



A MITEL
PRODUCT
GUIDE

Unify OpenScape Contact Center Enterprise

Overview Guide

Description

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Contents

1 About this guide.	5
1.1 Who should use this guide	5
1.2 Formatting conventions	5
1.3 Documentation feedback	6
2 Introducing OpenScape Contact Center	7
2.1 System requirements	8
2.1.1 Main server machine	8
2.1.2 Client machine	9
2.1.3 External components	10
2.2 Communication platform requirements	11
2.3 Product documentation	12
2.3.1 Service documentation	12
2.3.2 User documentation	12
2.3.3 System integration documentation	13
3 OpenScape Contact Center features	15
3.1 Call Director	15
3.2 Contact handling	16
3.2.1 Voice	16
3.2.2 Callback	16
3.2.3 E-mail	17
3.3 Feedback and productivity	17
3.3.1 Wallboards and Broadcaster	17
3.3.2 Personal performance statistics	18
3.3.3 Contacts Waiting Indicator	18
3.4 Presence and collaboration	19
3.4.1 Team List	19
3.4.2 Team Bar	19
3.4.3 Speed List	20
3.4.4 Speed Bar	20
3.4.5 Directory	21
3.5 Reporting	22
3.5.1 Real-time and cumulative reports	22
3.5.2 Historical reports	23
3.5.3 Activity reports	24
3.6 Routing	25
3.6.1 Group-based routing	25
3.6.2 Routing strategy workflows	27
3.6.3 Queue processing workflows	28
4 OpenScape Contact Center applications	31
4.1 Manager application	31
4.1.1 Default user profiles	32
4.1.1.1 Manager user profiles	32
4.1.2 Work centers	33
4.1.2.1 Administration Center	33
4.1.2.2 Broadcast Center	34

Contents

4.1.2.3 Design Center	34
4.1.2.4 Report Center	34
4.1.2.5 Telephony Center.	34
4.2 System Monitor application	35
4.3 Web Manager	36
4.4 Mobile Supervisor application.	36
4.5 Web Supervisor	37
4.6 Agent Portal Web	37
4.7 Virtual Agents (Chatbot)	39
4.8 Virtual Agents (Speechbot)	39
5 Third-party integration	41
5.1 IVR integration	41
5.2 Screen Pop API	41
5.3 Workforce management integration	41
5.4 OpenScape Contact Center Analytics Life of Call (LoC)– powered by Softcom	42
5.5 MS Teams Integration.	42
Index.	43

1 About this guide

This guide provides an overview of the main OpenScape Contact Center concepts and features, including detailed hardware, software, and network requirements specific to each supported communication platform.

1.1 Who should use this guide

This guide is intended to provide a high-level overview of OpenScape Contact Center so you can better prepare for the planning and design phase of the OpenScape Contact Center implementation.

1.2 Formatting conventions

The following formatting conventions are used in this guide:

Bold

This font identifies OpenScape Contact Center components, window and dialog box titles, and item names.

Italic

This font identifies references to related documentation.

`Monospace Font`

This font distinguishes text that you should type, or that the computer displays in a message.

NOTE: Notes emphasize information that is useful but not essential, such as tips or alternative methods for performing a task.

IMPORTANT: Important notes draw special attention to actions that could adversely affect the operation of the application or result in a loss of data.

About this guide

Documentation feedback

1.3 Documentation feedback

To report an issue with this document, call the Customer Support Center.

When you call, be sure to include the following information. This will help identify which document you are having issues with.

- **Title:** Overview Guide
- **Order Number:** A31003-S22B0-T100-02-7618

2 Introducing OpenScape Contact Center

OpenScape Contact Center is a multimedia contact center solution for routing, tracking, and handling contacts. It is a full-featured 'ready-to-run' solution that is easy to implement, configure, use, and expand as requirements change.

The OpenScape Contact Center system provides an integrated set of features and tools that you can use to manage multiple channels of customer interaction and improve the effectiveness and efficiency of your contact center.

It provides:

- Next generation visualization tools for contact center management and reporting that enable managers and supervisors to ensure optimum productivity in the contact center.
- An intuitive desktop for blended multimedia interaction handling that enables your contact center to improve customer service and increase interaction handling efficiency.
- Unique multimedia presence and collaboration tools that enable you to extend your contact center to experts and decision makers across the enterprise, including in remote locations.
- Innovative and easy-to-use communication tools for all media that optimize user productivity.
- Visual design tools for quickly and easily creating multimedia routing strategy and queue processing workflows.

The OpenScape Contact Center licenses are concurrent.

2.1 System requirements

This section describes the minimum requirements for the OpenScape Contact Center server and client machines, as well as the requirements for supported external components.

NOTE: These are the minimum system requirements. For improved performance, use hardware that exceeds these minimum requirements.

NOTE: A firewall between server and client machines is not recommended. If firewall implementation is required, contact your service representative.

2.1.1 Main server machine

The OpenScape Contact Center main server machine is the primary server on which the OpenScape Contact Center software resides. This machine is always required to run OpenScape Contact Center.

Attention: It is strictly forbidden to make the following changes in our database: create triggers, create new tables or alter the current tables, remove or create indexes, create views, access the temporary tables (i.e. callrecord1, callrecord2, agentrecord1, agentrecord2) or lock the database for external operations. Doing so may adversely affect the operation and performance of the OpenScape Contact Center system and we may not be able to fulfill our support obligation for the product.

The minimum requirements for installing the OpenScape Contact Center software on a main server machine are listed in the following table. The requirements differ depending on the number of expected active users.

NOTE: If you plan to configure the system for high availability (warm standby), the server machines must meet the requirements provided in [Section 3.6.1, "System requirements for the high availability \(warm standby\) feature"](#), on page 26.

Introducing OpenScape Contact Center

System requirements

Requirement	Up to 250 active users	Up to 750 active users	More than 750 active users
Processor ^a	One Intel Xeon E3-1271v3	One Intel Xeon E3-1271v3	Two Intel Xeon E5-2609v2
Memory	8 GB	8 GB	8 GB ^b
Hard drive	1 TB, 7200 RPM, SATA	1 TB, 7200 RPM, SATA	1 TB, 7200 RPM, SATA
Display settings	1024 x 768 pixels with 16-bit color		
Operating system	- Windows Server 2019 Standard or Datacenter - Windows Server 2016 Standard or Datacenter		
Other	1 Gbps^c Ethernet network interface card for the customer LAN 10 Mbps Ethernet network interface card for the communication platform LAN^d - DVD-ROM drive - SSDP Service Plug-in for remote service access 56 Kbps modem for pager notifications (optional) 20 GB capacity tape drive, supported by Informix (optional)		

Table 1 System requirements for a main server machine

- a The OpenScape Contact Center software has been tested on machines running Intel dual-core, Intel quad-core, and AMD dual-core processors. In general, hardware that meets or exceeds the minimum requirements can be used, provided that it delivers comparable or better performance.
- b Ensure that all the memory is made available to the Windows operating system.
- c 10 Mbps Ethernet network infrastructure is only supported if there are no more than five concurrent Manager applications installed on the system.
- d The network interface card for the customer LAN must be at the top of the TCP/IP bindings list, before the network interface card for the communication platform LAN.

2.1.2 Central reporting server machine

A central reporting server machine is required for the central reporting feature. For details, see [Section 3.2, "Central Reporting"](#).

The minimum system requirements for installing the OpenScape Contact Center software on a central reporting server machine are listed in [Table 2](#).

Requirement	Central reporting server machine
Processor ^a	One Intel Xeon E3-1271v3
Memory	8 GB ^b
Hard drive	1 TB, 7200 RPM, SATA
Display settings	1024 x 768 resolution with 16-bit color
Operating system	• Windows Server 2019 Standard or Datacenter • Windows Server 2016 Standard or Datacenter
Other	• 1 Gbps Ethernet network interface card for the customer LAN • DVD-ROM drive • SSDP Service Plug-in for remote service access • 56 Kbps modem for pager notifications (optional) • 20 GB capacity tape drive, supported by Informix (optional)

Table 2 System requirements for a central reporting server machine

a The OpenScape Contact Center software has been tested on machines running Intel dual-core, Intel quad-core, and AMD dual-core processors. In general, hardware that meets or exceeds the minimum requirements can be used, provided that it delivers comparable or better performance.

b Ensure that all the memory is made available to the Windows operating system.

2.1.3 Auxiliary server machine

An auxiliary server machine can be installed at a remote site (where the users are located) to reduce the bandwidth required to transfer real-time and cumulative statistics over the network from the main site. It can also be used to run the servers for the optional SAP ICI integration.

NOTE: To determine whether you require an auxiliary server machine, contact your service representative.

NOTE: When the system is configured for high availability (warm standby), auxiliary server machines are not supported.

The minimum system requirements for installing the OpenScape Contact Center software on an auxiliary server machine are listed in [Table 3](#).

Requirement	Auxiliary server machine
Processor ^a	One Intel Xeon E3-1271v3
Memory	8 GB
Hard drive	1 TB, 7200 RPM, SATA
Display settings	1024 x 768 resolution with 16-bit color
Operating system	• Windows Server 2019 Standard or Datacenter • Windows Server 2016 Standard or Datacenter
Other	• 1 Gbps Ethernet network interface card for the customer LAN • DVD-ROM drive

Table 3 System requirements for an auxiliary server machine

^a The OpenScape Contact Center software has been tested on machines running Intel dual-core, Intel quad-core, and AMD dual-core processors. In general, hardware that meets or exceeds the minimum requirements can be used, provided that it delivers comparable or better performance.

2.1.4 Client machine

The minimum system requirements for installing the OpenScape Contact Center software on a client machine are listed in the table below. The requirements differ depending on the type of OpenScape Contact Center applications you expect to run on the machine.

NOTE: If you intend to run two instances of the Manager application on a client machine at one time, the hardware should exceed the minimum system requirements to ensure a reasonable level of performance.

Requirement	Agent Portal Client	Manager or System Monitor
Processor ^a	Intel Pentium 4 at 1.6 GHz (Intel Pentium Dual-core E2180 at 2.0 GHz recommended)	Intel Pentium 4 at 1.6 GHz (Intel Pentium Dual-core E2180 at 2.0 GHz recommended)
Memory	1 GB	1 GB (2 GB recommended)
Hard drive	100 MB available disk space	500 MB available disk space
Display settings	1024 x 768 pixels with 16-bit color	
Operating system	• Windows 10 Professional and Enterprise Edition	
Other	• 100 Mbps Ethernet network interface card for the customer LAN • DVD-ROM drive (optional)	• 100 Mbps^b Ethernet network interface card for the customer LAN • DVD-ROM drive (optional) • Sound playback device for listening to OpenScape Contact Center .wav files or audible thresholds from reports (optional)

Table 4 System requirements for OpenScape Contact Center client software

- a The OpenScape Contact Center software has been tested on machines running Intel dual-core, Intel quad-core, and AMD dual-core processors. In general, hardware that meets or exceeds the minimum requirements can be used, provided that it delivers comparable or better performance.
- b 10 Mbps Ethernet network infrastructure is only supported if there are no more than five concurrent Manager applications installed on the system.

2.1.5 External components

OpenScape Contact Center supports integration with the external components listed in this section.

