VNE Customization Builder

This chapter introduces the Virtual Network Element Customization Builder (VCB) in Cisco Prime Network (Prime Network).

This chapter contains the following topics:

About the VCB

The VCB is a command-line tool for Prime Network admin users to add—to an installed Prime Network system and for their own support—network elements (NEs), modules, and events, thereby extending what is delivered in Prime Network software. The VCB is installed when you install Prime Network and is targeted at professional service organizations and other power users.

Use the VCB to customize VNE drivers in the installed Prime Network at the customer site for additional discovery and recognition of the following:

- Cards—Enable Prime Network to recognize cards that would otherwise be treated as “Unknown”.
- Syslogs and traps—Enable Prime Network to process a syslog or a trap as a Prime Network event.
- Traps in a MIB—Provide MIBs as input to the VCB to produce a list of unsupported traps for a particular MIB, alternatively to produce an editable script to run to add the unsupported traps as Prime Network events.
- NE maintenance software—Enable VNE driver to recognize a maintenance software release of a device assuming that the management interface has not changed.
- Devices that extend an NE type—Clone from an existing VNE driver to manage new devices which has compatible management interface and fit within an existing supported device family.

Note Prime Network 3.9 supports only Cards and Syslogs/Traps that are associated with managed element.

Use the VCB to create user-defined VNE drivers for discovery of unsupported devices based on U-VNE templates. When using a U-VNE template, you must investigate the management interface instrumentation in the device and determine how closely it matches with those used in the U-VNE template.

Customizations using the VCB affect VNE drivers and update the Prime Network registry in a safe manner. The VCB enables you to roll back easily; you can remove:

- All VCB customizations with one command, restoring your system to a factory-defined state.
- Selective VCB customizations, using one command per customization that you want to remove.

Because VCB customizations are carried forward during an upgrade to a new version of Prime Network, your customizations continue to override any new or updated VNE drivers or newly supported events and modules. The ability to remove changes selectively enables you to discontinue particular overrides only and take advantage of any newly added support.

Briefly, the VCB works as follows:

- You select vcb commands and templates and supply parameters.
- The VCB writes extensions into a local registry file, site.xml, thereby avoiding impact on the Prime Network code. You do not need to know a great deal about the Prime Network registry to use the VCB.
- You verify the extension using your test resources, such as a simulator

VCB displays the details of the Cisco and the non-Cisco drivers in different tabs in the VCB GUI as Prime Network 4.0 supports separate installation directories and registry service for Cisco and non-Cisco drivers. Non-Cisco VNEs do not support pluggable module specification, and the pluggable module information is retrieved from the network element itself.

Note The Non-Cisco Drivers tab in VCB GUI is displayed only after successful installation of non-Cisco device package in Prime Network.

For more information about VNE Customization Builder, see *Cisco Active Network Abstraction 4.0 Customization User Guide*.

VCB Template Reference

Module Templates

Note Module templates are applicable to standard modules only (not pluggable modules). You do not need to use a module template to add a pluggable module.

Module templates define a set of port layers—from the connector at Layer 0 to encapsulation at Layer 2—that are applicable to a module. For example, typical port layers for an OC3 ATM card are:

- Layer 0—Fiber Optic
- Layer 1—OC-3
- Layer 2—ATM

Use module templates to enable developed VNEs to recognize new modules.

Note You cannot add modules to generic U-VNEs.

Module templates ensure that each port is modeled with the correct port layer information based on the ifType obtained from the SNMP MIB output.

Event Templates

Event templates work together to extract information from a syslog or a trap and to generate the keys and the location ID for associating a Prime Network event with a managed element device component.

For more information, see the *Cisco Active Network Abstraction 4.0 Customization User Guide*.

Module Groups and Module Specification Files

Note Unlike the modeling that Prime Network does for standard modules, Prime Network models only the ports for pluggable modules. The only module group for pluggable modules is the pluggable-ports-spec file. The remainder of this section applies to standard modules only (not pluggable modules).

