-hand side of the Add button to choose Logical Feeder and click on Add . The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
add a logical DS0	use the option menu at the right-hand side of the Add button to choose Logical DS0 and click on Add . The Logical DS0 window pops up (cf. “Logical DS0 window ” (7-61)).
open the Feeder List window	click on Feeder List... The Feeder List window pops up (cf. “Feeder List window” (7-35)).
open the Logical DS0 List window	click on Logical DS0 List... The Logical DS0 List window pops up (cf. “Logical DS0 List window” (7-56)).

3 Click on **Close** to exit the window.

END OF STEPS



VRT Unbundling Management Window

General This window is used to get and change the VRT unbundling configuration in a NE. This configuration consists on a set of permissions to perform some actions on individual VRTs via EOC or DDL channels.

Note: This window is only supported from NE R1.7.2.1 onwards.

Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
System Clock Source	<p>The Current TR303 field displays the TR303 that currently can be used to set the system clock via EOC messages. If none TR303 is allowed for this purpose, None will be displayed. This field will be initially empty until the Get button is pressed.</p> <p>New TR303: It contains the list of all the existing TR303s in the NE and the None value. It displays by default the same value as Current TR303 or v303-1 until the Get button is pressed. It will be initially disabled until the Get button is pressed the first time. If the user changes the selected value, a command is sent to the NE to change the selection on which TR303, if any, it is possible to set the system clock via EOC messages. When the command is finished (successfully or unsuccessfully) a message will be displayed in the command line indicating the user that the Get button has to be pressed in order to get the current selection.</p> <p>Get: It gets which TR303, if any, is allowed to set the system clock via EOC messages.</p>

Parameters/Buttons	Description
LDS Testing	<p>VRT: It contains the list of all the VRTs in the NE (TR303s and TR-08s)</p> <p>Status: It indicates the Enable/Disable status in the corresponding VRT. If Enable, then LDS Testing is possible in the corresponding TR303 via EOC or in the corresponding TR-08 via DDL.</p> <p>Get: It gets the current Enable/Disable status on the VRTs to perform LDS Testing via EOC or DDL messages.</p> <p>Enable: It is enabled when one or more lines are selected in the table. When pressed, it sends a command to allow LDS Testing on each one of the selected VRTs. When the command is finished (successful or unsuccessfully) a message will be displayed in the command line indicating the user that it has to press the Get button in order to get the current status of all the VRTs.</p> <p>Disable: It is enabled when one or more lines are selected in the table. When pressed, it sends a command to inhibit LDS Testing on each one of the selected VRTs. When the command is finished (successful or unsuccessfully) a message will be displayed in the command line indicating the user that it has to press the Get button in order to get the current status of all the VRTs.</p>



Feeder List

Overview

Purpose This section provides information about the Feeder List.

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Feeder List window

General This window displays the feeder id list based on a selection criteria. It provides access to the **Feeder List** window for parameter modification and to the **Logical Feeder** window for logical feeder parameter and cross-connection modification.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Selection Criteria	<p>Radio buttons are used to define the list that will be displayed in the field Feeder List.</p> <ul style="list-style-type: none"> • All VRT/VBs: The list displays all logical feeders currently present in the NE for all VRT/VBs. • TR-303, TR-08, INA: In all these cases a option menu is available showing the possible options. Selection of one of these VRT/VB ids automatically sets the corresponding radio button. If no VRT/VB id is selected, the radio button is not editable (i.e. the user will not be able to set it). <p><i>Note:</i> For COT (NE R1.2.3) VRT TR-303 is not possible and therefore the corresponding radio button is disabled.</p>
Feeder List	<p>The information in this field is displayed in a table.</p> <ul style="list-style-type: none"> • Feeder Id: Displays the feeder id within the VRT/VB id. Possible values: ds1-1-{1, 5}-{1, 4} for NE R1.x narrowband releases, fpt-1-{1, 5}-{1, 4} for NE R2.2 releases. • Logical Feeder Id: Indicates the logical feeder id within the VRT/VB id. Possible values: v3fdr-{1, 3}-{1, 28} for TR-303, v8fdr-{1, 20}-{a, b, c, d} for TR-08, ina-{1, 20} is only for INA. • Facility Id: Facility Id label assigned to the Feeder (this column is only displayed for Physical DS1 Feeders, not for FPTs).

Parameters/Buttons	Description
Feeder List (continued)	<p>The Add Logical feeder... button is available only if a VRT/VB id has been selected without cross-connection to a logical feeder and the maximum number of logical feeder has not yet been created:</p> <p>max. 4 for TR-08, max. 20 for TR-303, max. 1 for INA.</p> <p>This button provides access to the Logical feeder window to add a new logical feeder.</p> <p>Depending on the right-hand side option menu the Edit button provides access to different windows: Feeder Id window, Logical Feeder window. Edit Feeder... is always available. Edit Logical Feeder... is available only if the selected feeder is cross-connected to a logical feeder.</p> <p>The Remove Logical Feeder button can be used to remove the Feeder-Logical Feeder cross-connection selected in the list.</p>



Use the Feeder List

Procedure Complete the following procedure to modify the feeder list.

- 1 Select **NE** in the **NE Browser** and **List** → **Feeder** via the menu bar. The **Feeder List** window pops up.

This window can also be reached from the **VRT/VB List** window (cf. [“VRT/VB List window” \(7-17\)](#)) and the **VRT/VB** windows ([“VRT-TR303 window” \(7-20\)](#), [“VRT-TR08 window” \(7-26\)](#), [“VB-INA window” \(7-29\)](#)).

- 2 Use the radio buttons in the **Selection Criteria** field to choose a desired VRT/VB.
-

- 3

If you want to ...	then ...
add a logical feeder	select the desired feeder id and press Add Logical Feeder... The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)). The same result is obtained by double clicking in the corresponding row.
edit a logical feeder	select the desired logical feeder id and press Edit Logical Feeder... The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)). The same result is obtained by double clicking in the corresponding row.
edit a feeder	select the desired feeder id and press Edit Feeder... The Feeder window pops up (cf. “Feeder window” (7-42)).

If you want to ...	then ...
remove a feeder	<p>Click on Remove Logical Feeder. A Warning window pops up displaying the following message:</p> <p>Deleting Logical feeder may be service affecting and may remove existing semipermanent cross-connections (DSO end points). Do you want to continue?</p> <p>If you decide to continue, the NAM will send a delete-cross-connection message to the NE.</p>

-
- 4 Click on **Close** to exit the window.

END OF STEPS

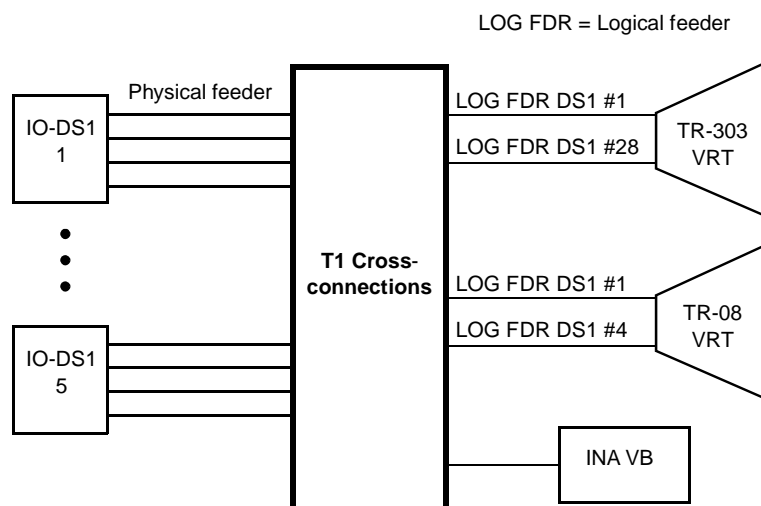


Creation of VRT/VB logical feeder (T1 cross-connection)

Overview

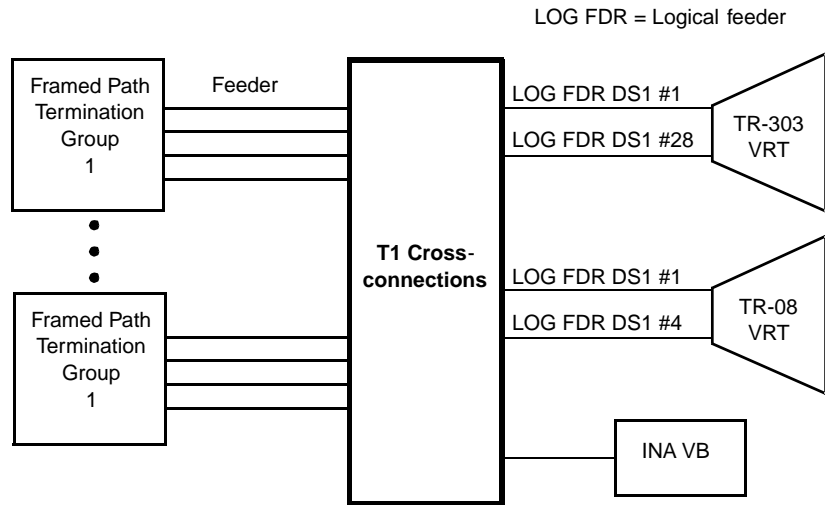
Purpose For the following description it is assumed that the NE is connected, a logical feeder is not yet created and the physical feeder (DS1) for NE R1.x narrowband releases or the framed path termination for NE R2.2 releases not in use by any other logical feeder.

T1 cross-connections for NE R1.x The following figure shows a block diagram of T1 cross-connections for NE R1.x narrowband releases.



T1 cross-connections for NE R2.2

The following figure shows a block diagram of T1 cross-connections for NE R2.2.



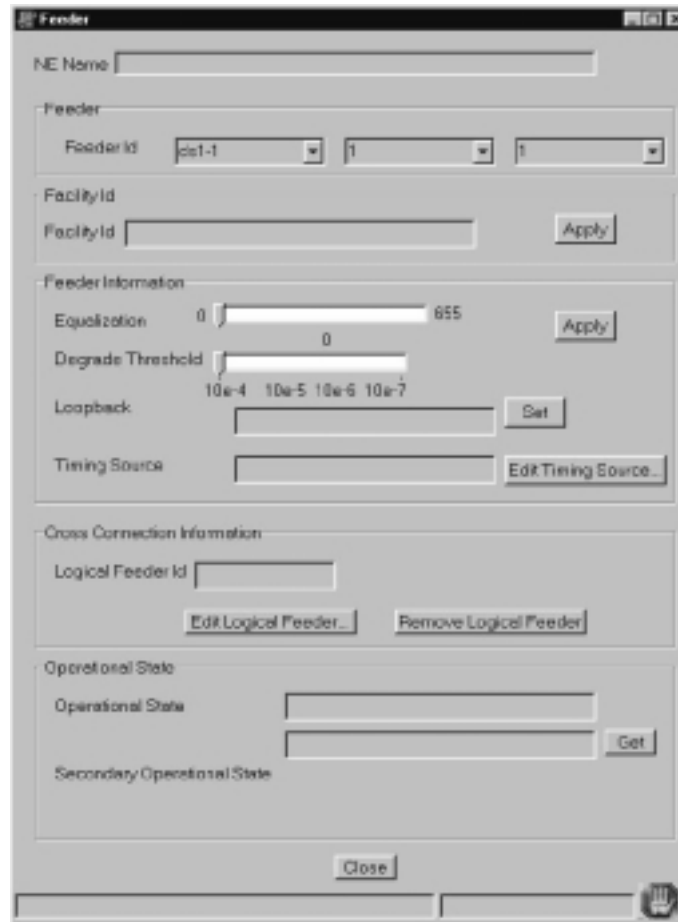
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Feeder window

General This window displays physical information of individual feeders and cross-connection information. It provides access to the **Logical Feeder** window for adding or editing the logical feeder, depending on the cross-connection state of the feeder.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Feeder Id	<p>This pull down allows the user to select the specific feeder for which he wants to display the information. The list includes all feeders present. The initially selected feeder is the one provided by the previous window.</p> <p>An icon next to every feeder number indicates the status of the id: free or busy. If a busy id is selected the edit mode is active, if a free id is selected the add mode is active.</p> <p>Format: ds1-1-{1-5}-{1-4} for NE R1.X NB releases, fpt-1-{1-5}-{1-4} for NE R2.2 releases.</p> <p>The contents of the whole window changes if another feeder is selected.</p> <p>Free/Busy icons are used to indicate the feeders that can be cross connected and those ones already cross connected. The operator can select any of the free feeders. Only feeders that have been provisioned are displayed (for example framed path termination).</p> <p>NOTE: NAM R2.1 does NOT support framed path termination provisioning . This is to be done via GSI (scripting, etc.).</p>
Facility Id	<p>Facility Id: Text editable field displaying the Facility Id label assigned to the selected feeder (this subpane shall only be displayed for Feeders, not for FPTs).</p> <p>Apply: Sets the new Facility Id value associated to the Physical DS1 feeder</p>

Parameters/Buttons	Description
Feeder Information	<p>Equalization (only available for NE R1.x): This slider can be used to define the cable length (in ft) to the DSX-1. Possible values are: 0 to 655 Step 1. Default: 0 ft</p> <p>Degrade Threshold: This slider can be used to define the feeder signal degrade threshold. Possible values are: 10⁻⁷, 10⁻⁶, 10⁻⁵, 10⁻⁴. Default: 10⁻⁶</p> <p>The Apply button is used to confirm the changes. It is available only if the Equalization and/or the Degrade Threshold has been modified.</p> <p>Loopback: This field displays the current loopback state (Clear or Set) (for loopback details see “Execute the loopback test on the feeder side” (8-58)). The Label button is used to set or clear the feeder loopback. Depending on the loopback state reflected, this button displays the possible operation (Clear, if the loopback is set; Set, if the loopback is cleared).</p> <p>Timing Source (only available for NE R1.x): Displays whether or not the selected feeder is the timing source reference (Yes or No). The reference can be changed via the Edit Timing Source... button (only available for NE R1.x) on the right-hand side. This button provides access to the Timing Source Control window (cf. “Timing Source Control (telephony) window” (5-95)) to allow the modification of the current NE timing source reference.</p>

Parameters/Buttons	Description
Cross Connection Information	<p>Logical Feeder Id: This field displays the logical feeder id which is cross-connected with the selected feeder id. If there is no cross-connection this field is empty.</p> <p>Add Logical Feeder...: This button provides access to the Logical Feeder window to add a new logical feeder to the selected feeder. The button is available only if there is no logical feeder cross-connection to the selected feeder.</p> <p>Edit Logical Feeder...: This button provides access to the Logical Feeder window to edit the logical feeder parameters. The button is available only if there is a logical feeder cross-connection to the selected feeder.</p> <p>Remove Logical Feeder: Removes the selected feeder-logical feeder cross-connection. The user has to confirm the remove operation in the warning window which opens.</p>
Operational State	<p>The Operational State shows the service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Secondary Operational State shows the secondary service state obtained from the NE through the use of the Get button.</p> <p>The Get button is used to retrieve the service states.</p>



Modify the feeder

General The **Feeder** window can be reached from the **IO-DS1** window (cf. [“IO-DS1 window” \(6-21\)](#)) (only available for NE R1.x), **Logical Feeder** window (cf. [“Logical Feeder window” \(7-48\)](#)) and **Feeder List** window (cf. [“Feeder List window” \(7-35\)](#)).

Procedure Complete the following procedure to modify the feeder.

1 Use the option menus **Feeder id** to select the desired feeder.

2

If you want to ...	then ...
change the values for Equalization and/or Degrade Threshold	use the corresponding sliders and press Apply .
change the loopback state	use the label button on the right-hand side of the corresponding text field. A Warning window pops up displaying the following message: Set or Clear Loopback may be service affecting. Do you want to continue?
modify the current NE timing source reference	click on Edit... button on the right-hand side of the Timing Source field. The Timing Source Control window pops up (cf. “Timing Source Control (telephony) window” (5-95)).
get the current service states	click on Get in the Operational State field.
add a logical feeder	click on Add Logical Feeder... The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48)).
edit a logical feeder	click on Edit Logical Feeder... The Logical Feeder window pops up (cf. “Logical Feeder window” (7-48) ?).

If you want to ...	then ...
remove a logical feeder	click on Remove Logical Feeder . A Warning window pops up displaying the following message: Deleting Logical Feeder id may be service affecting and may remove existing semi-permanent cross-connections (DSO end points), OK to proceed? If you decide to continue, the NAM will send a delete-cross-connection message to the NE.

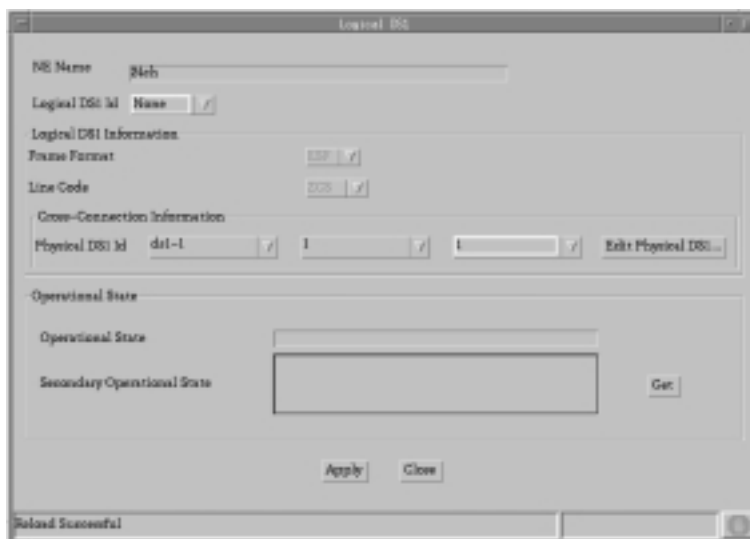
-
- 3** Click on **Close** to exit the window.

END OF STEPS



Logical Feeder window

General This window can be used to add or edit logical feeders and to cross-connect feeders.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Logical Feeder	<p>These fields display the logical feeder id by means of two option menus:</p> <ul style="list-style-type: none">• The first menu contains the VRT/VB list in where it is possible to create a logical feeder Possible values: v3fdr-{1, 3} for TR-303, v8fdr-{1, 20} for TR-08, ina-{1, 20} for INA.• The second menu contains the logical feeder number inside the corresponding VRT/VB. It only appears if a TR-08 or a TR-303 is selected in the first menu. <p>An icon next to every Logical feeder id indicates the status of the id: Free or Busy. If a busy id is selected the edit mode is active, if a free id is selected the add mode is active.</p>

Parameters/Buttons	Description
Logical Feeder Information	<p>Frame Format: This option menu shows the possible frame formats.</p> <p>Three possible values: ESF (Extended SuperFrame), FS (SuperFrame with Datalink) or SF (SuperFrame).</p> <p>Default values are:</p> <ul style="list-style-type: none">• ESF for TR-303 - not reprovisionable• FS for TR-08 (DS1-a) - not reprovisionable• SF for TR-08 (DS1-$\{b,d\}$) - not reprovisionable• ESF for INA - ESF or SF. <p>Values are only changeable for INA VB.</p> <p>Line Code (only available for NE R1.x): This option menu shows the line coding values.</p> <p>Possible values are:</p> <ul style="list-style-type: none">• ZCS (Zero Code Suppression) or• B8ZS (Bipolar with 8 Zero Suppression). <p>The default is B8ZS for TR-303 and for INA VRT/VBs and ZCS for TR-08.</p> <p>Values are only changeable for TR-08 and INA VRT/VBs. ZCS is blocked for TR-303 VRTs.</p>

Parameters/Buttons	Description
Cross-Connection Information	<p>Feeder Id: This pull down allows the user to select the specific feeder for which he wants to display the information. The list includes all feeders present. The initially selected feeder is the one provided by the previous window.</p> <p>Format: ds1-1-{1-5}-{1-4} for NE R1.X NB releases, fpt-1-{1-5}-{1-4} for NE R2.2 releases.</p> <p>The contents of the whole window changes if another feeder is selected.</p> <p>Only feeders that have been provisioned are displayed (for example framed path termination).</p> <p>NOTE: NAM R2.1 does NOT support framed path termination provisioning . This is to be done via GSI (scripting, etc.).</p> <p>Behaviour: Enable: Adding action. The operator can select any of the free feeders or None if there are no free feeders. Disable: Editing action.</p> <p>Edit Feeder...: This button provides access to the Feeder window. The button is available only if a feeder has been selected.</p>
Operational State	<p>The Operational State shows the service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Secondary Operational State shows the secondary service state obtained from the NE through the use of the Get button.</p> <p>The Get button is used to retrieve the service states.</p>

Parameters/Buttons	Description
Apply	<p>Depending on the selected logical feeder id the Apply button provides different functions:</p> <p>For logical feeder not cross-connected (white background): Add Logical Feeder.</p> <p>For logical feeder cross-connected (gray background): Edit Logical Feeder.</p> <p>This function is available only in the following situations:</p> <ul style="list-style-type: none">• VRT/VB type is TR-08 and the Line Code (only for NE R1.x NB releases) has been modified.• VRT/VB type is INA and the Frame Format and/or Line Code (only for NE R1.x NB releases) has been modified.



Modify logical feeder

General The **Logical Feeder** window can be reached from the **IO-DS1** window (cf. [“IO-DS1 window” \(6-21\)](#)), **Feeder** window (cf. [“Feeder window” \(7-42\)](#)), **VRT/VB List** window (cf. [“VRT/VB List window” \(7-17\)](#)) **VRT/VB** windows (cf. [“VRT-TR303 window” \(7-20\)](#) - [“VB-INA window” \(7-29\)](#)) **Feeder List** window (cf. [“Feeder List window” \(7-35\)](#)).

Procedure Complete the following procedure to modify the logical feeder window.

1

If you want to ...	then ...
add a logical feeder	use the option menu Logical Feeder to select a logical feeder with a white background and click on Apply .
change the frame format (only possible for INA)	use the option menu Logical Feeder to select the desired logical feeder (grey background), use the option menu Frame Format to change the value and click on Apply .
change the line code (only possible for INA or TR-08)	use the option menu Logical Feeder to select the desired logical feeder (grey background), use the option menu Line Code (only for NE R1x NB releases) to change the value and click on Apply .
edit a feeder	use the option menus Feeder to select the desired feeder and click on Edit Feeder... The Feeder window pops up (cf. “Feeder window” (7-42)).
get the current service states	click on Get in the Operational State field.

2 Click on **Close** to exit the window.

END OF STEPS

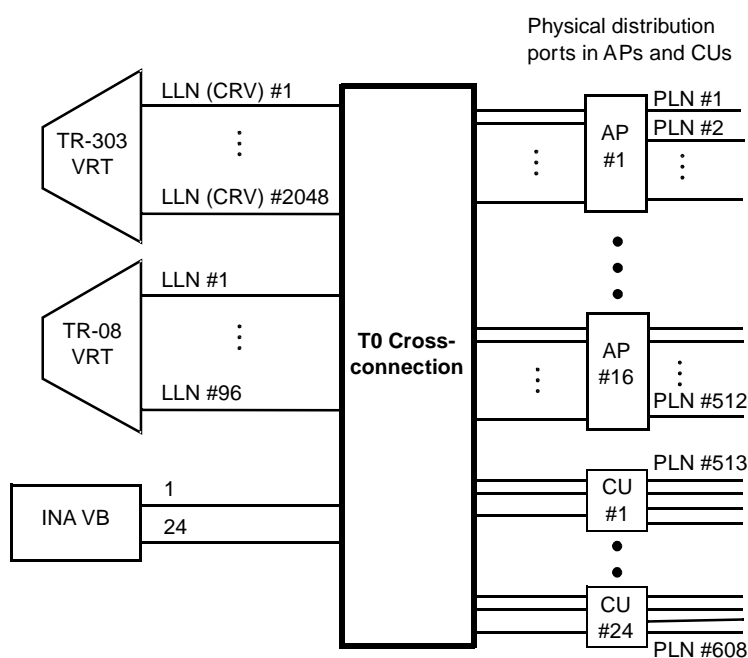


Creation of VRT/VB logical T0 (subscriber)

Overview

Purpose For the following description it is assumed that the NE is connected, the logical T0 is not yet created and the physical line (drop or roc) is not in use by any other logical T0.

The following figure shows a block diagram of T0 cross-connections.



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Logical DS0 List window

General This window displays the logical DS0 list based on a selection criterion. It provides access to the **Logical DS0** window to edit logical DS0s.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Selection Criteria	<p>Radio buttons are used to define the list that will be displayed in the field Logical DS0 List (see below).</p> <ul style="list-style-type: none">• All VRT: The list displays all logical DS0s currently present in the NE for all VRT/VBs.• TR-303, TR-08, INA: In all these cases except TR-303, a non-editable option list is available showing the possible options. Selection of one of these VRT/VB ids automatically sets the corresponding radio button. If no VRT/VB id is selected, the radio button is not editable (i.e. the user will not be able to set it). Possible values: vrt303-{1-3} or ALL for TR-303, {1, 20} or ALL for TR-08, {1, 20} or ALL for INA.

Parameters/Buttons	Description
Logical DS0 List	<p>The information in this field is displayed in a table:</p> <ul style="list-style-type: none"> • Logical DS0 id: Indicates the logical DS0 id within the VRT/VB id. Possible values: v3dp-{1, 3}-{1, 2048} for TR-303, v8dp-{1, 20}-{1, 96} for TR-08, inads0-{1,20}-{1, 24} for INA. • Physical DS0 Id: Displays the physical DS0 id cross-connected to the logical DS0 id shown in the row. Possible values: drop-{1}-{1, 16}-{1, 32} for APs, iatvdp-{1, 80}-1-{1, 24} for IAT, m2drop-{1}-{1, 24}-{1, 4} for CUs. • GSFN: Generic signalling function. The following values are possible: DFLT (default), 2LS, 2GS, Coin, 2FXLS, 2FX, 2RV0, 2NOS, ISDN, Data, EBS, AC, LR, NO1, NO2, 4DO (only for ROC in NE R1.x narrowband releases), BRI, TO, DPT, DX4[N, R], FX[O, P][1, 2, 3, 5], FX[S, T][1, 2, 3, 5], EM4[C, H], PLR[1, 2], ETO4, FXO, OCU[1, 2, 3,4,5,6], SW56[A], TD[O, S][A, B, C, D], TO4, 2RVT, 2LO, COIN2, DFLT2, DPO, DS01, DS02, FXS, EM0, FXOD, FXS0, NO, OCU0, Unknown.

Parameters/Buttons	Description
Logical DS0 List (continued)	<p>Add Logical DS0...: This button is available only</p> <ul style="list-style-type: none">• if no row in the table is selected and• if a specific VRT/VB id has been selected and the maximum number of logical DS0s has not been created yet: max. 96 for TR-08, max. 2048 for TR-303, max. 24 for INA. <p>The Edit Logical DS0... button provides access to the Logical DS0 window to edit the logical DS0 parameters (if possible).</p> <p>Note: This button is disabled if Physical DS0 id = roc-1 or if GSFN = Unknown or 4DO.</p> <p>Remove Logical DS0: This button can be used to remove the cross-connection selected in the list. This button is disabled if Physical DS0 id = roc-1 or if GSFN = 4DO.</p>



Use the logical DS0 list

Procedure Complete the following procedure to modify the logical DS0 list:

- 1 Select **NE** in the **NE Browser** and **List** → **Logical DS0** via the menu bar. The **Logical DS0 List** window pops up.

This window can also be reached from the **VRT/VB List** window (cf. [“VRT/VB List window” \(7-17\)](#)) and **VRT/VB** windows (cf. [“VRT-TR303 window” \(7-20\)](#) - [“VB-INA window” \(7-29\)](#)).

- 2 Use the radio buttons in the **Selection Criteria** field to choose a desired VRT/VB.
-

- 3

If you want to ...	then ...
add a logical DS0	click on Add Logical DS0... The new VRT/VB id will be inserted into the Logical DS0 List .
edit a logical DS0	select an appropriate row in the Logical DS0 List and press Edit Logical DS0... The Logical DS0 window pops up (cf. “Logical DS0 window ” (7-61)).
remove a logical DS0	select an appropriate row in the Logical DS0 List and press Remove Logical DS0 . A Warning window pops up displaying the following message: Logical DS0 will be removed. Ok to proceed? Note: If the logical DS0 is red-lined the following warning message pops up: Redlined logical DS0 will be removed. Ok to proceed? If you decide to continue, the remove operation will be started. The information displayed will be updated once the remove operation is finished to show the current list.

- 4 Click on **Close** to exit the window.

END OF STEPS

Logical DS0 window

General This window is used to add or modify logical DS0. The parameters shown in this window are enabled or disabled depending on the action selected and where this action has been selected from. This window allows cross-connection of physical DS0-logical DS0 (T0 cross-connections), as well as service configuration and modification.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
<p>Logical DS0 General Information</p>	<p>GSFN: The generic signalling function identifies the signalling and transmission function of the provisioned service.</p> <p>This option menu provides access to the Service Details windows (cf. “Common parameters in service details windows” (7-69) to “DPT, DPO Service Details windows” (7-101)).</p> <p>Note: GSFN type is NOT modifiable in R1.13. A change in the GSFN of a logical DS0 implies deletion and new creation of a logical DS0. Depending on the GSFN selected, the list of parameters needed for configuring a subscriber differs.</p> <p>The GSFN parameters are dependent on the GSFN type, and they are shown in each GSFN group table. There are some services which do not have special details: COIN, ISDN (only for TR-303), AC, DATA, EBS, LR, NO[1,2], OCU0 (NE R1.7), NO (NE R1.7), COIN2 (R1.2.3), DFLT2 (R1.2.3), and 2LO (R1.2.3). For these GSFNs the More Details button is disabled (see below).</p> <p>Logical DS0 Id: Three lines show the logical DS0 id(s) by means of a option menu and a text field. The option menu contains the VRT/VB list, the text field shows the logical DS0 number inside the selected VTR/VB. A command button provides access to the Select Logical DS0 window for adding or editing cross-connections. Possible values for the option menu:</p> <p>v8dp-{1, 20} {1, 96} for TR-08, v3dp-{1, 3}-{1, 2048} for TR-303, inads0-{1, 20}-{1, 24} for INA.</p>

Parameters/Buttons	Description
Logical DS0 General Information (continued)	<p>An icon next to every DS0 id indicates the status of the id: Free or Busy. If a busy id is selected the edit mode is active, if a free id is selected the add mode is active.</p> <p>The second line is available only when the GSFN field is populated with BRI, DATA, NO2, DS01, DS02 or OCU2, OCU3, OCU5, OCU6 for a second entry in bundle logical DS0s.</p> <p>The third line is available only when the GSFN field is populated with BRI for a third entry in bundle logical DS0s.</p> <p>Physical DS0 Id: These fields display the physical DS0 id by means of three option menus:</p> <ul style="list-style-type: none"> • the first menu contains the drop-shelf type: drop-1 (for AP), m2drop-1 (for MDS2), iatvdp-{1, 80} (for IAT). • the second menu contains the slot number inside the shelf or subshelf: {1, 16} for the AP slots, {1, 24} for the MDS2 slots, 1 for the IAT slots. • the third menu contains the port number inside the slot: {1, 32} for the AP ports, {1, 4} for the MDS2 ports, {1, 24} for the IAT ports. <p>After changing the drop-shelf type (first option menu) the other two option menus are set None.</p> <p>After changing the slot number (second option menu) the port number (third option menu) is set to None.</p>

Parameters/Buttons	Description
Logical DS0 General Information (continued)	<p>CLEI: In order to provide service, the subscriber has to be assigned to the proper AP. To ensure that the service requested will work, the user should enter the CLEI code of the AP that is supposed to provide that type of service.</p> <p>By default, this field is empty. It is an optional field. The service is not denied if a mismatch is detected in the provisioned CLEI code and the card CLEI code. It is not necessary for IAT provisioning.</p> <p>Red Line: This check box is used to identify red-lined subscribers. A warning message appears when red-lined logical DS0s are to be edited.</p> <p>More Details: This button provides access to a specific Service Details window. The button is enabled only if a GSFN has been selected.</p>
Operational State	<p>The Operational State shows the service state obtained from the NE through the use of the Get button. Possible values: Enabled, Disabled.</p> <p>The Secondary Operational State shows the secondary service state obtained from the NE through the use of the Get button.</p> <p>The Get button is used to retrieve the service states.</p>

Parameters/Buttons	Description
Command buttons	<p>The Port Test button can be used to start the port test. The button is enabled only if a physical DS0 has been selected.</p> <p>For more information refer to “Test management” (8-45).</p> <p>The Apply button is used to confirm edit or add logical DS0.</p>



Add a logical DS0

Launch the Logical DS0 window

The **Logical DS0** window can be reached from **VRT/VB** windows (cf. [“VRT-TR303 window” \(7-20\)](#) - [“VB-INA window” \(7-29\)](#)), **Logical DS0 List** window (cf. [“Logical DS0 List window” \(7-56\)](#)), **Telephony Application Pack** window (cf. [“Telephony Application Pack window” \(6-38\)](#)), **Channel Unit** window (cf. [“Channel Unit window” \(6-51\)](#)), **IAT Subshelf** window (cf. [“IAT Subshelf window \(NE R1.7 and the subsequent releases\)” \(6-68\)](#)) by clicking on **Add Logical DS0**.

Procedure Complete the following procedure to add a logical DS0:

- 1 Use the option menus **Logical DS0 id** to select a desired VRT/VB with a associated empty text field (“free” icon).

- 2 Use the option menu **GSFN** to select the desired GSFN. The corresponding **Service Details** window pops up where the service details information can be modified. The **Logical DS0** window is disabled until the **Service Details** window is closed.

- 3 Use the option menus **Physical DS0 Id** to select the desired id. Optionally the logical DS0 can be set as a redlined service and the CLEI code can be provisioned.

- 4 Click on **Apply**. The logical DS0 will be added.

- 5 Click on **Close** to exit the window.

END OF STEPS



Modify a logical DS0

Launch the Logical DS0 window

The **Logical DS0** window can be reached from **Logical DS0 List** window (cf. [“Logical DS0 List window” \(7-56\)](#)), **Telephony Application Pack** window (cf. [“Telephony Application Pack window” \(6-38\)](#)), **Channel Unit** window (cf. [“Channel Unit window” \(6-51\)](#)), **IAT Subshelf** window (cf. [“IAT Subshelf window \(NE R1.7 and the subsequent releases\)” \(6-68\)](#)) by clicking on **Edit Logical DS0**.

Procedure

Complete the following procedure to edit a logical DS0 of a VRT/VB:

- 1 Use the option menus **Logical DS0 id** to select a desired VRT/VB with a associated text field (grey background) to select a logical DS0 other than the pre selected (if desired).
-

2	If you want to ...	then ...
	add a cross-connection	use the option menus Logical DS0 id to select a desired VRT/VB with a associated text field (grey background), use the option menus Physical DS0 id to select the desired physical DS0 and click on Apply .
	modify the subscriber parameters	use the text field CLEI and the check box Red Line to enter/define the corresponding values and click on Apply .

- 3 Click on **Close** to exit the window.

END OF STEPS

Note: If the logical DS0 is red-lined the following warning message pops up after confirming the edit action:

You are about to edit a Logical DS0 carrying a priority service. Continue anyway?



Common parameters in service details windows

Window description The following table shows the parameters which are included in all service details windows:

Parameters/Buttons	Description
GSFN	Displays the selected GSFN for the logical DS0.
Command buttons	The OK button is used to confirm the changes. The Close button can be used to close the window without changes.



DFLT Service Details window

General The DFLT (default POTS/SPOTS) service is primarily applicable to TR-08 applications.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Enable Full Time Transmission	When a check mark is set in the check box the transmission circuits in the AP or CU remain active when the subscriber is on-hook. Possible values: Set, Not set . Default: Set .
Loss Mode	Use this option menu to specify whether the AP or CU will automatically adjust its transmit/receive loss to control the overall loop loss to approximately 2 or 5 dB, or use prescription-set values. Possible values: 2, 5, Auto . Default: Auto .

EM0, FXS0 Service Details windows

General EM0: E&M, non locally switched. The E&M function is used to provide the E&M signaling interface.

FXS0: foreign exchange - station, non-locally switched. It is applicable to the emulated SPQ443 phantom channel unit that is used to handle DS0 signals routed to a PBX or key system attached to the secondary T1/DSX-1 line at the IAT.



Window description The following table shows the edit option of this window:

Service Details (Parameters)	Description
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the central office (CO) to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle.



2LS, 2GS, 2FXLS, 2FX Service Details windows

General The 2LS (2-wire loop-start service with enhanced transmission and signaling provisioning options) is applicable to the POTS32 LPA300, PRCOIN LPA350 and PROG2W LPA380 APs channel units.

The 2GS (2-wire ground-start service with enhanced transmission and signaling provisioning options) is applicable to the PRCOIN LPA350 and PROG2W LPA380 APs channel units.

The 2FXLS (2-wire FX, loop-start) is applicable to the PRCOIN LPA350 and PROG2W LPA380 APs.

The 2FX (2-wire FX, ground-start) is applicable to the PRCOIN LPA350 and PROG2W LPA380 APs.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Enable Full Time Transmission	When a check mark is set in the check box the transmission circuits in the AP or CU remain active when the subscriber is on-hook. Possible values: Set, Not set. Default: Set.
Impedance	This option menu can be used to define the termination impedance of the tip/ring interface. Possible values: 600, 900 . Default: 900 .

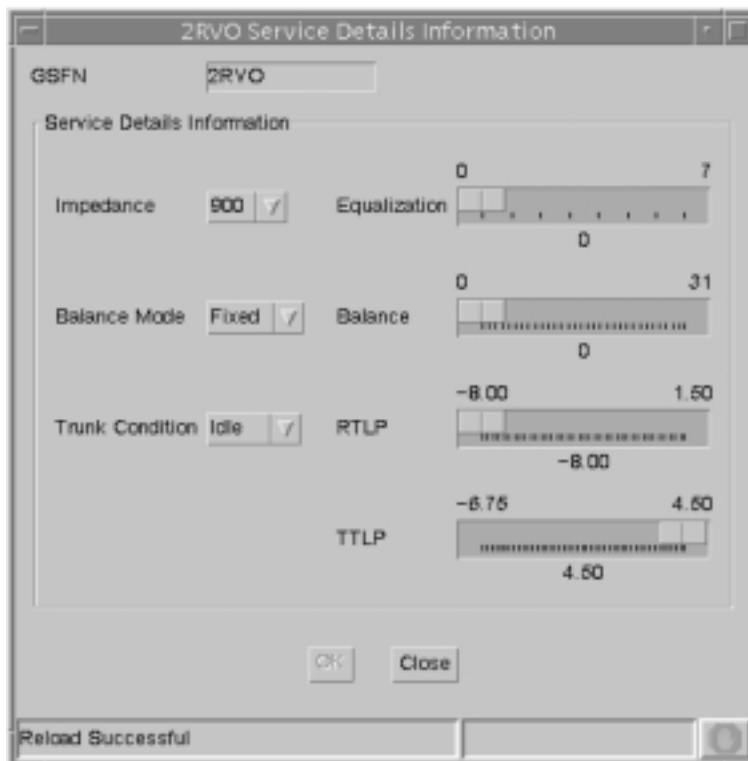
Service Details (Parameters)	Description
Equalization	This slider can be used to set the slope equalization for the AP or CU. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance Mode (BAL1)	This option menu can be used to define whether the AP or CU uses an adaptive hybrid to control the 4-wire-to-2-wire balance or a prescription set value. Possible values: Auto, Fixed . Default: Auto .
Balance (BAL2)	This slider can be used to establish the prescription balance setting, in case BAL1 is Fixed . If BAL1 has value Auto , this control will be disabled (grayed out). Possible values: 0 ... 31 , step 1. Default: 0 .
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO (Central Office) to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle (Busy for 2FX).
Receive TLP (RTLTP)	This slider is used to reset a fixed receive gain or loss in dB. Negative values define loss; positive values define gain. Only valid if LOSS is Fixed. If LOSS is not fixed, this control will be disabled. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Loss Mode	This option menu can be used to specify whether the AP or CU will automatically adjust its transmit/receive loss to control the overall loop loss to approximately 2 or 5 dB, or use prescription-set values. Possible values: 2, 5, Fixed . Default: 2 .

Service Details (Parameters)	Description
Transmit TLP (TTLP)	This slider can be used to set a fixed transmission gain or loss in dB. Negative values define loss; positive values define gain. Only valid if LOSS is Fixed. If LOSS is not fixed, this control will be disabled. Possible values: -6.75 ... 4.5 , step 0.25. Default: 4.5 .



2RVO Service Details window

General The 2RVO (2-wire loop reverse battery, originate) is applicable to the PROCOIN LPA350 and PROG2W LPA380 APs.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Impedance	This option menu can be used to define the termination impedance of the tip/ring interface. Possible values: 600, 900 . Default: 900 .
Equalization	This slider can be used to set the slope equalization for the AP or CU. Possible values: 0 ... 7 , step 1. Default: 0 .

Service Details (Parameters)	Description
Balance Mode	This option menu can be used to define whether the AP or CU uses an adaptive hybrid to control the 4-wire-to-2-wire balance or a prescription set value. Possible values: Auto, Fixed . Default: Fixed .
Balance	This slider can be used to establish the prescription balance setting, in case BAL1 is Fixed . If BAL1 has value Auto , this control will be disabled (grayed out). Possible values: 0 ... 31 , step 1. Default: 0 .
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Receive TLP (RTLP)	This slider can be used to reset a fixed receive gain or loss in dB. Negative values define loss; positive values define gain. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Transmit TLP (TTLP)	This slider can be used to set a fixed transmission gain or loss in dB. Negative values define loss; positive values define gain. Possible values: -6.75 ... 4.5 , step 0.25. Default: 4.5 .



2NOS Service Details window

General The 2NOS (2-wire transmission only, with sealing current) is applicable to the PROCOIN LPA350 and PROG2W LPA380 APs.



Window description The following table shows the view/edit option of this window:

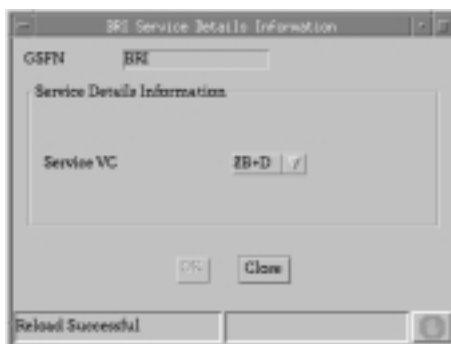
Service Details (Parameters)	Description
Impedance	This option menu can be used to define the termination impedance of the tip/ring interface. Possible values: 600, 900 . Default: 900 .
Equalization	This slider can be used to set the slope equalization for the AP or CU. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance Mode (BAL1)	This option menu can be used to define whether the AP or CU uses an adaptive hybrid to control the 4-wire-to-2-wire balance or a prescription set value. Possible values: Auto, Fixed . Default: Fixed .

Service Details (Parameters)	Description
Balance (BAL2)	This slider can be used to establish the prescription balance setting, in case BAL1 is Fixed . If BAL1 has value Auto , this control will be disabled (grayed out). Possible values: 0 ... 31 , step 1. Default: 0 .
Receive TLP (RTLP)	This slider can be used to reset a fixed receive gain or loss in dB. Negative values define loss; positive values define gain. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Transmit TLP (TTLP)	This slider can be used to set a fixed transmission gain or loss in dB. Negative values define loss; positive values define gain. Possible values: -6.75 ... 4.5 , step 0.25. Default: 4.5 .



BRI Service Details window

General The BRI (basic rate interface transmission extension (3 DS0 ISDN BRITE)) is applicable to the AUA293 ISDN BRITE channel unit which uses the U-Interface 2B1Q signal comprising two B channels and one D channel, plus overhead.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Service VC	Switched virtual connection for ISDN. This option menu can be used to select the combination of bearer (B) channels provided to the subscriber. Possible values: 2B+D , B1+D , B2+D , D . Default: 2B+D .

TO Service Details window

General The TO (transmission only, no sealing current) is used for a private line application with no DC signal. It is applicable to the SPQ442 channel unit which provides four channels of service which can be used for 2-wire non-switched private lines.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 600, 900 . Default: 600 .
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance	This slider can be used to specify the precision network for the 4-wire-to-2-wire hybrid balance function. Possible values: 0 ... 15 , step 1. Default: 3 .

Service Details (Parameters)	Description
Receive Gain	This slider can be used to define the receive gain parameter. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Transmit Gain	This slider can be used to define the transmit gain parameter. Possible values: -1 .. 6.75 , step 0.25. Default: -1 .



FXS Service Details window

General The FXS is a 2-wire foreign exchange station end. It is applicable to the SPQ 443 channel units. This GSFN is only available for NE R1.2.3.



Window description The following table shows the view/edit option of this window:

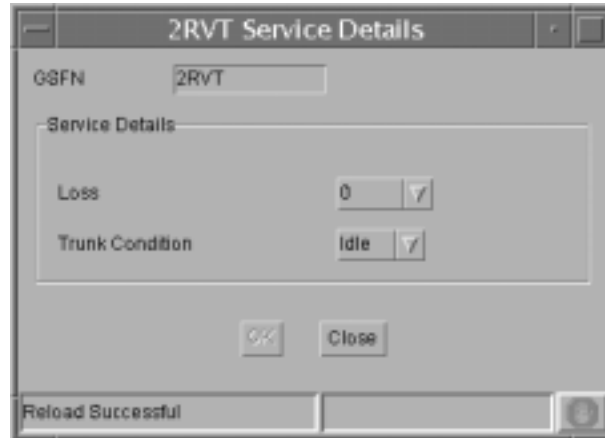
Service Details (Parameters)	Description
On-Hook Transmission	When a check mark is set, the channel unit is configured for full-time on-hook transmission. Possible values: Set, Not set . Default: Not set .
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state Busy , or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 600, 900 . Default: 600 .

Service Details (Parameters)	Description
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance	This slider can be used to specify the precision network for the 4-wire-to-2-wire hybrid balance function. Possible values: 0 ... 15 , step 1. Default: 3 .
Receive Gain	This slider can be used to define the receive gain parameter. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Transmit Gain	This slider can be used to define the transmit gain parameter. Possible values: -1 .. 6.75 , step 0.25. Default: -1 .



2RVT Service Details window

General The 2RVT (2-wire loop reverse battery, CS) is applicable to the SPQ442, LPA356 APs. This GSFN is only available for NE R1.2.2.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Loss	This option menu can be used to determine the bidirectional loss. Possible values: 0 dB , 2.5 dB . Default: 0 DB .
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state Busy , or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .

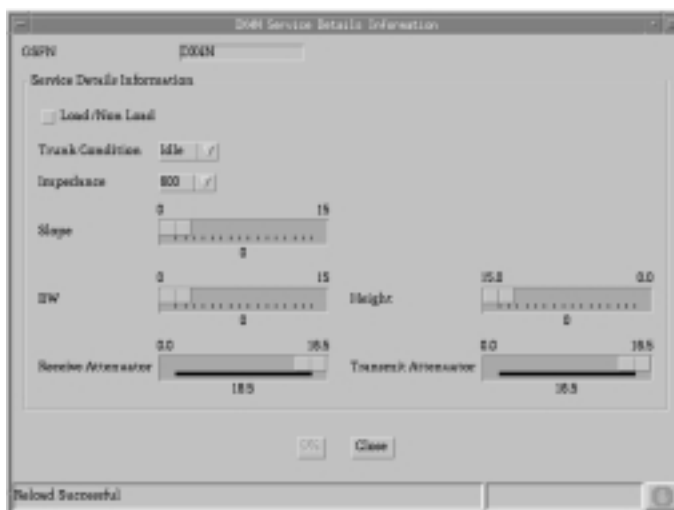


DX4N, DX4R, FX[O, P][1, 2, 3, 5], FX[S, T][1, 2, 3, 5] Service Details windows

General The DX4[N, R] (4-wire duplex signaling, normal simplex and reverse simplex) is applicable to the AUA41B channel unit which provides one channel of service to be used in the MDS2/MDS2B.

The FX[O, P][1,2,3,5] (4-wire foreign Xoffice, no toll diversion/with toll diversion (LSNS, LSRS, GSNS, LSNS)) is applicable to the SPQ444 channel unit which is intended for use in non locally switched loop- and ground-start special services (loop start normal simplex, loop start reverse simplex, ground start normal simplex, ground start reverse simplex).

The FX[S, T][1,2,3,5] (4-wire foreign exchange, no toll diversion/with toll diversion (LSNS, LSRS, GSNS, LSNS)) is applicable to the AUA41B channel unit which provides one channel of service to be used in the MDS2/MDS2B (loop start normal simplex, loop start reverse simplex, ground start normal simplex, ground start reverse simplex).



Window description The following table shows the view/edit option of this window:

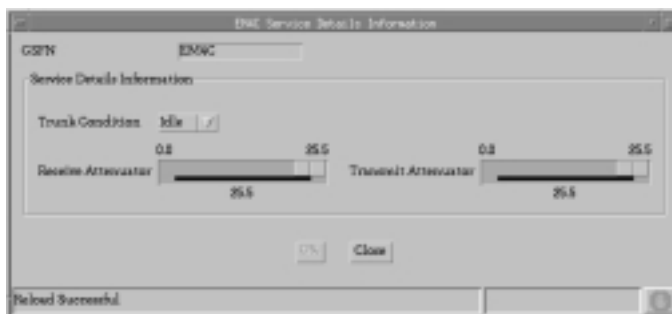
Service Details (Parameters)	Description
Load/Non Load	This option menu can be used to select whether the transmit equalizer must be loaded or non-loaded distribution cable. Possible values: N, L . Default: N .
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 150, 600, 1200 . Default: 600 .
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 15 , step 1. Default: 0 .
Bandwidth (BW)	This slider can be used to control the frequency response characteristic of the transmit equalizer. Possible values: 0 ... 15 , step 1. Default: 0 .
Height	This slider can be used to control the amplitude of the transmit equalizer's transfer function. Possible values: 0 ... 15 , step 1. Default: 0 .
Receive Attenuator	This slider can be used to define the receive attenuator parameter. Possible values : 0... 16.5 , step 0.1. Default: 16.5 .
Transmit Attenuator	This slider can be used to define the transmit attenuator parameter. Possible values: 0 ... 16.5 , step 0.1. Default: 16.5 .



EM4C, EM4H, PLR1, PLR2 Service Details windows

General EM4[C, H]: 4-wire E&M, Type I and Type II. The E&M function is used in PBX tie trunks to provide the E&M signaling interface. It is applicable to the SPQ454 channel unit which is intended for used in PBX tie trunks and it can interface with a PBX or other transmission equipment.

PLR[1,2]: 4-wire pulse link repeater, Type I and Type II. The primary application of the PLR function is also in PBX tie trunks providing the E&M signaling interface with inverted polarity. It is also applicable to the SPQ454 channel unit.



