



Northbound API Overview

Introduction

The Cisco Packet Telephony Center (Cisco PTC) provides Network Management Layer functionality and manages a large network for various voice over IP solutions. This document provides the northbound interface specification and design of the Cisco PTC System. The Northbound interface provides network topology and configuration retrieval and provisioning services and facilitates the integration with OSS for fault management and flow through provisioning.

Scope

Cisco PTC provides topology retrieval and network provisioning services through Graphical User Interfaces and a Northbound API. The API is mainly used for integration with OSS and third party management applications (such as Cisco Info Center) for fault management and flow through provisioning. This guide documents the Northbound API use and the external object model for Cisco PTC.

Interface Specification

The Cisco PTC Northbound interface specification consists of:

- an object model that defines the Cisco PTC managed entities (logical elements and virtual entities) that can be accessed and manipulated by external applications through programming interfaces. The object model consists of a Cisco PTC external object model (coarse grained) that defines the logical elements and virtual entities.
- the programming interface consists of a set of Java-based APIs that provide secured access to Cisco PTC managed objects for inventory retrieval (logical and virtual entities) and provisioning functions
- an XML DTD (data definition dictionary) specification that defines the data format to be exchanged between external applications and the Java API.

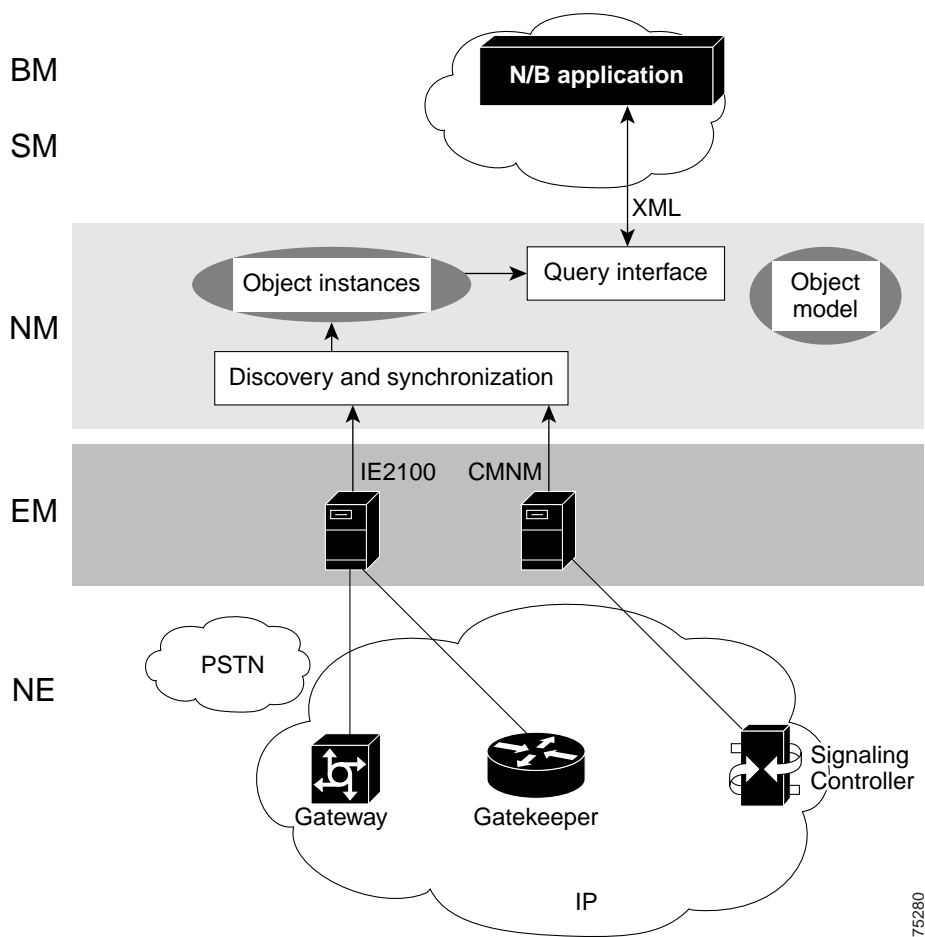
Together, they provide the facility for applications to access Cisco PTC functions programmatically.

The Network Configuration

The Cisco PTC Discovery/Synchronization feature interacts with the managed network in order to upload and update the object instances defined by the Cisco PTC Object Model.

Figure 1-1 represents key components involved in the Cisco PTC Northbound Interface. The Northbound client application retrieves network topology and configuration through the Northbound Interface as XML data from the Object Model containing the Cisco PTC managed entities. It does not interact directly with the managed network.

Figure 1-1 Network Configuration Management Architecture for Global Long Distance Voice Solution



Prerequisites

The following software is needed to develop a North Bound client application:

- Cisco PTC
- Java Development Kit JDK1.3 or equivalent.



Note

The JDK1.3 can be downloaded from <http://java.sun.com/j2se>

API Usage

The following steps must be followed in order to develop a Cisco PTC Northbound application:

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- Step 1** Install Cisco PTC on a server machine (see *Cisco Packet Telephony Center Installation and Configuration Guide* for details.)
 - Step 2** Edit the Northbound client Java Source code and compile it with a Java compiler.
 - Step 3** Cold Start the Cisco PTC Server (see the *Cisco Packet Telephony Center Installation and Configuration Guide* for details.)
 - Step 4** Run the client java class file.
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