A module group is the name of a vendor-specific module specification file that is stored in the Prime Network registry. A module specification file is an XML file that lists supported modules and other properties, such as port layers and sysOID. When you use vcb module commands to add, modify, or delete a module:

- You provide the name of a module specification file as an argument to the -group option.
- The VCB modifies the module specification file: adding, updating, or deleting the module definition.

Note The VCB allows you to update and delete only those modules that you added using the VCB.

Alcatel Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2.

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network 4.0 enables you to extend the alcatel-ess-physicalspec, alcatel-sar-physical-spec, alcatel-sr-physical-spec, and alcatelasamphysicalspec module specification files.

Table 12-1 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-1 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
alcatel-ess-physicalspec	Ethernet(Fixed), page 12-5	• ethernetDefault • faEthernetDefault • gigaEthernetDefault
	Channelized OCXX (Fixed), page 12-8	• OC3-default • OC12-default • OC48-default
		empty-port-loader
alcatel-sar-physical-spec	Ethernet(Fixed), page 12-5	• ethernetDefault • ethernetRJ48Default • ethernetFiberDefault • faEthernetDefault • faEthernetRJ48Default • faEthernetFiberDefault • gigaRJ48Default • gigaEthernetFiberDefault • gigaEthernetDefault
	Channelized OCXX (Fixed), page 12-8	• OC12-default • OC3-default • OC48-default
		empty-port-loader
alcatel-sr-physical-spec	Ethernet(Fixed), page 12-5	• ethernetDefault • ethernetRJ48Default • ethernetFiberDefault • faEthernetDefault • faEthernetRJ48Default • faEthernetFiberDefault • gigaRJ48Default • gigaEthernetFiberDefault • gigaEthernetDefault
	Channelized OCXX (Fixed), page 12-8	• OC12-default • OC3-default • OC48-default • OC192-default
		empty-port-loader

Table 12-1 Module Group Summary for Standard Modules—Prime Network Version 4.0 (Continued)

Module Group	Technologies	Template Names
alcatelasamphysicalspec	Ethernet(Fixed), page 12-5	• 117 • 6
	ATM (Fixed), page 12-7	• 168 • 18 • 19 • 249 • 30 • 39 • 94
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet(Fixed), page 12-5
- Channelized OCXX (Fixed), page 12-8

Ethernet(Fixed)

Table 12-2 lists module templates for Ethernet(Fixed) for Alcatel-Lucent 7450 ESS.

Table 12-2 Module Templates—Ethernet(Fixed) for Alcatel-Lucent 7450 ESS

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ethernetDefault	RJ45	EthernetCSMA /CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 20 Ports 10/100/1000 Ethernet TX
faEthernetDefault	RJ45	EthernetCSMA /CD	Fast Ethernet	MDA 60 Ports 10/100 Ethernet TX
gigaEthernetDefault	Fiber Optic	EthernetCSMA /CD	Gigabit Ethernet	MDA 10 Ports 1-Gigabit Ethernet SFP

Table 12-3 lists module templates for Ethernet(Fixed) for Alcatel-Lucent 7705 SAR.

Table 12-3 Module Templates—Ethernet(Fixed) for Alcatel-Lucent 7705 SAR

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ethernetDefault	RJ45	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
ethernetRJ48Default	RJ48	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
ethernetFiberDefault	Fiber optic	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
faEthernetDefault	RJ45	EthernetCSMA/CD	Fast Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
faEthernetRJ48Default	RJ48	EthernetCSMA/CD	Fast Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
faEthernetFiberDefault	Fiber optic	EthernetCSMA/CD	Fast Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
gigaEthernetDefault	RJ45	EthernetCSMA/CD	Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
gigaRJ48Default	RJ48	EthernetCSMA/CD	Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP
gigaEthernetFiberDefault	Fiber optic	EthernetCSMA/CD	Gigabit Ethernet	MDA 6 10/100 Ethernet, 2 Port 1-Gigabit SFP

Table 12-4 lists module templates for Ethernet(Fixed) for Alcatel-Lucent ATM Subscriber Access Multiplexer.