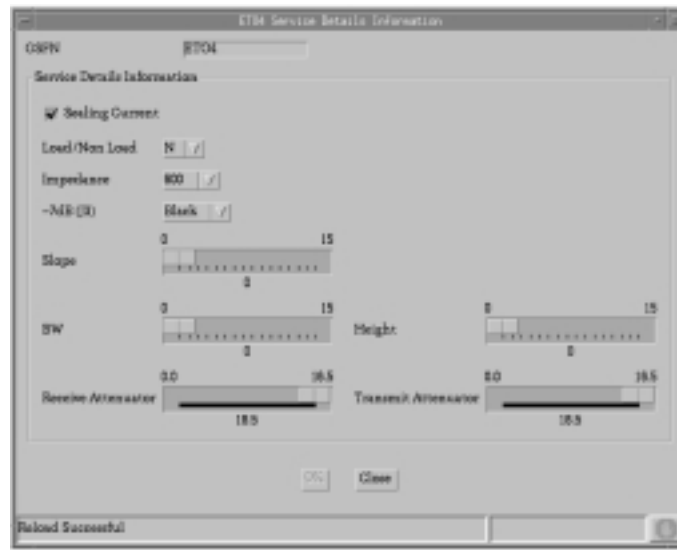
Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Trunk Condition	This option menu can be used to determine whether the AP sets the signaling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Receive Attenuator	This slider can be used to define the receive attenuator parameter. Possible values: 0 ... 25.5 , step 0.1. Default: 25.5 .
Transmit Attenuator	This slider can be used to define the transmit attenuator parameter. Possible values: 0 ... 25.5 , step 0.1. Default: 25.5 .



ETO4 Service Details window

General The ETO4 (4-wire equalized transmission only) function is used in private lines (voice or data) when equalization of cable transmission characteristics is required. It is applicable to the AUA41B channel unit.



Window description The following table shows the view/edit option of this window:

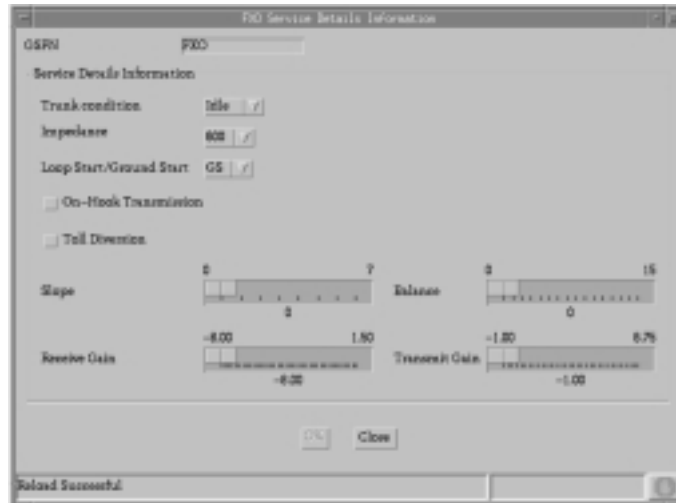
Service Details (Parameters)	Description
Sealing Current	When a check mark is set, the channel unit applies a current from tip to ring (or across the transmission lead simplex) of the subscriber interface. Possible values: Set , Not set . Default: Set .
Load/Non Load	This option menu can be used to select whether the transmit equalizer must be loaded or non-loaded distribution cable. Possible values: N , L . Default: N .

Service Details (Parameters)	Description
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 150, 600, 1200 . Default: 600 .
-7 dB (J3)	When the Black option is selected, the channel unit supports an input TLP range of -15.0 to 1 dB. When the White option is selected, the channel unit supports an input TLP range of -8.0 to 8.5 dB. Possible values: Black, White . Default: Black .
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 15 , step 1. Default: 0 .
Bandwidth (BW)	This slider can be used to control the frequency response characteristic of the transmit equalizer. Possible values: 0 ... 15 , step 1. Default: 0 .
Height	This slider can be used to control the amplitude of the transmit equalizer's transfer function. Possible values: 0 ... 15 , step 1. Default: 0 .
Receive Attenuator	This slider can be used to define the receive attenuator parameter. Possible values: 0 ... 16.5 , step 0.1. Default: 16.5 .
Transmit Attenuator	This slider can be used to define the transmit attenuator parameter. Possible values: 0 ... 16.5 , step 0.1. Default: 16.5 .



FXO Service Details window

General The FXO (foreign exchange office) function is used for a non locally or locally switched loop- or ground-start application. It is applicable to the SPQ442 channel unit.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 600 , 900 . Default: 600 .
Loop Start/ Ground Start	This option menu can be used to define whether loop start or ground start is used. Possible values: LS , GS . Default: GS .

Service Details (Parameters)	Description
On-Hook Transmission	When a check mark is set, the channel unit is configured for full-time on-hook transmission. Possible values: Set, Not set . Default: Not set .
Toll Diversion	This check box can be used to prevent/allow that the channel unit transmit the reverse loop current feed signalling state toward the digital facility. Possible values: Set, Not set . Default: Not set.
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance	This slider can be used to specify the precision network for the 4-wire to 2-wire hybrid balance function. Possible values: 0 ... 15 , step 1. Default: 0 .
Receive Gain	This slider can be used to define the receive gain parameter. Possible values: -8 ... 1.5 , step 0.25. Default: -8 .
Transmit Gain	This slider can be used to define the transmit gain parameter. Possible values: -1 ... 6.75 , step 0.25. Default: -1 .



OCU [1, 2, 3] Service Details windows

General The OCU[1,2,3] (office channel unit dataport (1, 2 or 4 data rates)) are applicable to the SPQ452 dual OCU dataport which is primarily used in an end-link of a DDS private line data service.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
All-Zero Code	All-Zero Code allowed: when a check mark is set, the channel unit will not allow a word containing 8 zeros to be sent toward the digital facility. Possible values for OCU1, 2: Set, Not set . Default: Not set ; Possible value for OCU3: Set .
Secondary channel	Secondary channel used: when a check mark is set, the channel unit supports a low-speed telemetry channel in the subscriber's data bits. Possible values for OCU1, 2: Set, Not set . Default: Not set ; Possible value for OCU3: Set .

Service Details (Parameters)	Description
Quality Monitoring	When a check mark is set, the channel unit will send abnormal station code to the network upon detecting an excessive number of bipolar violations from the loop. Possible values for OCU1, 2: Set, Not set . Default: Not set ; Possible value for OCU3: Not set .
Subscriber Data Rate	This option menu can be used to specify the subscriber data rate, in kbps, for the subscriber interface. Possible values for OCU1: 24, 48, 96, 192 ; Default: 192 . Possible values for OCU2: 384, 560 ; Default: 560 . Possible value for OCU3: 640 .
Error Correction	This option menu can be used to select the error correction technique for the DS0 path. The MVEC option is applicable only for subscriber data rates of 19.2 kbps and less. SCEC requires two DS0 time slots. Possible values for OCU1: NONE, MVEC ; Default: NONE . Possible values for OCU2 and OCU3: NONE, SCEC ; Default: NONE .



SW56 Service Details window

General The SW56 (switched 56 kbps DDS service) is also applicable to the SPQ452 dual OCU dataport including enhanced service options to the DDS.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Enhanced Switch	When the enhanced switched 56-kbps check mark is set, the channel unit supports the transmission of call progress tones to the customer premises equipment (CPE). Possible values: Set, Not set. Default: Not set.
AB Signaling	The AB signaling parameter check mark is normally not set, which causes the channel unit to operate in the software signaling mode. Possible values: Set, Not set. Default: Not set.

Service Details (Parameters)	Description
Quality Monitoring	When the quality monitoring parameter check mark is set, the channel unit will send abnormal station code to the network upon detecting an excessive number of bipolar violations from the loop. Possible values: Set, Not set. Default: Not set.



TD[O, S][A, B, C, D] Service Details windows

General TD[O, S][A, B, C, D]: 4-wire tandem office and 4-wire tandem subscriber, 4-state (Type II, Type I) and 2-state (Type II, Type I). The tandem function is used for providing a back-to-back carrier interface for loop- or ground-start circuits. It is applicable to the SPQ444 channel unit.



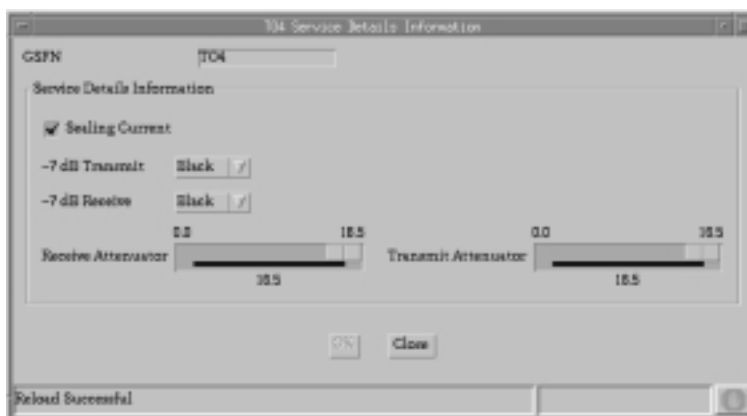
Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signaling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Transmit Attenuator	This slider can be used to define the transmit attenuator parameter. Possible values: 0 ... 11.6 , step 0.1. Default: 11.6 .



TO4 Service Details window

General The T04 (4-wire transmission only) function is used in voice or data private lines. It is applicable to the AUA41B channel unit which may be used in the MDS2/MDS2B, interfacing with a switch, other transmission equipment, data equipment, or cable.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Sealing Current	When a check mark is set, the channel unit applies a current from tip to ring (or across the transmission lead simplex) of the subscriber interface. Possible values: Set, Not set. Default: Set.
-7 dB Transmit	This option menu can be used to control a 7 dB pad in the transmit path. When the Black option is selected, the channel unit supports an input TLP range of -9.0 to 7.5 dB. When the White option is selected, the channel unit supports an input TLP range of -16.0 to 0.5 dB. Possible values: Black, White . Default: Black .

Service Details (Parameters)	Description
-7 dB Receive	This option menu can be used to control a 7 dB pad in the receive path. When the Black option is selected, the channel unit supports an input TLP range of -16 to 0 dB. When the White option is selected, the channel unit supports an input TLP range of -9.5 to 7 dB. Possible values: Black, White . Default: Black .
Receive Attenuator	This slider can be used to define the receive attenuator parameter. Possible values: 0 ... 16.5 , step 0.1. Default: 16.5 .
Transmit Attenuator	This slider can be used to define the transmit attenuator parameter. Possible values: 0 ... 16.5 , step 0.1. Default: 16.5 .



DS01, DS02 Service Details windows

General DS01 (4-wire dataport data services DS0A) and DS02 (4-wire dataport data services DS0B) are applicable to the SPQ334 channel units. This GSFN is only available for NE R1.2.3.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
All-Zero Code	All-Zero Code allowed: when a check mark is not set, the channel unit will not allow a word containing 8 zeros to be sent toward the digital facility. Possible values: Set, Not set. Default: Not set.
Error Correction	When this parameter is set, the type of error correction used is set automatically by the system based on the RATE parameter. Possible values: Set, Not set. Default: Not set.

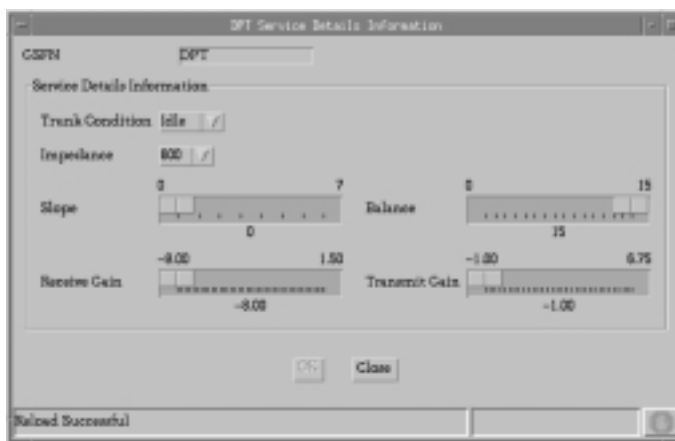
Service Details (Parameters)	Description
Subscriber Data Rate (RATE)	This option menu can be used to specify the subscriber data rate, in kbps, for the subscriber interface. Possible values for DS01: 24, 48, 96, 192, 384, 560, 640 ; Default: 560 . Possible values for DS02: 24, 48, 96, 192, 560, 640 ; Default: 560 .



DPT, DPO Service Details windows

General The DPT (dial-pulse terminating) function is used for a direct inward dial (DID) with either dial pulse or multi-frequency addressing. It is applicable to the SPQ442 channel unit which provides four channels of service which can be used for DID trunks.

The DPO (dial pulse originating) function is used for a DID with either dial pulse or multi-frequency addressing. It is applicable to the SPQ 443 channel units. This GSFN is only available for NE R1.2.3.



Window description The following table shows the view/edit option of this window:

Service Details (Parameters)	Description
Trunk Condition	This option menu can be used to determine whether the AP or CU sets the signalling state toward the CO to the Idle state, Busy or the DS0 remote alarm indication (Rai) code during a fault condition. Default: Idle .
Impedance	The transmit and receive impedance parameter selects the termination impedance of the channel unit. Possible values: 600, 900 . Default: 600 .

Service Details (Parameters)	Description
Slope	This slider can be used to adjust the frequency response of the equalizer. Possible values: 0 ... 7 , step 1. Default: 0 .
Balance	This slider can be used to specify the precision network for the 4-wire-to-2-wire hybrid balance function. Possible values: 0 ... 15 , step 1. Default: 15 for DPT, 3 for DPO.
Receive Gain	This slider can be used to define the receive gain parameter. Possible values: -1 ... 1.5 , step 0.25. Default: -1 for DPT, -8 for DPO.
Transmit Gain	This slider can be used to define the transmit gain parameter. Possible values: -1 ... 6.75 , step 0.25. Default: -1 .



Overview of APs and GSFNs

General The following table provides an overview of the general service functions and the compatible AP/CU.

GSFN	Apparatus codes
DFLT, 2LS	LPA300, LPA350, LPA380, SPQ440C
2GS	LPA350, LPA380, SPQ440C
2FX, 2FXLS, 2RVO, 2NOS	LPA350, LPA380
ISDN	LPU116
4DO	(ROC) for NE R1.x narrowband releases
DATA	AUA200 DPX, AUA232
EBS	SPQ429, SPQ328
AC	AUA45B
LR	AUA75
NO1, NO2	MCU5205, MCU5405
BRI	AUA293 ISDN BRITE
TO	SPQ442, SPQ443, LPA200
DPT, DPO	SPQ442, SPQ456, LPA200
FXO	SPQ442, LPA200
DX4[N,R], FX[S,T][1,2,3,5], ETO4, TO4	AUA41B
FX[O,P][1,2,3,5], TD[O,S][A,B,C,D]	SPQ444
FXS	SPQ443
FXS0, EM0 (NE R1.7.0)	-
EM4[C,H], PLR[1,2]	SPQ454
DS01, DS02	SPQ334
OCU[1,2,3]	SPQ452, LPA605
SW56	SPQ452, SPQ334
OCU0 (NE R1.7.0)	-



Remove VRT/VB logical DS0 (Subscriber)

General There are several ways to initiate the deletion of logical DS0s. The corresponding button **Remove Logical DS0...** exists in the **CU**, **AP** and **Logical DS0 List** windows (this button is disabled in **CU** and **AP** windows for R1.5).

Procedure Complete the following procedure to remove a logical DS0:

1 Select the logical DS0 in the corresponding list.

2 Click on **Remove Logical DS0**. A **Warning** window pops up:

Logical DS0 will be deleted, OK to proceed?

If the chosen logical DS0 has been configured as red lined (cf. [“Modify a logical DS0” \(7-67\)](#)) the following **Warning** message will pop up:

Redlined Logical DS0 will be deleted, OK to proceed?

If you decide to continue, the NAM will send a delete message to the NE.

END OF STEPS



Service provisioning (data)

Overview

Purpose The data service functionality covers the connection establishment process between an xDSL subscriber interface and an DS1/DS3/OC3c network interface.

This functionality is performed in the same way for all the AFM releases managed by NAM R2.1.

Pre-provisioning of ATM links and cross-connections is possible (i.e. if the packs and ports are pre-provisioned the ATM links and cross-connections can also be pre-provisioned even if the related card is not inserted).

This chapter describes the creation, modification and deletion of ATM virtual path/channel links and cross-connections in an NE.

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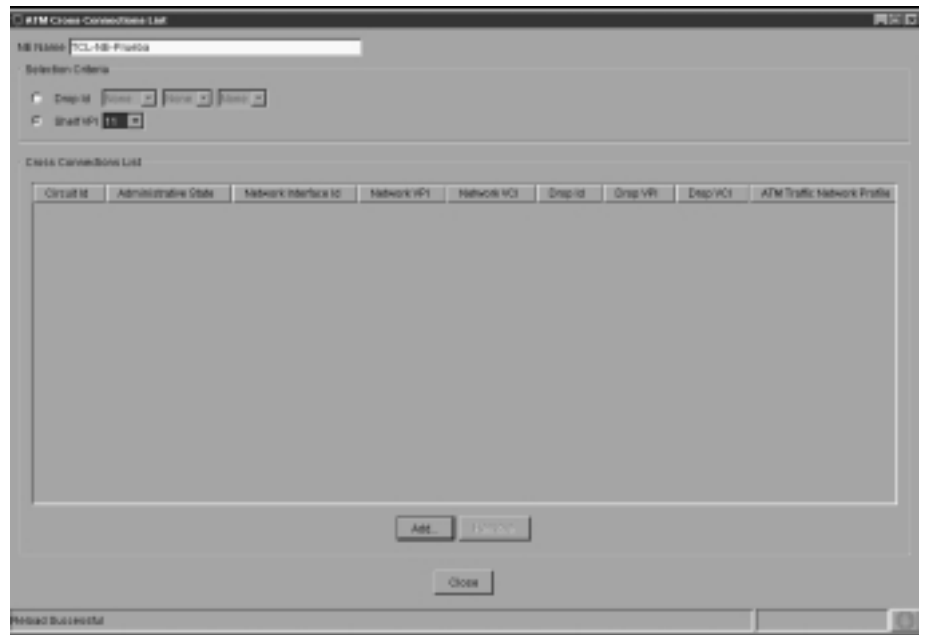
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ATM Cross Connections List window

General This window displays all ATM cross-connections within the NE, shelf, slot or port or Shelf_VP. It can also be used to add/edit/remove cross-connections. The cross connections between the AFM and the ACE COMDAC (BVPTs and CVPTs) are also displayed in this window when all the cross connections in the AFM are requested, however, the user will not be able to edit them.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
<p>Selection Criteria</p>	<p>In this subpane the user selects if he wants to display the cross connections that exist in a NE, shelf, slot or port, or if he wants to display the VC cross connections that exist in a certain Shelf VP.</p> <p>Drop Id: When the window is opened, Drop Id is the default selection criteria and the menu options are filled with the Id of the drop selected in the calling window, if there any.</p> <p>A drop inside the NE is identified by three parameters from three option menus:</p> <ul style="list-style-type: none"> • The first one contains the drop shelf. Format: drop-1 or subdrop-{1, 8}. All or None is also allowed. • The second one contains the slot number inside the NE, but only for slots in which an xDSL pack is inserted. Format: {1, 16} for FAST shelf, {0, 19} for BAIU shelf), or {1, 8} for subshelf. All or None is also allowed. • The third one contains the drop number inside the slot indicated in the previous list {1, x}. All or None is also allowed. <p>Format: drop shelf-slot-drop. Possible values for FAST: drop-1-{1, 16}-{1, x}. Possible values for BAIU: drop-1-{0, 19}-{1, x} possible values for subshelf: subdrop-{1, 8}-{1, 8}-{1, x}. None is also allowed (depending on the xDSL type x can be 4, 8, 16 or 32).</p> <p>Selecting a drop updates the cross-connection table unless None is selected in one of the related option menus.</p>

Parameters/Buttons	Description
Selection Criteria (continued)	<p>Please note the following relation between the associated option menus: drop number can be selected only if a slot number has been selected beforehand and a slot number can be selected only if a shelf/subshelf has been selected beforehand.</p> <p>Shelf VPI: When selected, it contains the list of Shelf_VP identifiers already created in the NE and None (default). When the user selects a Shelf_VP identifier, the list of VC cross-connections created in that Shelf_VP is displayed. Note that VP cross-connections are not displayed with this selection criteria.</p>

Parameters/Buttons	Description
Cross Connections List	<p>This list shows the parameters for the cross-connection selected by using the selection criteria above.</p> <p>Circuit Id: Indicates an identifier associated to each VP or VC cross-connection.</p> <p>Administrative State: This field indicates the current administrative state of the cross-connection: Locked, Unlocked.</p> <p>Network Interface Id: Indicates the network interface (Feeder, IMA Group) which is involved in the ATM cross-connection.</p> <p>Network VPI: Indicates the VPI used to create the cross-connection on the network side (Feeder, IMA Group). Possible values: { 1, 255 }.</p> <p>Network VCI: Indicates the VCI used to create the cross-connection on the network side (Feeder). This field is empty if the row represents a VP cross-connection. Possible values: { 33, 1999 } (up to R1.15U1 NEs only), { 33, 4111 } (R1.17 NEs and subsequent NE releases only with A-Version AFMs), { 33, 9723 } (R1.17 NEs and subsequent NE releases only with B-Version AFMs).</p>

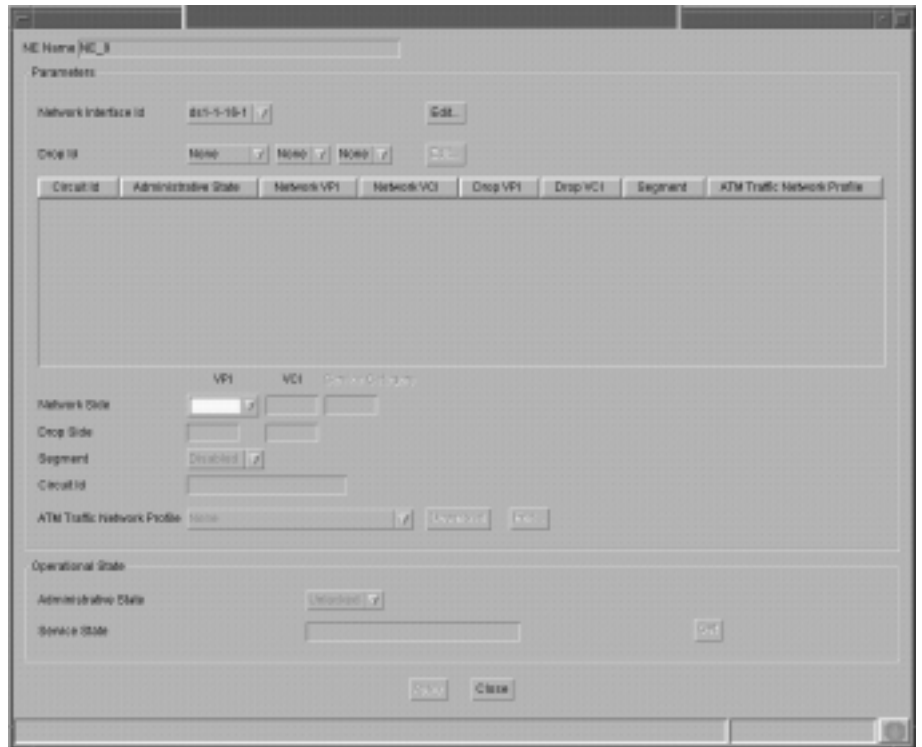
Parameters/Buttons	Description
Cross Connections List (continued)	<p>Drop Id: Indicates the drop selected in this window. It can also be the ACE COMDAC identifier: core-1.</p> <p>Drop VPI: Indicates the VPI used to create the cross-connection on the drop side. Possible values: {0, 255}.</p> <p>Drop VCI: Indicates the VCI used to create the cross-connection on the drop side. This field can be empty if the row is a VP cross-connection. Possible values: {0, 1023}.</p> <p>ATM Traffic Network Profile: Indicates the ATM traffic descriptor associated with each cross-connection. If the ATM Traffic profile is not a Network Profile (it is not controlled by the NAM) then the name displayed is constructed from the string “Local AFM” + index in the AFM table (e.g. “Local AFM 23”). If the profile is a duplicate of another profile in the AFM already controlled as a Network Profile, then its name is constructed as “Local AFM” + index in the AFM table + “-dup-” + Name of the Network Profile (e.g. “Local AFM 10-dup-Network Profile A”). If not all descriptors in the cross-connection are the same then “Corrupted” label is displayed.</p> <p>Segment: This parameter indicates the segment role of a cross connection. Possible Values: End Point, Disabled. It is empty for cross-connections between the AFM and the ACE COMDAC. Segment is enabled only for R1.11.2 NEs, R1.17 NEs and subsequent NE releases..</p>

Parameters/Buttons	Description
Command buttons	<p>The Add/Edit button provides access to the ATM Cross Connection window (cf. “ATM Cross Connection window” (7-113)). If a cross-connection has been selected: Edit; if no cross-connection has been selected: Add.</p> <p>This button is disabled if several rows are selected or if an AFM to ACE COMDAC cross-connection is selected.</p> <p>The Remove button can be used to remove a selected cross-connection. This button is disabled if no row, more than one row, or an AFM to ACE COMDAC cross-connection is selected.</p>



ATM Cross Connection window

General This window is used to add, view or modify ATM cross-connections over an xDSL drop.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Parameters	<p>Network Interface Id: This option menu is used to select the network interface id. It is enabled only in creation mode. Cross-connections can be provisioned on port 1 only. There are different values for the different AFM types.</p> <p>DS3 AFM: ds3_lfp-1.</p> <p>DS1 AFM (UNI mode): ds1-1-16-{x} for FAST, ds1-1-0-{x} for BAIU (x is the number of the active feeders supplied by the server).</p> <p>DS1 AFM (IMA mode): imagrp-1-16-{1, x} for FAST, imagrp-1-0-{1, x} for BAIU (x is the number of IMA groups supplied by the server).</p> <p>OC3c AFM: oc3_lfp-1.</p> <p>The Edit... button provides access to the DS3 AFM Feeder window (cf. “DS3 AFM Feeder window” (6-86)) or the DS1 AFM Feeder window (cf. “DS1 AFM Feeder window” (6-109)) or the IMA Group window (cf. “View the IMA Group parameters” (6-113)) or the OC3c AFM Feeder window (cf. “OC3c AFM Feeder window” (6-97)).</p> <p>Drop Id: This parameter is only enabled in creation mode. A drop inside the NE is identified by three parameters from three option menus:</p> <ul style="list-style-type: none"> • The first one contains the drop shelf. Format: drop-1 or subdrop-{1, 8}. None is also allowed.

Parameters/Buttons	Description
Parameters (continued)	<p>Drop ID (continued)</p> <ul style="list-style-type: none"> • The second one contains the slot number inside the NE, but only for slots in which an xDSL pack is inserted. Format: {1, 16} for FAST shelf, ({0, 19} for BAIU shelf), or {1, 8} for subshelf. None is also allowed. • The third one contains the drop number inside the slot indicated on the previous list {1, x}. None is also allowed (x is the number of drops supplied by the server). <p>An icon next to the drop number indicates whether the drop is ready to be cross connected or not.</p> <p>The Edit... button provides access either to the ADSL Drop window (cf. “ADSL Drop window” (6-127)) or the SDSL Drop window (cf. “SDSL Drop window” (6-140)) or the SHDSL Drop window (cf. “SHDSL ATM Drop window ” (6-153)).</p> <p>A table lists all existing cross connections for the selected drop. The following parameters are displayed: Circuit Id, Administrative State, Network VPI, Network VCI, Drop VPI, Drop VCI, ATM Traffic Network Profile, Segment (R1.11.2 NEs, R1.17 NEs and subsequent NE releases only). When a cross connection is selected the window is in edit mode. If no cross connection is selected the window is in creation mode.</p>

Parameters/Buttons	Description
Parameters (continued)	<p>Network Side: These fields are used to define the VPI and VCI related to the cross-connection on the network side. The Service Category field displays the service category of the selected Shelf VP. These fields are available in creation mode. Possible values for VP cross-connections: {1, 255} for network VPI. Possible values for VC cross-connections: one of the shelf-VPIs {1, 255} for network VPI, while the network VCI depends on the NE release: {33, 1999} (up to R1.15U1 NEs only) {33, 4111} (R1.17 NEs and subsequent NE releases only with A-Version AFMs), {33, 9723} (R1.17 NEs and subsequent NE releases only with B-Version AFMs). Possible values for Service category: CBR, rt-VBR, nrt-VBR, UBR, Unknown.</p> <p>The command button provides access to Free VCIs in Shelf VP x window</p> <p>Drop Side: Two fields are used to define the VPI and VCI related to the cross-connection on the drop side. These fields are available in creation mode. Possible values for VP cross-connections: {0, 255} for port VPI. Possible values for VC cross-connections: {0, 255} for port VPI, {0, 1023} for port VCI.</p> <p>Circuit Id: This text field is used to identify the VP and VC cross-connection. It is available for R1.17 NEs and subsequent NE releases only.</p>

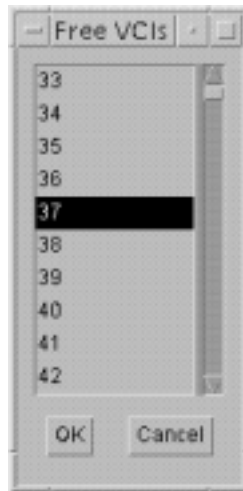
Parameters/Buttons	Description
Parameters (continued)	<p>ATM Traffic Network Profile: Indicates the ATM traffic descriptor associated with each cross-connection. If the ATM Traffic profile is not a Network Profile (it is not controlled by the NAM) then the name displayed is constructed from the string “Local AFM” + index in the AFM table (e.g. “Local AFM 23”). If the profile is a duplicate of another profile in the AFM already controlled as a Network Profile, then its name is constructed as “Local AFM” + index in the AFM table + “-dup-” + Name of the Network Profile (e.g. “Local AFM 10-dup-Network Profile A”). If not all descriptors in the cross-connection are the same then “Corrupted” label is displayed.</p> <p>The Download button can be used to download the selected ATM Traffic Network Profile to the AFM. A cross connection can be created only if the selected profile is available in the NE. Otherwise the creation process will fail and an unsuccessful message is generated.</p> <p>The Edit... button provides access to the ATM Traffic Network Profile window (cf. “ATM Traffic Network Profile window” (9-116)) (if the NAM is controlling this ATM traffic profile) or the ATM Traffic NE Profile window (cf. “ATM Traffic NE Profile window” (9-137)) (if the NAM is not controlling this ATM traffic profile).</p>

Parameters/Buttons	Description
Parameters (continued)	The option menu Segment can be used to define the segment role of a cross connection (F5 loopback cells for VC cross connections, F4 loopback cells for VP cross connections). Possible values: End Point, Disabled . This parameter is enabled only for R1.11.2 NEs, R1.17 NEs and subsequent NE releases.
Operational State	The option menu Administrative State provides the possible states that can be used: Locked and Unlocked . The field Service State shows the state of the xDSL drop obtained (on demand) by the user. Possible values: Enabled, Disabled, Mismatch of Equipment, Dormant, Unknown . The Get button can be used to update the display of the Operational State.
Apply	This button is used to confirm the changes (creation of a cross-connection or modifying an existing cross-connection).



Free VCIs in Shelf VP x window

General This window is composed of a list containing the free VCIs of the selected Shelf VP, and two command buttons. The **x** in the title is replaced by the VPI number of the corresponding Shelf VP.



Window description The scroll list displays a list with the Feeder VCIs that belong to the selected Shelf VP that are still available to create VC cross connections. The user can select one of the elements in the list or type the desired number. In this case, when the user starts typing the number, it opens a text field where it can continue typing the desired number. While the user enters the number, the nearest VCI number that equals or is above the typed one will be selected in the table.

The **OK** button updates the network side VCI field in the calling window with the selected VCI.



Add an ATM cross-connection

General When creating a cross connection, please make sure that the minimum transmission rate (kbps) (cf. xDSL Transmission Network Profile) associated to the selected drop is compatible to [“ATM Traffic Network Profile window” \(9-116\)](#) associated to the cross connection. Otherwise the create cross connection action will be rejected by the AFM. Please, apply the proper conversion rate before comparing both values (1 kbps \approx 2.5 cps).

Procedure Complete the following procedure to add an ATM cross-connection.

- 1 Select **NE** in the **NE Browser** and **List** → **ATM Cross Connections** via the cursor menu. The **ATM Cross Connection List** window pops up (cf. [“ATM Cross Connections List window” \(7-107\)](#)).

This window can also be reached from the **xDSL Application Pack** window (cf. [“ADSL Application Pack window” \(6-120\)](#) (ADSL), [“SDSL Application Pack window” \(6-134\)](#) (SDSL), [“SHDSL ATM Application Pack window” \(6-147\)](#) (SHDSL) or from the **xDSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#) (ADSL), [“SDSL Drop window” \(6-140\)](#) (SDSL), [“SHDSL ATM Drop window” \(6-153\)](#) (SHDSL) via **Cross Connections List...**

- 2 Click on **Add**. The **ATM Cross Connection** window pops up (cf. [“ATM Cross Connection window” \(7-113\)](#)).
-

- 3 Use the option menu **Network Interface Id** to select the network interface type.
-

- 4 Use the option menus **Drop Id** to select the xDSL drop in which you want to create a new ATM cross-connection. (If the ATM Cross Connection window has been launched in another way (see above) an xDSL drop is already selected.)
-

- 5 Use the text fields **Network Side** and **Drop Side** to define the VPIs and VCIs.
-

.....
6 Use the text field **Circuit Id** to define a name for the cross-connection.
.....

7 Use the option menu **ATM Traffic Network Profile** to select the desired profile and press **Apply**.

If an unsuccessful message is displayed (the selected profile is not yet available in the NE) download the profile to the NE by using the **Download** button and try again.
.....

8 Click on **Close** to exit the window

.....
E N D O F S T E P S
.....



Modify an ATM cross-connection

Procedure Complete the following procedure to modify an ATM cross-connection.

- 1 Select **NE** in the **NE Browser** and **List -> ATM Cross Connections** via the cursor menu. The **ATM Cross Connection List** window pops up (cf. [“ATM Cross Connections List window” \(7-107\)](#)).

This window can also be reached from the **xDSL Application Pack** window (cf. [“ADSL Application Pack window” \(6-120\)](#) (ADSL), [“SDSL Application Pack window” \(6-134\)](#) (SDSL), [“SHDSL ATM Application Pack window” \(6-147\)](#) (SHDSL) or from the **xDSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#) (ADSL), [“SDSL Drop window” \(6-140\)](#) (SDSL), [“SHDSL ATM Drop window” \(6-153\)](#) (SHDSL) via **Cross Connections List**.

- 2 Use the option menus **Drop Id** to select the drop for display in the cross-connection list.
-

- 3 Click on the cross-connection to be changed and press **Edit...** The **ATM Cross Connection** window pops up (cf. [“ATM Cross Connection window” \(7-113\)](#)).
-

- 4

If you want to ...	then ...
change the name of the cross-connection	use the text field Circuit Id and click on Apply .
view the ATM traffic profile associated with the cross-connection	use the option menu ATM Traffic Network Profile to select the desired profile and click on Edit... The corresponding ATM Traffic Profile window pops up (cf. “ATM Traffic NE Profile window” (9-137) or “ATM Traffic Network Profile window” (9-116)).
define the segment role of the cross connection	use the option menu Segment and click on Apply .

If you want to ...	then ...
change the ATM traffic profile associated with the cross-connection	first delete the cross-connection (“Remove an ATM cross-connection” (7-124)). Create the cross-connection with the new ATM profile (“Add an ATM cross-connection” (7-120)).
change the administrative state	use the corresponding option menu. If the administrative state has been changed from Unlocked to Locked a Warning window pops up: Changing the administrative state of an ATM cross-connection may be service affecting. Do you want to continue?

-
- 5** Click on **Close** to exit the window.

END OF STEPS



Remove an ATM cross-connection

Procedure Complete the following procedure to remove an ATM cross-connection.

- 1 Select **NE** in the **NE Browser** and **List** → **ATM Cross Connections** via the cursor menu. The **ATM Cross Connection List** window pops up (cf. [“ATM Cross Connections List window” \(7-107\)](#)).

- 2 Use the option menus **Drop Id** to select the drop for display in the cross-connection list.

- 3 Click on the cross-connection to be removed and press **Remove**. If the cross-connection is in service a **Warning** window pops up:

Removing an ATM cross connection may be service affecting.
Do you want to continue?

If you decide to continue, the NAM will send a delete message to the NE.

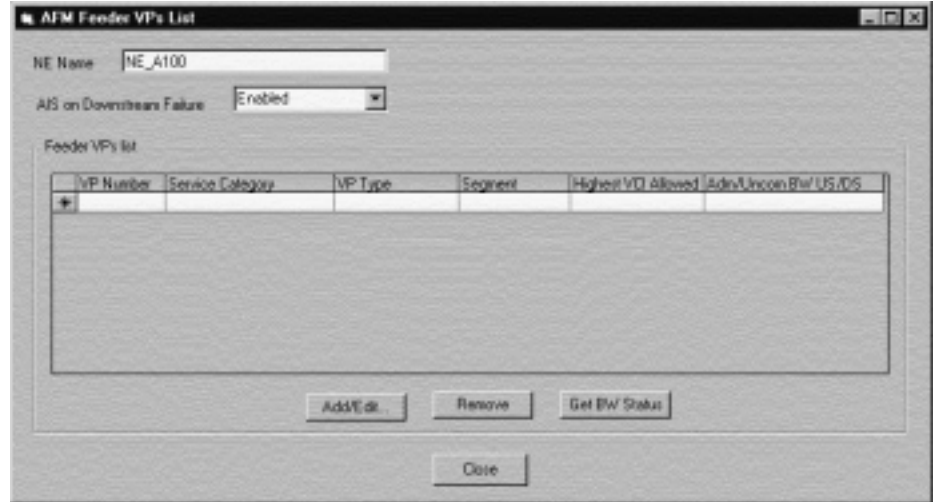
- 4 Click on **Close** to exit the window.

END OF STEPS



AFM Feeder VPs List window

General This window lists the available VPs on the feeder side.



Window description The following table shows the view options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
AIS on Downstream Failure	<p>This field is enabled only for R1.17 NEs and subsequent releases.</p> <p>It configures the AFM to send VP-AIS, through all the VPs provisioned as Downstream VP type, to the network (Port 1) in response to failures on the daisy chain downstream feeder (Port 2).</p> <p>Possible values: Enabled, Disabled.</p> <p>This feature will be disabled for IMA AFMs as they don't support daisy chain configurations.</p>

Parameters/Buttons	Description
Feeder VPs List	<p>The following subpane contains a table displaying Feeder VPs data: VPI, Service Category, VP Type, Segment role and Highest VCI Allowed. Note that OAM VP is not editable for NE releases before R1.17 while for R1.17 and subsequent releases it is editable. On the contrary, Upstream VPs are editable for NE releases before R1.17 while for R1.17 and subsequent releases they are not editable. For R1.17 NEs and subsequent releases, if there is a Shelf VP with the same VP Number as the Shelf OAM VP and the user selects and edits the row with the Shelf OAM VP, the AFM Feeder VP window is opened with the information of the Shelf VP with the same VP Number. The reason is that Shelf VP type has higher precedence than Shelf OAM VP in everything related to Feeder VP management.</p> <ul style="list-style-type: none"><li>• VP Number: Shows a unique sequence number for each Feeder VPI entry.<li>• Service Category: Indicates the VP's Quality of Service (QoS) class. Possible values: CBR, rt-VBR, nrt-VBR, UBR, Unknown (if the AFM returns a value that does not correspond to one of the values before).

Parameters/Buttons	Description
Feeder VPs List (continued)	<ul style="list-style-type: none"> VP Type: Indicates the type of the feeder VP. Possible values: Shelf VP1, Shelf VP2, Shelf VP3, Shelf VP4, Shelf OAM VP, Local VP, Downstream VP, Upstream VP, Shelf VP, Unknown (if the AFM returns a value that does not correspond to one of the values before).<i>Note:</i> Shelf VP1, Shelf VP2, Shelf VP3 and Shelf VP4 are valid types for R1.7 NEs up to R1.15U1. Shelf VP replace those types for R1.17 NEs and subsequent releases. <p>The text field Segment shows the segment role of the Shelf VPx, Shelf VP, Local VP and Downstream VP feeder VPs. It will be disabled for the other VP types. Possible values: End Point, Disabled. Segment is enabled only for R1.11.2 NEs, R1.17 NEs.</p> <p>The text field Highest VCI Allowed indicates indicates the Highest VCI Allowed value configured in a Shelf VP. It will be zero for all the other VP types. Possible values: 33..9723 (maximum range)</p> <p>The Edit.../Add... button provides access to the AFM Feeder VP window.</p>

Parameters/Buttons	Description
<p>Feeder VPs List (continued)</p>	<p>Edit... when one row with a Downstream VP or a Shelf VP in the above table is selected. The selected VP will be used when opening the new window</p> <p>Add... when no row in the above table is selected.</p> <p>When one row with an Upstream VP is selected, the button's label will be Edit... for R1.7 NEs up to R1.15U1, while it will be Disabled for R1.17 NEs and subsequent releases.</p> <p>When the selected row is the Shelf OAM VP, the button shall be Disabled for R1.7 NEs up to R1.15U1, while for R1.17 and subsequent releases NEs it will have the Edit... label if there is no Shelf VP with the same VPI number, or it will be Disabled if that Shelf VP exists.</p> <p>Disabled when more than one row is selected or the VP type of the selected row is Unknown or Local VP.</p> <p>The Remove button allows the operator to remove an entry from the table.</p> <p>Disabled... if no row or more than one row is selected or if the type of the selected VP is Unknown, Shelf OAM VP or Local VP.</p> <p>Enabled the rest of the cases.</p> <p>For R1.17 NEs and subsequent releases, if the Feeder VP selected is a Shelf VP, a Warning message shall be displayed to the user indicating that such an action may be service affecting and requesting for confirmation..</p>



AFM Feeder VP window

Introduction Depending on the NE release to be managed, there are two different versions of the AFM Feeder VP window

- If the NE release is up to R1.15U1, then refer to [“AFM Feeder VP window \(for NE releases up to R1.15U1\)” \(7-130\)](#).
- If the NE release is R1.17 or a subsequent release, refer to [“AFM Feeder VP window \(for NE R1.17 and subsequent releases\)” \(7-132\)](#).

□

AFM Feeder VP window (for NE releases up to R1.15U1)

General This window is used to add/edit AFM feeder VPs in NE releases up to R1.15U1.

The screenshot shows a window titled "AFM Feeder VP". At the top, there is a text field labeled "NE Name" containing the text "NE_9". Below this is a section titled "Feeder VP Information" which contains a table with the following data:

VP Number	Service Category	VP Type	Segment
1	CBR	Shelf VP1	Disabled

Below the table, there are two buttons: "Apply" and "Close".

Window description The following table shows the view options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/ Buttons	Description
Feeder VP Information	<p>VP Number: This field indicates the unique sequence number for each Feeder VPI entry. It is enabled if the Feeder VP entry is one of the shelf VPIs or the window is in creation mode. The field is disabled for upstream and downstream feeder VPs.</p> <p>Service Category: This option menu is used to define the QoS of the feeder VP. Possible values: CBR, rt-VBR, nrt-VBR, UBR.</p> <p>VP Type: This option menu is used to define the type of the feeder VP. Possible values: Downstream VP, Upstream VP, Shelf VP. This menu is disabled in edit mode. Upstream VP and Downstream VP are not supported by the AFMDS1.</p> <p>The option menu Segment is used to define the segment role of the Shelf VPx and Downstream VP feeder VPs. Possible values: End Point, Disabled (default). Segment is enabled only for Shelf VPx types and Downstream VP types for R1.11.2.</p> <p>The Apply button is used to create new feeder VPs (upstream, downstream and shelf VPs) or change their Service Category. The VP Number of a Shelf VPI can be changed too. Before release R1.7 Data, changing the shelf VPI does require a reset of the AFM to get the changes activated. Once the Feeder VP is created the window change to edition mode.</p>



AFM Feeder VP window (for NE R1.17 and subsequent releases)

General This window is used to add/edit AFM feeder VPs in NEs R1.17 and subsequent releases. It is not allowed to edit the Feeder VP Number, Service Category or VP Type of an existing Feeder VP. If any of these parameters needs to be changed, the Feeder VP has to be deleted and recreated again with the new values.

AFM Feeder VP

NE Name:

Feeder VP Information

Feeder VP Selection:

Feeder VP Number:

Service Category:

VP Type:

Segment:

Highest VCI Allowed:

Allowed Configuration

Global Shelf VP Parameters for Creation

Max Highest VCI Allowed:

Number of Free Shelf VPs:

Specific Shelf VP Parameters for Edition

Max Highest VCI Allowed:

Min Highest VCI Allowed:

Window description The following table shows the view options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Feeder VP Information	<p>Feeder VP Selection: Unique number that identifies each Feeder VP entry. The pull-down contains the list of all the Feeder VPs already created in the shelf and a field called New. If the user selects any of the existing VPs, the window will be refreshed with the corresponding data. If the user selects New the window shall be refreshed with default values and it will enter in creation mode. Possible values: {0, 255}.</p> <p>Feeder VP Number: This field indicates the unique sequence number for each Feeder VP entry. It is enabled if the Feeder VP entry is one of the shelf VPIs or the window is in creation mode. The field is disabled when editing a Feeder VP and enabled when creating a Feeder VP.</p> <p>Service Category: This option menu is used to define the QoS of the feeder VP. Possible values: CBR, rt-VBR, nrt-VBR, UBR.</p> <p>VP Type: This option menu is used to define the type of the feeder VP. Possible values: Downstream VP, Upstream VP, Shelf VP1, Shelf VP2, Shelf VP3, Shelf VP4. This menu is disabled in edit mode. Upstream VP and Downstream VP are not supported by the AFMDS1.</p> <p>The option menu Segment is used to define the segment role of the Shelf VPx and Downstream VP feeder VPs. Possible values: End Point, Disabled (default).</p>

Parameters/ Buttons	Description
Feeder VP Information (continued)	<p>Highest VCI Allowed: It indicates the Highest VCI value that it is allowed to be used when creating VC cross connections in the selected Shelf VP. The user must press the Get button in the Allowed Configuration subpane if he wants to know the actual range allowed in each moment for each Shelf VP that is creating or editing. Possible values: {33, 9723} (maximum range)</p>
Global Shelf VP parameters for Creation	<p>Max Highest VCI Allowed: It indicates the highest value that could be provisioned by the user in the Highest VCI Allowed parameter of a new Shelf VP being created in the selected NE. Possible values: {33, 9689}, or Insufficient</p> <p>Number of Free Shelf VPs: It indicates how many more Shelf VPs can still be created in the NE. It takes in account the maximum number of Shelf VPs that can be provisioned depending on the AFM version (64 for A-Versions, 128 for B-Versions), the number of Shelf VPs already created and the number of other Feeder VPs already created. Possible values: {0, 127}</p>
Specific Shelf VP parameters for Edition	<p>Max Highest VCI Allowed: It indicates the highest value that can be provisioned in the Highest VCI Allowed parameter of the selected Shelf VP that it is being edited. Possible values: {33, 9723}</p> <p>Min Highest VCI Allowed: It indicates the lowest value that can be provisioned in the Highest VCI Allowed parameter of the selected Shelf VP that is being edited. Possible values: {33, 9723}</p>
Allowed Configuration	<p>The Get button retrieves the information and fills the corresponding controls in this subpane. It will be always enabled.</p>

Parameters/ Buttons	Description
Feeder VP Information	<p>Allows the operator to create new Upstream VPs, Downstream VPs and Shelf VPs (including the case when a Shelf VP is created with the same VP Number that the Shelf OAM VP), or to edit some values of Downstream VPs and Shelf VPs. When a Shelf VP is edited, a Warning message is displayed to the user indicating that the operation may be service affecting and requesting for its confirmation; editing the Highest VCI Allowed value of a Shelf VP may affect the service. Once the Feeder VP is created successfully the window changes to edition mode.</p> <p>The Apply button is used to create new feeder VPs (upstream, downstream and shelf VPs) or change their Service Category. The VP Number of a Shelf VPI can be changed too. Before release R1.7 Data, changing the shelf VPI does require a reset of the AFM to get the changes activated. Once the Feeder VP is created the window change to edition mode.</p>



Add an AFM feeder VP

Procedure Complete the following procedure to add an AFM feeder VP:

- 1 Select **NE** in the **NE Browser** and **List** → **Feeder VP** via the cursor menu. The **AFM Feeder VPs List** window pops up (cf. [“AFM Feeder VPs List window” \(7-125\)](#))

- 2 Click on **Add...** in the **Feeder VPs List** field. The **AFM Feeder VP** window pops up.

- 3 Use the text field and the option menus in the **Feeder VP Information** field to define the desired parameters and click on **Apply**.

- 4 Click on **Close** to exit the window.

END OF STEPS



Modify an AFM feeder VP

Procedure Complete the following procedure to modify an AFM feeder VP:

- 1 Select **NE** in the **NE Browser** and **List** → **Feeder VP** via the cursor menu. The **AFM Feeder VPs List** window pops up (cf. [“AFM Feeder VPs List window” \(7-125\)](#))

- 2 Select the corresponding row in the **Feeder VPs List** and click on **Edit...**

- 3 Use the text field **VP Number** and/or the option menus **Service Category** and **Segment** in the **Feeder VP Information** field to change the parameters and click on **Apply**.

- 4 Click on **Close** to exit the window.

END OF STEPS



Add a Shelf VP

Procedure Complete the following procedure to add a Shelf VP:

- 1 Select **NE** in the **NE Browser** and **List** → **Feeder VP** via the cursor menu. The **AFM Feeder VPs List** window pops up (cf. [“AFM Feeder VPs List window” \(7-125\)](#))

- 2 Click on **Add...** in the **Feeder VPs List** field. The **AFM Feeder VP** window pops up.

- 3 Select a shelf VPx option in the VP type field. Use the text field and the option menus in the **Feeder VP Information** field to define the desired parameters and click on **Apply**.

- 4 Click on **Close** to exit the window.

END OF STEPS



Modify a Shelf VP

Procedure Complete the following procedure to modify a Shelf VP:

- 1 Select **NE** in the **NE Browser** and **List** → **Feeder VP** via the cursor menu. The **AFM Feeder VPs List** window pops up (cf. [“AFM Feeder VPs List window” \(7-125\)](#))

- 2 Select the corresponding row in the **Feeder VPs List** and click on **Edit...**

- 3 Use the text field **VP Number** and/or the option menu **Service Category** and **Segment** in the **Feeder VP Information** field to change the parameters and click on **Apply**.

