

Mitel Open Integration Gateway (OIG)

INSTALLATION AND MAINTENANCE GUIDE

RELEASE 3.0
AUGUST 2015



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This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>). This product includes cryptographic software written by Eric Young (eyay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

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**Mitel Open Integration Gateway (OIG)
Installation and Maintenance Guide
Release 3.0
November 2015
Document Release 2, August 2016**

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Introduction

This guide describes the installation, configuration, and maintenance of the Mitel® Open Integration Gateway (OIG), including OIG-based MiVoice Integration applications. The Mitel Open Integration Gateway (Mitel OIG) is a web server that provides each Mitel OIG application a single point of access to web services available within a Mitel communication system.

This release of the guide applies to the following platform line-up:

Table 1: Software release line-up for this guide

MITEL PLATFORM	SOFTWARE RELEASE
Mitel OIG	Release 3.0
MiVoice Business	Release 7.2
MiCollab	Release 7.0
MiVoice Border Gateway (Proxy)	Release 9.1 PRI
MiContact Center Server	Release 8.0
MiVoice Integration for Google	Release 1.1
MiVoice Integration for Salesforce	Release 2.0

The Mitel OIG uses a services-oriented architecture. A Mitel OIG application opens a communication session with a Mitel OIG by logging in (example: sending a service operation or request to the Mitel OIG). Once the Mitel OIG application is authenticated and authorized, the application can use this one communication session to access all Mitel OIG web services the application is authorized to use.

The Mitel OIG allows applications to access features and functionality offered by a MiVoice Business system cluster.



Note: The Mitel OIG can communicate with a single MiVoice Business controller or a cluster of MiVoice Business controllers. When there are two or more MiVoice Business controllers, the MiVoice Business controllers must be configured in a cluster. Mitel Open Integration Gateway cannot communicate with more than one MiVoice Business cluster. The Mitel OIG assumes the directory number (DN) of a Mitel phone is unique in the MiVoice Business system cluster; two Mitel phones in the system cannot have the same DN.

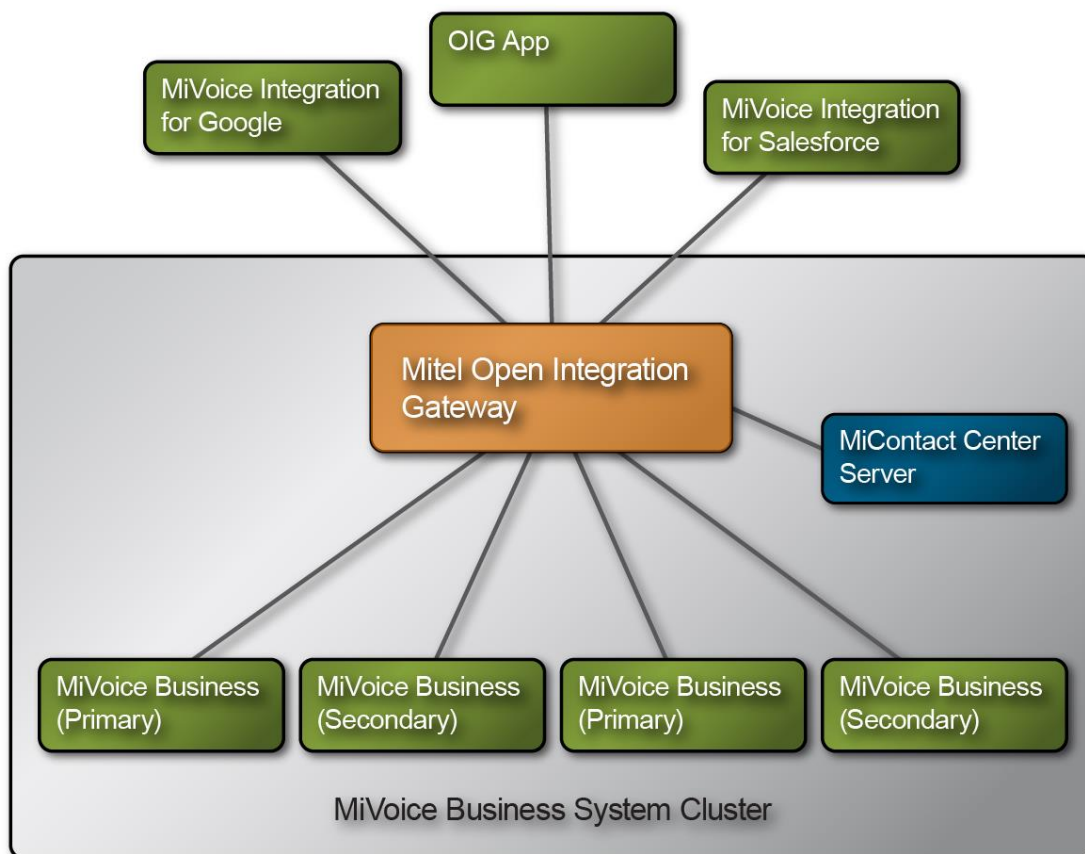


Note: For OIG Release 2.1+, the Mitel OIG server must be configured for SDS sharing with the MiVoice Business controller or cluster, and an SDS Sync must be performed.



Note: For OIG Release 2.1+, the Mitel OIG server must be configured to use a CA certificate when user also has MiVoice Integrations. The CA certificate resolves security issues in the web browser used to execute MiVoice Integrations.

Figure 1: Mitel OIG system configuration



IP1762

Mitel OIG web services

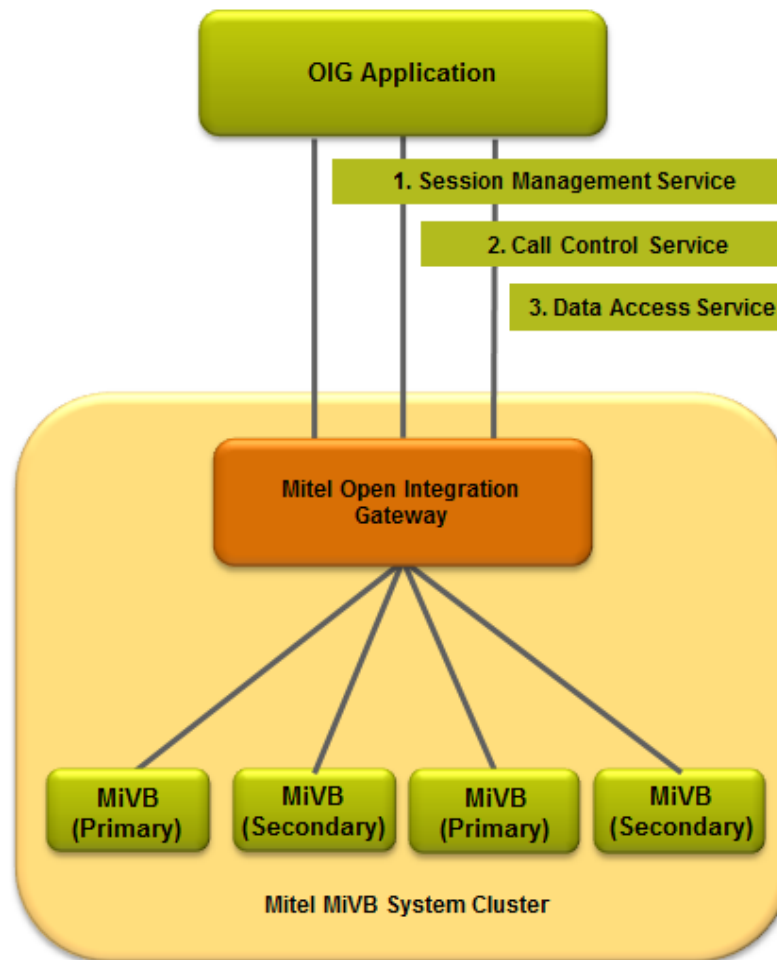
The Mitel OIG supports the following web services:

- **Session Management Service** – Allows an application to open a communication session with Mitel OIG.
- **Call Control Service** – Allows an application to control and monitor CTI behavior in Mitel Business system
- **Data Access Service** – Allows an application to register for MiVoice Business configuration data change notifications and read MiVoice Business configuration data.



Note: Mitel also offers applications that use the Mitel OIG: MiVoice Integration for Salesforce and MiVoice Integration for Google.

Figure 2: Mitel OIG application, server, and services relationship



Mitel OIG documentation

The following Mitel OIG documents are available to Mitel Solutions Alliance (MSA) members via the MSA-on-MOL web portal (MSA logon credentials required) and Mitel OnLine.

- *Mitel OIG Installation and Maintenance Guide* - This document provides details and instructions for installing the Mitel OIG and licensing it for applications and services, including MiVoice Integration applications.
- *Mitel OIG Engineering Guidelines* - The Engineering Guidelines document provides guidance on network and system level requirements and performance.
- *Mitel OIG Developer Guide - Fundamentals* - The fundamentals guide introduces the Mitel OIG application developer environment and general information that applies to developing applications for any of the Mitel OIG web services. The fundamentals document also includes a summary of the changes introduced for this release.



Note: Mitel recommends that you become familiar with the content of the *Mitel OIG Developer Guide - Fundamentals* before attempting to create Mitel OIG applications.

- *Mitel OIG Developer Guide - Call Control Service* - This developer guide provides detailed requirements for working with the Call Control Service.
- *Mitel OIG Developer Guide - Session Management Service* - This developer guide provides detailed requirements for working with the Session Management Service.
- *Mitel OIG Developer Guide - Data Access Service* - This developer guide describes the Data Access Service details needed for creating applications that receive MiVoice Business Data.

WSDL Files for Mitel OIG Operations and Events

The web service definition files (WSDL files) that define the web services offered by the Mitel OIG SOAP XML APIs are included in the Mitel OIG sample application package (available on Mitel OnLine).

Use third-party trusted CA certificates

To avoid security warnings related to HTTPS web service requests, the MSL server on which Mitel OIG is installed must be configured with a third-party CA certificate. This is important when using MiVoice Integrations to access the Mitel OIG.

The Mitel OIG is supported with the Mitel MBG for the cases in which the Mitel MBG is used to provide the web proxy feature for MiVoice Integrations, so the Mitel MBG will web proxy HTTPS requests to the Mitel OIG server within the enterprise. When using the web proxy feature, the MBG and Mitel OIG servers must be configured with a third-party CA certificate. Refer to the Mitel MSL server on-line help related to certificate management for details about configuring Mitel OIG with a third-party CA certificate. A separate MSL server is needed to deploy MBG when the MBG is offering the web proxy feature.

Software Deployment Options

All Mitel OIG and MiVoice Integration deployments require the OIG server software, which is delivered and installed through the use of one of the following Base Packages:

- **OIG Base Package:** The OIG Base Package is used for deploying any OIG-based applications.
- **MiVoice Integration Base Package:** The MiVoice Integration Base Package is for use by a customer intending to deploy only the MiVoice Integration application products (MiVoice Integration for Salesforce or MiVoice Integration for Google, for example). This Base Package cannot be used for non-Mitel applications.

*Mitel OIG compatibility with MiVoice Business and MiVoice Integrations***Table 2: MiVoice Integrations compatibility matrix**

MIVOICE INTEGRATIONS	SALESFORCE MANAGED PACKAGE	OIG 1.2 SP1	OIG 2.0	OIG 2.1	OIG 3.0	MIVOICE BUSINESS 6.0 SP3+	MIVOICE BUSINESS 7.X
Salesforce 1.2 (inc in OIG)	1,2	Yes	Yes	Yes	No	Yes	Yes
Salesforce 1.4 (inc in OIG)	1.4	No	Yes	Yes	No	Yes	Yes
Salesforce 1.5 (inc in OIG)	1.5	No	No	Yes	Replaced by 2.0 & OIG 3.0	Replaced by 2.0 & OIG.0	Replaced by 2.0 & OIG 3.0
Salesforce 2.0 (separate blade)	2.0	No	No	No	Yes	No	Yes
Google 1.0	N/A	No	No	Yes	No	No	Yes
Google 1.1	N/A	No	No	No	Yes	No	Yes

Note:

- At release of Mitel OIG 3.0, MiVoice Integration for Google 1.0 will no longer be supported. MiVoice Integration for Google 1.0 will be removed from the Google Chrome web store and replaced with MiVoice Integration for Google 1.1. MiVoice Integration for Google 1.0 is NOT compatible with Mitel OIG 3.0. When an existing Mitel OIG server is upgraded to Mitel OIG 3.0, existing MiVoice Integration for Google 1.0 will stop working, so it is advisable to upgrade MiVoice Integration for Google first.
- MiVoice Integration for Salesforce web application requires a Mitel OIG web server, a Salesforce Blade install on OIG, a MiVoice Business controller system, and the Mitel MiVoice Integration for Salesforce managed package (to be installed in the Salesforce system). The MiVoice Integration for Salesforce web application will continue to operate if the MiVoice Business controller version is upgraded. However if the managed package in Salesforce system is upgraded, then the Mitel OIG and the MiVoice Integration for Salesforce web application must also be upgraded.
- MiVoice Integration for Google requires a Google chrome web browser and the extension is downloaded from the Chrome Web Store. The MiVoice Integration for Google web application will continue to operate if the MiVoice Business controller version is upgraded. However if the MiVoice Integration for Google is upgraded, then the Mitel OIG must also be upgraded.

Supported MiVoice Business Platforms

The Mitel OIG supports the following MiVoice Business platforms:

- 3300 ICP, MxII and MxIII
- 3300 ICP, CX and CX II
- 3300 ICP, CXi and CXi II

- MiVoice Business for Industry Standard Servers
- MiVoice Business Virtual
- MiVoice Business Multi Instance
- MiVoice Business Express (previously called MiCollab with Voice)

Supported Mitel OIG Platforms

The Mitel OIG is available for use on hardware listed on the Mitel MSL Qualified Hardware List and approved hardware platforms. Refer to the Mitel Customer Documentation web site for the latest hardware list and documentation.



Note: System capacities and performance levels are dependent upon the type of Mitel OIG hardware platform, the number of applications using the Mitel OIG, and the number of MiVoice Business controllers in a cluster. Refer to the *Mitel OIG Engineering Guidelines* for details.

Industry Standard Server

Customers have the flexibility of purchasing their own Mitel Standard Linux (MSL)-qualified server and then installing the MSL operating system software and Mitel OIG software on it. For server installations, refer to the MSL Qualified Hardware List for a list of the supported server platforms. To access the MSL Qualified Hardware List:

Navigate to the Mitel Customer Documentation web site. Under **Applications**, click **Mitel Standard Linux**, then locate the MSL Qualified Hardware List and click the link for the document format of choice.



Note: Mitel OIG is a 32-bit application that requires the 32-bit version of MSL. Mitel OIG is not supported in the 64-bit version of MSL.