Table 12-4 Module Templates—Ethernet(Fixed) for Alcatel-Lucent ATM Subscriber Access Multiplexer

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
117	RJ45	EthernetCSMA/CD	Gigabit Ethernet	
6	RJ45	EthernetCSMA/CD	Fast Ethernet	

ATM (Fixed)

Table 12-5 lists module templates for ATM (Fixed) for Alcatel-Lucent ATM Subscriber Access Multiplexer.

Table 12-5 Module Templates—ATM (Fixed) Alcatel-Lucent ATM Subscriber Access Multiplexer

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
169	RJ11	SHDSL	EdgeATM	
18	BNC	DS1	ATM	
19	RJ48	DS1		
249	RJ11	ADSL2	EdgeATM	
30	BNC	DS3	ATM	
39	FiberOptic	OC3	ATM	
94	RJ11	ADSL	EdgeATM	

Table 12-6 lists module templates for Ethernet(Fixed) for Alcatel-Lucent 7750/7710 SR.

Table 12-6 Module Templates—Ethernet(Fixed) for Alcatel-Lucent 7750/7710 SR

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ethernetDefault	RJ45	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
ethernetRJ48Default	RJ48	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
ethernetFiberDefault	Fiber optic	EthernetCSMA/CD	• Ethernet • Fast Ethernet • Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
faEthernetDefault	RJ45	EthernetCSMA/CD	Fast Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
faEthernetRJ48Default	RJ48	EthernetCSMA/CD	Fast Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP

Table 12-6 Module Templates—Ethernet(Fixed) for Alcatel-Lucent 7750/7710 SR (Continued)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
faEthernetFiberDefault	Fiber optic	EthernetCSMA/CD	Fast Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
gigaEthernetDefault	RJ45	EthernetCSMA/CD	Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
gigaRJ48Default	RJ48	EthernetCSMA/CD	Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP
gigaEthernetFiberDefault	Fiber optic	EthernetCSMA/CD	Gigabit Ethernet	MDA 10-Port 10/100/1000 Ethernet Extended Performance SFP

Channelized OCXX (Fixed)

Table 12-7 lists module templates for Channelized OCXX (Fixed) for Alcatel-Lucent 7450 ESS.

Table 12-7 Module Templates—Channelized OCXX (Fixed) for Alcatel-Lucent 7450 ESS

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
OC3-default	Fiber optic	OC3	-	MDA 16 Ports OC3 SFP
OC12-default	Fiber optic	OC12	-	MDA 16 Ports OC12/OC3 SFP
OC48-default	Fiber optic	OC48	-	MDA 4 Ports OC48 SFP

Table 12-8 lists module templates for Channelized OCXX (Fixed) for Alcatel-Lucent 7705 SAR.

Table 12-8 Module Templates—Channelized OCXX (Fixed) for Alcatel-Lucent 7705 SAR

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
OC3-default	Fiber optic	OC3	-	MDA 4 Port OC3 SFP
OC12-default	Fiber optic	OC12	-	-
OC48-default	Fiber optic	OC48	-	-
OC192-default	Fiber optic	OC192	-	-

Table 12-9 lists module templates for Channelized OCXX (Fixed) for Alcatel-Lucent 7750/7710 SR.

Table 12-9 Module Templates—Channelized OCXX (Fixed) for Alcatel-Lucent 7750/7710 SR

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
OC3-default	Fiber optic	OC3	-	MDA 8-Port OC3 SFP
OC12-default	Fiber optic	OC12	-	MDA 4-Port ATM OC12/OC3
OC48-default	Fiber optic	OC48	-	MDA 2 Ports OC48 SFP
OC192-default	Fiber optic	OC192	-	MDA 1-Port OC192

Event Templates

Table 12-10 lists the repositories and parsing rules files for Alcatel.