- 4 Click on **Close** to exit the window.

END OF STEPS



AFM Global Parameters window

Introduction Depending on the NE release to be managed, there are two different versions of the AFM Global Parameters window

- If the NE release is before R1.17, then refer to [“AFM Global Parameters window \(for NE releases before R1.17\)” \(7-141\)](#).
- If the NE release is R1.17 or a subsequent release, refer to [“AFM Global Parameters window \(for NE releases R1.17 and subsequent NE releases\)” \(7-145\)](#).

□

AFM Global Parameters window (for NE releases before R1.17)

General This window is used to show/modify the inband management channel and the quality of service parameters in NE releases before R1.17.



Window description The following table shows the view/edit options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Inband Management Channel/ATM Operations Channel	<p>VPI: This field is used to show the VPI used to communicate with the NE. Possible values: {1, 225}</p> <p>VCI: This field is used to show the VCI used to communicate with the NE. Possible values: {32, 64}. If the VPI is equal to a shelf VPI the VCI must be 32.</p>

Parameters/ Buttons	Description
QoS Parameters	<p>QoS parameters are available for NE R1.7 and subsequent NE releases</p> <p>Shelf PCR (cps): Two fields are used to specify the upstream and downstream peak cell rate (cells per second) for this shelf.</p> <p>Possible values for DS3 upstream (HEC frame format): {452, 104000}. Default: 104000. Possible values for DS3 upstream (PLCP frame format): {452, 96000}. Default: 96000. Possible values for DS3 downstream (HEC frame format): {450, 104000}. Default: 104000. Possible values for DS3 downstream (PLCP frame format): {450, 96000}. Default: 96000. Possible values for DS1-IMA upstream: {452, 28853}. Default: 3507. Possible values for DS1-IMA downstream: {450, 28853}. Default: 3507. Possible values for OC3c upstream: {452, 353200}. Default: 353207. Possible values for OC3c downstream: {450, 353200}. Default: 353207.</p> <p>Shelf Overbooking factor: Three fields are used to specify the overbooking factors for the service classes CBR, rt-VBR, and nrt-VBR. Possible values before R1.11: {1, 10} in steps of 0.5. Possible values in R1.11 and subsequent releases for DS3 and DS1: {1, 10} for CBR, rt-VBR. Possible values in R1.11 and subsequent releases for DS3 and DS1: {1, 50} for nrt-VBR. Possible values in R1.11 and subsequent releases for OC3c: {1, 10} for CBR, rt-VBR and nrt-VBR. Default value: 1. For CBR service category it is recommended to set it to 1. When the AFM works with an ATM COMDAC this is mandatory.</p>

Parameters/ Buttons	Description
QoS Parameters (continued)	<p>Cell Loss Ratio (CLR): Three fields are used to specify the cell loss ratio for the service classes CBR, rt-VBR and nrt-VBR. CLR is not provisionable for CBR. Possible values for rt-VBR and nrt-VBR before R1.11: {1000, 1000000 x 10⁻⁹}. Possible values for rt-VBR and nrt-VBR for R1.11 and subsequent releases: {1, 100000000 x 10⁻⁹}. Default values for all releases: rt-VBR: 10⁻⁵, nrt-VBR: 10⁻⁵.</p> <p>The Get button is used to retrieve all the data in the text fields above.</p> <p>The Apply button is used to confirm the changes in the text fields above.</p>



Modify the AFM global parameters

General The **AFM Global Parameters** window is reached from the [“DS3 AFM window” \(6-80\)](#) or the [“Optical AFM window” \(6-91\)](#).

Procedure Complete the following procedure to modify the AFM global parameters:

1

If you want to ...	then ...
retrieve the QoS parameters	click on Get in the QoS Parameters field.
modify the QoS parameters	use the text fields in the QoS Parameters field to change the parameters and click on Apply .

2 Click on **Close** to exit the window.

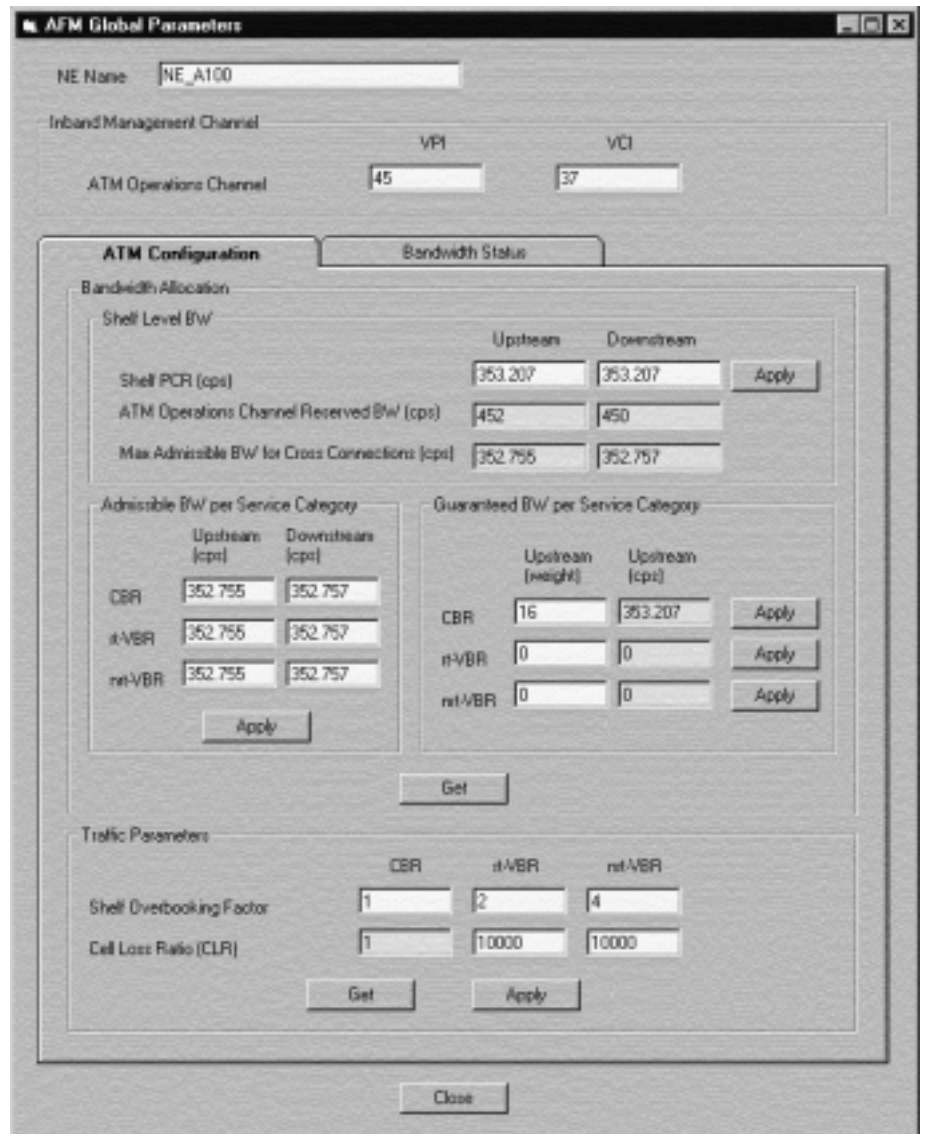
END OF STEPS



AFM Global Parameters window (for NE releases R1.17 and subsequent NE releases)

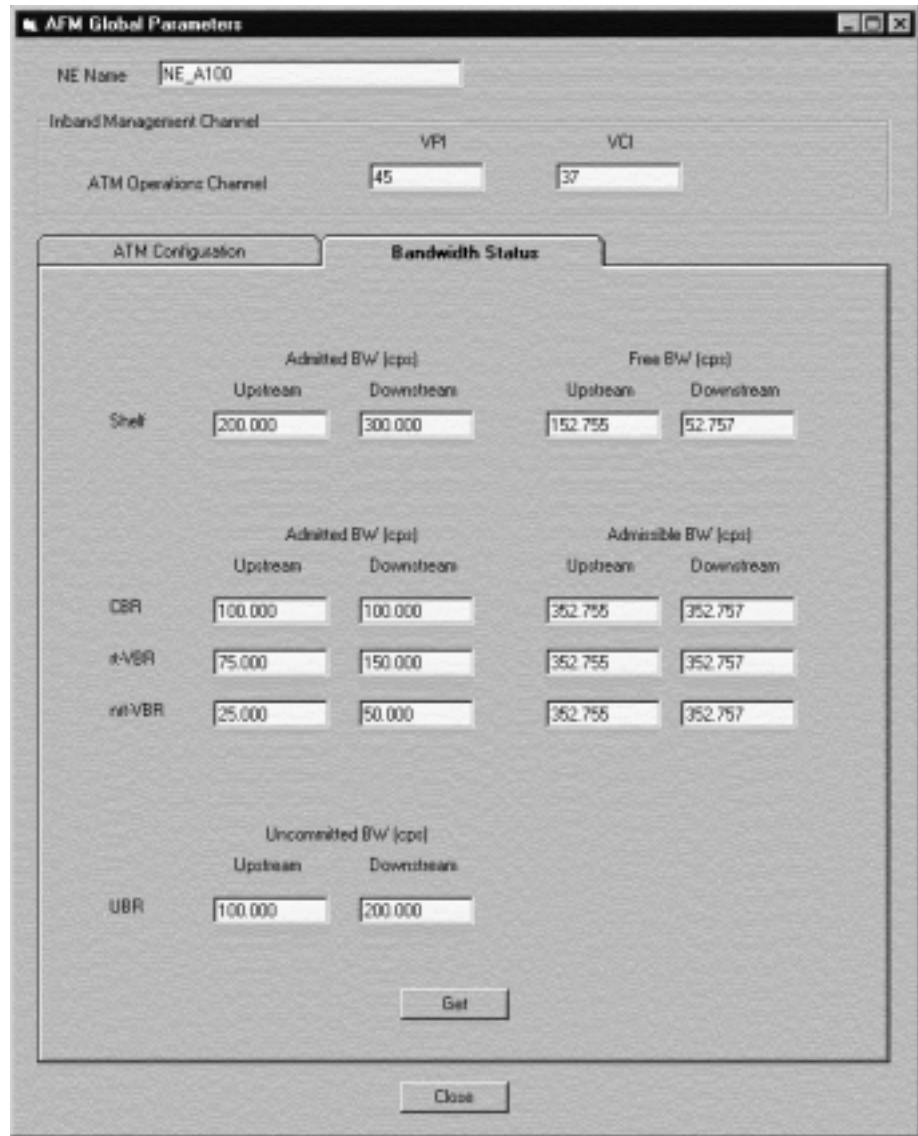
General This window is used to show/modify the inband management channel and the quality of service parameters in NE releases R1.17 and subsequent NE releases.

AFM Global Parameters window (tab ATM Configuration)



AFM Global Parameters window (for NE releases R1.17 and subsequent NE releases)

AFM Global Parameters window (tab Bandwidth Status)



Window description The following table shows the view/edit options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/ Buttons	Description
Inband Management Channel/ATM Operations Channel	<p>VPI: This field is used to show the VPI used to communicate with the NE. Possible values: {1, 225}</p> <p>VCI: This field is used to show the VCI used to communicate with the NE. Possible values: {32, 64}. If the VPI is equal to a shelf VPI the VCI must be 32.</p>
Tab ATM Configuration	<p>The Bandwidth Allocation subpane allows the user to retrieve and change the parameters that determine how the bandwidth is distributed in the NE.</p> <p>It consists of the</p> <ul style="list-style-type: none"> • Shelf Level BW subpane, • Admissible BW per Service Category subpane and • Guaranteed BW per Service Category subpane in the Upstream (weight) column.

Parameters/ Buttons	Description
Shelf Level BW	<p>Shelf PCR (cps): Two fields are used to specify the upstream and downstream peak cell rate (cells per second) for this shelf.</p> <p>Possible values for DS3 upstream (HEC frame format): {452, 104000}. Default: 104000. Possible values for DS3 upstream (PLCP frame format): {452, 96000}. Default: 96000. Possible values for DS3 downstream (HEC frame format): {450, 104000}. Default: 104000. Possible values for DS3 downstream (PLCP frame format): {450, 96000}. Default: 96000. Possible values for DS1-IMA upstream: {452, 28853}. Default: 3507. Possible values for DS1-IMA downstream: {450, 28853}. Default: 3507. Possible values for OC3c upstream: {452, 353200}. Default: 353207. Possible values for OC3c downstream: {450, 353200}. Default: 353207.</p> <p>ATM Operations Channel Reserved BW (cps): It displays the amount of BW that the NE reserves for the ATM Operations Channel in the upstream and downstream directions (not editable).</p> <p>Ranges: Upstream: {0, 452}. Current AFMs reserve 452 cps always. Downstream: {0, 450}. Current AFMs reserve 450 cps always.</p> <p>Max Admissible BW for Cross Connections (cps): Two fields are used to total BW that is available in the shelf to create local VP and VC cross connections.</p> <p>Ranges: Upstream: {0, (Shelf PCR US - Reserved BW US)}. Downstream: {0, (Shelf PCR DS - Reserved BW DS)}</p> <p>The Apply button is used to change the Shelf PCR. The user will be recommended to Get the current configuration when the command finishes.</p>

Parameters/ Buttons	Description
Admissible BW per Service Category	<p>Two fields are used per service category to specify the Upstream and Downstream Admissible BW (in cells per second) for CBR, rt-VBR and nrt-VBR.</p> <p>CBR Ranges (for all AFM types): Upstream: {0, (US Shelf PCR - Reserved BW US)}. Downstream: {0, (DS Shelf PCR - Reserved BW DS)}</p> <p>rt-VBR Ranges (for all AFM types): Upstream: {0, (US Shelf PCR - Reserved BW US)}. Downstream: {0, (DS Shelf PCR - Reserved BW DS)}</p> <p>nrt-VBR Ranges (for all AFM types): Upstream: {0, (US Shelf PCR - Reserved BW US)}. Downstream: {0, (DS Shelf PCR - Reserved BW DS)}</p> <p>The Apply button is used to change the parameters in this subpane.</p>

AFM Global Parameters window (for NE releases R1.17 and subsequent NE releases)

Parameters/ Buttons	Description
Guaranteed BW per Service Category	<p>The user provisions the Guaranteed BW in 1/16th parts of the total feeder capacity (weights). The sum of the values provisioned in the 'Upstream (weight)' column must not be greater than 16 (not supported by DS1 IMA AFMs in R1.17 NEs).</p> <p>CBR: Specifies the Upstream Guaranteed BW (in weights and cells per second) for the CBR service category.</p> <p>Ranges: DS3/OC3c AFMs: {0, 16}. DS1 IMA AFMs: 16 (disabled)</p> <p>The Apply button is used to change the CBR Guaranteed BW.</p> <p>rt-VBR: Specifies the Upstream Guaranteed BW (in weights and cells per second) for the rt-VBR service category.</p> <p>Ranges: DS3/OC3c AFMs: {0, 16}. DS1 IMA AFMs: 0 (disabled)</p> <p>The Apply button is used to change the rt-VBR Guaranteed BW.</p> <p>nrt-VBR: Specifies the Upstream Guaranteed BW (in weights and cells per second) for the nrt-VBR service category.</p> <p>Ranges: DS3/OC3c AFMs: {0, 16}. DS1 IMA AFMs: 0 (disabled)</p> <p>The Apply button is used to change the rt-VBR Guaranteed BW.</p>
Bandwidth Allocation	The Get button is used to retrieve all the data in the text fields above.

Parameters/ Buttons	Description
Traffic Parameters	<p>Shelf Overbooking factor: Three fields are used to specify the overbooking factors for the service classes CBR, rt-VBR, and nrt-VBR. Possible values before R1.11: {1, 10} in steps of 0.5. Possible values in R1.11 and subsequent releases for DS3 and DS1: {1, 10} for CBR, rt-VBR. Possible values in R1.11 and subsequent releases for DS3 and DS1: {1, 50} for nrt-VBR. Possible values in R1.11 and subsequent releases for OC3c: {1, 10} for CBR, rt-VBR and nrt-VBR. Default value: 1. For CBR service category it is recommended to set it to 1. When the AFM works with an ATM COMDAC this is mandatory.</p> <p>Cell Loss Ratio (CLR): Three fields are used to specify the cell loss ratio for the service classes CBR, rt-VBR and nrt-VBR. CLR is not provisionable for CBR. Possible values for rt-VBR and nrt-VBR before R1.11: {1000, 1000000 x 10⁻⁹}. Possible values for rt-VBR and nrt-VBR for R1.11 and subsequent releases: {1, 10000000 x 10⁻⁹}. Default values for all releases: rt-VBR: 10⁻⁵, nrt-VBR: 10⁻⁵.</p> <p>The Get button is used to retrieve all the data in the text fields above.</p> <p>The Apply button is used to confirm the changes in the text fields above. Note that new values provisioned by the user might cause existing connections to fail CAC. In this case, the new value is rejected and the prior value shall be restored.</p>

AFM Global Parameters window (for NE releases R1.17 and subsequent NE releases)

Parameters/ Buttons	Description
Tab Bandwidth Status	<p>The Bandwidth Status subpane allows the user to know how much bandwidth is being consumed currently in the NE by the user provisioned cross connections at Shelf level and on a per service category basis. For the UBR service category, the values provided represent the uncommitted BW that UBR cross connections may consume. For UBR service category, the BW is not actually booked for the UBR cross connections.</p> <p>Shelf: Display the Upstream and Downstream Admitted and Free bandwidth (cells per second) at shelf level. Ranges: Upstream: {0, 352755}; Downstream: {0, 352757}</p> <p>For the service categories CBR, rt-VBR and nrt-VBR the Upstream and Downstream Admitted and Admissible bandwidth (cells per second) is displayed.</p> <p>CBR Ranges: Upstream: {0, 352755}; Downstream: {0, 352757}</p> <p>rt-VBR Ranges: Upstream: {0, 352755}; Downstream: {0, 352757}</p> <p>nrt-VBR Ranges: Upstream: {0, 352755}; Downstream: {0, 352757}</p> <p>UBR: Display the Upstream and Downstream Admitted and Admissible bandwidth (cells per second) for the UBR service category. Ranges: Upstream: {0, 352755}; Downstream: {0, 352757}</p> <p>The Get button is used to retrieve all the data in the text fields above.</p>



Modify the AFM global parameters (for NE releases R1.17 and subsequent NE releases)

Procedure The **AFM Global Parameters** window is reached from the [“DS3 AFM window” \(6-80\)](#) or the [“Optical AFM window” \(6-91\)](#). Complete the following procedure to modify the AFM global parameters.

- 1 Use the tab **ATM Configuration** to modify the global ATM configuration

If you want to ...	then ...
retrieve the allocated bandwidth	click on Get in the Bandwidth Allocation field.
modify the shelf PRC	use the text fields in the Shelf PRC field to change the parameters and click on Apply .
modify the admissible BW per service category	use the text fields in the Admissible BW per Service Category field to change the parameters and click on Apply .
modify the guaranteed BW per service category	use the text fields in the Guaranteed BW per Service Category field to change the parameters and click on Apply .
retrieve the traffic parameters	click on Get in the Traffic Parameters field.
modify the traffic parameters	use the text fields in the Traffic Parameters field to change the parameters and click on Apply .

- 2 Click on **Close** to exit the window

END OF STEPS



Retrieve the Bandwidth Status (for NE releases R1.17 and subsequent NE releases)

Procedure The **AFM Global Parameters** window is reached from the [“DS3 AFM window” \(6-80\)](#) or the [“Optical AFM window” \(6-91\)](#). Complete the following procedure to retrieve the bandwidth status.

- 1 Use the tab **Bandwidth Status** to display the bandwidth status

If you want to ...	then ...
retrieve the bandwidth status	click on Get

- 2 Click on **Close** to exit the window

END OF STEPS



Subscriber Identifier

Overview

Purpose This section provides information about the subscriber identifier.

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Subscriber Identifier window

General This window is used to search for a Subscriber Identifier (SID). It provides the opportunity to add/edit/delete textual information of any kind associated to a given subscriber.



Window description The following table shows the view/edit option of this window:

Parameters/Buttons	Description
Menu bar	<p>File → Open: Launches a new instance of the Subscriber Identifier window.</p> <p>File → Print: Provides different print options.</p> <p>File → New: Provides access to the Add/Edit Subscriber window for adding a new SID.</p> <p>File → Close: Closes the instance of the Subscriber Identifier window.</p> <p>File → Exit: Closes the SID application.</p>

Parameters/Buttons	Description
Filter	<p>This field is used to search for a SID in the SID database. It contains two option menus and one editable text field.</p> <p>The first option menu includes the following values: SID, Additional Info, NE Name.</p> <p>The second option menu includes the following values: Contains, Starts with, Equals.</p> <p>The following combinations are possible: SID - Starts with, SID - Equals, NE Name - Starts with, NE Name - Equals, Additional Info - Starts with, Additional Info - Equals, Additional Info - Contains.</p> <p>The Search button requests the search on the SID database. The result will be displayed in the Search Result table (see below).</p>
Search Result	<p>The information in this field is displayed in a 4-column table:</p> <p>SID, Additional Info, NE Name and Physical Drop Id.</p> <p>For the Physical Drop Id the following format is used: drop-1-{1, 16}-{1, 32} or subdrop-{1, 8}-{1, 8}-{1, 32} or iatvdp-{1, 80}-1-{1, 24} or m2drop-1-{1, 24}-{1, 4}.</p> <p>The Edit... button provides access to the Add/Edit Subscriber Identifier window (edit mode). The button is enabled if a row has been selected.</p> <p>The Remove button is used to delete the selected item(s) from the SID database.</p> <p>The Drop Info... button provides access to the corresponding user port or drop window depending on the selected table item. The following windows can be opened: Logical DS0, xDSL Drop.</p>



Add/Edit Subscriber Identifier window

General This window is used to add/edit entries of the SID database.



The 4 fields **SID**, **NE Name**, **Physical Drop Id** and **Additional Info** are editable.

The **Apply** button is used to confirm the changes. It is enabled whenever at least one of the text fields is not empty



Add a subscriber identifier

Procedure Complete the following procedure to add a Subscriber Identifier.

- 1** Select **Tools** → **Subscriber Identifier...** in the Groups & NEs Management application menu bar or use the Subscriber Identifier icon in the NAM access bar. The **Subscriber Identifier** window pops up (cf. [“Subscriber Identifier window” \(7-156\)](#)).

- 2** Select **File** → **New**. The **Add/Edit Subscriber Identifier** window pops up (cf. [“Add/Edit Subscriber Identifier window” \(7-158\)](#)).

- 3** Fill the text fields with the desired values and click on **Apply**. The new record will be added to the SID database. The window remains open for further actions.

- 4** Click on **Close** to exit the window.

END OF STEPS



Edit a subscriber identifier

Procedure Complete the following procedure to add a Subscriber Identifier.

- 1 Select **Tools -> Subscriber Identifier...** in the Groups & NEs Management application menu bar or use the Subscriber Identifier icon in the NAM access bar. The Subscriber Identifier window pops up (cf. [“Subscriber Identifier window” \(7-156\)](#)).

- 2 Use the option menus in the Filter field to define the search criteria (s) and click on **Search**. The result is displayed in the Search Result list.

- 3 Select the desired row and click on **Edit...** The **Add/Edit Subscriber Identifier** window pops up (cf. [“Add/Edit Subscriber Identifier window” \(7-158\)](#)).

- 4 Use the text fields to change the values and click on **Apply**. The Subscriber Identifier will be changed in the SID database. The window remains open for further actions.

- 5 Click on **Close** to exit the window.

END OF STEPS



Delete a subscriber identifier

Procedure Complete the following procedure to delete a Subscriber Identifier.

- 1** Select **Tools -> Subscriber Identifier...** in the Groups & NEs Management application menu bar or use the Subscriber Identifier icon in the NAM access bar. The Subscriber Identifier window pops up (cf. [“Subscriber Identifier window” \(7-156\)](#)).

- 2** Use the option menus in the Filter field to define the search criteria (s) and click on **Search**. The result is displayed in the Search Result list.

- 3** Select one or more rows in the Search Result list and click on **Remove**. A **Warning** window pops up:
Subscriber ID will be removed. OK to proceed?

- 4** Confirm the message and click on **Close** to exit the window.

END OF STEPS



Management of the SID database

General The SID is a label used by the call center to identify the subscribers, mainly for failures or testing of the subscriber lines.

The managing of this label in the NAM provides the following advantages for the system administrator:

- In case of failure or disruption of the service, the customer gives the SID to the call center. Then it is easier to manage the issue if the SID is somehow linked with all subscriber facilities in the NAM, because one does not have to fall back on the customer database to find the according subscriber. Also, the subscriber identifier would only be included to the fault report.
- It is also much easier on the time of portation to the AnyMedia Access System, if all performance tests can be made from this SID. In this case one can go forward with the help of the SID list without consulting the customer's database.

The SID database is a part of the NAM databases, that contains the SID, NE Name, Physical Drop Id and additional info per subscriber.

□

Commands for managing the SID database

General There are three commands to manage the SID database, which

- populate the database with parameters from a text file,
- remove redundant entries from the SID database and
- export the contents of the SID database to a text file.

For each of the three commands a log file is created in the temporal directory of the NAM. These log files (SID_populate_n.log, SID_cleanup_n.log and SID_copy_n.log) are not displayed in the **Log View** window and can only be accessed by the administrator.

Populate the SID from a file

Use the following command to populate the SID database from a text file. If you enter none of the parameters, an empty database structure is created.

```
populateSIDdb [-r|-f] info_file
```

Parameter description:

- -r
Replace mode: Existing data are removed from the database and replaced with the new data. The script asks for confirmation. If the SID server process is running the scripts aborts with a warning.
- -f
To fail mode: The database populate stops at the first line with a wrong format. Changes made to the database by the populate process until then are undone and the database remains as it was before the process started.
- (neither -r nor -f)
Append to end mode: The *info_file* is read to the end. All lines with the correct format (cf. [“Input file format” \(7-165\)](#)) are added to the database while incorrect lines are ignored. Existing data are maintained in the database and new data are added. (Default).
- info_file
The input data are taken from the *info_file*. The parameter for *info_file* can include a directory (e.g. *tmp/siddata*), if no directory is specified the file is expected to be in the current directory. For the format of the file see [“Input file format” \(7-165\)](#).

Commands for managing the SID database

Cancel a populate A running populate of the SID database can be cancelled with the command:

```
populateSIDdb -c
```

Clean-up database Redundant entries in the SID database can removed with the command:

```
cleanupSIDdb
```

Cancel a clean-up A running clean-up of the SID database can be cancelled with the command:

```
cleanupSIDdb -c
```

Export database The contents of the SID database can be exported to the text file `info_file` with the command:

```
copySIDdb info_file
```

Cancel an export A running export of the SID database can be cancelled with the command:

```
copySIDdb -c
```



Input file format

Format The input file for the populateSIDdb command is a text file. Each line in this file contains four fields separated by semicolons. The general structure of a line is as follows:

```
<SID>;<NE name>;<Physical Drop Id>;<Additional info>
```

Blank lines and comments (lines starting with a "#") can be inserted at will to structure the file. These lines are ignored by the script.

Field formats The format of each of the fields is as follows:

- SID: 1 to 30 alphanumeric characters
- NE Name: 3 to 30 alphanumeric characters
- Physical Drop Id: "drop-x-x-x" with x being a number (for details cf. [Chapter 6, "Equipment configuration"](#)).
- Additional Info: 1 to 100 alphanumeric characters.

Empty fields are allowed, with the restriction that for each database record at least one of the fields SID, NE Name and Physical Drop Id has to be not empty.

Example input file The following is an example input file for the populateSIDdb command:

```
# This is a comment: Date 01.01.01 Time 18.000000000000;ne_1;drop-1-1-1;additional info1000000000;ne_1;drop-1-2-2;additional info2000000000;ne_1;drop-1-3-3;additional info3000000000;ne_1;drop-1-4-4;additional info4000000000;ne_1;drop-1-5-5;additional info
```

□

Hints for the administrator

**Free disk space,
reorganize segments**

The managing of such a big database makes the execution of some extra maintenance tasks necessary for the NAM administrator, in order to free disk space from segments that have been removed at any moment from the database (for example during a database populate in Replace mode, or after several item were removed on user demand) and to reorganize segments and databases.

Additional tools

This can be done via the ObjectStore tools, as for example the oscompact utility. These maintenance tasks will not be integrated inside the NAM functionality. It will be the administrator's responsibility to execute them periodically so that the memory resources of the machine will not be overloaded.



Facility Id and HOST/IDT Name Management

Overview

Purpose The *Navis™ AnyMedia®* Element Management System (NAM) allows to assign identification labels to network feeders (DS1 (NB), IMA DS1, logical DS3 and logical OC3) and network interfaces (GR-303). Network operators can use these labels to reference these entities along the network in a unique way. Therefore, no label duplication is allowed in the system.

The term ***Facility Id*** is used to reference network feeders and ***Host/IDT Name*** is used for GR-303 network interfaces. In both cases, the NAM provides the graphical interface to manage (add, modify and remove) and display these labels.

Facility Id and HOST/IDT Name labels can consist of any combination of characters up to 40 characters long. Characters can be entered in lower or upper case, although labels will be stored and displayed always in upper case. Label comparison will be case insensitive.



Configuring the Facility Id and HOST/IDT Name feature

Purpose The Facility Id and HOST/IDT Name management feature is disabled by default in the NAM and needs to be enabled by the NAM system administrator before using it. Additionally, the system administrator is able to specify which users in NAM will have access to configure and display the Facility Id and HOST/IDT Name label (refer to [“Assign Facility Id and HOST/IDT Name management rights to the desired user groups” \(7-170\)](#)).

Enable the NAM associated services

The NAM system administrator needs to start up the services in the NAM that allow to manage the Facility Id and HOST/IDT Name labels.

Start-up NAM CLLIService DMG

1	IF	THEN
	you want to configure the service to be started now	go to Step 2
	you want to configure the service to be started automatically on NAM server start up	go to Step 4

2 On the [“System administration window” \(3-38\)](#) DMGs tab, select the CLLIService DMG and press on **Start Up** button. This will start up the process that manages the feature inside the NAM.

Result:

Once the CLLIService is started up, the DMG Operational State will toggle to **IS**.

3 Reload the window to get an updated Operational State value.

END OF STEPS

-
- 4** On the [“System administration window” \(3-38\)](#) DMGs tab, select the CLLIService DMG and click on **Edit** button.

Result:

The **Edit DMG** window pops up.

-
- 5** Click on the **Launch on Package Start Up** check box and press **Apply**.

Result:

From that moment on, Facility Id and HOST/IDT Name service will be permanently enabled in the NAM.

END OF STEPS



Assign Facility Id and HOST/IDT Name management rights to the desired user groups

Purpose Users in the NAM shall not be able to display and configure Facility Id and HOST/IDT Name labels unless the user group they belong to has the 'Facility Id Management' task assigned. Use this procedure to assign this service to a user group.

Procedure

1 On the "[User Administration window](#)" (4-5), select a **User Group** and right click on it to get the pop up menu.

2 Select the **Edit** option.

Result:

The **User Group Profile** window pops up.

3 Select the **Applications & Tasks** tab.

4 Click on the **Groups and NE Manage...** application to display the associated tasks in the lower part of the window.

5 Select the **Facility Id Management** task on the **Tasks Not Assigned** field and click on the **Add>>** button.

6 Click on the **Apply** button to validate the changes.

Result:

Once the respective user group has this task assigned, associated users are able to display and configure the Facility Id and HOST/IDT Name labels in the different NAM windows.

END OF STEPS



Assigning and Modifying the Facility Id label or a HOST/IDT Name label

Purpose Use this procedure to assign and/or modify the Facility ID label associated to a network feeder (DS1, logical DS3, logical OC3c or IMA DS1) or to assign a HOST/IDT Name label to a GR-303 network interface.

Narrowband DS1 Feeder

- 1 On the [“Feeder window” \(7-42\)](#), fill the **Facility Id** text field with the desired value and click on the **Apply** button.

Result:

The new record is added to the database if no duplicates are found.

END OF STEPS

Logical DS3 Feeder

- 1 On the [“DS3 AFM Feeder window” \(6-86\)](#), select the **Logical Addressing Mode** and the appropriate DS3 logical feeder Id.

- 2 Fill the **Facility Id** text field with the desired value and click on the **Apply** button.

Result:

The new record is added to the database if no duplicates are found.

END OF STEPS

Logical OC3c Feeder

- 1 On the [“OC3c AFM Feeder window” \(6-97\)](#), select the **Logical** Addressing Mode and the appropriate OC3c logical feeder Id.

- 2 Fill the **Facility Id** text field with the desired value and click on the **Apply** button.

Result:

The new record is added to the database if no duplicates are found.

.....
E N D O F S T E P S
.....

IMA DS1 Feeder

- 1 On the [“DS1 AFM Feeder window” \(6-109\)](#), select the appropriate DS1 feeder Id.

- 2 Fill the **Facility Id** text field with the desired value and click on the **Apply** button.

Result:

The new record is added to the database if no duplicates are found.

.....
E N D O F S T E P S
.....

GR-303 Network Interface

- 1 On the [“VRT-TR303 window” \(7-20\)](#), fill the **HOST/IDT Name** text field with the desired value and click on the **Apply** button.

Result:

The new record is added to the database if no duplicates are found.

END OF STEPS



Removing Facility Id and HOST/IDT Name labels

Purpose Use this procedure to remove the Facility ID label from a network feeder (DS1, logical DS3, logical OC3c or IMA DS1) or the HOST/IDT Name label from a network interface (GR-303).

Narrowband DS1 Feeder

- 1 On the [“Feeder window” \(7-42\)](#), remove the **Facility Id** text field and click on the **Apply** button.

Result:

The record is deleted from the database.

END OF STEPS

Logical DS3 Feeder

- 1 On the [“DS3 AFM Feeder window” \(6-86\)](#), select the **Logical Addressing Mode** and the appropriate DS3 logical feeder Id.
-

- 2 Remove the **Facility Id** text field and click on the **Apply** button.

Result:

The record is deleted from the database.

END OF STEPS

Logical OC3c Feeder

- 1 On the [“OC3c AFM Feeder window” \(6-97\)](#), select the **Logical Addressing Mode** and the appropriate OC3c logical feeder Id.
-

- 2 Remove the **Facility Id** text field and click on the **Apply** button.

Result:

The record is deleted from the database.

END OF STEPS

IMA DS1 Feeder

- 1 On the [“DS1 AFM Feeder window” \(6-109\)](#), select the appropriate DS1 feeder Id.
.....
- 2 Remove the **Facility Id** text field and click on the **Apply** button.

Result:

The record is deleted from the database.

.....
E N D O F S T E P S
.....

GR-303 Network Interface

- 1 On the [“VRT-TR303 window” \(7-20\)](#), remove the **HOST/IDT Name** text field and click on the **Apply** button.

Result:

The record is deleted from the database.

.....
E N D O F S T E P S
.....





8 Fault management and maintenance

Overview

- Purpose** This chapter provides you with informations about
- basics on the alarm management
 - basics on alarms
 - maintenance actions if certain alarms are pending
 - using the Alarm Viewer
 - performing test actions with the test management.

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Alarm management

Overview

Purpose This section provides an overview of the alarm management function.

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Overview of the functions

Overview The main function of the alarm management is to manage the *Navis*[™] *AnyMedia*[®] Element Management System (NAM) and network element (NE) related alarms that are registered in the EMS. For the list of the alarms refer to [“Alarms” \(8-71\)](#).

Alarm synchronization Once the communication connection between the NAM and an NE is established, the NAM clears the “not-connected” NE alarm indication (if it exist) and starts an alarms and environment alarms synchronization process between the NAM alarm database and active NE alarms. Finally the NAM will try to update its view of NE configuration data and will start a synchronization process between the NAM data set and the NE configuration information (NE NVDS). The NE database is always the master.

Alarm states The database does not maintain the alarm history, it only stores the current alarm statuses. An alarm can be in one of the following states:

- Severity states
 - raised
 - cleared
- Acknowledgment states:
 - acknowledged
 - not acknowledged.

Main responsibilities The main responsibilities of the alarm management subsystem (AMS) are the following:

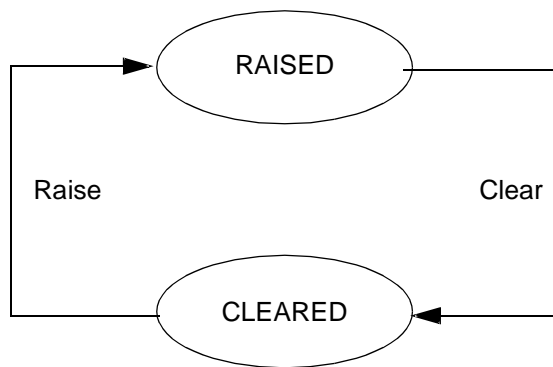
- maintain up-to-date alarm information
- notify alarm changes to alarm clients
- provide access to the current alarm data
- manage alarm raising
- manage cleared alarms
- manage acknowledgment of alarms
- synchronization of the alarm data per NE
- NAM alarm log handling
- periodical deletion of cleared alarms.

Maintain the alarm information

During the alarm life time, the NAM updates the following information:

- the date and time of the last severity change (Date&Time Last Change)
- the last alarm severity change (Perceived Severity)
- the last alarm acknowledge status change (Acknowledge State)
- the last user id which has acknowledged an alarm (Acknowledge User)
- the number of raises the alarm has been raised between the first raised time and the actual time (Number Raises)
- the last alarm correlation state change (Correlation State).

During an alarm life the severity status can change from raised to cleared and vice versa.



□

Alarm notification to the user

Overview Whenever a new alarm occurs or the status of any alarm changes to raised again, an alarm message is reported to the NAM. The alarms are indicated, if defined, visually and audibly.

Visual alarm indication The occurrence of a new alarm is visually indicated in different ways:

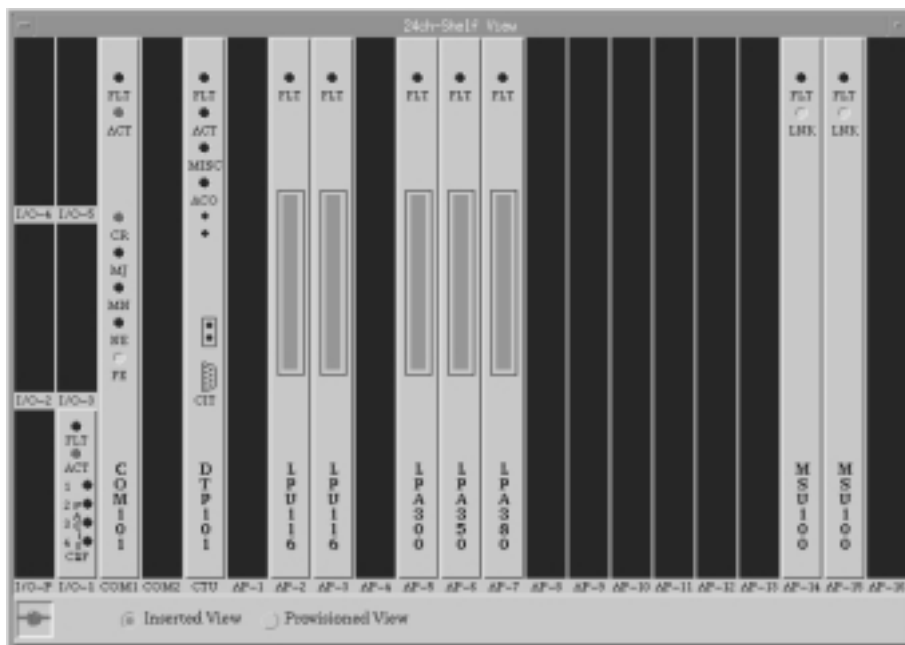
- Notification icon displayed in the NAM access bar.
This icon consists of a flag. If new alarms are received the flag is raised. The changes in the state of this flag determines the start and end times for playing continuous and periodic audible alarm notifications. If the user clicks on the icon the flag goes down.
- Via the Network Browser
The Network Browser displays all groups and NEs created in the NAM by the use of icons (cf. [“Overview of the test procedures” \(8-46\)](#)).
The icons change their color to reflect the highest severity alarm (critical, major, minor, indeterminate or warning alarms). The highest severity alarm of a group is the highest severity alarm of all the alarms of its child groups and NEs. The alarm status color can be configured and is in accordance with the alarm viewer color set (default values are: red for critical and major; yellow for minor; white for indeterminate and warning).
 - Select **Group** in the **Network Browser** and **Alarm Monitoring** in the cursor menu to look at the group-specific alarms.
 - Select **NE** in the **Network Browser** and **Alarm Monitoring** in the cursor menu to look at the NE-specific alarms.
- Shelf View Window
This window (see figure below) provides general inventory, provisioning and alarm information (through the circuit packs LEDs). Each slot shows the card type inserted and its alarms (via a red FLT LED, if available). If the slot is empty, no card will be shown.

See table below for the list of LEDs provided in each pack. The table describes the color used when the LED is ON or blinking. If the LED is OFF the color black is used.

Pack	LED	Color	Meanings
IO-DS1 (only for NE R1.x narrowband releases)	FLT	red	Different meanings: <ul style="list-style-type: none"> • Lit during pack failure • Flashes when the pack executes off-line self-test.
	ACT	green	Lit when the pack is service-active.
	CLF1	yellow	Lit when a fault or facility alarm occurs on the in-service received DS1 port 1.
	CLF2	yellow	Lit when a fault or facility alarm occurs on the in-service received DS1 port 2.
	CLF3	yellow	Lit when a fault or facility alarm occurs on the in-service received DS1 port 3.
	CLF4	yellow	Lit when a fault or facility alarm occurs on the in-service received DS1 port 4.
COMDAC	FLT	red	Different meanings: <ul style="list-style-type: none"> • Lit when a fault is detected on the pack. • Flashes during software download and turn-up.
	ACT	green	Indicates that this COMDAC is active.
	CR	red	Lit when the highest severity alarm is critical.
	MJ	red	Lit when the highest severity alarm is major.
	MN	yellow	Lit when the highest severity alarm is minor.
	NE	yellow	Lit when the source of the fault or abnormal condition is near-end.
	FE	yellow	Lit when the source of the fault or abnormal condition is far-end.
CTU	FLT	red	Different meaning: <ul style="list-style-type: none"> • Lit when a fault is detected on the pack • Flashes on turn-up.
	ACT	green	Lit when a test is in progress.
	MISC	yellow	Lit when one of the eight miscellaneous alarm inputs is active.
	ACO	green	For future use

Pack	LED	Color	Meanings
All Application Packs	FLT	red	Different meaning: <ul style="list-style-type: none"> Lit when a fault is detected on the pack Flashes when the AP executes off-line shelf-tests.
AP (MDSU)	FLT	red	Lit when a fault is detected on the pack.
	LNK	yellow	Different meaning: <ul style="list-style-type: none"> Lit when loss of clock/sync signal is detected Flashes when incorrect MDSU/MDS2/MDS2B side association is detected.
IAT-Server (NE R1.7.0)	FLT	red	Lit when a fault is detected on the pack.
	CFL	yellow	Lit when a failure of either IAT/RT carrier link from the IAT to the IATS is detected.
	CFG	yellow	Lit when a configuration error or mismatch is detected, as follows: <ul style="list-style-type: none"> the IATS is placed in an AP slot not provisioned for the IAT server pack type the IATS faceplate DS1 cable is disconnected there is a mismatch between the host T0 provisioning and the IAT phantom CU equipage (IAT01 only).
AFMDS3	IAT	yellow	Lit when a failure of either link from the IATS to the IAT (IAT/RT link working) is detected.
	FLT	red	Lit when a fault is detected on the pack.
	ACT	green	Indicates that this AFM is active.
	CR-MJ	red	Lit when the highest severity alarm is critical or major.
	MN	yellow	Lit when the highest severity alarm is minor.
	CLF1	yellow	Lit when a fault or facility alarm occurs on the in-service received DS3 port 1.
CLF2	yellow	Lit when a fault or facility alarm occurs on the in-service received DS3 port 2.	

Pack	LED	Color	Meanings
AFM_DS1 IMA	FLT	red	Lit when a fault is detected on the pack.
	ACT	green	Indicates that this AFM is active.
	CR-MJ	red	Lit when the highest severity alarm is critical or major.
	MN	yellow	Lit when the highest severity alarm is minor.
	CLF	yellow	Lit when a fault or facility alarm occurs on the in-service received DS1 port.
AFMO	FLT	red	Lit when a fault is detected on the pack.
	ACT	green	Indicates that this AFM is active.
	ALM	red/yellow	Lit red when a critical or major ATM xDSL alarm condition is detected. Lit yellow when a minor ATM xDSL alarm condition is detected.
	FAC1	yellow/green	Lit green when the OC-3c port 1 facility is okay. Lit yellow when an OC-3c port 1 near end error is detected (e.g. LOS).
	FAC2	yellow/green	Lit green when the OC-3c port 2 facility is okay. Lit yellow when an OC-3c port 2 near end error is detected (e.g. LOS).



See table below for the list of LEDs provided in the MDS2 shelf pack.

Pack	LED	Color	Meanings
MSC	FLT	red	Lit when a fault is detected on the pack.
	LNK	yellow	Different meaning: <ul style="list-style-type: none">• Lit when loss of clock/sync signal is detected• Flashes when incorrect MDSU/MDS2/MDS2B side association is detected.
PTU	FLT	red	Lit when a fault is detected on the pack.
	TST	green	Lit when a channel served by the PTU is under test.

For more information on the reported alarm open the Alarm Viewer (cf. [“Alarm monitoring” \(8-22\)](#)).

Acknowledging alarms and clearing alarms is described in [“Alarm Viewer functions” \(8-43\)](#).

Audible alarm indication

The NAM allows the user to configure an audible alarm indication that is generated when an alarm is received. The audible indication is configurable as a sound that can be different depending on the alarm severity or a bip for all the alarm types.

This configuration is possible for each client installation independently and with the following options:

- **Always**, the sound shall be played each time a new alarm is reported.
- **Never**, the sound shall be never played.
- **On Raise**, the sound shall be played only when the visual alarm indication flag is raised. If other alarms are reported while the flag is already raised, no sound shall be played again.

- **Continue**, the sound shall be played continuously since the visual alarm indication flag is raised until the flag is reset by the user.
- **Periodic**, the sound shall be replayed periodically since the visual alarm indication flag is raised until the flag is reset by the user. The period between the start of a play to the start of the next one shall be configurable by the user per client installation too. Range: 5..300 seconds, default value: 60 seconds.

If the user configured the Continue or Periodic options, the system is already playing the sound that corresponds to the severity of an alarm already received and a new alarm of greater severity is received while the visual alarm indication flag is still raised, the sound that the GUI is playing shall be replaced by the sound that corresponds to the severity of the new alarm received.

The severity alarm precedence is: **Critical, Major, Minor, Warning, Indeterminate** and **Cleared**.

The SystemPreferences.ini file contains the following two configurable variables to support this feature:

- *ALARM_SOUND*
- *ALARM_SOUND_PERIOD*

For the options and default values see [“NAM client GUI configuration variables” \(B-8\)](#).

□

Provide access to the current alarm data

Alarm retrieval The user can select lists of alarms filtered by several fields. Therefore the user specifies a selection criterion (cf. [“Select a filter” \(8-36\)](#)) that is taken by the AMS to make the appropriate filters. For instance, an user can request all the critical alarms of an NE, or all platform alarms, or all alarms which are service affecting and are raised at the same time.

The number of alarms stored in the alarm database can be retrieved, too. The total number of alarms can be retrieved as well as the number of alarms per severity (number of critical alarms, major, minor and indeterminate).

User Domains The user domain is the list of NEs and/or the NAM the user can manage. The user domains are applicable in the AMS to the alarm retrieval operations and to the alarm notification.

Each user can only request alarms and the number of alarms that are in the user's domain. The client and server security filters fill in this information. When the alarm retrieval operation arrives at the alarm server, in addition to the normal input data it also contains the user domain information added by the user interface.



Managing the raising of alarms

- Convert alarm information** An alarm is raised by different types of agents (e.g. telephony and data) or by any object of the NAM. When an alarm is raised its state and the relevant transmitted data (cf. [“Alarm types” \(8-73\)](#)) are updated. The alarm information provided by these agents can be different and with different formats. The NAM will convert this information to a common format, this common format is based on the ITU-T Recommendation X.733.
- Repeatedly raised alarms** Special care has to be taken if the alarm is raised repeatedly (see “Repetitive and fluctuating alarms”). In this case the already existing alarm is put into the raised state. This way a raised condition of an existing alarm is considered as a new raising (not a new alarm). The number of occurrences is increased every time the same alarm is raised.
- Repetitive and fluctuating alarms** A repetitive alarm is an alarm that is raised several times before it is cleared. A fluctuating alarm is an alarm that is raised and cleared alternatively several times in a short period (at least less than the NAM constant for the cleared alarms, see [“Periodical deletion of cleared alarms” \(8-21\)](#)).
- To handle these alarms three fields are defined and maintained for each alarm:
- First Raised Time
 - Last Changed Time
 - Number of Occurrences.
- The alarm viewer can obtain the following information:
- The “Number of Occurrences” is the number of times the alarm has been raised between when it was first raised and the current time (only the raised alarms are counted). In this period the alarm has been raised all the time or it may have been raised/cleared several times (it is not relevant to distinguish both cases).
- Correlated/duplicated alarms** Alarms coming from the same NE through telephony and data agents (i.e. the same alarm reported via both controller cards) are correlated into a unique new alarm.

Although the result alarm is generated by the NAM, it is handled as an NE alarm.

The perceived severity of the result alarm is the highest severity value of the received source alarms. The service affecting of the result alarm will be the highest value of the received source alarms (where service affecting (SA) is the highest value and not service affecting (NSA) is the lowest).

□

Manage alarm acknowledgment

General Alarms can only be acknowledged by a user at the user interface. It is possible to acknowledge all alarms types. If an alarm is acknowledged its state is updated accordingly and the user identification is registered. Acknowledging an alarm causes a change to the alarm database. Therefore the alarm was logged before in the action log. It is possible to acknowledge an alarm that has already been acknowledged. The user identification and the new acknowledge time are registered as well, overwriting the previous acknowledge data.



Managing the clearing of alarms

General The NE alarms are cleared by the NE-AMS. Platform alarms are cleared automatically (e.g. NE-NAM association alarms) or by a user at the user interface (e.g. log alarms). Users can only clear specific platform alarms. Users cannot clear the association alarms or the NE alarms.

The following platform alarms can be cleared by the NAM user (cf. [“General NAM platform alarms” \(8-77\)](#)):

- LOG_DEL_FULL
- LOG_DEL_PART
- PRINT_ALARM

When an alarm is cleared its severity is updated and the time is registered, too. Clearing an alarm causes a change to the alarm database. Therefore the alarm is logged beforehand in the alarms log (if the user clears an alarm this will be logged in the action log; if an alarm is cleared by the NE it will be logged in the action log).