Mitel OIG Virtual in a VMware Environment

Mitel Open Integration Gateway Virtual runs in a VMware® vSphere environment in either Standalone (single ESXi hypervisor) or Managed (by vCenter Server) modes. During the installation of the OIG Virtual .ova file, select the required configuration for the site. Mitel OIG Virtual runs as a virtual appliance within the VMware vSphere Cloud Operating System. A virtual appliance is a packaging format for virtual machines that allows virtual machine templates to be installed and configured on a VMware Cloud Operating System. A virtual appliance defines the operational policies for applications in such a way that the cloud OS can automatically interpret and execute the applications. Virtual appliances are software solutions that can include any applications running on any OS. Virtual appliances are packaged and maintained as a single entity in OVF format. OVF-formatted files are recognized by their .ova file extension. The Mitel OIG virtual appliance is packaged as a virtual appliance (OVA file).

For detailed information about performance, capacity, and deployment of virtual Mitel appliances in virtualized environments, see the *Virtual Appliance Deployment Solutions Guide*.

The Mitel OIG virtual appliance contains the following pre-installed software:

- VMware Tools
- Mitel Standard Linux (MSL), the base operating system on which the Mitel OIG resides
- Mitel Open Integration Gateway (OIG)

The OIG Virtual has the following characteristics:

- Hardware-independent MSL operating software;
- A virtual appliance that encapsulates both MSL and Mitel OIG. The virtual appliance is deployed using a vSphere Client. The vSphere Client can be used to deploy OIG Virtual directly onto an ESXi 5.5 server or through the vCenter Server.



Note: When upgrading from OIG 2.X to OIG 3.0 do not restore an MSL database backup from Mitel OIG 2.X into Mitel OIG 3.0. A database restore from Mitel OIG 2.X is NOT supported.

When upgrading Mitel OIG 2.X use the Mitel OIG blades panel to first upgrade MSL 10.X to MSL 10.3, then upgrade Mitel OIG 2.X to Mitel 3.0 and the database will automatically be restored.

The restriction about Database restore during upgrade from Mitel OIG 2.X to Mitel OIG 3.0 is only temporary. Future upgrades from Mitel 3.0 to newer Mitel OIG versions will not have this restriction.

Client Station Support

Mitel OIG Administrators access the Mitel OIG using a web browser (e.g., Google Chrome, Microsoft Internet Explorer, and Firefox) supported on the following operating systems:

- Windows 8
- Windows 7 Professional, Ultimate, and Enterprise (both 32- and 64-bit versions)



Note: Mitel OIG is a 32-bit application that requires the 32-bit version of MSL. Mitel OIG is not supported in the 64-bit version of MSL.

Browser support for MiVoice Integrations

MiVoice Integration for Google is supported only on the latest version of the Google Chrome web browser.

MiVoice Integration for Salesforce supports the following web browsers on both PCs and Macs. The web browser must support HTML 5.0 and CCS 3.

- Google Chrome 40
- Microsoft Internet Explorer 11
- Mozilla Firefox 33
- Safari 5.1

Product Documentation

You can access product documentation at <http://edocs.mitel.com>. You must have a Mitel Connect account user name and password to view and download technical documentation.

To access the Mitel product documentation:

1. Log in to Mitel Connect. (<https://connect.mitel.com>)
2. On the left side of the screen, click the link to log in to **Mitel OnLine**.
3. In the Mitel OnLine screen that appears, mouse-over **Support**, and click **Product Documentation**.

Mitel OIG Documentation

The following Mitel OIG documentation is available on the Mitel Customer Documentation web site:

- *Mitel OIG Installation and Maintenance Guide (this guide)*
- *Mitel OIG Engineering Guidelines*
- *Mitel OIG Developer Guide – Fundamentals*
- *Mitel OIG Developer Guide – Session Management Service*
- *Mitel OIG Developer Guide – Call Control Service*
- *Mitel OIG Developer Guide – Data Access Service*
- *MiVoice Integration for Salesforce - Administration Guide*
- *MiVoice Integration for Salesforce - User Guide*
- *MiVoice Integration for Google - Administration Guide*
- *MiVoice Integration for Google - User Guide*

Virtual Appliance Deployment Solutions Guide

The Virtual Appliance Deployment Solutions Guide provides guidelines for deploying Mitel virtual appliances and applications in a VMware virtual infrastructure. The guide is available on Mitel OnLine on the **Solutions Guides** page: <http://edocs.mitel.com/TechDocs/Solutions-Guides/BP-Virtualization.pdf>.

Other available Mitel Product documentation

- Mitel Standard Linux (MSL)
- MiVoice Business
- MiVoice Business Multi Instance



Note: Mitel OIG is a 32-bit application that requires the 32-bit version of MSL. Mitel OIG is not supported in the 64-bit version of MSL.

MSA Documentation and Sample Code

Access the API software and related technical documentation on the MSA member website.

To access the MSA member web site:

1. Log in to Mitel Connect. (<https://connect.mitel.com>)

2. On the left side of the screen, click the link to log in to **Mitel OnLine**.
3. Hover over **MSA** and then click **MSA Downloads**.



Note: MSA Membership is required for access to the MSA web portal.

The following Mitel OIG materials are available on the MSA member web site and on Mitel OnLine:

- Mitel OIG 3.0 Release Notes
- Mitel OIG 3.0 Product Bulletins
- Global Call ID Developer Guide
- Mitel OIG 3.0 Sample Application package for application development

Mitel Open Integration Gateway Training

To find Mitel OIG training courses, access the Mitel Learning Management System at <https://mitel.absorbtraining.com/#/login> and enter "Open Integration Gateway" in the **Find A Course** search window.

The following Mitel OIG training courses are available for new OIG users:

- **Mitel OIG Primer** - A basic overview and introduction to the Mitel Open Integration Gateway application including deployment, licensing, and operation.
- **Mitel OIG Installer Installation and Maintenance Course** - This training covers software installation (for both physical and virtual environments), and configuration for Technicians who will install the Mitel OIG at customer premises.
- **Mitel OIG Developer Installation and Maintenance Course** - This training covers software installation for physical and virtual environments, configuration, licensing, and certificate management for Developers who will use Mitel OIG to create telephony applications.

The following free courses are available if you are already certified on a previous release of OIG:

- Mitel OIG Installer Installation and Maintenance UPDATE Course
- Mitel OIG Developer Installation and Maintenance UPDATE Course

Technical Support

Inquiries or other difficulties that are not considered to be defect-related can be described in an electronic mail message to MSAInfo@mitel.com.

Member Support

The Mitel MSA web site is designed for self-service. It provides all members with access to API documentation, SDK upgrades, troubleshooting tips, sample configuration, and sample code. The MSA web site is located at <http://www.mitel.com/msa>. Login to Mitel Connect and navigate to MSA.

Web Support

In the uppermost navigation bar of the MSA web pages, you can click CONTACT US. Since all Internet users can use this contact mechanism, we expect that the range of questions will be quite broad. Questions may vary from general information about the MSA program to specific product inquiries that may or may not be aimed at MSA. In the case of registered members using the web CONTACT US mechanism, Web Support will follow Mitel Product Support policies and guidelines.

Providing Feedback

Comments or suggestions relating to this document can be provided in an electronic mail message to MASInfo@Mitel.com.

Mitel Open Integration Gateway Licensing

In general, licensing and delivery of the Mitel OIG software is similar to other Mitel software applications:

- Purchased by the Mitel customer (through a Mitel reseller)
- Downloaded and licensed via the Mitel licensing portal, the Application Management Center (AMC)
- Deployed on Mitel Standard Linux (MSL)
- Available in physical and virtual versions
- Deployed as a Mitel MSL blade through the Mitel AMC licensing server, or as a virtual appliance downloaded from the Mitel OnLine (MOL) Software Downloads web portal.

Some important Mitel OIG-specific licensing information:

- The Mitel OIG uses a Mitel Certificate Server (MCS) and Access Control List (ACL) to ensure that only authorized applications connect to a customer Mitel OIG.
- The Mitel OIG hardware platform must have an Internet connection to allow the Mitel OIG software to connect to the Mitel AMC server to obtain application licenses. The Mitel OIG hardware platform also requires an Internet connection to allow the Mitel OIG software to connect to the MCS to obtain the latest ACL for confirmation of authorized applications.
- The Mitel OIG is licensed to allow connected applications to use Web Services to gain access to features offered by MiVoice call managers.
- The AMC licensing for the MiVoice Business, or other call manager, is separate from the AMC licensing for the Mitel OIG.
- One OIG server can connect to multiple OIG-based applications. .

More information about Mitel OIG-specific licensing is provided in the sub-sections below.

Standard and Advanced Call Control licensing

The Mitel OIG Call Control Service functionality is offered in two license types, Standard Call Control and Advanced Call Control.

Standard Call Control

In general, the Mitel OIG Standard Call Control license enables an application to monitor and control the telephony activity of Mitel physical and logical devices (devices programmed or configured in MiVoice call managers) including IP phones, Personal Ring Groups and line appearances on multi-line phones. The Mitel OIG Standard Call Control license allows applications to control and monitor a Mitel desktop phone similar to a user manually controlling the phone.

Mitel OIG can be licensed with Standard call control service if MiVoice Integration for Salesforce is to be used only by hot desk users. If ACD hot desk users are required, Advanced Call Control licensing must be purchased.

Advanced Call Control

In general, the Mitel OIG Advanced Call Control license enables applications with third-party call control capabilities and a full suite of functionality from simple call control to contact center monitoring and control. Advanced Call Control licensing enables applications to monitor and control MiVoice Business functions, e.g., Hot Desk Agent login (internal and external), Trunking, Ring Groups, Hunt Groups, ACD2, ACD Express. Control relates to functions not normally associated with a specific desktop phone user. Support for MiVoice Business level monitoring (e.g., all conferences within a MiVoice Business controller) is included. Setting the phone message waiting lamp and auto answer are also provided only with the Advanced Call Control license.



Note: Application developers are responsible for telling the Mitel Resellers and end-customers the type of Mitel OIG application (Standard or Advanced) they provide. Application developers are also responsible for communicating the number of Mitel OIG licenses typically required by their application.

Mitel OIG 3.0 part numbers, licensing, and deployment options

All OIG and MiVoice Integration deployments require the OIG server software, which is delivered and installed via one of the Base Packages described in the table.

Mitel OIG 3.0 has new AMC licensing. To use MiVoice Integrations with Mitel OIG 3.0, Premium Software Assurance is no longer required. When upgrading a Mitel OIG 2.1 server with Premium software assurance and MiVoice Integrations to Mitel OIG 3.0, new MiVoice Integration part numbers are required or the MiVoice Integrations will stop working. See [Option 2: On-premise](#) with external applications and MiVoice Integrations below for more details.

The AMC licenses for the OIG Call Control Service are shared by all connected applications, and allocated to applications on a first-come, first-served basis. For customers running third-party OIG-based applications on the same OIG as a MiVoice Integration application, it is important to enable a sufficient number of OIG Call Control User Licenses to accommodate the concurrent user requirements of both the third-party applications, and the Mitel MiVoice Integration applications.

Table 3: Mitel OIG Base Package application support

MITEL OIG BASE PACKAGE	PART NUMBER	NOTES
Mitel OIG Base Package - Physical	54005784	Mitel OIG can be purchased and deployed to access and run MiVoice Integration for Salesforce or MiVoice Integration for Google , and the same OIG platform can be used to run a third-party OIG-based application, like a call recorder or IVR, for example
Mitel OIG Base Package - Virtual	54005785	
MiVoice Integrations Base Package - Physical	54006216	These base packs can be used only to support Mitel applications.

MiVoice Integrations Base Package - Virtual	54006217
SP CAPEX Base Package	54006210
SP Subscription (OPEX) Base Package	54006213
Developer Standard Kit	54005787
Developer Advanced Kit	54005788
MiVoice Integrations Demo Kit	54006307
Mitel OIG Base Pkg - 60 Day Trial	54005933

For part numbers 54006216, 54006217, 54006210, 54006213: In the CAPEX and OPEX options, and when deploying only the MiVoice Integration Applications (e.g., MiVoice Integration for Salesforce or MiVoice Integration for Google) and NO custom applications, the Mitel OIG server must be added to an AMC ULM Group along with the MiVoice Business nodes..

Table 4: Mitel OIG Base Package application support

MITEL OIG BASE PACKAGES	MITEL APPLICATIONS	THIRD-PARTY APPLICATIONS	NOTES
Mitel OIG Base Package - Physical	Y	Y	Also requires Call Control licenses
Mitel OIG Base Package - Virtual	Y	Y	Also requires Call Control licenses
MiVoice Integrations Base Package - Physical	Y	N	Call Control licenses are not required, with one exception:
MiVoice Integrations Base Package - Virtual	Y	N	- MiVoice Integration for Salesforce with MiContact Center, which requires Advanced Call Control licensing.
SP CAPEX Base Package	Y	Y	For Service Providers, third-party OIG-based apps and MiVoice Integration applications cannot be combined on one server. They can also not be combined onto a MiVoice Integration Base Package or an OIG Base Package.
SP Subscription (OPEX) Base Package	Y	Y	

OIG Base Packages

The software-only Mitel OIG is deployed in the form of a required Base Package (physical or virtual), with additional API Services (current and future) licensed on top of the Base Package.

Call Control Licensing











Developers are expected to provide guidance to Mitel resellers and their end-customers about their application-specific OIG application licensing requirements. For turn-key OIG-based applications supplied by Mitel, Mitel supplies the OIG licensing requirements, if the applications are not otherwise bundled with the requisite licenses (see elsewhere in this doc).

Each Call Control user license supports 2 Monitors. A total of up to 25,000 users can be supported in an OIG system.

Table 5: Call Control licensing types and part numbers

CALL CONTROL LICENSES	1 USER	50 USERS	UP TO 25,000 USERS
OIG Call Control – Std User	54005792	54006214	
OIG Call Control – Adv User	54005793	54006215	
Std Server license			54005807
Adv Server license			54005808

Figure 4: Licensing for applications

Application Type	License Types that Can be Used			
 Standard Application	 • Standard apps will consume Server type licenses as long as Server licenses are available (i.e. license limits not exceeded). • Either Server license is allowed but not both for one service. • Depending on the number of applications you develop, the Server option may be more economical.		 If no Std Server or Adv Server licenses are available, then any available Std User licenses are consumed.	 Standard apps cannot consume Advanced User licenses.
 Advanced Application	 • Advanced apps will consume Advanced Server type licenses as long as Server license limits not exceeded. • Depending on the number of applications you develop and the usage model, the Server option may be more economical.		 If no Advanced Server licenses are available, then any available Advanced User licenses are consumed.	  Advanced apps cannot consume Standard User or Standard Server service licenses.

Upgrading Call Control user licenses

Standard Call Control User licenses can be upgraded to Advanced Call Control User licenses using part number 54005797.

Upgrading Call Control server licenses

The following table details the cases for which upgrading the Mitel OIG Server licenses is permitted.

Table 6: Upgrading server licenses to the next level

Upgrade to:	STANDARD CALL CONTROL SERVER LICENSE	ADVANCED CALL CONTROL SERVER LICENSE	OIG BASE PKG - VIRTUAL
Upgrade from:			
STANDARD CALL CONTROL SERVER LICENSE (54005807)	-	Supported Use 54005811	-
OIG BASE PKG – PHYSICAL (54005784)	-	-	Supported Use 54005786

* - Existing User licenses are not used if a Server license is added to the OIG Base Package.