Component	Requirements
E-mail and LDAP components	- Corporate e-mail servers: - Microsoft Office 365 - Microsoft Exchange Server 2007, 2010, 2013, 2016 and 2019 - IBM Lotus Domino 8.0, 8.5 and 9 - Protocols: - IMAP Version 4 - SMTP Version 1 (Enhanced SMTP is not supported)
Presence integration	When using the OpenScape UC Application integration feature, the following versions are supported: OpenScape UC Application V7R2
Voice processor	The following voice processors are supported: - OSCMS (OpenScape Contact Media Service) Notes: - The Call Director feature requires a voice processor to handle interactive messages.
Voice processor – OpenScape Contact Media Service	OpenScape Contact Media Service voice processors can be used with Call Director to handle interactive messages when the system is connected to an OpenScape Voice, OpenScape 4000, or OpenScape Business communication platform. The system supports the use of multiple OpenScape Contact Media Service voice processors. The number of extensions that are supported depends on the communication platform: - OpenScape Voice – Up to 300 extensions. - OpenScape 4000 – Up to 120 extensions. NOTE: Must be connected to an STM14 board, an STMIX board or SoftGate that has been configured to support SIP extensions. - OpenScape Business V2 - Up to 56 extensions

Table 5 Supported external components

Introducing OpenScape Contact Center

Communication platform requirements

Component	Requirements
Wallboards	The following Spectrum IP and serial (with a Spectrum IP converter kit) wallboards are supported: • 3024C • 3027C • 3214C • 3614C • 3024-IPC • 3029-IPC • 3214-IPC • 3614-IPC • 4200R Note: Other wallboards that adhere to the EZ Key II protocol are also supported. Ensure that you have the supported firmware for the wallboard.
Web components	• Corporate Web servers – Microsoft Internet Information Server (IIS) 10 on Windows – Server 2016 – Apache Tomcat 9 on Windows Server 2016 – ApacheTomcat7.0.63onRedHatEnterpriseLinux6Server – Apache Tomcat 6.0 on Red Hat Enterprise Linux 6 Server • Web browsers – Internet Explorer 8, 9, 10 and 11 – Firefox 10, 11 and 63.0 – MS Edge 42 Note: VoiceXML integration is not supported with the Sun Java System Web Server.

Table 5 Supported external components

2.2 Communication platform requirements

OpenScape Contact Center supports the following communication platforms:

- OpenScape Voice V7, V8 and V9
- OpenScape 4000 V7 and V8
- OpenScape Business V2

2.2.1 OpenScape Voice

An OpenScape Contact Center main server machine connects directly to an OpenScape Voice communication platform. However, the following is required to support Call Director and announcements:

- OpenScape Contact Media Service

To integrate the Circuit telephony features with OpenScape Contact Center, a custom application must be created on Circuit. This procedure generates a unique client ID and client secret and provide basic configuration for the application. The tools provided are mandatory for authentication and authorization via OAuth 2.0 on the Circuit API.

2.2.2 OpenScape 4000

The following items must be installed on an OpenScape 4000 communication platform when connecting to an OpenScape Contact Center main server machine:

- Network interface card for the customer LAN

2.2.3 OpenScape Business

The minimum requirements for connecting an OpenScape Contact Center main server machine to an OpenScape Business communication platform are the following:

- UC Booster Card or external UC Booster Server

2.3 Product documentation

This guide is part of a comprehensive documentation package for the OpenScape Contact Center system. The complete package includes the documentation listed in the following sections.

2.3.1 Service documentation

- **Communication Platform Integration Guide** — Describes how to configure the various supported communication platforms and voice processors to integrate with the OpenScape Contact Center system.
- **Installation Guide** — Describes how to install, upgrade, and configure the OpenScape Contact Center software on both server and client machines.
- **System Management Guide** — Describes how to configure third-party hardware, such as wallboards, corporate e-mail servers, and corporate Web servers, to integrate with the OpenScape Contact Center system. It also describes how to perform ongoing maintenance of the system, including backing up and restoring the database.

2.3.2 User documentation

- **Manager Administration Guide** — Provides an overview of the Manager application and walks users through the various administration tasks that need to be performed on an ongoing basis.
- **Manager Help** — Provides detailed instructions on how to use all the features available in the Manager application.
- **Web Manager Administrator Guide** - Provides detailed instructions on how to use all the features available in the Web Manager application

- **Overview Guide** — Provides an overview of the main OpenScape Contact Center concepts and features, including detailed hardware, software, and network requirements specific to each supported communication platform.
- **Reporting Reference Guide** — Provides detailed information on interpreting reports, including descriptions of report types, predefined report templates, and statistics.
- **System Monitor Help** — Provides detailed instructions on how to use all the features available in the System Monitor application.
- **Supervisor User Guide** - Provides detailed instructions on how to use the Mobile and Web Supervisor applications.
- **OpenMedia Connectors Deployment Guide** - Provides detailed instructions on how to install and configure the Facebook, Twitter and WhatsApp Connector applications.
- **Agent Portal Web User Guide** - Provides detailed instructions on how to use the Agent Portal Web application.

2.3.3 System integration documentation

- **IVR API Integration Guide** — Describes how to integrate the OpenScape Contact Center system with an Interactive Voice Response (IVR) system using the IVR Application Programming Interface (API).
- **SAP ICI Integration Guide** — Provides an overview of the OpenScape Contact Center integration with the SAP Integrated Communication Interface (ICI).
- **Screen Pop API Integration Guide** — Describes how to integrate the OpenScape Contact Center system with the Screen Pop Application Programming Interface (API).
- **Siebel Integration Guide** — Provides an overview of the OpenScape Contact Center integration with the Siebel CRM 7.8 desktop environment.
- **VoiceXML Integration Guide** — Describes how to integrate the OpenScape Contact Center system with an Interactive Voice Response (IVR) system using the VoiceXML interface.
- **Workforce Management Integration Guide** — Describes the statistical and administration XML data that is exported by the OpenScape Contact Center system for use in third-party workforce management applications.

Introducing OpenScape Contact Center

Product documentation

3 OpenScape Contact Center features

This chapter provides a brief description of the beneficial features of the OpenScape Contact Center system.

3.1 Call Director

Call Director is a licensed feature that works with the OpenScape Contact Media Service voice processor to execute interactive messages and announcements.

NOTE: The OpenScape Contact Media Service is supported only when the system is connected to an OpenScape Voice, OpenScape Business, OpenScape 4000 communication platform.

Call Director is a fully integrated basic Interactive Voice Response (IVR) application and interactive call processing tool that can be used to front end incoming interactions. Call Director is designed to enhance call handling productivity and customer service, without the high cost and complexity associated with a full IVR system.

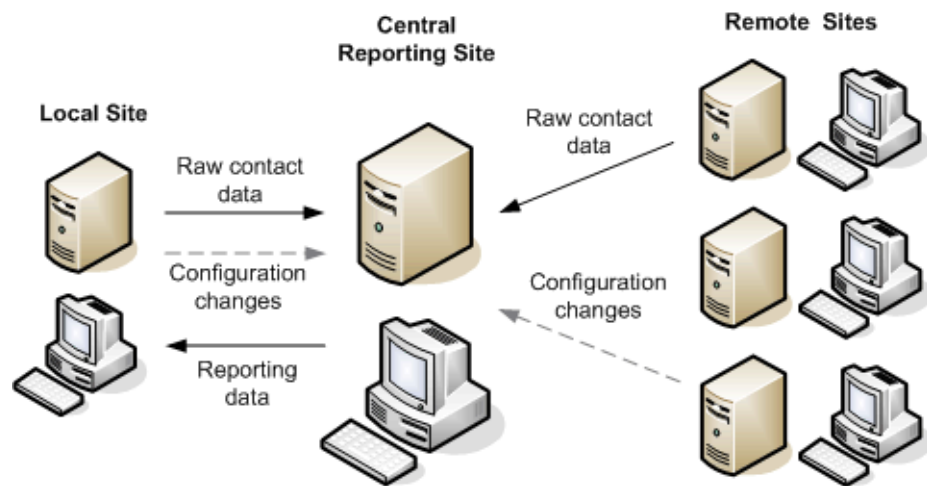
Call Director allows you to provide a variety of call processing features, including:

- **Messages and announcements** — Provide custom greetings and informational messages to customers to automate self-service items, such as business hours, weekly promotions, or frequently asked questions.
- **Menu prompts** — Gather requirements by allowing customers to select options and navigate through menus via their telephone keypad. These interactive menus allow the customer to make choices while waiting in queue and can be configured to be interruptible to allow the customer to input choices immediately rather than wait for prompts to finish.
- **Digit collection** — Collect information from the customer through the telephone keypad. Collected digits can be passed to the answering user's desktop in real time in order to streamline call handling. This information can also be passed to third-party applications, such as billing systems, in order to automate the retrieval of the customer's file.

- **Performance level messages** — Keep your customers informed by providing real-time feedback regarding the status of their call, such as the estimated wait time or their position in the queue. These intelligent messages help reduce call abandon rates by managing customer expectations.

3.2 Central Reporting

The central reporting feature uses a separate central reporting server machine that is running Informix and a subset of the OpenScape Contact Center servers.



A central reporting server machine can be used for the following purposes:

- To produce historical reports across multiple networked sites. For details on the networking feature, see [Section 3.8, "Networking"](#).
- To offload the historical reporting function from the main server machine. This allows the main server machine to process real-time contacts and real-time reports more efficiently.
- To provide increased data retention. Since more historical reporting data can be stored on a central reporting server machine, you can store reporting data for longer periods of time.
- When the system is configured for high availability (warm standby), to consolidate the historical reporting data from the server cluster. For details on the high availability (warm standby) feature, see [Section 3.6, "High availability \(warm standby\)"](#).

The central reporting feature provides reporting on all available media types. The central reporting server machine stores its own set of report definitions, independent of the definitions stored at local sites.

Note: When a central reporting server machine is used in a multitenant environment, only one main site is supported. For details on the multitenancy feature, see [Section 3.7, "Multitenancy"](#).

3.3 Contact handling

The OpenScape Contact Center system has the ability to route, track, and handle the following types of contacts:

- [Voice](#)
- [Callback](#)
- [E-mail](#)
- [Web collaboration](#)
- [Facebook connector](#)
- [Twitter connector](#)
- [WhatsApp connector](#)

3.3.1 Voice

In working with a communication platform to manage calls, the OpenScape Contact Center system's key responsibilities are calculating and delivering call routing directives, collecting statistics, and managing user interaction and component interaction with the communication platform. The communication platform is still responsible for initial call processing, fundamental operations such as transfers and holds, and other basic voice tasks.

The OpenScape Contact Center system supports the communication platforms listed in [Section 2.2, "Communication platform requirements"](#), on page 11.

3.3.2 Callback

The callback feature is a licensed feature that allows you to provide users and customers with the ability to generate callbacks. A callback is a request for a return call that is usually based on a customer's previous interaction with the contact center.

A callback can be generated in the following ways:

- A callback request is generated as part of the workflow using a Create Callback component. Using this method, you can reserve a callback for a specified user.
- A voice queue can be configured so that a callback is created automatically when a customer abandons a call.

NOTE: Support is provided for additional ways of creating callbacks programmatically, for example, by having an IVR gather contact information to generate a callback. Contact your service representative for details.

- A user schedules a callback from the Agent Portal application. Using this method, you can reserve a callback for a specified user.
- A customer generates a callback request from a Web page.
- The system automatically imports a list of callbacks to be scheduled. For details, see [Section 3.9, "Outbound", on page 28](#).

3.3.3 E-mail

The e-mail feature is a licensed feature that allows you to provide customers with the ability to interact with your contact center through e-mail messages. The customer sends an e-mail message to a particular e-mail address and the e-mail message is routed through your corporate e-mail server to the OpenScape Contact Center E-mail Server.

Note: A Multichannel User license is needed to handle this medium.

3.3.4 Web collaboration

The Web collaboration feature is a licensed feature that allows customers to communicate with your contact center by sending text messages using a Web browser. The customer submits a request from a Web page on the corporate Web site. The request is assigned to a queue where it waits for an available user. A user responds by opening a Web collaboration session.

For businesses such as service bureaus and other dedicated contact centers, Web collaboration provides an alternative to voice and e-mail, that provides customers the opportunity to communicate with a

contact center user in real-time. Other businesses can use Web collaboration as a form of support to the primary business. For example, a business with an emphasis on online sales could use Web collaboration as a live help option to let customers viewing Web pages interact with sales or support personnel.

NOTE: A Multichannel User license is needed to handle this medium.

3.3.5 Facebook connector

The Facebook Connector implements the conversion between the OSCC OpenMedia JSON API and the Facebook Graph API.