If the raise is newer, then it is a repetitive raise; the alarm state is set to the raised state. If the raise is older, then this message is ignored; the alarm state stays in the cleared state and the relevant data is updated.

Automatic alarm clearance If network and platform alarms are cleared at their source the NAM clears them after a variable period of time in the NAM database. This period of time is set by default to 3 days and can be configured by the user via the system variable “AM.minimumClearPeriod” in the file \$ANYMEDIAPATH/cfg/AnyMediaEM.cfg.

□

Alarm data synchronization

General The AMS is responsible for the performance of NE alarm synchronization. To accomplish this, the AMS requests all the current alarms (normal and environment) of the NE that is being synchronized. Once the AMS has received these alarms it compares them with the alarms stored in the NAM alarm database. At the end of the synchronization the alarms stored in the alarm database must be the same as the alarms retrieved from the NE-AMS. Only one synchronization per NE can be performed at the same time. The AMS rejects any synchronization request for the same NE if the first one has still not finished.



Alarm log handling

General If the user wants to know the different states throughout the alarm life the user will have to see the Log System (cf. [“Log Viewer window” \(3-82\)](#)) in which all alarm changes are stored.

The AMS logs the following situations:

- **Actions**
In this Action log actions like knowledge alarms and clearing of alarms are logged.
- **System Internal Events**
It contains all internal events or actions which report unusual changes in the configuration and state of the NAM or indicate errors which occurred in the NAM. Periodical database deletion of cleared alarms is logged in this log type.
- **Autonomous Reports**
It contains all TCAs (Threshold Crossing Alert) from NB and BB and all actions performed in the NEs that imply changes in the NAM data base.
- **Alarms**
It contains all alarms received from the platform (AEM), telephony agent and data agent.

□

Periodical deletion of cleared alarms

General By default, alarms with cleared status are maintained for at least three days (including the current day) in the database. This value can be configured by the user via the system variable "AM.minimumClearPeriod" in the file \$ANYMEDIAPATH/cfg/AnyMediaEM.cfg and is an integer multiple in days. The default value is 3 days.

The NAM performs a periodical deletion of the alarms with cleared status that exceed the specified time. This is done during the night-time period in low-load hours.



Alarm monitoring

Overview

Purpose This section describes the functionality of the Alarm viewer.

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Overview

General The NAM provides a process to monitor and display all alarms stored in the database. Using this system, the Alarm Viewer, the user is able to see many different alarm attributes such as Alarm Type, Severity, Status, Summary and the date and time when the alarm was raised. Via this tool the user can perform actions (e.g. acknowledge, clear) for some of these alarms.

What you will find In this chapter you will find the following information:

- Instructions for starting and terminating the alarm viewer ([“Starting and terminating the Alarm Viewer” \(8-24\)](#))
- Instructions for handling the alarm viewer ([“Performing Alarm Viewer functions” \(8-26\)](#))
- Structure of the alarm viewer window ([“General Information” \(8-30\)](#) and [“Alarm table” \(8-31\)](#))
- System management ([“System management functions” \(8-34\)](#))
- Alarm viewer functions ([“Alarm Viewer functions” \(8-43\)](#)).



Starting and terminating the Alarm Viewer

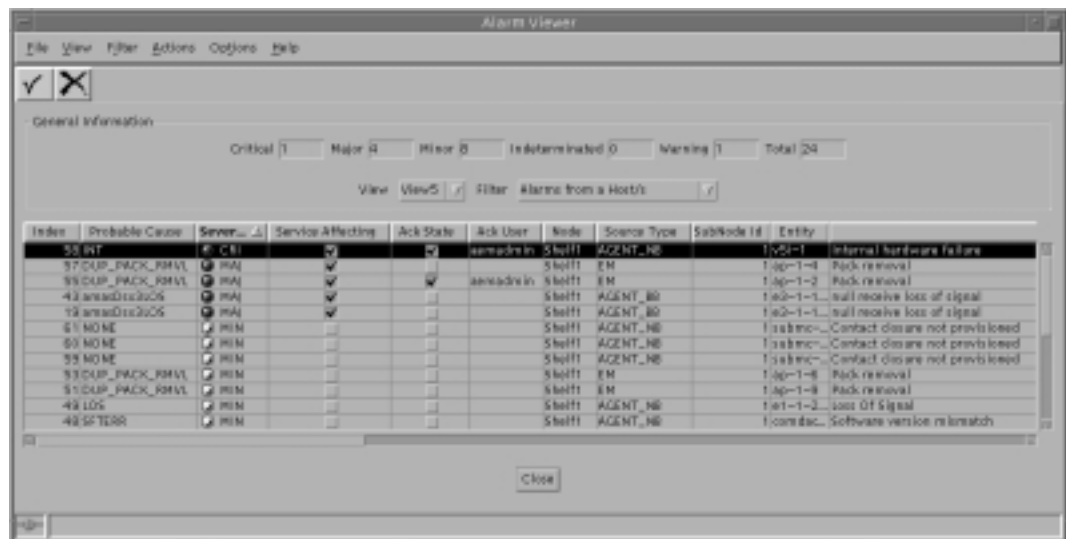
Starting the Alarm Viewer The Alarm Viewer can be started in different ways:

- Clicking on the icon **Alarm Viewer** in the access bar (cf. [“NAM access bar” \(3-8\)](#)).
- Clicking on **Alarms** in the menu bar of the other NAM applications (cf. [“Menu bar” \(3-21\)](#)). In this case only alarms of the NE which is selected in the Network Browser are shown.
- Selecting **File** → **New** in the Alarm Viewer.

The displayed window has the title “Alarm Viewer” and maintains similarities with the other NAM’s windows.

The **Alarm Viewer** window consists of the sections:

- Menu bar (**File, View, Filter, Actions, Help**).
- Toolbar (buttons for Acknowledge and Clear).
- General Information.
- Alarm table.



Terminating the Alarm Viewer

The Alarm Viewer can be terminated as follows:

- By selecting **File** → **Exit** in the Alarm Viewer menu to close all Alarm Viewers launched by the user.
- By clicking on **Close** button to close only the Alarm Viewer being in use.

Before quitting the Alarm Viewer the user is prompted for confirmation.



Performing Alarm Viewer functions

General The Alarm Viewer provides different possibilities to perform internal functions and alarm management functions.

These functions can be initiated via:

- Menu
- Tool bar.

In most cases the choice depends on the user's personal preference.

Menu bar The menu is used to activate alarm viewer functions.

Note: The executable functions depend on your user privileges.



Selection is achieved

- By opening the menu by pressing the left mouse button and dragging the cursor to the desired option in the menu or
- By opening the menu via the keyboard by entering **Alt** plus the underlined letter of the relevant menu to open the menu option and then entering the letter underlined in the desired menu option.

The following table describes the options of the **File** menu:

Menu option	Meaning	Information in
New	Launch a new instance of the Alarm Viewer.	“File” (8-34)
Print → Print Table	Print all alarm items displayed in the currently displayed table or save the items into an ASCII file. The Print dialog (cf. “Print dialog” (3-67)) is opened.	
Print → Preview	Show the Preview Frame window (cf. “Preview Frame dialog” (3-68)).	
Print → Print Window	Print a screen shot of the whole window. The Page Setup dialog is opened (cf. “Page Setup dialog” (3-66)).	
Close	Dismiss this window, but without closing other instances of the Alarm Viewer.	
Exit	Close all Alarm Viewers opened by the user.	

The following table describes the options of the **View** menu:

Menu option	Meaning	Information in
View1	Select a view from the predefined views.	“Select pre-defined views” (8-35)
View2		
View3		
View4		
View 5		
Reload	Display a fresh copy of the current information shown in the window. Only alarms which match the filter criteria will be included.	

The following table describes the options of the **Filters** menu:

Menu option	Meaning	Information in
Open...	Open a user-defined filter previously stored. No modifications allowed.	

Menu option	Meaning	Information in
Predefined Filters: Alarms for the last 24 hours Critical Raised Alarms Raised Alarms Alarms from Host/s Critical Alarms not cleared Owned Acknowledge Alarms Clear Alarms All Acknowledge Alarms None Filter/All Alarms	Selection of filter criteria for displaying alarm information.	“Select a filter” (8-36)

The following table describes the options of the **Actions** menu:

Menu option	Meaning	Information in
Acknowledge	Acknowledge all selected alarms, their status will change to acknowledged.	“Alarm Viewer functions” (8-43)
Clear	Clear all selected alarms, their status will change to cleared.	

The following table describes the options of the **Help** menu:



Menu option	Meaning	Information in
Index	Display the index help, allowing the user to navigate through the NAM help information.	“Help” (8-42)
On Window	Display the help information of the window where the user is currently working.	



Toolbar

The toolbar contains often used functions and consists of two buttons:

The following table describes the options of the tool bar menu:

Function	Icon	Meaning
Acknowledge		Acknowledge all selected alarms. Their status immediately changes to acknowledged. The User_Ack is set to the login of the user who has acknowledged the alarm
Clear		Clear all selected alarms. Their status immediately changes to cleared.

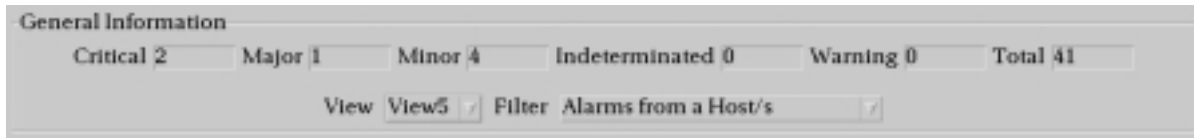


General Information

The first section is a frame titled **General Information**, this frame includes controls showing information about the number of alarms of each alarm severity (in the domain where the user is working):

- Critical
Displays the number of critical alarms.
- Major
Displays the number of major alarms.
- Minor
Displays the number of minor alarms.
- Indeterminated
Displays the number of indeterminated alarms.
- Warning
Displays the number of warning alarms.
- Total
Displays the total number of alarms (all severities).

Additionally the frame contains two option menus, which show the filter (cf. [“Select pre-defined views” \(8-35\)](#)) and view (cf. [“Select a filter” \(8-36\)](#)) currently being used. In this two option menus the user can select filters and views.



□

Alarm table

The last section in the Alarm Viewer window is a table that contains zero or more alarms belonging to a domain. This table allows the user to sort the alarms (cf. [“Sorting alarms” \(8-33\)](#)) by clicking on a specific table header. The user also can select them for acknowledgment or clearance. The mechanism to acknowledge or clear is the same, the user has to select one or more alarms. After selecting the alarms click on **Acknowledge** or **Clear** in the tool bar or select **Actions** → **Acknowledge** or **Actions** → **Clear** via the menu bar.

Index	Probable Cause	Severity	Service Affecting	Ack State	Ack User	Node	Source Type	Subnode Id	Entity
50 INT	CRI				amsadmin	SheFI	AGENT_NB	1w21-1	Internal hardware failure
57 DUP_RACK_EHVL	MAJ					SheFI	EM	1ap-1-4	Rack removal
55 DUP_RACK_EHVL	MAJ				amsadmin	SheFI	EM	1ap-1-2	Rack removal
43 amaCo3LOS	MAJ					SheFI	AGENT_SB	1w2-1-1...	Full receive loss of signal
19 amaCo3LOS	MAJ					SheFI	AGENT_SB	1w2-1-1...	Full receive loss of signal
61 NO ME	MIN					SheFI	AGENT_NB	1subm-...	Contact disare not provisioned
59 NO ME	MIN					SheFI	AGENT_NB	1subm-...	Contact disare not provisioned
53 DUP_RACK_EHVL	MIN					SheFI	EM	1ap-1-6	Rack removal
51 DUP_RACK_EHVL	MIN					SheFI	EM	1ap-1-8	Rack removal
49 LOS	MIN					SheFI	AGENT_NB	1w1-1-2...	Loss Of Signal
48 SFTERR	MIN					SheFI	AGENT_NB	1contac...	Software version mismatch

Alarm parameters For each alarm the following alarm fields (depending on the selected view) can be displayed:

- **Index**
Sequence number for each different alarm reported to the NAM (the maximum sequence number is 100 000).
- **Probable Cause**
Identifies the probable cause of the alarm. This field contains a unique identification string for each alarm type.
- **Severity** (contains the default severity of the alarm)
 - Critical (CRI)
 - Major (MAJ)
 - Minor (MIN)
 - Indeterminate (IND)
 - Warning (WAR)
 - Cleared (CLE).
- **Service Affecting**
Specifies whether the alarm is subscriber service affecting or not. Possible values: Yes, No.

- **Acknowledge State**
Reflects if the alarm has been acknowledged by a user.
- **Acknowledge User**
The login of the last user who has acknowledged an alarm.
- **Node**
A unique text label. For NE alarms, it is the NE-Name of the NE the alarm belongs to. For platform alarms, the string “EM” is used, except for communication alarms.
- **Source Type**
Defines the type of alarm reporting source. For NE alarms, the agent type (e.g. NarrowBand, BroadBand, NarrowBand-Broadband) is used. For platform alarms, the string “EM” is used.
- **Entity**
Object identifier referring to the alarm. Examples of objects are network elements, “ap-1-1”, etc.
- **Alarm Text**
Contains text briefly describing the alarm. The summary text is unique in the Element Manager.
- **Description**
This field contains a full description of the alarm.
- **Agent Description**
For the NE alarms, this field contains the description sent in the TL1 message or in the trap (without internationalizing). For platform alarms, this field is empty.
- **Date&Time First Change**
Date and Time of the first severity change.
- **Date&Time Last Change**
Date and Time of the last severity change in the life cycle of one alarm.
- **Number Raises**
Number of times the alarm has been raised between the first raised time and the current time.
- **Correlation State**
This field reflects if one alarm has been correlated or not. In the case of correlated alarms it also identifies if it is a source or a result alarm of the correlation process. For this release only duplicated alarms are considered.



Sorting alarms

General The user can sort alarms by the different fields by clicking on the respective header. The sort can be ascending or descending order. The sort order is reversed by clicking on the respective header.

All alarm fields are sorted by alphanumeric order except date and time field and severity field. In the severity field the alarms are sorted in ascending/descending severity order.

The alarms are re-arranged according to the selected criteria.

Procedure Proceed as follows to sort the alarm display:

- 1** Click on the header according to which the alarms are to be sorted.

The alarms are sorted according to the selected alarm field in ascending or descending order.

- 2** Check if the list was sorted as desired.

Yes: O.K.

No: Continue with step 3.

- 3** Click again on the header to sort the list in the reverse order.

The sort can be in ascending or descending order, each time the user clicks on the same header again the list is sorted the other way.

END OF STEPS



System management functions

Overview The general system management functions comprise the functions for file management, for defining view options and for getting help.

These functions are contained in the following menus:

- File
- Views
- Filters
- Help.

File In the file menu you can start the following actions:

- New
Launch a new instance of the Alarm Viewer.
- Print
(cf. [“Print out reports” \(3-65\)](#))
- Close
Close the active window, but without closing other instances of the Alarm Viewer. Same functionality as the Close button.
- Exit
Close all Alarm Viewers opened by the user.



Select pre-defined views

Overview For displaying alarm lists you can select from several pre-defined views.

- **View1:** Index, Node, Entity, Severity, Date&Time Last Change, Alarm Text.
- **View2:** Index, Node, Entity, Severity, Date&Time Last Change.
- **View3:** Index, Node, Entity, Date&Time First Raise, Date&Time Last Change, Acknowledge User, Number Raises.
- **View4:** Index, Node, Entity, Severity, Date&Time Last Change, Correlation State.
- **View5:** All alarm fields.

Note: In order to see the alarm description defined by the NE, use the **View5** and the filter **None Filter/All Alarms**.

The alarms are rearranged according to the selected criteria.

Proceed as follows to select the desired view option:

- 1 Select **Views** → **ViewX** (X = 1 to 5) in the menu bar.

The same view options can be selected via the option menu **Views** in the [“General Information” \(8-30\)](#) section.

The alarms are displayed according to the selected view.

END OF STEPS



Select a filter

Overview For displaying the alarm lists you can select pre-defined filters. Only those alarms corresponding to the pre-defined criteria are displayed. The alarm set is displayed without modifying the current view.

The filters are:

- Alarms for the last 24 hours (all alarms which have been changed in the last 24 hours)
- Critical Alarms
- Raised Alarms
- Alarms from a Host/s
- Critical Alarms not cleared
- Owned Acknowledge Alarms
- Clear Alarms
- All Acknowledge Alarms
- None Filter / All Alarms.

The alarms are rearranged according to the selected filter criteria.

Proceed as follows to select the desired filter option:

1 Select the desired filter option:

2

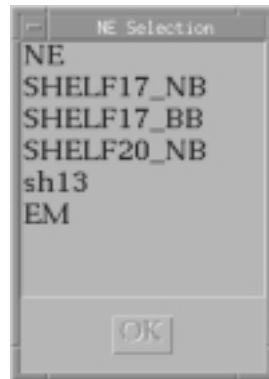
If you want to view ...	then select Filters → Pre-defined Filters...	Result/Notes
all alarms which have been changed in the last 24 hours	Alarms for the last 24 hours	The alarms are displayed according to the selected filter.
all critical raised alarms	Critical Alarms	The alarms are displayed according to the selected filter.
all raised alarms	Raised Alarms	The alarms are displayed according to the selected filter.

If you want to view ...	then select Filters → Pre-defined Filters...	Result/Notes
all alarms from a host	Alarms from a Host/s	NE selection window will open, see details below.
all not cleared critical alarms	Critical Alarms not cleared	The alarms are displayed according to the selected filter.
all owned acknowledge alarms	Owned Acknowledge Alarms	The alarms are displayed according to the selected filter.
all cleared alarms	Clear Alarms	The alarms are displayed according to the selected filter.
all acknowledge alarms	All Acknowledge Alarms	The alarms are displayed according to the selected filter.
all alarms	None Filter / All Alarms	The alarms are displayed according to the selected filter.

-
- 3** The same filter option can be selected via the option menu **Filters** in the general information section (cf. [“General Information” \(8-30\)](#)).

If you selected **Alarms from a Host/s** the NE selection window is displayed (see the following figure) and you have to select one or more NEs and/or the NAM for which the alarms should be displayed.

Press **OK** in the NE selection window to display the alarms from the selected objects in the Alarm Viewer or press **Cancel** to cancel the operation.



END OF STEPS



Administrator defined filters

Administrator privileges required Only a user with administrator privileges can define own alarm filters in the Alarm Viewer application.

Filter Syntax This filter consist of a combination of logical expressions over the so called field-value tuples of the alarm database. Each logical expression consists of an alarm field, a relational operator (>, <, =, ...) and a value for the specified alarm field. Parenthesis can be used for grouping expressions.

Filter file If the administrator specifies a logical expression in the filter file the AMS will query the alarm database to return the list of alarms that match this logical expression. For instance, an administrator can request all critical alarms of an NE, or all platform alarms, or all alarms which are service affecting and are raised at the same time.

Syntax rules The following rules have to be obeyed for building a filter expression:

- The filter file must contain a single line only.
- A space has to be used between field names, possible values, operators and brackets.
- The expression NULL has to be used to represent an empty string.

The following symbols for logical operators must be used:

Operation	Symbol
AND	&&
OR	
NOT	!

Brackets "()" must be used to group the expressions if more than one logical expression is needed.

The following symbols for relational operators must be used:

Operation	Symbol
equal	==
less than	<

Operation	Symbol
less than or equal	<=
greater than	>
greater than or equal	>=

The alarm field names and their possible values from the following table have to be used.

Field name	Possible values
index	integer > 0
node	integer > 0 (for NE identifiers) or 0 (for NAM)
source_type	Agent_BB or Agent_NB
object	AID parameter in TL1 REPT-ALAM (e.g. ap-1-1)
cause	CONDTYPE parameter in TL1 REPT-ALAM (e.g. AIS)
severity	indeterminate, critical, major, minor, warning or cleared
serv_aff	sa or nsa
event_type	AIDTYPE parameter in TL1 REPT-ALAM (e.g. COMM)
ack_state	ack or noack
ack_user	any string which can be a valid user login
num_raises	integer >= 0
f_c_time	integer (number of seconds since Jan 1 1970 UTC)
l_c_time	integer (number of seconds since Jan 1 1970 UTC)
correlation	correlated_source, no_correlated or correlated_result

Example for filter file

The following expressions are examples for filters:

- Alarms which are in the state "ack" and do not have the severity "major"
`(ack_state == ack) && ! (severity == major)`
- Alarms which have the severity "minor" or are not service affecting
`(severity == minor) || (serv_aff == nsa)`

□

Help

Help is provided for every window. The help text describes the purpose of the window, how to use it and a description of each field of the window is given.

In the Menu Bar of each NAM application there are two help options:

- **Index**
Displays the help index, allowing the user to navigate through the NAM help information.
- **On window**
Displays the help information of the window where the user is currently working.



Alarm Viewer functions

- General** The Alarm Viewer provides the user with different functions for managing alarm information:
- Manual reload of alarms
 - Acknowledge alarms.
The user can acknowledge one, several or all reported alarms. The NAM allows different users to acknowledge the same alarm. The name of the last user who has acknowledged the alarm is stored.
 - Clear alarms
The user can clear one, several or all platform alarms (communication alarms are platform alarms that cannot be cleared by the user). If not all selected alarms could be cleared, the user is informed about the alarms for which this action failed. The following platform alarms can be cleared by the NAM user (cf. [“General NAM platform alarms” \(8-77\)](#)):
 - LOG_DEL_FULL
 - LOG_DEL_PART
 - PRINT_ALARM
 - Print alarm lists (cf. [“File” \(8-34\)](#)).
- Before performing alarm acknowledgment and alarm clearance select the alarms you want to acknowledge or clear.

Starting actions Select the desired alarm viewer action:

1

If you want to ...	then select ...	Result/Notes
manually retrieve alarms	View → Reload	Reloads alarms in the table. Only alarms which match the filter criteria are included. The Alarm Viewer is blocked until the reload is finished. Same functionality as Reload in the tool bar. To customize the displayed alarm list perform the actions described in “Select a filter” (8-36) and “Select pre-defined views” (8-35) .
acknowledge alarms	Actions → Acknowledge	All selected alarm items are acknowledged. Their status immediately changes to acknowledge. Same functionality as Acknowledge in the tool bar. For better readability the displayed alarms can be sorted (cf. “Sorting alarms” (8-33)).
clear alarms	Actions → Clear	All selected alarm items are cleared. Their status immediately changes to cleared. Same functionality as Clear in the tool bar. For better readability the displayed alarms can be sorted (cf. “Sorting alarms” (8-33)).

END OF STEPS



Test management

Overview

Purpose This section provides information about the test procedures.

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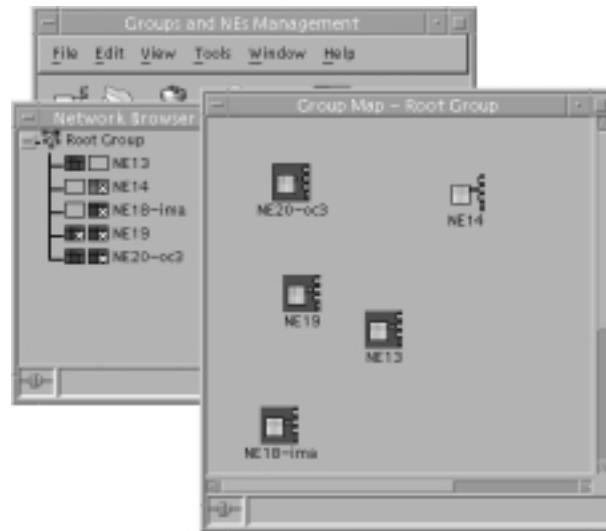


Overview of the test procedures

Main functions Test management provides all the general purpose test functionality. The main functions are:

- Providing the user with different test options (see below)
- Starting the test execution by means of the NAM
- Displaying the test results on the NAM user interface
- Setting and clearing of loopbacks.

Access to the test routines The test routines are available via the "Groups and NEs Management" application. To start it, click on the Groups and NEs Management icon in the access bar. The menu bar, the **Network Browser** and the Background Map pop up.



The tests can be executed from **AP** windows and **User Port** windows.

TL1 commands Most of the test routines can also be executed via TL1 commands by using the TL1 command line interface (cf. ["TL1 cut-through \(telephony agent\)" \(5-183\)](#)).

Please refer to the network element documentation for a detailed description of TL1 commands (including an explanation of the input format, restrictions, error conditions etc.).

Test options (telephony agents)

The following test options are available for telephony application:

- Port test (cf. [“Execute the port test \(telephony\)” \(8-48\)](#))
- AP card test (cf. [“Execute the AP Card test \(telephony\)” \(8-51\)](#))
- Standby card test scheduling (cf. [“Execute the stand-by card test scheduling \(telephony\)” \(8-54\)](#))
- Built-in self-test (cf. [“Built-in self-test \(telephony\)” \(8-57\)](#))
- Loopback test on the feeder side (cf. [“Execute the loopback test on the feeder side” \(8-58\)](#)).

Test options (data agents)

The following test options are available for data application:

- xDSL test list (cf. [“View the xDSL test list” \(8-59\)](#))
- ADSL corrupted CRC test (cf. [“Execute an ADSL corrupted CRC test” \(8-62\)](#))
- ADSL port built-in self-test (cf. [“Execute an ADSL port BIST test” \(8-65\)](#)).
- SDSL port built-in self-test (cf. [“Execute an SDSL port BIST test” \(8-67\)](#)).
- SHDSL port built-in self-test (cf. [“Execute an SHDSL port BIST test” \(8-69\)](#)).



Execute the port test (telephony)

Purpose By means of a port test you are able to run a series of self-diagnostic routines for a particular port on a specified AP (except AFM, ADSL/SDSL/SHDSL APs) and CUs on MDS2 or MDS2B subshelves (NE R1.7.0).

The port test can be executed via GUI and via TL1 command.

Procedure Proceed as follows to start a port test via GUI and view the test result:

- 1 Open one of the following windows:
 - **Telephony Application Pack** window (cf. [“Telephony Application Pack window” \(6-38\)](#))
 - **Logical DS0** window (cf. [“Logical DS0 window” \(7-61\)](#)).
-

- 2 Select the user port where you intend the test to run.
-

- 3 Use the option menu in the **Test Management** field to select Port Test and click on **Apply**.

After confirming the test execution a **Warning** window pops up showing the following message:

```
Port Test may be service affecting. Do you want do
continue?
```

After confirming this warning the following **In Progress** message pops up:

```
Port Test Launched.
```

- 4 Wait until the **Port Test Result** window appears and view the test result.

The **Port Test Result** window (cf. [“Port Test Result window” \(8-50\)](#)) shows the test results of a series of self-diagnostic routines on a specific port circuit.

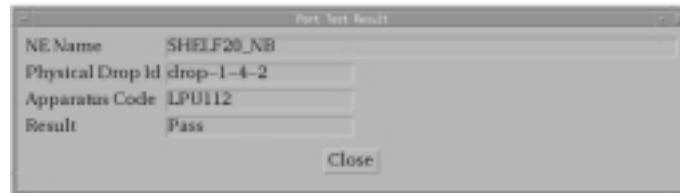
-
- 5** Click on **Close** to exit the **Port Test Result** window.

END OF STEPS



Port Test Result window

General The **Port Test Result** window shows the test results of a series of self-diagnostic routines on a specific port circuit.



Window description The text fields are display-only, they have the following meaning

Parameter/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters) as specified at NE creation time.
Physical Drop Id	This field shows the port of the AP affected by the test. Possible values: drop-1-{1,16}-{1, x} / subdrop-{1, 8}-{1, 8}-{1, x} . (“x” depends on the card type).
Result	This field displays the result of the test routines. Possible values: PASS or FAIL .



Execute the AP Card test (telephony)

Purpose By means of an AP card test you are able to start a series of self-diagnostic routines for all port circuits on a specified AP plus its common circuitry.

Procedure Proceed as follows to start an AP card test and view the test result:

1 Open the **Telephony Application Pack** window (cf. [“Telephony Application Pack window” \(6-38\)](#)).

2 Use the option menu in the **Test Management** field to select AP Card Test and click on **Apply**.

After confirming the test execution a **Warning** window pops up showing the following message:

AP Card Test may be service affecting. Do you want do continue?

After confirming this warning the following **In Progress** message pops up:

AP Card Test Launched.

3 Wait until the [“AP Card Test Result window” \(8-52\)](#) appears and view the test result.

The **AP Card Test Result** window shows the test results of a series of self-diagnostic routines for all port circuits on a specified AP plus its common circuitry.

4 Click **Close** to dismiss the **AP Card Test Result** window.

END OF STEPS



AP Card Test Result window

General The **AP Card Test Result** window shows the test results of a series of self-diagnostic routines for all port circuits on a specified AP plus its common circuitry.



Window description The text fields are display-only and have the following meaning:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters) as specified at NE creation time.
Slot	This field shows the slot number of the AP being used. Possible values: AP-{1, 16} .
Card Type	Mnemonic used to identify the general type of function provided (AP card type). Possible values: PROG2W, PRCOIN, ISDN, AFM_DS3, ADSL4, TAP, MDSU .

Parameters/ Buttons	Description
Result List	Port Id: Identifies the port within the AP. Possible values: Port 1 to Port 32 . Result: Shows the result of the test. Possible values: PASS or FAIL .



Execute the stand-by card test scheduling (telephony)

Side switch and off-line diagnostics During the execution of a standby card test scheduling a COMDAC side switch and off-line diagnostics for the standby COMDAC or off-line diagnostics for the protection feeder IO-DS1 pack (only for NE R1.x narrowband releases) are performed.

Possible user settings The NAM provides the opportunity to set up the periodicity and the time of the day to perform a standby card test over:

- the standby COMDAC pack or
- the protection IO-DS1 pack.

Procedure Proceed as follows to define the test scheduling:

1 Select **Main shelf** → **Scheduling Exercise** in the **NE Browser**. The **Standby Card Test Schedule** window pops up (cf. [“Test management” \(8-45\)](#)).

2 Use the parameter in the **New** field to define the standby card test scheduling data.

3 Click on **Apply** to request the execution. A **Warning** window pops up showing the following message:

The operation may be service affecting. Do you want to continue?

After confirming this warning the new standby card test execution is initiated.

4 Click on **Close** to exit the **Standby Card Test Schedule** window.

END OF STEPS



Standby Card Test Schedule window

Overview This window provides the option to read the current test schedule data and to define new schedule data.



Window description The following table describes the parameters of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters) as specified at NE creation time.
Protection Group Type	This option menu identifies the protection group type: COMDAC, IODS1 .

Parameters/ Buttons	Description
Current	<p>The parameters in this field show the current settings.</p> <p>Periodicity - days: This field shows the number of days between exercise. Possible values: {1, 365}.</p> <p>Starting Time: This field identifies the starting time of the day of exercise. The first exercise will start within the next 24 hours at the time specified.</p> <p>Next Date: This text field shows the next date on which the test will be executed.</p> <p>The Get button is used to retrieve the current data from the NE.</p>
New	<p>This field is used to define new schedule data.</p> <p>Periodicity: This field is used to define the number of days between exercises. Possible values: {1, 365}.</p> <p>Starting Time: This field is used to define the starting time of the day of exercise. The first exercise will start within the next 24 hours at the time specified.</p> <p>The Apply button is used to request the standby card test execution. This button is enabled only if one of the parameters in this field has been changed.</p>



Built-in self-test (telephony)

Test request Each NE performs a built-in self-test of plug-in circuit packs periodically.

Note: The built-in self-test is not requested from the NAM, it will be always started from the NE!

Procedure If a failure occurs, the NE will raise an alarm (REPT-ALM) which contains the AID of the failed pack. The alarm is then visible in the Alarm Viewer of the NAM. For more information about possible alarms refer to the network elements documentation (describes NE alarms).



Execute the loopback test on the feeder side

General When an AFM_D1 pack is being used, a line loopback that loops an individual DS1 coming from the ATM network back toward that network can be initiated.

This loopback occurs at the framer inside the AFM_D1 and can be set or cleared on:

- IODS ports (only applicable for NE R1.x narrowband releases)
- IAT server ports
- Logical DS1 feeders (only applicable for NE R2.2 release)
- Framed path terminations (only applicable for NE R2.2 release)

Note: This loopback is service-affecting in IMA mode if there is not a sufficient number of IMA links remaining to carry service.

Procedure Proceed as follows to set/clear a DS1 loopback:

1 Open one of the following windows:

- **IAT Server Port Information** window (cf. [“IAT Server Port window \(NE R1.7 and the subsequent releases\)” \(6-75\)](#))
 - **Feeder** window (cf. [“Feeder window” \(7-42\)](#)).
-

2 Select the feeder where you intend the test to run.

3 Click on **Set/Clear** to change the loopback state. If the loopback setting is service affecting a **Warning** window pops up:

for IAT Server:

Setting Loopback for a feeder can be service affecting. Do you want to continue?

for Feeder:

Set or Clear Loopback may be service affecting. Do you want to continue?

4 Enter y and press **Return** to confirm.

END OF STEPS

View the xDSL test list

Procedure Proceed as follows to view the xDSL test list:

1 Select **NE** in the **NE Browser** and **Lists** → **Data Test** via the cursor menu. The **xDSL Test List** window pops up (cf. [“xDSL Test List window” \(8-60\)](#)).

2 Click on **Get Tests** to display the list of the ADSL/SDSL/SHDSL tests stored in the data agent.

3 Select an entry in the test list and click on **Remove** to remove a test from the list or proceed with step 4.

4 Click on **Close** to exit the window.

If a test is already running (status **In_Progress**) a new start (ADSL corrupted CRC test - cf. [“Execute an ADSL corrupted CRC test” \(8-62\)](#); ADSL/SDSL BIST test - [“Execute an ADSL port BIST test” \(8-65\)](#), resp. [“Execute an SDSL port BIST test” \(8-67\)](#), resp. [“SHDSL Port BIST Test Result window” \(8-70\)](#)) of the same kind of test will provoke a warning:

If the test exists in the table remove it and launch the test again.

Therefore it is recommended to remove a test from the list after the execution has been finished.

END OF STEPS



xDSL Test List window

General This window lists all the tests stored in the data agent. In this window it is possible to delete stored tests.



Window description The following table shows the parameters of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Table	<p>This table shows all tests currently stored in the data agent. The table is sorted by entities.</p> <ul style="list-style-type: none"> • Test Identifier: Indicates the test identifier inside the AFM (test number). • Access Identifier: Indicates the object for which the test has been executed. • Type: Indicates the test type which has been executed. Possible values: CRC test, BIST (Built-in self-test), LED test. • Status (Result): Indicates the status of the test. Possible values: In Progress, Passed, Could not be started, Passed with warning, Aborted. • Start Time: Indicates the date and time when the test was started. This parameter is displayed empty for NE R1.4D.

Parameters/Buttons	Description
Command buttons	<p>When the window is launched, the table appears empty.</p> <p>The Get Tests button is used to display the list of xDSL tests.</p> <p>The Remove button can be used to remove a test from the list in the data agent. It is enabled only if a test has been selected.</p>



Execute an ADSL corrupted CRC test

Procedure Proceed as follows to set up an ADSL corrupted CRC test:

- 1 Open one of the following windows:
 - **ADSL Application Pack** window (cf. [“ADSL Application Pack window” \(6-120\)](#))
 - **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)).

- 2 Use the option menu near the **Apply** button to select **Corrupted CRC Test** and click on **Apply**. The **ADSL Corrupted CRC Test** window pops up (cf. [“ADSL Corrupted CRC Test window” \(8-63\)](#)).

- 3 Use the option menus in the **Test Programming** field to define the test parameters and click on **Apply**. The **In Progress** window pops up:

ADSL Corrupted CRC Test Launched.

- 4 Wait until the test is finished and view the test result in the **ADSL Corrupted CRC Test** window (**Test Results**, see above).

- 5 Click on **Close** to exit the window.

END OF STEPS



ADSL Corrupted CRC Test window

General This window provides the options for the test execution and shows the test result.



Window description The following table shows the parameters of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This field shows the port of the drop affected by the test. Possible values: drop-1-{1, 15}-{1, x}/ subdrop-{1, 8}-{1, 8}-{1, x} (drop-1-{1-19}-{1, x} for BAIU). x is the number of drops, supplied by the server.

Parameters/ Buttons	Description
Test Programming	<p>Direction: This option menu is used to define the direction of the test. Possible values: Upstream, Downstream.</p> <p>Test Duration (sec): This numeric field is used to define the test duration in seconds. Possible values: {0, 511}. The Apply button is used to execute the corrupted CRC test</p>
Test Results	<p>Test Results: This field shows the test result. Possible values: PASS, PASS-WARNING, FAIL, IN PROGRESS, ABORTED, NOT STARTED, INVALID TEST.</p> <p>Additional Information: This field shows additional information related to the CRC test. If the CRC has been passed the number of the detected CRC is displayed.</p>



Execute an ADSL port BIST test

Procedure Proceed as follows to set up an ADSL port BIST test:

- 1 Open one of the following windows:
 - **ADSL Application Pack** window (cf. [“ADSL Application Pack window” \(6-120\)](#))
 - **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)).

- 2 Use the option menu near the **Apply** button to select **ADSL BIST Test** and click on **Apply**. If the drop is in the unlocked administrative state a **Warning** window pops up (otherwise the **In Progress** window pops up - see below):

Performing a BIST Test on ADSL drop may be service affecting. Do you want to continue?

- 3 Enter **y** and press **Return**. The **In Progress** window pops up:

BIST Test Launched.

- 4 Wait until the **ADSL BIST Test Result** window appears (cf. [“ADSL Port BIST Test Result window” \(8-66\)](#)) and view the test result.

- 5 Click on **Close** to exit the window.

END OF STEPS



ADSL Port BIST Test Result window

General This window shows the test result of the ADSL port BIST test.



Window description The following table shows the parameters of this window

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This field shows the port of the drop affected by the test. Possible values: drop-1-{1, 15}-{1, x}/ subdrop-{1, 8}-{1, 8}-{1, x} (drop-1{1, 19}-{1, x} for BAIU). x is the number of drops, supplied by the server.
Test Results	Test Results: This field shows the test result. Possible values: PASS, PASS-WARNING, FAIL, IN PROGRESS, ABORTED, NOT STARTED, INVALID TEST. Additional Information: This field shows additional information related to this test.



Execute an SDSL port BIST test

Procedure Proceed as follows to set up an SDSL port BIST test:

- 1 Open one of the following windows:
 - **SDSL Application Pack** window (cf. [“SDSL Application Pack window” \(6-134\)](#))
 - **SDSL Drop** window (cf. [“SDSL Drop window” \(6-140\)](#)).

- 2 Use the option menu near the **Apply** button to select **SDSL BIST Test** and click on **Apply**. If the drop is in the unlocked administrative state a **Warning** window pops up (otherwise the **In Progress** window pops up - see below):

Performing a BIST Test on SDSL drop may be service affecting. Do you want to continue?

- 3 Enter **y** and press **Return**. The **In Progress** window pops up:

BIST Test Launched.

- 4 Wait until the **SDSL Port BIST Test Result** window appears (cf. [“SDSL Port BIST Test Result window” \(8-68\)](#)) and view the test result.

- 5 Click on **Close** to exit the window.

END OF STEPS



SDSL Port BIST Test Result window

General This window shows the test result of the SDSL port BIST test.



Window description The following table shows the parameters of this window

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This field shows the port of the drop affected by the test. Possible values: drop-1-{1, 15}-{1, x}/ subdrop-{1, 8}-{1, 8}-{1, x} (drop-1{1, 19}-{1, x} for BAIU). x is the number of drops, supplied by the server.
Test Results	Test Results: This field shows the test result. Possible values: PASS, PASS-WARNING, FAIL, IN PROGRESS, ABORTED, NOT STARTED, INVALID TEST. Additional Information: This field shows additional information related to this test.



Execute an SHDSL port BIST test

Procedure Proceed as follows to set up an SHDSL port BIST test:

- 1 Open one of the following windows:
 - [“SHDSL ATM Application Pack window” \(6-147\)](#)
 - [“SHDSL ATM Drop window” \(6-153\)](#).

- 2 Use the option menu near the **Apply** button to select **SHDSL BIST Test** and click on **Apply**. If the drop is in the unlocked administrative state a **Warning** window pops up (otherwise the **In Progress** window pops up - see below):

Performing a BIST Test on SHDSL drop may be service affecting. Do you want to continue?

- 3 Enter **y** and press **Return**. The **In Progress** window pops up:

BIST Test Launched.

- 4 Wait until the **SHDSL BIST Test Result** window appears (cf. [“SHDSL Port BIST Test Result window” \(8-70\)](#)) and view the test result.

- 5 Click on **Close** to exit the window.

END OF STEPS



SHDSL Port BIST Test Result window

General This window shows the test result of the SHDSL port BIST test.



Window description The following table shows the view/edit options of this window

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This field shows the port of the drop affected by the test. Possible values: drop-1-{1, 15}-{1, x}/ subdrop-{1, 8}-{1, 8}-{1, x} (drop-1{1, 19}-{1, x} for BAIU). x is the number of drops, supplied by the server.
Test Results	Test Results: This field shows the test result. Possible values: PASS, PASS-WARNING, FAIL, IN PROGRESS, ABORTED, NOT STARTED, INVALID TEST. Additional Information: This field shows additional information related to this test.



Alarms

Overview

Purpose An alarm is reported for any condition that needs user attention, since it may impact the normal operations of any system under user responsibility (e.g. NAM, NE).

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Alarm types

Alarm classification Detected alarms are classified as one of the following:

- Platform Alarm
Alarm related to the NAM application or its hardware/software platform. Generated (raised) by any object of the NAM when it detects an abnormal condition to be reported to the user.
Information provided:
 - Probable Cause
 - Severity
 - Service Affecting
 - NAM Object Identifier
 - Alarm Type Identifier
 - Occurrence Time.
- NE-AM Alarms
Generated (raised) by the NE-AM. Refer to [“Managing the raising of alarms” \(8-15\)](#) to see how the information comes from the NE-AM to the NAM. The NE-AM alarms are classified in two groups:
 - Normal alarms
Data provided: Access Identifier, Condition Type, Notification Code, Service Affecting, Access Identifier Type, Occurrence Date, Occurrence Time
 - Environment alarms
Data provided: Access Identifier, Alarm Type, Notification Code, Occurrence Date, Occurrence Time.

For all alarm types several alarm data fields are conceptually the same (although they convey different values). For instance, both Condition Type and Alarm Type refer to the type of alarm being raised/cleared (Battery on discharge, Loss of frame, ...).

General alarm fields The following table maps all the equivalent fields to general names that uniquely identify a concept independently of the alarm type.

General Name	Platform Alarm	NE Alarm	NE Environment Alarm
Object_Id.	EM Object Identifier	Access Identifier	Access Identifier
Alarm_Type	Alarm Type Identifier	Condition Type	Alarm Type
Severity	Severity	Notification Code	Notification Code
Serv_Affec.	Service Affecting	Service Effect	-
Date_First_Time/ Date_Last_Time (Date and time: YYYY-MM-DD HH-MM-SS)	Occurrence Time and Date(Date and time: YYYY-MM-DD HH-MM-SS)	Occurrence Time (Only time:HH-MM-SS)	Occurrence Time (Only time:HH-MM-SS)
		Occurrence Date (Only date: MM-DD)	Occurrence Date (Only date: MM-DD)

Alarm severities For each alarm one of the following alarm severities is defined:

- Critical (CR)
- Major (MJ)
- Minor (MN)
- Warning (WR)
- Indeterminate (IN)
- Cleared (CL).

Alarm identification

The multiple key that uniquely identifies an alarm is:

- **Host identifier**
Identifies where the alarm comes from. If it comes from an NE, then this identifier is the NE name. If the alarm is reported by the NAM the host identifier is "EM". For association alarms the host identifier is "NE_name".
- **System object identifier**
Identifies the alarm-affected object within the host, which is identified by the host identifier. For association alarms the system object identifier is "ASSOC".
- **General alarm identifier**
Unique identifier within each type of alarm.

In order to ease possible communication between different users, an index number is provided as a temporal alarm identification. It is temporal because the index number will be used as a circular sequence (the maximum sequence number is 100 000). It is provided only for user convenience. It will not be used to identify an alarm within the AMS. For this purpose the multiple key defined above has to be used.

□

Network element alarms

Alarm descriptions Please refer to the network element documentation for detailed alarm descriptions of network element alarms.



General NAM platform alarms

General This chapter provides alarm descriptions of general NAM platform alarms including proposals for corrective maintenance actions.

In the following the NAM platform alarms are listed alphabetically.

Only the platform alarms can be cleared by the NAM user.



LOG_DEL_FULL (platform alarm)

Meaning All old logs have been deleted. Because more available space was necessary the log type of the current day has been deleted, too. The Object_Id shows which log type has been deleted.

Alarm severity: *Major*

Service affecting: *No*

Effects There are no old logs available, and not all logs of the current day are available to be viewed or stored.

Possible cause(s) There may be a problem or abnormal situation in the NAM, or the selection of the configurable size limits of the log system was too small.

Corrective actions Proceed as follows to clear the alarm:

1 Check the NAM for problems or abnormal situations.

Have any problems or abnormal situations occurred?

- Yes: Try to resolve these problems or abnormal situations. If this is not possible, continue with step 2.
 - No: Continue with step 2.
-

2 Check the size limits of the log system.

Are the size limits set correctly (cf. [“Configuration of logs” \(3-81\)](#))?

- Yes: Call Lucent Technologies Technical Support.
- No: Set the size limits correctly, i.e. increase the size limits.

END OF STEPS



LOG_DEL_PART (platform alarm)

Meaning A log type not yet archived has been deleted due to lack of available space.

Alarm severity: Minor

Service affecting: No

Effects The respective log type can neither be viewed nor archived.

Possible cause(s) There may be a problem or an abnormal situation in the NAM, or the configurable size limits of the log system have not been chosen correctly.

Corrective actions Proceed as follows to clear the alarm:

1 Archive the remaining logs to prevent them from being deleted.

2 Check the NAM for problems or abnormal situations.

Have any problems or abnormal situations occurred?

- Yes: Try to resolve these problems or abnormal situations. If this is not possible, continue with step 3.
 - No: Continue with step 3.
-

3 Check the size limits of the log system.

Are the size limits set correctly (cf. [“Configuration of logs” \(3-81\)](#))?

- Yes: Call Lucent Technologies Technical Support.
- No: Set the size limits correctly, i.e. increase the size limits.

END OF STEPS



PRINT_ALARM (platform alarm)

Meaning There are one or more problems blocking the printing jobs.

Alarm severity: Warning

Service affecting: No

Effects It is not possible to print reports.

Possible cause(s) There may be a problem in the printer, the spoolers, the network or the NAM.

Corrective actions Proceed as follows to clear the alarm:

1 Check if a default printer is defined.

- Yes: Continue with step 2.
 - No: Define a default printer.
-

2 Check if the printer is working properly.

- Yes: Call Lucent Technologies Technical Support for checking the network or the NAM.
- No: Have the printer repaired.

END OF STEPS



Communication alarms (NE-NAM)

General This chapter provides descriptions of communication alarms (NAM -data/telephony agents) including proposals for corrective maintenance actions.



AGENT_NP_SYNC_PROBLEM

Meaning The network profile synchronization in the current agent has not finished successfully.

Alarm severity: Major

Service affecting: No

Effects The network element profiles are not completely synchronized.

Possible cause(s) NAM internal problem.

Corrective actions Proceed as follows to clear the alarm:

- 1 Resynchronize the configuration part of the agent.

END OF STEPS



AGENT_PROFILE_WITH_NO_NP

Meaning There are NE profiles within the agent that are not associated to a network profile in the NAM.

Alarm severity: Minor

Service affecting: No

Effects The affected NE profiles data can not be used to create cross-connections in the NAM.

Possible cause(s) The NE profile is not defined as network profile in the NAM.

Corrective actions Proceed as follows to clear the alarm:

- 1 Define the NE profile as network profile in the NAM.

END OF STEPS



ALARM_AO_NOT_PROCESS

Meaning The NAM is discarding the Alarm AOs coming from the telephony agent.

Alarm severity: Major

Service affecting: No

Effects The alarm data of the NAM does not match the alarm data of the telephony agent. The alarm synchronization state is moved to BLOCK.

Possible cause(s) Alarm buffer overflow detection.

Corrective actions Proceed as follows to clear the alarm:

1 Perform a manual alarm synchronization process to upload the alarm data and to start processing AOs.

2 Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



ALARM_EVENT_NOT_PROCESS

Meaning The NAM is discarding the alarm traps coming from the data agent.

Alarm severity: Major

Service affecting: No

Effects The alarm data of the NAM does not match the alarm data of the data agent.

Possible cause(s) Alarm buffer overflow.

Corrective actions Proceed as follows to clear the alarm:

1 Perform a manual alarm synchronization process to upload the alarm data and to start processing traps.

2 Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



COMM_DENIED

Meaning An unsuccessful reply has been detected when the NAM sends the request to establish a connection with the telephony agent.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the telephony agent.
The alarm will be cleared when the connection between the NAM and the telephony agent has been successfully established.

Possible cause(s) The NAM is trying to establish the connection with an agent while its COMDAC initialization process is in progress.

Corrective actions Proceed as follows to clear the alarm:

- 1 Check if the COMDAC is in the initialization process and wait until this process is finished.

END OF STEPS



COMM_PROBLEM

Meaning The data agent does not respond the NAM while trying to establish a communication.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the data agent.

Possible cause(s) Invalid IP address.

Corrective actions Proceed as follows to clear the alarm:

- 1** Check for DCN being in service.
 - Yes: Continue with step 2.
 - No: Put the DCN into service.

- 2** Check the IP address of the data agent.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Correct the IP address.

- 3** Is the alarm now cleared?
 - Yes: O.K.
 - No: Call Lucent Technologies Technical Support.

END OF STEPS



COMM_RES_NOT_AVAILABLE

Meaning The communication between NAM and NE cannot be established.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the NE.

Possible causes(s) The limit of connections that the NAM can manage has been reached.

Corrective actions Proceed as follows to clear the alarm:

- 1 Start new instances of the process(es) in charge of communication management.

END OF STEPS



COMMUNICATION_LOST

Meaning Communication with data agent lost.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the data agent.

Possible cause(s) Heart beat messages are not responded by the data agent.

Corrective actions Proceed as follows to clear the alarm:

- 1** Check for correct data agent state.
 - Yes: Continue with step 2.
 - No: Call Lucent Technologies Technical Support.

- 2** Check for DCN being in service.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Put the DCN into service.

- 3** Is the alarm now cleared?
 - Yes: O.K.
 - No: Call Lucent Technologies Technical Support.

END OF STEPS



CONFIG_AO_NOT_PROCESS

Meaning The NAM is discarding the configuration AOs coming from the telephony agent.

