

Frame Relay CPE Datapipe

Software Version: 4.2

HP OpenView Performance Insight

User Guide

May 2006



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The following table provides a list of changes made to this document since December 2005.

Chapter	Changes
Chapter 1	Minor editorial changes and updates re version 4.2.
Chapter 2	Minor editorial changes and updates re version 4.2.
Chapter 3	Minor editorial changes and updates re version 4.2.

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1 Overview

The Frame Relay CPE Datapipe collects raw data for the Frame Relay Report Pack. It can serve as the only source of data for the Frame Relay Report Pack, or it can serve as one of several sources of data. The Frame Relay CPE Datapipe polls the following MIBs:

- RFC 1315
- Cisco Frame Relay MIB
- Nortel/Bay FRSW MIB
- Nortel/Bay WAN780 MIB

The default polling cycle is 15 minutes. If a device supports one of the MIBs listed above, and if the default polling cycle is not changed, the MIB will be polled every 15 minutes.

Supported Features

The Frame Relay CPE Datapipe uses a persistent attribute to track each interface. Use of a persistent attribute means that the interfaces on a device can be tracked even if the device reboots and renumbers its interfaces. In addition to supporting interface-reindexing, the Frame Relay CPE Datapipe supports directed-instance polling. Directed-instance polling lets you collect data from a smaller subset of interfaces. You can define the subset using rules or you can define the subset by specific provisioning.

The Frame Relay CPE Datapipe provides:

- Five pre-packaged polling rules, based on common DIP configurations
- High capacity counters for MIB-II values that exceed 32 bits
- SNMP collection details regarding specific OIDs
- A change form for easy datapipe configuration

The Frame Relay CPE Datapipe sources the following values automatically:

- Committed Information Rate (CIR)
- Discard Eligible frame count

The following table outlines recent changes.

Version	Release Date	Enhancements
3.0	October 2003	Sybase only
4.0	April 2004	Ported to Oracle
4.0	August 2004	No changes
4.1	November 2004	Minor defect fixes

Version	Release Date	Enhancements
4.1	June 2005	No changes
4.1	March 2006	No changes
4.2	May 2006	<i>defect fixed:</i> QXCR1000292632 - install _FRSCPE_ifEntry_map_p.sql script throwing an <i>ORA-01002: fetch out of sequence error.</i>

Sources for Additional Information

The following documents are related to this manual:

- *Frame Relay Report Pack 4.0 User Guide*
- *Interface Reporting ifEntry Datapipe 2.3 User Guide*
- *Interface Discovery Datapipe 2.3 User Guide*



Interface re-indexing is a function of the Interface Discovery Datapipe. For a description of how interface re-indexing works, refer to the user guide for that datapipe.

- *Frame Relay Newbridge Datapipe 4.0 Release Statement*
- *Frame Relay Stratacom Datapipe 4.0 Release Statement*
- *Frame Relay Ascend Datapipe 4.0 Release Statement*
- *OVPI Report Packs, Release Notes, May 2006*

Manuals for the core product, OVPI, and manuals for the reporting solutions and shared packages that run on OVPI, can be downloaded from this site:

<http://www.managementsoftware.hp.com>

Select **Support** > **Product Manuals** to reach the **Product Manuals Search** page. The user guides for OVPI are listed under **Performance Insight**. The user guides for report packs and datapipes are listed under **Performance Insight Reporting Solutions**.

The manuals listed under **Performance Insight Reporting Solutions** indicate the month and year of publication. If a manual is revised and reposted, the date of publication will change. Since we post revised manuals on a regular basis, you should search this site for updates before using any PDF that came with the report pack CD-ROM.

2 Package Installation

This chapter covers the following topics:

- [Installing Frame Relay CPE Datapipe](#)
- [Verifying Data Collection](#)
- [Uninstalling the Frame Relay CPE Datapipe](#)

If you recently installed the Frame Relay Report Pack, the Frame Relay CPE Datapipe may already be installed. If the datapipe is installed, you may want to verify that the datapipe is collecting data. Do that by opening the Configuration and Logging Report. If you just installed the datapipe and you want to configure it, see [Chapter 3, Package Configuration](#).

Guidelines for a Smooth Installation

The report pack CD-ROM contains report packs, datapipes, and shared packages. When you insert the report pack CD and launch the package extraction program, the install script extracts every package from the CD and copies the results to the Packages directory on your system. When the extract finishes, the install script prompts you to launch Performance Insight and start Package Manager. Before using Package Manager, review the following guidelines.

