



Collaboration Sizing Tool: Frequently Asked Questions

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This document answers frequently asked questions about the Collaboration Sizing Tool and Session Management Edition (SME) Sizing Tool, available at the following URL: www.cisco.com/go/cst.

This guide includes the following sections:

About Collaboration Sizing Tool	In this section, find answers to questions such as: <ul style="list-style-type: none">■ Who can access the Collaboration Sizing Tool?■ How do I learn how to use the Collaboration Sizing Tools?■ Does the Collaboration Sizing Tool produce a Bill of Materials (BOM)?■ How do I install the Collaboration Sizing Tools?■ What browser can I use to access the Collaboration Sizing Tool?■ How do I save my sizing solution for later reference?■ How do I generate a solution sizing summary report?
About Sizing	In this section, find answers to questions such as: <ul style="list-style-type: none">■ What is an Erlang?■ How many simultaneous calls can a server support?■ What is the BHCA per server or cluster?■ Why is my CPU or memory utilization low, but is the tool specifying multiple servers?■ How many voice messaging ports do I need?■ When should I choose the Complex option for the Database Complexity field on the Unified CM Deployment page?

About Collaboration Sizing Tool

This section answers general questions about the Collaboration Sizing Tool.

Who can access the Collaboration Sizing Tool?

Any Cisco employee with a Cisco.com account. The Cisco.com account can also be provided to partners who are either members of the Cisco Technology Developer Program (CTDP) or hold one of the following specializations:

- Advanced Unified Communications Specialization
- Master Unified Communications Specialization
- Multinational Master Unified Communications - Satellite Specialization
- ATP-Customer Voice Portal
- Authorized Unified MeetingPlace (ATP-Rich Media Communications)
- ATP-Unified Contact Center Enterprise
- Collaboration Architecture Specialization
- Data Center Architecture Specialization

The tool won't start. What do I do?

Check the following:

- Make sure that you meet the minimum requirements.
- Make sure you have the latest Service Pack for your version of Windows installed.
- Make Sure you have the latest Service Pack for Microsoft Office installed.
- If you are still having issues, send email to uc-sizing@cisco.com.

What products and versions does the Collaboration Sizing Tool support?

You will find a list of supported products in the release notes for the Collaboration Sizing Tool. A PDF version of the release notes is packaged with the downloadable sizing tool and is available in the installation directory after the tool is installed. The default path for the installation directory is C:\Program Files\Cisco Systems\Sizing Tool\

How do I learn how to use the Collaboration Sizing Tools?

Click **Help** in the sizing tool menu (located near the top and bottom of each sizing tool page) to display a help window. The help window contains a table of contents with information on tool navigation, saving solutions to XML, loading existing solutions from XML, input field descriptions, and more. Suppose you use the Unified Communications Manager Session Management Edition (SME) sizing tool. In that case, there is a Session Management Edition sizing video available at <http://cucst.cloudapps.cisco.com/help/Cisco-SME-Sizing-Tool-VOD.arf> (if you cannot open this link directly from this PDF document, copy and paste the link into the address bar of your browser). A WebEx ARF player is required to playback these recordings. To download an ARF player, see <https://www.webex.com/play-webex-recording.html>.

Does the Collaboration Sizing Tool produce a Bill of Materials (BOM)?

Yes. The Collaboration Sizing Tool provides a *Bill of Materials* option, which lists the solution's recommended components and the suggested quantities based on the information you provide throughout the solution. The *Bill of Materials* option appears at the bottom of the navigation list after you complete the *Create Bill of Materials* page. When you access the Bill of Materials page, an Export BOM to Excel option is available near the top of the page. Click the **Export BOM to Excel** option to export this information to an Excel worksheet. You can then use [Cisco Commerce Workspace](#) (CCW) to complete, quote, and validate your configuration.

What is Export to VMPT?

See **What is Save to XML?**

What is Save to XML?

Use the **Save to XML** option to save your existing work in an XML file so that you can continue working on it later. We also use this option to import the file into the latest CST application or to import the recommended VMs and/or SKUs into the Virtual Machine Placement Tool (VMPT).

Why should I use the Unified Communications Audit Tool (Unified Communications AT) in conjunction with the Collaboration Sizing Tool?

The Unified Communications AT mines an existing system for data and generates a report containing 90% of Unified CM information requested by the Collaboration Sizing Tool. This report limits the need to research the Unified CM deployment extensively. Unified Communications AT *cannot* be used with new deployments, and the information that is provided in the report is confined to Unified CM. The report information is available as an XML file that can be imported into the Collaboration Sizing Tool.

Why can't Unified CM be sized as an individual component?

Unified CM requires Gateways as part of the sizing; therefore, it cannot be sized as a separate component. Use the System Release or Compatible Components Sizing scenario as possible scenarios to size Unified CM.

How do I install the Collaboration Sizing Tools?

