Oracle® Communications Network Integrity

MIB-II SNMP Cartridge Guide

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Oracle Communications Network Integrity MIB-II SNMP Cartridge Guide, Release 7.5

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Contents

Preface

This guide describes the functionality and design of the Oracle Communications Network Integrity Management Information Base (MIB) II SNMP cartridge.

Audience

This guide is intended for network administrators who want to understand the design and functionality of this cartridge and for Network Integrity developers who want either to build or extend similar cartridges.

You should have a good working knowledge of SNMP and SNMP operations, specifications, and the use of Oracle Communications Design Studio for Network Integrity.

You should be familiar with the following documents, included with this release:

- *Network Integrity Concepts*
- *Network Integrity Developer's Guide*

Documentation Accessibility

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Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

1
Overview

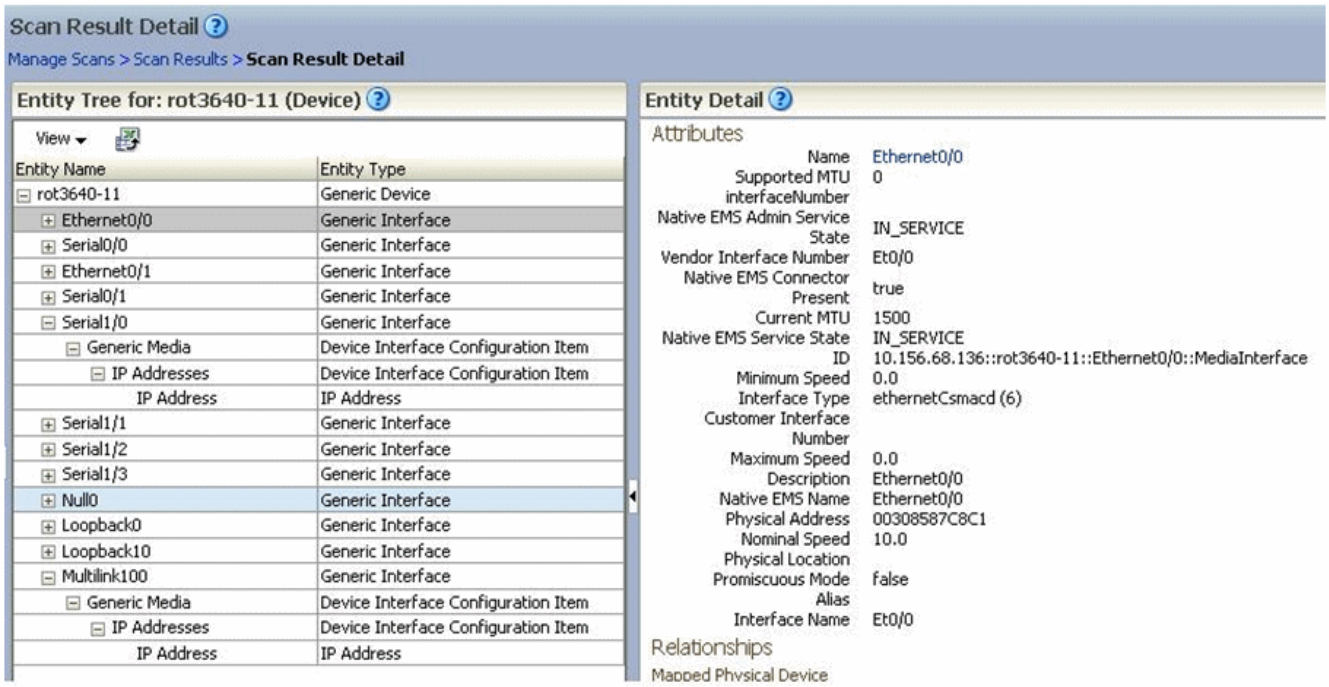
This chapter provides an overview of the Oracle Communications Network Integrity MIB-II SNMP cartridge.

About the MIB-II SNMP Cartridge

The MIB-II SNMP cartridge enables you to discover devices in your network using the SNMP protocol.The cartridge produces a logical device hierarchy that represents the discovered device and includes a logical device instance and child interface(s) or subInterface instance(s) (collectively called interfaces).

Figure 1-1 shows a discovered logical device.

Figure 1-1 Sample Discovered Logical Device



About Cartridge Dependencies

This section provides information on dependencies that the MIB-II SNMP cartridge has on other cartridges.