Software Prerequisites

Version 4.2 of the Frame Relay CPE Datapipe has the following prerequisites:

- OVPI 5.0 or higher
- All available service packs for the version of OVPI (5.0 or 5.1) you are running
- Common Property Tables 3.5
- Interface Reporting Report Pack 5.1
- Frame Relay Report Pack 4.0
- Interface Discovery Datapipe 2.3

The following packages are optional:

- Interface Reporting ifEntry Datapipe 2.3
- Interface Reporting Devices, a sub-package bundled with Interface Reporting
- Thresholds Module 5.0

There is no upgrade package for the Frame Relay CPE Datapipe 4.2. If you are currently running an earlier version, your first step is to start Package Manager and uninstall the earlier version. When removal is complete, install version 4.2.

Common Property Tables

Version 4.2 of the Frame Relay CPE Datapipe requires Common Property Tables 3.0 or higher. If you are not currently running any version of Common Property Tables, let Package Manager install the correct version for you, automatically. If you are not running the latest version, upgrade to the latest version by installing the “to_3.5” upgrade package. If you need help with the upgrade, or if you want to know more about how this package operates, refer to the *Common Property Tables 3.5 User Guide*.

Distributed Environments

Keep these guidelines in mind when installing Frame Relay CPE Datapipe 4.2 on a distributed system:

- Make sure that every OVPI server is running the same version of OVPI and all available service packs.
- Install the Frame Relay CPE Datapipe on any server that performs polling. If the central server does not poll, do not install the datapipe on the central server.
- Do not install the Frame Relay CPE Datapipe on servers that function as Remote Pollers.

Installing Frame Relay CPE Datapipe

Complete the following tasks before upgrading or installing the Frame Relay CPE Datapipe:

- [Stop OVPI Timer and extract packages from the report pack CD](#)
- [If necessary, upgrade to Common Property Tables 3.5](#)
- [Install Frame Relay CPE Datapipe 4.2](#)

Task 1: [Stop OVPI Timer and extract packages from the report pack CD](#)

- 1 Log in to the system. On UNIX[®] systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.

Windows: Do the following:

- a Select **Control Panel > Administrative Tools > Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Stop**.

UNIX: As root, do one of the following:

- HP-UX: **sh /sbin/init.d/ovpi_timer stop**
- Sun: **sh /etc/init.d/ovpi_timer stop**

- 3 Insert the report packCD in the CD-ROM drive.

Windows: The Main Menu automatically displays.

UNIX:

- a Mount the CD (if the CD does not mount automatically).

- b Navigate to the top level directory on the CD.
 - c Run `./setup`
- 4 Type **1** in the choice field and press **Enter**.

The install script displays a percentage complete bar. When the copy is complete, the install script starts Package Manager. The Package Manager Welcome window opens.

Task 2: [If necessary, upgrade to Common Property Tables 3.5](#)

If you are running an earlier version of Common Property Tables, upgrade to version 3.5. When you upgrade, do not install any other packages at the same time. Install the upgrade package and *only* the upgrade package. When Package Manager indicates that the upgrade is complete, click **Done** to return to the Management Console.

If you need help with the upgrade, refer to the *Common Property Tables 3.5 User Guide*. If you are not currently running any version of Common Property Tables, skip this task. Package Manager will install Common Property Tables for you, automatically.

Task 3: [Install Frame Relay CPE Datapipe 4.2](#)

- 1 Start Package Manager. The Package Manager welcome window opens.
- 2 Click **Next**. The Package Location window opens.
- 3 Click **Install**. Approve the default installation directory; or, if necessary, select a different directory.
- 4 Click **Next**. The Report Deployment window opens. Accept the default for Deploy Reports. Type your username and password for the OVPI Application Server.
- 5 Click **Next**. The Package Selection window opens.
- 6 Click the check box next to the following package: *FRSCPE_Datapipe 4.2*
- 7 Click **Next**. The Type Discovery window opens. To run Type Discovery immediately after package installation, accept the default.
- 8 Click **Next**. The Selection Summary window opens.
- 9 Click **Install**. The Installation Progress window opens. When installation is complete, a package installation complete message appears.
- 10 Click **Done**.
- 11 Restart OVPI Timer.

On Windows, do the following:

- a Select **Control Panel > Administrative Tools > Services**
- b Select OVPI Timer from the list of services.
- c From the Action menu, select **Start**.