Table 12-10 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • product scheme: – alcatel-ess-syslog-product-parsing-rules – alcatel-ess-trap-product-parsing-rules – alcatel-sar-syslog-product-parsing-rules – alcatel-sar-trap-product-parsing-rules – alcatel-sr-syslog-ipcore-parsing-rules – alcatel-sr-trap-ipcore-parsing-rules – alcatel-asam-trap-product-parsing-rules	Select based on whether you are supporting a syslog or a trap: • Trap: – alcatel-7450-trap-repository – alcatel-7705-trap-repository – alcatel-7750/7710-trap-repository – mib2-trap-repository[1] – alcatel-trap-repository

1. Select mib2-trap-repository when you are adding a standard MIB-II trap. Otherwise, select alcatel-7450-trap-repository.

Calix Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2.

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network Version 4.0 enables you to extend the Calix-blc-physicalspec module specification files.

Table 12-11 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-11 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
Calix-blc-physicalspec	Ethernet(Fixed), page 12-10	• FiberOpticEthernetDefault • FiberOpticOrPluggableEthernetDefault • UTPEthernetDefault
	ATM (Fixed), page 12-10	ADSL2Default
	Generic, page 12-10	DefaultLoader
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet(Fixed), page 12-10
- ATM (Fixed), page 12-10
- Generic, page 12-10

Ethernet(Fixed)

Table 12-12 lists module templates for Ethernet(Fixed) for Calix.

Table 12-12 Module Templates—Ethernet(Fixed) for RAD

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
UTPEthernetDefault	RJ45	EthernetCSMA/CD	Ethernet	
FiberOpticEthernetDefault	FiberOptic	EthernetCSMA/CD	Gigabit Ethernet	
FiberOpticOrPluggableEthernetDefault	FiberOptic	EthernetCSMA/CD	Gigabit Ethernet	

ATM (Fixed)

Table 12-13 lists module templates for ATM (Fixed) for Calix.

Table 12-13 Module Templates—ATM (Fixed) for RAD

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ADSL2Default	RJ45	ADSL2	ATM	

Generic

Table 12-14 lists module templates for Generic for Calix.

Table 12-14 Module Templates—Generic Calix

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
DefaultLoader	RJ45			

Event Templates

Table 12-15 lists the repositories and parsing rules files for Calix.

Table 12-15 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • Product Scheme: – Calix-trap-product-parsing-rules.xml	Select based on whether you are supporting a syslog or a trap: • Trap: – Calix-trap-repository.xml

Huawei Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2.

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network 4.0 enables you to extend the huawei-trs-physicalspec module specification files.

Table 12-16 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-16 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
huawei-trs-physicalspec	Ethernet(Fixed), page 12-12	• ethernetDefault • ethernet-default-over-optic • gigaEthernetDefault • A10GigaEthernet • ethernetFiberDefault • gigaEthernet • ethernetDefault1 • fastEthernetFiberDefault • gigaEthernetFiberDefault • fastEthernetDefault
	Ethernet (Multiloader), page 12-13	E1OrEthOrGig
	Channelized T1/E1, page 12-14	E1Default
	ATM (Fixed), page 12-14	• DS1Default • AtmDefault
	POS (Fixed), page 12-14	• FiberDefault-pos • FiberDefault-pos-ppp
	Generic, page 12-14	generic-port
	Multitechnology, page 12-14	MultiTechnologiesModuleDefault
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet(Fixed), page 12-12
- Ethernet (Multiloader), page 12-13
- Channelized T1/E1, page 12-14
- ATM (Fixed), page 12-14
- POS (Fixed), page 12-14
- Generic, page 12-14
- Multitechnology, page 12-14

Ethernet(Fixed)

Table 12-17 lists module templates for Ethernet(Fixed).

