

# TESTING REPORT: Callware's Callegra



The Converged Communication  
Industry's Premier Testing Service

## Date of Tests:

October, 2002

## Vendor:

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## Product Tested:

**Callegra**  
Callegra .UC Platform  
Version: 6. 0a.B37 R1



## Executive Summary:

*CT Labs found the Callware Callegra .UC product to be very powerful and feature-rich. The Callegra .UC system has great flexibility, since it can be set up as a single server or as a multi-server solution. This allows companies to expand their systems easily as their needs grow.*

*The online help for Callegra .UC is well organized and contains plenty of useful information including troubleshooting tips. As of the time of this test, Callware was still working on the documentation package for Callegra .UC, so CT Labs did not evaluate it.*

*The Callegra .UC voicemail system telephone user interface contained descriptive prompts that made it very easy to use. The two Windows-based administrative graphical user interfaces and the Web-based clients were well-designed and easy to use. The Callegra .UC system can be easily configured for different levels of functionality based on a user's level.*

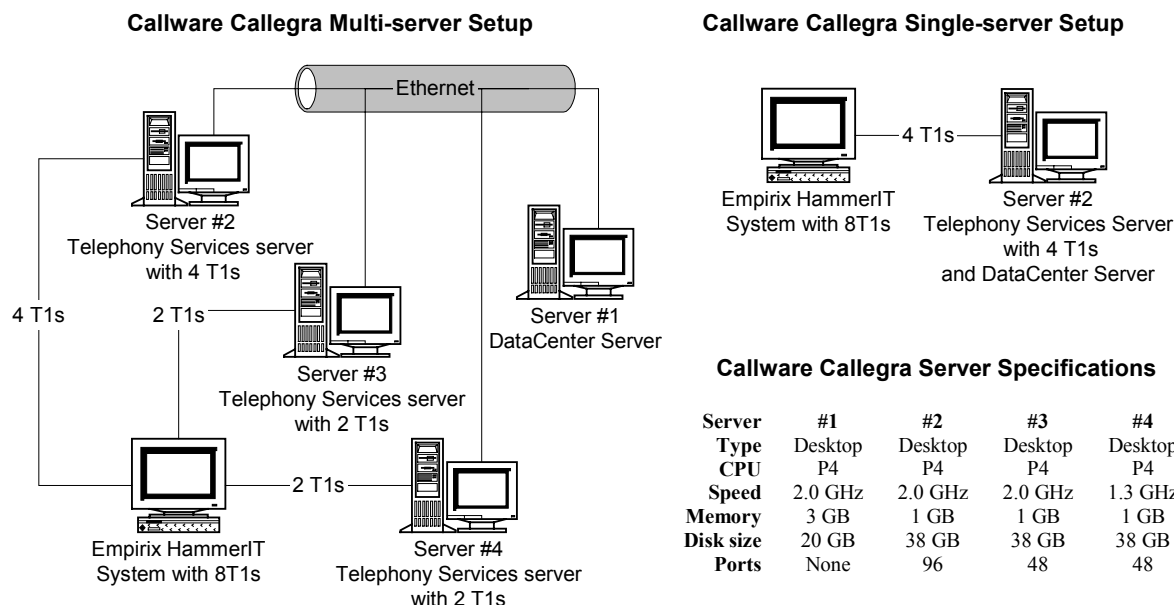
*CT Labs found that during the automated voicemail testing, the Callegra .UC system performed very well both in a single-server and in a multi-server setup. No message delivery or retrieval errors were detected during these performance tests.*

## Product Description:

Callware Technologies' Callegra .UC, is a complete unified communication and messaging (UCM) solution and enterprise application integration development platform. Callegra .UC offers a powerful voice messaging and automated attendant solution that easily expands to include additional unified messaging advantages, such as integrated speech recognition, fax services, browser based voice and fax messaging, and email integration including text-to-speech. Leveraging Microsoft's .NET, SQL and Windows 2000 technologies, Callegra .UC was designed with an XML-based N-tier, object-oriented, distributed architecture allowing it to scale from a full-featured 4 port voice mail system up to a very large network of unified communication installations capable of serving one million users. Additionally, the Callegra .UC XML Web Services SDK allows system integrators and other developers to add advanced voice, phone, and fax functionality to other enterprise applications. This is accomplished by using XML Web Services or COM-enabled development environments to access client functions from the Callegra .UC servers. Client applications are supported on all current desktop versions of Microsoft Windows with support for Microsoft Outlook 2000, XP, Novell GroupWise, IBM Notes, and Internet Explorer browser-based access. Intuitive graphical interfaces are provided for system set-up and administration. Callegra .UC's telephone system integration combined with its rich feature set provides the capability to improve overall company communication, increase productivity and deliver next-generation telephone applications to any device anywhere, anytime.