Developers are expected to provide guidance to Mitel resellers and their end-customers about their application-specific OIG application licensing requirements. For turn-key OIG-based applications supplied by Mitel, Mitel supplies the OIG licensing requirements, if the applications are not otherwise bundled with the requisite licenses (see elsewhere in this doc).

Determining the number and type of OIG Licenses required

Mitel OIG software licensing applied to one specific Mitel OIG is shared across, and consumed by, all applications that communicate with that specific Mitel OIG, and allocated to applications on a first-come-first-served basis. Application developers are responsible for clearly stating the type of Mitel OIG application (standard or advanced) they provide. Application Developers are also responsible for clearly stating how their application consumes Mitel OIG licenses.

For example, a Mitel OIG application that uses the standard Call Control service to monitor and control the prime lines of desktop phones only consumes one MiVoice call manager monitor for each phone. When there are 100 phones, for example, 50 Standard user licenses are consumed (each user license provides two monitors).

Consider a Mitel OIG application that uses the advanced Call Control service to monitor and control Hot Desk ACD Agents. The application may monitor and control all Hot Desk ACD Agents, all prime lines of the desktop phones, the ACD Groups, and the ACD paths. In this case, the application consumes a MiVoice call manager monitor for each Hot Desk ACD agent; one for each phone prime line, and at least two more monitors—one for an ACD group and one for an ACD path. So if there are 50 Hot Desk ACD agents on 50 desktop phones

with one ACD group and one ACD path, 51 Advanced user licenses are consumed (each user license provides two monitors).

Consider a Mitel OIG application that uses the standard Call Control service to monitor and control all the lines of desktop phones. When there are four lines on each phone, the application consumes four OIG call control monitors for each phone, so when there are 100 phones, 200 Standard Call Control user licenses are consumed (each user license provides two monitors).

Licensing selection for Mitel OIG applications

This section describes the licenses and licensing rules for the case in which you are installing all of the Mitel products at the same time – a new deployment of the entire system.

If you are deploying Mitel OIG into a network that already contains a Mitel call manager and MiCollab, ask your Mitel Sales Engineer for guidance.

The following licensing options are described in the following pages:

- [Option 1: On-Premise – MiVoice Integration applications only](#)
- [Option 2: On-premise – Mitel OIG with external applications and MiVoice Integrations](#)
- [Option 3: Mitel OIG External Applications but No MiVoice Integrations](#)
- [Option 4: Service Provider CAPEX](#)
- [Option 5: Service Provider OPEX](#)

To license your Mitel OIG software:

- Choose a Mitel OIG base package.
- Select the Service type to license.
- Select the type and quantity license for users.
- Select Software Assurance for the Mitel OIG software.



Note: Mitel OIG follows the standard Mitel Software Assurance policies.

License Activation

After receiving an order for Mitel OIG software through Customer Services, the AMC adds the selected licenses into a specific licensing account. Technicians can then create an OIG ARID and assign the OIG licensing to it.



Note: For detailed instructions about AMC licensing accounts, see the AMC Licensing section of the Mitel Standard Linux Installation and Administration Guide, available on Mitel OnLine.



Note: When deploying the MiVoice Integration Applications (e.g., MiVoice Integration for Salesforce or MiVoice Integration for Google), the Mitel OIG ARID (for OIG Base Package or MiVoice Integration Base Package) must be added to an AMC ULM

Group along with the MiVoice Business ARID in the following license models:

- MiVoice Integration Base Packs 54006216 or 54006217
- Mitel OIG Service Provider OPEX and CAPEX Base Packs

MiVoice Integration licensing and deployment

MiVoice Integration applications may be deployed via any of the options described in this section.

Mitel OIG can have up to 1500 MiVoice Integration for Salesforce sessions, up to 1500 MiVoice Integration for Google sessions, or a combination of both that does not exceed 1500 in total.

Option 1: On-Premise – MiVoice Integration applications only



Note: This Option does not permit the deployment of third-party OIG applications. Only MiVoice Integration for Salesforce and MiVoice Integration for Google are permitted.

When relying on UCC user bundling, the UCC MiVoice Business ULM must contain:

- One of the following call managers:
 - MiVoice Business Express Base Pkg, Business or Enterprise with UCC Entry, Standard or Premium User
 - MiVoice Business Base Pkg, Business or Enterprise
- MiCollab with UCC licenses

Table 7: Option 1: On-premise - MiVoice Integrations only

ITEM	LICENSE PURCHASE	PART NUMBER	NOTES
BASE PACKAGE	MiVoice Integrations Base Pkg (physical)	54006216 (base only, no users)	
	MiVoice Integrations Base Pkg (virtual)	54006217 (base only, no users)	
MIVoice INTEGRATION APPLICATION LICENSES	MiVoice Integration licenses for Google are enabled for UCCv4 Standard and Premium users.		
	MiVoice Integration licenses for Salesforce are enabled for UCCv4 Premium Users.		
	1 MiVoice Integration for Salesforce User-Std	54006723 54006218	Purchase Salesforce as required for UCCv4 Standard users. Purchase as required for UCCv4 Entry users.
	50 MiVoice Integration for Salesforce User- Std	54006725 54006219	A la carte for non-UCC users

	1 MiVoice Integration for Salesforce User-Adv	54006724	MiVoice Integration for Google licenses are enabled for UCCv4 Standard Users
	50 MiVoice Integration for Salesforce User- Adv	54006726	
	1 MiVoice Integration for Google User-Std	54006220	Purchase Google as required for UCCv4 Entry users. A la carte for non-UCC users
	50 MiVoice Integration for Google User-Std	54006221	

Option 2: On-premise – Mitel OIG with external applications and MiVoice Integrations

Option 2 allows MiVoice Integration applications and third-party applications at the same time.

Mitel OIG 3.0 has new AMC licensing. To use MiVoice Integrations with Mitel OIG 3.0, Premium Software Assurance is no longer required. When upgrading a Mitel OIG 2.1 server with Premium software assurance and MiVoice Integrations to Mitel OIG 3.0, new MiVoice Integration part numbers are required or the MiVoice Integrations will stop working. Add the following part numbers as needed to enable the MiVoice Integrations. Mitel OIG 2.1 with Premium Software Assurance will no longer enable MiVoice Integrations in Mitel OIG 3.0 for this option.

1	MiVoice Integration for Salesforce User-Std	54006723, 54006218
50	MiVoice Integration for Salesforce User- Std	54006725, 54006219
1	MiVoice Integration for Salesforce User –Adv	54006724
50	MiVoice Integration for Salesforce User - Adv	54006726
1	MiVoice Integration for Google User-Std	54006702
50	MiVoice Integration for Google User-Std	54006703

MiVoice Integrations can be deployed a la carte, subject to the following commercial prerequisites and conditions:

1. Deploy OIG Base Package. These base packages do not include any Standard Call Control licenses.
2. Purchase the Call Control licenses as needed.

3. Each MiVoice Integration for Google application consumes one Standard Call Control user license and one MiVoice Integration for Google license.

Each MiVoice Integration for Salesforce application consumes one Standard Call Control license and one MiVoice Integration for Salesforce license.

Each MiVoice Integration for Salesforce (Advanced) consumes one Advanced Call Control user license and one MiVoice Integration for Salesforce license.

The system to which the OIG is added must be under active Standard Software Assurance to get the Standard Call Control licenses at no charge.

When using MiVoice Integrations on the Mitel OIG, this option does not require:

- Mitel OIG Premium Software Assurance
- AMC Business ULM with MiVoice Business or AMC Enterprise ULM with MiVoice Enterprise.

Table 8: Option 2: On-premise - Unrestricted

ITEM	LICENSE PURCHASE	PART NUMBER	NOTES
BASE PACKAGE	Mitel OIG Base Package	54005784 (base only, no users)	
	Mitel Virtual OIG Base Package	54005785 (base only, no users)	
CALL CONTROL LICENSES	1 Standard User	54005792	Standard licenses included with Standard Software Assurance on the call manager in the Mitel system; otherwise standard licenses are purchased a la carte.
	50 Standard User	54006214	
	1 Standard Server	54005807	
	1 Advanced User	54005793	Advanced licenses purchased a la carte.
	50 Advanced User	54006215	
	1 Advanced Server	54005808	
MIVoice INTEGRATION LICENSES	1 MiVoice for Salesforce User-Std	54006723 54006218	A la carte for users
	50 MiVoice for Salesforce User-Std	54006725 54006219	
	1 MiVoice Salesforce User – Adv	54006724	
	50 MiVoice Salesforce User - Adv	54006726	

	1 MiVoice Google User-Std	54006702
	50 MiVoice Google User-Std	54006703
DATA ACCESS SERVER LICENSE	Included for all User licenses	

Option 3: Mitel OIG External Applications but No MiVoice Integrations

The Mitel system to which the OIG is added must be under active Software Assurance to get the OIG base pack and standard call control licenses at no charge.

If Standard Software Assurance is not kept active on the call managers, the Standard Call Control service stops working.

Mitel OIG Advanced Call Control licenses can also be added to this option when there is a Mitel OIG Std. Call Control service license.

For this option, no ULM is required and Mitel OIG does not require Premium Software Assurance.

Table 9: Option 3: Mitel OIG with external applications but no MiVoice Integrations

Table of prices for Mitel vOIG and other third-party applications and their voice integrations			
ITEM	LICENSE PURCHASE	PART NUMBER	NOTES
BASE PACKAGE	Mitel Open Integration Gateway Base Pkg	54005784 (base only, no users)	
	Mitel vOIG (Virtual) Base Pkg	54005785 (base only, no users)	
CALL CONTROL LICENSES	1 Standard User	54005792	Standard licenses included with Standard Software Assurance on the call manager in the Mitel system.
	50 Standard User	54006214	
	1 Standard Server	54005807	
	1 Advanced User	54005793	Advanced licenses purchased a la carte.
	50 Advanced User:	54006215	
	1 Advanced Server	54005808	
DATA ACCESS SERVER LICENSE	Included for all User licenses		



Note: Application developers are responsible for telling the Mitel Resellers and end-customers the type of Mitel OIG application (Standard or Advanced) they provide. Application developers are also responsible for communicating the number of Mitel OIG licenses typically required by their application.

Option 4: Service Provider CAPEX



Note: This Option does not permit the deployment of third-party/custom OIG applications. MiVoice Integration for Salesforce and MiVoice Integration for Google are allowed.

MiVoice Integration for Salesforce licenses or MiVoice Integration for Google licenses (specific part numbers) can be purchased. The maximum number allowed for each MiVoice Integration app is 1500.

Each CAPEX UCC premium user license added to the AMC ULM includes:

- One MiVoice Integration for Salesforce App license
- One MiVoice Integration for Google App license

ARIDs for MiVoice Integrations Base Package, MiCollab and MiVoice Business must be in a common ULM. See the MiVoice Integration for Salesforce Product Bulletin and the MiVoice Integration for Google Product Bulletin for the complete list of part numbers and deployment details for these applications.

For UCC, ULM must contain MiVoice Business licensed for SP CAPEX:

1. MiVoice Business Express Base Pkg licensed for SP Capex Base with UCC Entry, Standard or Premium User Licensing.

OR

2. MiVoice Business Base Pkg licensed for SP Capex Base

AND

2a. MiCollab Virtual – SP Capex Base with UCC Entry, Standard or Premium User Licensing.

Table 10: Option 4: Service Provider CAPEX Model

ITEM	LICENSE PURCHASE	PART NUMBER	NOTES
Base Package	SP CAPEX Base-MiVoice Integr	54006210 (base only, no users)	
MiVoice Integration Licenses	MiVoice Integration for Salesforce and MiVoice Integration for Google user licenses are Automatically added for UCCv4 Premium Users. Chargeable for UCCv4 Entry users. MiVoice Integration for Google licenses are added for all UCCv4 Standard Users.		

A la carte for non-UCC users.

1 SP CAPEX License- MiVoice SFDC User - Std	54006211	Purchase Salesforce as required for UCCv4 Standard users
1 OIG Call Control Adv. user license for SFDC		Included in Premium UCC User. Purchase as required the necessary quantity of add-ons for Basic IPT, Standard IPT, Entry UCC, and Standard UCC. Purchase as required for UCCv4 Entry users.
1 SP CAPEX License- MiVoice Google User	54006212	Included in Premium UCC User and Standard UCC User. Purchase as required the necessary quantity of add-ons for Basic IPT, Standard IPT. Entry UCC. Note: existing part number 54006120 (UCCv4 Std. UCC) includes MiVoice Google part number

Option 5: Service Provider OPEX

Each MiVoice Integration license is set to 1500 when the OPEX option is purchased.

ARIDs for MiVoice Integrations Base Package, MiCollab, and MiVoice Business must be in a common ULM. See the MiVoice Integration for Salesforce Product Bulletin and the MiVoice Integration for Google Product Bulletin for the complete list of part numbers and deployment details for these applications.

For UCC, the ULM must contain MiVoice Business licensed for SP Subscript.

MiVoice Integrations for Salesforce and Google can be deployed by subscription-based Service Providers, subject to the following commercial prerequisites and conditions:

1. MiVoice Business Express Base Pkg licensed for SP Subscript Base.

OR

2. MiVoice Business Base Pkg licensed for SP Subscript Base

AND

2a. MiCollab Virtual – SP Subscript Base

Table 11: Option 5: Service Provider OPEX Model

ITEM	LICENSE PURCHASE	PART NUMBER	NOTES
BASE PACKAGE	SP Subscript Base – MiVoice Integr	54006213	This is a No Charge Activation license. Service provider pays Mitel on a monthly basis for each provisioned Google/SFDC user. See <i>MSP License Guide</i> for further details. Fully licensed for MiVoice Integration users to system limit
MIVoice INTEGRATION LICENSES	MiVoice Integration for Salesforce - UCCv4 Standard users.	54006208	Fully licensed - billed according to max concurrent usage. Monthly billing, not licensed through AMC
	MiVoice Integration for Google - UCCv4 Standard users.	54006209	

Registering Mitel OIG Applications with Mitel

All Mitel OIG Applications must be registered with Mitel. There are two types of registrations:

- standard application that uses Mitel OIG standard service
- advanced application that uses Mitel OIG advanced services.

Mitel Certificate Server

Application developers (MSA members) must register their applications with the Mitel Certificate Server (MCS) before using the Mitel OIG. Application registration is needed before such applications can be deployed at a Mitel customer site. The Mitel OIG uses an Access Control List (ACL) from the MCS to identify approved applications. An application must be registered with the MCS and in the ACL before the application can communicate with the Mitel OIG. An application must have a Mitel certificate to use the Mitel OIG Advanced Services.



Notes: ALL applications must register for inclusion on the Mitel Access Control List (ACL).

Applications that use Advanced Service licensing must establish their credentials by requesting a Mitel Certificate (the certificate request includes ACL registration).

You access the Mitel Certificate Server at the MSA web portal of Mitel OnLine.

For more information about application registration and Mitel Certificate requests, refer to the *Mitel OIG Developer Guide - Fundamentals*.