Table 12-17 Module Templates—Ethernet(Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ethernetDefault	RJ45	EthernetCSMA /CD	• Ethernet • Fast Ethernet • 10 Gigabit Ethernet • Gigabit Ethernet	
ethernet-default-over-optic	Fiber optic	EthernetCSMA /CD	• Ethernet • Fast Ethernet • 10 Gigabit Ethernet • Gigabit Ethernet	G24SC
gigaEthernetDefault	RJ45	Ethernet CSMA/CD	Gigabit Ethernet	AND1EG2
A10GigaEthernet	Fiber optic	Ethernet CSMA/CD	10 Gigabit Ethernet	CR52L2XXNB
ethernetFiberDefault	Fiber optic	Ethernet CSMA/CD	Ethernet	CR52EEGFNB
gigaEthernet	Fiber optic	Ethernet CSMA/CD	Gigabit Ethernet	
ethernetDefault1	RJ45	Ethernet CSMA/CD	Ethernet	AND1VIRCARD
fastEthernetFiberDefault	Fiber optic	Ethernet CSMA/CD	Ethernet	CR52EEGFNB
gigaEthernetFiberDefault	Fiber optic	Ethernet CSMA/CD	Gigabit Ethernet	CR52EEGFNB
fastEthernetDefault	RJ45	Ethernet CSMA/CD	Fast Ethernet	AND1VIRCARD

Ethernet (Multiloader)

Table 12-18 lists module templates for Ethernet (Multiloader).

Table 12-18 Module Templates—Ethernet (Multiloader)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
E1OrEthOrGig	RJ45	E1		

Channelized T1/E1

Table 12-19 lists module templates for Channelized T1/E1.

Table 12-19 Module Templates—Channelized T1/E1

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
E1Default	RJ45	E1		AND1VIRCARD

ATM (Fixed)

Table 12-20 lists module templates for ATM (Fixed).

Table 12-20 Module Templates—ATM (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
DS1Default	DS1 connector	DS1		AND1VIRCARD
AtmDefault	Fiber optic	OC3	ATM	CR53A4CF

POS (Fixed)

Table 12-21 lists module templates for POS (Fixed).

Table 12-21 Module Templates—POS (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
FiberDefault-pos	Fiber optic	OC3	PPP	CX67C1CF0
FiberDefault-pos-ppp	Fiber optic	OC3	PPP	CR53P8CF

Generic

Table 12-22 lists module templates for Generic.

Table 12-22 Module Templates—Generic

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
generic-port	POS Connector	Generic Layer 1	Generic Layer 2	

Multitechnology

Table 12-23 lists module templates for Multitechnology.

Table 12-23 Module Templates—Multitechnology

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
MultiTechnologies ModuleDefault	• RJ11 • RJ45 • RJ48 • Fiber optic • DB60	• EthernetCSMA/CD • DS1 • E1 • OC3 • ADSL • Serial	• Fast Ethernet • Gigabit Ethernet • PPP • HDLC • Frame relay • ATM	

Event Templates

Table 12-24 lists the repositories and parsing rules files for Huawei.

Table 12-24 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • product scheme: – huawei-trs-trap-ipcore-parsing-rules	Select based on whether you are supporting a syslog or a trap: • Trap: – mib2-trap-repository[1] – huawei-trap-repository

1. Select mib2-trap-repository when you are adding a standard MIB-II trap. Otherwise, select huawei-trap-repository.

Juniper Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network 4.0 enables you to extend the juniper-junos-physicalspec and juniper-screenos-physicalspec module specification files.