The sizing tools are available as downloadable packages from www.cisco.com/go/cst (a Cisco username and password are required for access). Click the **Download** link corresponding to the tool you want to use. You are prompted to **Run** or **Save** the file to your local machine.

- If you choose Run, the file downloads automatically to a temporary folder on your local machine. When the download is complete, the installation begins.
- If you choose Save, you can save the downloadable .exe file to a location of your choice on your local machine. To install the tool at your convenience, navigate to the folder in which you saved the executable file and double-click the .exe file for the tool.

What browser can I use to access the Collaboration Sizing Tool?

You can access the Collaboration sizing tools from the following browsers:

- Microsoft Internet Explorer 6.0 +
- Apple Safari 3.0 +
- Mozilla Firefox 2.0 +
- Google Chrome

How do I save my sizing solution for later reference?

The sizing tool pages contain a *Save to XML* option on the menu bar (in the upper right area of the sizing tool page). The sizing tool prompts you to enter a solution name if you have not already entered one. Use this option to save the current solution information as an XML file. The solution is saved to the MySavedSolutions folder. Solution information saved as an XML file can be loaded into the sizing tool using the *Open from XML* option.

How do I generate a solution sizing summary report?

In the sizing tool, click the **Export to PDF** option in the upper right of the Solution Sizing Summary page. The solution sizing summary report is automatically saved in PDF format to the sizing tool installation folder (the folder in which the sizing tool application file (.exe) resides).

In which languages is the Collaboration Sizing Tool available?

The Collaboration Sizing Tool is available only in English.

I found more than one DSP calculator on www.cisco.com. Which one should I use?

You can use the Collaboration Sizing Tool to size Cisco ISR gateways and DSPs either as a standalone request or as part of sizing the larger Cisco UC solution. Access to this tool is restricted to Cisco Field and Unified Communications certified Cisco Partners.

If you are not a Cisco Partner and want to determine what DSPs to order on your ISRs, you can use the DSP Calculator tool at http://www.cisco.com/web/applicat/dsprecal/dsp_calc.html.

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What is an Erlang?

An Erlang is a unit of measure for communications traffic. It is used to represent the utilization of a resource over a one-hour period. One Erlang means that one resource was used 100% of the hour. This usage could have been due to a single call of one-hour duration, or multiple sequential calls whose durations add to 1 hour. Therefore, if 10 Erlangs are required, it is necessary to have 10 resources to service all traffic.

What is BHCA?

Busy Hour Call Attempts is a measure of call volume indicating the number of call attempts that are presented to a system during the busiest one-hour period. The concept allows a more accurate prediction of system capacity because it represents a peak load over a relatively short period. BHCA can be measured over any time period, but typically a day is used. In some environments, there may be a particular hour in a week or year when traffic volume is much greater. For

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example, in the PSTN, the busiest day for calls is Mother's Day. You should determine and use the highest call rate you can measure during the longest period.

How many simultaneous calls can a server support?

No absolute number of simultaneous calls can occur on a server. It depends on the amount of memory that is available. The Collaboration Sizing Tool calculates how many simultaneous calls a server can support based on multiple inputs.

What is the BHCA per server or cluster?

An absolute BHCA is not specified. Rather, the tool considers the different costs of different types of call flows. The tool accounts for differences in cost, such as calls using different protocols (SIP or SCCP), shared lines, the type of endpoints involved, and other factors. Therefore, there is no flat BHCA budget per server. The BHCA for a cluster depends on the number of subscribers because each subscriber adds additional BHCA capacity to the cluster.

How do I determine the number of CTI connections?

The number of CTI connections the system needs to manage is determined by the inputs in the **Unified Communications Manager > Applications** tab of the Collaboration Sizing Tool. The system tracks the number of CTI-controlled devices, CTI-controlled lines or directory numbers (DNs), and the average number of CTI applications that control each device. The system is sized based on all these values. Note that lines and DNs that are shared among multiple devices may also have a CTI cost.

Why is my CPU or memory utilization low, but does the tool specify multiple servers?

In addition to memory and CPU utilization, the Collaboration Sizing Tool also tracks specific hard limits in the system. The number of servers may be larger due to specific limits on the number of phones, CTI-controlled devices, agents, or other factors.

For Unified CCE (IPCC), why does the tool have an input for incoming calls rather than the number of agents?

the resources can be impacted under various call scenarios, such as call treatment in the Unified IP IVR and agent wrap-up time. The number of agents is determined by call volume and service level desired.

What is the difference in call processing cost for gatekeeper-controlled versus non-gatekeeper-controlled?

There is no difference in the actual cost, but the tool input is structured to reflect the configuration of the Unified CM. The Unified CM is configured with gatekeeper-controlled gateways as a separate item.

Why is it necessary to distinguish between KPML dialing and en bloc dialing on the phones?