Run-time Dependencies

For the MIB-II SNMP cartridge to work at run time, the Address_Handlers cartridge must be deployed to Network Integrity.

Design Studio Dependencies

The MIB-II SNMP cartridge has the following dependencies:

- Address_Handlers
- NetworkIntegritySDK
- ora_ni_uim_device
- ora_uim_model

Opening the Cartridge Files in Design Studio

To review and extend the Network Integrity MIB-II SNMP cartridge, you must first download the Oracle Communications Network Integrity MIB-II SNMP Cartridge software from the Oracle software delivery website:

https://edelivery.oracle.com

The software contains the MIB-II SNMP cartridge ZIP file, which has the following structure:

- **\UIM_Cartridge_Projects**
- **\Network_Integrity_Cartridge_Projects**
- **\SNMP_MIBs**
- **Address_Handlers-R7.jar**
- **MIB_II_SNMP_Cartridge-R7.jar**

The **\UIM_Cartridge_Projects\ora_ni_uim_device** project contains the model project used by the MIB-II SNMP cartridge.

The **\Network_Integrity_Cartridge_Projects\MIB_II_SNMP_Cartridge** project contains the extensible Design Studio files.

> **Note:**
>
> When importing MIB files into Design Studio, ensure that the MIB files do not have any filename extension. For example, rename the **FileMIB1.txt** file to **FileMIB1** before importing it into Design Studio.

See Design Studio Help and Network Integrity Developer's Guide for information about opening files in Design Studio. For guidelines and best practices for extending cartridges, see Network Integrity Concepts.

Building and Deploying the Cartridge

The MIB-II SNMP cartridge does not include any extendable cartridges.

See SCD Design Studio Modeling Network Integrity for information about building and deploying cartridges.

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About the Cartridge Components

This chapter provides information about the components of the Oracle Communications Network Integrity MIB-II SNMP cartridge.

The MIB-II SNMP cartridge contains the following actions:

- Discover MIB-II SNMP Action

Discover MIB-II SNMP Action

The Discover MIB-II SNMP action discovers a device and creates its hierarchical model.

The MIB-II SNMP cartridge is designed to be used on a standalone basis to display the logical device hierarchy in Network Integrity. The SNMP cartridge provides no integration with other products but can be extended.

The Discover MIB-II SNMP action contains the following processors run in the following order:

1. MIB-II Properties Initializer Processor
2. MIB-II SNMP Collector Processor
3. MIB-II SNMP Modeler Processor

Figure 2-1 illustrates the processor workflow of the Discover MIB-II SNMP action.

Figure 2-1 Discover MIB-II SNMP Action Processor Workflow

MIB-II Properties Initializer Processor

The MIB-II Properties Initializer processor produces the following data sets:

- `snmpVendorNameMap`: Contains a snapshot of industry enterprise numbers to help identify devices in the network.
- `snmpIfTypeMap`: Contains a snapshot of ifTypes to help identify interface types in the network.

Table 2-1 shows a fragment of each data set output from the MIB-II Properties Initializer.

Table 2-1 MIB-II Properties Initializer Fragment

Sample snmpIfTypeMap	Sample snmpVendorNameMap
1: other (1)	0 = Reserved
2: regular1822 (2)	1 = NxNetworks
3: hdh1822 (3)	2 = IBM
4: ddnX25 (4)	3 = Carnegie Mellon
5: rfc877x25 (5)	4 = UNIX
6: ethernetCsmacd (6)	5 = ACC
7: iso88023Csmacd (7)	6 = TWG
8: iso88024TokenBus (8)	7 = CAYMAN
9: iso88025TokenRing (9)	8 = PSI
10: iso88026Man (10)	9 = ciscoSystems
251: vdsl2 (251)	34730 = FRANCILIENNE D'INGENIERIE ET DE SERVICES INFORMATIQUES SAS

The content of these files may change from time to time, so they are maintained as part of cartridge revisions. SDK extensions to this cartridge can update the content of the property files. See "About Design Studio Extensions" for more information.

MIB-II SNMP Collector Processor

The MIB-II SNMP Collector processor collects SNMP variables from a device. See "About Poll Lists" for more information.

MIB-II SNMP Modeler Processor

The MIB-II SNMP Modeler processor models the data that is collected by the MIB-II SNMP Collector processor. Modeling includes building the hierarchical relationship of logical device and child interfaces.