Table 12-25 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-25 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
juniper-junos-physicalspec	Ethernet (Fixed), page 12-17	• A10GigaEthernet • gigaEthernet • fxp • ethernet-over-baseband • gigabit ethernet over baseband • gigabit-ethernet-over-fiber
	POS (Fixed), page 12-17	ppp over oc48
	POS (Multiloader), page 12-17	• ppp over oc12 • ppp over oc192 • ppp-over-oc3
	Channelized T1/E1 (Fixed), page 12-18	• E3Default • E1
	ATM (Fixed), page 12-18	• atmDefault • atm over oc12 • atm over ds3
	ATM (Multiloader), page 12-18	• layer2-over-ds3 • layer2-over-oc12 • layer2-over-oc48 • layer2-over-oc3
	Multitechnology, page 12-19	MultiTechnologiesModuleDefault
		empty-port-loader
juniper-screenos-physicalspec	Generic, page 12-19	DefaultLoader
	Ethernet (Fixed), page 12-17	• SfpGigaEthernetDefault • FastEthernetDefault
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet (Fixed), page 12-17
- POS (Fixed), page 12-17

Ethernet (Fixed)

Table 12-26 lists module templates for Etherenet (Fixed).

Table 12-26 Module Templates—Ethernet (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
A10GigaEthernet	Fiber optic	EthernetCSMA/CD	10 Gigabit Ethernet	PIC:1×10GE(LAN),XENPAK
gigaEthernet	Fiber optic	EthernetCSMA/CD	Gigabit Ethernet	PIC: 10×1GE(LAN)
fxp	RJ45	EthernetCSMA/CD	Ethernet	FPC
ethernet-over-baseband	RJ45	EthernetCSMA/CD	Ethernet	PIC: 4×F/E, 10 BASE-TX
gigabit ethernet over baseband	RJ45	EthernetCSMA/CD	Ethernet	PIC: 2×F/E, 100 BASE-TX
gigabit-ethernet-over-fiber	Fiber optic	EthernetCSMA/CD	Ethernet	PIC: 1×10GE(LAN/WAN) IQ2
SfpGigaEthernetDefault	RJ45	EthernetCSMA/CD	Gigabit Ethernet	Management-Board II, Processing- 8G2
FastEthernetDefault	RJ45	EthernetCSMA/CD	Fast Ethernet	Management-Board II, Processing- 8G2

POS (Fixed)

Table 12-27 lists module templates for POS (Fixed).

Table 12-27 Module Templates—POS (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ppp over oc48	Fiber optic	OC48	PPP	

POS (Multiloader)

Table 12-28 lists module templates for POS (Multiloader).

Table 12-28 Module Templates—POS (Multiloader)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ppp over oc12	Fiber optic	OC12	PPP	
ppp over oc192	Fiber optic	OC192	PPP	PIC: 1×OC-192 SM SR1
ppp-over-oc3	Fiber optic	OC3	PPP	jnxM20QuadSonetOc3

Channelized T1/E1 (Fixed)

Table 12-29 lists module templates for Channelized T1/E1 (Fixed).

Table 12-29 Module Templates—Channelized T1/E1 (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
E3 Default	BNC	DS3	-	
E1	RJ48	DS1	PPP	PIC: 4×E1, RJ48

ATM (Fixed)

Table 12-30 lists module templates for ATM (Fixed).

Table 12-30 Module Templates—ATM (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
atmDefault	Fiber optic	OC3	ATM	PIC: 2×OC-3 ATM-II IQ, SMIR
atm over oc12	Fiber optic	OC12	ATM	
atm over ds3	BNC	DS3	ATM	jnxM20QuadSonetOc3

ATM (Multiloader)

Table 12-31 lists module templates for ATM (Multiloader).