In order to send HTTP requests to the Application Server, the Connector uses the following URL: `https://<servername>/openmedia/webapi`.

The Facebook Connector registers on the OpenScape Contact Center by passing the Connector's name and a token which is generated via OSCC Manager Application, when the Connector is added to the OSCC. As a response to the registration, OSCC passes the company's Facebook user credentials to access the user account on Facebook and a Session Token.

The Facebook Connector logs in to Facebook with the credentials it receives from OSCC during registration. Facebook responds with the token which allows the Facebook Connector to keep the session open.

The Facebook Connector subscribes to the company page(s) and to the company user in order to be notified every time other Facebook users publish posts on the company's page timeline or on the company's user timeline. It also subscribes to the Facebook Messenger in order to be notified when messages are received. It is also able to filter the messages by means of keywords and sets of keywords.

The Facebook Connector also identifies when hashtags or mentions are present in published posts.

The Facebook Connector is also able to download an attachment from the Facebook server, store it locally and provide a URL which will be used by the Agent Portal to access the attachment. The attached files are automatically deleted after one week.

A separate license is not required for the Facebook Connector, as long as you have the new level of license named "Omni Channel License" necessary for the OpenMedia Framework.

3.3.6 Twitter connector

A Twitter user sends a direct message to the Company Twitter user. This message is received by the Contact Center and routed to a free agent. The agent starts a dialog with the customer via Twitter Direct Message.

A Twitter user mentions the Company Twitter user (@Company) in a tweet. The tweet is collected by the Contact Center and routed to a free agent. The agent can choose to send a direct message to the customer or can post a response to the customer tweet by adding the customer Twitter user name.

A Twitter user mentions the Company Twitter user (@Company) in a tweet. The tweet is collected by the Contact Center which tries to identify the customer and his/her phone number. If the phone number is identified, a callback is scheduled to the customer.

3.3.7 WhatsApp connector

The WhatsApp Connector can capture direct messages, that means one-to-one messages which are sent to the company user. WhatsApp groups are not supported.

The WhatsApp Connector implements the conversion between the OSCC OpenMedia JSON API and the WhatsApp API.

In order to send HTTP requests to the Application Server, the Connector uses the following URL: `https://<servername>/openmedia/webapi`

The WhatsApp Connector registers on the OpenScape Contact Center by passing the Connector name and a token which is generated via OSCC Manager Application when the Connector is added to OSCC. As a response to the registration, OSCC passes the WhatsApp company user credentials to access the user account on WhatsApp and a Session Token.

NOTE: Verify whether WhatsApp allows implicit authentication.

The Session Token is provided by the Authorization header of any HTTP request sent by the Connector to the OSCC OpenMedia Server.

The WhatsApp Connector logs in to WhatsApp either via the credentials it received from OSCC during registration (when allowed by WhatsApp) or the credentials must be manually provided to WhatsApp. WhatsApp responds with the token which allows the WhatsApp Connector to keep the session open.

The WhatsApp Connector subscribes to the WhatsApp company user to be notified every time other WhatsApp users posts to the company user.

The WhatsApp Connector can handle up to 6000 posts / hour. Since OSCC is able to handle up to 3000 posts / hour, the posts which exceed this post rate are stored by the WhatsApp Connector to be passed further to OSCC when the traffic is lower.

The WhatsApp Connector can temporarily store up to 30000 posts which cannot be passed further to OSCC or to WhatsApp server for any reason.

3.4 Multiple contact handling

To increase agent productivity and the average speed of answer, the system can be configured to allow users to handle multiple routed contacts at the same time. The number and types of contacts that a user can handle at one time are defined using contact handling rules. The system's routing logic takes the user's contact handling rules into account to determine the routing availability. The maximum number of active contacts that a user can handle concurrently is eight, of which no more than one contact can be a call or a callback. Additional statistics related to multiple contact handling are provided to help managers and supervisors manage contact center performance.

3.5 Feedback and productivity

The OpenScape Contact Center system provides performance feedback and productivity tools that empower Agent Portal users to understand current operating conditions and manage their own personal performance, thus improving employee efficiency and satisfaction. As a result, supervisor workload is reduced, because users can easily see their personal performance as it relates to service level or operational targets.

3.5.1 Wallboards and Broadcaster

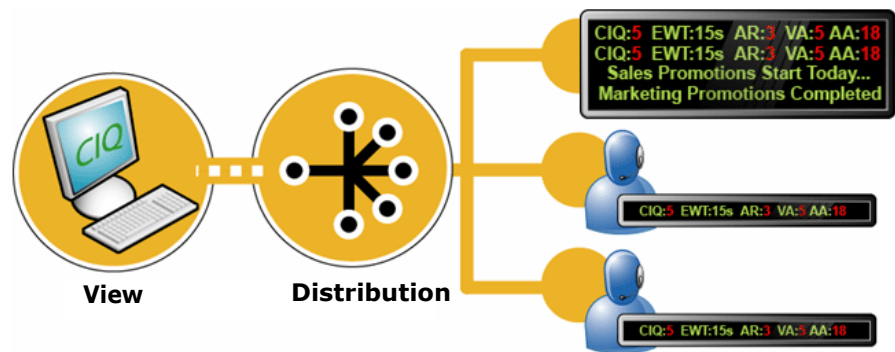
A wallboard is an electronic message board that displays a scrolling view of real-time statistical data and general system information about the contact center to several users at once. Data on a wallboard is refreshed using the same refresh interval as the Agent Portal application so you can visually alert all users of changes in the operational conditions of the contact center.

OpenScape Contact Center features

Feedback and productivity

Broadcaster is an integrated “ticker-tape” display that, like a personal wallboard, distributes real-time operational statistics and supervisor messages directly to the user’s desktop. Users can control the display, including stopping, moving, and controlling the speed and direction of the display. Broadcaster can be displayed as part of the Agent Portal application or torn off and parked elsewhere on the screen.

Views and distributions are used to send messages and statistical data to wallboards and Broadcaster. A view displays information on a wallboard or user’s desktop, such as performance statistics for contacts, users, groups, or queues. A distribution is a group of users or wallboards to which you can assign a view.



3.5.2 Personal performance statistics

Personal performance statistics visually inform users of their adherence to thresholds and business targets as defined by their manager, such as utilization, contact handling time, and the number of contacts handled.

Cumulative information is displayed since the start of the user’s shift and is updated in real time. Statistics can be configured to change color or flash when their thresholds are exceeded.

3.5.3 Contacts Waiting Indicator

The Contacts Waiting Indicator is a visual indicator of the number of contacts waiting in queue that the user is eligible to handle. This allows users to pace their activities accordingly.

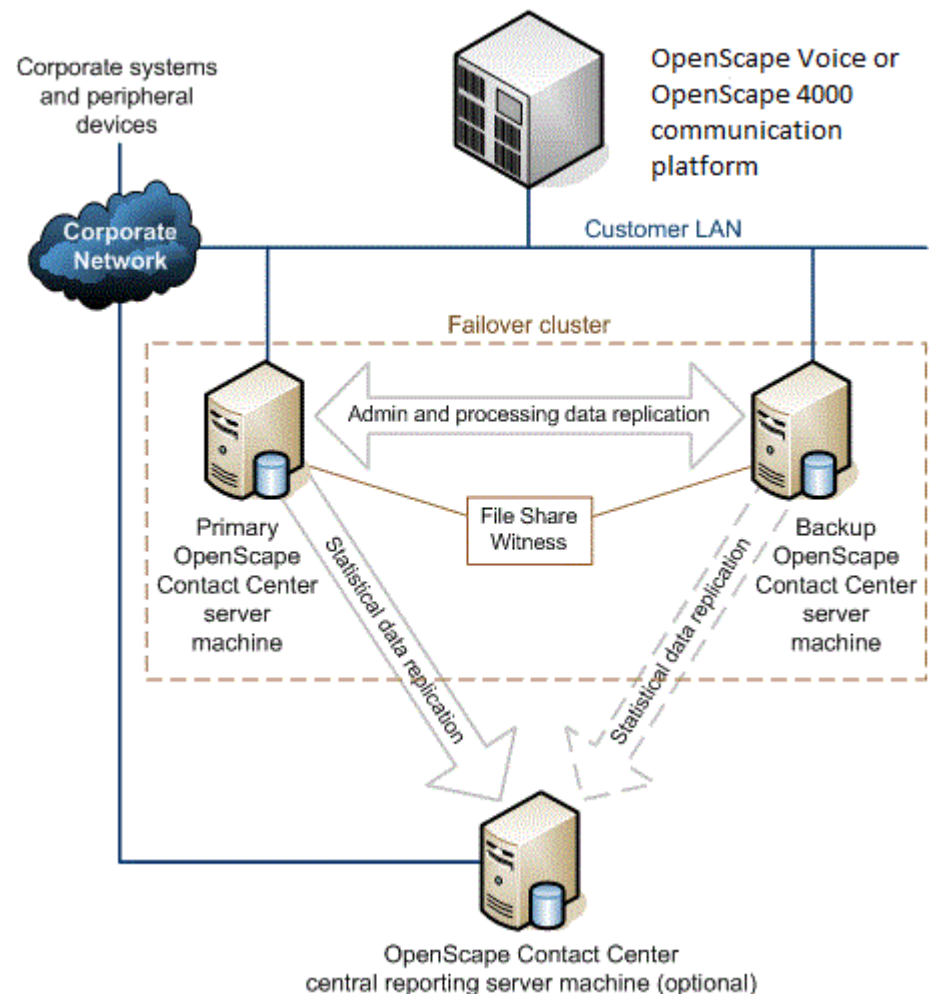
The Contacts Waiting Indicator has configurable thresholds to identify performance highs and lows. The indicator has four states: off, on, slow flash, and fast flash. These states correspond to thresholds that can be

set in the Manager application. As the number of contacts waiting increases and passes each threshold, the indicator moves through the different states.

3.6 High availability (warm standby)

High availability (warm standby) is a licensed feature that is supported only when the system is connected to an OpenScape Voice or OpenScape 4000 communication platform.

The high availability (warm standby) feature uses a redundant server machine to provide a high level of availability for OpenScape Contact Center server processes and required third-party processes in the event of a hardware or software component failure.



OpenScape Contact Center features

High availability (warm standby)

An optional central reporting server machine can be used to consolidate statistical data from the server cluster and thus provide on-going historical reporting during and after failover. For details on the central reporting feature, see [Section 3.2, “Central Reporting”](#).

NOTE: When the system is configured for high availability (warm standby), auxiliary server machines are not supported.

3.6.1 System requirements for the high availability (warm standby) feature

The minimum system requirements for installing the OpenScape Contact Center high availability (warm standby) feature are listed in the following table.

Requirement	Mainserver—upto750active users	Mainserver—morethan750 active users
Processor ^a	Intel Xeon E5-2609v2	Two Intel Xeon E5-2609v2
Memory	8 GB	8 GB ^b
Hard drive	1 TB, 7200 RPM, SATA	1 TB, 7200 RPM, SATA
Displaysettings	1024 x 768 pixels with 16-bit color	
Operating system	- Windows Server 2019 Standard or Datacenter - Windows Server 2016 Standard or Datacenter	
Other	- Teamed network interface card^c to provide adapter fault tolerance for the customer LAN - A single, non-redundant network interface card for the private network for the server cluster^d - Redundant disks, power supplies, and cooling units (optional, but highly recommended) - Error checking and correcting (ECC) memory (optional, but highly recommended) - DVD-ROM drive - SSDP Service Plug-in for remote service access 56 Kbps modem for pager notifications (optional) 20 GB capacity tape drive, supported by Informix (optional)	

Table 4 High availability (warm standby) system requirements for a main server machine

a The OpenScape Contact Center software has been tested on machines running Intel dual-core, Intel quad-core, and AMD dual-core processors. In general, hardware that meets or exceeds the minimum requirements can be used, provided that it delivers comparable or better performance.

b Ensure that all the memory is made available to the Windows operating system.