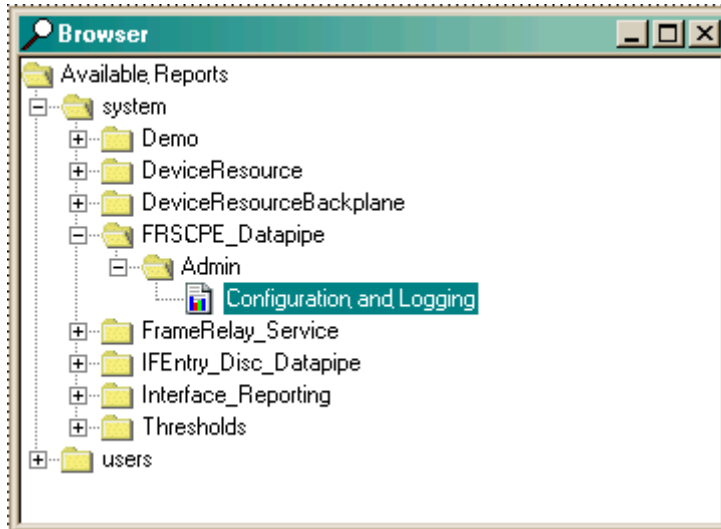
On UNIX, as root, do one of the following:

- HP-UX: `sh /sbin/init.d/ovpi_timer start`
- Sun: `sh /etc/init.d/ovpi_timer start`

Verifying Data Collection

During package installation, discovery files were placed in the scripts directory under OVPI on your system. If you activated the type discovery option during installation, data collection will begin immediately after installation. If you did not activate the type discovery option, data collection will execute automatically later today.

If you activated type discovery during installation, you can verify that data is being collected by opening the Configuration and Logging report. You will find this report in the Admin folder under the Frame Relay CPE Datapipe folder.



This report, shown below, describes the initial configuration of new rows in the property tables and the subsequent mapping of rows of data into the Frame Relay Report Pack.

Report Pack Administration



Configuration and Logging

This report displays configuration information relating to Frame Relay Reporting collections, and lists the most recent log table entries for report pack internal procedures. Use the 'Component' parameter to filter the displayed data.

FRSCPE Mapping Procedure Configuration

Configuration Parameter	Current Value	Meaning
logging level	1	High Level and Errors Only
data filtering	0	Report on all interfaces
provisioning	0	Use provisioned data only

Log Entries

Time	Component	Message
Wed Apr 23 11:31 AM	FRSCPE_RFC1315_map_p	Inserted 40 new rows into Rfrswitch_pvc.
Wed Apr 23 11:30 AM	FRSCPE_iEntry_map_p	Info: 61 polled rows were mapped to Rfrswitch_port in 0 seconds.
Wed Apr 23 11:15 AM	FRSCPE_RFC1315_map_p	Inserted 40 new rows into Rfrswitch_pvc.
Wed Apr 23 11:15 AM	FRSCPE_iEntry_map_p	Info: 61 polled rows were mapped to Rfrswitch_port in 1 seconds.

Uninstalling the Frame Relay CPE Datapipe

Follow these steps to uninstall the Frame Relay CPE Datapipe:

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Stop OVPI Timer and wait for processes to terminate.
On Windows, do the following:
 - a Select **Control Panel > Administrative Tools > Services**
 - b Select OVPI Timer from the list of services.
 - c From the Action menu, select **Stop**.On UNIX, as root, do one of the following:
 - HP-UX: **sh /sbin/init.d/ovpi_timer stop**
 - Sun: **sh /etc/init.d/ovpi_timer stop**
- 3 From the Management Console, start Package Manager. The Package Manager welcome window opens.
- 4 Click **Next**. The Package Location window opens.
- 5 Select **Uninstall**.
- 6 Click **Next**. The Report Undeployment window opens.
- 7 Click **Next**. The Package Selection window opens.
- 8 Click the check box next to: *FRSCPE_Datapipe 4.2*
- 9 Click **Next**. The Selection Summary window opens.
- 10 Click **Uninstall**. The Progress window opens. When removal is complete, a package removal complete message appears.
- 11 Click **Done**.
- 12 Restart OVPI Timer.
On Windows, do the following:
 - a Select **Control Panel > Administrative Tools > Services**
 - b Select OVPI Timer from the list of services.
 - c From the Action menu, select **Start**.On UNIX, as root, do one of the following:
 - HP-UX: **sh /sbin/init.d/ovpi_timer start**
 - Sun: **sh /etc/init.d/ovpi_timer start**

3 Package Configuration

This chapter covers the following topics:

- [Configuring the Frame Relay CPE Datapipe](#)
- [Property Import and Export](#)
- [Logging Options](#)
- [Data Filtering Options](#)
- [Property Provisioning Options](#)
- [Polling Policy Options](#)
- [Archiving Options](#)

Configuring the Frame Relay CPE Datapipe

There are two ways to configure the Frame Relay CPE Datapipe:

- [Command-line utility](#)
- [Update Configuration form](#)

The form makes certain aspects of datapipe configuration easier and faster.