The cost to the system for each type of dialing is different and is included to ensure a high level of precision in the calculations. KPML is more expensive, but is the default for SIP phones that support it.

I am sizing a system that has two distinct sets of users, which each have different core office hours. How do I come up with a BHCA for this environment?

BHCA is meant to reflect the number of calls attempted at the busiest hour of the day. Therefore, it is not significant that there are two distinct sets of users. The information that is required to calculate BHCA is the total highest load on the system in a one-hour interval.

Why does Unified CM: Traffic Mix ask for the average input of BHCA "excluding Scheduled Conference Calls"?

Conferencing is bursty traffic that occurs at the top of the hour because most conferences start on an hour or half-hour boundary. The Collaboration Sizing Tool accounts for this traffic differently because it is highly concentrated. It

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determines the BHCA due to conferencing based on the number of conferences that are initiated and the specified period when those conferences are initiated. This results in a more precise calculation for the bursty conferencing traffic.

How many voice messaging ports do I need?

The Collaboration Sizing Tool calculates the number of voice messaging ports based on the number of messages that are sent during busy hours and whether IMAP or CPCA is used for retrieving messages.

If the Collaboration Sizing Tool tells me I cannot scale anymore due to memory constraints, can I fix this by adding more memory to the server?

Extra memory improves an operating system's performance for running multiple processes. However, the amount of Virtual Memory (VM) space is important. The Collaboration Sizing Tool sizes are based on the maximum VM available for a specific Unified CM version. More memory does not increase that VM space or provide extra capacity.

Does the Collaboration Sizing Tool guide me in how much network bandwidth I need?

No, not time currently.

Can the Collaboration Sizing Tool help me size my system if I only know the number of IP phones?

Default values are provided for many inputs and can be used to provide useful output. If you accept the defaults, you should monitor the system you implement to verify that the defaults are not exceeded. If the default values for system activity are exceeded, rerun the tool with the actual data to verify that your solution has sufficient capacity.

Is there a difference in the effect of devices using different protocols, such as SIP, SCCP, MGCP, or H.323, and does the Collaboration Sizing Tool account for this?

Yes, the tool accounts for differences in protocols that are used by devices and different call flow patterns of those devices.

What information do I need to obtain before running the Collaboration Sizing Tool?

You can view the input fields in the Collaboration Sizing Tool interface to get an idea of the required information for a solution. You can also look at the Field Reference information available in the Help files packaged with the sizing tool. The field reference information contains descriptions of each sizing tool input field and sometimes suggests where to obtain the required information for a particular input field.

How do I know that the results of a sizing exercise are accurate?

The calculations are based on performance testing of the system. The accuracy of the result you get depends on the accuracy of your inputs. The output of the tool may differ from your observations. For instance, the tool provides a percentage of a CPU budget rather than the total CPU usage. Also, the CPU utilization that is shown by the tool refers to the CPU utilized by the Unified CM process rather than the overall CPU utilization of a specific server.

How does the number of Unified Contact Center agents affect the Unified CM component?

The number of agents is used to calculate the expected BHCA load on the Unified CM.

How many gateway ports or PSTN trunks do I need?

The tool derives a number of ports from your input on the percentage of the BHCA load that involves gateways and the required service level specified by the blocking probability.

When should I choose the Complex option for the Database Complexity field on the Unified CM Deployment page?

The tool allows the selection of two levels of dial plan complexity: Simple and Complex. The Database Complexity option uses a fixed multiplier for all the dial plan-related performance data. Select the Complex choice when a dial plan includes non-trivial call flows. For example, hunt lists generate multiple calls for each incoming call to the hunt list. This would not be reflected in the BHCA for the overall system, and you should choose the Complex Database option. You should also choose the Complex Database option for deployments over 10,000 phones because these deployments typically use advanced dial plan constructs.

What is ECC?

Extended Call Context: Extended Call Context are variables defined and enabled in the Configuration Manager to store values associated with the calls and pass the associated data between different IPCC components. ECC variables can be defined up to 2-Kbyte size. Cisco IP Contact Center: IP Contact Center is the previous name for the Cisco Unified Contact Center

What is a PG?

Peripheral Gateway: The computer and process within the ICM system that communicates directly with the CM, ACD, PBX, or ICM at a contact center. The Peripheral Gateway reads status data from the peripheral and sends it to the Central Controller. In a private network configuration, the Peripheral Gateway sends routing requests to the Central Controller, receiving routing information in return.

What is a Progger?

Peripheral Gateway, Router, and Logger: When the Call Router, Logger, and Peripheral Gateway modules run on the same server, the server is called a Progger.

I am trying to perform calculations for an agent-less campaign, but the tool shows me that I still need agents. What do I do?

In the **Unified Contact Center Enterprise > Outbound** page of the Collaboration Sizing Tool, you must define each Campaign by selecting **Ports** in the *Select Input Type* field and entering 0% in the *%Transfer to Agents* field.