Provisioning GR-303 and TR-008

Provisioning GR-303

Proper GR-303 provisioning to a Class 5 switch requires that a primary DS1 line and a secondary DS1 line be established. Prior to provisioning, users should determine which DS1 lines from the Class 5 switch will serve as the primary and secondary DS1 lines. Each interface group can have up to 28 DS1s.

Allocating Call Reference Values

The following procedure assigns call reference values (CRVs) to a GR-303 interface group.

Step 1 Starting from the node view, select **Objects > Interface Group** from the menu bar. (See Figure 7-1.)



Figure 7-1 Node View Menu

Step 2 EMS launches the interface group provisioning window. (See Figure 7-2.) The grayed out **GR-303 Interface Group** tab shows that you are in the GR-303 provisioning screen.

GPCRD friedman Group	6732 Barnet	Pober
6R303 IDLC Prolifes	Interface Group Type:	EDEFA
TFI008 Interface Bioup	Allocated Humber of CRVs:	
Interface Group List	Bumber of Assigned CRVs/	0
Exit	DSI Liut:	Ead Line VI-DS1Nun MenderID
	Werface Group Problem List:	
	GR3H3 Datalink ID: GR3H3 Datalink Type: GR3H3 Datalink D111 Inc.	
	GR393 Datalink DS9 Channelt GR393 Datalink Admin Status: GR393 Datalink Admin Status:	12 Inference
	GR303 Datalink Problem:	GP303 data link is in init state
	GR383 Datalink Protect Group ID: GR383 Datalink Protect Unit Type:	1 Protected
		Appy Retent

Figure 7-2 Interface Group Provisioning Window

Step 3 Set the following GR-303 parameters:

- Interface Group ID: Select an interface group ID number (from 1 to 4) that matches the interface group provisioned on the Class 5 switch.
- Allocated Number of CRVs: Enter the number of CRVs to be assigned to the interface group. The CRV range assigned to this interface group must match the CRVs of the Class 5 switch phone numbers.
- **Step 4** Click **Apply** to provision CRVs for the interface group.

Provisioning DS1 Lines for GR-303

At least two DS1 lines (the primary and secondary DS1) must be provisioned for GR-303. Use the following procedure to provision embedded operation channel (EOC) and timeslot management channel (TOC) lines:

Step 1 Starting from node view, double-click the facility (line) to be provisioned. EMS launches the line provisioning window. (See Figure 7-3.)





Note The following procedure must be completed at least **twice**—once to assign a primary DS1 line, and once to assign a secondary DS1 line.

Step 2 In the line provisioning window, set the following parameters:

- Interface Group: Select GR-303.
- Interface Group ID: Select the interface group ID number (from 1 to 4) that was assigned CRVs in the "Allocating Call Reference Values" procedure.
- Interface Group Member ID: Select an ID for the DS1 line.
 - Select **1** for the primary DS1 line.
 - Select 2 for the secondary DS1 line.
 - Assign a unique member ID for each additional DS1 line in the interface group.
- **Step 3** Click **Apply** to provision the DS1 line.
- **Step 4** Repeat this procedure until all DS1 lines are assigned to the GR-303 interface group.

Note To reassign an incorrect interface group ID or member ID, first set the ID to **0** and click **Apply**, then select the correct ID number and click **Apply**.

Provision GR-303 Analog Lines

GR-303 provides dynamic cross connects. This type of concentration allows one DS1 to serve more than 24 subscribers. Instead of creating traditional cross connections, GR-303 provisioning is performed by assigning call reference values (CRV) to analog lines. CRVs are used to build translation tables on the Class 5 switch that map remote analog connections to internal circuits at the switch.

Individual CRV Provisioning

To begin GR-303 provisioning, launch the node view of a specific node. Double-click on a specific analog line to launch the line provisioning window. (See Figure 7-4.)

Figure 7-4 Individual CRV Provisioning

RPOTS,16 Line Provision for 6732 (node: node9	×
RPOTS,16 Basic Provisioning	6732 Name:	node9
Fxit	RPOTS,16 Card Number:	5
	RPOTS,16 Line Number:	1 💷
	Admin Status:	OutOfService 🖵
	Operation Status:	Down
	Interface GroupType:	GR303 🖵
	Interface Group ID:	1 💷
	CRV:	1
	Generic Signal Function:	ls 💷
	On Hook:	Fulltime
	Line Test:	Off
	Termination Mode:	ohm900And2dB 😐
	Red Lined:	false
	Apply	Refresh

From the line provisioning window, the following parameters must be defined:

- Interface Group Type: Select GR-303.
- Interface Group ID: Select the interface group ID number (from 1 to 4) used on the Class 5 switch.
- CRV: Select a CRV for this line. Each GR-303 line must be provisioned with a unique CRV.

Click **Apply** to complete GR-303 provisioning for the line. Repeat this procedure to provision additional GR-303 lines.