Prerequisites for using the Mitel OIG

Before applications can use the Mitel OIG, the following is required:

- Mitel OIG requires a MiVoice Business system (single node or cluster).
- Mitel OIG must be licensed through the Mitel AMC license server.
- Applications must be registered with Mitel (see section above).
- Mitel OIG must be installed on Mitel MSL server (see section below).

Mitel OIG Deployment: Premise and Service Provider Options

Overview

There are two major licensing models for the Mitel OIG software:

- via the Mitel OIG Base Packages (which support both third-party/custom OIG applications, and MiVoice Integration applications)
- via the MiVoice Integration Base Packages (which support only MiVoice Integration applications).

The Mitel licensing models map to two major deployment options:

- Premise deployments, which can use license Options 1, 2, or 3.
- Service provider deployments, which use license Options 4 or 5

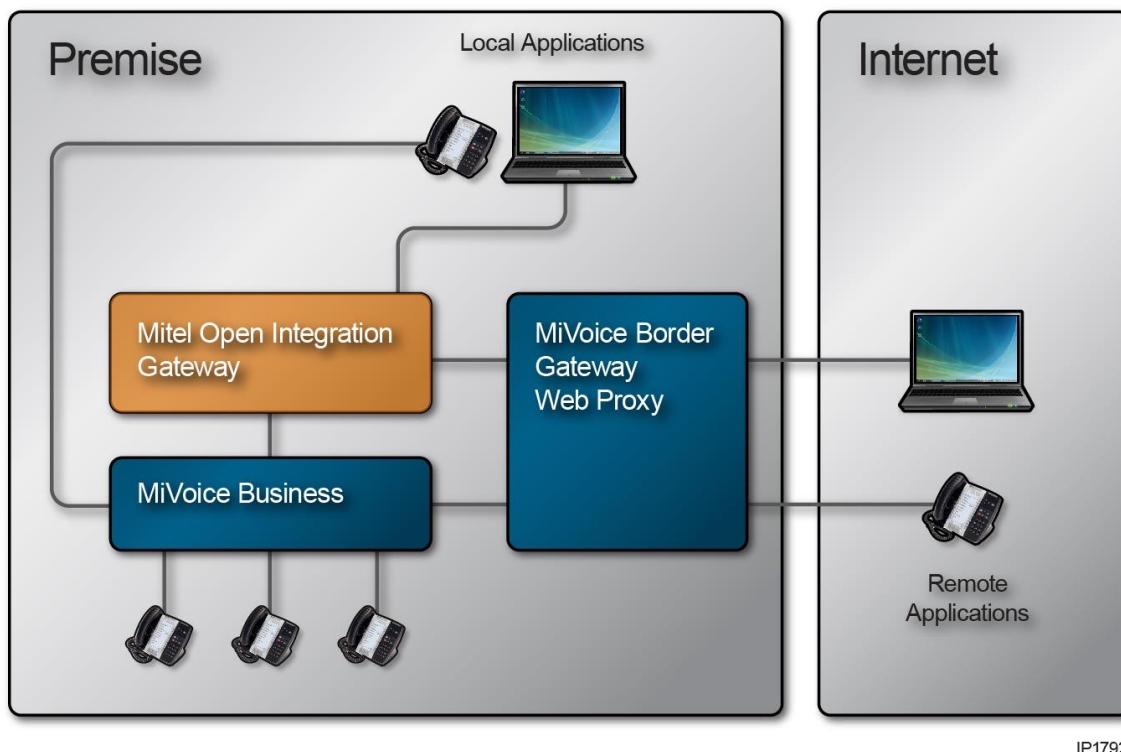
The Mitel OIG is a server that provides web services. Customers use applications that communicate with the Mitel OIG to access services provided by a MiVoice Business system. The applications can be installed locally with the Mitel OIG server or remote from the Mitel OIG server.

Consider the two major Mitel OIG server deployments options: premise and service provider.

Mitel OIG deployment: Premise

A premise deployment can have local applications communicating with the Mitel OIG server within the same LAN or the remote applications in the Internet communicating with the Mitel OIG server through a MiVoice Border Gateway web proxy. In a service provider deployment, the applications communicate remotely with the Mitel OIG server through a MiVoice Border Gateway web proxy.

Figure 3: OIG Premise deployment architecture



The premise deployment is intended for 100 to 1500 application sessions (one user per application in some cases) located at one central site. This deployment assumes the customer will control their own network. All equipment is physically on site, on the customer's premises, including telephony end points, MiVoice Business controllers, trunking gateways, MiVoice Border Gateways, and business / UC applications.

One Mitel OIG server supports up to 1500 application sessions and up to 250 MiVoice Business controllers in one system cluster. If more applications or more MiVoice Business controllers are needed, then a second Mitel OIG server must be installed.

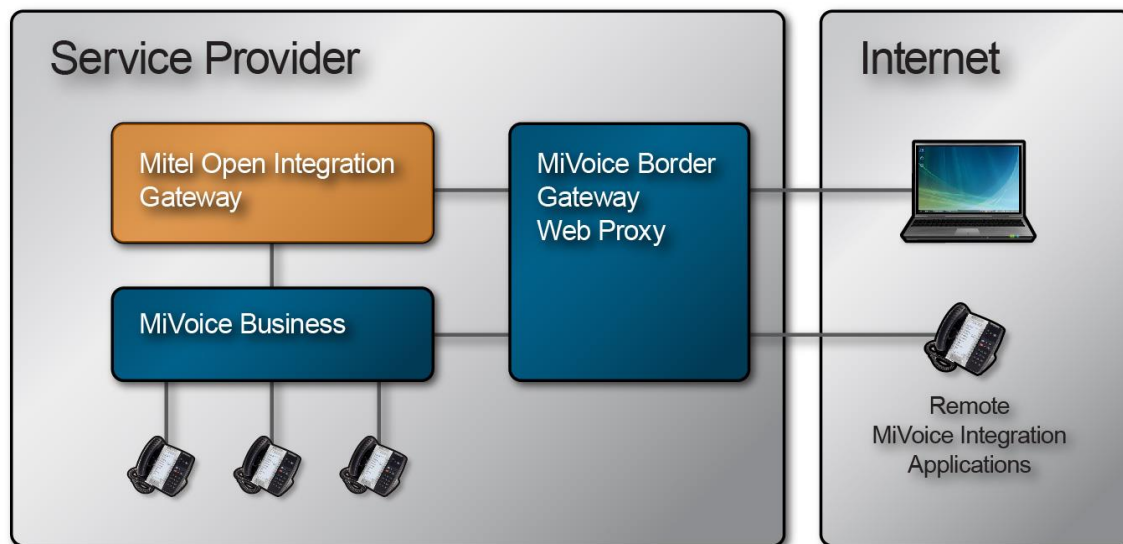
Mitel OIG deployment options: Service Provider

Service Provider deployments include MiVoice Integration support for general business users and contact center users with support for a Google call client and a Salesforce call client integrated with MiContact Center.

A service provider deployment has remote applications communicating with the Mitel OIG server through a MiVoice Border Gateway web proxy. The remote applications can only be MiVoice Integration applications. In service provider deployments, the Mitel OIG server is expected to be in a virtualized environment. There are two options for a virtualized environment:

- Install one vOIG virtual machine on a virtualized server
- Deploy up to 50 vOIG instances (virtual machines) on a virtualized server

Figure 4: OIG Service Provider deployment architecture



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Private Cloud / Data Center

The Private Cloud / Data Center deployment is intended to support 100 to 1500 applications or application instances (one user per application or instance). Applications could be located at one site or distributed across a few different sites. The Private Cloud / Data Center allows the customer to locate the majority of their equipment in a centralized location such as their data center or in a private cloud. MiVoice Business controllers, trunking gateways, MiVoice Border Gateways, business/UC applications can all be private cloud based. Telephony end-points are located with employees at the customer sites. Communication between the customer site(s) and the private cloud is via an MPLS network.

In this deployment usually only one Mitel OIG server is required; one OIG Virtual install supports 1500 user applications or application instances. The Mitel OIG server must be associated with a MiVoice Border Gateway web proxy; remote applications communicate through the web proxy to the Mitel OIG server. Multiple Mitel OIG servers can communicate through one MiVoice Border Gateway web proxy.

In this deployment the Mitel OIG can connect to several MiVoice Business Virtual instances in a system cluster or communicate with a Multi-Instance MiVoice Business server with many MiVoice Business instances.

Private Cloud / Shared Services

The Private Cloud / Shared Services deployment is intended for 100 to 500 applications or application instances (one user per application or instance) for each customer where there are many customers, distributed across different multiple sites. This deployment allows the customer to locate the majority of their equipment in a centralized location such as their data center or in a private cloud. MiVoice Business controllers, trunking gateways, MiVoice Border Gateways, and business/UC applications can all be private cloud-based. Telephony end-points are located with employees at the customer site(s). Communication between the customer site(s) and the private cloud is via an MPLS network.

In this deployment usually many virtual instances (up to 50 virtual machines) of Mitel OIG server are required in one virtualized server; one vOIG instance for each customer. Each instance of Mitel OIG server must be associated with a MiVoice Border Gateway web proxy; remote applications communicate through the web proxy to the Mitel OIG server. Multiple Mitel OIG servers can communicate through one MiVoice Border Gateway web proxy.

In this deployment the Mitel OIG would connect to one MiVoice Business Virtual or communicate with one instance of MiVoice Business in a Multi-Instance MiVoice Business server.

Mitel OIG deployment options: Contact Center application

There are two main options for implementing a contact center with Salesforce CRM. Refer to the *MiContact Center Deployment* Guide and the MiVoice Integration for Salesforce documentation.

General Business

MiVoice Integration for Salesforce can be used to add Salesforce CRM without adding MiContact Center. This provides basic call center functionality with CRM.

MiContact Center

Mitel OIG and MiVoice Integration for Salesforce are integrated with MiContact Center for full ACD contact center functionality.

Mitel OIG installation formats

The Mitel OIG software is provided in two formats:

- as a Mitel MSL server blade that is installed by an MSL server administrator using the MSL server manager UI
- as a virtual appliance in a VMware virtualized environment. In this format, the Mitel OIG server software and the MSL OS are provided in one file.

Remote and local access to Mitel OIG

Applications use web services when communicating with the Mitel OIG. Applications can be co-located/local with the Mitel OIG (e.g., applications and the Mitel OIG are within the same LAN / IP network) or remote (e.g., applications are outside of the IP Network firewall). Local applications communicate directly using the FQDN / IP address of the Mitel OIG. Remote applications communicate indirectly through a MiVoice Border Gateway web proxy which proxies all information exchange between the applications and the Mitel OIG.

In this case, the external FQDN for Mitel OIG must match the internal FQDN. The MiVoice Border Gateway web proxy must have the same CA certificate as included in the Mitel OIG server.

Service Provider Deployment examples

Example 1 - One customer with 25,000 MiVoice Integrations users:

- 1 VMware server
- 50 vOIGs
- Each vOIG instance has 500 users
- Supports 25,000 users for one tenant (i.e., 50 x 500)

Example 2 - 10 customers each with 1000 MiVoice Integrations users:

- 1 VMware server
- 20 vOIGs
- Each vOIG instance has 500 users
- 2 vOIGs to support 1000 users for each of 10 tenants.

Example 3 - One customer with 400 MiVoice Integrations users (with 200 users on each of two MiVoice Business controllers):

- 1 vOIG connected to 2 MiVoice Business controllers
- 1 vOIG supports 400 users on 2 MiVoice Business controllers.

Installing the Mitel OIG

This guide covers the following installation scenarios:

- Fresh install of the Mitel OIG (both physical and virtual appliance). See *Install the Mitel OIG Server (physical OIG)* and *Install Mitel OIG Virtual Software*.
- Software upgrade of the Mitel OIG software. See *Upgrading Mitel OIG Software*.
- Physical Mitel OIG conversion to a virtual Mitel OIG. See *Convert a Physical Mitel OIG Server to a Mitel OIG Virtual Server*.
- Fresh install of the Mitel OIG or MiVoice Integration Base Package (physical or virtual appliance). See "Install the Mitel OIG Server (physical OIG)" and "Install Mitel OIG Virtual Software". Applies to both Mitel OIG Base Package installations and MiVoice Integration Base Package installations.

General installation steps

1. **Site:** Identify the Mitel OIG site requirements and deployment configuration (refer to the *Mitel OIG Engineering Guidelines*). Decide whether the Mitel OIG will be deployed as a physical server or a virtual appliance.
2. **Hardware:** Decide on the Mitel OIG hardware platform needed. Consider the MiVoice Business software and hardware platform needed. Consider remote access and firewall settings. Refer to the *Mitel OIG Engineering Guidelines*.
3. **Licensing:** Order the required Mitel OIG part numbers and assign to them to Application Records in the Mitel AMC Licensing server. Decide on a license model to match the deployment planned. See the *Mitel Open Integration Licensing* section, above, for details.

If MiVoice Integration for Salesforce and MiContact Center will be part of the final system, order licenses for MiContact Center. For more information, see the *MiContact Center* documentation on Mitel OnLine.



Notes: The Mitel OIG server and associated services are licensed by Mitel. Individual applications that communicate with the Mitel OIG are NOT licensed by Mitel.

4. **Install PBX/Controller:** Install and configure the MiVoice Business platform. Refer to the *Mitel Customer Documentation* web site to access the documentation for the MiVoice Business platform.
5. Obtain and install Mitel Standard Linux (MSL).
6. Set up MSL SMTP server to send e-mail.
7. Obtain the Mitel OIG software.
8. Install Mitel OIG.
9. Configure Mitel OIG.
10. Back up Mitel OIG and the MSL database.
11. **SDS Sync:** For releases after Mitel OIG 2.1, the Mitel OIG server must be set up for SDS sharing with the MiVoice Business controller or cluster. Then perform an SDS Sync.
12. **MiContact Center:** If MiVoice Integration for Salesforce and MiContact Center will be part of the final system, install and configure the MiContact Center server.



Note: Mitel OIG applications must be registered with Mitel using the Mitel Certificate Server (MCS) by MSA Authorized Users before such applications will be allowed to connect to a deployed Mitel OIG. See the *Mitel OIG Developer Guide – Fundamentals* for details.

1 Collect Site Information

The following list itemizes the information needed during the MSL software installation and configuration. For an efficient installation, gather this information before starting.

INFORMATION REQUIRED	NOTES
OIG Server Administrator Password	For password strength, choose a password that contains a mix of uppercase and lowercase letters, numbers, and punctuation.
OIG Server Domain Name	Names must start with a letter and can contain letters, numbers, and hyphens.
OIG Server System Name	A name recognizable to the OIG Administrator.
IP addresses of OIG server	LAN mode only needs one IP address for the internal network (i.e., the local IP address of the server where the OIG is to be installed). Network Edge mode is not supported
External Interface Connection	Need to know if there is a Cable Modem. If yes, then it must be determined if the ISP supplies an account name or an Ethernet IP address. Is there a Direct external Connection? If yes, then the static IP address is required.
Gateway IP address	The IP address that the OIG will use to access the IP network.
Will the Mitel OIG (MSL) server be supplying DHCP services?	Usually this field is set to No. If the server will supply DHCP services, a range of IP addresses that the server can distribute must be provided.
DNS Server IP address	Enter the IP address of your corporate DNS server. If your DNS is supplied by your ISP, leave this setting blank.
Application Record ID	Create an Application Record for the OIG installation in the AMC license account. This Application Record ID number will be required later to activate the MSL license. Record the generated Application Record ID.
Third-party trusted CA certificate	If using MiVoice Integration Applications with the Mitel OIG obtain a third-party CA certificate for the MSL server where Mitel OIG will be installed.