Table 12-31 Module Templates—ATM (Multiloader)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
layer2-over-ds3	BNC	DS3	• PPP • HDLC • Frame relay • ATM	• PIC: 2×T3 • PIC: 10×CHE1 IQ
layer2-over-oc12	Fiber optic	OC12	• PPP • HDLC • Frame relay • ATM	PIC: 1×CHOC12 IQ SONET, SMIR

Table 12-31 Module Templates—ATM (Multiloader) (Continued)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
layer2-over-oc48	Fiber optic	OC48	• PPP • HDLC • Frame relay • ATM	PIC: 1×STM-16 SDH, SMSR
layer2-over-oc3	Fiber optic	OC3	• PPP • HDLC • Frame relay • ATM	PIC: 2×OC-3 SONET, MM

Multitechnology

Table 12-32 lists module templates for Multitechnology.

Table 12-32 Module Templates—Multitechnology

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
MultiTechnologies ModuleDefault	• RJ11 • RJ45 • RJ48 • Fiber optic • DB60	• EthernetCSMA/CD • DS1 • E1 • OC3 • ADSL • Serial	• Fast Ethernet • Gigabit Ethernet • PPP • HDLC • Frame relay • ATM	

Generic

Table 12-33 lists module templates for Generic.

Table 12-33 Module Templates—Generic

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
DefaultLoader	RJ45			

Event Templates

Table 12-34 lists the repositories and parsing rules files for Juniper.

Table 12-34 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • product scheme: – juniper-syslog-product-parsing-rules – juniper-trap-product-parsing-rules • ipcore scheme: – juniper-syslog-ipcore-parsing-rules – juniper-trap-ipcore-parsing-rules – juniper-netscreen-trap-ipcore-parsing-rules	Select based on whether you are supporting a syslog or a trap: • Syslog: – juniper-syslog-repository • Trap: – juniper-traps-repository – mib2-trap-repository[1] – juniper-netscreen-trap-repository

1. Select mib2-trap-repository when you are adding a standard MIB-II trap. Otherwise, select juniper-traps-repository.

RAD Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2.

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network Version 4.0 enables you to extend the rad-ace-csg-physicalspec, rad-etx-physicalspec, rad-ipmux-physicalspec, and rad-la-physicalspec module specification files.

Table 12-35 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-35 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
rad-ace-csg-physicalspec	Ethernet(Fixed), page 12-22	• FastEthernetDefault • EthernetDefault • gigaEthernetDefault
	ATM (Fixed), page 12-22	• ADSL2Default • DS1Default • SHDSLDefault
	Generic, page 12-22	DefaultLoader
		empty-port-loader
rad-etx-physicalspec	Ethernet(Fixed), page 12-22	• gigaEthernetDefault • FastEthernetDefault • EthernetDefault • SfpOrUtpEthernetDefault • SfpOrUtpFastEthernetDefault • SfpOrUtpGigaEthernetDefault
	ATM (Fixed), page 12-22	DS1Default
	Generic, page 12-22	DefaultLoader
		empty-port-loader
rad-ipmux-physicalspec	Ethernet(Fixed), page 12-22	• EthernetDefault • FastEthernetDefault • gigaEthernetDefault
	ATM (Fixed), page 12-22	DS1Default
	Generic, page 12-22	DefaultLoader
		empty-port-loader
rad-la-physicalspec	Ethernet(Fixed), page 12-22	• EthernetDefault • FastEthernetDefault • gigaEthernetDefault
	ATM (Fixed), page 12-22	SHDSLDefault
	Generic, page 12-22	DefaultLoader
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet(Fixed), page 12-22
- ATM (Fixed), page 12-22
- Generic, page 12-22

Ethernet(Fixed)

Table 12-36 lists module templates for Ethernet(Fixed) for RAD.

Table 12-36 Module Templates—Ethernet(Fixed) for RAD

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
FastEthernetDefault	RJ45	EthernetCSMA/CD	Fast Ethernet	
EthernetDefault	RJ45	EthernetCSMA/CD	Ethernet	
gigaEthernetDefault	RJ45	EthernetCSMA/CD	• Gigabit Ethernet • SfpOrUtpGigaEthernetDefault	

ATM (Fixed)

Table 12-37 lists module templates for ATM (Fixed) for RAD ATM Subscriber Access Multiplexer.