Alarm severity: Major

Service affecting: No

Effects The configuration data of the NAM does not match the configuration data of the telephony agent. The configuration data synchronization state is moved to ASYNC.

Possible Cause(s) Configuration buffer overflow detection.

Corrective actions Proceed as follows to clear the alarm:

1 Perform a manual configuration synchronization process to upload the configuration data and to start processing AOs.

2 Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



CONFIG_EVENT_NOT_PROCESS

Meaning The NAM is discarding the configuration traps coming from the data agent.

Alarm severity: Major

Service affecting: No

Effects The configuration data of the NAM does not match the configuration data of the data agent.

Possible cause(s) Configuration buffer overflow.

Corrective actions Proceed as follows to clear the alarm:

.....
1 Perform a manual configuration synchronization process to upload the configuration data and to start processing traps.

.....
2 Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



DUPLICATED_AGENT_PROFILE

Meaning There are several NE profiles within the agent with the same content as one network profile.

Alarm severity: Minor

Service affecting: No

Effects Only one of the duplicated NE profiles is recognized by the NAM.

Possible cause(s) It has been detected that there is more than one NE profile with the same content as the considered network profile.

Corrective actions Use the GSI to remove the duplicated profiles. The IDs of the profiles can be looked up in the NAM's internal events log files.

- 1 Use the following table to remove the duplicated profiles.
-

- 2

if...	then...
one of the duplicated profiles is a default profile	remove all the others.
there is no default profile among the duplicated profiles	keep the profile that has the lowest number of drops or cross connections associated and remove the others.

- 3 All the drops or cross connections which were associated with the removed profiles should be associated with the remaining NE profile after the network profile synchronization was performed over the related AFM.

END OF STEPS



INVALID_MIB_IDENTIFIER

Meaning The agent to communicate with is not a valid data agent.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to start the communication with the data agent.

Possible cause(s) The sysObjectId MIB variable retrieved from the data agent is not valid.

Corrective actions Proceed as follows to clear the alarm:

- 1** Check the IP address of the data agent.
 - Yes: Continue with step 2.
 - No: Correct the IP address.

- 2** Check for correct sysObjectId MIB variable.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Correct the sysObjectId MIB variable.

- 3** Is the alarm now cleared?
 - Yes: O.K.
 - No: Call Lucent Technologies Technical Support.

END OF STEPS



MINOR_UPLOAD_PROBLEM

Meaning Minor synchronization problem. Wrong feeder index and/or virtual channels/cross connection without provisioned drop may have been detected.

Alarm Severity: Minor

Service affecting: No

Effects Some configuration data are not consistent in the NAM database.

Possible cause(s) AFM problem.

Corrective actions Proceed as follows to clear the alarm:

- 1 Check the AFM's MIB content.

END OF STEPS



NB_ASSOC_FAILED

Meaning The communication association with the telephony agent has failed.

Alarm severity: *Critical*

Service affecting: *No*

This alarm covers the following alarms:

- TCP/IP_CON_REFUSED (cf. [“TCP_IP_CON_REFUSED” \(8-96\)](#))
Meaning: The TCP/IP connection establishment could not be completed successfully for port numbers 11002, 11004, 11006 and 11008.
- TL1_COMM_DENIED (cf. [“TL1_COMM_DENIED” \(8-97\)](#))
Meaning: User login for a TL1 communication session was denied by the telephony agent for all TCP/IP connections opened.
- NB_ASSOC_LOST (cf. [“NB_ASSOC_LOST” \(8-98\)](#)).
Meaning: The NAM lost the management association with the telephony agent.

□

TCP_IP_CON_REFUSED

Meaning The TCP/IP connection establishment could not be completed successfully for port numbers 11002, 11004, 11006 and 11008.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the telephony agent.

Possible cause(s) Some TCP/IP protocol errors stopped the connection establishment process between the NAM and the telephony agent.

Corrective actions Proceed as follows to clear the alarm:

1 Check the TCP/IP communication addresses.

Are the TCP/IP communication addresses correct?

- Yes: Continue with step 2.
 - No: Correct the addresses. Continue with step 4.
-

2 Check the gateway telephony agent identification.

Is the gateway telephony agent identification correct?

- Yes: Continue with step 3.
 - No: Correct the identification. Continue with step 4.
-

3 Check the DCN.

Is the DCN in service?

- Yes: Continue with step 4.
 - No: Bring the DCN into service.
-

4 Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



TL1_COMM_DENIED

Meaning User login for a TL1 communication session was denied by the telephony agent for all TCP/IP connections opened.

Alarm severity: Critical

Service affecting: No

The alarm will be cleared when a TL1 communication session between the NAM and the telephony agent has been successfully opened.

Effects It is not possible to manage the telephony agent because there is no TL1 communication session available.

Possible cause(s) A user login error is stopping the TL1 communication session establishment process between the NAM and the telephony agent.

Corrective actions Proceed as follows to clear the alarm:

1 Check for correct user identification (user login), password and telephony agent target identifier (TID).

2 Check with the GSI that the four VCs in the telephony agent are not busy (RTRV-STATUS TL1 command).

END OF STEPS



NB_ASSOC_LOST

Meaning The NAM lost the management association with the telephony agent.

Alarm severity: *Critical*

Service affecting: *No*

The alarm will be cleared when the TCP/IP connection and TL1 communication session are available, and the software version currently stored in the NE is supported by the NAM, i.e. when the association process between the NAM and the NE is completed (NE state is *CONNECTED*).

Effects It is not possible to manage the telephony agent. The TL1 communication session and the TCP/IP connection are lost.

Possible cause(s) A loss of the TCP/IP connection has been detected, or the TCP/IP connection has been closed as a consequence of a loss of the TL1 communication session.

Corrective actions Proceed as follows to clear the alarm:

1 Check the telephony agent state after a waiting period of 1 minute.

Note: When the NE state is *CONNECTED* and the TCP/IP connection is lost or closed, the NE state is moved to *TRYING* and the loop process to re-establish the connection with the NE is started by the NAM.

Is the state *CONNECTED*?

- Yes: O.K.
 - No: Continue with step 2.
-

2 Check for Data Communication Network (DCN) being in service.

Is the DCN in service?

- Yes: Call Lucent Technologies Technical Support.
- No: Put the DCN into service.

END OF STEPS



NP_SYNC_PROBLEM

Meaning The network profile synchronization with all the managed agents has not finished successfully.

Alarm severity: Major

Service affecting: No

Effects The network profile is not synchronized with all the managed agents.

Possible cause(s) NAM internal problem.

Corrective actions Proceed as follows to clear the alarm:

- 1 Resynchronize the related network profile.

END OF STEPS



SW_VR_ILLEGAL

Meaning The software version currently stored in the agent is not supported by the NAM.

Alarm severity: Critical

Service affecting: No

Effects It is not possible to manage the agent. Agent software version is not supported.

Possible cause(s) The software version currently stored in the agent is not supported by the NAM, or the NAM is trying to establish the communication with a agent while its COMDAC/AFM initialization process is in progress.

Corrective actions Proceed as follows to clear the alarm:

1 Check that the correct version of software is installed on the agent's system controller card.

- Yes: Continue with step 2.
 - No: Install the correct SW version.
-

2 Check if the COMDAC/AFM is in the initialization process, and wait until this process has finished.

Is the alarm now cleared?

- Yes: O.K.
- No: Call Lucent Technologies Technical Support.

END OF STEPS



UNABLE_TO_SYNC_ALARM

Meaning The alarm synchronization process has failed “n” times.

Alarm severity: Major

Service affecting: No

Effects An updated view of the alarm data of the data agent cannot be uploaded.

Possible Cause(s) The communication with the data agent may be interrupted.

Corrective actions Proceed as follows to clear the alarm:

- 1** Check for correct data agent state.
 - Yes: Continue with step 2.
 - No: Call Lucent Technologies Technical Support.

- 2** Check for DCN being in service.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Put the DCN into service.

- 3** Is the alarm now cleared?
 - Yes: O.K.
 - No: Call Lucent Technologies Technical Support.

END OF STEPS



UNABLE_TO_SYNC_CONFIG

Meaning The configuration synchronization process has failed “n” times.

Alarm severity: Major

Service affecting: No

Effects An updated view of the configuration data of the data agent cannot be uploaded.

Possible cause(s) The communication with the data agent may be interrupted.

Corrective actions Proceed as follows to clear the alarm:

- 1 Check for correct data agent state.
 - Yes: Continue with step 2.
 - No: Call Lucent Technologies Technical Support.

- 2 Check for DCN being in service.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Put the DCN into service.

- 3 Is the alarm now cleared?
 - Yes: O.K
 - No: Call Lucent Technologies Technical Support.

END OF STEPS



UNSYNC_NETWORK_PROF

Meaning A NE profile and the network profile have different content and the NAM cannot edit the NE profile.

Alarm severity: Major

Service affecting: No

Effects The NE profile data can not be updated according to the network profile.

Possible cause(s) The NAM cannot edit the NE profile.

Corrective actions Proceed as follows to clear the alarm:

- 1 Check for correct data agent state
 - Yes: Continue with step 2.
 - No: Call Lucent Technologies Technical Support.
-

- 2 Check for DCN being in service.
 - Yes: Call Lucent Technologies Technical Support.
 - No: Put the DCN into service.

END OF STEPS



UPLOAD_PROBLEM

Meaning Some configuration data have been lost during synchronization.

Alarm severity: Critical

Service affecting: No

Effects Some configuration data are not available in the NAM database.

Possible cause(s) AFM problem.

Corrective actions Proceed as follows to clear the alarm:

- 1 Check for correct AFM configuration.

END OF STEPS



Correlated alarms

Introduction The following table contains a list of NAM alarms triggered by alarms from the telephony or/and data agent.

Example The POLL alarm from the telephony agent as well as the amasAFMAPNoResponseAlarmCS alarm from the data agent effects the DUP_NO_RESP_POLL alarm in the NAM.

Probable Cause	Summary	Severity	Service Affecting	Object_Id	Description
POLL	not responding to poll	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
amasAFMAPNoResponseAlarmCS	AP not responding to AFM poll	Major, Minor	yes	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
DUP_NO_RESP_POLL	not responding to poll	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	AP: pack not responding to poll
INT	internal hardware failure	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
amasAFMPack-FailAlarmCS	AP self test pack failure reported	Major, Minor	yes	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
amasAFMAPFailAlarmCS	AFM self test pack failure reported	Major, Minor	yes	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
DUP_PACK_FAIL	internal hardware failure	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	AP self test pack failure reported
PRCDERR	procedural error	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	illegal/unknown pack in AP slot
amasUnknown-PackType	unknown pack detected	Minor	no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	

Probable Cause	Summary	Severity	Service Affecting	Object_Id	Description
DUP_PACK_MISMATCH	incompatible pack type	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	illegal pack in AP slot
IMPROPRMVL	improper removal	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	missing pack in AP slot
amasAFMPackRemovedAlarmCS	AP has been removed	Minor	yes	ap-1-{1, 16} subap-{1, 8}-{1, 8}	
DUP_PACK_RMVL	pack removal	Major, Minor	yes, no	ap-1-{1, 16} subap-{1, 8}-{1, 8}	missing pack in AP slot
PRCDERR	mismatch of logical subshelf number	Critical	yes	subsh-{1, 8}	
amasSubShelfAssociationMismatchAlarm	association mismatch reported	Major	yes	subsh-{1, 8}	
DUP_SUBSHELF_MISMATCH	incompatible subshelf type	Critical	yes	subsh-{1, 8}	illegal subshelf type in parent slot





9 Performance monitoring

Overview

Purpose This chapter provides you with informations about

- ADSL performance monitoring
- SDSL performance monitoring
- SHDSL performance monitoring
- AFM feeder performance monitoring
- ATM traffic monitoring
- ATM traffic profiles
- Network profiles
- NE profiles.

It describes the collection, display, logging and threshold reporting for performance monitoring (PM) and traffic measurements counts.

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ADSL performance monitoring data

Overview

Purpose The NAM is able to retrieve the ADSL PM counts by direct request to the data agent. Only the "Previous 15 min" interval data are retrieved via ftp, when the data agent is enabled for periodic PM data collection. Then, the 15-minutes interval data and the 1-day data are retrieved and stored in a per day log file in the logs directory..

When the ReportTranslator has been added to the cron, it translates the ADSL PM logs of all the data agents once a day, generating a unique log file (ADSLLineStatisticsLog_YYYYMMDD ; YYYY=year, MM=month and DD=day) in the /opt/amasem_pmbb_logs directory. The file contains also hints about start logging, stop logging and error messages.

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ADSL PM Data window

Overview This window is used to display all the performance monitoring parameters of an ADSL drop. It also allows the user to select data collection or clear counters of either the selected ADSL drop or all the ADSL drops in the NE.

The screenshot shows the 'ADSL PM Data' window. At the top, there is a text field for 'NE Name' containing 'OC3'. Below it are three dropdown menus for 'Drop Id' with values 'drop-1', '14', and '1'. A checkbox labeled 'Log All PM Drops Data' is present. The main area is divided into 'Upstream' and 'Downstream' sections. Each section has a table of performance metrics: 'Errored Seconds (ES)', 'Loss Of Signal (LOS)', 'High Bit Error Rate (HBER)', and 'Loss Of Frame (LOF)'. For each metric, there are four input fields corresponding to 'Current 15 min.', 'Previous 15 min.', 'Current Day', and 'Previous Day'. Below these tables are 'Valid Data' checkboxes for each of the four time periods. At the bottom, there are three buttons: 'Get', 'Reset Counts', and 'Reset All Counts', and a 'Close' button. A status bar at the very bottom indicates 'Reload Successful'.

Window description The following table shows the view/edit options of this window.

Parameter/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameter/Buttons	Description
Drop Id	<p>These fields display the ADSL drop id by means of three option menus:</p> <ul style="list-style-type: none"> • The first one contains the drop shelf Format: drop-1 or subdrop-{1, 8}. None is also allowed. • The second one contains the slot number inside the NE, but only for slots in which an ADSL pack is provisioned. Format: {1, 16} for main shelf or {1, 8} for subshelf or {0, 19} for BAIU. None is also allowed. • The third one contains the drop number inside the slot indicated in the previous list {1, x}. Format: drop-shelf-slot-port. Possible values: drop-1-{1, 16}-{1, x} or subdrop-{1, 8}-{1, 8}-{1, x} or drop-1-{0, 19}-{1, x} for BAIU. None is also allowed. (x is the number of drops, supplied by the server).
Log All PM Drops Data	<p>This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the drops (ADSL, SDSL, SHDSL) in the NE or not.</p>

Parameter/Buttons	Description
Performance Monitoring	<p>Upstream: Four text fields show the values for different time periods (Current 15 min, Previous 15 min, Current day, Previous day) for the selected ADSL drop.</p> <ul style="list-style-type: none">• Errored Seconds (ES): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day.• Loss of Signal (LOS): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day.• High Bit Error Rate (HBER): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day.• Loss of Frame (LOF): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p>

Parameter/Buttons	Description
Performance Monitoring (continued)	<p>Downstream: Four text fields show the values for different time periods (Current 15 min, Previous 15 min, Current day, Previous day) for the selected ADSL drop.</p> <ul style="list-style-type: none"> • Errored Seconds (ES): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day. • Loss of Signal (LOS): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. • High Bit Error Rate (HBER): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. • Remote Failure Indication (RFI): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the PM data of the selected drop.</p> <p>The Reset Counts button is used to restart the PM of the selected drop.</p> <p>The Reset All Drops Counts button is used to restart the PM of all the xDSL drops within the NE.</p>



Modify the ADSL performance monitoring

Procedure Complete the following procedure to modify the ADSL performance monitoring data:

1 Click on the **PM Data...** button in the **ADSL Drop** window. The **ADSL Performance Monitoring Data** window pops up.

2 Use the option menus **Drop Id** to select the desired ADSL drop.

3 Use the check box **Log All PM Drops Data** to define whether the monitoring data should be logged or not.

4

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the performance monitoring data counter for the selected drop	click on Reset Counts .
restart the performance monitoring data counters for all drops within the NE	click on Reset ALL Drops Counts .

5 Click on **Close** to exit the window.

END OF STEPS



SDSL performance monitoring data

Overview

Purpose The NAM is able to retrieve the SDSL PM counts by direct request to the data agent. Only the "Previous 15 min" interval data are retrieved via ftp, when the data agent is enabled for periodic PM data collection. Then, the 15-minutes interval data and the 1-day data are retrieved and stored in a per day log file in the logs directory..

When the ReportTranslator has been added to the cron, it translates the SDSL PM logs of all the data agents once a day, generating a unique log file (SDSLLineStatisticsLog_YYYYMMDD ; YYYY=year, MM=month and DD=day) in the /opt/amasem_pmbb_logs directory. The file contains also hints about start logging, stop logging and error messages.



SDSL PM Data window

Overview This window is used to display all performance monitoring parameters of an SDSL drop. It also allows the user to select data collection or clear counters of either the selected SDSL drop or all the SDSL drops in the NE.



Window description The following table shows the view/edit options of this window

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Drop Id	<p>These fields display the SDSL drop id by means of three option menus:</p> <ul style="list-style-type: none"> • The first one contains the drop shelf format: drop-1 or subdrop-{1, 8}. None is also allowed. • The second one contains the slot number inside the NE, but only for slots in which an SDSL pack is provisioned. Format: {1, 16} for main shelf or {1, 8} for subshelf or {0, 19} for BAIU. None is also allowed. • The third one contains the drop number inside the slot indicated in the previous list {1, x}. Format: drop shelf-slot-port. Possible values: drop-1-{1, 16}-{1, x} or subdrop-{1, 8}-{1, 8}-{1, x} or drop-1-{0, 19}-{1, x} for BAIU. None is also allowed. (x is the number of drops, supplied by the server).
Log All PM Drops Data	<p>This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the drops (ADSL, SDSL, SHDSL) in the NE or not.</p>

Parameters/Buttons	Description
Performance Monitoring	<p>Upstream: Four text fields show the values for four different time periods (Current 15 min, Previous 15 min, Current day, Previous day).</p> <ul style="list-style-type: none"> • Errored Seconds (ES): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day. • Loss of Signal (LOS): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. • High Bit Error Rate (HBER): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. • Loss of Frame (LOF): Possible values: {0, 90} for 15 minutes, {0, 8640} for one day. <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the PM data of the selected drop.</p> <p>The Reset Counts button can be used to restart the performance monitoring of the selected drop.</p> <p>The Reset All Drops Counts button can be used to restart the performance monitoring of all SDSL drops within the NE.</p>



Modify the SDSL performance monitoring

Procedure Complete the following procedure to modify the SDSL performance monitoring data:

1 Click on the **PM Data...** button in the **SDSL Drop** window. The **SDSL PM Data** window pops up.

2 Use the option menus **Drop Id** to select the desired SDSL drop.

3 Use the check box **Log All PM Drops Data** to define whether the monitoring data should be logged or not.

4

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for the selected drop	click on Reset Counts .
restart the monitoring data counters for all drops within the NE	click on Reset ALL Drops Counts .

5 Click on **Close** to exit the window.

END OF STEPS



SHDSL performance monitoring data

Overview

Purpose The NAM is able to retrieve the SHDSL PM counts by direct request to the data agent. Only the "Previous 15 min" interval data are retrieved via ftp, when the data agent is enabled for periodic PM data collection. Then, the 15-minutes interval data and the 1-day data are retrieved and stored in a per day log file in the logs directory.

When the ReportTranslator has been added to the cron, it translates the SHDSL PM logs of all the data agents once a day, generating a unique log file (SHDSLLineStatisticsLog_YYYYMMDD ; YYYY=year, MM=month and DD=day) in the /opt/amasem_pmbb_logs directory. The file contains also hints about start logging, stop logging and error messages.

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SHDSL ATM PM Data window

Overview This window is used to display all performance monitoring parameters of an SHDSL drop. It also allows the user to select data collection or clear counters of either the selected SHDSL drop or all the SHDSL drops in the NE concerned.



Window description The following table shows the view options of this window.

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Drop Id	<p>These fields display the SHDSL drop id by means of three option menus:</p> <ul style="list-style-type: none"> • The first one contains the drop shelf format: drop-1 or subdrop-{1, 8}. None is also allowed. • The second one contains the slot number inside the NE, but only for slots in which an SHDSL pack is provisioned. Format: {1, 16} for main shelf or {1, 8} for subshelf or {0, 19} for BAIU. None is also allowed. • The third one contains the drop number inside the slot indicated in the previous list {1, x}. Format: drop shelf-slot-port. Possible values: drop-1-{1, 16}-{1, x} or subdrop-{1, 8}-{1, 8}-{1, x} or drop-1-{0, 19}-{1, x} for BAIU. None is also allowed. (x is the number of drops, supplied by the server).
Log All PM Drops Data	<p>This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the drops (ADSL, SDSL, SHDSL) in the NE or not.</p>

Parameters/Buttons	Description
Performance Monitoring	<p>Upstream/Downstream: Four text fields show the values for four different time periods (Current 15 min, Previous 15 min, Current day, Previous day) for the selected SHDSL drop.</p> <ul style="list-style-type: none"> • Errored Seconds (ES): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day. • Severely Errored Seconds (SES): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day. • Unavailable Seconds (UAS): Possible values: {0, 900} for 15 minutes, {0, 86400} for one day. <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the PM data of the selected drop.</p> <p>The Reset Counts button can be used to restart the performance monitoring of the selected drop.</p> <p>The Reset All Drops Counts button can be used to restart the performance monitoring of all xDSL drops within the NE.</p>



Modify the SHDSL performance monitoring

Procedure Complete the following procedure to modify the SHDSL performance monitoring data:

1 Click on the **PM Data...** button in the **SHDSL ATM Drop** window. The **SHDSL ATM PM Data** window pops up.

2 Use the option menus **Drop Id** to select the desired SHDSL drop.

3 Use the check box **Log All PM Drops Data** to define whether the monitoring data should be logged or not.

4

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for the selected drop	click on Reset Counts .
restart the monitoring data counters for all drops within the NE	click on Reset ALL Drops Counts .

5 Click on **Close** to exit the window.

END OF STEPS



AFM feeder performance monitoring

Overview

Purpose The AFM feeder performance monitoring consists of retrieving, displaying, provisioning and storing DS3/DS1/OC3c/IMA Group/IMA Link performance measurements detected by the AFM.

The NAM is able to retrieve the DS3 performance monitoring counts from the NE. The interval data are retrieved and stored every 15 minutes the day data are retrieved and stored every 24 hours from each enabled NE. The 24 hour data for feeders is updated every 15 minutes in the AFM.

The data are stored per day in a separate log files

- DS3E3StatisticsLog_YYYYMMDD
- DS1E1StatisticsLog_YYYYMMDD
- OpticalSecRegSecStatisticsLog_YYYYMMDD
- OpticalLineMultSecUpStatisticsLog_YYYYMMDD
- OpticalLineMultSecDownStatisticsLog_YYYYMMDD
- IMAGroupStatisticsLog_YYYYMMDD
- IMALinkStatisticsLog_YYYYMMDD

where YYYY = year, MM = month and DD = day) located in /opt/amasem_pmbb_logs. The files contains also hints about start logging, stop logging and error messages.

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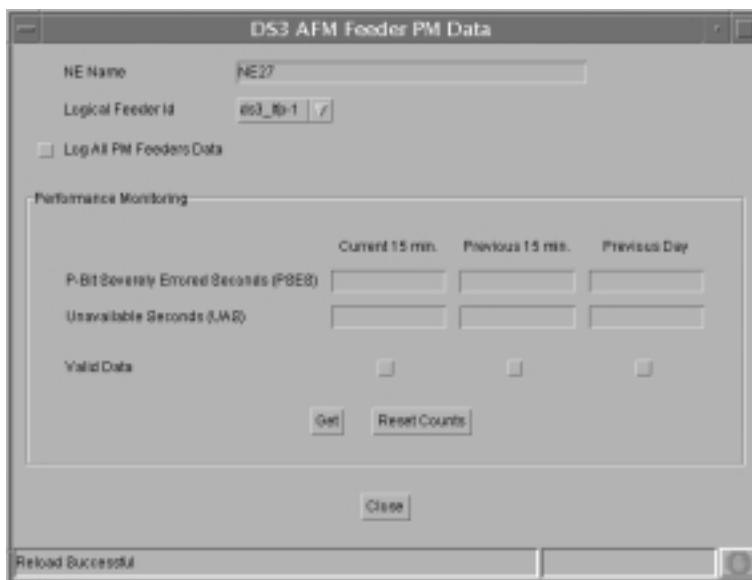
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DS3 AFM Feeder PM Data window

Overview This window displays the AFM performance monitoring parameter of the selected feeder. This window also allows to select data collection (for all the feeders in the NE) or clear counters of one feeder.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Logical Feeder Id	This option menu can be used to select an appropriate feeder. Possible values: ds3_lfp-{1, 2} . If coming from the DS3 AFM Feeder window the previous selected feeder is shown.
Log All PM Feeders Data	This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the feeders in the NE or not.

Parameters/Buttons	Description
Performance Monitoring	<p>Three text fields show the values for three different time periods (Current 15 minutes, Previous 15 minutes, Previous day).</p> <ul style="list-style-type: none">• P-bit Severely Errored Second (PSES): Possible values: {1, 900} for 15 minutes, {1, 86400} for one day.• Unavailable Seconds (UAS): Possible values: {1, 900} for 15 minutes, {1, 86400} for one day. <p>Valid Data: Three check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the performance monitoring data of the selected feeder.</p> <p>The Reset Counts button can be used to restart the performance monitoring data of the selected feeder.</p> <p>The Reset All Counts button can be used to restart the performance monitoring data of all the feeders.</p>



Modify the PM data of the DS3 AFM feeder

Procedure Complete the following procedure to modify the performance monitoring data of the DS3 AFM feeder:

- 1 Click on the **PM Data...** button in the **DS3 AFM Feeder** window. The **DS3 AFM PM Data** window pops up.

- 2 Use the option menu **Logical Feeder Id** to select the desired feeder.

- 3 Use the check box **Log Performance Data** to define whether the monitoring data should be logged or not.

4

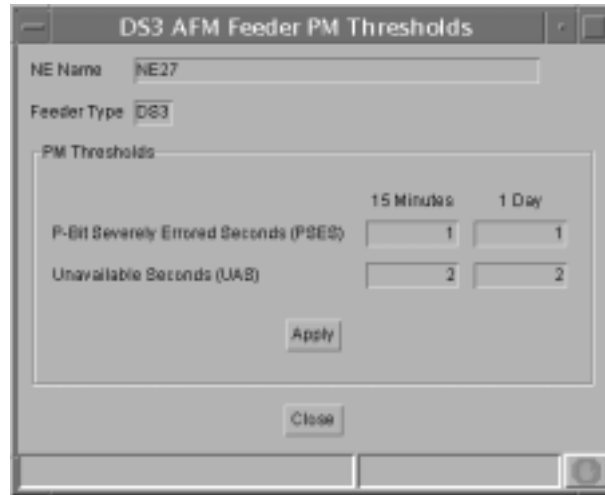
If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for the selected feeder	click on Reset Counts .
restart the monitoring data counter for all the feeders	click on Reset All Counts .
exit the window	click on Close .

END OF STEPS



DS3 AFM Feeder PM Threshold window

Overview This window is used to configure the PM threshold parameters of the DS3 feeder. It can be reached from the **DS3 AFM Feeder** window (cf. [“DS3 AFM Feeder window” \(6-86\)](#)).



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Feeder Type	This field displays the feeder type: DS3 .

Parameters/Buttons	Description
PM Thresholds	<p>The following parameters are applicable to all feeders.</p> <p>P-Bit Severely Errored Second (PSES): These text fields show the PSES thresholds for 15-minute/1-day periods. A PSES is a second with 44 or more PCVs or one or more OOF defects or a detected incoming AIS. This gauge is not incremented when UASs are counted.</p> <p>Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute/1-day periods. The UASs are calculated by counting the number of seconds that the interface is unavailable.</p> <p>Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p>
Apply	This button is used to confirm the changes.



Define the DS3 AFM feeder PM thresholds

Procedure Complete the following procedure to define the feeder PM thresholds:

- 1 Open the **DS3 AFM** window (cf. [“Modify a DS3 AFM” \(6-84\)](#)).

- 2 Select the desired feeder and press **Edit** or double click on the row entry. The **DS3 AFM Feeder** window pops up (cf. [“DS3 AFM Feeder window” \(6-86\)](#)).

- 3 Click on **PM Thresholds....** The **AFM Feeder PM Threshold** window pops up.

- 4 Use the corresponding text fields to define the desired thresholds and press **Apply**.

- 5 Click on **Close** to exit the window.

END OF STEPS



OC3c AFM Feeder PM Data window

General This window displays the OC3c AFM performance monitoring parameter of the selected feeder. This window also allows to select data collection (for all the feeders in the NE) or to clear counters. This window is available for R1.13 and subsequent releases.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Feeder Id	<p>This option menu is used to select the desired feeder. Possible values : oc3_pfp-1-{15, 16}-{1, 2} (oc3_pfp-1-{0, 1}-{1, 2} for BAIU).</p> <p>If coming from the OC3c AFM Feeder window the previously selected feeder is shown.</p>

Parameters/Buttons	Description
Performance Monitoring/Tab Section Layer Downstream	<p>Log All PM Feeders Data: This check box can be used to define whether the NAM is collecting and logging the section downstream performance monitoring data for all the feeders in the NE or not.</p> <p>Start Time: Four fields show the start time for the different time periods: Current 15 min, Previous 15 min, Current Day, Previous Day.</p> <p>Coding Violations (CV): These text fields show the CV thresholds for the four time periods.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for the four time periods.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for the four time periods.</p> <p>Severely Errored Framing Seconds (SEFS): These text fields show the SEFS thresholds for the four time periods.</p> <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the performance monitoring data of the selected feeder.</p> <p>The Reset Current Counts button is used to restart the current section downstream performance monitoring data of the selected feeder.</p> <p>The Reset All Counts button is used to restart the current and previous section downstream performance monitoring data of the selected feeder.</p>

Parameters/Buttons	Description
Performance Monitoring/Tab Line Layer-Upstream	<p>Log All PM Feeders Data: This check box can be used to define whether the NAM is collecting and logging the section downstream performance monitoring data for all the feeders in the NE or not.</p> <p>Start Time: Four fields show the start time for the different time periods: Current 15 min, Previous 15 min, Current Day, Previous Day.</p> <p>Coding Violations (CV): These text fields show the CV thresholds for the four time periods.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for the four time periods.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for the four time periods.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for the four time periods.</p> <p>Failure Counts (FC): These text fields show the FC thresholds for the four time periods.</p> <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the performance monitoring data of the selected feeder.</p> <p>The Reset Current Counts button is used to restart the current section upstream performance monitoring data of the selected feeder.</p> <p>The Reset All Counts button is used to restart the current and previous section upstream performance monitoring data of the selected feeder.</p>

Parameters/Buttons	Description
Performance Monitoring/Tab Line Layer-Downstream	<p>Log All PM Feeders Data: This check box can be used to define whether the NAM is collecting and logging the section downstream performance monitoring data for all the feeders in the NE or not.</p> <p>Start Time: Four fields show the start time for the different time periods: Current 15 min, Previous 15 min, Current Day, Previous Day.</p> <p>Coding Violations (CV): These text fields show the CV thresholds for the four time periods.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for the four time periods.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for the four time periods.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for the four time periods.</p> <p>Failure Counts (FC): These text fields show the FC thresholds for the four time periods.</p> <p>Protection Switch Counts (PSC): These text fields show the PSC thresholds for the four time periods.</p> <p>Valid Data: Four check boxes show whether the data for the time period are reliable or not.</p> <p>The Get button is used to retrieve the performance monitoring data of the selected feeder.</p> <p>The Reset Current Counts button is used to restart the current section downstream performance monitoring data of the selected feeder.</p>

Parameters/Buttons	Description
Performance Monitoring/Tab Line Layer-Downstream (continued)	The Reset All Counts button is used to restart the current and previous section downstream performance monitoring data of the selected feeder.
Common Button	The Reset All Feeders Counts button is used to restart the current and previous performance monitoring data of all feeders in the AFM.



Modify the PM data of the OC3c AFM feeder

Procedure Complete the following procedure to modify the PM data of the OC3c AFM feeder:

- 1 Open the **OC3c AFM Feeder** window (cf. [“Modify an OC3c AFM feeder” \(6-103\)](#)).

- 2 Click on the **PM Data...** The **OC3c AFM Feeder PM Data** window pops up (tab **Section Layer**).

- 3 Use the option menu **Feeder Id** to select the desired feeder.

- 4 If you want to modify the Section Layer parameters then proceed with step 5. If you want to modify the Line Layer parameters then continue with step 8.

- 5 Use the check box **Log All PM Feeders Data** to define whether the monitoring data should be logged or not.

6

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the current downstream PM data counter for the selected feeder	click on Reset Current Counts .
restart the current and previous downstream PM data counter for the selected feeder	click on Reset All Counts .
restart the current and previous PM data counters for all feeders in the AFM	click on Reset All Feeders Counts .

.....

7 Continue with step 8 to modify the Line Layer parameters or click on **Close** to exit the window.

.....

8 Select tab **Line Layer -Upstream (Downstream)**.

.....

9 Use the check boxes **Log All PM Feeders Data** to define whether the monitoring data should be logged or not.

.....

10

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the current downstream/upstream PM data counter for the selected feeder	click on the corresponding button Reset Current Counts .
restart the current and previous section downstream/upstream PM data counter for the selected feeder	click on the corresponding button Reset All Counts .
restart the current and previous PM data counter for all feeders in the AFM	click on Reset All Feeders Counts .

.....

11 Click on **Close** to exit the window.

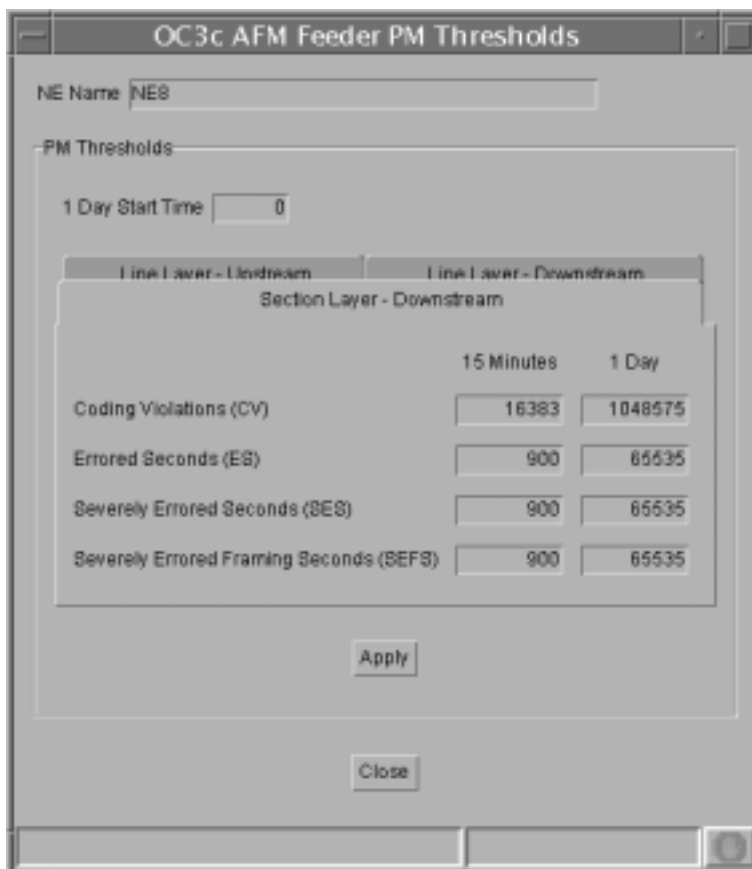
END OF STEPS

.....



OC3c AFM Feeder PM Threshold window

General This window is used to configure the PM threshold parameters of the OC3c feeder. It can be reached from the **OC3c AFM Feeder** window (cf. [“OC3c AFM Feeder window” \(6-97\)](#)). This window is available for R1.13 and subsequent releases.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
PM Thresholds	1 Day Start Time: This field is used to define the start time of the 1-day intervals. Possible values: {0, 23}.

Parameters/Buttons	Description
PM Thresholds/tab Section Layer-Downstream	<p>Coding Violations (CV): These text fields show the CV thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 16383}. Possible values for 1 day {0, 1048575}.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Severely Errored Framing Seconds (SEFS): These text fields show the SEF thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p>

Parameters/Buttons	Description
PM Thresholds/tab Line Layer-Downstream	<p>Coding Violations (CV): These text fields show the CV thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 16383}. Possible values for 1 day {0, 1048575}.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p>

Parameters/Buttons	Description
PM Thresholds/tab Line Layer-Upstream	<p>Coding Violations (CV): These text fields show the CV thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 16383}. Possible values for 1 day {0, 1048575}.</p> <p>Errored Seconds (ES): These text fields show the ES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Severely Errored Seconds (SES): These text fields show the SES thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute/1-day periods. Possible values for 15 minutes: {0, 900}. Possible values for 1 day {0, 65535}.</p>
Apply	This button is used to confirm the changes.



Define the OC3c AFM feeder PM thresholds

Procedure Complete the following procedure to define the PM thresholds of the OC3c AFM feeder:

- 1** Open the **OC3c AFM Feeder** window (cf. [“OC3c AFM Feeder window” \(6-97\)](#)).

- 2** Click on **PM Threshold...** The **OC3c AFM Feeder PM Threshold** window (tab **Section Layer**) pops up.

- 3** Use the **1 Day Start Time** field to define the start hour for the 1-day interval.

- 4** If you want to define the **Section Layer** parameters then proceed with step 5. If you want to define the **Line Layer** parameters then continue with step 7.

- 5** Use the corresponding text fields to define the desired thresholds and press **Apply**.

- 6** If you want to define the **Line Layer** parameters then continue with step 7. Otherwise click on **Close** to exit the window.

- 7** Change to tab **Line Layer-Downstream (Upstream)**.

- 8** Use the corresponding text fields to define the desired thresholds and press **Apply**.

- 9** Click on **Close** to exit the window.

END OF STEPS



DS1 AFM Feeder PM Data window

General This window displays the DS1 AFM performance monitoring parameter of the selected feeder. This window also allows to select data collection (for all the feeders in the NE) or clear counters of one feeder or all of them.



Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Feeder Id	This option menu can be used to select an appropriate feeder. Possible values: ds1-1-16-{1, 8} for FAST shelf, ds1-1-0-{1, 8} for BAIU shelf. If coming from the DS1 AFM Feeder window the previously selected feeder is shown.

Parameters/ Buttons	Description
Log All PM Feeders Data	This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the feeders in the NE or not (Disabled for R1.13, R1.15 and R1.15U1 BB Agents).
Performance Monitoring	Three text fields show the values for three different time periods (Current 15 min, Previous 15 min, Previous Day) for the following parameters: <ul style="list-style-type: none"> • Errored Second (ES), Unavailable Seconds (UAS), Severely Errored Second (SES), Severely Errored Framing / Alarm Indication Signal Second (SAS), Coding Violation Path (CV-P), Coding Violation Line (CV-L), Errored Seconds Line (ES-L). <p>Valid Data: Three check boxes show whether the data for the time period are valid or not.</p> <p>The Get button is used to retrieve the performance monitoring data of the selected feeder (Disabled for R1.13, R1.15 and R1.15U1 BB Agents).</p> <p>The Reset Counts button is used to restart the performance monitoring data of the selected feeder (Disabled for R1.13, R1.15 and R1.15U1 BB Agents).</p> <p>The Reset All Counts button is used to restart the performance monitoring data of all the feeders in the AFM (Disabled for R1.13, R1.15 and R1.15U1 BB Agents).</p>



Modify the PM data of the DS1 AFM feeder

Procedure Complete the following procedure to modify the PM data of the DS1 AFM feeder:

- 1 Open the **DS1 AFM Feeder** window (cf. [“DS1 AFM Feeder window” \(6-109\)](#)).

- 2 Click on the **PM Data...** The **DS1 AFM Feeder PM Data** window pops up.

- 3 Use the option menu **Physical Feeder Id** to select the desired feeder.

- 4 Use the check box **Log All PM Feeder Data** to define whether the monitoring data should be logged or not.

5

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for the selected feeder	click on Reset Counts .
restart the monitoring data counter for all the feeders placed in the AFM	click on Reset All Counts .

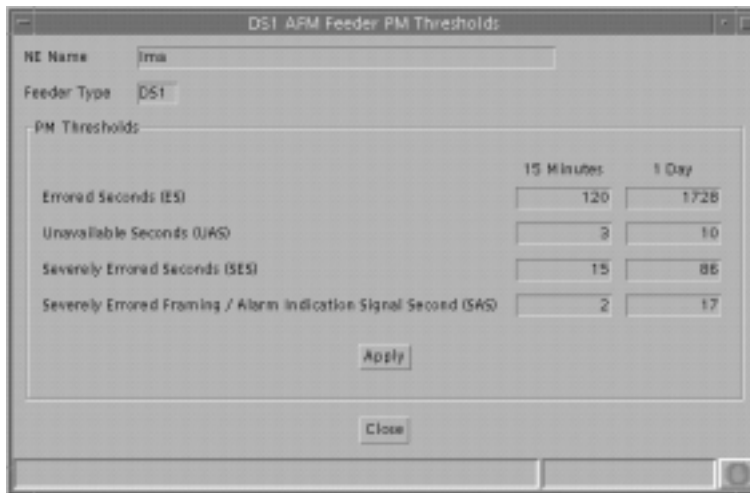
- 6 Click on **Close** to exit the window.

END OF STEPS



DS1 AFM Feeder PM Thresholds window

General This window is used to configure the PM threshold parameters of the feeder. It can be reached from the DS1 AFM Feeder window (cf. [“DS1 AFM Feeder window” \(6-109\)](#)).



Window description The following table shows the view/edit options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Feeder Type	This field displays the feeder type: DS1 .

Parameters/ Buttons	Description
PM Thresholds	<p>The following parameters are applicable to all feeders.</p> <p>Errored Second (ES): These text fields show the ES thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute and 1-day periods. The UASs are calculated by counting the number of seconds that the interface is unavailable. Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p> <p>Severely Errored Second (SES): These text fields show the SES thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p> <p>Severely Errored Framing/Alarm Indication Signal Second (SAS): These text fields show the SAS thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {1, 900}. Possible values for 1 day {1, 86400}.</p>
Apply	This button is used to confirm the changes.



Define the PM thresholds of the DS1 AFM Feeder

Procedure Complete the following procedure to define the PM thresholds of the DS1 AFM feeder:

- 1** Open the **DS1 AFM** window (cf. [“DS1 AFM window” \(6-105\)](#)).

- 2** Select the desired feeder and press **Edit** or double click on the row entry. The **DS1 AFM Feeder** window pops up (cf. [“DS1 AFM Feeder window” \(6-109\)](#)).

- 3** Click on **PM Thresholds...**. The **DS1 AFM Feeder PM Threshold** window pops up.

- 4** Use the corresponding text fields to define the desired thresholds and press **Apply**.

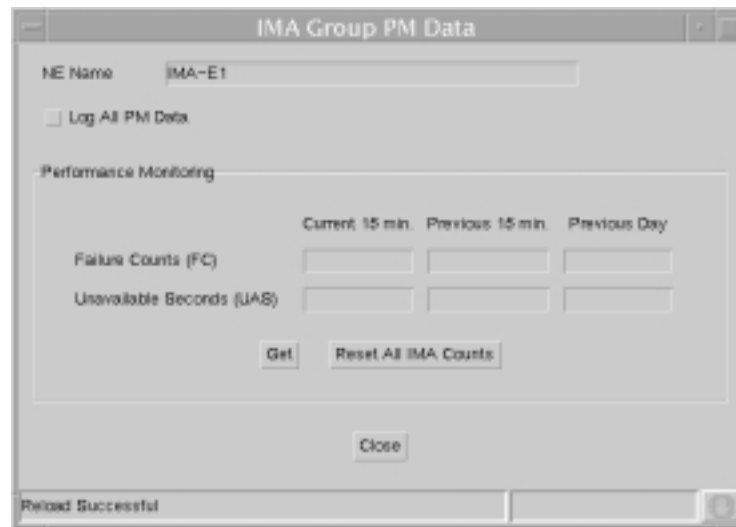
- 5** Click on **Close** to exit the window.

END OF STEPS



IMA Group PM Data window

General This window displays the IMA group performance monitoring parameters of the selected IMA group. This window also allows you to select data collection (for all the IMA groups in the NE) or to clear all IMA counts (IMA groups and IMA links).



Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Log All PM Data	This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the feeders in the NE or not.

Parameters/ Buttons	Description
Performance Monitoring	<p>Three text fields show the values for three different time periods (Current 15 min, Previous 15 min, Previous Day).</p> <ul style="list-style-type: none"> • Failure Count (FC): These text fields show the FC thresholds for 15-minutes and 1-day periods. Possible values for 15 minutes: {0, 1000}. Possible values for 1 day: {0, 5000}. • Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {0, 100}. Possible values for 1 day: {0, 300}. <p>The Get button is used to retrieve the performance monitoring data of the selected IMA group.</p> <p>Note that periodic PM collection is possible only if the connection between NAM and the data agent of the NE is in communication state COMM_ESTABLISHED or COMM_ESTABLISHED_SYNCHRONIZING.</p> <p>The Reset All IMA Counts button can be used to restart the performance monitoring data of all IMA groups and all IMA links.</p>



View the PM data of the IMA group

Procedure Complete the following procedure to modify PM data of the IMA group:

- 1 Select **NE** in the **Network Browser** and **Performance** → **IMA Group** via the cursor menu. The **IMA Group PM Data** window pops up.

This window can also be reached from the **IMA Group** window via **PM Data...**

- 2 Use the check box **Log All PM Data** to define whether the monitoring data should be logged or not.
-

- 3

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for all IMA groups and IMA links	click on Reset All IMA Counts .

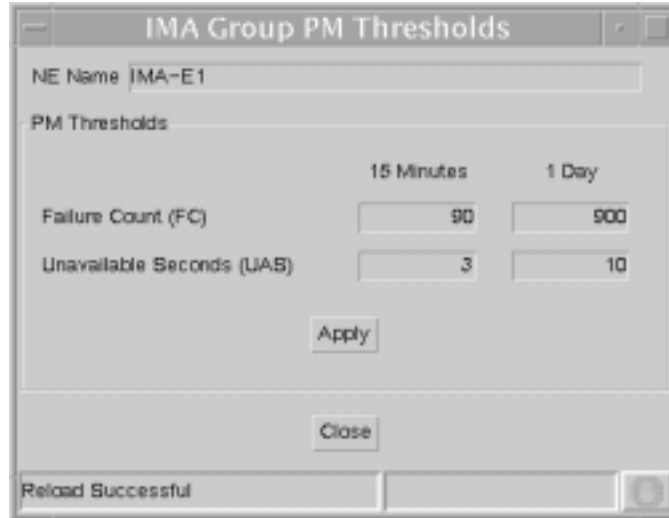
- 4 Click on **Close** to exit the window.

END OF STEPS



IMA Group PM Thresholds window

General This screen is used to configure the feeder PM threshold parameters. It can be reached from the **IMA Group** window (cf. [“View the IMA Group parameters” \(6-113\)](#)).



Window description The following table shows the view/edit options of this window:

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/ Buttons	Description
PM Thresholds	<p>The following parameters are applicable to all IMA groups.</p> <p>Failure Count (FC): These text fields show the FC thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {1, 1000}. Possible values for 1 day: {1, 5000}.</p> <p>Unavailable Seconds (UAS): These text fields show the UAS thresholds for 15-minute and 1-day periods. The UASs are calculated by counting the number of seconds that the interface is unavailable. Possible values for 15 minutes: {1, 100}. Possible values for 1 day: {1, 300}.</p> <p>The Apply button is used to confirm the changes.</p>



Define the PM thresholds of the IMA group

Procedure Complete the following procedure to define the PM thresholds of the IMA group:

- 1** Open the **DS1 AFM** window (cf. [“DS1 AFM window” \(6-105\)](#)).

- 2** Click on **IMA Group...** (only available if the AFM is working in IMA mode). The **IMA Group** window pops up (cf. [“View the IMA Group parameters” \(6-113\)](#)).

- 3** Click on **PM Threshold...** The **IMA Group PM Threshold** window pops up.

- 4** Use the text fields **Failure Count (FC)** and/or **Unavailable Seconds (UAS)** to modify the parameters and click on **Apply**.

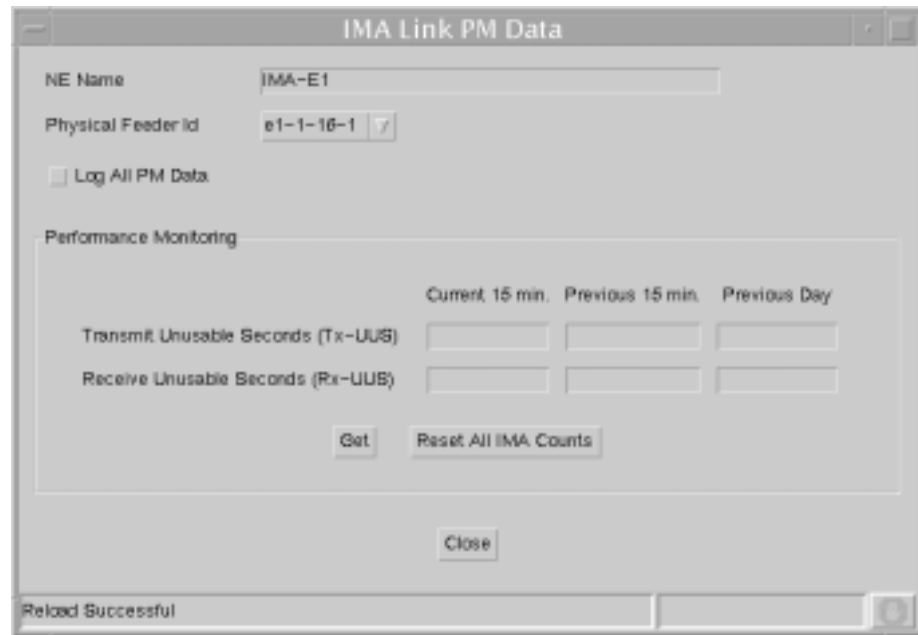
- 5** Click on **Close** to exit the window.

END OF STEPS



IMA Link PM Data window

General This window displays the IMA link performance monitoring parameters of the selected IMA link. This window also allows you to select data collection (for all the IMA links and groups in the NE) or to clear all IMA counts (IMA groups and IMA links).



Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Feeder Id	This option menu displays the available feeders which can be selected. If coming from the IMA Link window the previously selected feeder is displayed.
Log All PM Data	This check box can be used to define whether the NAM is collecting and logging the performance monitoring data for all the IMA links in the NE or not.