Local Network Access - If the MiVoice Business platform or some of the Mitel OIG applications and users are not on the same subnet as the Mitel OIG server, the other networks must be classified as "Local Networks" and then network access needs to be provided with the following information:

IP Address - The IP address of the network to allow access.

Subnet - The subnet OIG for the range of required IP addresses.

Router Address - The address of the router or gateway used to access the network (or subnet) for which access is required.

2 Set up Hardware

PBX controller configuration for Mitel OIG

MiVoice Business configuration

For new installations on a fresh site, install the MiVoice Business platform and configure the system using the documentation. Refer to the MiVoice Business documentation on Mitel OnLine for the latest documentation.

The Mitel Open Integration Gateway communicates with a MiVoice Business system. Each MiVoice Business must have two Class of Service Options enabled, as defined in the table below.



Note: If either of these options is disabled for a device, then the Mitel Open Integration Gateway operations on the device do not function correctly.

CLASS OF SERVICE (COS) OPTIONS THAT MUST BE SET FOR EACH MONITORED DEVICE

HCI/CTI/TAPI Call Control Allowed: **Yes**

HCI/CTI/TAPI Monitor Allowed: **Yes**

EXAMPLES

Routing Devices use COS #1 only. If you are monitoring a routing device, COS #1 must have options set as indicated above.

The COS for an ACD Path and an Agent Group is defined by the COS of the first agent in the prime agent group for the ACD path. If you are monitoring ACD paths and querying ACD groups, the COS of the first agent must have options set as indicated above.

When monitoring ACD agents, the COS for each monitored agent must have options set as indicated above.

When monitoring trunks, the COS for each monitored trunk must have options set as indicated above.

When monitoring phones, the COS for each monitored phone must have options set as indicated above.

Hardware for the Mitel OIG

The OIG hardware platform must have an Internet connection to allow the OIG to connect to the Mitel Application Management Center (AMC) to obtain application licenses.

The OIG hardware platform also requires an Internet connection to allow the OIG to connect to the Mitel Certificate Server (MCS) to obtain the Access Control List (ACL) for allowed applications. See the *OIG Developer Guide* for more information.

The OIG runs on the Mitel Standard Linux (MSL) operating system. The OIG is supported on industry standard, hardware-redundant servers (RAID 5 and redundant Power Supply Units). The MSL Qualified Hardware List identifies third-party manufacturer server platforms that can be used to install the OIG software using MSL. Follow the manufacturer's instructions to set up the server hardware.

For new installations on a fresh site, install the Mitel OIG hardware server platform. Physically connect the server to an IP network. The Mitel OIG needs access to the Internet to allow communication with the Mitel AMC license server and the Mitel Certificate Server.

To access the MSL Qualified Hardware List:

1. Navigate to the Mitel Customer Documentation web site:
<http://edocs.mitel.com/default.htm>.
2. On the Applications tab, click Mitel Standard Linux.
3. From the **MSL Qualified Hardware List** section, select **Online**, **PDF**, or **HTML** to view the MSL Qualified Hardware List in the desired format.
4. Click Application Matrix and scroll down the table to Open Integration Gateway.



Note: Some server models may require modifications to the BIOS settings. Any modifications required are specified in the MSL Qualified Hardware List.

Hardware for Mitel OIG Virtual

Ensure that the VMware platform to be used meets the minimum specified requirements for the Mitel OIG. Refer to the *Mitel OIG Engineering Guidelines* and the *Virtual Appliance Deployment Solutions Guide* for the minimum requirements. Connect installation laptop (vSphere Client PC) to the network.

3 Get licenses and create Application Records (ARIDs)

Obtain a license Mitel Standard Linux. This step will not be necessary if you are installing Mitel OIG virtual because MSL is included in the OVA, and is deployed at the same time as the OIG.



Note: Mitel OIG is a 32-bit application that requires the 32-bit version of MSL. Mitel OIG is not supported in the 64-bit version of MSL.

Create an Application Record for an OIG installation in the AMC license account. Use the ID number (ARID) of this Application Record to activate the OIG license. See the [Mitel OIG Licensing](#) section of this document for more information.

For MiVoice Integration deployments, Mitel OIG and MiVoice Business ARIDs must be added to a common ULM.

The *Mitel OIG Product Bulletin* defines the options for AMC licensing. Refer to the *MiVoice Business Site Planning Guide*, *MiVoice Business Engineering Guidelines*, and *MiVoice Business Technician's Handbook* for MiVoice Business licensing information.

For MiContact Center licensing, see the Licensing sections of this guide, and review the licensing information in the MiContact Center 8.0 release notes and documentation.

4 Install PBX/Controller

Install and configure the MiVoice Business. Follow the instructions in the MiVoice Business documentation, available on Mitel OnLine.

5 Obtain and install MSL Software



Note: Skip this step if you are planning to install Mitel OIG in virtual form by deploying the OVA. MSL is included in the OVA.

When installing on a physical server, MSL software must be obtained before the OIG can be installed. The MSL software is available for download from the MOL Technical Support Software Downloads portal. After obtaining the MSL .iso file from MOL, transfer the files to a portable storage media (DVD or USB device). When downloading the .iso files from Mitel OnLine, a MD5 checksum file is also provided to verify that the download of the .iso file was successful. The MSL operating system also provides a server console menu option that allows you to verify, using the MD5 checksum, the contents of an inserted DVD or USB device.

For more details about the Mitel MSL Operating System software, refer to the documentation available on the Mitel Customer Documentation web site.



Note: Mitel OIG is a 32-bit application that requires the 32-bit version of MSL. Mitel OIG is not supported in the 64-bit version of MSL.

To download a software .iso file from the MOL Technical Support Software Downloads portal:

1. Log on to Mitel OnLine.
2. Click Support and then click Software Downloads.
3. Click Open Integration Gateway. The correct MSL load for each OIG release is included on this page.
4. Review the Release Notes.
5. Click the MSLx.x.x.iso link (where x.x.x represents the MSL release number).

Click **I Agree** [Download using Software Download Manager (Recommended)].

If the Download Manager is not already installed on the local PC, you are prompted to install it. The Download Manager is an Active X application that optimizes the software download speed. After installing the Download Manager, it is available for subsequent software downloads.

13. Save the downloaded software ISO images to a folder on the local PC.

Create storage media for MSL

After downloading the MSL software, burn the .iso file to a CD/DVD or USB device as an image. **Do not simply copy the .iso file to the CD/DVD.**

1. Insert a CD or DVD into a local PC CD/DVD ROM drive.
2. Navigate to the stored .iso image and use a CD/DVD burner application to create a CD/DVD.
3. Label the CD/DVD with specific MSL information for your reference (for example, MSL 10.3 for OIG Servers MSL_10.3.xx.0.i686.iso, 32-bit version).



Note: For instructions for installing with a USB device, see the Mitel MSL user documents available on the Mitel Customer Documentation web site. Look for Mitel Standard Linux under the Applications tab on the web site.

Install and configure MSL Operating System software

Refer to the MSL user documentation for MSL installation and configuration procedures. The documentation is available on the Mitel Customer Documentation web site.



Note: If you are planning to install the Mitel OIG Virtual, DO NOT INSTALL MSL. The Mitel OIG OVA includes MSL.

To install a third-party CA certificate (required for use of MiVoice Integration Applications), refer to the MSL server administration UI **Security** tab and click **Certificate Management**. Installing a third-party CA certificate on the Mitel OIG server prevents the web browser from displaying security warnings, and allows access to the Mitel OIG.



Note: MSL restricts access to many MSL services to devices on the same subnet as the MSL server. Access to MSL services from a different subnet can be configured by adding Trusted Networks and Network Routes. Refer to MSL documentation for details on correctly configuring MSL network settings.

6 Set up the MSL SMTP server to send e-mail

The MSL SMTP server can deliver outgoing messages using a corporate or Internet service provider's SMTP server, or can deliver messages directly to their destination.

For a specific SMTP server, you must configure the MSL SMTP server before you can send logs or monthly usage reports to be sent to an e-mail address.



Note: Service Providers deploying MiVoice Integrations using the subscription model must configure the mail server in order to receive MiVoice Integration usage data for reporting and billing purposes.

To set up the MSL SMTP server:

1. In the MSL Server Manager, select **E-mail Setting**.

2. To set the **Server to use for outbound SMTP**, click the corresponding **Change** button.
3. In the screen that appears, enter the host name or IP address of the SMTP server you want to use.
4. Click **Save**.

7 Obtain Mitel OIG software

Physical Mitel OIG

When installing on a physical server, the Mitel OIG software is delivered from the Mitel AMC licensing through the MSL Blades interface after the Mitel MSL software is installed.

Mitel OIG OVA

Download the virtual OIG .ova file from the Mitel OnLine web site:

1. Launch Internet Explorer on the vSphere Client PC.
2. Log into Mitel MSA member web site.
3. Click the appropriate OIG download version.
 - OIG Physical Software

- OIG Virtual Software
4. Review the Release Notes.
 5. Verify that the versions of the software are correct.
 6. Download the required file. In the case of OIG Virtual, this will be an OVA file.

After clicking the download link, the Software License Agreement is presented.

7. Click **I Agree** [Download - Software Download Manager (Recommended)].
8. If the Download Manager is not already installed on the local PC, you are prompted to install it. The Download Manager is an Active X application that optimizes the software download speed. After installing the Download Manager, it is available for subsequent software downloads.
9. Save the OIG Virtual .ova file to a network drive or to a folder on the vSphere Client PC. The OIG Virtual appliance packaged as a virtual appliance .ova file vOIG_2.1.x.x.ova is approximately 2.0 GB in size.

8 Install Mitel OIG software

There are two installation types for the Mitel OIG software:

- OIG for physical platform
- Deploy the Mitel OIG OVA file.



Note: OIG 60-Day Trial – Database Migration

To move a Mitel OIG database from an OIG 60-Day trial server to a new Mitel OIG server with the same OIG software version, the OIG admin must navigate to the MSL **Status** panel, **Deactivate** the current ARID and then enter the new ARID with new licenses.

The Mitel technician must log into the AMC licensing server and clear the hardware ID in the old ARID record before synchronizing the Mitel OIG with the new ARID.

Install the Mitel OIG blade in MSL

1. Access the MSL server manager.
2. Under **ServiceLink**, click **Blades**, and then click **Update List**.
3. Click the **Install** link for the version of Open Integration Gateway you want to install.
4. Read and accept the license agreement to continue.
5. Installation begins automatically and is complete in a few minutes. You are prompted to manually sync your server with the AMC.
6. Under ServiceLink, click Status.
7. In the **Status** panel, click **Sync**. This ensures that the required licensing is delivered. When synchronization is complete, the Mitel OIG appears in the Application section of the server manager.



Note: No reboot of the MSL server is needed after the software installation.

Deploy the Mitel OIG OVA

Mitel OIG Virtual allows you to deploy the OIG as a virtual appliance in a VMware vSphere environment. Refer to the *OIG Engineering Guidelines* and the *Virtual Appliance Deployment Solutions Guide* for OIG Virtual capacities and performance information.

Review Installation Details

- The OIG server has Internet access to allow licensing from the Applications Management Center (AMC) and communication with the Mitel Certificate Server (MCS).
- There is a DNS server that is reachable from the OIG server platform.
- The latest OIG Virtual software is in an OVA file from Mitel OnLine.
- OIG Virtual must be installed in the vSphere environment using Thick provisioning.

The OIG hardware resource requirements of the OIG Virtual appliance as defined in its OVA template for the supported deployment configurations are described in the *OIG Engineering Guidelines*. Minimum specifications for deployment are listed in the *Virtual Appliance Deployment Solutions Guide*.



Note: You can use the **Summary** tab in the vSphere Client interface to set or view the hardware specifications of a deployed OIG instance.

Constraints

The following constraints apply:

- A virtual OIG base software license must be used when creating the Application Record ID for a virtual OIG installation. Do not attempt to install the virtual OIG using an Application Record ID created from an OIG Server physical base software license; the installation will fail.
- The virtual OIG is not supported for manual OIG installations. A virtual OIG is only supported when installed using the virtual OIG .ova file. (Do not install the MSL and the OIG software into a VMware virtual appliance and then use a virtual OIG Application Record ID to activate the software.)
- Not all VMware vCenter features are supported for a virtual OIG. The VMware support list is available in the *Virtual Appliance Deployment Solutions Guide*.
- The vCenter Management vMotion feature provides live migration of virtual machines from one physical host to another with zero downtime. While a vMotion migration is in progress, virtual OIG users may experience voice quality degradation.

To deploy the OIG virtual appliance

The virtual OIG virtual appliance is deployed as an image in OVF 1.1.0 package format (file ending in .ova). The virtual OIG .ova file contains the VMware tools, the MSL operating system, and the OIG software.

To deploy the virtual OIG on a vSphere Standalone host or via a vCenter Server, complete the following steps in the *Virtual Appliance Deployment Solutions Guide*.



Note: The filename of the OVF template cannot contain any spaces.

VMware Resources

For setup and operation of the vSphere environment, refer to the VMware documentation. Refer to the VMware vSphere main documentation page at <https://www.vmware.com/support/pubs/> for links to the following information:

- New Features and Release Notes
- Hardware and Software Compatibility Information
- System Administrator Documentation (Main Documentation Set plus additional resources)
- Optional vSphere Products and Modules
- Automators and Customizers
- The VMware Compatibility Guide at <http://www.vmware.com/resources/compatibility/search.php> identifies supported hardware platforms.

9 Configure Mitel OIG

Follow the instructions in [Configure Mitel OIG Software](#).

10 Back up Mitel OIG Server and MSL database

Refer to the MSL documentation for MSL database backup, restore, upgrade, and configuration procedures. The documentation is available on the Mitel Customer Documentation web site.



Note: Performing the backup is especially important for virtual appliances as the backup includes the Globally Unique Identifier (GUID), which is supplied to each virtual appliance by the AMC. This GUID must be maintained when the virtual appliance is redeployed on a different virtual machine to ensure continued synchronization with the AMC.

11 Add OIG to SDS Sharing with MiVoice Business cluster

In the MiVoice Business System Administration Tool, navigate to the **Network Elements** form, and add the OIG Server as a new Network Element.

For detailed instructions for use of the System Administration Tool, see the System Administration Tool Online Help.

For detailed instructions for setting up SDS sharing, see the *Using SDS Solutions Guide*.

12 Optional: Install and configure MiContact Center

See the *MiContact Center Management Installation* Guide for detailed instructions.

Configure Mitel OIG Software

The Mitel OIG Administrator web user interface (UI) provides a central location for configuring the Mitel OIG server. The administrator interface provides access to operational and configuration information.