Launching the Command Line Utility

Follow these steps to launch the utility:

- 1 Log in to the system as the OVPI administrator (root on UNIX).
- 2 Run one of the following commands:

UNIX: `$DPIPE_HOME/bin/perl $DPIPE_HOME/scripts/FRS_Config.pl`

Windows: `%DPIPE_HOME%\bin\perl %DPIPE_HOME%\scripts\FRS_Config.pl`

The Update Configuration Form

Use the form shown below to modify the following options:

- [Logging level](#)
- [Data filtering](#)
- [Provisioning](#)

Open this form by clicking the **General Tasks** option in the Object/property Management window. The form shows the settings that are currently in effect. It also describes each option and the changes you can make.

FrameRelay Service

Update Configuration

Use this form to update the Provisioning, Data Filtering and Logging settings for the FrameRelay ReportPack. Select the Configuration setting you want to change and enter the new value in the Change setting box below. Click the Apply button to save any changes. Click the Cancel button to cancel any changes. Click the OK button to save changes and close the form.

Logging Level : The number and detail of messages sent to the Configuration and Logging Report.
 0 = high level only
 1 = informational
 2 = all / debug

Data Filtering : Create new ports in the ReportPack property tables as they are discovered during polling.
 0 = Yes.
 1 = No

Provisioning : Property values for ifSpeed, ifType and ifDescr will not be overwritten by polled values unless the current value is NULL.

Description	Setting
Logging Level	1
Data Filtering	0
Provisioning	0

Change setting

OK Apply Cancel

Property Import and Export

You can use forms to add customer names, locations, or various interface attributes. Sometimes, however, bulk changes are required. When that is the case, it may be easier to perform the import using a tab-separated file and a spreadsheet tool.

The `FRS_Config.pl` script can help with this task:

- If you choose the **export** option when you run the script, the script generates a new, date-stamped file in the `PropertyData` directory.
- If you choose the **import** option when you run the script, the script loads files with names starting with the letters “FrameRelay_Switch_PVC_Property” into the `PropertyData` directory.

The most common way to provision PVC endpoints is to poll your network for a short while, export the collected data, and then see if changes are needed. If changes are needed, you can make those changes, then reload the revised file into the system. For more information about the format of property files, and the directories where these files are stored, refer to the *Frame Relay Report Pack 4.0 User Guide*.

Logging Options

The Frame Relay CPE Datapipe contains the Configuration and Logging Report. This report reads the `RFRSCPE_Procedure Log` table. The report itself contains logging messages produced by datapipe collection activity. The logging depth options are:

- Level 0 — Error messages only.
- Level 1 — Informational and error messages. Default.
- Level 2 — Full debug level output.

Level 2 is not recommended unless you are experiencing collection problems. To change the level of logging, use the change form or run the command line utility.

Data Filtering Options

The Frame Relay CPE Datapipe can operate in *promiscuous* mode or *data filtering* mode with regard to interface data. The options are:

- 0 [Promiscuous Mode]
- 1 [Data Filtering Mode]

In promiscuous mode the datapipe creates a related property row in the report pack property tables and maps all data into the report pack’s base table. In data filtering mode, only pre-provisioned devices are allowed to update related property information, and only pre-provisioned (or pre-existing) device interfaces are allowed to have data mapped from the rate table to the base table. The default is promiscuous mode. When the default is enabled:

- Every device is mapped from the rate table to the base table.
- New property records are created for any device that does not already have property information.

If you are managing a large network by uploading provisioning data from another in-house inventory management system, and you want to specify exactly which devices are monitored, consider using data filtering mode. Data filtering mode has the following advantages:

- Only devices that have pre-provisioned property information will be mapped from the rate table to the base table.
- Your property tables will not contain new rows for transient interfaces that are not of interest to you

The only disadvantage to using data filtering mode is that you will not automatically monitor new interfaces when they are created on the network. To disable the default mode and enable data filtering, use the change form or run the command line utility.

Property Provisioning Options

Property provisioning options determine the precedence of property record updates. In the default mode, mode 0, only NULL or invalid property information will be updated by newly collected interface information. In mode 1, all existing property information will be updated by newly collected interface information. The columns that can be updated include ifType (interface type, or protocol) and ifSpeed (interface speed). To reconfigure property provisioning, use the change form or use the script provided.

Polling Policy Options

The Frame Relay CPE Datapipe supports 6 polling options. Each option controls how MIB-II type data is polled. This section describes each polling option, discusses simple changes you can make to the default configuration, and explains when complex polling routines might be needed.

Unless you identified advanced configurations that are not met by the default polling policy, modifying the default polling policy or the datapipe groups should not be necessary. Keep these points in mind:

- Polling at the PVC endpoint level cannot be altered
- Directed-instance polling at the PVC endpoint level is not supported
- Re-indexing support at the PVC endpoint level is unnecessary

Polling Option 1: ACTIVE_ALL

Poll all Frame Relay interfaces that have an ifAdminStatus of Active (1). Do not poll any other interfaces.

