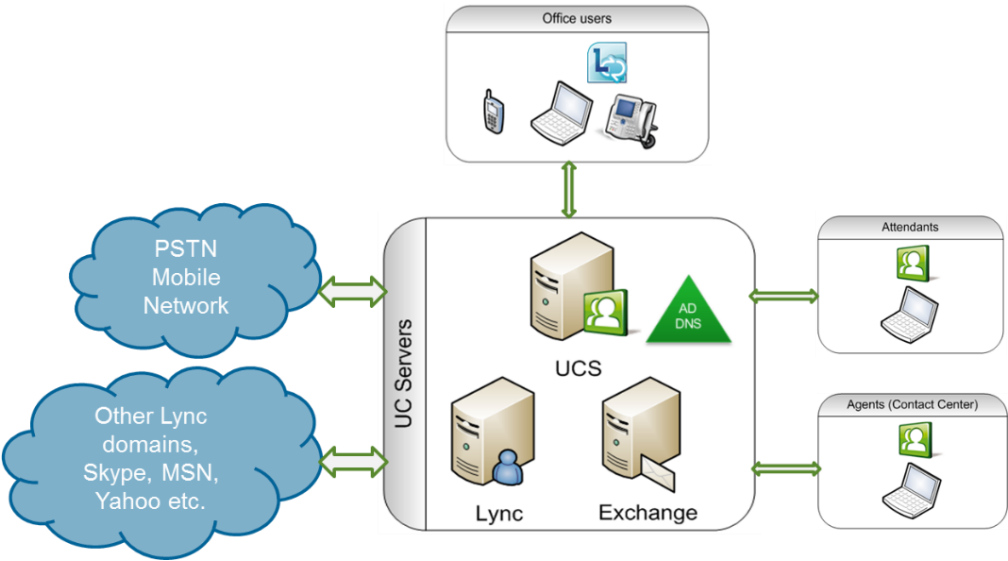


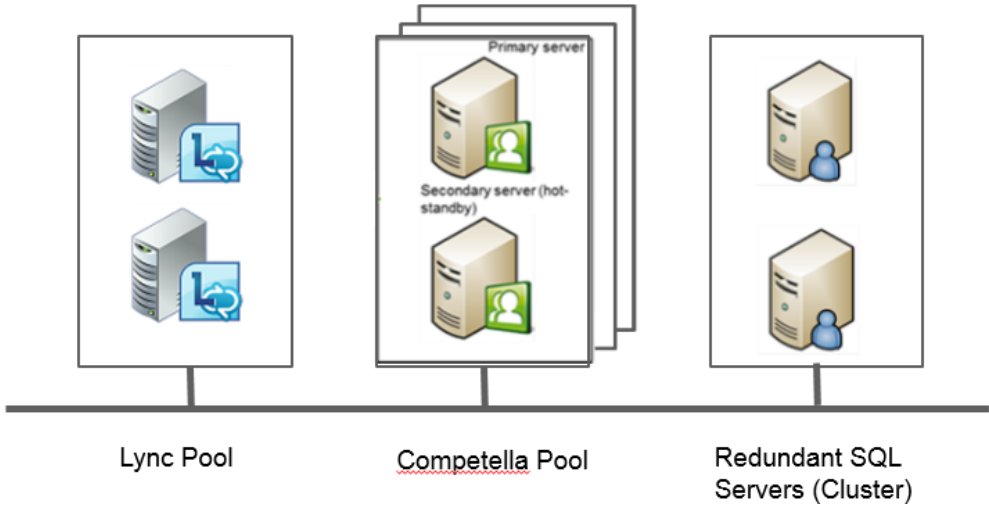
Competella Unified Communication Suite – Architecture

Competella Unified Communications Server (UCS)

The Competella Unified Communications Server (UCS) is hosting Lync trusted applications based completely on the Lync native API's. The Competella UCS is also integrated with Microsoft Active Directory and Exchange for directory data, e-mail and calendar information. UCS can optionally be integrated with other external systems e.g. SMS- and mobile presence providers.