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About Poll Lists

This chapter provides a poll list for the MIB-II SNMP Collector processor that collects SNMP variables from a device.

About the MIB-II SNMP Collector Poll List

The following list shows the MIB-II SNMP Collector poll list:

- MIB-II:
  - * RFC1213-MIB.mgmt.mib-2.system.sysObjectID
    * RFC1213-MIB.mgmt.mib-2.system.sysDescr
    * RFC1213-MIB.mgmt.mib-2.system.sysName
    * RFC1213-MIB.mgmt.mib-2.system.sysLocation
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifNumber
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifIndex
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifDescr
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifMtu
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifSpeed
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifAdminStatus
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifPhysAddress
    * RFC1213-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifLastChange
    * RFC1213-MIB.mgmt.mib-2.ip.ipAddrTable.ipAddrEntry.ipAdEntAddr
    * RFC1213-MIB.mgmt.mib-2.ip.ipAddrTable.ipAddrEntry.ipAdEntIfIndex
    * RFC1213-MIB.mgmt.mib-2.ip.ipAddrTable.ipAddrEntry.ipAdEntNetMask
    * RFC1213-MIB.mgmt.mib-2.ip.ipAddrTable.ipAddrEntry.ipAdEntBcastAddr

About the IF MIB Poll List

The following list shows the IF MIB poll list:

- IF MIB:
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry.ifName
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry.ifHighSpeed
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry.ifPromiscuousMode
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry.ifConnectorPresent
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry.ifAlias
  - IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifStackTable.ifStackEntry.ifStackStatus

  - IF-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifType
  - IF-MIB.mgmt.mib-2.interfaces.ifTable.ifEntry.ifOperStatus

About the IP MIB Poll List

The following list shows the IP MIB poll list:

- IP MIB:
  - IP-MIB.mgmt.mib-2.ip.ipAddressTable.ipAddressEntry.ipAddressPrefix
  - IP-MIB.mgmt.mib-2.ip.ipAddressTable.ipAddressEntry.ipAddressType
  - IP-MIB.mgmt.mib-2.ip.ipAddressTable.ipAddressEntry.ipAddressIfIndex