The Mitel OIG administrator must define a local password for each application that will connect to the Mitel OIG. This local password must be associated with the application when it is deployed (the application developer provides a means to do this). Each application must also supply the appropriate local password to the Mitel OIG when opening a communication session. See the description of the Mitel OIG Administrator UI below.

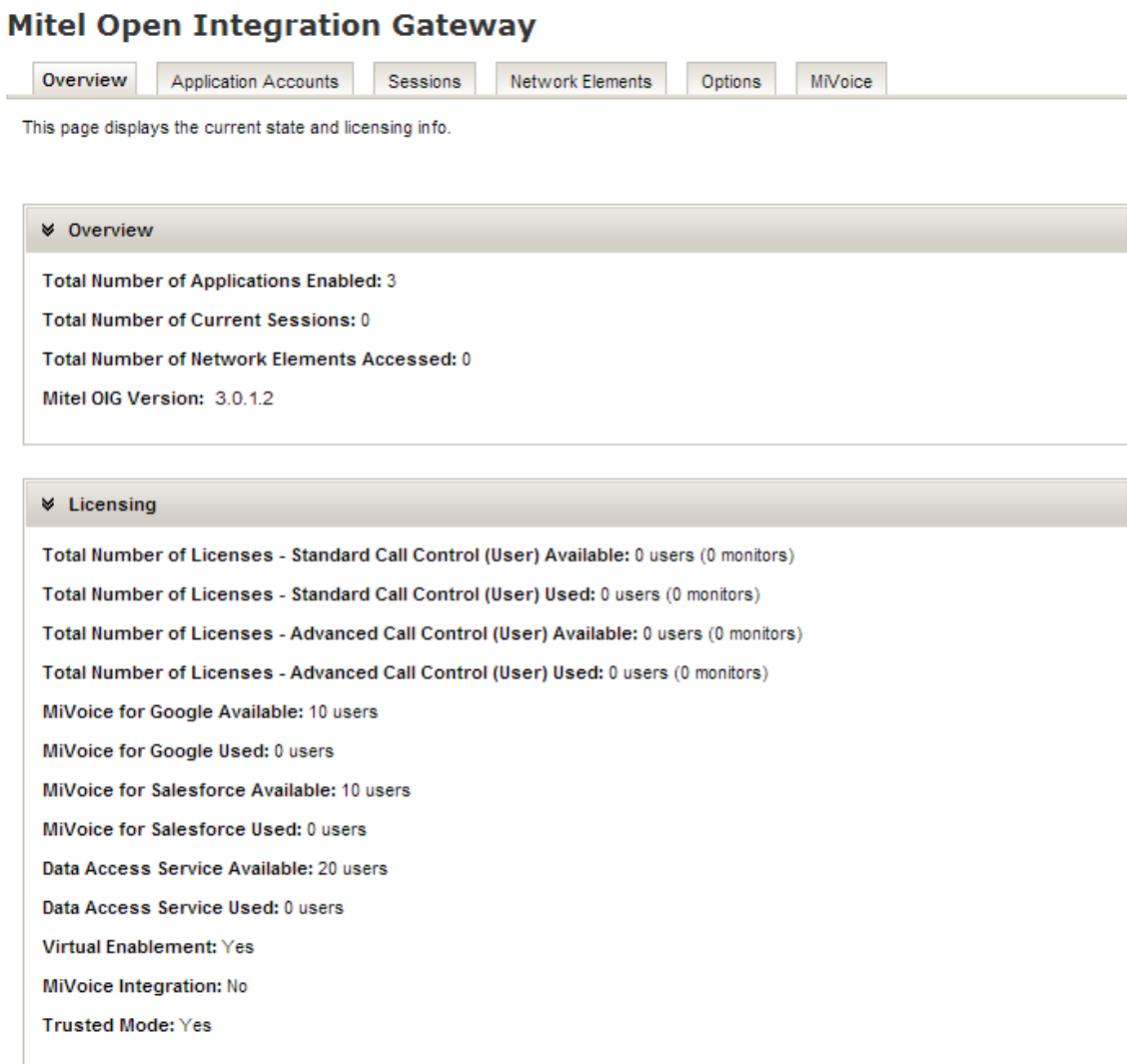
The main page of the Mitel OIG Administrator UI provides the following tabs:

- **Overview:** Displays current status and licensing information.
- **Application Accounts:** Displays a list of application accounts with local passwords.
- **Sessions:** Displays a list of current active communication sessions from applications.
- **Network Elements:** Displays a list of connected MiVoice Business controllers.
- **Options:** Displays system options.
- **MiVoice:** Allows an administrator to enable the Mitel OIG to be able to access to a Google Domain corporate directory of contacts. This access is needed by MiVoice Integration for Google. For complete instructions see the MiVoice Integration for Google Admin Guide.

Overview Tab

The **Overview** tab is shown here.

Figure 5: Open Integration Gateway Administrator UI Overview



The Overview page displays the current state and licensing information of the Mitel Open Integration Gateway (OIG). The Overview page has two collapsible panels:

Overview panel:

- Total number of configured Applications
- Total number of current communication Sessions with Applications
- Total number of Network Elements Accessed
- Mitel Open Integration Gateway Version

Licensing panel:

- Total number of Standard Call Control Service Licenses available to applications
- Total number of Standard Call Control Service Licenses used by applications
- Total number of Advanced Call Control Service Licenses available to applications
- Total number of Advanced Call Control Service Licenses used by applications
- MiVoice for Google available
- MiVoice for Google used
- MiVoice for Salesforce available
- MiVoice for Salesforce used
- Data Access Service available
- Data Access Service used
- Virtual Enablement
- MiVoice Integration
- Trusted Mode



Note: These statistics indicate whether the Mitel OIG server is licensed as a server or an individual user has been added to the licensing information. The Server qualifier is displayed (in brackets) when the maximum number of licenses is available, which is 25000 users. This is equivalent to 50,000 monitors.

Application Accounts Tab

The **Application Accounts** tab provides a view of the application accounts configured in the Open Integration Gateway.

Figure 6: Open Integration Gateway Application Accounts Tab
Mitel Open Integration Gateway

Overview Application Accounts Sessions Network Elements Options Mitel OIG

This page displays the list of application accounts.

Allowed Applications

Application Name	Company Name	Active Sessions	
Application-1	Company-1	1	
Application-2	Company-2	1	
Application-3	Company-3	0	

Create Application Local Password:

Click [here](#) to get the latest available applications list from Mitel.

Available Applications:

Local Password:

Create

The Application Accounts tab includes two collapsible panels.




Allowed Applications panel

This panel displays application accounts in the Mitel OIG that already have a local password. The name of the application, with its respective company name and the number of current active sessions, is displayed. For each application displayed in the table, an option to edit or delete the local password of each application is provided on the right. Edits take effect on subsequent application logins to the Mitel OIG.



Note: When the Mitel OIG administrator deletes an existing local password for an existing application, the application is NOT disconnected immediately. The application continues to work for the duration of the current session, but the next time the application tries to connect it will fail.


The following task icons are available:

-  Disable an application
-  Edit application password
-  Filter application account data

Create Application Local Password panel

The **Create Application Local Password** panel allows a Mitel OIG administrator to create a local password for each application that will communicate with this specific Mitel OIG. The administrator selects an application from the available application list, enters a local password, and then clicks Create. One application account with the local password is created and added to the Allowed Applications in the Allowed Applications panel.

To get the latest available applications list from Mitel is possible by clicking on the link provided. When this link is clicked, the Mitel OIG makes a web service call to the Mitel Certificate Server (MCS) to get the Access Control List (ACL), and the view is updated with the latest list of available applications.



Note: Application developers (MSA members) must register their applications with the Mitel Certificate Server (MCS) before using the Mitel OIG, and before such applications can be deployed at a Mitel customer site. The MCS is accessible over the Internet.

The Mitel OIG uses an Access Control List (ACL) from the MCS to identify approved applications. An application must be registered with the MCS and in the ACL before the application can communicate with the OIG. An application must have a Mitel certificate to use the OIG Advanced Services.

Sessions Tab

The **Sessions** tab displays the current application communication sessions with the Mitel OIG. **Error! Reference source not found.** shows an example of the Sessions tab.

Figure 7: Open Integration Gateway Sessions Tab




For each session in the list, the following information is displayed:

- **Application Name:** Name of the application in the communication session. Alphanumeric characters only.
- **Company Name:** Company that created the application in the communication session. Alphanumeric characters only.
- **Creation Date and Time:** Session start time.
- **Type:** The type of the application (Standard or Advanced).

The list of sessions refreshes every 30 seconds. A manual refresh option is also provided.

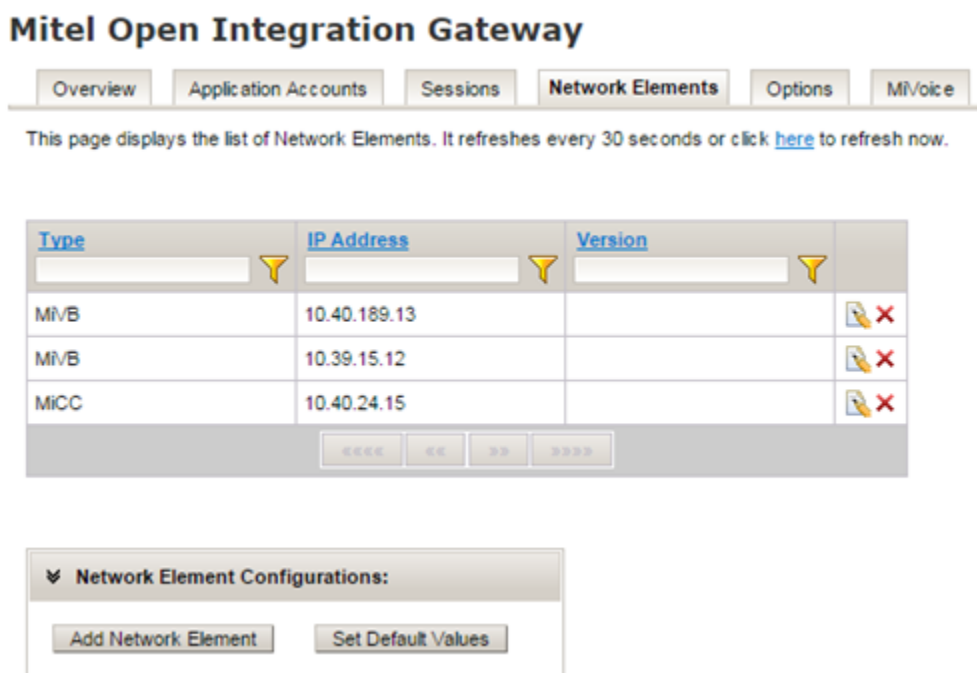
The following task icon is available:

- Filter Session data 

Network Elements Tab

The **Network Elements** tab displays the network elements that are currently connected to the Mitel OIG. The type of network element is listed (e.g., MiVoice Business) with its respective IP address and version. The figure provides an example of the Network Elements tab.

Figure 8: Open Integration Gateway Network Elements Tab



The following task icon is available:

- Filter Network Element data 

The following network element procedures follow here:

- To add a network element
- To add a default MiVoice Business network element
- To add a custom MiVoice Business network element
- To add a default MiContact Center network element
- To add a custom MiContact Center network element
- To edit or delete a network element
- To set the network element default values

To add a network element:

1. In the **Network Elements** tab, click **Add Network Element**.

The **Add Network Element** dialog box appears.

Figure 9: Add Network Element



2. From the **Type** menu, select the Network Element type. The two types of network element you can add are **MiVoice Business (MiVB)** and **MiContact Center (MiCC)**.



Note: You can add multiple MiVoice Business network elements, but you can add only one MiContact Center network element,

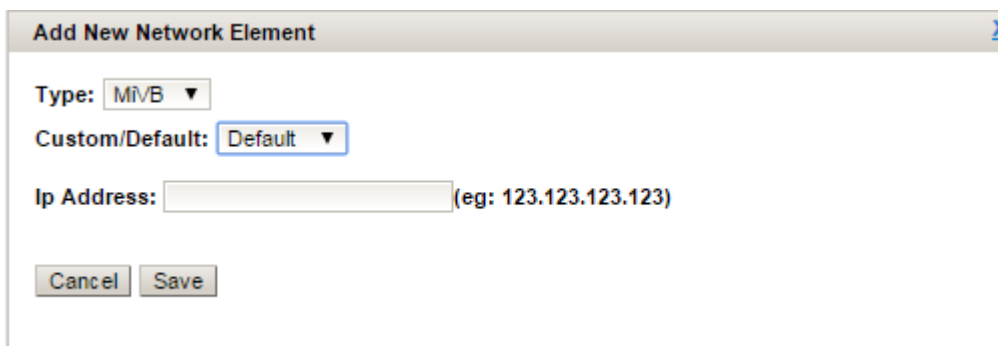
3. Each Network Element type can be added in one of two ways, **Default** and **Custom**.

The Custom setup allows you to configure for E.164 telephone directories. Some national telephone bodies or telephone companies have implemented an Internet-based database for their numbering spaces. E.164 numbers may be used in the Domain Name System (DNS) of the Internet in which the second-level domain e164.arpa has been reserved for telephone number mapping (ENUM).

The default network element setting will be used on all network elements of that type, unless changes are explicitly set for that element.

To add a Default MiVoice Business network element:

Figure 10: MiVoice Business – Default



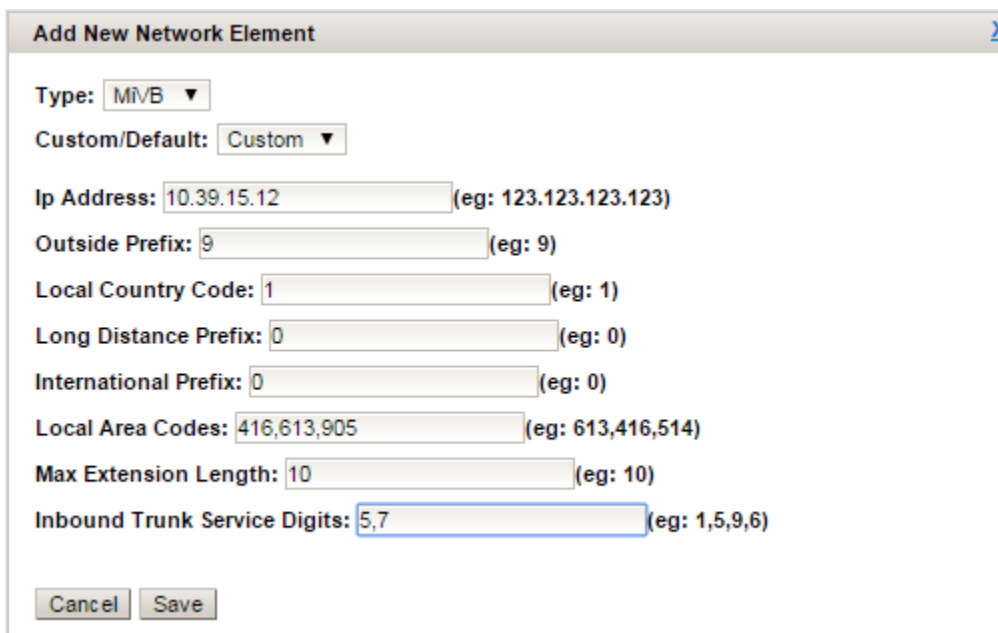
The screenshot shows a dialog box titled "Add New Network Element". It contains the following fields and controls:

- Type:** A dropdown menu with "MVB" selected.
- Custom/Default:** A dropdown menu with "Default" selected.
- Ip Address:** A text input field with a placeholder "(eg: 123.123.123.123)".
- Buttons:** "Cancel" and "Save" buttons at the bottom.