- c The high availability (warm standby) feature has been tested on server machines using an Intel Pro/1000 MT Dual Server Adapter. However, a comparable adapter can be used provided that it has the ability to expose a virtual MAC address for adapter fault tolerance, so that teamed network interface cards are transparent to OpenScape Contact Center.
- d You must configure the TCP/IP properties of the network interface card for the cluster private network such that the IP address is not registered in the DNS.

3.7 Multitenancy

Multitenancy is a licensed feature that is supported only when the system is connected to an OpenScape Voice, OpenScape 4000 communication platform.

The multitenancy feature enables a single contact center to have multiple business units that are clearly separated from each other. For example, in a managed services environment, the service provider needs to ensure that the different business units on the system cannot view each other's resources. Similarly, in a service bureau, supervisors and agents servicing different customers should not be able to view another customer's resources.

NOTE: Networking and SAP ICI integration are not supported in a multitenant environment.

NOTE: Licensed features are shared between business units in a multitenant environment.

NOTE: If the contact center is using a central reporting server machine, the central reporting server machine can be used by only one site and cannot be shared by multiple sites.

In a multitenant environment, there are two administrator roles:

- **System administrator** — System administrators are responsible for configuring the business units and other system-level resources, such as the OpenScape Contact Center servers and communication platform resources.
- **Business unit administrator** — Business unit administrators are responsible for configuring all other items required for their specific business units, such as Broadcaster and wallboard views, routing strategy and queue processing workflows, queues, and reports.

3.8 Networking

Networking is a licensed feature that allows you to distribute calls across multiple OpenScape Contact Center sites. Each site that is configured to participate in networking shares various performance statistics with the other networked sites. A voice networking workflow enables a series of decision criteria to be applied so that the system can determine whether to distribute a contact to a networked site and, if so, how to select the site to which the contact is sent.

NOTE: In a multitenant environment, networking is not supported. For details on the multitenancy feature, see [Section 3.7, “Multitenancy”](#), on page 27.

3.9 Outbound

Out bound is a licensed feature that is supported only when the system is licensed to handle callbacks.

The outbound feature allows you to configure the system to automatically import a text file (called an outbound list) that contains a list of callbacks to be scheduled. When this feature is enabled, the OpenScape Contact Center system scans a folder every five minutes, looking for a specified file. When the system finds the file, it automatically imports the file, schedules the callbacks, and then renames the file to a timestamp-based name.

The outbound list is normally generated by an external system, such as an SAP, although you can create a custom outbound list, if required.

3.10 Presence and collaboration

Several tools provide access to detailed presence information for all media, so that Agent Portal users can easily find the right person to help resolve a customer issue in real time.

These tools enable your contact center users to:

- Maximize their effectiveness.
- Save time and expense by eliminating unnecessary callbacks, queues, and transfers to voice mail.
- Leverage the expertise across the enterprise to provide higher value interactions.

- Facilitate first contact resolution to improve productivity and customer satisfaction.

3.10.1 Team List

The Team List is a fully-integrated, real-time presence and collaboration tool that allows a user to view the status and availability of up to 100 peers inside and outside the contact center. The users that can be displayed in the Team List are defined in the Manager application.

Team List members can be sorted by name, department, current status, and even the media they are logged on to. When the need arises, users can quickly contact the person they need to help resolve customer issues.

3.10.2 Team Bar

The Team Bar allows users to create a group of up to 25 team members whom they work with most often and display this list as a desktop toolbar for quick access. The Team Bar contains a subset of the entries from the Team List.

The Team Bar is completely customizable. Users can add or delete team members, undock and move the Team Bar to a different location on the screen, and change its size.

3.10.3 Speed List

To maximize efficiency, users can create a personal Speed List that contains up to 100 people whom they contact frequently. Users can store information about these contacts, such as multiple telephone numbers and e-mail addresses, so they can quickly retrieve contact information.

For example, if a customer has multiple telephone numbers (Office, Mobile, and Home) or several e-mail addresses, the user can quickly select the one to use.

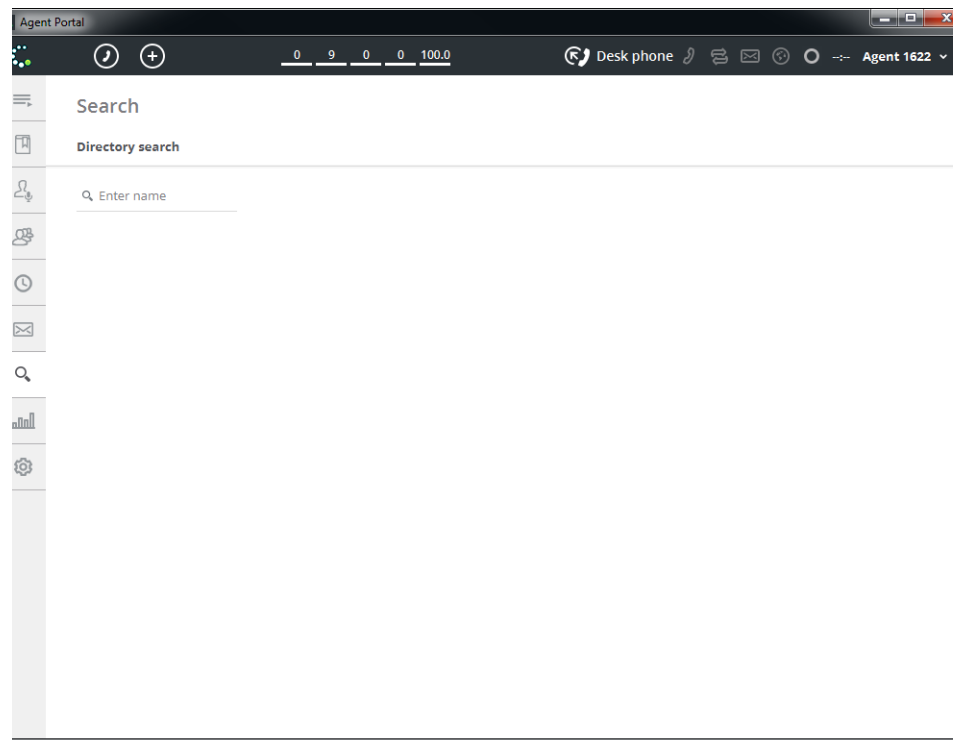
3.10.4 Speed Bar

The Speed Bar allows users to create a group of up to 25 people they contact most frequently and display this list as a desktop toolbar for quick access. The Speed Bar contains a subset of the entries from the Speed List.

The Speed Bar is completely customizable. Users can add or delete contacts, undock and move the Speed Bar to a different location on the screen, and change its size.

3.10.5 Directory

To assist with first contact resolution and leverage the knowledge of others, Agent Portal Web users can query against existing corporate and external LDAP-compliant directories, to contact colleagues and customers who are beyond the boundaries of the contact center.



When the optional presence integration feature is enabled and the Agent Portal Web user performs a directory search, the system attempts to obtain the presence of each entry in the search results, as follows:

- The system first attempts to obtain the user presence state and voice media presence state from the OpenScape Unified Communications (UC) Application, provided that the OpenScape UC Application Integration feature is enabled and configured.
- If the user is not an OpenScape UC Application user, or the OpenScape UC Application integration feature is not enabled or is not available, the system attempts to obtain the user presence state from the OpenScape Contact Center system.
- If the user is not an OpenScape Contact Center user or the presence state is not available from the OpenScape Contact Center system, and the system is connected to an OpenScape Voice communication platform, the system attempts to obtain the line state of the user's device from the OpenScape Voice communication platform.

For convenience, entries in the directory can be added to the Speed List and Speed Bar with a single mouse click.

3.11 Reporting

You can use the Manager reporting feature to view performance data which can help you resolve issues, evaluate the efficiency of your contact center, and optimize your OpenScape Contact Center configuration. Reporting provides real-time statistics, accumulated statistics for the current day, and historical statistics on various contact center resources. Options range from online views showing the current status of particular resources to traditional statistical summaries.

3.11.1 Real-time and cumulative reports

Real-time reports provide detailed up-to-date contact center information, such as user utilization, service levels, abandon rates, and average handling time for all media types. You can choose from a comprehensive range of statistical values for blended as well as media-specific reports.

Cumulative reports provide accumulated performance statistics for the previous 24-hour period. These statistics are continuously updated at configured intervals, such as every 15 minutes or every hour, to include trending information that allows you to compare the statistics with statistics from a previous day.

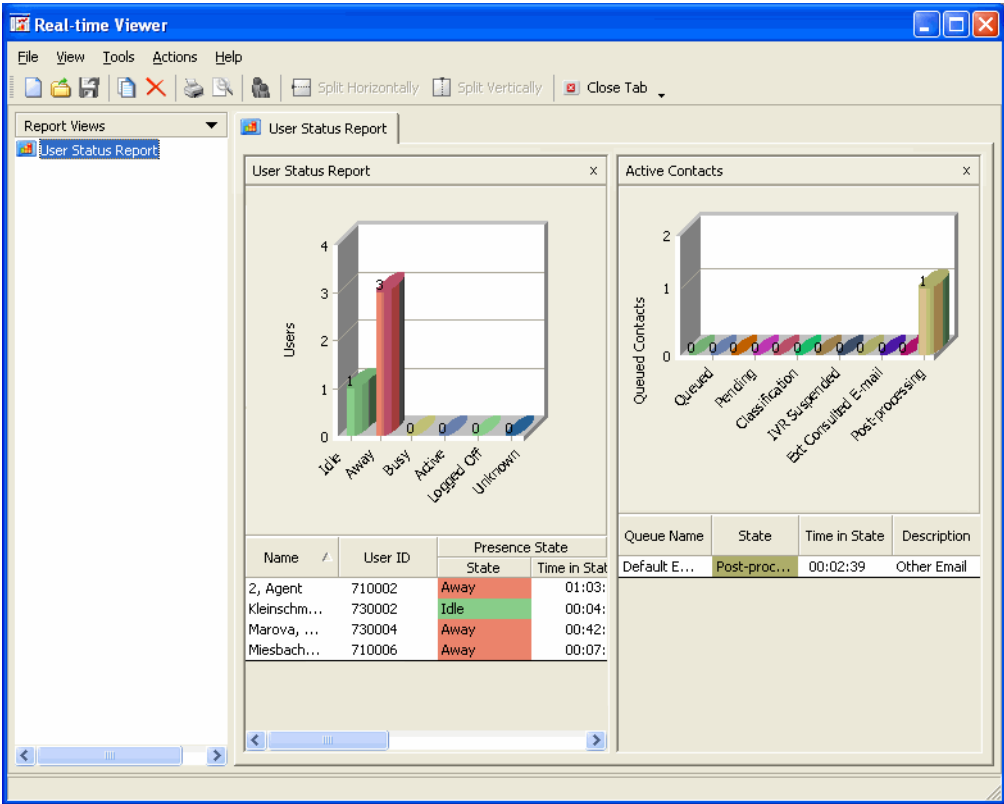
OpenScape Contact Center features
Reporting

Real-time and cumulative reports have an alarm mechanism to alert you to key column values in the report. For each column in the report, you can set a threshold condition.

Views can be delivered in a variety of graphical and tabular formats. A built-in analytic model uses actual data trends to predict performance patterns and volumes in real-time, enabling you to make better decisions regarding staffing resources or contact routing approaches.

The Real-time Viewer enables you to display one report view at a time. Each report view can display up to four real-time or cumulative reports. These views are automatically updated on screen at configurable refresh intervals.