4

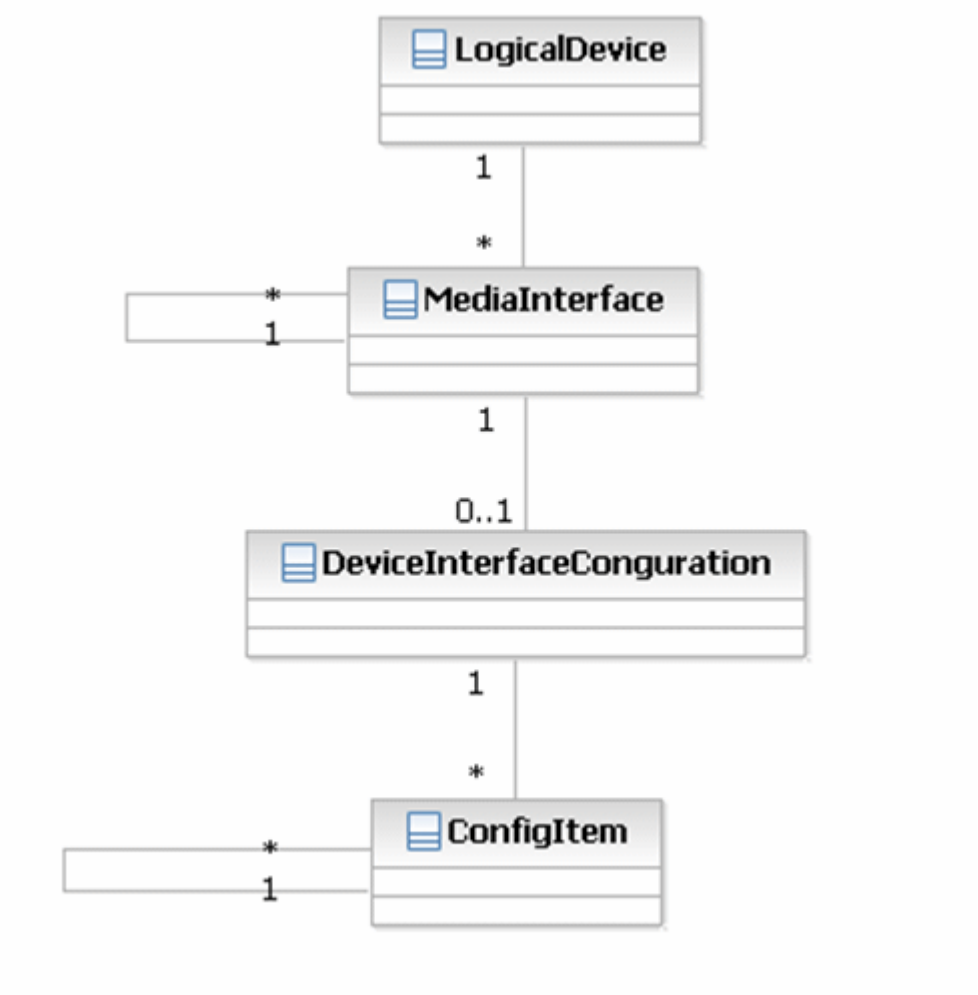
About Cartridge Modeling

This chapter provides information on modeling the Oracle Communications Network Integrity MIB-II SNMP cartridge.

MIB-II SNMP Cartridge UML Representation

Figure 4-1 displays a unified modeling language (UML) diagram depicting the object relationship being rendered.

Figure 4-1 MIB-II SNMP Cartridge UML Representation



Hierarchy Mapping

The logical device object is established and seeded with data sourced by RFC1213-MIB.mgmt.mib-2.system tables.

As a device is discovered, the media interface encapsulates common information about that interface. The device interface configuration captures the media type information that decorates the interface with media-specific parameters that define its behavior (that is; Generic, ATM, Frame Relay or VLAN). This cartridge supports only Generic.

Interfaces are established and seeded with data sourced by:

- RFC1213-MIB.mgmt.mib-2.system
- RFC1213-MIB.mgmt.mib-2.interfaces.ifTable
- IF-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifXTable.ifXEntry
- IP-MIB.mgmt.mib-2.ip.ipAddressTable.ipAddressEntry

The interface hierarchy is established by:

- F-MIB.mgmt.mib-2.ifMIB.ifMIBObjects.ifStackTable.ifStackEntry.ifStackStatus

Device interface configuration is established and seeded with data sourced by:

- RFC1213-MIB.mgmt.mib-2.ip.ipAddrTable.ipAddrEntry
- IP-MIB.mgmt.mib-2.ip.ipAddressTable.ipAddressEntry

About Oracle Communications Information Model

The logical device and media interface objects are Oracle Communications Information Model 1.0 compliant for static fields. The dynamic fields (sometimes referred to as characteristics) are considered application-specific.

The device interface configuration is considered a mechanism to customize the media interface to show application specific data. See Figure 4-1.

This cartridge supports only generic media. Other cartridges support other configurations:

- AtmMedia
- FrameRelayMedia
- VLAN Membership

For a listing of the Information Model fields, see "Field Mappings".

Specifications

This section lists the specifications included in the Network Integrity MIB-II SNMP cartridge.

Logical Device: deviceGeneric

This specification models a generic Logical Device entity.

This specification is used to model a logical device discovered by Network Integrity.

Table 4-1 shows the characteristics applied to the generic device specification.

Table 4-1 Characteristics Applied to the deviceGeneric Specification

Characteristics	Field Type	Field Content	Intended Usage/ Notes
mgmtIpAddress	String	Text	Management IP address of discovered device
nativeEmsAdminServiceState	Drop Down box	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING • IN_MAINTENANCE	Device administered state
nativeEmsServiceState	Drop Down box	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING • IN_MAINTENANCE	Device actual state
nativeEmsName	String	Text	Device actual name
sysObjectId	String	Text	The vendor's authoritative identification of the network management subsystem contained in the entity.

Device Interface: interfaceGeneric

This specification models a generic interface entity.

This specification is used to model an interface discovered by Network Integrity.

Table 4-2 shows the characteristics applied to the interfaceGeneric specification.

