

Speech Connect for Cisco Unity

Product Overview

Cisco® Unified Communications Solutions unify voice, video, data, and mobile applications on fixed and mobile networks, enabling easy collaboration every time from any workspace.

Speech Connect for Cisco Unity® allows people to quickly connect with their colleagues using only their voice. Speech Connect for Cisco Unity is a speech-enabled automated attendant (SEAA) for the enterprise. Internal or external callers speak the name of an employee into the phone and are connected to that employee. The Speech Connect solution delivers superior voice-recognition performance and uses enhanced software to store user preferences and fine-tune pronunciation, improving its accuracy over time. Users can collaborate more quickly and easily by connecting with each other without having to know multiple phone numbers. With the proliferation of mobile devices, flexible workspaces, and employee turnover, removing the need to know numbers greatly simplifies communications.

If multiple employees have the same name or if Speech Connect does not have a perfect match for the name spoken by the caller, Speech Connect will present a number of name choices for the caller and include additional information, such as the employee's location or department. This process is called disambiguation. Speech Connect will also play the person's recorded name in that person's own voice, making it easier for the caller to choose among the multiple names selected through the disambiguation process. Furthermore, Speech Connect performance improves over time through a self-learning mechanism that is included with the optional Names Tuning service described in further detail later in this document.

Speech Connect can be configured to respond to a number of voice commands, not just employee names. For example, if you deploy product names in the Speech Connect grammar logic, customers can speak the name of a product and reach a person responsible for that product. Employee names, departments, conference rooms, product names, and any other entity that steers a caller to a phone number can enhance the value of Speech Connect to your employees and customers.

While Speech Connect enables faster, easier connections over the phone, Cisco Unity improves productivity by allowing employees to access messages any time and anywhere, thereby enabling them to respond more quickly to messages.

Features and Benefits

Table 1 summarizes the features and benefits of Speech Connect for Cisco Unity.

Table 1. Features and Benefits

Feature	Benefit
Support for up to 200,000 names	Supports the scale required by large enterprises
Advanced disambiguation	Stores caller preferences over time, expediting transfers as it builds knowledge about a caller's community of interest when given choices among similar names
Names Tuning service	Monitors results in an automated manner, inserting improvements and updated pronunciations within 72 hours of a failed utterance
Speed dial	Can be configured as a speed-dial soft key on Cisco Unified IP Phones
Name response collection	Allows the caller to hear the contact's name in the contact's own recorded voice to help determine proper pronunciation

Note: Speech Connect for Cisco Unity is available only in installations that include a Cisco Unity or Cisco Unity Connection solution.

Services: Speech Connect Names Tuning

Company directories undergo frequent changes such as new names and pronunciations as employees join and leave the company. To protect the performance and your investment in Speech Connect, Cisco provides an optional service called Speech Connect Names Tuning, which automatically makes corrections in the background, without the need for you to report changes to a technical support team. The Names Tuning service also includes professional linguists to correct problems relating to nuances in speech recognition: problems that cannot be solved automatically by any speech engine. This service not only fine-tunes the variety of employee name pronunciations within your corporate directory, but it also provides support, monitoring, and reporting functions. The Names Tuning service continuously improves the performance of Speech Connect to deliver superior, intelligent speech recognition capabilities.

A customer who subscribes to Speech Connect Names Tuning service receives:

- Enhanced linguistic support for 30 days after installation
- Ongoing, automated monitoring and corrections (corrections generally appear within 72 hours of receipt)
- Cisco Help Desk support for recognition problems; the Cisco Technical Assistance Center (TAC) prioritizes any cases related to linguistic analysis and correction and puts you in contact immediately with a Speech Connect expert
- Monthly reporting of Names Tuning corrections and updates
- Alerts notifying your Speech Connect administrator of corrective actions to be taken

The Speech Connect Names Tuning service provides immediate benefits to your global enterprise. Although employees may be able to pronounce the names of co-workers in their own country with ease, proper pronunciation can be a real challenge when dealing with unfamiliar names from other parts of the world. The Names Tuning service monitors the performance of speech servers over the unified messaging network, correcting for pronunciation variances and errors within hours. This service helps ensure that Speech Connect is a valuable collaboration tool across borders and time zones no matter who is calling and no matter the name of the person on the other end of the connection.

The Speech Connect Names Tuning service is included with the purchase of a Cisco Unified Communications Software Subscription. For more information about the Cisco Unified Communications Software Subscription, refer to http://www.cisco.com/en/US/netsol/ns737/networking_solutions_package.html.

Table 2 summarizes the capabilities of the Speech Connect Names Tuning service.

Table 2. Speech Connect Names Tuning Service Capabilities

Problem	Description	Action
Out of grammar (entire name)	Speech Connect returns with no choices or presents incorrect choices. The name spoken is not in the corporate directory, often because of timing problems: new employee records have not yet been accurately imported.	A Speech Connect Names Tuning service linguist identifies the missing employee record and reports the absence to the Speech Connect administrator.
Out of grammar (first name or last name)	An employee record for the desired contact exists, but results are poor because the first or last name has alternative pronunciations.	A Names Tuning service linguist adds the nickname, preferred name, synonym, alternative pronunciation, or improved phonetic definition, as appropriate.
Low confidence score	Callers are being presented with many incorrect choices; there are too many choices to disambiguate ("Did you mean John Smith?").	A Names Tuning service linguist adds alternative pronunciations or improved phonetic definitions. If the poor results are due to audible voice quality problems, the problem is reported to the Speech Connect administrator.
Caller cancellation or lack of caller confirmation	The caller is offered choices but says "Cancel," hangs up, or transfers to the operator.	A Names Tuning service linguist adds the nickname, preferred name, synonym, alternative pronunciation, or improved phonetic definition, as appropriate.