Polling Option 2: ACTIVE_MONITORED

Poll every interface with an ifAdminStatus of Active and an ifType marked as Monitored in the Protocol Defaults form of the Interface Reporting Report Pack. ACTIVE_MONITORED is the default polling policy for the Frame Relay CPE Datapipe.

Polling Option 3: ALL_INTERFACES

Poll any discovered frame relay interfaces whether or not the protocol is monitored, whether or not the ifAdminStatus is up, and whether or not the interface is flagged for polling.

Polling Option 4: ALL_MONITORED

Poll all Frame Relay interfaces with an ifType marked Monitored in the Protocol Defaults form of the Interface Reporting Report Pack. This option is less restricted than ACTIVE_MONITORED, since it polls regardless of ifAdminStatus. Although this option allows you to disable polling of certain protocols, its use in the Frame Relay CPE Datapipe is limited, since polling is already restricted to four ifType values.

Polling Option 5: FLAGGED_FR

FLAGGED_FR is the first of two directed-instance polling options. This option forces the poller to restrict monitoring to interfaces that were explicitly flagged for monitoring when the poll_flag_FRsifEntry value was set to 1. Use this option only when the volume of traffic on frame relay interfaces would overwhelm OVPI and lead to performance issues. This option is not recommended for a typical installation.

Polling Option 6: FLAGGED_IR

FLAGGED_IR is the second directed-instance polling option for the Frame Relay CPE Datapipe. It is relevant only when the Interface Reporting Report Pack and the IR ifEntry Datapipe are installed.

FLAGGED_IR forces the poller to restrict monitoring to interfaces that were explicitly flagged for monitoring when the poll_flag_ifEntry value was set to 1. Use this option to synchronize monitored interfaces with NNM and to reflect that synchronization in the Frame Relay package. Sharing the directed-instance configuration used by Interface Reporting removes any duplication of effort. This option is appropriate when:

- The volume of frame relay interfaces would overwhelm OVPI
- You are not interested in most of the interfaces being polled

Multiple Poller Configuration

The Frame Relay CPE Datapipe requires additional configuration when you use it with multiple pollers. The standard installation configures eight groups and polling policies for a single poller. For use with multiple pollers, additional sets of groups and policies are required.

The Frame Relay CPE Datapipe includes installation scripts that make it easy to create two additional poller configurations. If you need to configure more than two pollers against a single database, you must generate additional sets of group files and policies.

- 1 Log in to the system. On UNIX systems, log in as root.
- 2 Navigate to the FRSCPE_Datapipe.ap directory:
 - *UNIX*: {\$DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap
 - *Windows*: {%DPIPE_HOME%}\packages\FRSCPE_Datapipe\FRSCPE_Datapipe.ap

- 3 Running the following command removes your current Frame Relay polling policies and configure two sets of new policies, one for a system known as *poller1* and another for a system known as *poller2*. You can recreate the default polling policies using an additional command listed below.
 - Change to multipoller: `trend_proc -f create_multipollers.pro`
 - Reset to default poller: `trend_proc -f remove_multipollers.pro`
- 4 Start Polling Policy Manager and select **Edit > Datapipe Installations...**
- 5 Click **Create...** to create new pollers. Add the hostname and (optionally) the IP address of each poller and click **OK**.
- 6 When all pollers have been added, click **Close** to exit.
- 7 Click **All** in the left panel to display all polling policies.
- 8 Modify each of the new poller1 polling policies (starting with the letters FR) by double-clicking the policy.
 - Change the **Polling Assigned to** setting to be the hostname of poller1.
- 9 Modify each of the new poller2 polling policies (starting with the letters FR) by double-clicking the policy.
 - Change the **Polling Assigned to** setting to be the hostname of poller2.
- 10 Select **Edit > Polling Groups... > All Nodes in Same View** in the upper pane, then select poller1 in the lower pane. Assign nodes to be collected by poller1 to the poller1 View.
- 11 Select **Edit > Polling Groups... > All Nodes in Same View** in the upper pane, then select poller2 in the lower pane. Assign nodes to be collected by poller2 to the poller2 View.

Make sure you do not overlap devices by placing them in more than one poller view. If devices overlap, you will have duplicate insertion errors when the system attempts to collect the same data twice. In addition, make sure that system clocks are set correctly on both poller1 and poller2. For more information about polling policies, see [Chapter 4, Groups and Policies](#).

Archiving Options

By default, raw data records are not archived after delta values have been calculated. Not archiving raw data records significantly improves system performance and minimizes database storage requirements. In addition, once the system reaches steady state, data maintenance routines such as `db_delete_data` have less work to perform.