Table 4-2 Characteristics Applied to the interfaceGeneric Specification

Characteristics	Field Type	Field Content	Intended Usage/ Notes
nativeEmsName	String	Text	Alternate name this interface could be known by
nativeEmsAdminServiceState	String	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING • IN_MAINTENANCE	Interface administered state
nativeEmsServiceState	Drop Down box	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING • IN_MAINTENANCE	Interface actual state
ifType	Drop Down box	Text	IANA iftype
mtuSupported	String	Text (numeric)	Max allowed MTU

Table 4-2 (Cont.) Characteristics Applied to the interfaceGeneric Specification

Characteristics	Field Type	Field Content	Intended Usage/ Notes
mtuCurrent	String	Text (numeric)	Current Value of MTU
physicalAddress	String	Text	Interface's address at its protocol sub-layer
physicalLocation	String	Text	Location of interface
minSpeed	String	Text (numeric)	Minimum speed of interface
maxSpeed	String	Text (numeric)	Max speed of interface
nominalSpeed	String	Text (numeric)	Nominal speed of interface
ifAlias	String	Text	Alternate name this interface could be known by
ifName	String	Text	Alternate name this interface could be known by
ifSpeed	String	Text (numeric)	ifSpeed of interface
rateCode	String	Text	rateCode of interface based on ifSpeed value
highSpeed	String	Text (numeric)	highSpeed of interface

Device Interface: l2vlan

This specification models an interface entity of ifType "l2vlan" discovered by Network Integrity.

Interfaces with this specification are not reconciled to UIM. The l2vlan interfaces are Ethernet flow points and created as flow interfaces when a link is discovered using the Assimilate IP Links scan available in the IP Assimilation cartridge.

Table 4-3 shows the characteristics applied to the l2vlan specification.

Table 4-3 Characteristics Applied to the l2vlan Specification

Characteristics	Field Type	Field Content	Intended Usage
nativeEmsName	String	Text	Alternate name this interface could be known by
nativeEmsAdminServiceState	String	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING • IN_MAINTENANCE	Interface administered state
nativeEmsServiceState	Drop Down list	Enum with the following values: • UNKNOWN • IN_SERVICE • OUT_OF_SERVICE • TESTING	Interface actual state
ifType	Drop-down list	Text	IANA iftype

Table 4-3 (Cont.) Characteristics Applied to the l2vlan Specification

Characteristics	Field Type	Field Content	Intended Usage
mtuSupported	String	Text (numeric)	Maximum allowed MTU
mtuCurrent	String	Text (numeric)	Current Value of MTU
physicalAddress	String	Text	Interface's address at its protocol sub-layer
physicalLocation	String	Text	Location of interface
minSpeed	String	Text (numeric)	Minimum speed of interface
maxSpeed	String	Text (numeric)	Maximum speed of interface
nominalSpeed	String	Text (numeric)	Nominal speed of interface
ifAlias	String	Text	Alternate name this interface could be known by
ifName	String	Text	Alternate name this interface could be known by
ifSpeed	String	Text (numeric)	ifSpeed of interface
rateCode	String	Text	rateCode of interface based on ifSpeed value
highSpeed	String	Text (numeric)	highSpeed value of interface

Other Characteristics

This MIB-II SNMP Cartridge additionally models the following characteristics. These characteristics are used by the Network Integrity Generic SNMP cartridge which extends the sample technology pack.

Table 4-4 shows the characteristics used by Network Integrity Generic SNMP.

Table 4-4 Characteristics used by ora_ni_uim_device

Characteristics	Field Type	Field Content	Intended Usage/ Notes
discoveredModelNumber	String	Text	All Physical Equipment
discoveredPartNumber	String	Text	All Physical Equipment
discoveredVendorName	String	Text	All Physical Equipment
hardwareRev	String	Text	All Physical Equipment
softwareRev	String	Text	All Physical Equipment
modelName	String	Text	All Physical Equipment