CRV Individual Reset

To change or reset the Call Reference Value (CRV) of an analog line, complete the following steps from the analog line provisioning window:

- Step 1 Change the Interface Group Type of each analog line to be reset to TR-008.
- **Step 2** Click **Apply** to complete the change.
- **Step 3** Change the **Interface Group Type** of the line back to **GR-303**, and reassign the **CRV** as desired. The appropriate **Interface Group ID** must also be specified.
- **Step 4** Click **Apply** to complete the change.

This procedure must be followed to change the CRV for any analog line while performing GR-303 provisioning from the analog line provisioning window.

CRV Batch Provisioning

Intra-node GR-303 provisioning can also be performed in batch mode (that is, multiple POTS lines and RPOTS cards can be provisioned at one time).

Step 1 To begin batch CRV provisioning, select Objects > CRV Batch Provisioning from the node view of the node to be provisioned. (See Figure 7-5.) The grayed out Local CRV tab indicates that you are at the local CRV provisioning window.

Extend CRVF Extensed ORVv CRVFLide Ext	61722 Hanner model Card Type Card Liet Cards Selected	
		Assign Defeto Cess

Figure 7-5 CRV Batch Provisioning

- **Step 2** From the CRV batch provisioning window, select the **Card Type** to be provisioned. Upon selecting a card type, EMS will display the applicable card numbers in the **Card List** display.
- **Step 3** In the card list display, highlight the cards to be provisioned. Click the right arrow icon to move the selected cards to the **Selected** list.
- **Step 4** Select the appropriate **Interface Group ID** (from 1 to 4), and click the **List** button to show card, line, and interface group information in the **Result List** display.

Execut CRVV Extensiol CRVV CRV/ Lists Exet	6732 Namer Card Type Card List	note9 RPOTS.16	_	Interface Group Interface Group III: Allocated Barrber of CPVs: Bamber of Assigned CPVs: CPV Pange From CPV Pange To: Result Lint:	GR30 1 2015 0 1 2048 Cast 5		ligid 1		
					.8	2	1	0	
					5	3	1	D	
					8	4	1	D	
					2	2	1	D	
					5	6	1	D	
					5	T	1	D	
					5	•	1	D	
					1.8		1.1	0	
					3	10	1	0	
					12	11	1	0	
		-	-		1.2	12	9 🐉	0	
					12	10	0.2	0	
					1	10	1		
					1.2	42	- *		1.0
				Assign Defete Clear	-				

Figure 7-6 Card and Line Information Displayed

- Step 5 To assign CRVs, enter starting and ending values in the CRV Range From and CRV Range To fields.
- **Step 6** Highlight the lines to be provisioned in the result list, and click **Assign** to begin the CRV batch provisioning process. EMS displays the assigned CRVs in the result list. (See Figure 7-7.)

Figure 7-7 CRV Batch Assignment Confirmed

Local CRVI	4722 Barrert	node9		Interface Group	GR30	9			
rWRD lacest	Card Type	RPOTS.	6 -1	Interface Group ID	1-	-			
TRALING	Card Line	Cardo	Selected	Allocated Bumber of CRVs	2016	Г			
Chin Cant		- 6	- <u>-</u>	Stanber of Assigned CRVs	16				
Ext			-	CRV Range From	1		1		
				CRV Range To	2048		-		
				Result List	Cet	Leve	Faid.	OW.	
				100000000	5	1	1	1	
					1.8	2	1	1	
					5	3	1	1	
					8	4	1	+	
					2	2	1	5	
					-5	6	1	6	
					5	7	1	7	
					5	•	1	5	
					5		: *	9	
					5	10	1	10	
					1.5	13	: 1	13	
		-	-		5	12	5 B)	12	
		9		1	12	13	1	13	
					1	14	1	14	
					12	45	- 1	15	1.5
					-	_	-		
				Assign Delete Clear					

CRV Batch Reset

To change or reset the Call Reference Value (CRV) of POTS lines while provisioning in CRV batch mode (CRV Batch Provisioning screen):

Step 1 Select **Objects > CRV Batch Provisioning** from the node view of the node to be provisioned. Click the **CRV Lists** tab to launch the CRV list window. (See Figure 7-8.)

Aemal CRVs CITV Lan	6732 Banes Interface Groups CRV Range Proms		_				
Ent	CRV Range To: CRV Type: CRV List	2048 <u>Al</u> CRV INJO	Diav050	Line/DS1	Card	Nodeld Swit	alitatus .
			Show Dele	tel Savel			

Figure 7-8 CRV Lists Window

Step 2 Set the following parameters in the CRV list window:

- Interface Group: set to All to display all interface groups, or select an interface group (from 1 to 4).
- **CRV Type**: set to **All** to display all CRV types, or select **Local**, **Remote**, or **External** to display different CRV types.
- **Step 3** Click **Show** to display the CRV information, including card and line numbers, in the CRV List. (See Figure 7-9.)