To change the default behavior and start archiving raw data records, add the **-A** option to the 15-minute collection time in the `/OVPI/lib/trendtimer.sched` file, as follows:

Before

```
15 - - {DPIPE_HOME}/bin/mw_collect.exe -n -i 15
```

After

```
15 - - {DPIPE_HOME}/bin/mw_collect.exe -n -i 15 -A
```

4 Groups and Policies

This chapter covers the following topics:

- [MIB-II Specific Polling Groups](#)
- [Rules-Based Polling Groups](#)
- [Frame Relay Polling Groups](#)
- [Polling Policies](#)

MIB-II Specific Polling Groups

The Frame Relay CPE Datapipe uses the same basic polling type groups as the Interface Discovery Datapipe. These polling type groups are created when the Interface Discovery Datapipe is installed. You can view and modify polling type groups using Polling Policy Manager.

The Frame Relay CPE Datapipe uses polling type groups to determine how to reference the interfaces on each polled device. Not all of the interfaces on a device will be polled by the datapipe. The datapipe follows this rule: *Poll MIB-II data from interfaces with the following ifTypes only:*

- 32
- 44
- 58
- 92

GENMIB2IF_Datapipe

Top-level group for all nodes that support MIB-II.

index-by-ifAlias

Subset of the GENMIB2IF_Datapipe group; contains all nodes that should use ifAlias as the interface identifier.

index-by-ifDescr

Subset of the GENMIB2IF_Datapipe group; contains all nodes that should use ifDescr as the interface identifier.

index-by-ifName

Subset of the GENMIB2IF_Datapipe group; contains all nodes that should use ifName as the interface identifier.

index-by-ifIndex

Subset of the GENMIB2IF_Datapipe group. This group is the default. It automatically contains all devices that belong to GENMIB2IF_Datapipe but are not in the index-by-ifAlias, index-by-ifDescr, or index-by-ifName groups. Unless a device is assigned to one of the other index-by groups (automatically by a type discovery, through the user interface, or by script), the device will default to using the ifIndex as the interface identifier.

Do not edit this group manually. This group is a logical combination of the other groups.

This group is not used to control polling; rather, it is intended to show you which devices will use ifIndex as the interface identifier. This group is automatically re-populated by the system on an hourly basis. If a device is re-allocated to a different indexing group, it may not disappear from this group immediately. However, because the data collection for index-by-ifIndex is a real-time view of devices that are in the GENMIB2IF_Datapipe group but not in the other three, the device will be polled from its new index-by group.



For most installations, a type discovery performed automatically by the Interface Discovery Datapipe is sufficient to identify the re-indexing properties of your network and assign the correct group or groups.

Rules-Based Polling Groups

In addition to the five basic groups described above, the Frame Relay CPE Datapipe adds four groups derived from the basic groups. Each group applies polling rules. You cannot alter these groups using the Polling Policy Manager, but you can view their contents using SQL.

Group Name	Database View	Description
ifAlias-FR	KV_FRSifEntry_by_ifAlias	Derived from the index-by-ifAlias group with polling rules applied.
ifDescr-FR	KV_FRSifEntry_by_ifDescr	Derived from the index-by-ifDescr group with polling rules applied.
ifIndex-FR	KV_FRSifEntry_by_ifIndex	Derived from the devices in the GENMIB2IF_Datapipe group which are not in the index-by-ifAlias, index-by-ifDescr or index-by-ifName groups, with polling rules applied.
ifName-FR	KV_FRSifEntry_by_ifName	Derived from the index-by-ifName group with polling rules applied.

Frame Relay Polling Groups

In addition to the four separate MIB-II related polling groups, provided by the Interface Discovery Datapipe, the Frame Relay CPE Datapipe creates and uses four additional node groups, described below, to help it poll for data specific to Frame Relay.

FRSCPE_Interfaces Node Group

All devices that support the standard RFC1315 MIB for frame relay data.

FRSCPE_Interfaces_Cisco_DE Node Group

All devices that support the standard RFC1315 MIB for frame relay *and* the Cisco specific Frame Relay MIB. The additional Cisco tables provide Discard Eligible counters and CIR values.

FRSCPE_WAN780 Node Group

All devices that support the Bay WAN 780 MIB.

FRSCPE_FRSW Node Group

All devices that support the Bay Frame Relay Switch MIB.

Polling Policies

A standard installation of the Frame Relay CPE Datapipe enables a total of eight new polling policies on a fifteen-minute interval. (Do not change these policies unless you need to enable support for multiple pollers.) As shown in the following table, each policy combines a MIB-II specific group and a Frame Relay specific group.