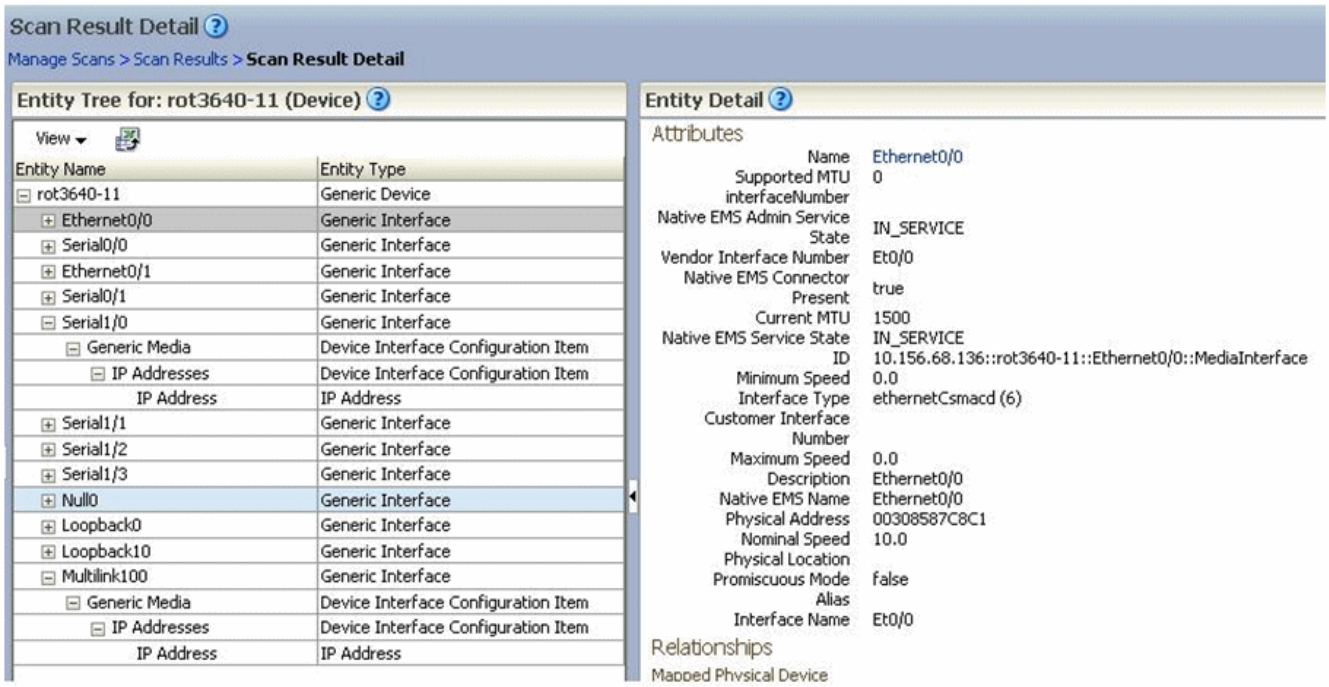
Specification Lineage

```
deviceGeneric
            [0.100000] interfaceGeneric
                       [0.100000] interfaceGeneric
```

Sample Logical Device Hierarchy

Figure 4-2 shows a logical device hierarchy.

Figure 4-2 Sample Logical Device Hierarchy



Field Mappings

This section provide information about field mappings used in the cartridge:

- *Text*: Implies Text [255].
- *static*: The Information Model 1.0 defines this field to be static on the entity specification. The specification provides getters/setters for this field.
- *dynamic*: This is a dynamic field where the entity specification treats the field as a name/value pair. The specification does not provide getter/setters but generically has a get/setCharacteristics method holding a HashSet of entries.

The following tables describe field mappings used in the cartridge:

- Table 4-5
- Table 4-6
- Table 4-7
- Table 4-8
- Table 4-9

Logical Device Mapping

Table 4-5 shows the logical device mapping for the MIB-II SNMP cartridge.

Table 4-5 Logical Device Mapping

LogicalDevice	Information Model Support	MIB Object	Field Type	Notes
Id	static	N/A	Text	Programmatically generated as MgmtIPAddress::sysName ::"LogicalDevice"
Name	static	sysName	Text	N/A
Description	static	sysDescr	Text	N/A
Specification	static	N/A	N/A	Programmatically applies specification “deviceGeneric"
nativeEmsAdminServiceState	static	N/A	Enum: • UNKNOWN • OUT_OF_SERVICE • TESTING • IN_SERVICE • IN_MAINTENANCE	No source
nativeEmsServiceState	static	N/A	Enum: • UNKNOWN • OUT_OF_SERVICE • TESTING • IN_SERVICE • IN_MAINTENANCE	No source
nativeEmsName	static	sysName	Text	N/A
mgmtIpAddress	dynamic	N/A	Text	discoveryAddress
sysObjectId	dynamic	sysObjectId	Text	Support legacy systems

Media Interface Mapping

Table 4-6 shows the media interface mapping for the MIB-II SNMP cartridge.