1. In **IP Address**, enter the IP address of the MiVoice Business controller you are adding.
2. Click **Save**.

To add a Custom MiVoice Business network element:

Figure 11: MiVoice Business – Custom



The screenshot shows a dialog box titled "Add New Network Element". It contains the following fields and controls:

- Type:** A dropdown menu with "MVB" selected.
- Custom/Default:** A dropdown menu with "Custom" selected.
- Ip Address:** A text input field with "10.39.15.12" entered and a placeholder "(eg: 123.123.123.123)".
- Outside Prefix:** A text input field with "9" entered and a placeholder "(eg: 9)".
- Local Country Code:** A text input field with "1" entered and a placeholder "(eg: 1)".
- Long Distance Prefix:** A text input field with "0" entered and a placeholder "(eg: 0)".
- International Prefix:** A text input field with "0" entered and a placeholder "(eg: 0)".
- Local Area Codes:** A text input field with "416,613,905" entered and a placeholder "(eg: 613,416,514)".
- Max Extension Length:** A text input field with "10" entered and a placeholder "(eg: 10)".
- Inbound Trunk Service Digits:** A text input field with "5,7" entered and a placeholder "(eg: 1,5,9,6)".
- Buttons:** "Cancel" and "Save" buttons at the bottom.

1. In **IP Address**, enter the IP address of the MiVoice Business controller you are adding.
2. In **Outside Prefix**, enter the number that is used to get an outside line.
3. In **Local Country Code**, enter the country code of the country the installation is in. For example, the country code for North America (United States and Canada) is 1, while the country code for Ireland is 353.

4. In **Long Distance Prefix**, enter the trunk prefix used to select an international telephone circuit for placing international call.
5. In **International Prefix**, enter the exit code (also known as international access codes or IDD International Direct Dialing Codes). The digits required for calling internationally from the territory.
6. In **Local Area Codes**, enter the numbering plans for geographically allocated telephone numbers typically designate an area code as the prefix routing code for a region.
7. In **Max Extension Length**, enter the maximum number of digits in extensions in the cluster.
8. In **Inbound Trunk Service Digits**, enter the digits inserted as leading digits when an outside call comes through a trunk. You can find this number using the System Administration Tool in the **Dial-in Trunks Incoming Digit Modification – Insert** form.
9. Click **Save**.

To add a Default MiContact Center network element:

Figure 12: MiContact Center - Default

The screenshot shows a dialog box titled "Add New Network Element" with a close button (X) in the top right corner. Inside the dialog, there are three fields: "Type:" with a dropdown menu showing "MiCC", "Custom/Default:" with a dropdown menu showing "Default", and "Ip Address:" with a text input field and a hint "(eg: 123.123.123.123)". At the bottom, there are two buttons: "Cancel" and "Save".

1. In IP Address, enter the IP address of the MiContact Center server you are adding. The default transport protocol will be used.
2. Click Save.

To add a Custom MiContact Center network element:

Figure 13: MiContact Center – Custom







The screenshot shows a dialog box titled "Add New Network Element" with a close button (X) in the top right corner. Inside the dialog, there are four fields: "Type:" with a dropdown menu showing "MiCC", "Custom/Default:" with a dropdown menu showing "Custom", "Ip Address:" with a text input field and a hint "(eg: 123.123.123.123)", and "Transport Protocol:" with two radio buttons, "http" (selected) and "https". At the bottom, there are two buttons: "Cancel" and "Save".

1. In **IP Address**, enter the IP address of the MiContact Center server you are adding.
2. In Transport Protocol, select **http**, or **https**. This is the protocol you want to use to access the MiContact Center REST API.
3. Click **Save**.

To edit or delete a network element:

1. To delete a network element, click the red X that appears beside the network element. You will be asked to confirm the deletion.
2. To edit the configuration of a MiVoice Business or MiContact Center network element, click the Edit button beside the network element you want to edit.

Figure 14: Network Element - Edit button

Type	IP Address	Version	
MVB	10.40.189.13		 
MVB	10.39.15.12		 
MICC	10.40.24.15		 

3. The **Edit Network Element** dialog box for the network element type appears.

Figure 15: Edit MiVoice Business network element

Edit Network Element Configs

Max Extension Length: 12 (eg: 10)
Outside Prefix: 13 (eg: 9)
Local Country Code: 45 (eg: 1)
International Prefix: 566 (eg: 0)
Long Distance Prefix: 78 (eg: 0)
Inbound Trunk Service Digits: 89 (eg: 1,5,9,6)
Local Area Codes: 85 (eg: 613,416,514)

Cancel Save

Figure 16: Edit MiContact Center network element

Edit Network Element Configs

Transport Protocol: ☒ http ☐ https







Cancel Save

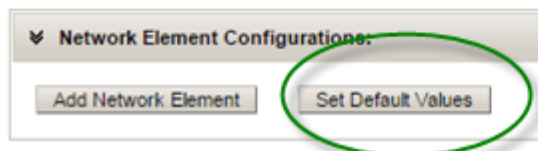
4. Make the required changes. For field details see the following procedures:
 - To add a custom MiVoice Business network element
 - To add a custom MiContact Center network element
5. Click **Save**.

To set the network element default values:

Use this function to set the values that will be used when you create a new “Default” MiVoice Business or MiContact Center network element.

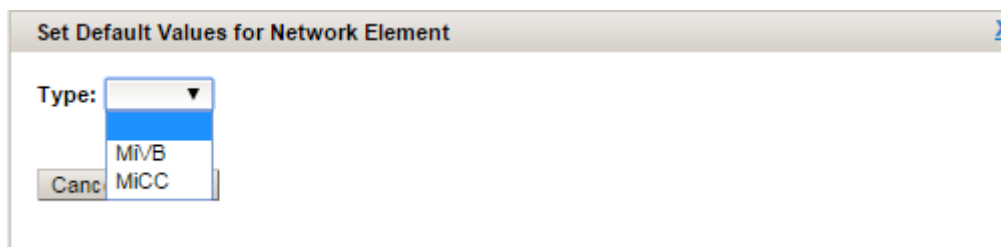
Figure 17: Edit Network Element Default values

Type	IP Address	Version	
MVB	10.40.189.13		 
MVB	10.39.15.12		 
MICC	10.40.24.15		 



1. Click Set Default Values.
2. In the Set Default Values for Network Element dialog box that appears, select MiVoice Business or MiContact Center.

Figure 18: Set Default values for network elements



3. In the dialog box that appears, enter the values that you want to use when you create a Default MiVoice Business or MiContact Center network element. For field details see the following procedures:
 - To add a custom MiVoice Business network element
 - To add a custom MiContact Center network element
4. Set or change any values.

5. Click **Save**.

Options Tab

The **Options** tab displays the different configuration options for the OIG.

General Options

There are four logging levels:

- Error
- Warning
- Info (default setting): used when troubleshooting scenarios at customer sites
- Trace: used by OIG support and maintenance when investigating correct OIG operation
- Logging Level can be set to Trace or Information (Info).
- If set to **Trace**; all levels of logs will be available.
- If set to **Information**; all logs will be available, with the exception of Trace logs.

Send Mitel OIG Usage Report

This section displays the e-mail address configured to receive the Mitel OIG monthly usage report, and an option to enter or change the e-mail address.

When the Mitel OIG is configured with an e-mail address, the e-mail address is stored in the Mitel OIG database and the reports are sent monthly. If no e-mail address is configured, no monthly reports will be sent. After an e-mail address is configured, the Mitel OIG usage report is delivered on the first day of each month.

The Administrator has the option to send a usage report immediately to the configured e-mail any time by clicking Send Report To Email Now. Clicking this button triggers a report with Mitel OIG usage information from the first day of the month (current month-to-date).



Note: Service Providers deploying MiVoice Integrations using the subscription model must configure the mail server in order to receive MiVoice Integration usage data for reporting and billing purposes. In addition, the **Send Report to Email Now** feature can be used to deliver MiVoice Integration usage data on demand, as needed.

The following figure shows an example of the **Options** tab.

Figure 19: Open Integration Gateway Options Tab

Mitel Open Integration Gateway

Overview
Application Accounts
Sessions
Network Elements
Options
MiVoice

This page allows you to change the different configuration options.

✓ General Options

Logging Level:

✓ Send Mitel OIG Usage Report

Email Monthly Report To: tu.nguyen@mitel.com

Email:

MiVoice Tab

The MiVoice tab allows the Mitel OIG administrator to configure the Mitel OIG server to retrieve a site-specific Google Gmail corporate directory. The administrator must enter a Google Gmail administrator e-mail address and the Google Gmail domain name.

For procedure details for configuring a hosted Google Gmail server to allow a MiVoice Integration for Google to access a corporate directory with user contact information refer to the MiVoice Integration for *Google Administration Guide*.

The **Sync with Google** button is used to trigger the Mitel OIG server to retrieve and locally cache the Google Gmail corporate directory.

Starting in Mitel OIG Release 3.0, you can also import and export:

- User lists for MiVoice Integration for Google
You can import or export lists of users to and from MiVoice Integration for Google
- UI localization files (language files) for both MiVoice Integration for Google and MiVoice Integration for Salesforce

You can change the language of the text strings on the UIs for MiVoice Integration for Google and MiVoice Integration for Salesforce.

Figure 20: Open Integration Gateway Options Tab

Mitel Open Integration Gateway

Overview
Application Accounts
Sessions
Network Elements
Options
MiVoice

This page allows you to setup MiVoice Google.

Google Domain Directory Integration

MiVoice Google Admin Email :
MiVoice Google Domain Name :
Save
Sync with Google

Import/Export for MiVoice

User List
Localization

Import Localization File Name:
(MiVoice Integration for Google_xx.csv) or (MiVoice Integration for Salesforce_xx.csv)
xx: language code (eg: fr, en-gb, es)

+ Add...

Email Localization File To : admin@mitel.com

Email:
Save

Select Application:
Salesforce
Email Language Strings

Before using the Export function

Before using the Export to e-mail function, you may need to make an adjustment to your MSL e-mail configuration.

1. In the procedure called [Set up the MSL SMTP server to send e-mail](#) earlier in this guide, ensure that the **Server to use for outbound SMTP** is set to an IP address. If the field currently uses an FQDN, you must change it to an IP address.
2. In the **Email** field, enter an e-mail address to send the export file to.

Import/Export User Lists

You can import and export lists of users to and from MiVoice Integration for Google using CSV files. You can use the Mitel OIG Import/Export functions to create and change the user list.

MiVoice Integration for Google can be used connected to a corporate Google user directory, or it can be used without a corporate directory.

When importing a user list for the first time, you need a CSV file containing the names of the users you are adding. You can get a template CSV file by performing an export, and modifying the resulting file to your needs.

1. The bottom section of the MiVoice tab has two tabs, **User List** and **Localization**. Click **User List**.
2. Click **Add** and browse to your CSV file. See the table below for the contents of the CSV for import.
3. Click **Upload**.
4. The **Done** indicator tells you the import is complete.

Table 12: CSV file contents

FIELD NAME	DESCRIPTION
primary_email	Required field
full_name	Full name
given_name	First name
family_name	Last name
phone_number	Required field
phone_type	Choices are “work”, “mobile”, or “home”
mark_as_delete	Set to “yes” to delete the record.
record_source	Optional field: Default is “csv”

Notes:

- Each phone number must be unique.
- A user's primary_email address can be associated with multiple phone numbers. In the CSV file, create multiple rows with the same e-mail address, but with different phone numbers.
- Importing a CSV file with a row that matches an existing primary_email and phone_number will update the full_name, given_name, family_name, and phone_type fields.
- Importing a CSV file with a row that matches an existing primary_email, but with a different phone number will add the record to the directory.
- To remove a phone_number from the directory, upload a CSV file with a row that has the phone_number you want to delete and the mark_as_delete column set to Yes.

To add, delete, or change user records:

1. Export the user list:
 - a. If you have not already set an e-mail address, in the **Email** field, enter your administrator e-mail address.
 - b. Click **Save**.
 - c. Click Email User List.
2. Make the additions, deletions, and changes to the user list.
 - a. Open and save the attachment when the User list e-mail arrives in your administrator inbox.
 - b. Make the required changes.
 - c. Save the file with a CSV extension.
3. Import the updated CSV file back into Mitel OIG. The new file overwrites the existing user list.

Import/Export Localization file

Localization is the process of translating the MiVoice Integration UI text strings from English to the desired language.

1. Export the localization file:
 - a. If you have not already set an e-mail address, in the **Email** field, enter your administrator e-mail address.
 - b. Click **Save**.
 - c. Select **Salesforce** to save the MiVoice Integration for Salesforce UI text strings, or **Google** to save the MiVoice Integration for Google UI strings
 - d. Click **Email Language Strings**.
2. Retrieve the Language strings file from the e-mail, and open it for editing. Use **Save As** to save it as a file type CSV.

CAUTION: Do not copy the English language strings file from this pdf into a text file. The pdf format contains artefacts (such as carriage returns) that may cause problems with your subsequent import. Instead, export the file to get your template.

3. Replace each string with the translation for the language you want in the display, and save the file as a CSV file.

See the Appendix for the English language strings file.

- For a MiVoice Integration for Google file, use the filename **MiVoice Integration for Google_xx.csv**.
- For a MiVoice Integration for Salesforce file, use the filename **MiVoice Integration for Salesforce_xx.csv**. The Salesforce application uses the browser language settings to determine what language is to be used.

Where xx is the 2-letter language code: en for English, fr for French, es for Spanish, and so on. See Appendix B for the full list of supported languages, and the language codes to use for each one.

4. Open the CSV file in Windows Notepad, and select **File > Save As**. From the **Encoding** drop-down menu at the bottom of the screen, select **UTF-8**.
5. If you are translating to Chinese, Japanese, or Korean, see the additional steps in the procedure below: To localize CJK languages on a non-CJK Windows system (Chinese, Japanese, and Korean).
6. In the OIG **MiVoice** tab, click **Localization**.
7. Click **Add**, and browse to your translated file.
8. Select the translated file, and click **Upload**.

The Done indicator tells you the import is complete.

The language strings on the UI are replaced with those in the file you have just uploaded.

9. Check the Tomcat logs to ensure that the language file has been imported without errors.



Note: Multiple languages can be supported for the application by one OIG and the language strings are stored in the OIG database, and are included in the MSL backup.

To localize CJK languages on a non-CJK Windows system (Chinese, Japanese, and Korean):

1. Open the CSV (UTF-8 with BOM encoded) file in Excel,
2. Type all UTF-8 Chinese characters for the UI,
3. Save as type: **Unicode Text (*.txt)**.
4. Open the file in Notepad.
5. Edit the file to replace all tabs with commas. This creates a comma-delimited csv.
6. Use **Save As** again, and select UTF-8 from the **Encoding** menu, as described above.