Policy	Table Alias Name for Data to be Collected	Group Name to Collect From
FR_ifAlias_Collection	rV_FRsifEntry_ifAlias	ifAlias-FR
FR_ifDescr_Collection	rV_FRsifEntry_ifDescr	ifDescr-FR
FR_ifIndex_Collection	rV_FRsifEntry_ifIndex	ifIndex-FR
FR_ifName_Collection	rV_FRsifEntry_ifName	ifName-FR
FR_RFC1315_Collection	xFRSCPE_RFC1315_pvc	FRSCPE_Interfaces
FR_Cisco_frCircuit_Collection	xcfrCircuit	FRSCPE_Interfaces_Cisco_DE
FR_Bay_SW_Collection	xFRSCPE_FRSW_pvc	FRSCPE_FRSW
FR_Bay_WAN780_Collection	xFRSCPE_WAN780_pvc	FRSCPE_WAN780

The Frame Relay CPE Datapipe adds a flag column called `poll_flag_FRsifEntry` to the Interface Discovery Datapipe property table `K_IFEntry_Disc`. This flag can be provisioned to control directed-instance polling. For details see [Chapter 3, Package Configuration](#).

5 SNMP Collection Details

This chapter covers the following topics:

- [SNMP Collections](#)
- [Object Identifiers in TEEL Files](#)

SNMP Collections

The Frame Relay CPE Datapipe performs five SNMP collections. See below for information about the type of data collected and the path to the TEEL file.

SNMP Collection 1: FRSifEntry

Type of Data

MIB-II collection for any interface where ifType = 32, 44, 58, or 92

Path to the TEEL File

{DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap/r_FRSifEntry.teel

SNMP Collection 2: FRSCPE_RFC1315_pvc

Type of Data

Generic Frame Relay PVC endpoint data, such as sent and received frames, from any device supporting RFC1315.

Path to the TEEL File

{DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap/
xFRSCPE_RFC1315_pvc.teel

SNMP Collection 3: FRSCPE_FRSW_pvc

Type of Data

Generic Frame Relay PVC endpoint data, such as sent and received frames, from a Bay device.

Path to the TEEL File

```
{DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap/  
xFRSCPE_FRSW_pvc.teel
```

SNMP Collection 4: FRSCPE_WAN780_pvc

Type of Data

Generic Frame Relay PVC endpoint data, such as sent and received frames, from a Bay device.

Path to the TEEL File

```
{DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap/  
xFRSCPE_WAN780_pvc.teel
```

SNMP Collection 5: xcfrCircuit

Type of Data

Additional PVC endpoint data for CIR, Discard Eligible In, and Out counts from any device supporting the Cisco Frame Relay MIB.

Path to the TEEL File

```
{DPIPE_HOME}/packages/FRSCPE_Datapipe/FRSCPE_Datapipe.ap/xcfrCircuit.teel
```

Object Identifiers in TEEL Files

The following table provides a list of object identifiers (OIDs) in each TEEL file.

Collection Name	OID List
FRSifEntry	1.3.6.1.2.1.2.2.1.1.1 1.3.6.1.2.1.2.2.1.1.2 1.3.6.1.2.1.2.2.1.1.3 1.3.6.1.2.1.2.2.1.1.4 1.3.6.1.2.1.2.2.1.1.5 1.3.6.1.2.1.2.2.1.1.6 1.3.6.1.2.1.2.2.1.1.7 1.3.6.1.2.1.2.2.1.1.8 1.3.6.1.2.1.2.2.1.1.9 1.3.6.1.2.1.2.2.1.1.10 1.3.6.1.2.1.2.2.1.1.11 1.3.6.1.2.1.2.2.1.1.12 1.3.6.1.2.1.2.2.1.1.13 1.3.6.1.2.1.2.2.1.1.14 1.3.6.1.2.1.2.2.1.1.15 1.3.6.1.2.1.2.2.1.1.16 1.3.6.1.2.1.2.2.1.1.17 1.3.6.1.2.1.2.2.1.1.18 1.3.6.1.2.1.2.2.1.1.19 1.3.6.1.2.1.2.2.1.1.20 1.3.6.1.2.1.2.2.1.1.21 1.3.6.1.2.1.2.2.1.1.22 1.3.6.1.2.1.31.1.1.1.1 1.3.6.1.2.1.31.1.1.1.6 1.3.6.1.2.1.31.1.1.1.7 1.3.6.1.2.1.31.1.1.1.8 1.3.6.1.2.1.31.1.1.1.9 1.3.6.1.2.1.31.1.1.1.10 1.3.6.1.2.1.31.1.1.1.11 1.3.6.1.2.1.31.1.1.1.12 1.3.6.1.2.1.31.1.1.1.18