Parameters/ Buttons	Description
Performance Monitoring	<p>Three text fields show the values for three different time periods (Current 15 min, Previous 15 min, Previous Day) for the following parameters:</p> <p>Transmit Unusable Seconds (Tx-UUS), Receive Unusable Seconds (Rx-UUS).</p> <p>The Get button is used to retrieve the performance monitoring data of the selected IMA link.</p> <p>Note that periodic PM collection is possible only if the connection between NAM and the data agent of the NE is in communication state COMM_ESTABLISHED or COMM_ESTABLISHED_SYNCHRONIZING.</p> <p>The Reset All IMA Counts button can be used to restart the performance monitoring data of all IMA groups and all IMA links.</p>



Modify the PM data of the IMA Link

Procedure Complete the following procedure to modify the PM data of the IMA link:

- 1 Open the **IMA Link** window (cf. [“View the IMA Link parameters” \(6-118\)](#)).

- 2 Click on the **PM Data...** The **IMA Group PM Data** window pops up.

- 3 Use the check box **Log All PM Data** to define whether the monitoring data should be logged or not.

If you want to ...	then ...
retrieve the performance monitoring data	click on Get .
restart the monitoring data counter for all IMA groups and IMA links	click on Reset All IMA Counts .

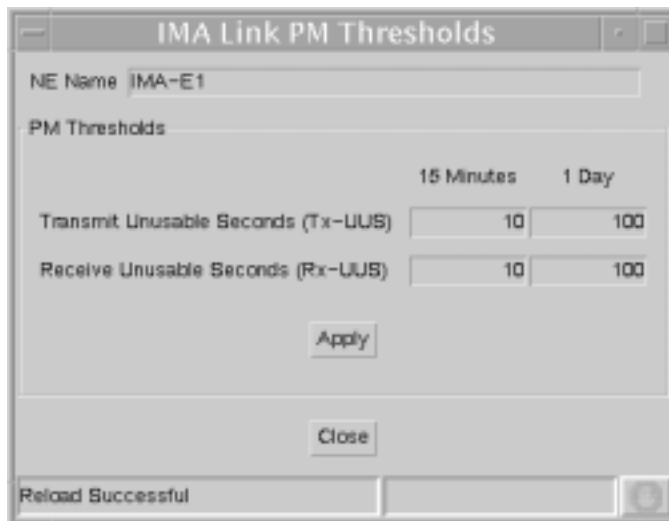
- 4 Click on **Close** to exit the window.

END OF STEPS



IMA Link PM Threshold window

General This window is used to configure the PM threshold parameters of the IMA link. It can be reached from the **IMA Link** window (cf. [“View the IMA Link parameters” \(6-118\)](#)).



Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/ Buttons	Description
PM Thresholds	<p>The following parameters are applicable to all IMA links.</p> <p>Transmit Unusable Seconds (Tx-UUS): These text fields show the Tx-UUS thresholds for 15-minutes and 1-day periods. Possible values for 15 minutes: {1, 300}. Possible values for 1 day: {1, 1000}.</p> <p>Receive Unusable Seconds (Rx-UUS): These text fields show the Rx-UUS thresholds for 15-minute and 1-day periods. Possible values for 15 minutes: {1, 300}. Possible values for 1 day: {1, 1000}.</p> <p>The Apply button is used to confirm the changes.</p>



Define the PM thresholds of the IMA link

Procedure Complete the following procedure to define the PM thresholds of the IMA link:

- 1 Open the **DS1 AFM** window (cf. [“DS1 AFM window” \(6-105\)](#)).

- 2 Select the desired feeder and press **Edit** or double click on the row entry. The **DS1 AFM Feeder** window pops up (cf. [“DS1 AFM Feeder window” \(6-109\)](#)).

- 3 Click on **IMA Link...** (only available if the AFM is working in IMA mode). The **IMA Link** window pops up (cf. [“View the IMA Link parameters” \(6-118\)](#)).

- 4 Click on **PM Threshold...** The **IMA Link PM Threshold** window pops up.

- 5 Use the text fields **Transmit Unusable Seconds (Tx-UUS)** and/or **Receive Unusable Seconds (Rx-UUS)** to modify the parameters and click on **Apply**.

- 6 Click on **Close** to exit the window.

END OF STEPS



ATM traffic monitoring

Overview

Purpose Limited ATM traffic measurements for cells received on the ATM feeder are collected by the AFM.

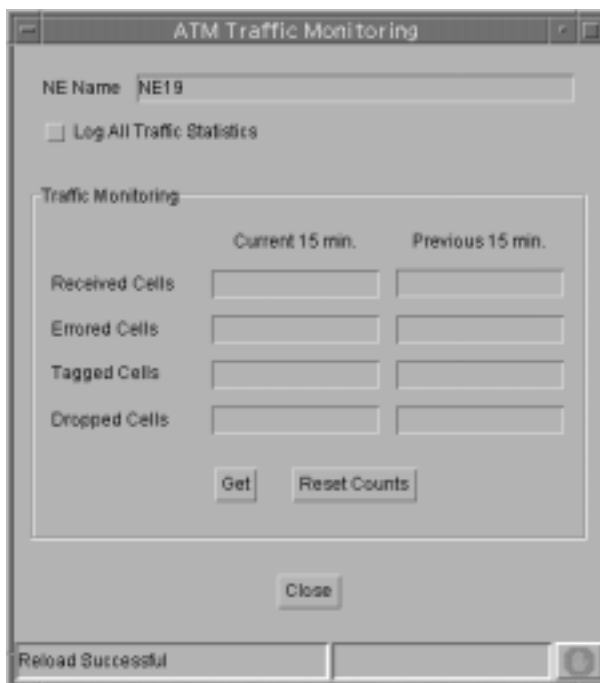
The NAM is able to display/clear the ATM cell traffic data. Interval data are retrieved and stored every 15 minutes from each enabled NE.

The data are stored per day in a separate log file (AdslATMStatistics-Log_YYYYMMDD; where YYYY = year, MM = month and DD = day) located in \$ANYMEDIAPATH/log. The file contains also hints about start logging, stop logging and error messages.



ATM Traffic Monitoring window

Overview This window is used to display all ATM cell traffic data. It also allows you to select data collection or to clear the counters.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Log All Traffic Data	This check box is used to specify whether the NAM is collecting and logging the traffic monitoring data in the NE or not.

Parameters/Buttons	Description
Traffic Monitoring	<p>Two text fields show the values for two different time periods (Current 15 min, Previous 15 min) for the following parameters:</p> <p>Receive Cells, Errored Cells , Tagged Cells, Dropped Cells.</p> <p>The Get button is used to retrieve the ATM traffic data.</p> <p>The Reset Counts button is used to clear all ATM traffic related current PM counts in the AFM.</p>



Modify the ATM traffic monitoring

Procedure Complete the following procedure to modify the ATM traffic monitoring:

- 1 Select **NE** in the **NE Browser** and **Performance** → **ATM Traffic** via the cursor menu. The **ATM Traffic Monitoring** window pops up.

- 2 Use the check box **Log All Traffic Data** to define whether the monitoring data should be logged or not.

3

If you want to ...	then ...
retrieve the traffic monitoring data	click on Get .
restart the traffic monitoring data counter	click on Reset Counts .
exit the window	click on Close .

END OF STEPS



Network profiles

Overview

Purpose This section provides an overview of network profiles.

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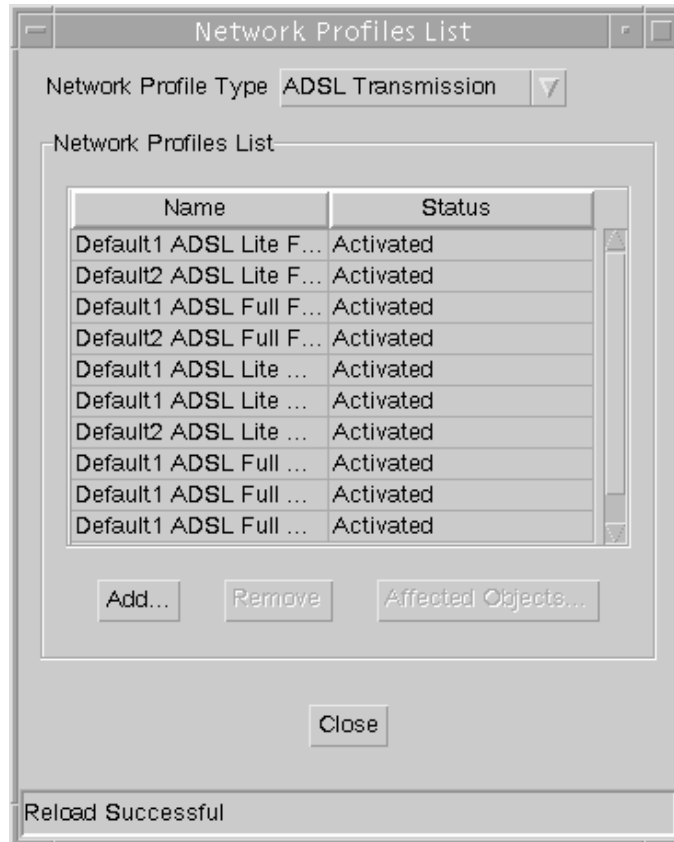
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Network Profiles List window

Overview This window is used to display a list of network profiles.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Network Profile Type	This option menu is used to select the network profile type. Possible values: ADSL PM Thresholds, SDSL PM Thresholds, SHDSL PM Thresholds, ADSL Transmission, SDSL Transmission, SHDSL Transmission, ATM Traffic.

Parameters/Buttons	Description
Network Profile List	<p>This table lists the Name and Status of each profile.</p> <p>The Add/Edit... button provides access to the following windows: “ADSL PM Thresholds Network Profile window ” (9-73), “SDSL PM Thresholds Network Profile window ” (9-80), “SHDSL ATM PM Thresholds Network Profile window ” (9-86) ,“ADSL Transmission Network Profile window ” (9-92), “SDSL Transmission Network Profile window ” (9-100), “SHDSL ATM Transmission Network Profile window ” (9-107) ,“ATM Traffic Network Profile window” (9-116). If a profile has been selected: Edit..., if no profile has been selected: Add...</p> <p>The Remove button can be used to delete a profile from the list. The button is enabled only if a row has been selected.</p> <p>The Affected Objects... button provides access to the Affected Objects List window. This button is enabled if the status of the profile is Activated.</p>



Add a network profile

Procedure Complete the following procedure to add a network profile:

- 1 Select the desired **Group** in the **Network Browser** and **Network Profiles** via the cursor menu. The **Network Profile List** window pops up.

- 2 Use the option menu **Network Profile Type** to select the desired profile type.

- 3 Click on **Add...** The corresponding network profile window pops up.

END OF STEPS



Modify a network profile

Procedure Complete the following procedure to modify a network profile:

- 1 Select the desired **Group** in the **Network Browser** and **Network Profiles** via the cursor menu. The **Network Profile List** window pops up.

- 2 Use the option menu **Network Profile Type** to select the desired profile type.

- 3 Select the desired profile in the **Network Profile** list and click on **Edit...** The corresponding network profile window pops up.

END OF STEPS



Remove a network profile

Procedure Complete the following procedure to remove a network profile (note that default profiles cannot be deleted):

- 1 Select a **Group** in the **Network Browser** and **Network Profiles** via the cursor menu. The **Network Profile List** window pops up.

- 2 Use the option menu **Network Profile Type** to select the desired profile type.

- 3 Select the desired profile in the **Network Profile** list and click on **Remove**.

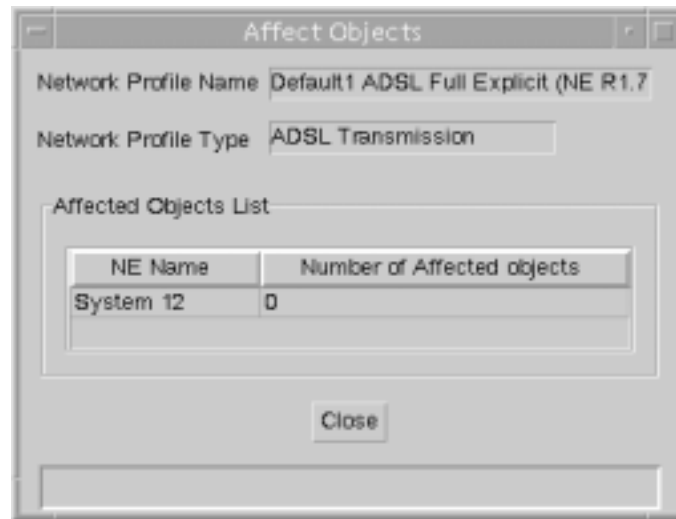
- 4 Click on **Close** to exit the window.

END OF STEPS



Affected Objects window

Overview This window is used to show the number of affected objects of the selected network profile. It can be reached from the following windows: **ADSL PM Thresholds Network Profile, SDSL PM Thresholds Network Profile, SHDSL PM Thresholds Network Profile, ADSL Transmission Network Profile, SDSL Transmission Network Profile, SHDSL Transmission Network Profile, ATM Traffic Network Profile.**



Window description The following table shows the options of this window:

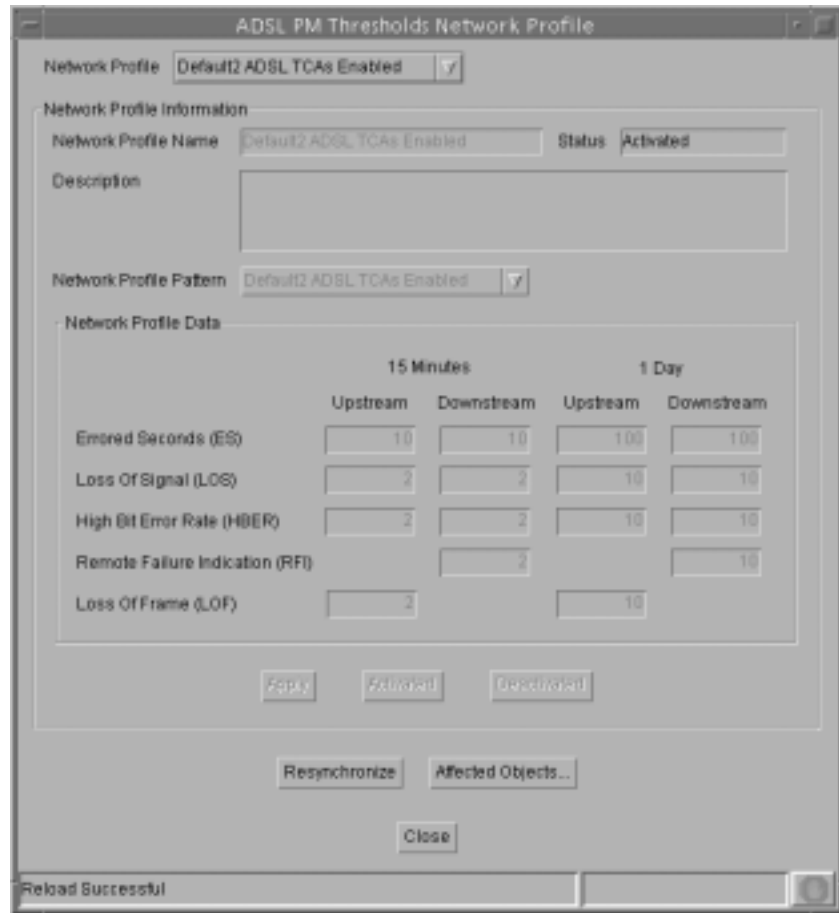
Parameters/Buttons	Description
Network Profile Name	This text field displays the name of the network profile.
Network Profile Type	This field shows the selected network profile type. Possible values: ADSL PM Thresholds, SDSL PM Thresholds, SHDSL PM Thresholds, ADSL Transmission, SDSL Transmission, SHDSL Transmission, ATM Traffic.

Parameters/Buttons	Description
Affected Objects List	<p>This table lists the NE Name and the Number of Affected Objects of the selected profile.</p> <p>For ATM traffic network profiles the associated objects are cross-connections. For the rest of the network profiles the affected objects refer to ADSL or SDSL or SHDSL drops.</p>



ADSL PM Thresholds Network Profile window

This window is used to create/view/modify ADSL PM thresholds network profiles.



Window description The following table shows the view/edit options of this window.

Parameters/ Buttons	Description
Network Profile	This option menu contains all the ADSL PM threshold network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/ Buttons	Description
Network Profile Information	<p>Network Profile Name: This text field shows the profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in ADSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reseted to zero.</p> <p>Network Profile Data:</p> <p>Errored Seconds (ES): Four text fields show the values for two different time periods (15 min, one day) for the two directions (upstream and downstream). Possible values: {0, 900} for 15 min, {0, 86400} for one day. Default value: 0 (This value deactivates the traps generation)</p> <p>Loss of Signal (LOS): Four text fields show the values for two different time periods (15 min, one day) for the two directions (upstream and downstream). Possible values: {0, 90} for 15 min, {0, 8640} for one day. Default value: 0 (This value deactivates the traps generation)</p> <p>High Bit Error Rate (HBER): Four text fields show the values for two different time periods (15 min, one day) for the two directions (upstream and downstream). Possible values: {0, 90} for 15 min, {0, 8640} for one day. Default value: 0 (This value deactivates the traps generation)</p>

Parameters/ Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data (continued):</p> <p>Remote Failure Indication (RFI): Two text fields show the values for two different time periods (15 min, one day) for the downstream direction. Possible values: {0, 90} for 15 min, {0, 8640} for one day.</p> <p>Default value: 0 (This value deactivates the traps generation)</p> <p>Loss of Frame (LOF): Two text fields show the values for two different time periods (15 min, one day) for the upstream direction. Possible values: {0, 90} for 15 min, {0, 8640} for one day.</p> <p>Default value: 0 (This value deactivates the traps generation)</p> <p>The Apply button is used to confirm the changes. When this button is pressed in Edition Mode, a Warning window is displayed. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.</p> <p>The Activate button changes the status of the network Profile to Activated. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>

Parameters/ Buttons	Description
Command buttons	<p>The Affected Objects... button provides access to the Affected Objects List window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM. This button is enabled if the status of the profile is Activated.</p>



Create an ADSL PM thresholds network profile

Procedure Complete the following procedure to create an ADSL PM thresholds network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **ADSL PM Thresholds** via the cursor menu. The **ADSL PM Thresholds Network Profile** window pops up (cf. [“ADSL PM Thresholds Network Profile window” \(9-73\)](#)).

- 2 Use the option menu **Network Profile** to select **New Network Profile**.

- 3 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4 Add a description of the new profile in the corresponding list box.

- 5 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6 Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7 Click on **Close** to exit the window.

END OF STEPS



Modify the ADSL PM thresholds network profile

Procedure Complete the following procedure to modify an ADSL PM thresholds network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **ADSL PM Thresholds** via the cursor menu. The **ADSL PM Thresholds Network Profile** window pops up (cf. [“ADSL PM Thresholds Network Profile window” \(9-73\)](#)).

This window can also be reached from the **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)) by pressing the **Edit** button for the PM thresholds network profile.

- 2 When coming from the NE Browser use the option menu **Network Profile** to select the desired profile.

This step is not necessary when coming from the **ADSL Drop** window via **Edit**.

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.

If you want to ...	then ...
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision ADSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Affected Objects window” (9-71) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

.....
4 Click on **Close** to exit the window.

END OF STEPS
.....



SDSL PM Thresholds Network Profile window

This window is used to create/view/modify the SDSL PM thresholds network profiles.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
Network Profile	This option menu contains all the SDSL PM thresholds network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/Buttons	Description
<p>Network Profile Information</p>	<p>Network Profile Name: This text field shows the profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in SDSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to zero.</p> <p>Network Profile Data:</p> <p>Errored Seconds (ES): Two text fields show the values for two different time periods (15 min, one day) for the upstream direction. Possible values: {0, 900} for 15 min, {0, 86400} for one day. Default value: 0 (This value deactivates the traps generation)</p> <p>Loss of Signal (LOS): Two text fields show the values for two different time periods (15 min, one day) for the upstream direction. Possible values: {0, 90} for 15 min, {0, 8640} for one day. Default value: 0 (This value deactivates the traps generation)</p> <p>High Bit Error Rate (HBER): Four text fields show the values for two different time periods (15 min, one day) for the upstream direction. Possible values: {0, 90} for 15 min, {0, 8640} for one day. Default value: 0 (This value deactivates the traps generation)</p>

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data (continued):</p> <p>Loss of Frame (LOF): Two text fields show the values for two different time periods (15 min, one day) for the upstream direction. Possible values: {0, 90} for 15 min, {0, 8640} for one day.</p> <p>Default value: 0 (This value deactivates the traps generation)</p> <p>The Apply button is used to confirm the changes. When this button is pressed in Edition Mode, a Warning window is displayed. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.</p> <p>The Activate button changes the status of the network Profile to Activated. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>
<p>Command buttons</p>	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM. This button is enabled if the status of the profile is Activated.</p>



Create an SDSL PM thresholds network profile

Procedure Complete the following procedure to create an SDSL PM thresholds network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SDSL PM Thresholds** via the cursor menu. The **SDSL PM Thresholds Network Profile** window pops up (cf. [“SDSL PM Thresholds Network Profile window” \(9-80\)](#)).

- 2 Use the option menu **Network Profile** to select New Network Profile.

- 3 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4 Add a description of the new profile in the corresponding list box.

- 5 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6 Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7 Click on **Close** to exit the window.

END OF STEPS



Modify the SDSL PM thresholds network profile

Procedure Complete the following procedure to modify an SDSL PM thresholds network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SDSL PM Thresholds** via the cursor menu. The **SDSL PM Thresholds Network Profile** window pops up (cf. [“SDSL PM Thresholds Network Profile window” \(9-80\)](#)).

This window can also be reached from the **SDSL Drop** window (cf. [“SDSL Drop window” \(6-140\)](#)) by pressing the **Edit** button for the PM thresholds network profile.

- 2 When coming from the NE Browser use the option menu **Network Profile** to select the desired profile.

This step is not necessary when coming from the **SDSL Drop** window via **Edit**.

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.

If you want to ...	then ...
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision SDSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Affected Objects window” (9-71) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

.....
4 Click on **Close** to exit the window.

END OF STEPS
.....



SHDSL ATM PM Thresholds Network Profile window

General This window is used to create/view/modify the SHDSL PM thresholds network profiles. It is available for R1.15 NEs and subsequent releases.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
Network Profile	This option menu contains all the SHDSL PM thresholds network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/Buttons	Description
<p>Network Profile Information</p>	<p>Network Profile Name: This text field shows the profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in SHDSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to zero.</p> <p>Network Profile Data:</p> <p>Errored Seconds (ES): Two numeric fields show the values for two different time periods (15 min, one day) for the two directions (upstream and downstream). Possible values: {0, 900} for 15 min, {0, 86400} for one day. Default value: 0 (This value deactivates the traps generation)</p> <p>Severely Errored Seconds (SES): Two numeric fields show the SES (Severely Errored Seconds) threshold for the SHDSL profile for two different time periods for Upstream and Downstream directions. Range: 15 minutes: 0..900 1 day: 0..86400 Default value: 0 (This value deactivates the traps generation).</p>

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Unavailable Seconds (UAS): Four numeric fields show the UAS (Unavailable Seconds) threshold for the SHDSL profile for two different time periods for Upstream and Downstream directions. Range: 15 minutes: 0..900 1 day: 0..86400</p> <p>Default value: 0 (This value deactivates the traps generation)</p> <p>The Apply button is used to confirm the changes. When this button is pressed in Edition Mode, a Warning window is displayed. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.</p> <p>The Activate button changes the status of the network Profile to Activated. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>
<p>Command buttons</p>	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM. This button is enabled if the status of the profile is Activated.</p>



Create an SHDSL PM thresholds network profile

Procedure Complete the following procedure to create an SHDSL PM thresholds network profile:

- 1** Select **NE** in the **NE Browser** and **Profiles** → **SHDSL PM Thresholds** via the cursor menu. The [“SHDSL ATM PM Thresholds Network Profile window” \(9-86\)](#) window pops up.

- 2** Use the option menu **Network Profile** to select New Network Profile.

- 3** Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4** Add a description of the new profile in the corresponding list box.

- 5** Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6** Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7** Click on **Close** to exit the window.

END OF STEPS



Modify the SHDSL PM thresholds network profile

Procedure Complete the following procedure to modify an SHDSL PM thresholds network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SHDSL PM Thresholds** via the cursor menu. The [“SHDSL ATM PM Thresholds Network Profile window” \(9-86\)](#) window pops up.

This window can also be reached from the [“SHDSL ATM Drop window” \(6-153\)](#) by pressing the **Edit** button for the PM thresholds network profile.

- 2 When coming from the NE Browser use the option menu **Network Profile** to select the desired profile.

This step is not necessary when coming from the **SHDSL Drop** window via **Edit**.

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision SHDSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.

If you want to ...	then ...
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Affected Objects window” (9-71) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

-
- 4** Click on **Close** to exit the window.

END OF STEPS



ADSL Transmission Network Profile window

Overview This window is used to create/view/modify ADSL transmission network profiles.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
Network Profile	This option menu contains all the ADSL transmission network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/Buttons	Description
<p>Network Profile Information</p>	<p>Network Profile Name: This text field shows the profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in ADSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to default value.</p> <p>Network Profile Data:</p> <p>Line Type: This option menu is used to select a sub-type of the profile: Full, Lite.</p> <p>Type of Rate Adaptation: This option menu is used to select one of the following values: Explicit (default), Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field. The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none"> • Max. Bit Rate (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the maximum bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 13120}. • Min. Bit Rate (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the minimum bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 13120}.

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data (continued): Options Rate: The following four parameters are enabled only if the Type of Rate Adaptation is explicit.</p> <ul style="list-style-type: none"> • Bit Rate Option 1 (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the option 1 bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 8160}. • Bit Rate Option 2 (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the option 2 bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 8160}. • Bit Rate Option 3 (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the option 3 bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 8160}. • Bit Rate Option 4 (kbps): Two numeric fields (upstream and downstream) can be used to define the values for the option 4 bit rate. Possible values for upstream: {64, 1440}. Possible values for downstream: {64, 8160}. <p>Latency: Two option menus (upstream and downstream) show the values: Interleaved, Fast.</p>

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Parity Bytes per RS: These two option menus (upstream and downstream) allow the following values to be selected: 0, 2, 4, 6, 8, 10, 12, 14, 16. These option menus are enabled only if the Type of Rate Adaptation is Explicit. If Latency is Interleaved, it must be a multiple integer of the value selected for DMT Symbols per RS.</p> <p>Interleave Depth: These two text fields (upstream and downstream) are enabled only if the value for Latency is Interleaved. Possible values for upstream: 1, 2, 4, 8, 16. Possible values for downstream: 1, 2, 4, 8, 16, 32, 64.</p> <p>DMT Symbols per RS: These two option menus (upstream and downstream) are enabled only if the Type of Rate Adaptation is Explicit. Possible values: 1, 2, 4, 8, 16. If Latency is Fast or Interleave Depth is 1, then the only allowed value for this parameter will be 1.</p> <p>SNR Margin (dB): These two option menus (upstream and downstream) allow the following values to be selected: {0, 15}. Default value: 5 (in both directions).</p> <p>PSDM (-dBm/Hz): This option menu is used to set the line power for the downstream direction. Possible values: {60, 40}. Default value: 40</p> <p>The Apply button is used to confirm the changes. The window remains open for further use. When this button is pressed in Edition Mode, a Warning window will be displayed to the user advising that it will affect all the AFMs controlled by the NAM. If the user confirms the operation, the network profile will be edited.</p> <p>The Activate button changes the status of the network Profile to Activated.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>

Parameters/Buttons	Description
Command buttons	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected network profile with all the AFMs currently controlled by the NAM. This button is enabled if the status of the profile is Activated.</p>



Create an ADSL transmission network profile

Procedure Complete the following procedure to create an ADSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **ADSL Transmission** via the cursor menu. The **ADSL Transmission Network Profile** window pops up (cf. [“ADSL Transmission Network Profile window” \(9-92\)](#)).

- 2 Use the option menu **Network Profile** to select **New Network Profile**.

- 3 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4 Add a description of the new profile in the corresponding list box.

- 5 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6 Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7 Click on **Close** to exit the window.

END OF STEPS



Modify the ADSL transmission network profile

Procedure Complete the following procedure to modify an ADSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **ADSL Transmission** via the cursor menu. The **ADSL Transmission Network Profile** window pops up (cf. [“ADSL Transmission Network Profile window” \(9-92\)](#)).

This window can also be reached from the **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)) by pressing the **Edit** button for the transmission network profile.

- 2 When coming from the **NE Browser** use the option menu **Network Profile** to select the desired profile.

This step is not necessary when coming from the **ADSL Drop** window via **Edit**.

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.

If you want to ...	then ...
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision ADSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Execute an ADSL port BIST test” (8-65) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

.....
4 Click on **Close** to exit the window.

END OF STEPS
.....



SDSL Transmission Network Profile window

Overview This window is used to create/view/modify SDSL transmission network profiles.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
Network Profile	This option menu contains all the SDSL transmission network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/Buttons	Description
<p>Network Profile Information</p>	<p>Network Profile Name: This text field shows the network profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in SDSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to default values.</p> <p>Network Profile Data:</p> <p>Line Type: This option menu is used to select a sub-type of the profile: SDSL.</p> <p>Type of Rate Adaptation: This option menu is used to select one of the following values: Explicit (default), Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field. The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none"> • Max. Bit Rate (kbps): This option menu allows to the operator to select the maximum bit rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). Default value: 2320 kbps. • Min. Bit Rate (kbps): This option menu allows to the operator to select the minimum bit rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). Default value: 144 kbps.

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data (continued):</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field.</p> <ul style="list-style-type: none"> • Explicit Bit Rate (kbps): This option menu allows to the operator select the Explicit Bit Rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). Default value: 784 kbps. This parameter is enabled only if the Type of Rate Adaptation is Explicit. • Tx/Rx Scramble: This option menu allows to the operator enable the SDSL Scramble function. Possible values: Enable, Disable. Default value: Enable. This parameter is enabled only if the Type of Rate Adaptation is Flexible. • COSET: This option menu allows to the operator enable the SDSL COSET function. Possible values: Enable, Disable. Default value: Enable. • ATM Cell Scramble: This option menu allows the operator to enable the SDSL ATM Cell Scramble function. Possible Values: Enable, Disable. Default value: Enable. <p>The Apply button is used to confirm the changes. The window remains open for further use. When this button is pressed in Edition Mode, a Warning window will be displayed to the user advising that it will affect all the AFMs controlled by the NAM. If the user confirms the operation, the network profile will be edited.</p> <p>The Activate button changes the status of the network Profile to Activated.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>

Parameters/Buttons	Description
Command buttons	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. This button is enabled if the status of the profile is Activated.</p>



Create an SDSL transmission network profile

Procedure Complete the following procedure to create an SDSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SDSL Transmission** via the cursor menu. The **SDSL Transmission Network Profile** window pops up (cf. [“SDSL Transmission Network Profile window” \(9-100\)](#)).

- 2 Use the option menu **Network Profile** to select New Network Profile.

- 3 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4 Add a description of the new profile in the corresponding list box.

- 5 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6 Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7 Click on **Close** to exit the window.

END OF STEPS



Modify the SDSL transmission network profile

Procedure Complete the following procedure to modify an SDSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SDSL Transmission** via the cursor menu. The **SDSL Transmission Network Profile** window pops up (cf. [“SDSL Transmission Network Profile window” \(9-100\)](#)).

This window can also be reached from the **SDSL Drop** window (cf. [“SDSL Drop window” \(6-140\)](#)) by pressing the **Edit** button for the transmission network profile.

- 2 When coming from the **NE Browser** use the option menu **Network Profile** to select the desired profile. This step is not necessary when coming from the **SDSL Drop** window via **Edit**.
-

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision SDSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.

If you want to ...	then ...
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Execute an ADSL port BIST test” (8-65) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

-
- 4 Click on **Close** to exit the window.

END OF STEPS



SHDSL ATM Transmission Network Profile window

General This window is used to create/view/modify SHDSL transmission network profiles. This window is available for R1.15 NEs and subsequent releases.



Window description The following table shows the view/edit options of this window.

Parameters/Buttons	Description
Network Profile	This option menu contains all the SHDSL transmission network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.

Parameters/Buttons	Description
Network Profile Information	<p>Network Profile Name: This text field shows the network profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in SHDSL drops. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This list box can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to default values.</p> <p>Network Profile Data:</p> <p>Line Type: This option menu is used to select a sub-type of the profile: SHDSL.</p> <p>Type of Rate Adaptation: This option menu is used to select one of the following values: Explicit (default), Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field. The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none">• Max. Bit Rate (kbps): This option menu allows to the operator to select the maximum bit rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps)Default value: 2304 (Kbps)

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data (continued):</p> <p>Options Rate:</p> <ul style="list-style-type: none"> • Min. Bit Rate (kbps): This option menu allows to the operator to select the minimum bit rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps)Default value: 192 (Kbps) Behavior: Enabled if the Rate Mode is set to Flexible. Disabled if the Rate Mode is set to Explicit. • Explicit Bit Rate (kbps): This option menu allows to the operator select the Explicit Bit Rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps)Default value: 1152 (Kbps) This parameter is enabled only if the Type of Rate Adaptation is Explicit. <p>The Apply button is used to confirm the changes. When this button is pressed in Edition Mode, a Warning window is displayed. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.</p> <p>The Activate button changes the status of the network Profile to Activated. If the user confirms, the “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>

Parameters/Buttons	Description
Command buttons	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. This button is enabled if the status of the profile is Activated.</p>



Create an SHDSL transmission network profile

Procedure Complete the following procedure to create an SHDSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SHDSL Transmission** via the cursor menu. The [“SHDSL ATM Transmission Network Profile window” \(9-107\)](#) pops up.

- 2 Use the option menu **Network Profile** to select New Network Profile.

- 3 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

- 4 Add a description of the new profile in the corresponding list box.

- 5 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

- 6 Modify the profile data and click on **Apply** to confirm. The [“Network Profile Operation In Progress window” \(9-114\)](#) opens, displaying the results.

- 7 Click on **Close** to exit the window.

END OF STEPS



Modify the SHDSL transmission network profile

Procedure Complete the following procedure to modify an SHDSL transmission network profile:

- 1 Select **NE** in the **NE Browser** and **Profiles** → **SHDSL Transmission** via the cursor menu. The [“SHDSL ATM Transmission Network Profile window” \(9-107\)](#) pops up.

This window can also be reached from the [“SHDSL ATM Drop window” \(6-153\)](#) by pressing the **Edit** button for the transmission network profile.

- 2 When coming from the **NE Browser** use the option menu **Network Profile** to select the desired profile. This step is not necessary when coming from the **SHDSL ATM Drop** window via **Edit**.
-

- 3

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the edition in each AFM.
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision SHDSL drops. The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the activation per AFM.

If you want to ...	then ...
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Execute an ADSL port BIST test” (8-65) pops up.
resynchronize the profile with all controlled AFMs	click on Resynchronize . The “Network Profile Operation In Progress window” (9-114) opens, displaying the results of the synchronization per AFM.

-
- 4** Click on **Close** to exit the window.

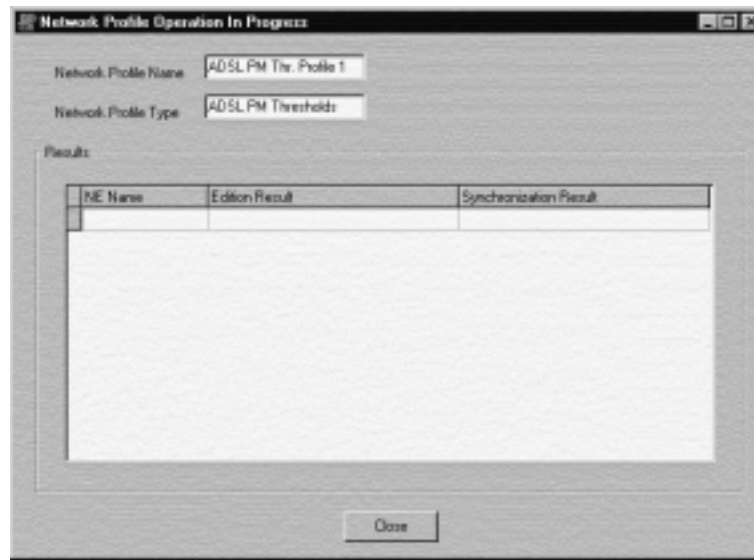
END OF STEPS



Network Profile Operation In Progress window

General This window is used to display the results that the edition/activation/resynchronization of a Network Profile action produces in each AFM.

The edition of a Network Profile consists of several phases: first, the Network Profile is changed in the NAM. Then, the profiles in the AFMs which are associated to the NAM Network Profile are edited; finally, the NAM Network Profile is resynchronized with the AFMs again in order to recreate its associations with the AFMs' profiles. The results of the second and third actions are displayed in this window for each AFM.



Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
Network Profile Name	This text field shows the profile name..
Network Profile Type	Shows the type of the selected Network Profile. Possible values: ADSL PM Thresholds, SDSL PM Thresholds, SHDSL PM thresholds, ADSL Transmission, SDSL Transmission, SHDSL Transmission, ATM Traffic.

Parameters/Buttons	Description
Results	<p>The following subpane contains a table displaying a list of NEs with the results of the edition (only for edition operations) and synchronization actions (for all the possible operations) on each of them. The table is filled when the result of each action is received in the GUI. First, the edition action results are displayed (if applicable), and later on the synchronization results.</p> <p>NE Name: The NE Name of selected NE</p> <p>Edition Result: Indicates the result that the edition of the profile in the AFM with the data from the associated Network Profile has produced. It is displayed only if the calling operation was the edition of a Network Profile. Possible values: Successful; Unsuccessful: {Reason}. 'Reason' indicates the most probable cause for the failed action.</p> <p>Synchronization Result: Indicates the result that the synchronization of the Network Profile with the profiles in the AFM has produced. Possible values: Successful; Unsuccessful: {Reason}. 'Reason' indicates the most probable cause for the failed action.</p> <p>The Close button is enabled only if the Network Profile operation over all the NEs has finished (successfully or unsuccessfully).</p>



ATM Traffic Network Profile window

Overview This window is used to view/edit the ATM traffic network profiles.

ATM Traffic Network Profile

Network Profile: ADSL Default UBR

Network Profile Information

Network Profile Name: ADSL Default UBR Status: Activated

Description:

Network Profile Pattern: ADSL Default UBR

Network Profile Data

Service Category: UBR

QoS Parameters

Cell Loss Priority (CLP): 0+1

Cell Tagging: Yes

AAL5 Frame Discard: Yes

PCR CDVT (nsec): 4787200

SCR CDVT (nsec): 4787200

	Upstream	Downstream
Peak Cell Rate (PCR)(cps)	905	2415
Sustainable Cell Rate (SCR)(cps)	1700	7200
Maximum Burst Size (MBS)(cells)	32	32

Apply Activated Deactivated

Resynchronize Affected Objects...

Close

Reload Successful

Window description The following table shows the view/edit options of this window:

Parameters/Buttons	Description
Network Profile	<p>This option menu contains all the ATM traffic network profiles (for editing) existing in the NAM and the entry New Network Profile (for creating a new profile). Default profiles are available. These profiles cannot be modified.</p>
Network Profile Information	<p>Network Profile Name: This text field shows the profile name. The entry can be changed in create and edit mode.</p> <p>Status: This text field shows the status of the profile. Possible values: Activated, Deactivated. Activated means that the profile can be used in cross connections. Initially, Network Profiles are in Deactivated status.</p> <p>Description: This field can be used to include a description of the network profile.</p> <p>Network Profile Pattern: This option menu is used to select a profile and to display its data in the field Network Profile Data (see below). None can also be selected. In this case all parameters in the field Network Profile Data are reset to default values.</p> <p>Network Profile Data:</p> <p>Service Category: This option menu is used to select the quality of service (QoS). Possible values: Unknown, CBR, rt-VBR, nrt-VBR, UBR.</p>

Parameters/Buttons	Description
Network Profile Information (continued)	<p>Network Profile Data (continued):</p> <p>QoS Parameters: The parameters in this field are enabled/disabled depending on the selected service category: For <i>rt-VBR</i> and <i>nrt-VBR</i> all parameters are enabled. For <i>CBR</i> only PCR CDVT and Peak Cell Rate (PCR) are enabled. For <i>UBR AAL5</i> Frame Discard, Cell Tagging, PCR CDVT and Peak Cell Rate (PCR) are enabled. Note: For <i>rt-VBR</i> and <i>nrt-VBR</i> the combination of CLP=0+1 and Cell Tagging =1 is not allowed.</p> <ul style="list-style-type: none"> • Cell Loss Priority (CLP): This option menu is used to specify whether the SCR, MBS and CLR apply to the CLP(0+1) stream or the CLP(0) stream. Possible values: 0, 0+1, Unknown (edit mode). If 0+1 is selected, Cell Tagging will be set to No and will be disabled. • AAL5 Frame Discard: This option menu is used to define whether to discard entire frames during congestion, rather than a few cells from many frames. Possible values: Yes, No. • Cell Tagging: This option menu is used to specify whether to tag nonconforming cells (i.e., change CLP is 0 to CLP is 1). Otherwise, nonconforming cells will be dropped. Possible values: Yes, No. This field is disabled if CLP is 0+1. • PCR CDVT (nsec): This text field is used to specify the Cell Delay Variation Tolerance (CDVT) corresponding to the PCR when a connection is provisioned. Possible values: {680, 1330000000}. • SCR CDVT (nsec): This text field is used to specify the CDVT corresponding to the SCR when the SCR for a connection is provisioned. Possible values: {680, 1330000000}.

Parameters/Buttons	Description
<p>Network Profile Information (continued)</p>	<p>Network Profile Data/QoS Parameters (continued): Two text fields (upstream and downstream) can be used to define the values for the following parameters:</p> <ul style="list-style-type: none"> • Peak Cell Rate (PCR) (cps): Possible values: {150, 108940}. • Sustainable Cell Rate (SCR) (cps): Possible values for upstream: {150, 108939}. Possible values for downstream: {150, 108939}. • Maximum Burst Size (MBS) (cells): Possible values for upstream: {1, 100}. Possible values for downstream: {1, 210}. <p>The Apply button is used to confirm the changes.</p> <p>The Activate button changes the status of the network Profile to Activated.</p> <p>The Deactivate button changes the status of the network Profile to Deactivated.</p>
<p>Command buttons</p>	<p>The Affected Objects... button provides access to the Affected Objects window. This button is enabled if the status of the profile is Activated.</p> <p>The Resynchronize button can be used to force the resynchronization of the selected profile with all the AFMs currently controlled by the NAM. This button is enabled if the status of the profile is Activated.</p>



Create an ATM traffic network profile

Overview The **ATM Traffic Network Profile** can be launched from the **ATM Cross Connection** window (cf. [“ATM Cross Connection window” \(7-113\)](#)) via **Edit...** button.

Procedure Complete the following procedure to create an ATM traffic network profile:

1 Use the option menu **Network Profile** to select **New Network Profile** (if the window has been launched from the **Network Profile List** window this step is not needed).

2 Use the text field **Network Profile Name** in the field **Network Profile Information** to enter a profile name.

3 Add a description of the new profile in the corresponding list box.

4 Select the **Network Profile** pattern.

Result:

The **Network Profile Data** panel will be filled with the Information of the selected profile pattern.

5 Modify the profile data and click on **Apply** to confirm.

6 Click on **Close** to exit the window.

END OF STEPS



Modify an ATM traffic network profile

Overview The **ATM Traffic Network Profile** can be launched from the **ATM Cross Connection** window (cf. [“ATM Cross Connection window” \(7-113\)](#)) via **Edit...** button.

Note: Default profiles can not be modified. The modification of an ATM profile is refused if this profiles is used by any cross-connection.

Procedure Complete the following procedure to modify an ATM traffic network profile:

1 Use the option menu **Network Profile Pattern** to display the profile data in the **Network Profile Data** field.

2 Use the option menu **Service Category** to define the quality of service

3 Use the option menus and text fields in the field **QoS Parameters** to modify the profile parameters and click on **Apply**.

4

If you want to ...	then ...
modify the profile information (not possible for the default profiles)	use the text fields Network Profile Name and Description to change the information data and click on Apply .
modify the profile data (not possible for the default profiles)	use the text fields in the field Network Profile Data to modify the parameters and click on Apply .
activate a profile	Use the option menu Status to select Activated and click on Apply . The profile now can be used to provision ADSL drops.
view the affected objects	click on Affected Objects... button, which is only available if the profile is in status Activated. The “Affected Objects window” (9-71) pops up.

If you want to ...	then ...
resynchronize the profile with all controlled AFMs	click on Resynchronize .

-
- 5** Click on **Close** to exit the window.

END OF STEPS

.....



NE profiles

Overview

Purpose This section shows the NE profiles windows.

Contents

ADSL PM Thresholds NE Profile window	9-124
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ADSL PM Thresholds NE Profile window

Overview This window can be reached from the **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)) and is exclusively used to view the data of an ADSL PM thresholds NE profile.

	15 Minutes		1 Day	
	Upstream	Downstream	Upstream	Downstream
Errored Seconds (ES)	2	2	20	20
Loss Of Signal (LOS)	2	2	20	20
High Bit Error Rate (HBER)	2	2	20	20
Remote Failure Indication (RFI)	2	2	20	20
Loss Of Frame (LOF)	2	2	20	20

Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

Parameters/ Buttons	Description
NE Profile Data	<p>Errored Seconds (ES): Four text fields show the ES thresholds for the ADSL profile in two different time periods (15 min, one day) for the two directions (upstream and downstream). 0 value means that traps generation is deactivated.</p> <p>Loss of Signal (LOS): Four text fields show the LOS thresholds for the ADSL profile in two different time periods (15 min, one day) for the two directions (upstream and downstream). 0 value means that traps generation is deactivated.</p> <p>High Bit Error Rate (HBER): Four text fields show the HBER thresholds for the ADSL profile in two different time periods (15 min, one day) for the two directions (upstream and downstream). 0 value means that traps generation is deactivated.</p> <p>Remote Failure Indication (RFI): Two text fields show the RFI thresholds for the ADSL profile in two different time periods (15 min, one day) for the downstream direction. 0 value means that traps generation is deactivated.</p> <p>Loss of Frame (LOF): Two text fields show the LOF thresholds for the ADSL profile in two different time periods (15 min, one day) for the upstream direction. 0 value means that traps generation is deactivated.</p>



SDSL PM Thresholds NE Profile window

Overview This window can be reached from the **SDSL Drop** window (cf. [“SDSL Drop window” \(6-140\)](#)) and is exclusively used to view the data of an SDSL PM thresholds NE profile.

Window description The following table shows the view options of this window.

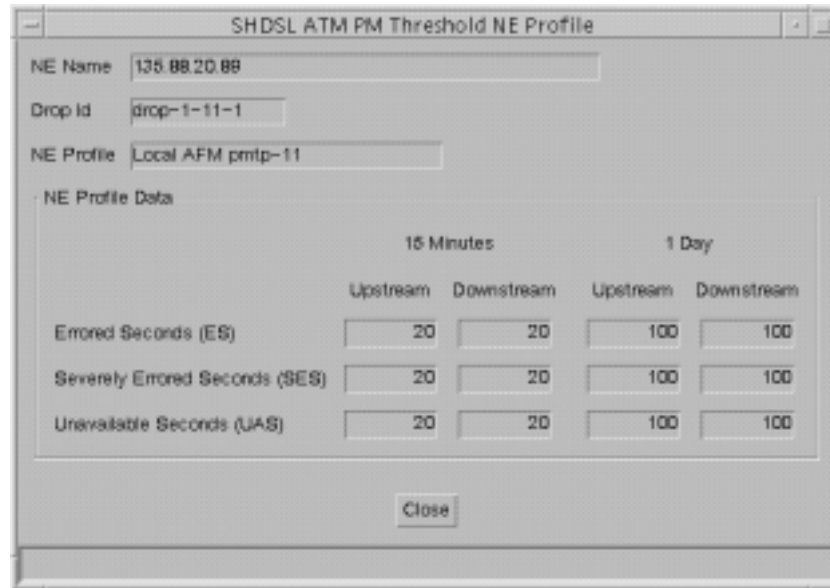
Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

Parameters/Buttons	Description
NE Profile Data	<p>Errored Seconds (ES): Two text fields show the ES thresholds for the SDSL profile in two different time periods (15 min, one day) for the upstream direction. 0 value means that traps generation is deactivated.</p> <p>Loss of Signal (LOS): Two text fields show the LOS thresholds for the SDSL profile in two different time periods (15 min, one day) for the upstream direction. 0 value means that traps generation is deactivated.</p> <p>High Bit Error Rate (HBER): Two text fields show the HBER thresholds for the SDSL profile in two different time periods (15 min, one day) for the upstream direction. 0 value means that traps generation is deactivated.</p> <p>Loss of Frame (LOF): Two text fields show the LOF thresholds for the SDSL profile in two different time periods (15 min, one day) for the upstream direction. 0 value means that traps generation is deactivated.</p>



SHDSL ATM PM Thresholds NE Profile window

Overview This window can be reached from the [“SHDSL ATM Drop window” \(6-153\)](#) and is exclusively used to view the data of an SHDSL PM thresholds NE profile. It is available for R1.15 NEs and subsequent releases.



Window description The following table shows the view options of this window.

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

Parameters/Buttons	Description
NE Profile Data	<p>Errored Seconds (ES): Four text fields show the ES thresholds for the SHDSL profile in two different time periods (15 min, one day) for the two directions (upstream and downstream). 0 value means that traps generation is deactivated.</p> <p>Severely Errored Seconds (SES): Shows the SES (Severely Errored Seconds) threshold for the SHDSL profile in two different time periods for Upstream and Downstream directions. (0 value means that traps generation is deactivated)</p> <p>Unavailable Seconds (UAS): Shows the UAS (Unavailable Seconds) threshold for the SHDSL profile in two different time periods for Upstream and Downstream directions. (0 value means that traps generation is deactivated)</p>



ADSL Transmission NE Profile window

Overview This window can be reached from the **ADSL Drop** window (cf. [“ADSL Drop window” \(6-127\)](#)) and is exclusively used to view the data of an ADSL transmission NE profile.

Options Rate		Upstream	Downstream	Upstream		Downstream
Max. Bit Rate (Kbps)		1024	4480	Min. Bit Rate (Kbps)	64	64
Bit Rate Option 1 (Kbps)		612	1536	Bit Rate Option 2 (Kbps)	288	1152
Bit Rate Option 3 (Kbps)		288	768	Bit Rate Option 4 (Kbps)	128	384

	Upstream	Downstream	Upstream	Downstream
Latency	Interleaved	Interleaved	Packet Bytes Per RB	2
Interleave Depth	1	1	DMT Symbols Per RB	1
SNR Margin (dB)	4.0	4.0	PSDM (-dBm/Hz)	40

Window description The following table shows the view options of this window.