Local CRVs Internal CRVs CRV Lan Exit	6732 Bannet Interface Groups CRV Pange Froms CRV Pange To: CRV Type: CRV Type:	node9 <u>A</u> 1 2048 A 			100.001	-	Nadari Calabian	2
	Contra Deser	-	1.90	0	1	-		
			1	0	-	2	0	
		1	12	~		-		
			1	ő	- 2	2		
			- 22	ő	-	-	0	
		100	1	ő	2	2	0	
		7	1.5	õ		1	0	
				õ			0	
			1	0	9	-		
		10	1	0	10	5	0	
		11	1	0	11	5	0	
		12	1	0	12	5	0	
		19	1	0	13	5	0	
		14	1	0	14	5	0	
		15	1	0	15	5	0	
								٠Ē
				Show Dele	te Save		-	-

Figure 7-9 CRV List Display



Provisioning TR-008

To set the DSX1 line that is connected to the Class 5 Switch for TR-008 operation, use the settings listed below:

- Interface Group: Select TR-008.
- Interface Group ID: Select the interface group ID number (from 1 to 4) used by the Class 5 switch.
- Interface Group Member ID: Select the proper group member ID (from A to D).

Provisioning Remote CRVs

EMS allows users to provision POTS lines in batch mode for GR-303.

Note An inter-node data link must be established between the nodes involved in the CRV assignment before CRV provisioning can be performed.

Step 1 Select Applications > CRV Batch Provisioning from the inter node cross connect display menu. EMS launches the inter node CRV batch provision screen. (See Figure 7-10.)

Figure 7-10 Inter-Node GR-303: Assign Interface Group

Inter Node CPIV Batch Assignment	Boad Hode Hame:	node9	
Inter Node CRV Batch Delete	Interface Group:	68303	
Innotace Broug on Pleast Stude	Allocated Humber of CRVst	2016	
ER	Bumber of Assigned CRVs	16	
	Ande	Between	

- **Step 2** Select an **Interface Group ID** to be assigned (from 1 to 4).
- **Step 3** Set the **Allocated Number of CRVs** to the number of CRVs for the selected interface group.
- **Step 4** Click **Apply** to provision the interface group.
- **Step 5** Click **Inter-Node CRV Batch Assignment** in the function bar. EMS displays the inter node CRV batch assignment window. (See Figure 7-11.)

Figure 7-11 Inter-Node GR-303: Initiate Batch CRV Provisioning

Inter Node DRY Batch Provision				<u> </u>
Inter Hode CFN Extch Assignment	Remarks Hode Rames - no	Bebo	Interface Group:	08303
Inter Node CRV Batch Delete	Card Type		Interface Group IB:	<u></u>
Interface Excupion Hand Node	CardUnt	Cards Selected	Allocated Humber of CES's:	
			Bumber of Assigned CERs:	0
			CRV Hange From:	
			CRV Range Tex	
			Forout Lint:	Cast Line Hgld ERV
	-	Ange	Dear List Internate DRV Pat	-

- **Step 6** From the inter node CRV batch provision window, the following parameters must be defined:
 - Card Type: Set to the desired analog card (FXS/16, RPOTS/16, or RUVG/8).
 - Highlight the card or cards from the **Card List** to be provisioned. Click the right arrow button to move the selected cards to the **Selected** list.
 - Interface Group ID: Select the interface group ID being provisioned, from 1 to 4.

After the appropriate cards have been moved to the **Selected** list, click the **List** button to display card and line information. (See Figure 7-12.)

Inter Node CRV Back Assignment Inter Node CRV Back Anter Interface Score on Hinad Node Est	Remote Hode Harnet Cand Type Cand Lint	node8 PPOTS:15	Intentace Group II: Intenface Group II: Allocated Hamber of CHTs: Banker of Assigned CHTs: CHT Bange From CHT Bange Ta:	08:00 1				
			Facult Lint	1 1 1 1 1 1	1 3 4 5 6 7	1 1 1 1 1 1 1	1 3 4 5 6 7	inter Inter inter inter inter Inter
		Arrige	Dear List Internade DRV Part	1 1 1	9 10	1 1	9 10	inter inter

Figure 7-12 Inter Node GR-303: Complete CRV Batch Provisioning

Step 7 Set the following fields for remote CRV batch provisioning:

- Interface Group ID: Select the interface group being provisioned.
- Allocated Number of CRVs: Enter the number of CRVs to be allocated for the interface group.
- **CRV Range From and CRV Range To**: Enter starting and ending values for the CRVs to be allocated.
- Step 8 Click Assign to provision the CRVs.

CRV Batch Reset

To change or reset the CRVs of analog lines:

Step 1 Select **CRV Batch Reset** in the function bar. EMS displays the CRV batch reset window. (See Figure 7-13.)

Figure 7-13 Initiate Inter-Node CRV Batch Reset



- **Step 2** Set the following parameters:
 - Card Type: select the desired analog card (FXS/16, RPOTS/16, or RUVG/8).
 - Highlight the desired card or cards from the **Card List** to be reset. Click the right arrow button to move the selected cards to the **Selected** list.
 - Click **Reset** to reset the CRV assignments of the selected analog lines to 0 (unassigned).