The following is an example of a real-time report displayed in the Real-time Viewer:



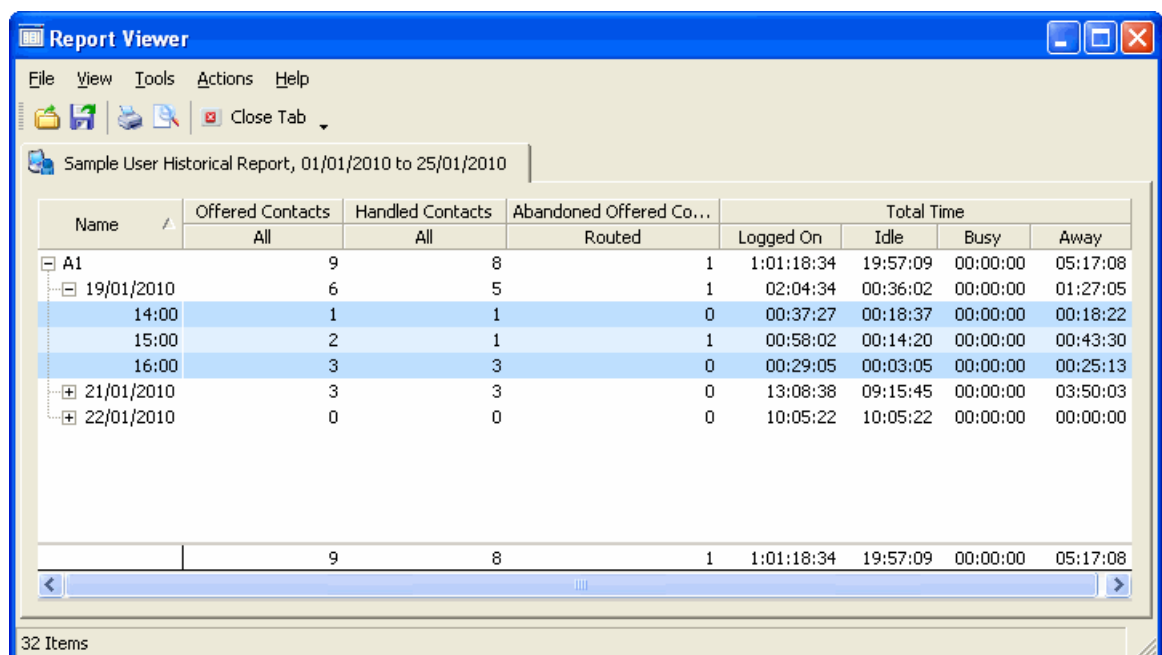
3.11.2 Historical reports

Historical reports provide statistical summaries on the performance of specific resources over a specified time period. Historical reports are commonly used to evaluate or assess contact center performance, configuration efficiency, and the productivity of individual queues and users. Statistics are available at user, department, and site levels.

Historical reports can be viewed on-demand or scheduled to run on a daily, weekly, or monthly basis. The reports can be delivered in a variety of graphical and tabular formats and can be printed or exported to a variety of formats. The system can also automatically distribute historical reports as attachments to e-mail messages.

The Report Viewer enables you to flexibly adjust report output even after the reports have been run. You can reorder and resort content, as well as tailor the level of detail displayed on screen.

The following is an example of a historical report displayed in the Report Viewer:



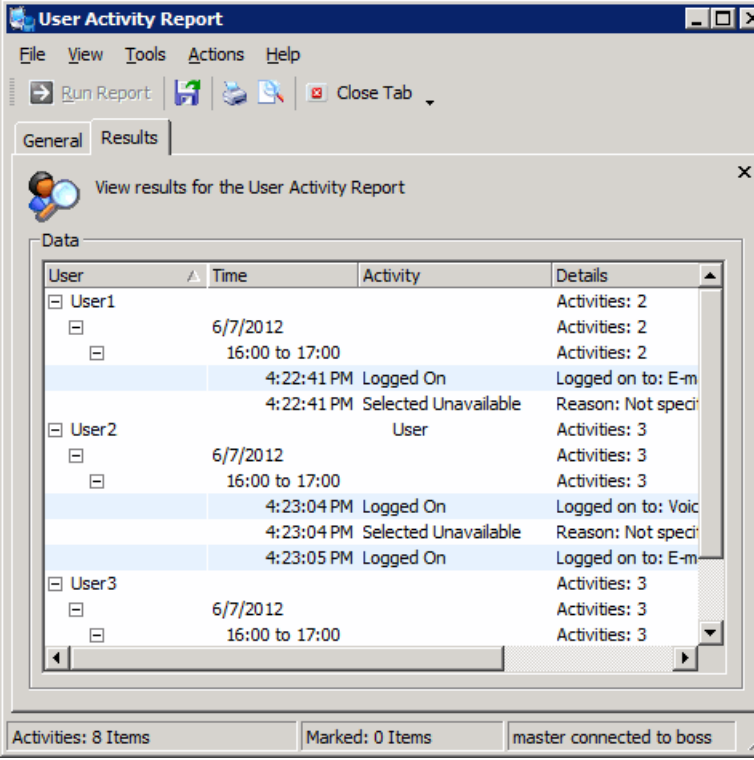
Name	Offered Contacts	Handled Contacts	Abandoned Offered Co...	Total Time			
	All	All	Routed	Logged On	Idle	Busy	Away
A1	9	8	1	1:01:18:34	19:57:09	00:00:00	05:17:08
19/01/2010	6	5	1	02:04:34	00:36:02	00:00:00	01:27:05
14:00	1	1	0	00:37:27	00:18:37	00:00:00	00:18:22
15:00	2	1	1	00:58:02	00:14:20	00:00:00	00:43:30
16:00	3	3	0	00:29:05	00:03:05	00:00:00	00:25:13
21/01/2010	3	3	0	13:08:38	09:15:45	00:00:00	03:50:03
22/01/2010	0	0	0	10:05:22	10:05:22	00:00:00	00:00:00
	9	8	1	1:01:18:34	19:57:09	00:00:00	05:17:08

3.11.3 Activity reports

There are three types of activity reports that you can generate:

- **User Activity Report** – Provides historical, minute-by-minute, state and activity data for a user or group of users during a specified time interval for a specified date range. If multiple locations are configured, you can choose to run the report based on the time zone of the local site or user location.
- **Source Activity Report** – Provides historical, minute-by-minute, state and event data for all contacts from a source or list of sources during a specified time interval for a specified date range.
- **Scheduled Callback List** – Provides a list of the callbacks scheduled for the contact center.

The following is an example of a User Activity Report:



The screenshot shows a window titled "User Activity Report" with a menu bar (File, View, Tools, Actions, Help) and a toolbar (Run Report, Close Tab). The window has two tabs: "General" and "Results". The "Results" tab is active, showing a table of user activities. The table has four columns: User, Time, Activity, and Details. The data is organized by user (User1, User2, User3) and then by time (6/7/2012, 16:00 to 17:00). The activities include "Logged On" and "Selected Unavailable". The details column provides additional information such as "Logged on to: E-m", "Reason: Not speci", and "Logged on to: Voic".

User	Time	Activity	Details
[-] User1			Activities: 2
[-] 6/7/2012			Activities: 2
[-] 16:00 to 17:00			Activities: 2
	4:22:41 PM	Logged On	Logged on to: E-m
	4:22:41 PM	Selected Unavailable	Reason: Not speci
[-] User2			Activities: 3
[-] 6/7/2012			Activities: 3
[-] 16:00 to 17:00			Activities: 3
	4:23:04 PM	Logged On	Logged on to: Voic
	4:23:04 PM	Selected Unavailable	Reason: Not speci
	4:23:05 PM	Logged On	Logged on to: E-m
[-] User3			Activities: 3
[-] 6/7/2012			Activities: 3
[-] 16:00 to 17:00			Activities: 3

Activities: 8 Items Marked: 0 Items master connected to boss

3.12 Routing

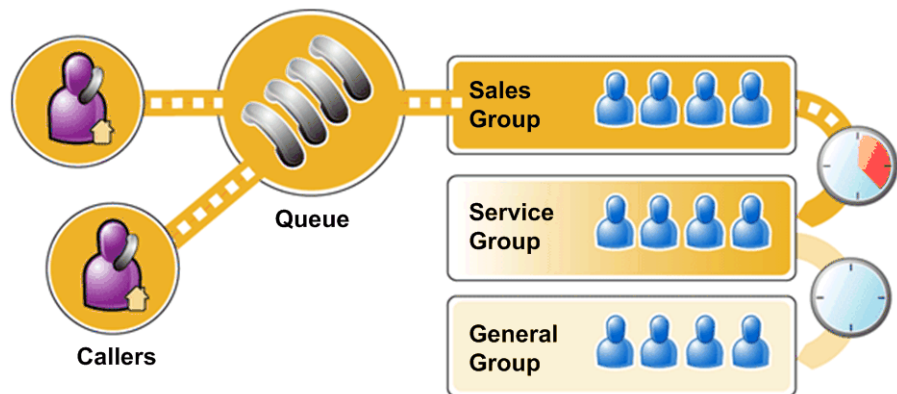
Several routing features are available to help you develop your own routing strategy.

3.12.1 Group-based routing

Group-based routing is the process of matching a contact to the best group of users eligible to handle the contact. Group-based routing is the OpenScape Contact Center default routing method.

When OpenScape Contact Center routes a contact to a queue, the primary step in the queue attempts to route the contact to any user in a primary group of users who are most qualified to handle the contact. If the primary group cannot handle the contact within the specified time, then the contact is routed to one or more overflow groups. The overflow mechanism is additive — at each point where a contact overflows to a new group, the new group of users is added to the current pool of available users.

In the following example, Sales is the primary group. If the call is not answered within a predetermined amount of time, the Service overflow group is added to the queue. If the call is still not answered, the General overflow group is added to the queue. The same queue concept applies to all supported media types.



3.12.2 Skills-based routing

Skills-based routing is the term used to describe the matching of a contact with the best user eligible to handle the contact based on the user's skills.

NOTE: Group-based routing is the default routing method in OpenScape Contact Center. You must purchase a license to be able to change to skills-based routing.

OpenScape Contact Center features

Routing

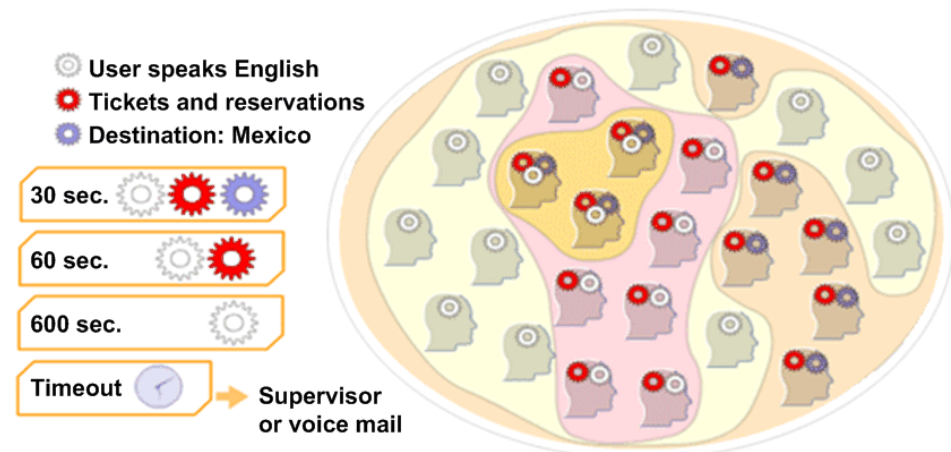
Contact centers typically have users who are proficient in a specific area. For this reason, you can assign skills to each user. This set of skills is referred to as a *résumé*. Based on their *résumés*, users are eligible to handle specific types of contacts.

Users who share certain predefined skills can be placed in a virtual group. For example, a virtual group might be created with the skills "Sales" and "Spanish Language". Users in this virtual group are eligible to handle sales contacts from Spanish-speaking customers.

When OpenScape Contact Center routes a contact to a queue, the first step in the queue attempts to route the contact to a specific user whose *résumé* best meets the requirements of the contact. As the contact passes through subsequent steps, the qualifying criteria are relaxed in favor of having the contact handled in a reasonable amount of time.