For scalability and redundancy, pairs of Competella servers (a primary and a secondary hot-stand-by) can be configured in a pool.

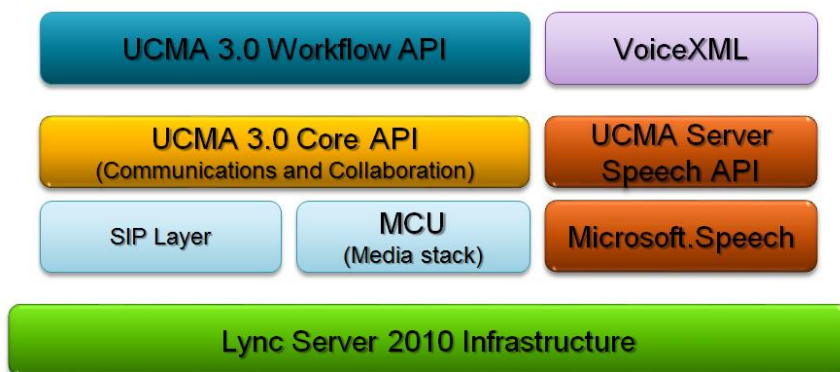


The Competella servers can be virtual (VM Ware or Hyper-V). Client failover is automatic as they will get the addresses of both Competella servers via DNS Service records. All configuration and user data, including voice prompts are stored in the SQL Database. Microsoft SQL Server Express is supported but for large systems separate servers for the database is recommended.

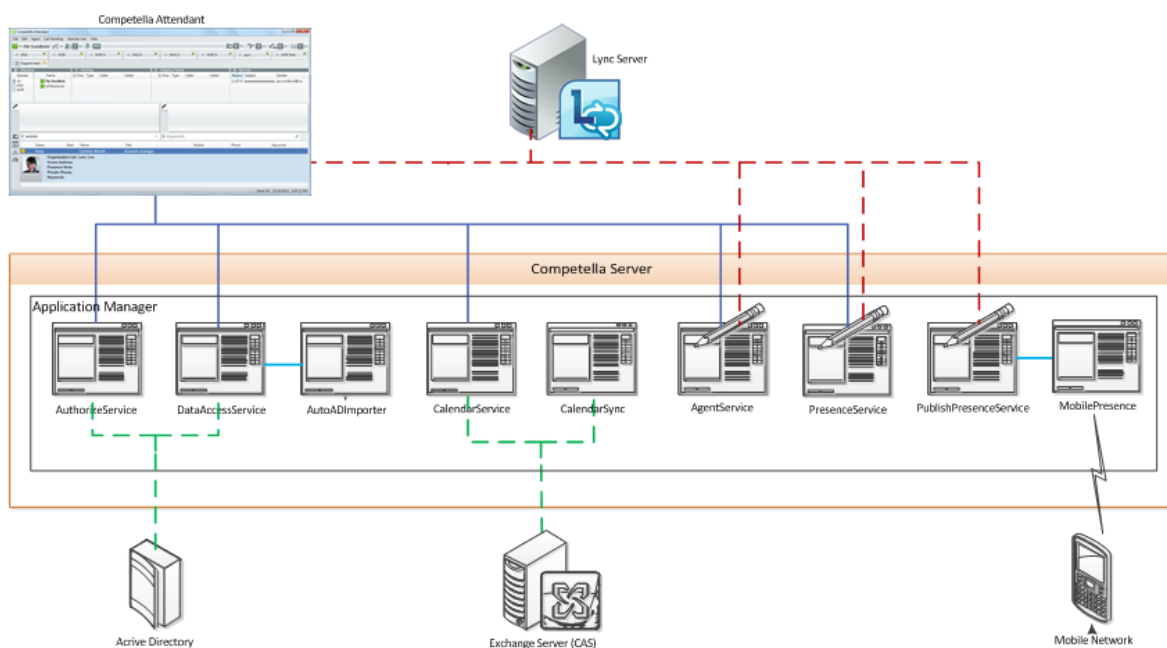
Lync Trusted Applications

A UCMA trusted application is an application based on Microsoft Unified Communications Managed API (UCMA) that is trusted by Microsoft Lync Server 2010.