Collection Name	OID List
FRSCPE_RFC1315_pvc	1.3.6.1.2.1.10.32.2.1.1 1.3.6.1.2.1.10.32.2.1.2 1.3.6.1.2.1.10.32.2.1.3 1.3.6.1.2.1.10.32.2.1.4 1.3.6.1.2.1.10.32.2.1.5 1.3.6.1.2.1.10.32.2.1.6 1.3.6.1.2.1.10.32.2.1.7 1.3.6.1.2.1.10.32.2.1.8 1.3.6.1.2.1.10.32.2.1.9 1.3.6.1.2.1.10.32.2.1.10 1.3.6.1.2.1.10.32.2.1.11 1.3.6.1.2.1.10.32.2.1.12 1.3.6.1.2.1.10.32.2.1.13 1.3.6.1.2.1.10.32.2.1.14
FRSCPE_FRSW_pvc	1.3.6.1.4.1.18.3.5.9.6.7.1.2 1.3.6.1.4.1.18.3.5.9.6.7.1.3 1.3.6.1.4.1.18.3.5.9.6.7.1.4 1.3.6.1.4.1.18.3.5.9.6.7.1.24 1.3.6.1.4.1.18.3.5.9.6.7.1.25 1.3.6.1.4.1.18.3.5.9.6.7.1.26 1.3.6.1.4.1.18.3.5.9.6.7.1.27 1.3.6.1.4.1.18.3.5.9.6.7.1.28 1.3.6.1.4.1.18.3.5.9.6.7.1.29 1.3.6.1.4.1.18.3.5.9.6.7.1.30 1.3.6.1.4.1.18.3.5.9.6.7.1.31 1.3.6.1.4.1.18.3.5.9.6.7.1.32 1.3.6.1.4.1.18.3.5.9.6.7.1.33 1.3.6.1.4.1.18.3.5.9.6.7.1.34 1.3.6.1.4.1.18.3.5.9.6.7.1.35 1.3.6.1.4.1.18.3.5.9.6.7.1.36 1.3.6.1.4.1.18.3.5.9.6.7.1.37 1.3.6.1.4.1.18.3.5.9.6.7.1.38 1.3.6.1.4.1.18.3.5.9.6.7.1.41 1.3.6.1.4.1.18.3.5.9.6.7.1.42 1.3.6.1.4.1.18.3.5.9.6.7.1.43 1.3.6.1.4.1.18.3.5.9.6.7.1.44 1.3.6.1.4.1.18.3.5.9.6.7.1.45 1.3.6.1.4.1.18.3.5.9.6.7.1.46 1.3.6.1.4.1.18.3.5.9.6.7.1.47 1.3.6.1.4.1.18.3.5.9.6.7.1.48

Collection Name	OID List
FRSCPE_WAN780_pvc	1.3.6.1.4.1.18.3.5.9.9.2.1.1 1.3.6.1.4.1.18.3.5.9.9.2.1.2 1.3.6.1.4.1.18.3.5.9.9.2.1.3 1.3.6.1.4.1.18.3.5.9.9.2.1.4 1.3.6.1.4.1.18.3.5.9.9.2.1.5 1.3.6.1.4.1.18.3.5.9.9.2.1.6 1.3.6.1.4.1.18.3.5.9.9.2.1.7 1.3.6.1.4.1.18.3.5.9.9.2.1.8 1.3.6.1.4.1.18.3.5.9.9.2.1.9 1.3.6.1.4.1.18.3.5.9.9.2.1.10 1.3.6.1.4.1.18.3.5.9.9.2.1.11 1.3.6.1.4.1.18.3.5.9.9.2.1.12 1.3.6.1.4.1.18.3.5.9.9.2.1.13 1.3.6.1.4.1.18.3.5.9.9.2.1.14 1.3.6.1.4.1.18.3.5.9.9.2.1.15 1.3.6.1.4.1.18.3.5.9.9.2.1.16 1.3.6.1.4.1.18.3.5.9.9.2.1.17 1.3.6.1.4.1.18.3.5.9.9.2.1.18 1.3.6.1.4.1.18.3.5.9.9.2.1.19 1.3.6.1.4.1.18.3.5.9.9.2.1.20 1.3.6.1.4.1.18.3.5.9.9.2.1.21 1.3.6.1.4.1.18.3.5.9.9.2.1.22 1.3.6.1.4.1.18.3.5.9.9.2.1.23 1.3.6.1.4.1.18.3.5.9.9.2.1.24 1.3.6.1.4.1.18.3.5.9.9.2.1.25 1.3.6.1.4.1.18.3.5.9.9.2.1.26 1.3.6.1.4.1.18.3.5.9.9.2.1.27 1.3.6.1.4.1.18.3.5.9.9.2.1.28
xcfrCircuit	1.3.6.1.4.1.9.9.49.1.2.1.1.1 1.3.6.1.4.1.9.9.49.1.2.1.1.2 1.3.6.1.4.1.9.9.49.1.2.1.1.3 1.3.6.1.4.1.9.9.49.1.2.2.1.17

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