In the following example, the routing mechanism does the following:

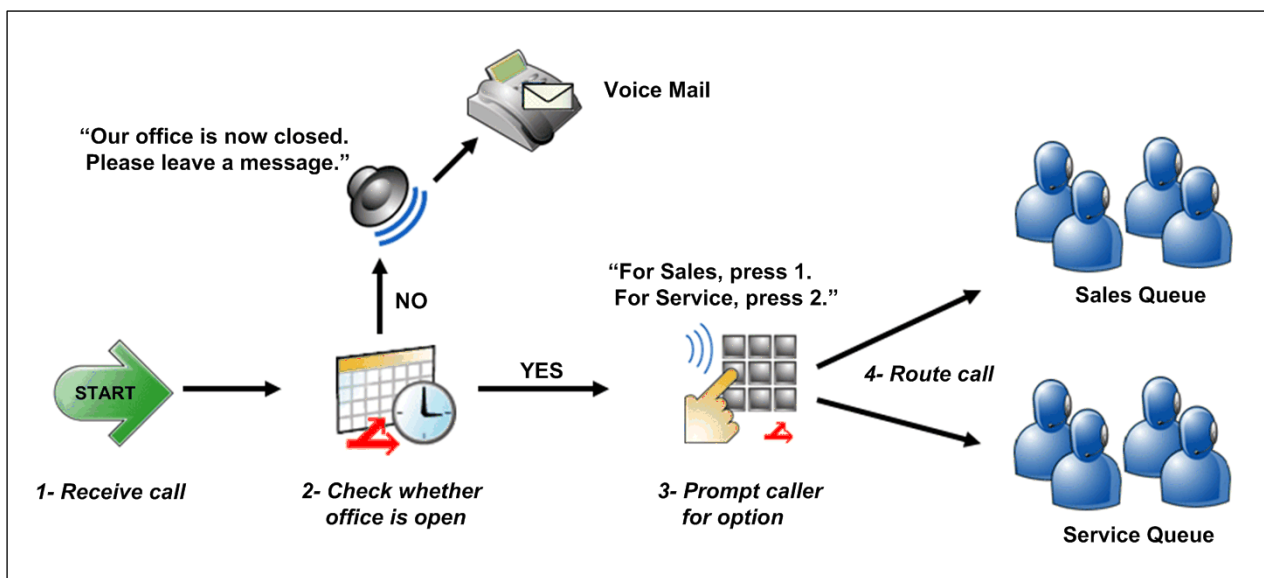
- Sets up a virtual group of users who are the "ideal fit" for the requirements; that is, the users have the following skills: "English", "Tickets and Reservations", and "Destination: Mexico". If the contact is not handled within 30 seconds, it moves to the next step.
- Relaxes the requirements to include a new, larger virtual group of users who are eligible to handle the contact; that is, the users have the following skills: "English" and "Tickets and Reservations". Users in this virtual group do not have the "Destination: Mexico" skill. If the contact is not handled within 90 seconds, it moves to the next step.
- Further relaxes the requirements to have the largest possible virtual group of users eligible to handle the contact; that is, the users have the following skill: "English". Users in this virtual group do not have the "Tickets and Reservations" or "Destination: Mexico" skills. If the contact is not handled within 600 seconds, it times out and is routed to a supervisor or to voice mail.



3.12.3 Routing strategy workflows

A routing strategy work flow is a sequence of events that determines the routing of a contact in the contact center. Workflow processing can route a contact based on criteria such as time, the source or destination of the contact, information obtained by database lookup, and performance statistics. Other media-specific criteria, such as information collected from the customer using Call Director or keywords in e-mail messages, can also be used.

The following is an example of a basic routing strategy workflow for incoming calls.



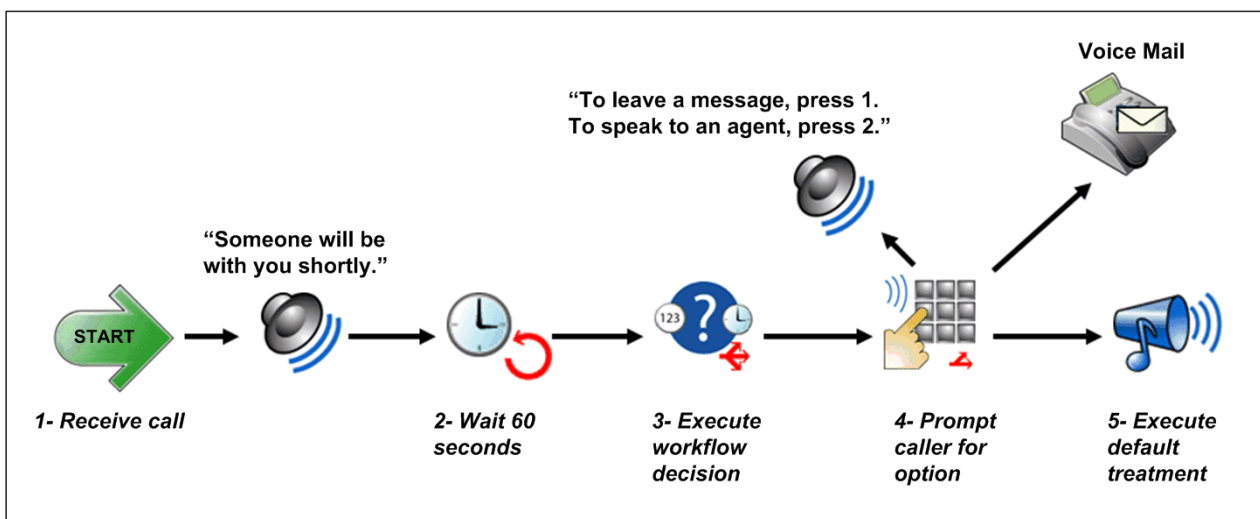
In this sample routing strategy workflow:

1. A call is received by OpenScape Contact Center.
2. The schedule component checks the time. If the call is received outside business hours, an announcement is played and the caller is given the option of leaving a voice message.
3. If the call is received during business hours, the caller is prompted with menu options, so the call can be directed to the appropriate department.
4. The customer is routed to an appropriate queue configured to match the department and handled by the first available user.

3.12.4 Queue processing workflows

A queue processing workflow determines what happens to a contact while it is waiting in queue. A queue processing workflow is primarily used to play messages to customers, collect additional information from customers, or allow customers to change the routing information they previously provided, while they wait for an available user. In general, in a queue processing workflow, you can perform any of the functions that you can use in a routing strategy workflow.

The following is an example of a basic queue processing workflow for handling callers in queue.



In this sample queue processing workflow:

1. A call is received by OpenScape Contact Center and greeted with an announcement.
2. The call waits for the pre configured Wait Interval (in this example, 60 seconds).
3. The Workflow Decision component checks how much wait time has elapsed. When the pre configured Wait Interval is finished, the caller is prompted with menu options.
4. The caller decides to wait for the next available user.
5. The default treatment is applied to the call.

3.12.5 Networking workflows

If your site is licensed for networking, you can use networking workflows to determine the distribution of calls to remote sites in the contact center. When a routing strategy workflow enqueues a call to a network-enabled queue, local processing of the workflow is suspended while the networking workflow executes.

The networking workflow performs the following basic functionality:

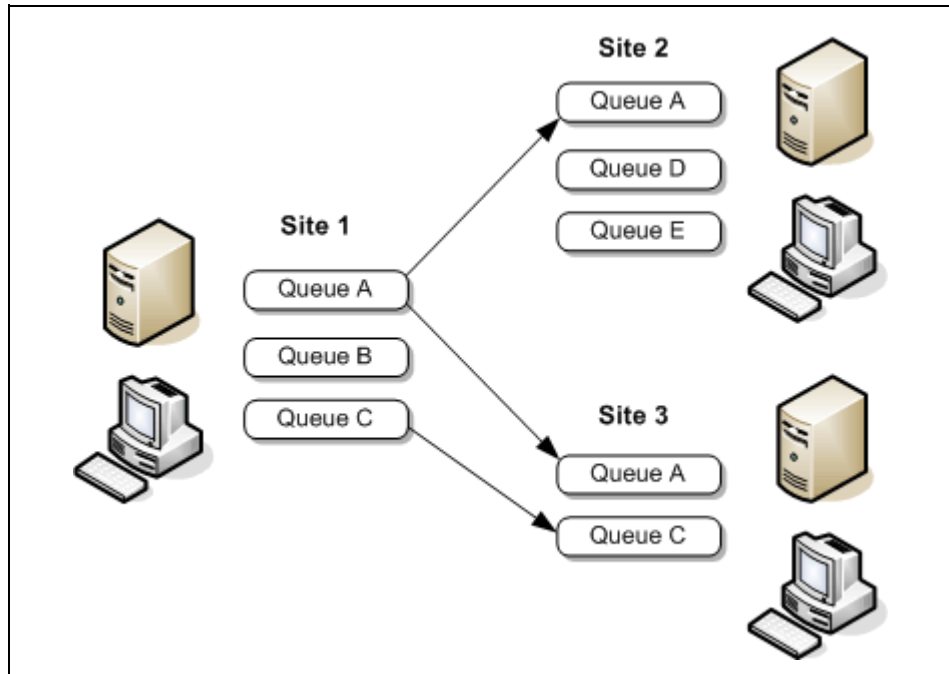
- Makes the decision to resume local routing of the contact or distribute it to another site based on a schedule or load at the local or remote sites.
- Refines the list of eligible network sites by eliminating sites that fail specific performance tests.
- Distributes the contact to the site that performs best on a given performance statistic (Best site method) or the site that ranks highest in a site-defined ordered list of sites (Preferred site method).

Networking is enabled and operates at the queue level. When an arriving contact is enqueued to a network-enabled queue, it can be distributed and enqueued only to an identically-named queue at another site participating in the network.

OpenScape Contact Center features

Voice Recording

For example, a contact enqueued to **Queue A** at **Site 1** could potentially be distributed to either **Site 2** or **Site 3**, since both sites have a queue named **Queue A**. However, contacts enqueued to **Queue C** at **Site A** could potentially be distributed only to **Site 3** since it is the only other site with a queue named **Queue C**.



3.13 Voice Recording

The Contact Media Service voice recorder feature is available for both switches: OpenScape Voice and OpenScape 4000. The feature enables the generation of recording files for the monitored extensions configured on the system. The voice recorder can be integrated with OpenScape Contact Center V10 R1.2.0 or newer. Only voice calls are recorded. For OpenScape Voice, call recording depends on the Continuous Silent Monitoring (SILM) feature, via a Prefix Access Code (PAC). For more details about the OSV Continuous SILM feature see: OpenScape Voice V10, Administrator Documentation, chapter **SILM (Silent Monitoring)**.

The recording ports are licensed separately from the announcement ports from CMS. You need to acquire new licenses for the recording ports.

3.14 WebRTC Integrated Phone with Voice

This feature allows you to embed a WebRTC client in the OSCC Agent Portal Web. With the WebRTC client you are able to establish voice calls. Specifically:

- Receive a voice contact in the Agent Portal Web without needing a physical phone or a soft client
- Configure which devices will be used for audio
- Start a voice contact via the Integrated Phone in the Agent Portal Web
- Dial DTMF during a call to interact with an answering machine.

This feature is available for OpenScape Voice and OpenScape 4000.

When connected to OpenScape 4000 the Agent device must be configured as UFIP device.

NOTE: The features Hold Call / Retrieve Call are currently not supported for the UFIP interface on OpenScape 4000.

3.14.1 WebRTC Video and Screen Sharing

This feature allows the interaction between agents and customers and also between agents themselves using Video and Screen Sharing.

Contacts are initiated independently from any other contacts from other media.

This feature depends on WebRTC Integrated Phone.

NOTE: It is available only for OpenScape Voice.

It can be used in the following ways:

3.14.1.1 From external user - Click To Dial

The Click To Dial component allows the user to make a call to Contact Center via the corporate web page. In order to do so, it is necessary to select a contact from the company's web page built with this component. During a call, the Click to Dial component allows the user to start sharing or transmitting video at any time.

3.14.1.2 Between Agents

After establishing an internal call, the agent can shift to a video call or share the screen.