**Testing Setup:**



**Testing Setup Description:**

In both test setups used for this test, CT Labs used the Empirix Hammer IT Automated Call Generator to place calls into the Callegra .UC system.

**Multi-server setup** supporting 192 ports: Server #1 was set up as a DataCenter server only, Server #2 was set up as a Telephony Services server supporting 96 ports, and Servers #3 and #4 were set up as Telephony Services servers supporting 48 ports each.

**Single-server setup** supporting 96 ports: Server #2 was set up as an independent Telephony Services server supporting 96 ports and the DataCenter database.

**Summary of Tests Performed:**

**Product installation and analysis:** Acting as an untrained solution provider, CT Labs installed and configured the system using the software, documentation, on-line help, and hardware provided by Callware Technologies. Then, the graphical and telephone user interfaces were fully evaluated for functionality and ease of use.

**Automated multi-line load test:** CT Labs then performed a fully automated test suite that generated multiple simultaneous calls into the Callegra .UC system to test voice mail and auto attendant functionality under real-world call loading conditions. This included a mixture of leaving, saving, and deleting message operations. This test logged detailed pass/fail and performance data, including call answer delays, touch-tone command delays, call durations, any missed messages, any messages received out of sequence, and any messages received in the wrong mailbox.

*CT Labs did not test fax, email-reading, or UM integration with Outlook for the Callegra .UC system for this test.*



**Evaluation Scores**

Test Category	Score
Ease of installation	7.0
Documentation	N/A
On-line help	8.0
Graphical user interface ease of use	9.5
Telephone user interface ease of use	9.0
Product features	9.5
Product performance	8.0

*Above scores are out of 10 possible in each category.*



**CT Labs Test Results and Findings:**

**Installation:** Callegra .UC is sold to end-users through a solution provider who are trained and certified by Callware. The solution provider typically purchases only the Callegra .UC software from Callware and builds a custom system for the end-customer. However, they can opt to order a custom-configured system directly from Callware or one of its distributors.

CT Labs evaluated the Callegra .UC installation and setup from the perspective of an untrained solution provider, which is not the norm for the typical Callware installer. Using their web-based install startup page, access to extensive help files on the installation CD-ROMs, and their new QuickStart checklist for installing single and multi-server units, CT Labs found the process straightforward to follow even without the Callware training. We expect trained solution providers to do it faster than our tester. Overall, due to the number of required install components and time needed to perform this installation, CT Labs rated this a "7.0."

**Documentation and on-line help:** The documentation provided to CT Labs for the Callegra .UC platform included a QuickStart installation checklist and two help files in .CHM format. The help file for the integration of Callegra .UC with Outlook was not reviewed. The other help file for the administrative GUIs (Callegra .UC Telephony Services and Callegra.ADMIN for MMC) was found to be well organized and contained plenty of helpful links. The amount of troubleshooting help in these files was found to very good -- an area that too often gets neglected in other products. Overall, CT Labs rated the online help file an "8." Callware stated that they are in the process of creating documentation for each user interface. Thus, CT Labs did not score the documentation category.

**Telephone User Interface (TUI) analysis:** The Callegra .UC voice-mail TUI was found to be well-designed and easy to use. The high-quality prompts were very descriptive, and they were found to be relatively short and efficient. It was nice to find that menu prompts could be interrupted with touch-tone commands while error prompts were played to completion without being interruptible, both excellent TUI attributes. The Callegra .UC voicemail TUI was found to be consistent with its use of single-digit entries, menu keys, the "#" key for ending input, and the "O" key to reach an operator. The minimum number of digits required for a mailbox password in the Callegra .UC voicemail TUI is 1 (a bit short for security reasons), but the default value is 4 and the maximum number of digits can be changed by the Administrator on a per-user basis. Overall, CT Labs rated the Callegra .UC TUI a "9.0."