Upgrading Mitel OIG Software

After initial installation of an OIG server, there are several options available when reinstalling software, including an upgrade to a newer release of software. The system administrator can also convert from a physical OIG server to a virtual OIG server.



Note: Refer to the MSL documentation for MSL database backup, restore, upgrade, and configuration procedures. The documentation is available on Mitel OnLine



Note: When upgrading from OIG 2.X to OIG 3.0, do not restore an MSL database backup from Mitel OIG 2.X into Mitel OIG 3.0. A database restore from Mitel OIG 2.X is NOT supported. When upgrading Mitel OIG 2.X use the Mitel OIG blades panel to first upgrade MSL 10.X to MSL 10.3, then upgrade Mitel OIG 2.X to Mitel 3.0 and the database will automatically be restored.

The restriction about Database restore during upgrade from Mitel OIG 2.X to Mitel OIG 3.0 is only temporary. Future upgrades from Mitel 3.0 to newer Mitel OIG versions will not have this restriction.

Option 1: Full Reinstall of OIG 3.0 Software

Repeat a fresh install of the physical OIG server with the same version and restore the MSL database.



Note: You cannot restore an OIG 2.x backup into an OIG 3.0 system.

1. Back up your OIG system (perform MSL database backup).
2. Insert MSL software media or download the MSL software and reboot the system.
3. When prompted to “Restore from Backup?” select “**Yes**”.
4. Install OIG software.

Option 2: Upgrade OIG Software and/or Upgrade MSL Operating System

Upgrade the version of MSL and/or the OIG server software. All available upgrade versions are automatically downloaded from the AMC to the Blades panel of the MSL interface.



Note: When an existing Mitel OIG server is upgraded to Mitel OIG 3.0, existing MiVoice Integration for Google 1.0 will stop working, so it is advisable to upgrade MiVoice Integration for Google first.

When OIG is upgraded, all clients will fail due to client incompatibility with the new OIG version. Staged upgrade is recommended, to minimize service disruption for users.

- **Staged upgrade:** A staging period is recommended when both old version OIG and OIG Release 3.0 are available. During this staging time, end-users upgrade their clients to migrate to the new version.
- **Unstaged upgrade:** In an unstaged upgrade, the old OIG version is upgraded to OIG Release 3.0. After the upgrade, all clients will fail. This will cause a service disruption until end-users upgrade their clients.

To upgrade to Mitel OIG Release 3.0:

1. Upgrade the MSL software using the [Upgrade](#) link in the Blades panel.
2. Reboot.
3. Upgrade the OIG software using the [Upgrade](#) link in the Blades panel.

Option 3: Convert a Physical OIG Server to a Virtual OIG Server

1. Make sure that the physical OIG and virtual OIG are at the same release, and that the physical and virtual MSL releases also match.
2. Apply the AMC part number for converting to the virtual OIG server Application Record.
3. Download the latest .ova file from Mitel OnLine.
4. Deploy the VOIG .ova file but do not power it up.
5. Back up your physical OIG system (perform MSL database backup).
6. Shut down the physical server, launch the vSphere Client, and power up the virtual appliance.
7. Open the virtual appliance console and at the prompt, **Restore from Backup?**, select **Yes**.

Mitel OIG Support Guidelines

Support eligibility and process

- MSA Developers can get installation and maintenance support by opening a ticket with MSA Developer Support, using the standard MSA process (i.e., via TCT-for-MSA).
- Reseller technicians get installation and maintenance support by opening a ticket with Mitel Product Support, using the standard Remedy process.
- For both developers and technicians, completion of Mitel OIG Installation and Maintenance Training and Certification is a prerequisite for obtaining support.

Obtaining Technical Assistance - MSA members

MSA member support is available to all current members of the MSA program who are in good standing and who have sufficient incident credits available. Members can contact MSA via the web when they wish to report a problem or incident.

TechCentral Tracker (TCT) for MSA Developer Support

The TechCentral Tracker (TCT) for MSA is an incident management web portal for MSA members that is used to report a problem and supply full problem information to Product Support. With the TCT for MSA, members can use the TCT web portal to create, modify, track and close Developer Support incidents, and to add log files and other supporting attachments to new or existing incidents.

Developer access to the TCT for MSA portal requires an active MSA Membership, active MSA-on-MOL logon credentials, and a valid MSA Developer TechID.



Note: The TechID is not the same number as the MSA Technical Support ID Code (TSID) that you previously used to access the e-mail-based MSA Developer Support.

You can access the new TCT for MSA portal by logging on to Mitel OnLine (MOL) using your MSA-on-MOL logon credentials, navigating to **Home > MSA > MSA Developer Support**, and clicking **TechCentral Tracker for MSA**.

The *TCT User Guide for MSA Developers* is available on the MSA-on-MOL web portal to aid you in incident creation and management.

Contact Mitel Support at Tech_Support_Admin@mitel.com with questions about access or use of the new TCT for MSA portal.

Troubleshooting - Getting log files

When troubleshooting issues with the Mitel OIG, Mitel Support will need two sets of software logs:

- Mitel OIG Tomcat logs
- MiVoice Business software logs.



Note: See Obtaining Technical Assistance for Mitel Support contact information.

The Mitel OIG Tomcat logs are found under `/var/log/tomcat` on the Mitel OIG server. A Mitel OIG administrator can use the MSL server command line to view the Tomcat log file or use the **MSL Server Manager Administration > View Log Files** option to select the Tomcat log from the drop-down menu and view the log in a browser.

The Mitel OIG Administrator user interface (UI) does not display errors that can occur while an application is interacting with the Mitel OIG. The administrator UI does show if the application has an active communication session with the Mitel OIG. See the OIG Administrator User Interface section for more information.

The MiVoice Business software logs can be viewed using the MiVoice Business System Administration Tool web browser interface. See the MiVoice Business user documentation for details.

Both the Tomcat logs and MiVoice Business software logs indicate when log messages are related to warnings or errors.

Mitel OIG Developer Tools

Mitel OIG Call Control Service Browser Tool

This Mitel OIG Browser Tool is a Windows-based test tool used to learn about how advanced applications use the Call Control service on the Mitel OIG. The Call Control Browser Tool requires the Advanced Call Control license.

The Browser Tool is used to test the Mitel OIG advanced Call Control service. The tool can be used to ensure that a connection is functioning properly and to initiate calls and view events from the Mitel OIG.

The Browser Tool runs on a workstation that has LAN connectivity to the Mitel OIG and the Mitel OIG needs to be connected to a MiVoice Business. The tool user must provide a Mitel certificate and recompile the tool. See the *Mitel OIG Developer Guide – Session Management* service for specific details about how an application uses certificates with a Mitel OIG. The Mitel certificate should be the same one that was requested for the advanced application being created by the developer.



Note: If there is a need to test a Mitel OIG for standard applications, then use the sample applications provided in the Mitel OIG Sample Application Package.

When using the Mitel OIG Browser Tool, application developers and Mitel support personnel can test problem scenarios reported during Mitel OIG application development. Application developers can also use the Browser Tool to learn how to use the Mitel OIG.

The Mitel OIG Browser Tool has the capability to monitor and control multiple devices on different MiVoice Business controllers.

To use the Mitel OIG Browser Tool, refer to the Mitel OIG sample applications package. The sample package includes the Mitel OIG Browser Tool, complete with instructions for its use.

Mitel OIG Data Access Service Browser Tool

This Mitel OIG Browser Tool is a Windows-based test tool used to learn about how applications use the Data Access service on the Mitel OIG. The tool is to be used to test the Mitel OIG standard Data Access service, and it can be used to ensure that a connection is functioning properly. It can also be used to read MiVoice Business configuration data from the Mitel OIG. The Browser Tool runs on a workstation that has LAN connectivity to the Mitel OIG and the Mitel OIG needs to be connected to a MiVoice Business.

When using the Mitel OIG Browser Tool, application developers and Mitel support personnel can test problem scenarios reported during Mitel OIG application development. Application developers can also use the Browser Tool to learn how to use the Mitel OIG.

The Mitel OIG Browser Tool has the capability to read data from different MiVoice Business controllers in one system cluster.

To use the Mitel OIG Browser Tool, refer to the Mitel OIG 2.2 sample applications package. The sample package includes the Mitel OIG Browser Tool with instructions for its use.

Appendix A: Localization file template

This appendix contains the Localization files for the text strings that appear on the user interfaces for MiVoice Integration for Google and MiVoice Integration for Google.

MiVoice Integration for Google: text strings for translation

messageKey	languageValue
my_ext	My Extension
enable_feature	Enable Feature
add_new_contact	Add New Contact
call_notes	Call Notes
logs	Logs
call_log_subject	Subject
call_log_subject_default	Call
settings	Settings
tooltips	Tooltips
logging_level	Enable Logging
call_log_comments	Enter Call Notes
call_log_default	Enter Call Notes
call_log_quick_notes	Quick Notes
call_log_wrap_up	Wrap Up
call_log_quick_note_label	Quick Note {0}
cancel	Cancel
save	Save
hold	Hold/Retrieve
conference	Conference
transfer	Transfer
dialpad	Dialpad
redirect	Redirect
answer	Answer
search	Search
unknown	Unknown
favorites	Favorites
all_calls	All Calls
received_calls	Received Calls
dialed_calls	Dialed Calls
add_contact	Add Contact
name	Name
email	Email
phone	Phone
work	Work

ringing_you_back	Ringling You Back
multiple_matches	Multiple Matches
corporate_directory	Corporate Directory
app_name	MiVoice Integration for Google
oig_err	Connecting to Mitel OIG
phone_oos_err	Phone out-of-service
err_no_config	Configure MiVoice using
err_no_gw	Connecting to Mitel system
phone_num_err	Phone number invalid
err_not_signedin	Sign in to Google Chrome
err_not_verified	Unauthorized phone number, {0}
invalid_password	Local Password Invalid
make_call_err	Make Call failed
answer_call_err	Answer Call failed
redirect_call_err	Redirect Call failed
hold_call_err	Hold Call failed
conf_call_err	Conference Call failed
trans_call_err	Transfer Call failed
retrieve_call_err	Retrieve Call failed
home	Home
mobile	Mobile
dtmf_send_err	Outpulsed Digits failed
clear_call_err	Clear Call failed
cancel_cons_err	Cancel Consultation Call failed
oig_settings	Mitel OIG Settings
oig_fqdn	Mitel OIG FQDN
mivoice_business_ip	Call Manager IP Address (optional)
oig_local_password	Mitel OIG Local Password
dn	Directory Number
receiving_call	Receiving Call
decline	Decline
options	Options
signed_in_as	Signed in as {0}
onhold	On Hold
callended	Call Ended
call_failed	Call Failed
dialing	Dialing
ringing	Ringling
choose_contact	Choose a Contact
save_exit	Save & Exit
save_review	Save & Review Contact
mivb_err	Connecting to Call Manager

cons_call_err	Consultation Call failed
settings_title	Settings
tooltip	Tooltips
date	Date
description	Description
phone_number	Phone number
duration	Duration
duration_format	{0} minutes, {1} seconds
call_type	Call Type
received	Received
dialed	Dialed
oncall	On Call
missed_calls	Missed Calls
missed	Missed

MiVoice Integration for Salesforce: text strings for translation

messageKey	languageValue
version_info	MiVoice v2.0.5.0
enter_extension	Enter Extension
trans_call_err	Transfer Call failed
retrieve_call_err	Retrieve Call failed
dtmf_send_err	Outpulsed Digits failed
clear_call_err	Clear Call failed
cons_call_err	Consultation Call failed
cancel_cons_call_err	Cancel Consultation Call failed
dialed	Dialed
call_log_saved	Saved
miscalls_tip	Missed Calls
hold_tip	Hold/Retrieve
conf_tip	Conference
trans_tip	Transfer
keypad_tip	Keypad
wrapup_save_create_opp	Save & Create New Opportunity
wrapup_cancel	Cancel
multi_callers	Choose a Contact...
multi_matches	Choose a record to screen pop
search_txt	Enter Name or Number...
call_log_classcode	Search Classification Code
phone_err	Unable to get phone number
unknown	Unknown

logout_tip	Logout
settings_tip	Settings
outcalls_tip	Dialed Calls
incalls_tip	Received Calls
redirect_tip	Redirect
wrapup_save_exit	Save & Exit
wrapup_save_create_task	Save & Create Follow-up Task
wrapup_save_create_event	Save & Create Follow-up Event
wrapup_save_create_case	Save & Create New Case
inbound_call_note	Inbound Call Notes
user_err	Unable to get user information
allcalls_tip	All Calls
enter_pin	Enter Pin
app_name	MiVoice Integration for Salesforce
login	Login
on	ON
off	OFF
yes	Yes
no	No
logout_txt	Logout?
call_log_subject	Call Subject
call_log_relatedto	Related to...
call_log_comments	Enter Call Notes
call_log_quick_notes	Quick Notes
call_log_wrap_up	Wrap Up
collect_digits	Collected Digits
que_name	Queue Name
user_settings	User Settings
cancel	Cancel
save	Save
tooltip	Tooltips
edit_num_to_dial	Edit Number to Dial
autosave	Auto Save Notes
mod_call_subject	Call Subject
logs	Logs
internal_call_note	Internal Call Notes
popup_time	Pop-Up Phone State
popup_ringing	Pop-Up at Ringing
popup_answered	Pop-Up at Answered
popup_order	Pop-Up Order
popup_ani	ANI Search
popup_dnis	DNIS Search

popup_collectdigits	Collected Digits Search
popup_newcontact	New Contact
popup_disable	Do not pop
dialing	Dialing
ringing	Ringling
ended	Call Ended
onhold	On Hold
oncall	On Call
ringing_you_back	Ringling You Back
call_failed	Call Failed
login_failed	Login Failed
available	Available
dnd	Do Not Disturb
away	Make Busy
oig_err	Connecting to Mitel OIG
mivb_err	Connecting to Call Manager
phone_oos_err	Phone out-of-service
extension_err	Phone extension invalid
license_err	No License
make_call_err	Make Call failed
answer_call_err	Answer Call failed
redirect_call_err	Redirect Call failed
hold_call_err	Hold Call failed
fav_tip	Favorites
call_log_acctcode	Search Account Code
outbound_call_note	Outbound Call Notes
incoming_call	Incoming Call
phone_num_err	Phone number invalid
conf_call_err	Conference Call failed

Appendix B: Language extensions

The following table lists the languages supported, and the language extension to use in the file name when creating a translation file for import.

LANGUAGE	LANGUAGE EXTENSION (CODE)
Chinese (Simplified)	zh-cn
Chinese (Traditional)	zh-tw
Danish	Da
Dutch	Nl
English	En
Finnish	Fi
French	Fr
German	De
Italian	It
Japanese	Ja
Korean	Ko
Norwegian Bokmål	nb
Portuguese (Portugal)	pt-Pt
Portuguese (Brazil)	pt-Br
Russian	Ru
Spanish	Es
Swedish	Sv