UCMS is Managed API for building unified communications solutions built on the Microsoft Lync infrastructure. It supports IM, voice, presence, call control, multimodal conversations and abstracts underlying protocols (SIP, telephony etc.).



Competella UCS – Server Roles



Application Manager service

The Competella Application Manager is a Windows Service process responsible for controlling all Competella Server services. It can be configured from the Competella Application Manager Client.

Authorize service

The Authorize service authorizes access to the system for client application and handles user and system settings. Authorization is performed by verifying the user, password and application against the Active Directory or the Competella database. The service communicates with the clients using HTTP.

Data Access service

The Data Access service provides access to the Competella database for clients and other services. Synchronization with AD is performed by a service called ADImporter or by an administrator from the Directory Manager web GUI. Support for Fuzzy search.

Agent service

The Agent service provides services to agents running Competella Multimedia Attendant. All queue handling is done by this service. The Agent service is a trusted Lync application.

Presence service

Trusted Lync application that reads presence info from the Lync presence store.

PublishPresence service

Trusted Lync application that publish presence info to the Lync presence store.

Forwarding service

Trusted Lync application that enable display and setting of forwarding from the Attendant and the Call Delegation Agent application.

ADImporter service

The ADImporter service performs synchronization with Active Directory. The Competella Directory Manager is used for configuration.

Calendar and Messaging service

The Calendar service gives access to users calendars for client applications. It uses Exchange Web Services (EWS) to communicate with Exchange 2007 and Exchange 2010. Note that SP1 or later is required for Exchange 2007! The service supports Auto Discovery to detect servers for Exchange 2010 and 2012 (works also in a mixed environment).

Calendar Sync service

The Calendar Sync service fetches calendar entries for users into the Competella Database. Default sync period is one day (24 hours). The sync process is used to calculate busy/free time and to control forwarding

IVR service

Trusted Lync application that provides Interactive Voice Response services based on Lync VoiceXML.

Callback service

Trusted Lync application that handles callback requests from callers in a queue, IVR menu and Web Callback requests.

WebChat service

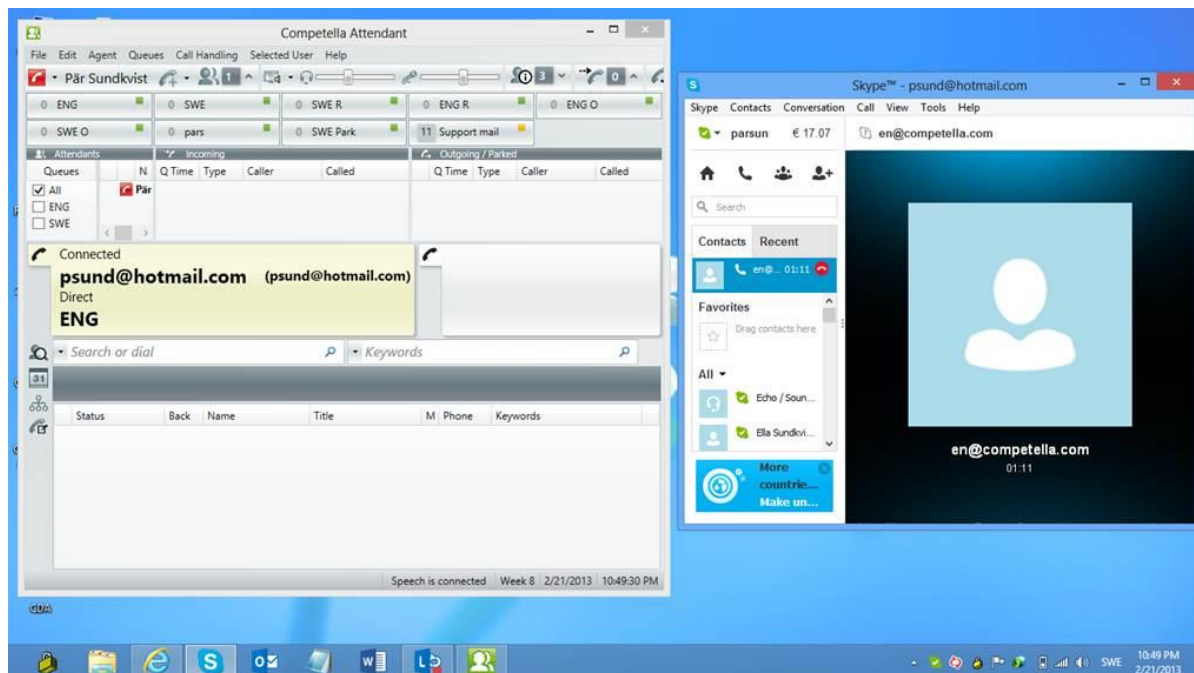
Trusted Lync application that handles web chat.