Parameters/ Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

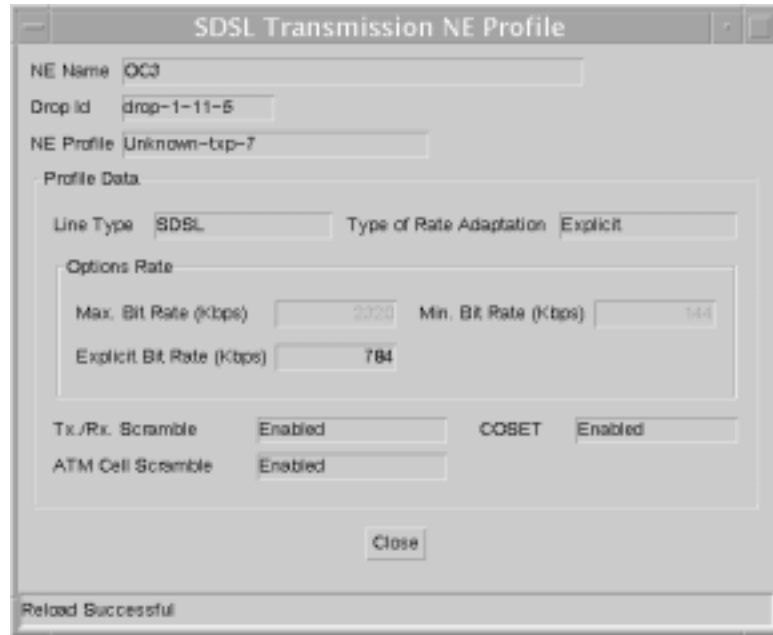
Parameters/ Buttons	Description
NE Profile Data	<p>Line Type: This field shows the sub-type of the profile: Full, Lite.</p> <p>Type of Rate Adaptation: This field shows one of the following values: Explicit, Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field. The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none"> • Max. Bit Rate (kbps): Two numeric fields (upstream and downstream) show the values for the maximum bit rate. • Min. Bit Rate (kbps): Two numeric fields (upstream and downstream) show the values for the minimum bit rate. <p>The following four parameters are enabled only if the Type of Rate Adaptation is explicit. Two fields (upstream and downstream) show the corresponding values for:</p> <ul style="list-style-type: none"> • Bit Rate Option 1 (kbps), Bit Rate Option 2 (kbps), Bit Rate Option 3(kbps), Bit Rate Option 4 (kbps). <p>Latency: Two fields (upstream and downstream) show the value: Interleaved.</p> <p>Parity Bytes per RS: These two fields (upstream and downstream) show the following values to be selected: 0, 2, 4, 6, 8, 10, 12, 14, 16. These fields are enabled only if the Type of Rate Adaptation is Explicit.</p> <p>Interleave Depth: These two text fields (upstream and downstream) are enabled only if the value for Latency is Interleaved.</p> <p>DMT Symbols per RS: These two fields (upstream and downstream) are enabled only if the Type of Rate Adaptation is Explicit.</p>

Parameters/ Buttons	Description
NE Profile Data (continued)	SNR Margin (dB): These two fields (upstream and downstream) show one of the following values: { 0, 15 } (1 dB steps). PSDM (-dBm/Hz): This field shows the line power for the downstream direction. Possible values are { 60, 40 } (1 dB steps).



SDSL Transmission NE Profile window

Overview This window can be reached from the **SDSL Drop** window (cf. [“SDSL Drop window” \(6-140\)](#)) and is exclusively used to view the data of an SDSL transmission NE profile.



Window description The following table shows the view options of this window.

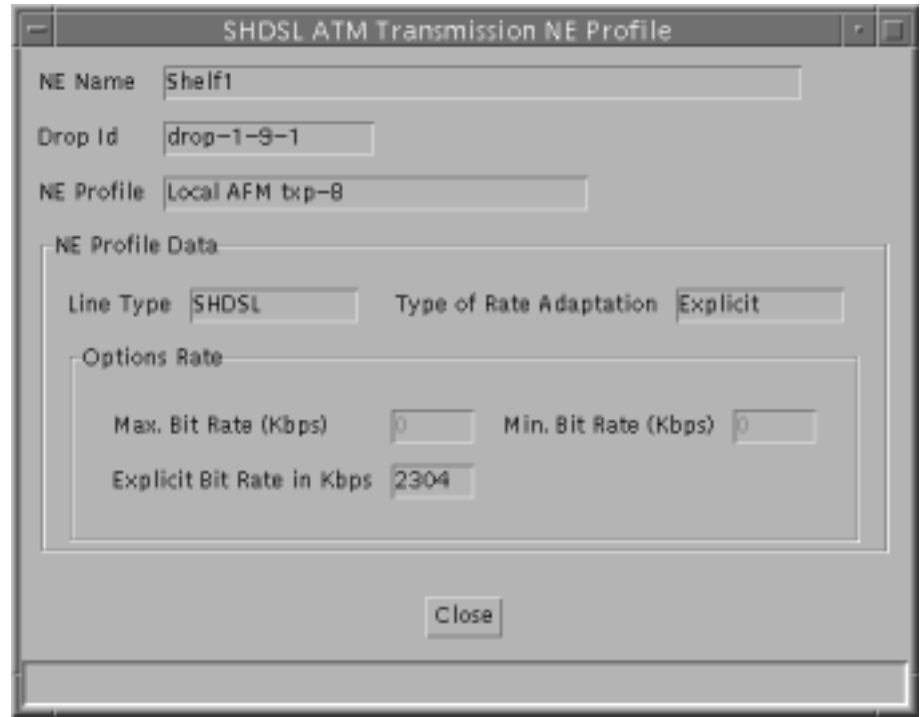
Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

Parameters/Buttons	Description
SDSL Profile Data	<p>Line Type: This field shows the sub-type of the profile: SDSL.</p> <p>Type of Rate Adaptation: This field shows one of the following values: Explicit, Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field.</p> <p>The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none"> • Max. Bit Rate (kbps): This field shows the maximum bit rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). • Min. Bit Rate (kbps): This field shows the minimum bit rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). <p>Explicit Bit Rate (kbps): This field shows the Explicit Bit Rate. Possible values: 144, 272, 400, 528, 784, 1168, 1552, 2320 (Kbps). This parameter is enabled only if the Type of Rate Adaptation is Explicit.</p> <p>Tx/Rx Scramble: This field shows whether the SDSL scramble function is enabled or not. Possible values: Enable, Disable.</p> <p>COSET: This field shows whether the SDSL COSET function is enabled or not. Possible values: Enable, Disable.</p> <p>ATM Cell Scramble: This field shows whether the SDSL ATM cell scramble function is enabled or not. Possible values: Enable, Disable.</p>



SHDSL ATM Transmission NE Profile window

Overview This window can be reached from the [“SHDSL ATM Drop window” \(6-153\)](#) and is exclusively used to view the data of an SHDSL transmission NE profile.



Window description The following table shows the view options of this window.

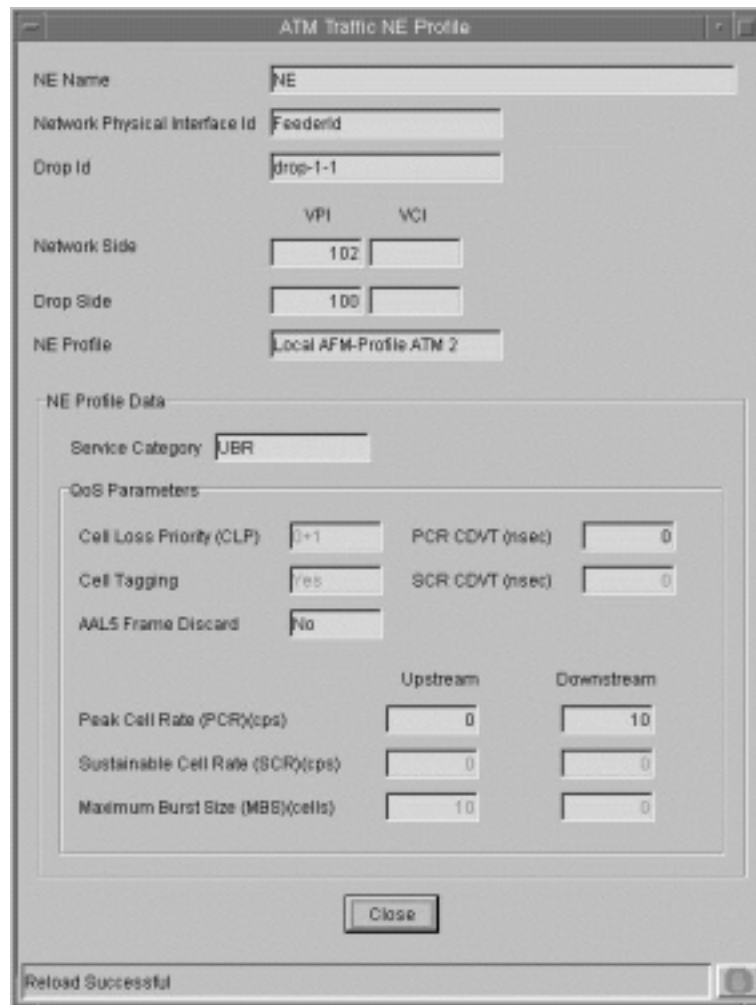
Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).
Drop Id	This text field shows the drop inside the NE with this NE profile is associated.
NE Profile	This text field shows the name of NE profile.

Parameters/Buttons	Description
NE Profile Data	<p>Line Type: This field shows the sub-type used in this profile: SHDSL.</p> <p>Type of Rate Adaptation: This field shows one of the following values: Explicit, Flexible.</p> <p>Options Rate: The parameters in this field are enabled or disabled depending on the selected value in the Type of Rate Adaptation field.</p> <p>The following two parameters are enabled only if the Type of Rate Adaptation is Flexible.</p> <ul style="list-style-type: none">• Max. Bit Rate (kbps): This field shows the maximum bit rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps)• Min. Bit Rate (kbps): This field shows the minimum bit rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps) <p>Explicit Bit Rate (kbps): This field shows the Explicit Bit Rate. Possible values: Any multiple of 64 from 192 to 2304 (Kbps). This parameter is enabled only if the Type of rate Adaption is set to Explicit.</p>



ATM Traffic NE Profile window

General This window can be launched from the **ATM Cross Connection** window (cf. [“ATM Cross Connection window” \(7-113\)](#)) via **Edit...** button and is exclusively used to view the data of the ATM traffic NE profile.



Window description The following table shows the view options of this window.

Parameters/Buttons	Description
NE Name	NE name of the selected NE (max. 30 characters).

Parameters/Buttons	Description
Network Interface Id	This text field shows the network interface (e.g. Feeder, IMA Group) inside the NE associated with this NE profile.
Drop Id	This text field shows the drop inside the NE.
Network Side	Two fields are used to show the VPI and VCI related to the cross-connection on the network side.
Drop Side	Two fields are used to show the VPI and VCI related to the cross-connection on the drop side.
NE Profile	This text field shows the name of NE profile.
NE Profile Data	<p>Service Category: Possible values: Unknown, CBR, rt-VBR, nrt-VBR, UBR.</p> <p>QoS Parameters: Text fields show the values of the following parameters:</p> <ul style="list-style-type: none"> • Cell Loss Priority (CLP), AAL5 Frame Discard, Cell Tagging, PCR CDVT (nsec), SCR CDVT (nsec). • Two text fields (upstream and downstream) show the values for the following parameters: <ul style="list-style-type: none"> - Peak Cell Rate (PCR) (cps), Sustainable Cell Rate (SCR) (cps), Maximum Burst Size (MBS) (cells).





Appendix A: Data communication network configuration

Overview

Purpose This appendix gives an overview of the DCN and shows recommended configurations.

Contents

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<u>Communication with remote NEs using inband ATM PVC</u>	A-14

DCN introduction

Overview

- Purpose** This section provides you with information about
- Data communication network (DCN) introduction,
 - general definitions of terms,
 - network element management communications,
 - NAM management communications,
 - Sample DCN configurations.



DCN introduction

The *AnyMedia* Access System is designed to provide a full range of telephony access services (like POTS, ISDN and leased lines) and data services.

NAM features

The *Navis™ AnyMedia®* Element Management System (NAM) - 24 Channel, R2.1 will provide the standard management configuration, equipment configuration, fault and testing, performance and security functions capabilities to do service management, monitoring, generate reports and printouts, do backup and restore functions for example to improve the customer's day to day business.

Communication of NAM and NE

The NAM communicates with the telephony agents by using TL1 commands and file transfer protocol (FTP) over TCP/IP. The NAM communicates with the data agents by using simple network management protocol (SNMP) over UDP/IP and FTP over TCP/IP. The NAM is also prepared to communicate with other legacy OSs by means of TL1 northbound interfaces and via CORBA interface. TL1 is used for request/response and autonomous reports commands and FTP is used for software and database upload/download operations.

DCN

The DCN is the communications infrastructure (routers, WAN links, etc.) needed for communication of the NAM with the NEs it manages. This manual refers to NAM release 1.14 and the supported NE releases. For these releases many DCN configurations and protocol profiles can be used according to the network operators needs and scenarios. Two sample DCN scenarios are given at the end of this chapter.

□

Terms used in this chapter

- Data communications network** The DCN consists of the communication media and the interconnected devices which are used to exchange management information between the NAM, the NEs and other management systems.
- Semipermanent leased line** A semi permanent leased line (SPLL) is a service in which resources are used permanently for the transmission of data between two points. The switch is the responsible for the set-up of this service.
- Remote operations channel** The remote operations channel (ROC) for NE R1.x narrowband releases is a bearer channel that conveys management information for a remote system (*AnyMedia* NE). The ROC is expected to be used when the system is installed at locations where no ethernet local area network (LAN) and no separate network (e.g. X.25) exists.
- Router** A router is a network layer device that forwards packets from one network to another based on network layer information (OSI layer 3). Data packets are only transferred through the router, if the participant is on another port of the router. A router is more powerful than a bridge, it reduces the traffic on a LAN more than a bridge, because the IP address is evaluated for traffic control.
- Bridge** A bridge is a network layer device that passes packets between two or more network segments that use the same data link communications protocol (OSI layer 2). The network segments appear as one segment to protocol levels higher than the data link layer. The bridge recognizes with the help of the MAC address which LAN component is on which port of the bridge. Data packets are only transferred over the bridge if the participant is on another port of the bridge. With a bridge data traffic can be kept from certain parts of a LAN.
- Inband management channel** The inband management channel is a bearer ATM PVC that conveys management information for a remote data agent (AFM). It can also be used for carrying NB management information in mixed configurations.

□

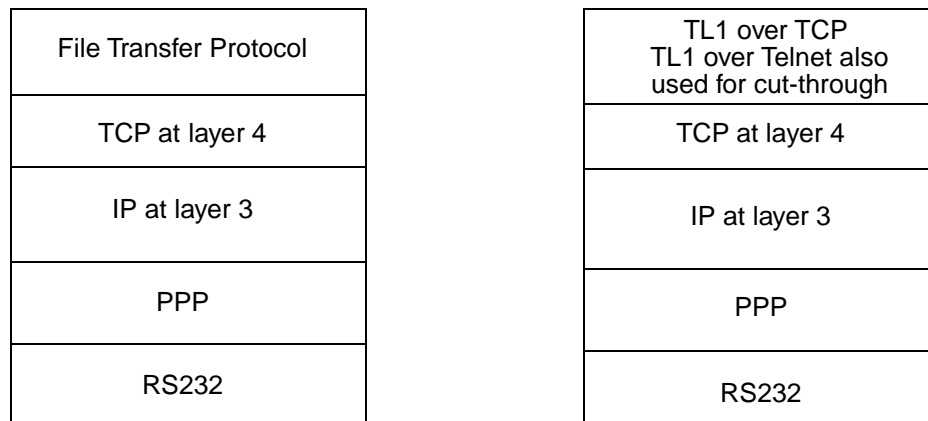
NE communication capabilities

General In this section the management communication capabilities of an NAM R2.1 are described.

The *AnyMedia* Access System provides the following management interfaces for operation, administration, maintenance, and provisioning (OAM&P):

- Craft interface terminal (CIT).
The CIT port is an EIA/TIA-232-E interface configured as a data communication equipment (DCE) and located on the CTU faceplate for local and remote logins. The CIT interface supports exchange of TL1 messages and file transfers.
There are two modes available for communications via the CIT interface:
dumb terminal which allows local access with the exchange of TL1 messages
GSI without PPP capability which allows local exchange of TL1 messages and file transfers over a Lucent proprietary communicating protocol.
The protocol profile in the NE for this scenario is shown in the following figure.

Figure A-1 COMDAC remote access to CIT port protocol profiles



- External system LAN interface.
 LAN interface is available via the shelf connection panel (SCP) connector on the *AnyMedia* Access System Mainshelf. It provides access to an IEEE 802.3 compliant LAN through a 10BaseT connection. All communications through this interface occur over the transmission control protocol/internet protocol (TCP/IP) to the GSI or NAM. The protocol profile in the NE for this scenario is shown in the following figure.

Figure A-2 AnyMedia external LAN interface profiles

File Transfer Protocol (COMDAC and AMF)	TL1 over TCP (COMDAC) (TL1 over Telnet also used for cut-through)	SNMP (AFM)
TCP at layer 4	TCP at layer 4	UDP at layer 4
IP at layer 3	IP at layer 3	IP at layer 3
MAC & LLC-1 at layer 2	MAC & LLC-1 at layer 2	MAC & LLC-1 at layer 2
10BaseT at layer 1	10BaseT at layer 1	10BaseT at layer 1

- Remote Operations Channel (ROC) for NE R1.x narrowband releases
 ROC is a 64-kbps timeslot within the payload of a DS1 link bound to a feeder of the network element. The *AnyMedia* Access System provides access for a remotely located OS if it communicates via TCP. The protocol profile in the NE for this scenario is shown in [Figure A-3, “COMDAC remote operations channel \(ROC\) protocol profiles” \(A-7\)](#). This alternative can be

used if no local ethernet LAN is available or the outside plant (OSP) environment is too severe for a router. It does not need a separate DCN, then it can be a cheaper solution. The protocol profile in the NE for this scenario is shown in the following figure.

Figure A-3 COMDAC remote operations channel (ROC) protocol profiles

File Transfer Protocol	TL1 over TCP (TL1 over Telnet also used for cut-through)
TCP at layer 4	TCP at layer 4
IP at layer 3	IP at layer 3
HDLC	HDLC
E0	E0

For establishing communication between the NAM and the NE, the NE must be minimally configured with its LAN, ROC or CIT parameters with the GSI as applicable. This option is the only available, as the *AnyMedia* Access System does not support remote boot and remote TCP/IP configuration. The GSI can be used to provide this initial configuration of the NE using the CIT port.

□

NAM communication capabilities

The NAM uses for communicating management data an external system LAN interface. The protocol profile in the NAM for this scenario is shown in the following figure.

Figure A-4 NAM protocol profiles

File Transfer Protocol (COMDAC and AFM)	TL1 over TCP (COMDAC) (TL1 over Telnet also used for cut-through)	SNMP (AFM)
TCP at layer 4	TCP at layer 4	UDP at layer 4
IP at layer 3	IP at layer 3	IP at layer 3
MAC & LLC-1 at layer 2	MAC & LLC-1 at layer 2	MAC & LLC-1 at layer 2
10BaseT at layer 1	10BaseT at layer 1	10BaseT at layer 1

□

Recommended DCN configurations

Overview

Purpose If a data network is not yet available between the central site where the NAM is located and the remote site where the NEs are located, the following configurations are recommended:

- [“ROC over semi permanent leased lines DCN \(for NE R1.x narrowband releases\)” \(A-10\)](#)
- [“Communication with remote NEs using inband ATM PVC” \(A-14\).](#)

□

ROC over semi permanent leased lines DCN (for NE R1.x narrowband releases)

- General** The assumptions for this configuration are:
- The LAN-based element manager is located in the central office collocated with the Local Digital Switch (LDS).
 - The NEs are located at remote locations.
 - The OAM&P information (mapped in the 64 kbit/s ROCs) is transported from the NAM in the central office to the remote locations via a semi permanent leased line (SPLL) using either TR-08 or TR-303 access technologies.
 - A router/bridge is used for interfacing the channelized T1 I/F to the LAN in the central office. The router/bridge performs the translation from LAN to HDLC/DS0 access via channelized T1 interfaces.
 - For layer 2 the HDLC Protocol is used between 24 channel NEs and the router.
 - One remote operation channel is used for communicating with each NE (64 kbit/s ROC carried on a SPLL). For managing up to 24 NEs connected to the LDS, a single T1 interface for the router/bridge is sufficient.

Router configuration The minimal requirements for the router/bridge for supporting this scenario are:

- **Minimal WAN Interface Requirements:**
The router/bridge must have one or more channelized 1.544 Mbit/s T1 interfaces (ITU G.703/G.704). An IP address may be assigned to each time-slot or channel group.
- **Minimal LAN Interface Requirements**
The router must have one or two (for cascading purposes) Ethernet (IEEE 802.3) 10BaseT ports. In case of two LAN ports, LAN-to-LAN routing is supported.

For the router/bridge the following has to be provisioned:

- T1 interface functionality (line code, framing type etc.)
- Time-slot mapping (each needed serial interface will be a channel group mapped on a time slot of the channelized T1)

- Protocols and encapsulations
- IP-addresses for IP routing (routing tables)
- Ethernet media

The initial provisioning of a router/bridge is typically performed by a VT100/ANSI terminal, connected to a RS-232C port. When the IP-address of the router is provisioned, the router may be configured via LAN (TELNET, SNMP) depending on the router/bridge used.

AnyMedia network element configuration

The ROC (over SPLL) is the management interface used to access the NE. The initial provisioning has to be done via pre-provisioning (factory settings) or a local GSI (LAN or RS-232C) because the SPLL service, carrying the remote operations channel, must be in-service to get remote access to the NE via remote operations channel.

Provisioning the ROC over SPLL

The following actions have to be made to provision the ROC over SPLL management interface:

- Provision the Local Digital Switch (LDS) that is connected to the NE shelf to associate the DS0 channel to a SPLL service.
- Provision the NE using the ENT-T0 TL1 command to indicate that the received DS0 is a 64 Kbps clear channel (gsfn=4do).
- Provision the NE using the ENT-CRS-T0 command to indicate that the received DS0 should be cross connected to the logical ROC port. Note that the remote operations port T0 cross-connection created for a TR-08 VRT will cause system bandwidth to be allocated, while for TR-303 this command is more an association function than a cross-connection. No actual cross-connection is made in TR-303 until a request to connect the logical line specified in this command is received from the LDS over the EOC data link (for semi-permanent connections).
- Provision the NE using the SET-IP command to an unique IP address.

Note that the default router address of the NE must be set to 224.0.0.2 (universal router's multicast address) so that the NE points to the router on the other side of the ROC interface.

Example of TL1 command

The following TL1 commands are an example of ROC over SPLL configuration (for TR-303) in the NE.

```
ent-t0::v3dp-1-49:::gsfn=4do;
```

```
ent-crs-t0::v3dp-1-49,roc-1;  
ent-crs-t1::dsl-1-1-1,v3fdr-1-3;  
set-ip:::::shelf=135.5.78.2,defrouter=224.0.0.2,  
submask=255.255.255.0
```

The “nail-up” of the DS0 channel must also be provisioned in the LDS. Then the ROC over SPLL is provisioned. Once communications with the element manager is established via the ROC over SPLL, remote operations on the NE can be executed as over a connection via LAN. Also either the GSI or a standard windows FTP/TELNET can be used.

NAM server configuration

The server on which the NAM application resides must have its IP parameters configured:

- IP address (e.g. 135.88.20.234)
- subnet mask (e.g. 255.255.240.0)
- default router (e.g. 135.88.17.1)

In the NAM the following parameters have to be configured to be able to communicate with the NEs.

- TCP/IP configuration related to NEs
 - For every NE the NAM wants to communicate with, its IP address (e.g. 135.88.4.2) must be introduced in the NAM (provisionable with the NAM GUI via cut-through).
- Association configuration related to NEs
 - For every NE with which the NAM has to communicate, the NEs Target Identifier (TID) must be known by the NAM (provisionable with the NAM GUI via cut-through).
 - For every NE with which the NAM wants to communicate, the LOGIN and the PASSWORD information related to that NE must be introduced in the NAM. (provisionable with the NAM GUI via cut-through).

NAM client configuration

The workstation with the NAM client has the following IP parameters configured.

Note that if the client is located at the same machine as the server these parameters are already configured.

- IP address (e.g. 135.88.20.230)
- subnet mask (e.g. 255.255.240.0)
- default router (e.g. 135.88.17.1)

The client workstation has to be configured as a client machine of the server workstation where the NAM server is going to run.

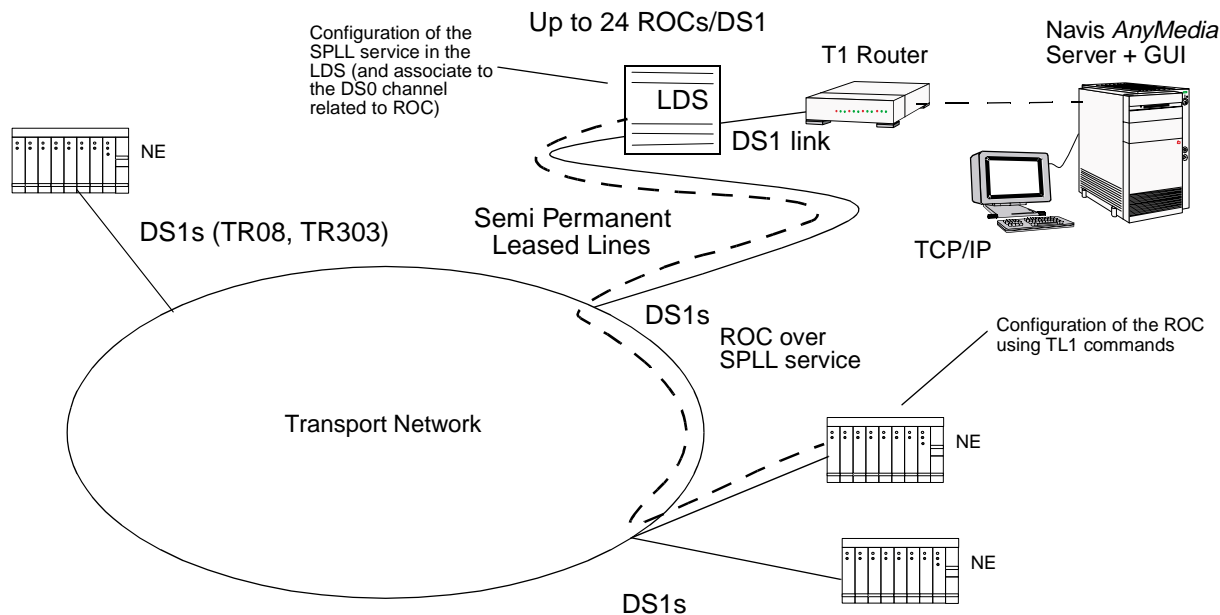
The 'SystemPreferences.ini' file includes the LOGTELNET, PASSTELNET and SERVER variables that have to be configured only if the user wants to open a cut-through session in the NAM client.

Local digital switch configuration

Management operations have to be performed on the LDS to create the SPLL service and associate this service to the DS0 channel which will be cross connected with the ROC. The provisioning of this DS0 channel will be static with TR-08 and dynamic with TR-303.

A separate SPLL needs to be established with every NE which shall be managed.

Figure A-5 ROC over semi permanent leased line for NAM



Communication with remote NEs using inband ATM PVC

The assumptions for this configuration are:

- There are data and telephony access technologies collocated in the same NE. Data access is oriented to data applications and is based on asynchronous transfer mode (ATM) over asymmetrical digital subscriber line (ADSL) access. The data access consists of ADSL application packs and access feeder multiplexer (AFM) control cards which make the switching between ADSL access traffic and ATM networks using DS3 interfaces (24-channel market).
- There is an ATM network between central office and remote *AnyMedia* NEs.
- In this scenario ATM permanent virtual connections (PVCs) are used to communicate telephony (TL1/FTP over TCP based) and data (SNMP over UDP and FTP over TCP based) management traffic between NAM and *AnyMedia* NEs.
- One ATM PVC will be used for every NE to be managed, this ATM PVC carries IP packets related to both COMDAC and AFM management information.
- ATM PVCs carrying management information related to one NE are originated in a LAN environment where NAM is located.
- A DCN device is needed at the Central Office to make the translation between 10BaseT/MAC&LLC1/IP and DS3/ATM PVC/AAL5/802.2 LLC/802.2 SNAP/IP interface to the ATM network. The LLC encapsulation method to be supported by that device is that described in RFC 1483, i.e. this method allows multiplexing multiple protocols over a single ATM virtual circuit. Further, this method carries connectionless network traffic over the ATM network. Note that this functionality (if available) can also be performed by the ATM switch connected by means of a LAN connection with the central office (e.g. CBX-500), in these cases there is no need of a separate ATM router at the CO.
- ATM PVC which carries IP management information is carried over an ATM network and finally they are inserted in a related NE by means of DS3/DS1/OC3c data ports, IP packets contained in the ATM PVC are extracted in the data AFM card which also support RFC 1483.

- Part of these IP packets (those with IP address of AFM) which carry BB management information are terminated in AFM.
- Part of these IP packets (those with IP address of COMDAC) which carry telephony management information are forwarded to AFM LAN port which is joined to COMDAC LAN port (located on the SCP of the *AnyMedia* Mainshelf), these IP packets will be terminated in the COMDAC.

Configuration of the router

The router at central office need to be configured. The minimal requirements for the router for supporting this scenario are:

- Minimal WAN interface requirements
The router must have one or more ATM DS3s interfaces with the ATM network (or any other physical interface, e.g. STM-1, DS1 depending on the edge ATM switch to interface with). It is in charge of mediating from 10BaseT/ MAC&LLC1/ IP to DS3/ATM, AAL5, 802.2 LLC, 802.2 SNAP/ IP. The logical WAN interface should be compatible with that of the connected ATM switch (e.g. Support of UNI 3.1 ATM cell switching). This router must support RFC 1483 (multiprotocol over ATM encapsulation) since AFM supports it.
- Minimal LAN interface requirements
The router must have one or two (for cascading purpose) Ethernet (IEEE 802.3) 10BaseT/100BaseT ports. In case of two LAN ports, LAN-to-LAN routing should be supported.

The configuration tasks to be performed on router are:

- Configure ATM DS3 interface
- Configure LAN interface
- Configure ATM PVCs inside the ATM DS3 interfaces
- Create routing tables for both AFM and COMDAC (e.g. those IP packets to be sent to COMDAC and AFM addresses should be routed to the IP address of the related PVC).

Configuration of COMDAC

On the *AnyMedia* telephony part of NE the user must configure the local LAN port. The initial provisioning has to be done via pre-provisioning (factory settings) or a local GSI (RS-232C). To do so the user must configure the COMDAC LAN port IP address, the default router address (address of AFM LAN port) and the subnet mask of the NE local LAN port. We use TL1 commands to configure the NE as it is shown in the next example.

```
set-ip:::::shelf=135.88.4.2,defrouter=135.88.17.1,  
submask=255.255.240.0
```

Configuration of AFM On the AFM it is necessary to configure the in-band ATM permanent virtual connection (PVC) which is carrying telephony and data management information. This ATM PVC will be terminated at the AFM, and the IP packets contained in it will be extracted. For this PVC, the VPI should be 0 and the VCI greater than 31. ATM PVCs may be provisioned in the AFM by means of the GSI via the local CIT together with the AFM IP addresses (one for the DS3 interface and another one for the LAN port). IP, Net Mask and Gateway addresses for the AFM must be provisioned.

On the AFM a routing table must be configured (i.e. so that IP packets related to the COMDAC are forwarded to the AFM LAN port and IP packets related to the AFM are terminated at the AFM)

The user must connect the AFM LAN port with the COMDAC LAN port located on the SCP of the *AnyMedia* Mainshelf by means of an Ethernet cross-over cable.

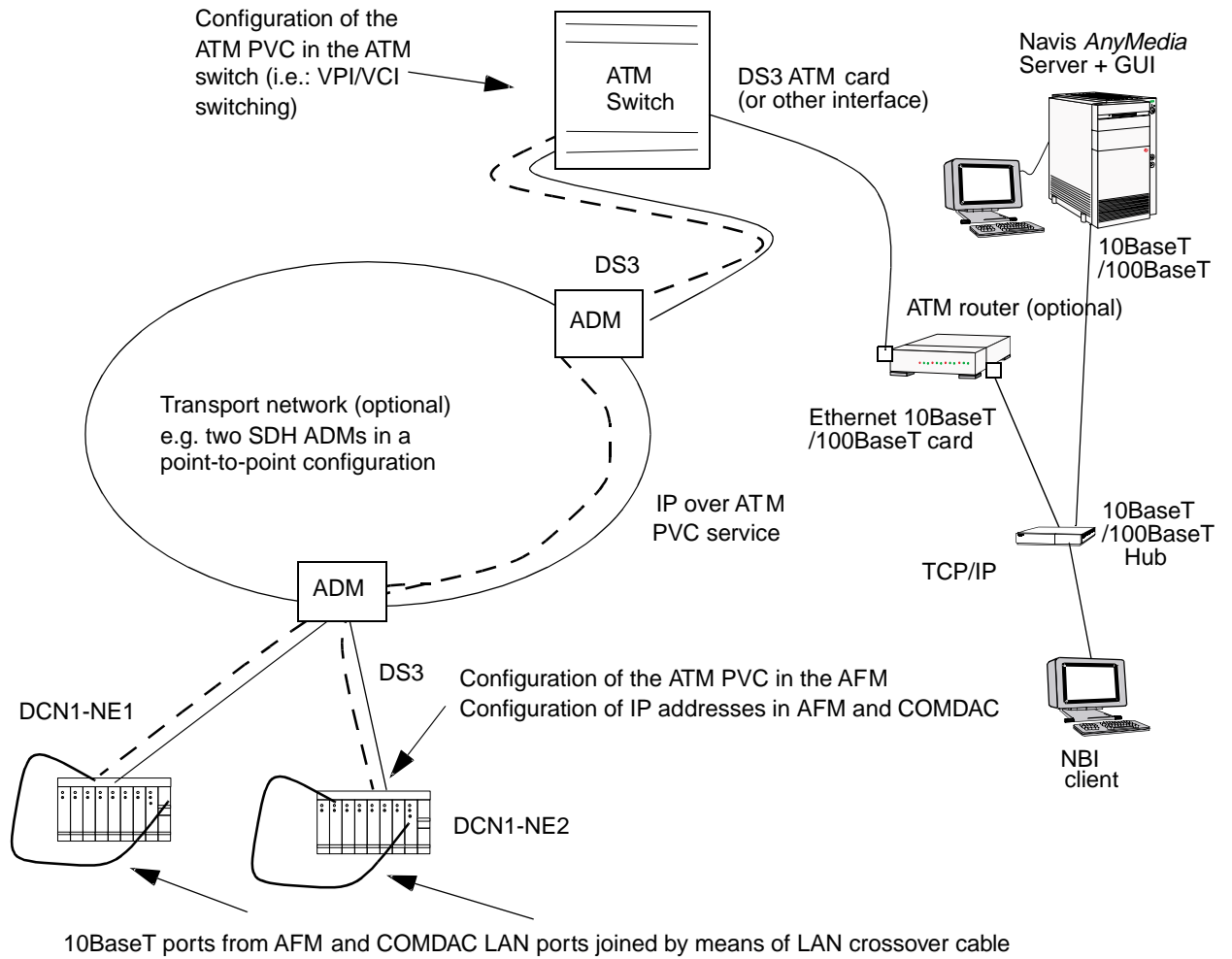
NAM server configuration The NAM server configuration is the same as described in [“NAM server configuration” \(A-12\)](#).

NAM client configuration The NAM client configuration is the same as described in [“NAM client configuration” \(A-12\)](#).

Transport elements configuration The ATM switches which will transport the ATM PVCs carrying the IP management traffic need to be provisioned, i.e a table must be provisioned in these switches saying that the cells from a specific VPI/VCI are related to a VPI/VCI pair in another interface. The ATM router and *AnyMedia* Access System must be attached to the ATM network by using DS3 links (for the ATM router other links may also be used, e.g. DS1/STM-1, OC-3, etc.). If the switch supports directly RFC1483 a direct LAN connection between the switch and the CO LAN environment must be provisioned, in this case there is no need of ATM router at the CO side.

If SDH ADMs are used the paths which carry the ATM information need to be provisioned.

Figure A-6 Communication with remote NEs using in-band ATM PVC



□



Appendix B: Configuration parameters

Overview

Purpose This chapter provides information about all the configuration parameters that are used with *Navis*[™] *AnyMedia*[®] Element Management System (NAM) - 24 Channel, R2.1 as follows:

- an alphabetical list of all configuration parameters that are used with NAM.
- a detailed information about each parameter.

These configuration parameters are distributed in three configuration files, as follows:

- *AnyMediaEM.cfg* for variables used by the *AnyMedia* servers (located in *\$ANYMEDIAPATH/cfg/*).
- *AnyMedia.ini* and *SystemPreferences.ini* for variables used by the GUI. (located in *\$ANYMEDIAPATH/GUI24/config/*).

Only the configuration parameters the *AnyMedia* administrator can modify are explained in this chapter (modify these configuration variables with caution as they may adversely affect the correct operation of the application). To modify the other configuration parameters stored in the configuration files, please contact with Lucent Technologies Customer support.

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NAM server configuration variables

General The following table provide an alphabetical list of the configuration variables for *AnyMedia* servers.

The directories can be defined either absolute or relative to the environment variable *\$ANYMEDIAPATH*.

AnyMediaEM.cfg File

Name	Description
AM.clearHour	Hour of the day in 24h format at which the removal process of the alarm database is executed every day. It is OPTIONAL. If not present, default value is taken. Possible values: 0 to 23 Default value: 1
AM.clearMinute	Minute within the AM.clearHour at which the removal process of the alarm database is executed every day. It is OPTIONAL. If not present, default value is taken. Possible values: 0 to 59 Default value: 0
AM.correlationRulesPath	AM configuration file location relative to <i>AnyMedia</i> path. It contains the correlation rules needed for the reduced correlation process in the AM subsystem. It is MANDATORY. It should be present in this file. Default value: <i>AM/cfg/CorrelationRules.cfg</i> .
AM.minimumClearPeriod	Number of days that cleared alarms remain in the database before they are removed. It is optional. If not present, default value is taken. Possible values: 1 to *. Default value: 3.
AM.platformAlarmTablePath	AM configuration file location relative to <i>AnyMedia</i> path. It contains the static information of the platform alarms. It is MANDATORY. It should be present in this file. Default value: <i>AM/cfg/PlatformAlarmTable.cfg</i> .
All CM variables in this file are mandatory and must be defined here.	
FB.Root.NVDS_BB	Path associate to the root key used by File Browser. Default value: NVDS_BB.

Name	Description
FB.Root.NVDS_NB	Path associate to the root key used by File Browser. Default value: NVDS_NB.
FB.Root.NVPS_BB	Path associate to the root key used by File Browser. Default value: NVPS_BB.
FB.Root.NVPS_NB	Path associate to the root key used by File Browser. Default value: NVPS_NB.
CM.FTPtimeOut	Time out in seconds for all FTP commands. The FTP command is aborted if there is no progress of file transfer during the interval. Possible values: 90 to 900 seconds. Default value: 300.
CM.maxTriesCounter	Maximum number of SNMP PDUs retransmissions when time out. Obsoleted by BAM.association.snmpRetries. Possible values: 0 to (upper limit not defined). Default value: 3.
Gen.directoryTemp	Temporary directory of the <i>AnyMedia</i> Access System application. Default value: tmp.
Gen.orbixTracesInEm	Orbix daemon trace level. Possible values: 0 to 2. Default value: 0
Gen.timeout	Time out in milliseconds for CORBA calls. Possible values: 0 to *. Default value: 480 000 ms.
FB.Root.ALARM_FILTERS	Path associate to the root key used by File Browser. Default value: AlarmFilters.
NEM.association.timeSync	Indicates if the time and date in the agents has to be kept in synchronization with the time and date of the NAM. Possible values: true, false. Default value: false.
NEM.aoHandler.fullSyncInvalidTimes	Maximum number of retries of full synchronizations. Possible values: 0 to 5 times. Default value: 3.

Name	Description
NEM.aoHandler.queueSize	Maximum size of the event's queue. Possible values: 1 to 1000 elements. Default value: 1000.
NEM.association.heartBeatNumber	Maximum number of missing heartbeats to the NE. Possible values: 1 to 5 times. Default value: 3.
NEM.association.heartBeatTime	Time between two heartbeats to the NE. Possible values: 0 to 15 minutes. Default value: 5.
NEM.association.loopTimer	Time to wait after connection to four TCP/IP ports have been tried and failed. Possible values: 0 to 50 minutes. Default value: 5.
NEM.timeSync.delay	Maximal time delay in seconds when a time sync is not needed. Possible value: 0 to 30 seconds. Default value: 30
NEM.association.osContext	TL1 context used as parameter in ENT-OSACMAP TL1 command. Default value: TL1OTHER1
NEM.association.tl1Timeout	Time out for all TL1 commands. Possible values: 1 to 5. Default value: 4.
BAM.association.timeSync	Indicates if the time and date in the agents has to be kept in synchronization with the time and date of the NAM. Possible values: true, false. Default value: false.
BAM.association.heartBeatNumber	Maximum number of missing heartbeats to the NE. Possible values: 1 to 5 times. Default value: 3.
BAM.association.heartBeatTime	Time between two heartbeats to the NE. Possible values: 0 to 15 minutes. Default value: 5.

Name	Description
BAM.association.snmpTimeout	Time out for all SNMP commands. Possible values: 1 to 5. Default value: 4.
BAM.association.snmpRetries	Maximum number of times for a SNMP retransmission. Possible values: 1 to 10. Default value: 3.
BAM.association.nextAttempt	Time to wait after a new SNMP communication attempt. Possible values: 0 to 50 minutes. Default value: 5.
BAM.alarmSync.period	Time between periodic alarm synchronization. Possible values: 3600 to 86400 seconds. Default value: 86400.
BAM.cfgSync.period	Time between periodic config synchronization.
BAM.timeSync.delay	Maximal time delay when a time synchronization is not needed. Possible values: 0 to 30 seconds. Default values: 30.
BAM.cfgSync.maxRetries	Maximum number of retries of full synchronizations. Possible values: 0 to 5 times. Default value: 3.
BAM.trapHandler.queueSize	Maximum size of the trap's queue. Possible values: 1 to 1000 elements. Default value: 1000.
BAM.nmssync.pollPeriod	Default value: 5.
BAM.nmssync.pollRetries	Default value: 3.
CAM.association.pingTimeout	Possible values: 0 to 10 seconds Default value: 1 second
CAM.association.pingRetries	Possible values: 0 to 5 times Default value: 3 times
OAM.backup.archiveDirectory	Destination of the log files archived by the <i>AnyMedia</i> archive script, if it is not specified as command-line parameter. It can be a tape device. Default value: archive.

Name	Description
OAM.backup.backupDirectory	Destination of the log files and data bases backed up by the <i>AnyMedia</i> backup script, if it is not specified as command-line parameter. It can be a tape device. Default value: backup.
OAM.backup.backupLogDirectory	Location of the log files of the backup/archive/restore scripts execution. Default value: tmp.
OAM.backup.numberOfLogFiles	Maximum number of log files (per type) allowed in the OAM.backup.backupLogDirectory. Possible values: 1 to *. Default value: 10 files per script file.
OAM.log.directoryCurrentLogs	Directory where current log files are stored. Default value: log.
OAM.sysadmin.clientIdleTime	Period of inactivity after that a client is forced to log out. Possible values: 60 to *. Default value: 240 seconds.



NAM client GUI configuration variables

General The following table provides an alphabetical list of the configuration parameters for *AnyMedia* GUI.

SystemPreferences.ini configuration file

Name	Description
SITE	The city or the location where the NAM is working. This value is used for printing purposes, it is mandatory at installation time.
LOC_LANG=en LOC_COUNTRY=US	Default locale of the application. These value cannot be modified.
<p>The following variable should be used to change the timezone. That should be done only if some problems has been detected by default.</p> <p>In order to notify to the application that the time zone should be change the value of TZ_userDefined should be set to true.</p> <p>In order to set properly the time zone to be used in the AnyMedia application we have to set the following variables: TZ_rawOffset, TZ_ID, TZ_startMonth, TZ_startDay, TZ_startDayOfWeek, TZ_startTime, TZ_endMonth, TZ_endDay, TZ_endDayOfWeek, TZ_endTime.</p>	
TZ_userDefined	Possible values: true, false Default value: false
TZ_rawOffset	Defines the difference in milliseconds between local time and UTC.
TZ_ID	<p>The syntax necessary to define a TZ_ID is the following: GMT[+ -]hh[:mm].</p> <p>For example, you might specify GMT+14:00 as a custom time zone ID. The time zone that is returned when you specify a custom time zone ID does not include daylight savings time, then it is necessary to use the rest of variables to set the daylight saving time for this time zone.</p>
TZ_startMonth	The daylight savings starting month. Month is 0-based. e.g., 0 for January.
TZ_startDay	The daylight savings starting day-of-month.
TZ_startDayOfWeek	The daylight savings starting day-of-week-in-month. Day of week are 1-based: 1 is SUNDAY, 2 is MONDAY and so on.
TZ_startTime	The daylight savings starting time in local wall time, which is standard time in this case.
TZ_endMonth	The daylight savings ending month. Month is 0-based. e.g., 0 for January.

Name	Description
TZ_endDay	The daylight savings ending day-of-month.
TZ_endDayOfWeek	The daylight savings starting day-of-week-in-month. Day of week are 1-based: 1 is SUNDAY, 2 is MONDAY and so on.
TZ_endTime	The daylight savings ending time in local wall time, which is daylight time in this case.
USERVIEW	Default view in User Administration and Profiling application. Possible values: users, user groups, domains or objects. Default value: users.
ALM_VIEW	Default view of the Alarm Viewer. Range of values: 1 to 5. Default value: 3.
ALM_FILTER	Default alarm filter of the Alarm Viewer. Possible values: 0:Last 24 hours, 1:Critical raised alarms, 2:Raised alarms, 3:Alarm from a Host/s, 4:Critical alarms not cleared, 5:Owned acknowledge alarms, 6:All acknowledge alarms, 7:None filter/all alarms. Default value: 3.
ALARM_SOUND	Default value: ON_RAISE
ALARM_SOUND_PERIOD	Range of values: 5 to 300 Default value: 60 (seconds)
ALARM_CLEARED	Default value: sound/alarm_noSound.wav
ALARM_INDETERMINATE	Default value: sound/alarm_noSound.wav
ALARM_WARNING	Default value: sound/alarm_noSound.wav
ALARM_MINOR	Default value: sound/alarm_minor.wav
ALARM_MAJOR	Default value: sound/alarm_major.wav
ALARM_CRITICAL	Default value: sound/alarm_critical.wav
LOGTELNET	Login to connect to NAM server for cutthrough purposes. Default value: defined at installation time.
PASSTELNET	Password to connect to NAM server for Cut-through purposes. Default value: defined at installation time.
SERVER	Server host where the NAM application is running. Default value: defined at installation time.

Name	Description
EVENT_DELAY	<p>This is the delay applied to all events received by the GUI (except those ones managed by the System Events Distributor). That is, the delay between the GUI event reception and the event handler process. Value expressed in milliseconds.</p> <p>Default value: 5000.</p>
IS_NAR_MARKET	<p>This variable defines if the <i>AnyMedia</i> application is being used either in the NAR market (true) or in the international market (false).</p> <p>Default value: false.</p>
SHUTDOWN_TIME	<p>This variable defines the shutdown time at which the systme will be closed every day.</p> <p>Allowed values: None or time in SHORT format. HH:mm:ss where HH is hour in day (0 23), mm minutes (0 59) and ss seconds (0 59).</p> <p>Default value: 02:00:00</p>
SHUTDOWN_MINIMUM_EXECUTION_PERIOD	<p>This variable defines the minimum time, which should be up the GUI to activate the shutdown feature.</p> <p>Allowed values: None or time in SHORT format. HH:mm:ss where HH is hour in day (0 23), mm minutes (0 59) and ss seconds (0 59).</p> <p>Default value: 12:00:00</p>
IDLENESS	<p>This variable defines the idleness time allowed, if this time is exceeded, then the GUI closed.</p> <p>Allowed values: None or time in SHORT format. HH:mm:ss where HH is hour in day (0 23), mm minutes (0 59) and ss seconds (0 59).</p> <p>Default value: 02:00:00</p>
<p>The following variables are used to associate a color to a specific alarm severity. Each parameter value defines the color using the RGB model. The value has to be entered in hexadecimal format. Every combination possible in the RGB model is allowed in the NAM configuration. Examples: value ff0000 means 255 red, 00 green, 00 blue → red</p> <p>value 00ff00 means 00 red, 255 green, 00 blue → green</p> <p>value 0000ff means 00 red, 00 green, 255 blue → blue</p> <p>value ffffff means 255 red, 255 green, 255 blue → white</p>	
PS_CLEARED	<p>This variable is to define the color used for the representantion of a cleared alarm. Default value: 00ff00 (green)</p>

Name	Description
PS_INDETERMINATE	This variable is to define the color used for the representation of a indeterminate alarm. Default value: ffffff (white)
PS_WARNING	This variable is to define the color used for the representation of a warning alarm. Default value: ffffff (white)
PS_MINOR	This variable is to define the color used for the representation of a minor alarm. Default value: ffff00 (yellow)
PS_MAJOR	This variable is to define the color used for the representation of a major alarm. Default value: ff0000 (red)
PS_CRITICAL	This variable is to define the color used for the representation of a critical alarm. Default value: ff0000 (red)
PING_ENABLED	Default value: false
PING_TIME_MONITOR	Time between two periodic polls Default value: 300 (seconds)
PING_NUMBER_OF_ATTEMPS	Number of retries needed to detect a communication loss Default value: 3
PING_TIME_OUT	Timeout that defines when a ping is considered lost Default value: 1000 (milliseconds)





Appendix C: Northbound interface

Overview

- Purpose** This appendix provides you with information about the
- Northbound interface basics and
 - Northbound interface specific TL1 messages.

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Northbound interface basics

Overview

Purpose This section provides information about the northbound interface basics.



