



Release Notes for Cisco EMF CORBA Gateway v2.1 Developer Toolkit

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Introduction

The Cisco Element Management Framework (Cisco EMF) CORBA Gateway solution is designed to meet service providers' expectations for integrated operational support systems. The components of this solution enable equipment vendors and systems integrators to access the full functionality of Cisco EMF-based Element Managers across the industry-standard CORBA "bus."

Systems integrators and equipment manufacturers who aim to develop Web-based applications that make use of Cisco EMF information and complex Element Manager operations can also use the Cisco EMF CORBA Gateway.

Version 2.1 provides full support for integrating Cisco EMF Element Managers with fully automated flow-through provisioning systems. Specifically, Version 2.1 components add a method to aid in setting of a vector value attribute type.

The Cisco EMF CORBA Gateway solution is a part of the Cisco EMF Integration Interfaces product family, which also includes the Cisco EMF Northbound Event Interface for fault management using Simple Network Management Protocol (SNMP) traps and ASCII log files.



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Key Applications

The Cisco EMF CORBA Gateway is particularly suited for integrating Cisco EMF Element Management solutions with key parts of service provider operational support infrastructure.

Versions 1.0 and 2.0 have focused primarily at provisioning systems. Version 2.1 completes the provisioning support and introduces fault management support. Future releases will complete fault management support and include enhanced performance management support.

The Cisco EMF CORBA Gateway Product Suite

The Cisco EMF CORBA Gateway product suite consists of the Developer Toolkit and the Runtime Gateway (only the Runtime Gateway is required for deployment in a managed network):

Developer Toolkit—An Interface Definition Language (IDL) specification, which systems integrators and software houses can use to develop the glue software components needed to integrate operational support systems with Cisco EMF Element Managers or build new Web-based applications which make use of Cisco EMF capabilities

Runtime Gateway—Included with Cisco EMF and incorporates the market-leading Iona Orbix ORB. The Runtime Gateway runs on the Cisco EMF server allowing the systems integrator's glue module or Web application to run anywhere in the CORBA Bus.

System Requirements

The system requirements for client systems and development systems will depend upon factors such as which CORBA ORB is used, which other systems will be running on the same workstation or server (such as other OSS), and possibly the requirements of your development environment.

Software Compatibility

Cisco EMF CORBA Gateway Developer Toolkit v2.1 is compatible with the following:

Cisco Element Management Framework v3.2 Patch 5.4

Cisco EMF-Software Development Toolkit v1.3.1

New and Changed Information

The changes to the Documentation from v2.1 are:

- Chapter 7
 - IDL module ATL_DABS updated.
 - The setAVVSimple method call defines an interface for setting attributes of type VectorValue. VectorValue is used to represent SNMP table data.

Enhancements in this Release

The CORBA Gateway has been enhanced as follows:

- A method was added to aid in setting of a vector value attribute type. There have been some incompatibilities between certain orb provider while setting vector values and if these problems exist then the new method calls should be used.

Symptom: The corba client may see the following marshal exception when trying to set an attribute of type AttrVectorValue.

```
ERROR: exception when setting attribute [org.omg.CORBA.MARSHAL minor code: 1230242054
completed: No]
EXCEPTION: null
org.omg.CORBA.MARSHAL minor code: 1230242054 completed: No
  at com.ooc.OB.Util.unmarshalSystemException(Util.java:149)
  at com.ooc.OB.GIOPClientWorker.execute(GIOPClientWorker.java:565)
  at com.ooc.OB.GIOPClientWorkerThreaded.receiverRun
    (GIOPClientWorkerThreaded.java:546)
  at com.ooc.OB.GIOPClientWorkerThreaded$ReceiverThread.run
    (GIOPClientWorkerThreaded.java:69)
```

Condition: The Corba client is setting an attribute of type AttrVectorValue.

Workaround: There is currently no workaround.

To fix this problem updates were made to the IDL. After the updates, current corba clients should work without having to recompile. Current corba clients should recompile with the new idl without changing.

If a current corba client sets vector values and does not experience the above error, it should not have to change the code. Only if the corba client experiences the above error should the code be changed to the new interface described below.

The fix added new data structures, method call and callback interface to fix this issue. The goal was to simplify the interface so that the marshaling of the attributes work.