Queue Monitor service

Web Application that displays real-time queue information on a PC monitor. Push technique.

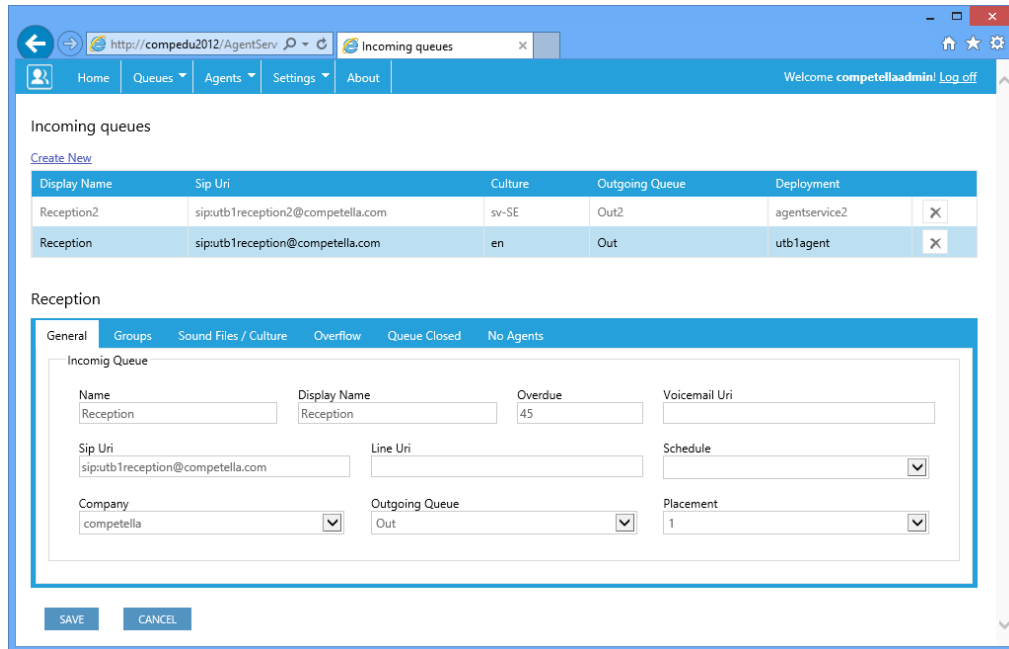
Support for federation

Since the Competella UCS is built natively on Lync, calls (voice and IM) from other domain than the PSTN is supported, e.g. Skype calls, other Lync domains, AOL and Yahoo.



Web-based Management Tools

Competella Configuration Manager is used to configure system parameters e.g. queues.