Table 4-6 Media Interface Mapping

Media Interface	Information Model Support	MIB Object	Field Type	Notes
Id	static	N/A	Text	Programmatically generated asMgmtIPAddress:: sysName::ifDesc::"MediaInterface"
Name	static	ifDescr	Text	N/A
Description	static	ifDescr	Text	N/A
Specification	static	N/A	N/A	Programmatically applies specification "interfaceGeneric"
interfaceNumber	static	N/A	Text	No source

Table 4-6 (Cont.) Media Interface Mapping

Media Interface	Information Model Support	MIB Object	Field Type	Notes
customerInterfaceNumber	static	N/A	Text	No source
vendorInterfaceNumber	static	ifName	Text	N/A
nativeEmsName	static	ifDesc	Text	Field must be unique. ifDescr guarantees uniqueness in device.
nativeEmsAdminServiceState	static	ifAdminStatus	Enum: • UNKNOWN • OUT_OF_SERVICE • TESTING • IN_SERVICE • IN_MAINTENANCE	Mapped. See "Mapping Table" for more information.
nativeEmsServiceState	static	ifOperStatus	Enum: • UNKNOWN • OUT_OF_SERVICE • TESTING • IN_SERVICE • IN_MAINTENANCE	Mapped. See "Mapping Table" for more information.
ifType	dynamic	ifType	Text	Mapped from IANA MIB using properties file "snmpIfTypeMap". Look up returning null results in value of "n"
mtuSupported	static	N/A	Float	No source. Defaults to 0.0
mtuCurrent	static	ifMtu	Float	N/A
physicalAddress	static	ifPhysAddress	Text	N/A
physicalLocation	static	sysLocation	Text	N/A
minSpeed	static	N/A	Float	No source. Defaults to 0.0
maxSpeed	static	N/A	Float	No source. Defaults to 0.0
nominalSpeed	static	ifSpeed | ifHighSpeed	Float	ifHighSpeed overrides ifSpeed when ifHighSpeed is available
ifAlias	dynamic	ifAlias	Text	N/A
ifName	dynamic	ifName	Text	Support legacy systems

Device Interface Configuration Mapping (IPv4)

Table 4-7 shows the device interface configuration mapping for Internet Protocol, Version 4, for the MIB-II SNMP cartridge.

Table 4-7 Device Interface Configuration Mapping (IPv4)

Generic Media	Information Model Support	MIB Object	Field Type	Notes
ipaddress	dynamic	ipAdEntAddr	Text	N/A
prefix	dynamic	ipAdEntNetMask	Text	N/A
ipVersion	dynamic	ipAddressType	Enum {IPV4 | IPV6}	Programmatically set to IPV4
Specification	static	N/A	N/A	Programmatically applies specification "GenericMedia"

Device Interface Configuration (IPv6)

Table 4-8 shows the device interface configuration for the Internet Protocol, Version 6 for the MIB-II SNMP cartridge.

Table 4-8 Device Interface Configuration Mapping (IPv6)

Generic Media	Information Model Support	MIB Object	Field Type	Notes
ipAddress	dynamic	ipAddressIfIndex	Text	For IP v6 addresses, the actual IP is derived from the index since ipAddressAddr is not accessible.
prefix	dynamic	ipAddressPrefix	Text	N/A
ipVersion	dynamic	ipAddressType	Enum {IPV4 | IPV6}	Programmatically set to IPV6
Specification	static	N/A	N/A	Programmatically applies specification "GenericMedia"

Mapping Table

Table 4-9 shows the mapping of ifOperStatus/ifAdminStatus to nativeEms(Admin)ServiceState.

Table 4-9 Mapping Table

ifOperStatus	ifAdminStatus	nativeEmsServiceState nativeEmsAdminState
1: up	1: up	IN_SERVICE
2: down	2: down	OUT_OF_SERVICE
3: testing	3: testing	TESTING
4: unknown	N/A	UNKNOWN
5: dormant	2: down	OUT_OF_SERVICE
6: notPresent	N/A	UNKNOWN
7: lowerLayerDown	2: down	OUT_OF_SERVICE
N/A	N/A	IN_MAINTENANCE

5

About Design Studio Construction

This chapter provides information on using Oracle Communications Design Studio to construct for the Oracle Communications Network Integrity MIB-II SNMP cartridge.

Model Collection

Table 5-1 shows the model collection for the MIB-II SNMP cartridge.