4 OpenScape Contact Center applications

This section describes key features of the OpenScape Contact Center Manager, System Monitor, Agent Portal Web, Mobile Supervisor, Web Supervisor, OpenMedia Framework, Web Manager and Virtual Agents (Chat-bots) applications.

4.1 Manager application

The OpenScape Contact Center Manager application provides contact center managers and supervisors with a unified and easy-to-use interface for performing all contact center management tasks.

Manager features include:

- An intuitive user interface for system configuration and user administration tasks.
- A powerful design tool for creating routing strategy and queue processing workflows.
- Real-time statistics and performance data that can be distributed to user desktops or wallboards.
- Customizable real-time, cumulative, and historical reports in graphical and tabular format.
- Built-in analytic model for predicting trends in operating conditions.
- Configurable alerts, thresholds, and notifications.
- Automatic detection and identification of synchronization errors or mismatched resources.

4.1.1 Default user profiles

The Manager application is packaged with a set of default user profiles, which provide a wide range of roles and responsibilities. You can use these profiles as provided, or modify them to account for more specific permission requirements at your site.

4.1.1.1 Manager user profiles

The system provides the following default user profiles for the Manager application:

- **Administrator** — The Administrator profile is intended for users who have limited administrative responsibilities. This profile provides access to all configuration items except those directly involved with contact routing and interaction with external resources, such as communication platforms. (Access to these items is provided in the Master Administrator profile.)

NOTE: In a multitenant environment, access for the Administrator profile within a business unit is further restricted to the items that can be configured only at the business unit level.

- **Manager** — The Manager profile is intended for users who are responsible for the overall contact center business targets, and are accountable for hiring and contact center performance. This profile provides access to reports that help the manager assess and measure performance.
- **Master Administrator** — The Master Administrator profile is intended for users who are responsible for configuring all the resources in OpenScape Contact Center. This profile provides full access to the system, including the ability to change all contact center settings.

NOTE: In a multitenant environment, the Master Administrator profile at the system level has restricted access to system-level tasks, such as uploading a design database and configuring communication platform resources. Similarly, the Master Administrator profile within a business unit has restricted access to tasks such as configuring the business unit resources.

- **Supervisor** — The Supervisor profile is intended for users who are responsible for the day-to-day supervision of contact center staff. Responsibilities include monitoring performance and ensuring customer satisfaction. This profile provides access to real-time communications and reporting.
- **Telecommunications Specialist** — The Telecommunications Specialist profile is intended for users, such as IT experts and administrators, who are responsible for providing support for the contact center and configuring the computer and voice aspects of OpenScape Contact Center. This profile provides access to system and voice settings.

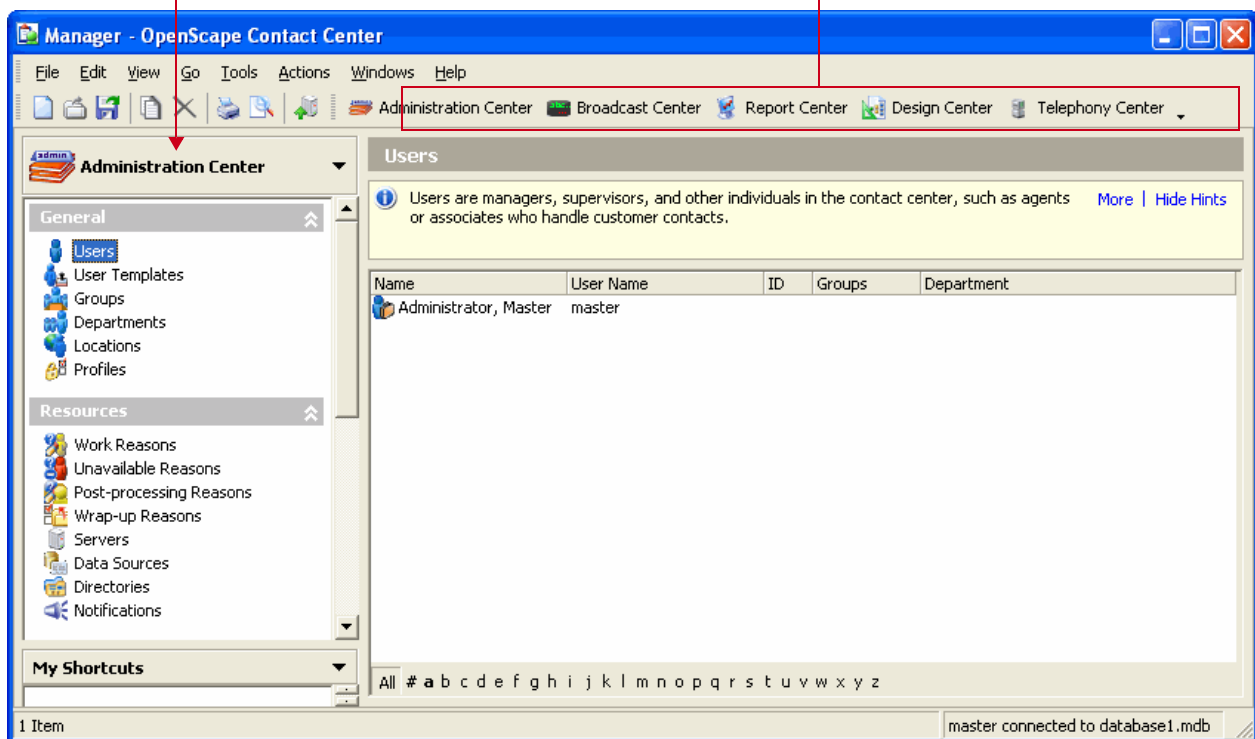
NOTE: In a multitenant environment, access for the Telecommunications Specialist profile within a business unit is further restricted to the items that can be configured only at the business unit level.

4.1.2 Work centers

The Manager application has five main work centers dedicated to helping you perform key contact center management tasks: Administration Center, Broadcast Center, Design Center, Report Center, and Telephony Center.

Selected Manager work center

Access to other work centers



4.1.2.1 Administration Center

The Administration Center provides a central point of administration for all user-related configuration. The Administration Center is the area where you define and manage resources, such as users, user templates, profiles, data sources, directories, and notifications.

4.1.2.2 Broadcast Center

The Broadcast Center provides a fully integrated and powerful communication tool for keeping your contact center personnel informed at all times. You can send real-time statistics and performance data for all media types to wallboards or directly to user desktops via the Broadcaster.

The Broadcast Center is the area where you define and manage wallboard and Broadcaster views and definitions.

4.1.2.3 Design Center

The Design Center provides a powerful workflow-style tool for defining intelligent routing strategy and queue processing workflows to handle all multimedia contact center interactions.

To streamline the creation of workflows, OpenScape Contact Center provides a library of configurable and reusable routing strategy and queue processing components. A drag-and-drop interface allows you to configure workflows that are automatically validated for completeness as they are created.

The Design Center is the area where you define and manage the queues and workflows that determine how contacts are routed.

4.1.2.4 Report Center

The Report Center provides a powerful, yet easily customized reporting engine for defining and viewing real-time, cumulative, and historical reports for all media types. Versatile reporting allows for better operational monitoring, more effective decision making, and the ability to proactively recognize and respond to patterns before they become issues.

The Report Center is the area where you define and manage the reports that provide insight into your contact center operations.

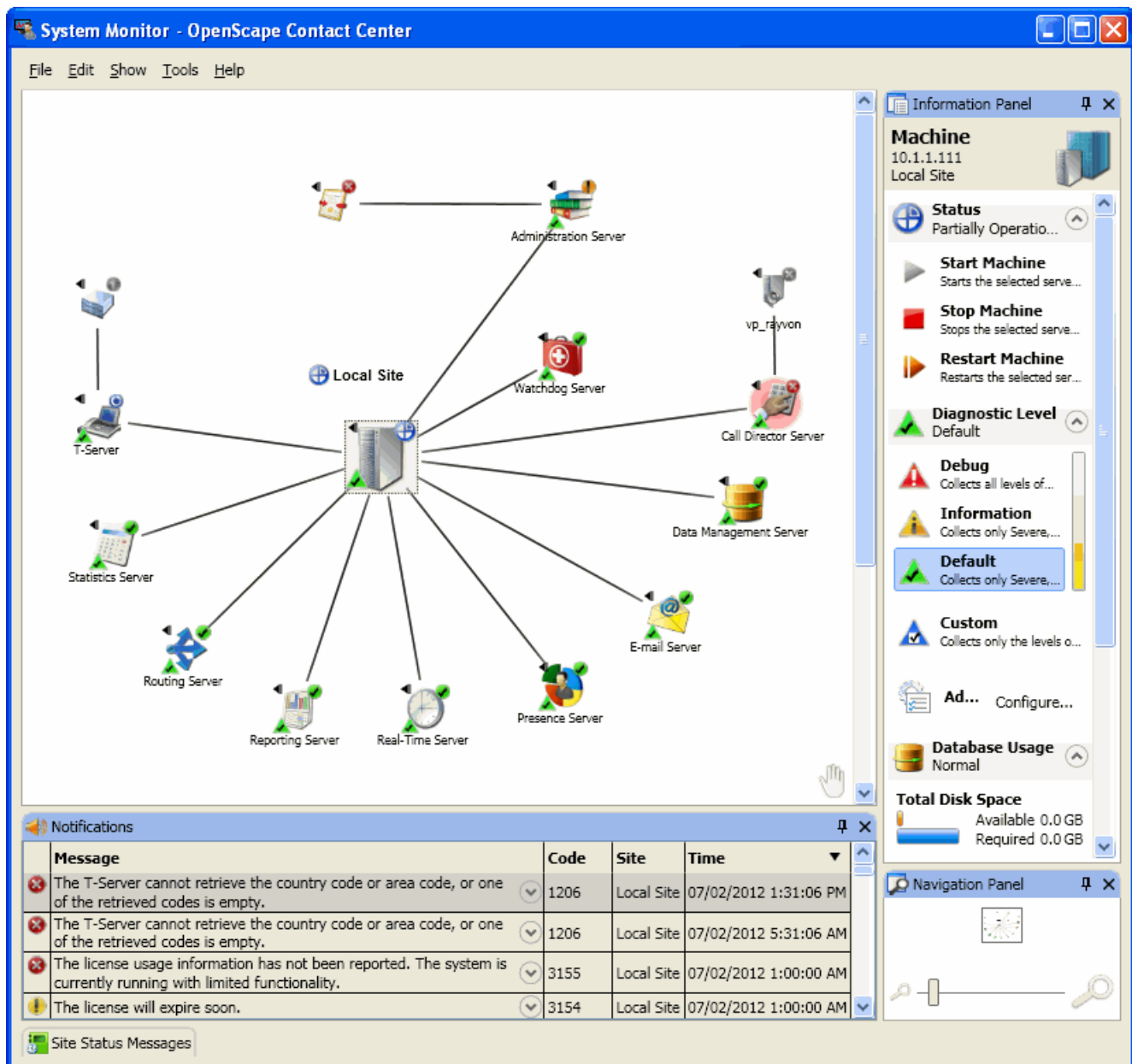
4.1.2.5 Telephony Center

The Telephony Center simplifies the synchronization between OpenScape Contact Center and the communication platform. The Telephony Center is the area where you configure the OpenScape Contact Center communication platform resources and other external components that OpenScape Contact Center monitors to route contacts and collect statistics for reporting.

4.2 System Monitor application

The System Monitor application allows administrators to monitor and manage the OpenScape Contact Center system in real time.

NOTE: In a multitenant environment, only system administrators can access the System Monitor application.



You can use the System Monitor application to perform the following tasks:

- Monitor the status of the OpenScape Contact Center system, including the status of a site, server machine, server, communication platform, and voice processor (if applicable).
- Manage the OpenScape Contact Center system, including starting and stopping a server machine or server, configuring the startup settings for the Administration Server, and configuring diagnostics.
- Troubleshoot the OpenScape Contact Center system, including viewing information about the operational status of a site and viewing messages regarding potential issues that can affect the system.