The new data structures look like this:

```
module ATL_OBJ
{
  struct AVVSimple
  {
    ObjectID moid;
    ObjectID attrid;
    VectorValue value;
  };

  typedef sequence<AVVSimple> AVVSimpleList;

  struct AVVSimpleFailure
  {
    ObjectID moid;
    ObjectID attrid;
  };

  typedef sequence<AVVSimpleFailure> AVVSimpleFailureList;
};
```

The client code would still create the vector value, but instead of merging it into the attribute value, the vector value would be placed in the AVVSimple data structure. The attribute id to be set would be put in attrid. The id of the object would be placed in moid.

The new method call on the data abstractor looks like this:

```
short setAVVSimple ( in ATL_OBJ::AVVSimpleList requests,
                   in DataAbstractorCallbackExtended daCallback,
                   in unsigned long userData );
```

The client code would make an array of AVVSimple with the vector value that needs to be set. and call the new method.

The client code would have to implement the following interface:

```
module ATL_DABS
{
    interface DataAbstractorCallbackExtended : DataAbstractorCallback {
        oneway void setAVVSimpleCB( in ATL_OBJ::AVVSimpleList success,
                                   in ATL_OBJ::AVVSimpleFailureList failures,
                                   in unsigned long userData );
    };
};
```

Notice it inherits from the DataAbstractorCallback interface already implemented by the client.

The new method returns the results of the setAVVSimple method call. The success returns an array of AVVSimple data structures of the attributes that were successfully set. The failures return an array of AVVSimpleFailure to state which attributes were not set.

Installation

The Cisco Element Management Framework CORBA Gateway Installation Instructions Version 2.1 provides information to install the product.

Caveats



Note

This section provides concise descriptions of the problems which have been identified upto the date the software is released. Cisco EMF CORBA Gateway v2.1 is constantly improving, and caveats will be resolved and workarounds provided after the release date. For the most up-to-date information refer to the Customer Note enclosures provided in DDTS on Cisco Connection Online.

Open Caveats

There are no open caveats.

Related Documentation

Cisco Element Management Framework CORBA Gateway Installation Instructions v2.1, OL-4322-01

Cisco Element Management Framework CORBA Gateway Developer Guide v2.1, OL-4321-01

Cisco Element Management Framework CORBA Gateway v1.0 to v2.1 Porting Guide, OL-4362-01

Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

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International Cisco websites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

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<http://www.cisco.com/go/subscription>

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You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

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<http://www.cisco.com/en/US/partner/ordering/index.shtml>

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You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

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San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com, which includes the Cisco Technical Assistance Center (TAC) website, as a starting point for all technical assistance. Customers and partners can obtain online documentation, troubleshooting tips, and sample configurations from the Cisco TAC website. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC website, including TAC tools and utilities.

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<http://tools.cisco.com/RPF/register/register.do>

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available: the Cisco TAC website and the Cisco TAC Escalation Center. The type of support that you choose depends on the priority of the problem and the conditions stated in service contracts, when applicable.

We categorize Cisco TAC inquiries according to urgency:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration. There is little or no impact to your business operations.
- Priority level 3 (P3)—Operational performance of the network is impaired, but most business operations remain functional. You and Cisco are willing to commit resources during normal business hours to restore service to satisfactory levels.
- Priority level 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively impacted by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.
- Priority level 1 (P1)—An existing network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Cisco TAC Website

The Cisco TAC website provides online documents and tools to help troubleshoot and resolve technical issues with Cisco products and technologies. To access the Cisco TAC website, go to this URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC website. Some services on the Cisco TAC website require a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

<http://tools.cisco.com/RPF/register/register.do>

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC website, you can open a case online at this URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, we recommend that you open P3 and P4 cases online so that you can fully describe the situation and attach any necessary files.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

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Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:
http://www.cisco.com/en/US/products/products_catalog_links_launch.html
- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: *Internetworking Terms and Acronyms Dictionary*, *Internetworking Technology Handbook*, *Internetworking Troubleshooting Guide*, and the *Internetworking Design Guide*. For current Cisco Press titles and other information, go to Cisco Press online at this URL:
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access *Packet* magazine at this URL:
<http://www.cisco.com/go/packet>
- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:
<http://www.cisco.com/go/iqmagazine>
- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:
http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:
http://www.cisco.com/en/US/learning/le31/learning_recommended_training_list.html

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