Table 5-1 MIB-II Model Collection

Specification	Notes
deviceGeneric	Intended to represent any root object discovered on the network
interfaceGeneric	Intended to represent any interface discovered under deviceGeneric
GenericMedia	Intended to represent IpAddresses that are applied to a interfaceGeneric
IPAddresses	Container of IP addresses
IPAddress	Container of IP address details
l2vlan	Intended to represent any interface discovered under deviceGeneric

Specification Lineage

This section outlines the specification lineage.

```
deviceGeneric
   [0..*] interfaceGeneric
      [0..1] GenericMedia
         [0..1] IP Addresses
            [0..*] IpAddress

          IpAddress (characteristic)

                                P                    refix (characteristic)

       IpVersion (characteristic)
```

Discovery Action

Table 5-2 shows the discovery action for the MIB-II SNMP cartridge.

Table 5-2 Discover MIB-II SNMP Action

Result Category	Address Handler	Scan Parameters	Model	Processors
Device	IPAddressHandler	• version, Enum {v1, v2c, v3} • port, String • snmpReadCommunity, String • snmpTimeout, String • snmpRetries, String • username, String • contextName, String • authProtocol, Enum {MD5, SHA} • authPassword, String • privacyProtocol Enum {DES} • privacyPassword, String	MIB-II Model	• MIB-II Properties Initializer • MIB-II SNMP Collector • MIB-II SNMP Modeler

Figure 5-1 depicts the Discover MIB-II SNMP action chain.

Figure 5-1 Discover MIB-II SNMP Action Chain

Discovery Processors

Table 5-3 shows the discovery processors for the MIB-II SNMP cartridge.

Table 5-3 Discovery Processors

Processor Name	Variable
MIB-II Properties Initializer	Input: N/A Output: • snmpIfTypeMap Property map containing listing of ifTypes to string name. • snmpVendorNameMap Property map containing listing of sysObjectId suffixes to vendorName.

Table 5-3 (Cont.) Discovery Processors

Processor Name	Variable
MIB-II SNMP Collector	Input: N/A Output: • mibiisnmpCollectorResponseDocument (implicit) Polled SNMP data, see "About Poll Lists".
MIB-II SNMP Modeler	Input: mibiisnmpCollectorResponseDocument, snmpIfTypeMap Output: • deviceInterfaceMap A map that contains interfaces with IfIndex as key. • logicalDevice This is the logical device that was created in the MIB-II Modeler.

The MIB-II SNMP Collector polling the SNMP variables implicitly outputs this data in mibiisnmpCollectorResponseDocument. This output field is not seen explicitly in Design Studio. This document is available to the MIB-II SNMP Modeler processor.

Property File Sample

Table 5-4 shows a sample of the property files being loaded by the MIB-II Properties Initializer.

Table 5-4 Sample Property Files Loaded by MIB-II Properties Initializer

Sample snmpIfTypeMap	Sample snmpVendorNameMap
1: other (1)	0 = Reserved
2: regular1822 (2)	1 = NxNetworks
3: hdh1822 (3)	2 = IBM
4: ddnX25 (4)	3 = Carnegie Mellon
5: rfc877x25 (5)	4 = UNIX
6: ethernetCsmacd (6)	5 = ACC
7: iso88023Csmacd (7)	6 = TWG
8: iso88024TokenBus (8)	7 = CAYMAN
9: iso88025TokenRing (9)	8 = PSI
10: iso88026Man (10)	9 = ciscoSystems
251: vdsl2 (251)	34730 = FRANCILIENNE D'INGENIERIE ET DE SERVICES INFORMATIQUES SAS

> **Note:**
>
> The **snmpVendorNameMap** is not used in this cartridge but is initialized for extension cartridges to make use of this map.

6
About Design Studio Extensions

This chapter provides information about Oracle Communications Design Studio extensions to the Oracle Communications Network Integrity MIB-II SNMP cartridge.

Updating Property Files

To update the property files (if new interface types or new vendors are introduced), the user can extend **Discover MIB-II SNMP** and add a new **Post** processor, which takes as input, snmpIfTypeMap or snmpVendorNameMap.

Source code can then update the map either programmatically or by loading a new property file and then (re)write into the map. For further information on extensibility, see "Using Design Studio to Extend Network Integrity" in *Network Integrity Developer's Guide*.