4.3 Web Manager

Web Manager is a browser-based application installed with the OpenScape Contact Center Application Server package.

With the Web Manager it is possible to configure:

- Single Sign On by using SAML2 protocol for Agent Portal Web
- Single Sign On with Circuit for Agent Portal Web
- Virtual Agents to enable chatbot functionality
- REST SDK
- CLIP for Outgoing Calls
- Email Configuration

4.4 Mobile Supervisor application

Mobile Supervisor is an application for mobile devices that assists with the effective management of OpenScape Contact Center by providing useful real-time information regarding the contact center and its agents. Mobile Supervisor supports Android and iOS devices including mobile phones and tablets. The following operating system versions are required in order to install Mobile Supervisor to your device:

- Android 4.4 and 5.1 up to 10.0

OpenScape Contact Center applications

Web Supervisor

- iOS 8.x, 9.x up to 12.0.1

NOTE: Android versions 4.3 and below and iOS 7.x are not supported.

With Mobile Supervisor you can monitor and control all of the important aspects of your contact center, including:

- Agent status and individual agent details such as their routing state, media used, handled contacts etc.
- Queue status and individual queue details such as average wait time, number of deflected calls etc.
- Change the routing state of an agent (for example from unavailable to logged off)
- View all available skills for each agent and remove/assign skills from/to an agent.

4.5 Web Supervisor

Web Supervisor is a web based application that has the same functionalities with Mobile Supervisor application and is accessible via the OSCC Application Server service.

The user starts the application by using the Google Chrome web browser and entering the URI, for example:

`https://<IP-ADDRESS-OR-FQDN>/supervisor`

4.6 Agent Portal Web

Agent Portal Web is the web-based Agent Portal application, that provides many tools to help OpenScape Contact Center agents respond to contacts, track contact activity, perform callback, and quickly find the information that they need.

Agent Portal Web is accessible via the OSCC Application Server and enables the agents to control various phone functions such as:

- dialing phone numbers
- accepting, transferring, holding and terminating calls

- performing callback
- receive and answer routed Web Collaboration

A speed list is embedded in Agent Portal Web with search functionality and adding of contacts.

More over the agents are able to customize many of the application's features to suit their preferences and working style.

You can use the following web-browsers to access the Agent Portal Web:

- Google Chrome
- Mozilla Firefox
- Microsoft Edge

The integration with Circuit allows an agent to handle both Contact Center functions and voice calls using only the Agent Portal Web. The Agent Portal Web executes the following features directly on the Circuit interface:

- Receive and signal incoming calls.
- Answer incoming calls.
- Handle disconnection of calls.
- Start outgoing calls.
- Handle voice media.
- Mute and unmute calls.
- Pull calls from other Circuit clients.

All other telephony features are handled via the regular CTI functions already available on the Agent Portal Web.

Attention: The integration with Circuit is only applicable for Agent Portal Web.

In order to connect to Circuit, the agent on Agent Portal Web must be authenticated by Circuit as a Single Sign-On user. In this way, there is no need to authenticate again on OSCC.

You can use the following web-browsers to integrate the Agent Portal Web to Circuit:

- Google Chrome
- Mozilla Firefox

OpenScape Contact Center applications

Virtual Agents (Chatbot)

Agent Portal Web Desktop Application is an embedded application, developed using Electron JS framework. It supports functions which are blocked by browsers, such as:

- Open a desktop application from Supplemental Information.
- The taskbar is always displayed on top of the screen.

For more information, see the *Agent Portal Web, User Guide*.

4.7 Virtual Agents (Chatbot)

The Virtual Agent feature enables the integration of the OpenScape Contact Center with a Natural Language Processor (NLP) to include chatbots.

The Virtual Agent service runs into the OSCC Application Server container, and will logon all agents configured in the Web Manager.

For more information, see chapter **Virtual Agents** in the *Web Manager Administration Guide*.

4.8 Virtual Agents (Speechbot)

The Virtual Agent feature enables the integration of speechbots to respond to voice contact.

The Virtual Agent service will logon to voice media and is available to handle contacts. The CMS can simulate SIP extensions to answer the calls that come to the Virtual Agent.

The CMS integrates with Dialogflow, Google speech-to-text API, and Google text-to-speech API.

The Virtual Agent can also requeue a voice contact to a configured requeue number, create a callback if the customer wants to be called later, and provide external consultation.

For more information, see chapter **Virtual Agents** in the *Web Manager Administration Guide*.

4.9 OpenMedia Framework

Open Media Framework extends OSCC's capability to handle media's beyond current standard supported medias like voice, email and chat. Contacts in applications such as Facebook, Circuit and other business applications (work ticket systems for example) can be routed by OSCC to the right user. OSCC Omni-channel capability will continue to provide same universal queue handling, reporting and analytics.

With OpenMedia framework it is possible to configure new media on the OSCC Enterprise. You can configure:

- the logo of the OpenMedia;
- the rules under which the contacts are handled by the Agent - it shall be possible to indicate if the messages / posts shall be handled in a real time or non real time way.
 - Real time media - the contact session must be finished by the agent or by the customer.
 - Non real time media - the contact session is closed after the reply is sent by the customer. Further messages / posts will be handled as a new contact session.

The new messages/routes are routed to an agent by using routing criteria like:

- OpenMedia page / user to which the message is sent or the post is published;
- Message / post originator;
- Error;
- Performance data;
- Categorization

The agent is able to handle the OpenMedia contacts via the Agent Portal by:

- Replying, deferring, transferring, re-queueing the messages and posts;
- Viewing details about the current active OpenMedia contact;
- Viewing the previous OpenMedia contacts as part of the 360° Customer View feature.

Reports are generated for the OpenMedia contacts, groups and agents. For the reports which already generate reports per media, the new media are added to them.

OpenScape Contact Center applications

OpenMedia Framework

Access to the OpenMedia functionality is controlled by a new level of license named "Omni Channel License".

OpenMedia is supported per tenant in a multi-tenant system. Each Connector is used for only one tenant.

In a system with Multiple Contact Handling enabled, the Open Media is counted together with e-mail and/or Web Collaboration.

5 Third-party integration

This chapter describes the third-party software and interfaces that can integrate with OpenScape Contact Center.

5.1 Siebel CRM integration

The OpenScape Contact Center Siebel Integration enables Siebel users to handle calls routed by the OpenScape Contact Center system by providing softphone and voice screen pop functionality. The integration supports the use of both the Siebel Web Client (thin) and the Siebel Mobile Web Client (thick).

NOTE: The OpenScape Contact Center Siebel Integration also provides a validated SDK-based template and the source files used to compile the Siebel driver so that you can customize the integration. For details, contact your support representative.

5.2 IVR integration

OpenScape Contact Center provides two mechanisms for integrating your Interactive Voice Response (IVR) system:

- OpenScape Contact Center IVR API
You can create a customized IVR script that gathers information from your customers, provides call functions, and calls the IVR API functions provided with OpenScape Contact Center.
- OpenScape Contact Center VoiceXML Interface
You can use the Voice Extensible Markup Language (VXML) interface to integrate an IVR system with OpenScape Contact Center. A user can interact with the Internet through voice-recognition technology. Instead of a traditional browser that relies on a combination of HTML and keyboard and mouse, VXML relies on a voice browser and the telephone. Using VXML, the user interacts with a voice browser by listening to audio output that is either pre-recorded or computer-synthesized, and submitting audio input through the user's natural speaking voice or through a keypad, such as a telephone.

Third-party integration

Screen Pop API

5.3 Screen Pop API

The OpenScape Contact Center Screen Pop API provides a mechanism for initiating a screen pop in a third-party application. Information is sent by OpenScape Contact Center to the third-party application when the contact arrives at the user's desktop.

This interface is completely independent of the OpenScape Contact Center client applications, and is provided as a separate COM control, which limits the exposure of information.

The interface allows a single contact center extension or user ID to be monitored, and an event is sent from the interface when a contact of any media type arrives at the user's desktop.

5.4 Workforce management integration

OpenScape Contact Center allows you to simplify the user scheduling and workforce forecasting process by integrating with a third-party workforce management application. OpenScape Contact Center uses XML to export information about users, groups, user activities, and contact statistics. You can then import the data from OpenScape Contact Center into a workforce management application.

5.5 Software Development Kit (SDK)

The OpenScape Contact Center Software Development Kit (SDK) allows system integrators and application developers to interact with the core OpenScape Contact Center components. Through the development of applications that integrate with the OpenScape Contact Center environment, the SDK provides the ability to extend contact center functionality.

The SDK Runtime installation is included in the **OpenScape Contact Center SDK Runtime** folder on the OpenScape Contact Center DVD. The SDK is available through the Unify Technology Partner Program. For details, contact your support representative.

5.6 OpenScape Contact Center Analytics Life of Call (LoC)– powered by Softcom

The OpenScape Contact Center Analytics Life Of Call feature is an advanced analytics and reporting tool that traces contacts, from the moment they enter the contact center and analyzes not only calls, but other key activities within the contact center. This includes any portions of the contact such as voice, e-mail, chat, IVR or back-end processes. Analysis can be performed by date range, keys, filters, trends and others. All analysis can be displayed through graphical visualizations.

- Analysis can be by date range, keys, filters, trends, etc.
- Various viewpoints at the click of a mouse – for example by Call, by Agent or by ANI.
- Ease-of-use-Investigate on-the-fly. Life of Call adds to existing comprehensive reporting capabilities through graphical visualizations such as the heat map.

5.7 MS Teams Integration

Microsoft Teams integration provides a way to open an Agent Portal Lite interface which allows the MS Teams user to control the Routing Status and enable the Preferred Device feature in such a way that an agent can use Teams to receive or make calls via the OSCC Preferred Device feature.

Index

A

- activity reports 24
- Administration Center, in Manager application 33
- Administrator profile 32
- Agent Portal 37
- applications
 - Manager 31
 - System Monitor 35

B

- Broadcast Center, in Manager application 34
- Broadcaster 17

C

- Call Director 15
- callback feature 16
- Client Desktop application
 - system requirements 9
- client machine, system requirements 9
- collaboration features 19
- contact handling
 - callback 16
 - e-mail 17
 - voice 16
- Contacts Waiting Indicator 18
- cumulative reports 22

D

- default user profiles 32
- Design Center, in Manager application 34
- directories 21
- distributions 18
- documentation
 - formatting conventions 5
 - intended audience 5
 - list of product documentation 12
 - providing feedback 6

E

- e-mail feature 17
- e-mail requirements 10

G

- group-based routing 25

H

- historical reports 23

I

- IVR API integration 41

L

- LDAP requirements 10

M

- main server machine, system requirements 8
- Manager application
 - default user profiles 32
 - description 31
 - system requirements 9
 - work centers 33
- Manager profile 32
- Master Administrator profile 32
- Mobile Supervisor application 39

O

- operating systems supported
 - client machine 9
 - main server machine 8

P

- personal performance statistics 18
- presence features 19
- presence integration feature 21

Q

- queue processing workflows 28

R

- real-time reports 22
- Report Center, in Manager application 34
- reporting feature 22
- routing strategy workflows 27

S

- Scheduled Callback List 24
- Screen Pop API integration 41
- Source Activity Report 24
- Speed Bar 20
- Speed List 20
- Supervisor profile 32
- System Monitor application
 - description 35
 - system requirements 9
- system requirements
 - client machine 9

Index

- communication platforms 11
- e-mail and LDAP components 10
- external components 10
- main server machine 8
- wallboards 11
- Web components 11

T

- Team Bar 19
- Team List 19
- Telecommunications Specialist profile 32
- Telephony Center, in Manager application 34
- third-party software integration 41

U

- User Activity Report 24
- user profiles 32

V

- views 18
- voice feature 16

W

- wallboards
 - description 17
 - requirements 11
- Web component requirements 11
- Web Supervisor 39
- workflows
 - queue processing 28
 - routing strategy 27
- workforce management integration 41