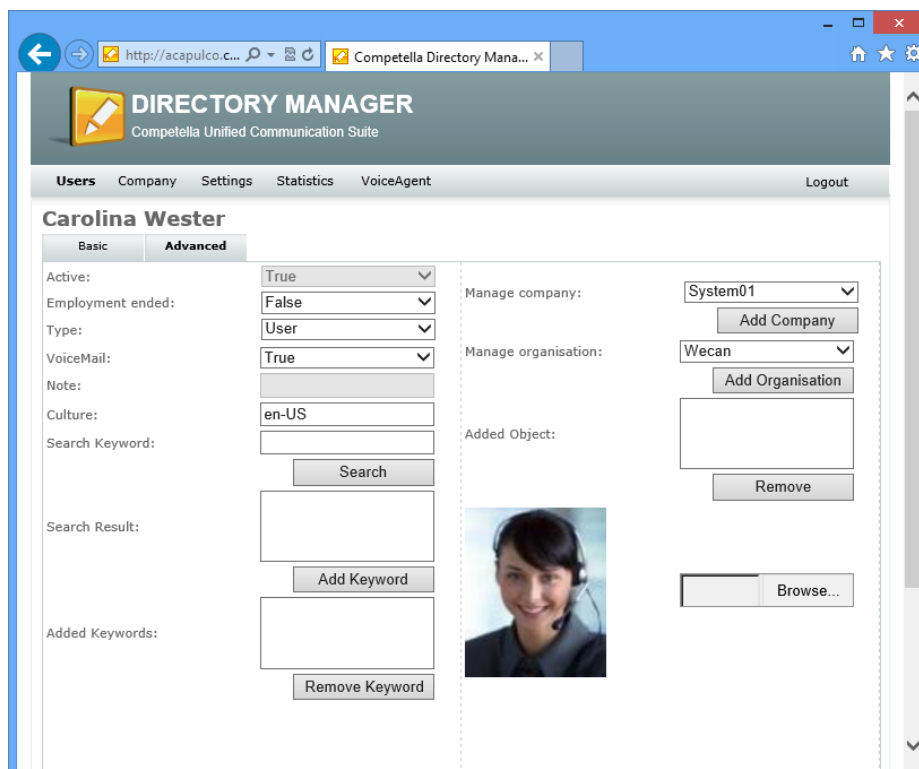


The screenshot shows a web browser window with the URL <http://compedu2012/AgentServ>. The page title is "Incoming queues". The navigation menu includes Home, Queues, Agents, Settings, and About. A welcome message for "competellaadmin!" is visible. The main content area displays a table of incoming queues:

Display Name	Sip Uri	Culture	Outgoing Queue	Deployment	
Reception2	sip:utb1reception2@competella.com	sv-SE	Out2	agentservice2	X
Reception	sip:utb1reception@competella.com	en	Out	utb1agent	X

Below the table, there is a configuration form for the "Reception" queue. The form includes fields for Name, Display Name, Overdue, Voicemail Uri, Sip Uri, Line Uri, Schedule, Company, Outgoing Queue, and Placement. The "General" tab is selected, and there are "SAVE" and "CANCEL" buttons at the bottom.

In addition to automatically import of user data from Active Directory and other sources the Competella Directory Manager can be used to update user data.



The screenshot shows a web browser window with the URL <http://acapulco...>. The page title is "Competella Directory Manager". The navigation menu includes Users, Company, Settings, Statistics, VoiceAgent, and Logout. The main content area displays the user profile for "Carolina Wester". The profile is divided into "Basic" and "Advanced" tabs. The "Basic" tab is selected, showing fields for Active, Employment ended, Type, VoiceMail, Note, Culture, Search Keyword, and Search Result. The "Advanced" tab shows fields for Manage company, Manage organisation, Added Object, and Added Keywords. A profile picture of Carolina Wester is displayed.

Client communication with Lync and the Competella UC Server

The Competella Multimedia Attendant and Agent are using the Lync Client API to communicate with the Lync Server. Note: The Lync client needs to be installed and running.

To communicate with the Competella UC Server the Competella Web Services API is used.