*Due to time constraints, CT Labs did not review the TUI areas involving faxes, emails, speed dial, and message play order.*

**Graphical User Interface (GUI) analysis:** CT Labs evaluated two administrative GUIs and one client GUI. The Callegra.ADMIN GUI for MMC (Microsoft Management Console) has the typical expanding tree-type structure of MMC GUIs. CT Labs found that this GUI made it easy to drill down to the desired command. One of the best features tested was the ability to choose all or just parts of a user profile (e.g. permissions, distribution lists, etc.) to copy, making it very easy for creating new user accounts. In organizations where different levels of access are required for different groups of users, this technique can save an administrator much time. CT Labs rated this GUI a "9.25."

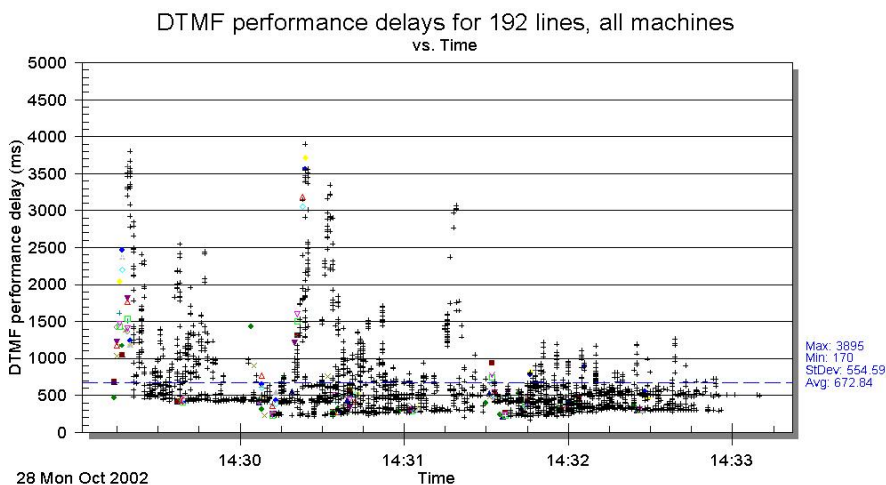
The Callegra .UC Telephony Services GUI is Windows-based and allows viewing and modification of system parameters such as ports, boards, and PBX integration. It supports permission levels depending on the profile of the logged-in user. For security reasons, CT Labs would have liked to see the administrative log-ins time out after a specified amount of time instead of having to remember to manually log out.

The client GUI is web-based and also supports different feature sets based on permission levels. This GUI is designed to show as much of the information as possible on-screen, so the user has little need to scroll up and down -- nice! CT Labs found this GUI so easy to use that there was no need to access a help file—a good thing since there *is* no help file.

**Product performance:**

**Multi-server performance:**

CT Labs found that with 192 ports being used across 4 servers (two with 48 ports each, one with 96 ports, and one for database services), the DTMF performance was very good as shown in the graph below. No message delivery or retrieval errors were detected during this test.





### About CT Labs

CT Labs is an independent, full-service testing and product analysis lab exclusively serving the Converged Communication (CC) and IP Telephony (IPT) industries. CT Labs' testing automation specialists not only perform a wide variety of standard test suites that validate and exercise CC and IPT products, but can also create custom-developed tests for special testing needs. Testing solutions include telephone and graphical user interface functional, regression, and load / stress tests. CT Labs prides itself on working with cutting edge technology and products.

The *CT Labs Tested* program was designed to provide independent testing and validation of converged communication products, including the execution of tests that verify real-world performance and ease of use. Products that display the *CT Labs Tested* label have been tested by CT Labs and have exhibited a high level of quality in their performance and use.

For more information about this or other testing services, contact:

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### Product performance, continued:

#### Single-server performance:

CT Labs found that with 96 ports and the database services being installed onto a single machine, the performance was acceptable; at 72 ports for the same setup, the call-handling performance was excellent. This "burst" test was run with all calls started simultaneously, resulting in each call reaching the start menu at approximately the same time, then accessing messages at approximately the same time, etc. This type of test is performed as a worst-case load on the system, but it is not typical of real-world use. No message delivery or retrieval errors were detected during this test.

#### Web Client performance:

CT Labs found that, on average, a single active web GUI in use by the average client uses the overall CPU resources equivalent to that consumed by a single phone line. CT Labs recommends that customers who anticipate a large percentage of web-access users may want to consider adding another server for client web access.

CT Labs rates the Callegra .UC product an "8.0" in the category of product performance.