Product Architecture

Speech Connect for Cisco Unity runs on a separate Cisco speech server (Cisco MCS 7825, 7835, or 7845 Media Convergence Server) as an independent application. If you have deployed a speech server for Cisco Unity Version 5.0 or 7.0 to take advantage of its speech-recognition features, another speech server will be required to support Speech Connect. Future releases of Speech Connect and Cisco Unity speech-recognition capabilities will merge onto a single speech server.

Table 3 summarizes the product specifications for Speech Connect for Cisco Unity.

Table 3. Product Specifications

Item	Specification
Product compatibility	Speech Connect is compatible with Cisco Unified Communications Manager Version 4.0 and newer; Cisco Unity Version 4.0 and newer; and Cisco Unity Connection Version 2.0 and newer.
Software compatibility	There are no specific software requirements for Cisco Unified Communications Manager and Cisco Unity solutions because Speech Connect, in this initial release, operates independently. Company directory records can be imported into Speech Connect from any directory source, including Microsoft Active Directory and Lightweight Directory Access Protocol (LDAP).
Protocols	Speech Connect supports Session Initiation Protocol (SIP) integration.
Components	Speech Connect is an application that is installed on a Cisco Unity messaging product server (Cisco MCS 7825, 7835, or 7845) running Red Hat Linux and the Nuance 9.0 speech engine.
Ports	The speech server (Cisco MCS) is configured with the number of telephony ports required to support the desired call volumes based on the Cisco MCS server platform. See Table 4.
Integrations	Speech Connect integrates to the local Cisco Unified Communications Manager or private branch exchange (PBX) over a SIP connection or through traditional time-division multiplexing (TDM) connections (using Cisco PBX-IP Media Gateway [PIMG] or T1 media gateway [TIMG]).
Options	The Names Tuning service is the only optional item related to Speech Connect and is included with the purchase of a Cisco Unified Communications Software Subscription.

Performance	See Table 4 for name directory size and port considerations.
Programming interfaces	Speech Connect does not provide a programming interface, such as VoiceXML, for the building of voice applications on the same server.
Language support	Speech Connect supports both U.S. and U.K. English.

Table 4. Hardware Considerations

Call Volume per Month	Company Directory Size	Recommended Server	Notes
1 to 20,000	1 to 5,000	Cisco MCS 7825	Will not migrate to speech server for future Cisco Unity releases
1 to 60,000	1 to 50,000	Cisco MCS 7835	Can be field upgraded to speech server for Cisco Unity releases
1 to 200,000*	1 to 200,000	Cisco MCS 7845	Can be field upgraded to speech server for Cisco Unity releases
Assumptions			
Busy hour (15%)	If you anticipate more than 20% of daily calls to fall within one busy hour, increase the configuration to the next server level.		
Steady call levels	If you have bursts of activity and calls are not evenly distributed over the month, increase the configuration to the next server level.		
Blocking (P.01)	These recommendations assume potential blocking of 1% of calls during the busy hour. If you require a lower level of blocking, increase the configuration to the next server level.		

* For higher call volumes, order multiple speech servers.

Ordering Information

To place an order, visit the Cisco Ordering Home Page

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

Table 5. Ordering Information

Product Name	Part Number
One Speech Connect Cisco Unity Name	SC-UNITY-NAME
One Speech Connect Non-Cisco Unity Name	SC-GUEST-NAME
Speech Connect software kit	SC-SW-KIT

Note: Please refer to the Cisco Unified Communications Applications Ordering Guide for detailed information about part numbers, descriptions, and packaging options.

Cisco Unified Communications Services

Cisco and its certified partners can help you deploy a secure, resilient Cisco Unified Communications solution, meeting aggressive deployment schedules and accelerating business advantage. Cisco's portfolio of services is based on proven methodologies for unifying voice, video, data, and mobile applications on fixed and mobile networks.

Cisco's unique lifecycle approach to services defines the requisite activities at each phase of the solution lifecycle. Customized planning and design services focus on creation of a solution that meets your business needs. Award-winning technical support increases operational efficiency. Remote management services simplify day-to-day operations, and optimization services enhance solution performance as your business needs change.

Conclusion

Speech Connect for Cisco Unity enables creation of a “numberless enterprise,” in which names are all that an employee, customer, or business partner needs to bridge the gap created by the proliferation of communications devices. Cisco provides the software and services to create this numberless enterprise, in addition to delivering speech-accuracy enhancements so that connections between people and teams become more accurate and instantaneous over time. In addition, Cisco Unity amplifies your productivity with an enterprise-ready voice and unified messaging platform as part of a unified communications solution. This system improves productivity by allowing employees to access messages any time and anywhere, thereby allowing them to respond more quickly to messages for increased customer intimacy, service, and organizational agility. Speech Connect for Cisco Unity is an essential component of a unified communications strategy that enables collaboration across complex enterprises and across the human network.

For More Information

For more information about Cisco Unity with Speech Connect, visit

<http://www.cisco.com/en/US/products/sw/voicesw/ps2237/index.html> or contact your Cisco account representative.



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