Table 12-37 Module Templates—ATM (Fixed) for RAD

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ADSL2Default	RJ45	ADSL2	ATM	
DS1Default	RJ45	DS1	ATM	
SHDSLDefault	RJ45	SHDSL	EdgeATM	

Generic

Table 12-38 lists module templates for Generic for RAD.

Table 12-38 Module Templates—Generic RAD

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
DefaultLoader	RJ45			

Event Templates

Table 12-39 lists the repositories and parsing rules files for RAD.

Table 12-39 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • Product Scheme: – rad-etx-syslog-product-parsing-rules – rad-etx-trap-product-parsing-rules – rad-ipmux-syslog-product-parsing-rules – rad-ipmux-trap-product-parsing-rules – rad-la-syslog-product-parsing-rules – rad-la-trap-product-parsing-rules – rad-csg-syslog-product-parsing-rules – rad-csg-trap-product-parsing-rules	Select based on whether you are supporting a syslog or a trap: • Trap: – rad-etx-trap-repository – rad-trap-repository – rad-ipmux-trap-repository – rad-la-trap-repository – rad-csg-trap-repository

Tellabs Template Reference

This section contains the following topic:

Module Templates

This section contains the following topics:

For more information, see Module Templates, page 12-2.

Module Groups and Module Specification Files

For more information, see Module Groups and Module Specification Files, page 12-3.

Prime Network Version 4.0 enables you to extend the tellabs-msr-physicalspec module specification files.

Table 12-40 summarizes the technologies that are supported and the module templates that are provided in the module specification files. For more information about a module template, use the link in the Technologies column.

Table 12-40 Module Group Summary for Standard Modules—Prime Network Version 4.0

Module Group	Technologies	Template Names
tellabs-msr-physicalspec	Ethernet(Fixed), page 12-24	• A10GigaEthernet • GigabitEthernetDefault • FastEthernetDefault
	ATM (Fixed), page 12-25	• E3Default • ADSL2Default • DS1Default • SHDSLDefault
	Generic, page 12-25	DefaultLoader
		empty-port-loader

Module Templates by Technology

This section presents module templates organized by technology:

- Ethernet(Fixed), page 12-24
- ATM (Fixed), page 12-25
- Generic, page 12-25

Ethernet(Fixed)

Table 12-41 lists module templates for Ethernet(Fixed).

Table 12-41 Module Templates—Ethernet(Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
A10GigaEthernet	Fiber optic	EthernetCSMA/CD	10 Gigabit Ethernet	
GigabitEthernetDefault	Fiber optic	EthernetCSMA/CD	Gigabit Ethernet	
FastEthernetDefault	RJ45	EthernetCSMA/CD	Fast Ethernet	

ATM (Fixed)

Table 12-42 lists module templates for ATM (Fixed).

Table 12-42 Module Templates—ATM (Fixed)

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
ADSL2Default	RJ45	ADSL2		
DS1Default	RJ45	DS1	ATM	
E3Default	BNC	DS3		
SHDSLDefault	RJ45	SHDSL	EdgeATM	

Generic

Table 12-43 lists module templates for Generic.

Table 12-43 Module Templates—Generic

Template Name	Layer 0	Layer 1	Layer 2	Example Modules
DefaultLoader	RJ45			

Event Templates

Table 12-44 lists the repositories and parsing rules files for Tellabs.

Table 12-44 Parsing Rules and Repositories

Parsing Rules Files	Repository Files
Select based on the scheme and whether you are adding support for a trap or a syslog: • product scheme: – tellabs-msr-trap-product-parsing-rules	Select based on whether you are supporting a syslog or a trap: • Trap: – tellabs-trap-repository – tellabs-msr-trap-repository – mib2-trap-repository[1]

1. Select mib2-trap-repository when you are adding a standard MIB-II trap. Otherwise, select tellabs-trap-repository.