Northbound interface description

General	The <i>Navis™ AnyMedia®</i> Element Management System (NAM) - 24 Channel, R2.1 offers to any external OS a straight TL1 connection with the set of NEs in the OS's network. Using this link, any external OS with access rights to open a northbound interface session, can configure, test or monitor a set of NEs using a TL1 interface and can receive the responses to the TL1 commands and the autonomous outputs which are generated by the NE (depending on the northbound interface application type selected).
Two types of northbound interfaces	The NAM provides two different types of northbound interface applications: <ul style="list-style-type: none"> • general northbound interface all types of autonomous messages received from the NE are sent to the OS. None NE autonomous messages will be inhibited. • alarm only northbound interface only alarm and environment alarm autonomous message received from the NE are sent to the OS, the NAM will inhibit the rest of NE autonomous messages (database changes, events, etc...).
Configure terminal for session	Before the telnet session for the northbound interface is opened the TERM variable must be set correctly. Set the TERM variable either to <i>dterm</i> , <i>xterm</i> or <i>vt100</i> .
Restrictions with multiple sessions	While a northbound interface session is already open another session of a different type must not be opened for the same NE.
Avoid interference with other EM	When a northbound interface session is opened it is recommended to send the message <i>ALW-MSG::vc-all::,ALL;</i> to avoid changes in the configuration of the NE introduced by another manager interfering with the application.
Start northbound interface session	To start a northbound interface session, the OS must open a TCP/IP connection with the NAM. Then a TL1 interface, see <i>Command and Message Manual</i> , is used. This done by the ACT-USER message authenticating and authorizing the OS. The NAM opens a dedicated TL1 virtual circuit with every NE included in the domain of the external OS. When the connections

are open, any TL1 command typed by the OS operator, will be sent, to the proper NE, and the responses to these commands, as well as all the available autonomous output messages (AO) will be routed to the proper OS.

Close northbound interface session

To close the northbound interface session, the external OS uses the CANC-USER TL1 message. When this message reaches the NAM, it logs-out the external OS, closes all the TCP/IP connections which are involved in this northbound interface session (both sides, northbound to the OS, and southbound to the NEs managed by the OS) and logs the end of the northbound interface link.

Maintaining authentication information

The OS will be authenticated and authorized by the NAM not by the NE. Using this mechanism, the OS will only have to send one ACT-USER TL1 message, which will be spawned by the NAM to all the NEs in the network managed by the OS. To do that, the NAM will have to maintain some information, e.g. the TIDs and IP addresses of all the NEs managed by the OS, and a UID - PID pair to open a virtual circuit on each NE. The NAM operator will be provided with the required set of script tools to maintain this information easily.

Close virtual circuits with NEs

In the same way, only one CANC-USER message, sent by the OS to the NAM, will be enough to close all the virtual circuits with the NEs, and the northbound interface session.

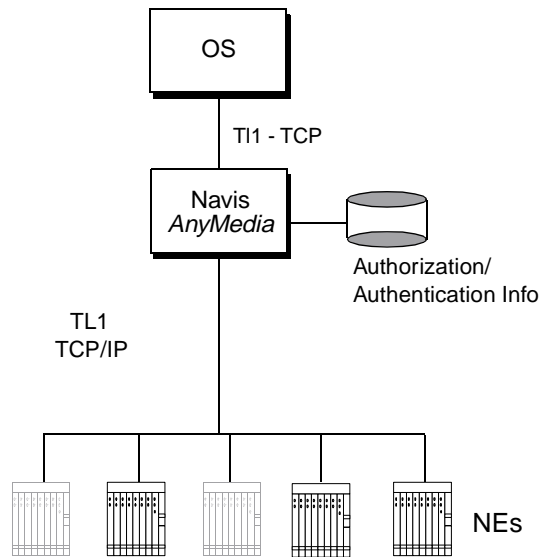
Routing of TL1 messages

For the routing of the TL1 messages, the NEs TID is used, and from every NE configuration table, the corresponding IP address is determined. Incoming messages that have no TID (field empty), are sent to all connected NEs.

Messages from NEs

In case the OS will send a TL1 request message, the OS has to support as many completion responses as NEs are connected. Messages coming from the NEs (responses and autonomous output), are queued until they are complete (i.e. received) and then sent to the

northbound OS. There are no guarantees about the order in which responses are sent to the OS.



The light grey NEs can not be accessed by the external OS

The number of concurrent northbound interface sessions supported by a single NE will depend on the number of available virtual circuits on the NE.

The NAM will provide the independence of the northbound interface sessions and the NAM GUI interface, so an operator using the NAM GUI, will not get to know whether a northbound interface session is running or not.

□

Northbound interface specific TL1 messages

Overview

Purpose Some TL1 messages feature more parameters when invoked via NAM. These TL1 messages are described in this section, namely

- REPT ALM (Report Alarm)
- RTRV-ALM (Retrieve-Alarms)
- RTRV-ALM-ENV (Retrieve-Alarm-Environment)
- RTRV-HDR (Retrieve-Header).



REPT ALM (Report Alarm)

Purpose A REPT ALM (Report Alarm) message is generated autonomously by the NE to report the occurrence of an equipment, facility, or system alarm condition to the OS/NAM and CIT.

An alarm condition reported via the REPT ALM message has a corresponding REPT ALM clearance message that is generated when the alarm condition clears.

Abortable	No
Privilege Code	Reports Only
GSI Confirmation Required	No
File Transfer	No
Related Autonomous Message	None

Output format If the command request completes successfully, the following normal completion response is returned:

```
sid date time
AC atag REPT ALM AIDTYPE
"AID:NTFCNCDE,CONDTYPE,SRVEFF,OCRDAT,OCRTM:CONDDDESCR"
;
```

Output format parameter AID This parameter appears in the Access ID Block

Type	Access ID
Required	Yes

AID is the address of the equipment or facility for which an alarm is being reported.

Abbreviation	Meaning
afm-1 ² ₋	AFM
ap-1-{1-16}	Application Pack
bvc-{1-2}-{1-6}-{32-1023} ² ₋	Bearer Virtual Channel

Abbreviation	Meaning
bvpt-{1-2}-{1-6} ² ₂	Bearer Virtual Path Termination
comdac-1-{1-2}	COMDAC
ctu-1	Craft/Test Unit
cu-1-{1-24}	Channel Unit
cvc-{1-2}-1-{32-1023} ² ₂	Control Virtual Channel
cvpt-{1-2}-1 ² ₂	Control Virtual Path Termination
drop-1-{1-16}-{1-32}	Drop
ds1-1-{1-5}-{1-4} ¹ ₁	DS1 narrowband port (feeder side)
ext-1-{1-2}	External DS1 Synchronization
fpt-1-{1-5}-{1-4} ² ₂	Framed Path Termination
iat-{1-32} ³ ₃ , iat-{1-80} ⁴ ₄	Integrated Access Terminal
iatfdr-{1-32}-1-1 ³ ₃ , iatfdr-{1-80}-1-1 ⁴ ₄	Integrated Access Terminal
iatfsp-1-{1-16}-{1-2} ³ ₃ , iatfsp-1-{1-16}-{1-5} ⁴ ₄	Integrated Access Terminal Server Port
iods1-1-{1-5} ¹ ₁	DS1 Circuit Pack
iods1p-1 ¹ ₁	DS1 protection pack
m2drop-1-{1-24}-{1-4}	Metallic Distrib 2 Shelf Drop
m2s-1	Metallic Distrib 2 Shelf
msc-1-{1-2}	Metallic Shelf Controller
ptu-1-{1-2}	Power Test Unit
pwr-1-{1-2}	-48V Fast Distribution Bank
pwrms-1-{1-2}	-48V MDS2 Distribution Bank
sh-1	Shelf
telnet-{1-2}	Telnet virtual port
tr8dl-{1-20}-1	TR-008 Mode 1 Data Link
v08-{1-20}	TR-008 VRT
v303-1, v303-{1-3} ⁵ ₅	GR-303 VRT

Abbreviation	Meaning
v3eoc-1-{1-2}, v3eoc-{1-3}-{1-2} ⁵ ,	GR-303 Embedded Operations Channel
v3tmc-1-{1-2}, v3tmc-{1-3}-{1-2} ⁵ ,	GR-303 Timeslot Management Channel
{string}Note: Only available via NAM	NE TID (Target Identifier)

Notes:

1. For NE R1.x narrowband releases
2. For NE R2.2 releases
3. From NE R1.7.0 on
4. From NE R1.7.2 on
5. From NE R1.7.2.1 on

Output format parameter notification code (NTFCNCDE)

This parameter appears in the Common Block

Type	List
Required	Yes

NTFCNCDE is the alarm level.

Abbreviation	Meaning
CL	Cleared Alarm
CR	Critical Alarm
MJ	Major Alarm
MN	Minor Alarm

Output parameter condition type (CONDTYPE)

This parameter appears in the Common Block

Type	List
Required	Yes

CONDTYPE is a code denoting the condition type. A message reporting the clearing of an alarm has the same condition type as the one reporting the alarm.

Abbreviation	Meaning
AIS	Alarm indication signal
BKUPMEMP	System data memory mismatch
CABLE	Cable disconnect
COM_RES_NOT_AVAILABLE (Note: only available via NAM)	Port busy
CPYMEMF	Copy Memory Failed
DATASYSCR	Data system failed critical
DATASYSMJ	Data system failed major
DATASYSMN	Data system failed minor
DBCRRPT	Data memory corrupt
DBMEMTRF	Data memory update abort
DIGRPF	TR-08 major shelf alarm received
EXT	External
IMPROPRMVL	Improper removal
INT	Internal hardware failure
INTRMVL	Internal Fault or Pack Missing
LOF	Loss of frame
LOS	Loss of signal
NE_ASSOC_FAILED (Note: only available via NAM)	Association with NE failed
NE_ASSOC_LOST (Note: only available via NAM)	Association with the NE lost
POLL	Not responding to poll
PRCDERR	Procedural error
PWR	Power fault
RINGF	Ringing source input failed
SFTCRRPT	Software program corrupt

Abbreviation	Meaning
SFTERR	Software version mismatch
SWFTDWNF	Software download failed
SYNC	Synchronization input failed
SYNCOOS	System free running
TL1_COMM_DENIED (Note: only available via NAM)	TL1 session rejected
T-BERL	BER exceeds threshold
TSTRELAY	Stuck test access relay
UNLATCH	Pack unlatched
YEL	Yellow Alarm

Output parameter service effect (SRVEFF)

This parameter appears in the Common Block

Type	List
Required	Yes

SRVEFF indicates the effect of the reported alarm on service.

Abbreviation	Meaning
NSA	Non Service Affecting
SA	Service Affecting

Output parameter occurrence date (OCRDAT)

This parameter appears in the Common Block

Type	Date
Required	Yes

OCRDAT indicates the date of the condition being reported and has the format YY-MM-DD (year-month-day). 70<=yy<=99 maps to 1970 through 1999 respectively; 00<=yy<=37 maps to 2000 through 2037 respectively.

**Output parameter
occurrence time (OCR TM)**

This parameter appears in the Common Block

Type	Time
Required	Yes

OCR TM indicates the time of the condition being reported and has the format HH-MM-SS (hours-minutes-seconds).

**Output parameter
condition description
(CONDDESCR)**

Type	String
Required	Yes
Min # chars	1
Max # chars	68

This is the text description for the reported alarm condition. This information can be found in the Correlations Tables. The 68 characters included a pair of escaped quotes \"

**Output parameter access
identifier type (AIDTYPE)**

Type	List
Required	Yes

MODIFIER is the message modifier to the REPT ALM message.

Abbreviation	Meaning
T1	T1
EQPT	Equipment



RTRV-ALM (Retrieve-Alarms)

Purpose The RTRV-ALM (Retrieve-Alarms) command instructs the system to retrieve: (1) all currently active alarms, (2) currently active equipment alarms, (3) currently active facility alarms, or (4) currently active system level alarms from the system.

Input format RTRV-ALM-[AIDTYPE]:[tid]::[ctag]::,,,[,TMPER];

Abortable	Yes
Privilege Code	Reports Only
GSI Confirmation Required	No
File Transfer	No
Related Autonomous Message	None

Input format parameter Target ID (tid)

This parameter appears in the TID Block

Type	String
Required	No
Default Type	Dynamic

Target ID is the name of the system to which the command is addressed.

Input format parameter Correlation tag (ctag)

This parameter appears in the CTAG Block

Type	String
Required	No
Default Type	Dynamic

This field is used to associate the command message to the response message.

**Input format parameter
accumulation time period
(TMPER)**

This parameter appears in the CTAG Block

Type	String
Required	No
Default Type	none
min # chars	0
max # chars	0

Since the condition type is not supported, this field does not pertain and will be ignored.

**Input format parameter
access identifier type
(AIDTYPE)**

Type	List
Required	No
Default Type	Fixed
Default	ALL

Access identifier type

Abbreviation	Meaning
ALL	All
T1	T1
EQPT	Equipment

Output format

If the command request completes successfully, the following normal completion response is returned:

```
sid date time M ctag COMPLD"AID,AIDTYPE:NTFCNCDE,CONDTYPE,  
SRVEFF,OCRDAT,OCRTM:CONDDDESCR";
```

**Output format parameter
access identifier (AID)**

This parameter appears in the Access ID Block

Type	Access ID
Required	Yes
Default Type	Fixed

Default	It-all
---------	--------

AID is the address of the equipment or facility for which an alarm is being reported.

Abbreviation	Meaning
afm-1 ² _—	AFM
ap-1-{1-16}	Application Pack
bvc-{1-2}-{1-6}-{32-1023} ² _—	Bearer Virtual Channel
bvpt-{1-2}-{1-6} ² _—	Bearer Virtual Path Termination
comdac-1-{1-2}	COMDAC
ctu-1	Craft/Test Unit
cu-1-{1-24}	Channel Unit
cvc-{1-2}-1-{32-1023} ² _—	Control Virtual Channel
cvpt-{1-2}-1 ² _—	Control Virtual Path Termination
drop-1-{1-16}-{1-32}	Drop
ds1-1-{1-5}-{1-4} ¹ _—	DS1 narrowband port (feeder side)
ext-1-{1-2}	External DS1 Synchronization
fpt-1-{1-5}-{1-4} ² _—	Framed Path Termination
iat-{1-32} ³ _— , iat-{1-80} ⁴ _—	Integrated Access Terminal
iatfdr-{1-32}-1-1 ³ _— , iatfdr-{1-32}-1-1 ⁴ _—	Integrated Access Terminal
iatsp-1-{1-16}-{1-2} ³ _— , iatsp-1-{1-16}-{1-2} ⁴ _—	Integrated Access Terminal Server Port
iods1-1-{1-5} ¹ _—	DS1 Circuit Pack
iods1p-1 ¹ _—	DS1 protection pack
m2drop-1-{1-24}-{1-4}	Metallic Distrib 2 Shelf Drop
mds2-1	Metallic Distrib 2 Shelf
msc-1-{1-2}	Metallic Shelf Controller
ptu-1-{1-2}	Power Test Unit
pwrf-1-{1-2}	-48V Fast Distribution Bank

Abbreviation	Meaning
pwrn-1-1-2	-48V MDS2 Distribution Bank
sh-1	Shelf
telnet-1-2	Telnet virtual port
tr8dl-1-20-1	TR-008 Mode 1 Data Link
v08-1-20	TR-008 VRT
v303-1, v303-1-3 ⁵	GR-303 VRT
v3eoc-1-1-2, v3eoc-1-3-1-2 ⁵	GR-303 Embedded Operations Channel
v3tmc-1-1-2, v3tcm-1-3-1-2 ⁵	GR-303 Timeslot Management Channel
{string}Note: Only available via NAM	NE TID (Target Identifier)

Notes:

1. For NE R1.x narrowband releases
2. For NE R2.2 releases
3. From NE R1.7.0 on
4. From NE R1.7.2 on
5. From NE R1.7.2.1 on

Output parameter access identifier type (AIDTYPE)

This parameter appears in the Access ID Block

Type	List
Required	Yes

Abbreviation	Meaning
T1	T1
EQPT	Equipment

Output parameter notification code (NTFCNCDE)

This parameter appears in the Common Block

Type	List
Required	Yes

This is notification code associated with a single alarm condition.

Abbreviation	Meaning
CR	Critical alarm
MJ	Major alarm
MN	Minor alarm

Output parameter condition type (CONDTYPE)

This parameter appears in the Common Block

Type	List
Required	Yes

Abbreviation	Meaning
AIS	Alarm indication signal
BKUPMEMP	System data memory mismatch
CABLE	Cable disconnect
CPYMEMF	Copy Memory Failed
DATASYSCR	Data system failed critical
DATASYSMJ	Data system failed major
DATASYSMN	Data system failed minor
DBCRRPT	Data memory corrupt
DBMEMTRF	Data memory update abort
DIGRPF	TR-08 major shelf alarm received
EXT	External
IMPROPRMVL	Improper removal
INT	Internal hardware failure
INTRMVL	Internal Fault or Pack Missing

Abbreviation	Meaning
LOF	Loss of frame
LOS	Loss of signal
NE_ASSOC_FAILED Note: only available via NAM	Assoc with NE failed
POLL	Not responding to poll
PRCDERR	Procedural error
PWR	Power fault
RINGF	Ringin source input failed
SFTCRRPT	Software program corrupt
SFTERR	Software version mismatch
SWFTDWNF	Software download failed
SYNC	Synchronization input failed
SYNCOOS	System free running
T-BERL	BER exceeds threshold
TSTRELAY	Stuck test access relay
UNLATCH	Pack unlatched
YEL	Yellow Alarm

Output parameter service effect (SRVEFF)

This parameter appears in the Common Block

Type	List
Required	Yes

This indicates the reported alarm condition is service-effecting or non-service effecting.

Abbreviation	Meaning
NSA	Non Service Affecting
SA	Service Affecting

**Output parameter
occurrence date (OCRDAT)**

This parameter appears in the Common Block

Type	Date
Required	Yes

This indicates the date of the condition being reported and has the format YY-MM-DD (year-month-day). $70 \leq yy \leq 99$ maps to 1970 through 1999 respectively; $00 \leq yy \leq 37$ maps to 2000 through 2037 respectively.

**Output parameter
occurrence time (OCRTM)**

This parameter appears in the Common Block

Type	Time
Required	Yes

This indicates the time of the condition being reported and has the format hours-minutes-seconds.

**Output parameter
condition description
(CONDDESCR)**

Type	String
Required	Yes
Min # chars	1
Max # chars	68

This is the text description for the reported alarm condition. This information can be found in the Correlations Tables. The 68 characters included a pair of escaped quotes `\"`.

Generic error responses

Code	Definition	Reason for code
CLOS (only available via NAM)	NE Connection Not Available	Connection with the <NE TID> is not available

Code	Definition	Reason for code
IITA	Input, Invalid Target Identifier.	TID does not match with SID, has not allowed characters, or string is too long.
IICT	Input, Invalid Correlation Tag.	Incorrect CTAG.
ICNV	Input, Command, Not Valid.	The command verb or a modifier is invalid (not recognizable by the system).
PICC	Privilege, Illegal Command Code	Command not supported at this interface



RTRV-ALM-ENV (Retrieve-Alarm-Environment)

Purpose The RTRV-ALM-ENV (Retrieve-Alarm-Environment) command instructs the system to retrieve all currently active environment alarms.

Input format RTRV-ALM-ENV:[tid]::[ctag]::[,ALMTYPE];

Abortable	Yes
Privilege Code	Reports Only
GSI Confirmation Required	No
File Transfer	No
Related Autonomous Message	None

Input format parameter Target ID (tid) This parameter appears in the TID Block

Type	String
Required	No
Default Type	Dynamic

Target ID is the name of the system to which the command is addressed.

Input format parameter Correlation tag (ctag) This parameter appears in the CTAG Block

Type	String
Required	No
Default Type	Dynamic

This field is used to associate the command message to the response message.

Input format parameter alarm type (ALMTYPE) This parameter appears in the Common Block

Type	String
------	--------

Required	No
Default Type	none
min # chars	0
max # chars	0

Alarm type is not supported in this release and will be ignored.

Output format If the command request completes successfully, the following normal completion response is returned:

```
sid date time M ctag
COMPLD"AID:NTFCNCDE,ALMTYPE,OCRDAT,OCRTM,ALMMSG";
```

Output format parameter access identifier (AID)

This parameter appears in the Access ID Block

Type	Access ID
Required	Yes
Default Type	Fixed
Default	It-all

AID is the access identifier of the contact closure.

Abbreviation	Meaning
mc-1-{1-8}	Miscellaneous Contact Closure

Output parameter notification code (NTFCNCDE)

This parameter appears in the Common Block

Type	List
Required	Yes

NTFCNCDE is the alarm level.

Abbreviation	Meaning
CR	Critical alarm
MJ	Major alarm

Abbreviation	Meaning
MN	Minor alarm

Output parameter condition type (CONDTYPE)

This parameter appears in the Common Block

Type	List
Required	Yes

Alarm Type. Use alarm type instead of condition type for RTRV-ALM-ENV.

Abbreviation	Meaning
ACF	AC Loss (AC Input Power Failure)
BD	Battery on Discharge
FAN	Fan Unit Failed
MISC1	Miscellaneous 1
MISC2	Miscellaneous 2
MISC3	Miscellaneous 3
MISC4	Miscellaneous 4
MISC5	Miscellaneous 5
MISC6	Miscellaneous 6
MISC7	Miscellaneous 7
MISC8	Miscellaneous 8
MJF	Fuse Major
MNF	Fuse Minor
NONE	None
PMJ	Power Major
PMN	Power Minor
PWR	One of the -48V power feeds failed
TAMPER	Intrusion (Door Open)

**Output parameter
occurrence date (OCRDAT)**

This parameter appears in the Common Block

Type	Date
Required	Yes

This indicates the date of the condition being reported and has the format YY-MM-DD (year-month-day). $70 \leq yy \leq 99$ maps to 1970 through 1999 respectively; $00 \leq yy \leq 37$ maps to 2000 through 2037 respectively.

**Output parameter
occurrence time (OCR TM)**

This parameter appears in the Common Block

Type	Time
Required	Yes

This indicates the time of the condition being reported and has the format HH:MM:SS (hours-minutes-seconds).

**Output parameter alarm
message (ALMMSG)**

This parameter appears in the Common Block

Type	String
Required	Yes
Min # chars	1
Max # chars	40

Alarm Message. Use alarm message instead of condition description. Refer to the Correlation Tables for the default environmental alarm conditions. The 40 characters include a pair of escaped quotes `\"`.

Generic error responses

Code	Definition	Reason for code
CLOS (only available via NAM)	NE Connection Not Available	Connection with the <NE TID> is not available

Code	Definition	Reason for code
IITA	Input, Invalid Target Identifier.	TID does not match with SID, has not allowed characters, or string is too long.
IICT	Input, Invalid Correlation Tag.	Incorrect CTAG.
ICNV	Input, Command, Not Valid.	The command verb or a modifier is invalid (not recognizable by the system).
PICC	Privilege, Illegal Command Code	Command not supported at this interface



RTRV-HDR (Retrieve-Header)

Purpose The RTRV-HDR (Retrieve-Header) command is used by an OS or an external interface user to request the AnyMedia Access System to return a normal completion response. This command is used as a "keep-alive" hand-shaking signal by an OS. This command can also be used to obtain the Date and Time information for the system.

Input format RTRV-HDR:[tid]::[ctag];

Abortable	Yes
Privilege Code	Reports Only
GSI Confirmation Required	No
File Transfer	No
Related Autonomous Message	None

**Input format parameter
Target ID (tid)**

This parameter appears in the TID Block

Type	String
Required	No
Default Type	Dynamic

Target ID is the name of the system to which the command is addressed.

**Input format parameter
Correlation tag (ctag)**

This parameter appears in the CTAG Block

Type	String
Required	No
Default Type	Dynamic

This field is used to associate the command message to the response message.

Output format If the command request completes successfully, the following normal completion response is returned:

sid date time M ctag COMPLD

There are no output format parameters.

Generic error responses

Code	Definition	Reason for code
IITA	Input, Invalid Target Identifier.	TID does not match with SID, has not allowed characters, or string is too long.
IICT	Input, Invalid Correlation Tag.	Incorrect CTAG.
ICNV	Input, Command, Not Valid.	The command verb or a modifier is invalid (not recognizable by the system).
PICC	Privilege, Illegal Command Code	Command not supported at this interface





Appendix D: Service provisioning examples

Overview

Purpose This appendix shows an example of ADSL subscriber provisioning.



Service Provisioning example of ADSL subscriber

Overview

Purpose This section shows an example of ADSL subscriber provisioning.

Contents

Provisioning steps

D-3



Provisioning steps

General To provision an ADSL subscriber you need to perform the following steps

- Define an ATM profile with the appropriate QoS class and the related parameters.
- Define a suitable ADSL profile.
- Apply the ADSL profile to the desired drop.
- Create an ATM cross connection on the drop.

Example settings Define a Feeder VPI of the QoS class **rt-VBR** and the VPI 11.
Insert an ADSL application pack in slot 11.

ATM Profile	
Profile Name	rt-VBR_1000_5000
QoS class	rt-VBR
Peak Cell Rate (PCR) US/DS	1000 / 5000
Sustainable Cell Rate (SCR) US/DS	800 / 3000
Maximum Burst Size (MBS)	100
Cell Loss Priority (CLP)	0
Cell Tagging	NO
AAL5 Frame Discard	YES
PCR CDVT	4787200
SCR CDVT	4787200

ADSL Profile	
Profile Name	ADSL_Full_Flex_452_568
Line Type	Full
Type of Rate Adaptation	Flexible
Max. Bit Rate US/DS	1440 Kbps / 3520Kbps
Min. Bit rate US/DS	352 Kbps / 1568 Kbps
Latency US/DS	interleaved / interleaved

ADSL Profile	
Profile Name	ADSL_Full_Flex_452_568
Interleave Depth US/DS	1 / 1
SNR Margin (dB) US/DS	6 / 6
Parity Bites US/DS	2 / 2
DMT Symbols US/DS	1 / 1
PSDM	40

Drop settings/ATM Subscriber Cross Connection	
Transmission Network Profile	ADSL_Full_Flex_452_568
PM Thresholds Network Profile	Default1 ADSL All TCA's Disabled
Line Start Up Mode	Multimode
Example Drop	drop-1-11-1
ATM Traffic Network Profile	rt-VBR_1000_5000
Network Side VPI/VCI	11/55
Drop Side VPI/VCI	0 / 33
Circuit ID	rt-VBR Test Connection

Create an ATM profile

- 1 Open the **Network Browser**.
.....
- 2 Right-click on **Root Groupname**.
.....
- 3 Open the **Network Profiles List** window by selecting **Network Profiles** from the context menu.
.....
- 4 In the **Network Profiles List** window select the Network Profile Type **ATM Traffic**.
.....
- 5 Click on **Add...**

- 6 In the **ATM Traffic Network Profile** window, select **New Network Profile**.
 - 7 Type `rt-VBR_1000_5000` into the field **Network Profile Name**.
 - 8 Select **rt-VBR** in the **Service Category** combo box.
 - 9 Enter or select the transmission parameters as listed in the *Example Settings: ATM profiles* above.
 - 10 Click on **Apply**.
 - 11 Change the **Status** to **Activated**.
 - 12 Close the **ATM Traffic Network Profile** window and verify that the new profile appears in the **Network Profiles List** window.
- END OF STEPS

Create an ADSL profile

- 1 Open the **NE Browser**.
- 2 Right-click on the NE name.
- 3 Open the **ADSL Transmission Profiles** window by selecting **Profiles** → **ADSL Transmission** from the context menu.
- 4 In the **ATM Transmission Network Profile** window select **New Network Profile**.
- 5 Enter `ADSL_Full_Flex_452_568` into the field **Network Profile Name**.

- 6 Select Full in the **Line Type** combo box and Flexible in the **Type of Rate Adaptation** combo box.
 - 7 Enter or select the transmission parameters described in the above table.
 - 8 Click on **Apply**.
 - 9 Change the **Status** to **Activated**.
 - 10 Close the **ADSL Transmission Network Profile** window and verify that the new profile appears in the **Network Profiles List** window.
- END OF STEPS

Create an ATM cross connection

- 1 Open the **NE Browser** window.
- 2 Double-click on **Sh-1**.
- 3 Click on the ADSL application pack in slot 11.
- 4 In the **ADSL Application Pack** window select the drop-1-11-1.
- 5 Click on **Edit**.
- 6 In the **ADSL Drop** window change to **Provisioning** tab.
- 7 Select ADSL_Full_Flex_452_568 from the **Transmission Network Profile** combo box and Default1 All ADSL TCA's disabled from the **PM Thresholds Network Profile** combo box.

-
- 8 Click on **Apply**.

.....

 - 9 Select **Multimode** from the **Line Stat Up Mode** combo box.

.....

 - 10 Click on **Apply**.

.....

 - 11 Change **Administrative State** from **Locked** to **Unlocked**.

.....

 - 12 Change to **Maintenance** tab and click on **Cross-Connections List...**

.....

 - 13 In the **ATM Cross Connections List** window click on **Add...**

.....

 - 14 In the window **ATM Cross Connection** select the correct *Network Interface ID*.

.....

 - 15 Enter the VPI/VCI values both for the *Network Side* and the *Drop Side* as described in the table above.

.....

 - 16 Enter **rt-VBR Test Connection** into the field **Circuit ID**.

.....

 - 17 Select **rt-VBR_1000_5000** from the **ATM Traffic Network Profile** combo box.

.....

 - 18 Verify that the **Administrative State** is set to **Unlocked**.

.....

 - 19 Click on **Apply**.

END OF STEPS





Glossary

A ACE COMDAC

The controller pack of an *AnyMedia* Access System NE R2.2 for NB services. It implements up to 20 DS1 ports (framed path terminations) to the network via AAL1 unstructured data transfer mode circuit emulation service (UDT CES) and provides all the traditional services to the NB application packs.

ACO

Alarm Cut-off

ADSL

Asymmetrical Digital Subscriber Line

AEM

AnyMedia® Access System Element Manager

AFM

Access Feeder Multiplexer

AID

Access Identifier

Alarm

Any condition that needs operator attention, since it may impact the normal operations of any system under operator responsibility (e.g. Element Manager, Network Element).

AMAS

AnyMedia Access System

AMS

Alarm Management Subsystem

ANSI

American National Standards Institute

AnyMedia Access System

This is also referred to as the Network Element or just the NE.

AO

Autonomous output; reports generated by the NEs.

APOG

Applications, Planning, and Ordering Guide

Application

Group of one or more modules that offer related functionality.

Application Pack (AP)

This is a circuit pack which provides the line-side interface functionality for POTS, SPOTS, ISDN or special service circuits. Each AP handles 24 or 32 lines (POTS, SPOTS, COIN and special services) or 16 lines (ISDN). There can be up to 16 APs in an *AnyMedia* Access System shelf.

Archive

Process of copying file systems to removable media (such as tape) and deleting the original files once they have been backed up.

ASCII

American Standard Code for Information Interchange

ATM

Asynchronous Transfer Mode

ATU

Alarm and Test Unit

AUTO

Automatic

B b-wire

One of the wires of the subscriber line. Sometimes it is called the ring wire.

Backup

Process of copying file systems to removable media (such as tape) to safeguard against loss, damage, or corruption.

BAIU

Broadband Access Interface Unit

BAL

Balance

BB

Broadband.

BCL

Bank Controller Link

BRA

Basic Rate Access

Bridge

A network layer device that passes packets between two or more network segments that use the same data link communications protocol (OSI layer 2). The network segments appear as one segment to protocol levels higher than the data link layer. The bridge recognizes with the help of the MAC address which LAN component is connected at which port of the bridge. Data packets are only transferred over the bridge if the participant is at another port of the bridge. With a bridge, data traffic can be kept from a certain part of a LAN.

Built-in Self Test (BIST)

This is a procedure executed by each plug-in circuit pack either after power-up or on demand. The task is to check the functions of the hardware.

C Call Reference Value (CRV)

This is a numeric value used to identify a logical line on a TR-303 Virtual Remote Terminal (VRT) in messages exchanged between the HDT and the TR-303 switch when setting up and tearing down individual calls. For TR-303 VRTs, the CRV is identical to the last field in the AID for a logical line, e.g., 104 is the CRV for the logical line having AID v3dp-{1, 3}-104. CRVs are numbered between 1 and 2048. A maximum of 768 provisioned logical lines are supported by the AnyMedia Access System. A CRV can be uniquely associated with a single Distribution Port by setting up a T0 cross-connection between that port and the logical line specified by the CRV.

CD

Compact Disk

CDE

Common Desktop Environment

CDV

Cell Delay Variation

CDVT

Cell Delay Variation Tolerance

CFL

Customer Feature List

Circuit

This refers to the devices and functions built on or provided by an AP for one port. In some documents this is also called facility. The subscriber line is not included.

Circuit Emulation Service (CES)

An ATM transport service for constant bit-rate traffic, applicable for R2.2. It means the transparent transmission of TDM (circuits) over the asynchronous infrastructure of an ATM network using only its transport function. The ATM-CES functions at an RT location are essentially performed by a new controller pack called the ACE COMDAC. Contained within the ACE COMDAC is a set of DS1 framers, similar if not identical to framers used in R1.x *AnyMedia* Access System terminals, that interface the ATM system through what is called a CES Interworking Function (CES-IWF) component. Each framer port connects to an individual CES-IWF object that presents the same logical interface to the framer as does a line interface unit (LIU) in a narrowband R1.x system. Because the connections between the framer and CES-IWF do not involve paths external to the ACE COMDAC, the framer's port facing the CES-IWF is referred to as a virtual/logical DS1 port. Provisioning of framed path termination is not supported by R2.2. It is assumed that it will be done via the GSI during NE turn-up.

CIT (Craft Interface terminal)

A local RS232 connection on the AnyMedia access system to which a PC GUI can be connected.

CIU

Communication Interface Unit

CLEI

Code assigned by Bellcore

Client

A machine where one or more user modules are installed.

CLR

Cell Lost Radio

CMIP

Common Management Information Protocol

CO

Central Office

Common Data and Control Pack (COMDAC)

This performs the main bandwidth management and control functions of the system.

Configuration Management

This consists of a set of functions for controlling the network elements, including initialization, parameter setting, starting and stopping and collecting information about the NE configuration.

Controlled Objects

An entity defined via type and value. Where type is defined as NE for NAM, but later when unbundled it requires the ability to configure type as VRT for the 24-channel product. Value will identify one specific managed NE or VRT Interface.

COT

Central Office Terminal

CPE

Customer Premises Equipment

cps

cell per second

CR

Critical (alarm severity)

Cross Connection

Several types of cross connections are present in the AnyMedia Access System:

T1 cross-connections provide links between physical DS1 or framed path termination feeder ports and the logical feeder ports of the VRTs and INA Virtual Banks (VB). They are created and deleted using the TL1 commands ENT-CRS-T1 and DLT-CRS-T1. The creation of a T1 cross-connection acts as a trigger within the NE to instantiate the associated VRT or VB.

T0 cross-connections provide links between the logical ports of a VRT or an INA VB and the physical distribution ports of the NE. They are created and deleted by the TL1 commands ENT-CRS-T0 and DLT-CRS-T0.

Finally, the undifferentiated term cross connection describes an actual bandwidth assignment within the system's TSI fabric. Such bandwidth assignments are administered dynamically by the TR-303 TMC, they are administered semi-permanently by the TR-303 EOC, and they are created automatically by the NE in response to provisioning activities on TR-08 VRTs and INA VBs.

CSA

Customer Serving Area

CTC

Common Transit Clock

CTD

Cell Transfer Delay

CTRL

Control

CTU

Craft Test Unit

CU

Channel Unit

D DB

Database

DC

Direct Current

DCN

Data Communication Network; the communication media and interconnected devices used to exchange management information between the NAM-NB, the NEs and other OSs.

DDS

Digital Data System

Device Driver

A program that controls a specific device, such as a cartridge tape (DAT).

DFL

Default

Distribution Port

The circuitry that provides narrowband access (i.e., up to the 1.544 Mbps DS1 rate) to a single network interface over one (2- or 4-wire) metallic facility and converts between the format seen by this network interface (e.g., analog voice-frequency, ISDN U-interface, etc.) and the internal format (i.e., 4-Mbps timeslots). Distribution Ports are contained in Application Packs / Channel Units for the AnyMedia Access System. A maximum of 32 Distribution Ports are supported on POTS/COIN Application Packs (APs) and a maximum of 16 Distribution Ports are supported on ISDN APs.

DMT

Discrete Multitone

Download

The process of moving information from a server to a client at the request of a client according to client/server paradigm. Expected applications of this capability are database retrievals.

DPT

Dial Pulse Termination

DS1 ports

DS1 circuits are used to provide the AnyMedia Access System shelf virtual remote terminal (VRT) or INA Virtual Bank feeder facilities and are physically located on the IO_DS1 circuit packs in the NE shelf.

E EAS Element Access Server

This is a CORBA server developed by Lumos Technologies which provides an interface between TL1 messages and CORBA methods.

ECI

Code that corresponds to the bar-coded label on the faceplate of the plug-in.

EIA

Electronic Industries Association

EM

Element Manager

EM Domain

An assigned collection of Controlled Objects.

EOC (Embedded Operations Channel)

A duplicated DS0 data link dedicated for exchange operations messages between the LDS and RDT.

ES

Errored Seconds

ESF

Extended Super Frame

F Fault Management

For detecting, displaying, storing, filtering and routing fault/alarm data.

Feeder DS1 Ports

These are the DS1 circuits that are used to provide virtual remote terminals or INA virtual bank feeder facilities and are provided by IO_DS1 circuit packs in the AnyMedia Access System. The DS1 port numbers are included as part of the AIDs for these feeder DS1 ports.

FLT

Fault

Forced Switch

This refers to an Element Manager-initiated switch command that instructs the NE to perform a switch no matter what the conditions of the protection unit (COMDAC and IO_DS1 circuit packs only) are.

FS

SuperFrame with Datalink

FTP

File Transfer Protocol

Full Backup

This copies a complete file system or directory.

FXO

Foreign Exchange Office

G GSF

General Service Function

GSFN (Generic Signaling Function)

This defines the signaling interface for a provisioned distribution port. It is part of the T0 object data associated with each port. Typical values for the GSFN are 2LS (2-wire loop start) and 2RV0 (2-wire loop reverse battery, originating side)

GSI (Graphical System Interface)

This is an intelligent terminal which may be a laptop PC that supports Graphical User Interface (GUI) software and the TL1 protocol interface to the AnyMedia Access System.

GUI

The Graphical User Interface of the *AnyMedia* Element Manager System.

H Host

A machine where one or more modules are installed.

HP

Hewlett Packard

Hub or Multiport Repeaters

These have 8, 12, 16 or more ports. With their help multiple devices with 10BASE-T interface can be connected to a single LAN. They have at least one additional port for connecting an additional segment of a LAN.

HW

Hardware

I IAT

Integrated Access Terminal

IATS

Integrated Access Terminal Server

ICC

InterChangeability Code

ID

Identifier

IEEE

Institute of Electrical and Electronics Engineers

IIOIP

Internet Interoperability Protocol

IMA

Inverse Multiplexing for ATM

IMA Group

Refers to a set of feeder links that provides Inverse Multiplexing for ATM (IMA).

IMA Link

Refers to to the logical entity that identifies a feeder inside an IMA group.

Incremental Backup

This copies new files and files that have changed since a previous backup. The incremental backups are usually given a dump level which determines which files are backed up. A certain level incremental backup will save all the new or changed files since the last backup with a lower level.

Inhibit Switch

This refers to an Element Manager-initiated switch command that instructs the NE to inhibit a side switch irrespective of the conditions of the active unit (COMDAC and IO_DS1 circuit packs only).

Internationalization

This is the process of isolating the language- and customs-dependent code in a computer program from the language-independent code. The term internationalization is often abbreviated as i18n.

IO/DS1 Pack (IO_DS1) (not applicable for NE R2.1)

This provides four DS1 interfaces to accommodate telephony via standard TR-08 mode, TR-303 and INA network interfaces.

IO_DS1 Circuit Packs (not applicable for NE R2.1)

Each circuit pack contains four feeder DS1 port circuits together with the circuitry needed to interface with DS1 signals (metallic feeder).

IP

Internet Protocol

IP Addresses

These are distributed according to the worldwide or local configuration. The IP address is used in ISO layer 3. A LAN contains tables for making an assignment between MAC address and IP address.

IS

In Service

ISDN

Integrated Services Digital Network

ISP

Internet Service Providers

ITC

Independent Transmit Clock

ITU

International Telecommunication Union

L LAN

Local Area Network

LDS

Logical Digital Switch

LED

Light Emitting Diode

Line Test

Also called drop test. This checks for open circuits, short circuits, leakages to ground, foreign voltages, or other faults on the subscriber line that connects an AP port circuit to the CPE. The results are used to detect broken or bad quality wires even before the customer realizes a lack of quality.

LL/PLL Permanent Leased Lines

A service in which resources are used permanently for the transmission of data between two points. The switch is not responsible for setting up this service.

LLN

Logical Line Number

Local Digital Switch (LDS)

This is a switching machine that terminates a TR-303 VRT. An example of an LDS is the Lucent 5ESS switch.

LOF

Loss of Frame

LOG file

This is the file used for listing all actions that have occurred in a system. This information is generated and recorded concurrently and sequentially as transactions and events are processed in the system.

Logical DS0

The descriptor used in this document to refer to parameters affecting a DS0 (64-kbps) service or facility (TR-303 logical line DS0).

Logical DS1

The descriptor used in this document to refer to parameters affecting a DS1 (1.544-Mbps) service or facility (TR-303 logical feeder DS1).

Logical DS1 port

The descriptor used in this document to refer to so called DS1 port of a framed path termination that interfaces the CES-IWF of an ACE COMDAC. The *AnyMedia* Access System NE R2.2 only supports logical DS1 ports and their provisioning is not related to physical DS1 feeder. Logical DS1 ports are provisioned as a group of 4 logical DS1 feeders. Up to 5 groups are supported. The physical resources for logical DS1 ports, the framed path terminations, are

located on the mezzanine board of the COMDAC but provisioning is independent of the existence of the mezzanine board.

Logical Feeder DS1 Numbers

These are the identifiers (1 to 28, for the TR-303 VRT) of the VRTs feeder DS1s that are used by the real-time call processing software of the TR-303 Local Digital Switch (LDS) and in communicating with the VRT (over the TMC and/or EOC) about these feeder DS1s. The AnyMedia Access System provides only 20 physical DS1 or framed path termination feeder ports, so only a subset of the logical feeder DS1s can be in service.

Logical Line

This is a logical customer termination provided by the NE on either a TR-303/TR-08 VRT or an INA VB

Logical Line Number (LLN)

This is the Access IDentifier (AID) used externally by the Element Manager to identify uniquely a VRT or INA Virtual Bank distribution-side logical drop.

LOS

Loss of Signal

LS

Loop Start

M MAC Address

This is a 6-byte hardware address, which identifies a unique participant worldwide in an Ethernet LAN. A MAC address is used in OSI layer 2.

Manual (normal) Switch

This refers to an Element Manager-initiated switch command that instructs the NE to perform a switch only if the protection unit (COMDAC and IO_DS1 circuit packs only) is in service and not faulty.

MDS

Metallic Distribution Server

MDSU

Metallic Distribution Server Unit

MJ

Major (alarm severity)

MN

Minor (alarm severity)

MR
Modification Request

MSC
Metallic Shelf Controller

N NAM
Navis *AnyMedia*

NAR
North America Region

NB
Narrowband

NE
AnyMedia Access System Network Element.

NIC
Network Interface Card

NM
Network Management

NMS
Network Management System

Normal Hour Load
The average load expected during the lifetime of the system.

NVDS (Non-Volatile Data Storage)
This refers to a capability of the AnyMedia Access System to store information in such a way as to survive indefinite periods of total power failure. The current values for all provisionable parameters are stored in the NVDS and hence are the parameter values that will be used on subsequent NE power-up.

NVPS (Non-Volatile Program Storage)
This keeps software program data. It resides in the COMDAC.

O OAM
Operations, Administration and Maintenance

Off-line Backups

These are backups performed automatically via any scheduling mechanisms, e.g. cron file.

OMG

Object Management Group

On-line Backups

These are backups performed on user demand.

OODB

Object Oriented Database

OOS

Out Of Service

Operator

This refers to the AnyMedia Element Manager users.

ORB

Object Request Broker

OS

This is any operations system or Element Manager connected to the AnyMedia Access System Element Manager by some means of communication. For the AnyMedia Element Manager R1.7.1 the communication method is TCP/IP.

Overload

The load that causes the system to take drastic measures to ensure its integrity. During overload normal system function is disrupted and certain inputs (the ones causing the overload) are ignored. After clearing the overload situation, the system is left in asynchronous state for those inputs that generated the overload. Re-synchronization of this input retrieves synchronization.

P Password (PID)

This is always associated with a login UID. PID is a case-sensitive string containing 6 to 10 alphabetic, numeric and symbolic characters, where at least two characters are non-alphabetic and one is symbolic.

PBX

Private Branch Exchange

PC

Personal Computer

PCM Highway

The COMDAC pack is connected to each AP by the PCM highway, which consists of two 4.096-Mbps serial links, a 4.096-MHz clock and an 8-kHz sync signal. The AnyMedia Access System uses two PCM highways between the COMDAC, the IO_DS1s and each of the 16 AP slots.

PCR

Peak Cell Rate

Performance Management

For receiving, detecting, time stamping, analyzing, displaying and storing performance data.

PGTC

Pair Gain Test Controller

Platform

The hardware on which any AnyMedia EM module, server or client, is running

Platform Alarm

This is an alarm related to the AnyMedia Element Manager application or its hardware/software platform. It usually refers to an Element Manager function or hardware/software platform object.

PLN

Physical Line Number

Port

This is circuitry built on an AP to provide an interface for subscribers. Note that more than one port can be housed on an AP, e.g. the LPZ100 provides 32 Z-ports.

Port Test

Also called circuit test. Verifies the ability of an AP port to provide proper transmission and signaling. It is the testing of the port hardware. The functions of the port test rather depend on the hardware function of the circuit (e.g. POTS, pulse metering, ISDN, ...). These tests are performed on each AP using part of their self-test capabilities.

POTS (Plain Old Telephone Service)

The conversational 2-wire analog subscriber service.

PSTN

Public Switched Telephone Network

PTU

Power Test Unit

PVC

Permanent Virtual Channels

R RAM

Random Access Memory

RDT

This refers to the physical Remote Digital Terminal. A Remote Digital Terminal is a physical section of the NE that interfaces to the LDS at DS1 rate.

Restore

The process of copying backup files from removable media to a working directory, replacing the original files which could have been damaged.

RFI

Remote Failure Indication

ROC (Remote Operations Channel)

The bearer channel that conveys management information for a remote system (AnyMedia NE) for NE R1.x narrowband releases. The ROC is intended to be used when the system is installed at locations where no local Ethernet LAN and no separate network (e.g., X.25) exists.

ROM

Read Only Memory

Router

A network layer device that forwards packets from one network to another based on network layer information (OSI layer 3). Data packets are only transferred through the router if the participant is connected to another port of the router. With a router, data traffic can be kept from certain parts of a LAN. A router is more powerful than a bridge, it reduces the traffic on a LAN more than a bridge, because the IP address is evaluated for traffic control.

RTLP

Receive Transmission Level Point

RTU

Remote Test Unit

S SDH

Synchronous Digital Hierarchy

Security Management

This restricts access based upon the establishment of log-in procedures and an associated set of passwords. Screen locks are used as well.

User access is based upon domain partitioning. Controls the access to the data and capabilities inherent within a fixed partition of the network, including unbundling.

Server

A network element that waits for requests from clients to perform specific tasks. This is the function performed by the AnyMedia Access System.

Server Application

This is a set of server processes that perform a certain function.

Service State (of an object or entity)

This represents the current availability status of an associated resource or service in the NE from the management point of view (e.g., memory administration, maintenance).

SHDSL

Single-Pair High-Bit-Rate Digital Subscriber Line.

SHDSL AP

Single-pair High-bit-rate digital subscriber line application pack that transmits and receives SHDSL signal.

Side Switching

This refers to the operation of deactivating the active core entity and activating the standby core entity (COMDAC and IO_DS1 circuit packs).

SLC

Subscriber Loop Carrier

SNMP

Simple Network Management Protocol

Software Download

The transport of the information required to upgrade/update a given NE's generic program.

SPLL (Semi Permanent Leased Lines)

A service in which resources are used permanently for the transmission of data between two points. The switch is responsible for setting up this service.

SW

Software

T T0

This is the descriptor used for the TL1 interface to refer to parameters concerning a DS0 (64 kbps) service or facility.

T1

This is the descriptor used for the TL1 interface to refer to parameters concerning a DS1 (1.544 Mbps) service or facility.

TAP (Test Access Path)

There are up to two TAPs, one consisting of two pairs (TAP-B) and the other of six pairs (TAP-A), both providing internal and external metallic test access to the circuits.

TCA (Threshold Crossing Alert)

A crossing of a parameter threshold that is generally considered to be a transient condition.

TELNET

This is a remote terminal interface protocol which allows remote login capability into a system on a network from any other node on that network that is also running TELNET. TELNET is a TCP/IP application.

Test Session

This is the procedure including all necessary functions to test a subscriber. This includes the setup of the test path as well as the release of the test equipment. The test session runs in the NE.

TID

Targeted Identifier

TL1 (Transaction Language 1)

This is a bellcore standard message language. It is the primary means of operating and maintaining the V5DLC system. A TL1 message session supports bi-directional message transmission and when a TL1 link is established, the system can initiate autonomous messages to monitor alarms and changes in system status.

TMC (Timeslot Management Channel)

This is a duplicated DS0 data link that a TR-303 VRT and Local Digital Switch (LDS) use to exchange connection control information with each other as they set up and tear down DS0 paths through the system on a per-call basis.

U UART

Universal Asynchronous Receiver/Transmitter

UID (User Identifier)

This is a unique user login identifier. This string is required and cannot be null. Grouping of UID string values for this command is not allowed. The valid UID value is a 3 to 10 case-sensitive alphanumeric character string.

Unstructured Data Transfer Mode (UDT)

The ACE COMDAC does not provide the circuit emulation function on a basis of 64 kbps channel but on a basis of DS1 signals carrying 64 kbps channel. The ATM layer is merely used as a transport means, there is no need to know the frame structure within the DS1 signal.

Upgrade

Is a type of migration where the software release is changed from an earlier release to a later release.

UPS

Uninterruptable Power Supply

User

The operator who will use the EM to provision, maintain and monitor the *AnyMedia* Access System.

User Module

A module that provides an interface to the users or to other external systems to the *AnyMedia* EM functionality.

V VB

Virtual Bank. This is the entity that groups a feeder and various drops for permanent leased line services in a similar way to the VRTs for switched traffic

VC

Virtual Connection

VF

Voice Frequency

VFDE

Voice Frequency Data Enhancement

VPI

Virtual Path Identifier

VRT

Virtual Path Identifier

W WAN

Wide Area Network

Z Z-port

A Z-port is circuitry built on a POTS AP to provide a Z interface for analog subscribers. Note that more than one Z-port is housed on an *AnyMedia* POTS AP, e.g. the LPZ100 provides 32 Z-ports.

ZCS

Zero Code Suppression

ZS

Zero Suppression



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