



Case Study: Menlo College

ClarusIPC® Operations Helps Manage the Complexities of Deploying and Scaling an Institution's IP Telephony Environment

Clarus Systems

Clarus Systems, the leader in automated Cisco IP telephony testing and documentation solutions, offers software for systems integrators and enterprises seeking enhanced visibility into their IPT environment. ClarusIPC Certification and ClarusIPC Operations are the only products available to validate that all aspects of a Cisco IPT environment meet actual user requirements both at deployment and throughout the life of the network. Costly and time-consuming end-to-end manual testing that is not possible for large and distributed deployments can be done proactively and systematically and the results presented in clear and useful reports. Systems integrators deploying and enterprises managing large, distributed IP telephony networks use Clarus Systems' solutions to save testing and management costs, ensure an available IP telephony network and increase user confidence and satisfaction.

Menlo College

Menlo College, an independent, co-educational, nonsectarian institution in Atherton, California, has degree programs which focus on academic excellence and interdisciplinary study with a global perspective. Curriculum is designed to provide students with relevant, real-world tools and innovative thinking processes and help them develop their individual talents as successful global citizens. Students are encouraged to participate in local and international internships and study programs in Fortune 500 companies and innovative start-ups that bridge the gap between theory and practice.

Menlo College's use of Cisco IP phones throughout 150 campus administration offices and 500 students' dorm rooms illustrates this dedication to achieving real world experience while helping students to leverage campus IT technology and manage telecommunications expenditures. Students enjoy IT phone and voicemail service in their rooms and have direct dial connectivity to important campus services such as emergency direct dial to the campus security department.



“ClarusIPC has enabled Menlo College to fully realize and manage the benefits of our IPT deployment. Pro-active nightly health checks keep administrative IP phones functioning properly. Campus phones are used round-the-clock so the ability to resolve issues with minimal user impact is very important to us. Now with ClarusIPC, there is increased visibility into and satisfaction with the campus IP environment.”

Blair Simmons
Director of Information
Technology
Menlo College



Technology
Developer
Partner



Case Study: Menlo College

The Opportunity

The IP telephony market is growing. The Yankee Group forecasts that the business VoIP market will grow from \$840 million at the end of 2005 to almost \$3.3 billion by 2010. According to IDC, 61% of medium and large companies will deploy IP telephony by 2007. Converged data and voice networks save carrier costs and offer features like teleconferencing. TEQ Consulting forecasts that U.S. IP phone sales will increase from 4 million in 2005 to 5 million in 2006. Sage Research reports that 61% of IT professionals trialing and deploying IP telephony networks trialed solutions from Cisco Systems. Cisco Systems continues to lead the market as the dominant provider of IP networking equipment and of IP telephony systems.

The Challenge

The shift to IP telephony has created an opportunity for institutions to streamline and improve IP telephony management through automated and standardized testing and reporting. Manual testing and nightly health checks, included in systems integrators' best practices for decades, are impossible to comprehensively accomplish for organizations with large numbers of IP phones in distributed locations with in and out-of-network calling plans, diverse user classes and calling profiles. Many large organizations perform some level of manual testing on a small percentage of IP phones and are forced to infer health performance of all phones based on this limited testing. The man-hour expenditure for operations testing of all phones for real user needs prohibits comprehensive manual testing from being a reliable aid in enterprise telephony deployment and ongoing network operations.

Menlo College uses Cisco IP telephony solutions and Clarus Systems testing and certification software to deliver the cost and feature benefits of IP telephony to administration staff and the student body. Prior to the use of ClarusIPC Operations, Menlo College was unable to perform nightly, end-to-end health checks as part of their IPT management plan. As their network grew, troubleshooting was becoming more complex and the time to complete tests increased. The Menlo College IPT network includes eight-hundred Cisco IP voice communication devices campus-wide, all administered from a central server. Issues from daily communication, routine phone moves, adds and changes were escalated to the operations Help Desk group regularly as they occurred. Management needed more visibility into and confidence in the campus IP telephony network.



company	cluster	description	publisher IP address	CCM version	last synchronized
NegativeRegression41	NegativeRegression41	QA Test Cluster	172.17.12.41	4.1	02/03/2006 01:30 AM
PositiveRegression41	PositiveRegression41	QA Test Cluster	172.17.12.41	4.1	02/01/2006 17:28 PM
NegativeRegression41	NegativeRegression41	QA Test Cluster	172.17.12.41	4.1	02/03/2006 01:30 AM
PositiveRegression33	PositiveRegression33	QA Test Cluster	172.17.13.47	3.3	02/02/2006 18:31 PM

The ClarusIPC Cluster Management interface provides a centralized workspace to manage CallManager clusters.



Case Study: Menlo College

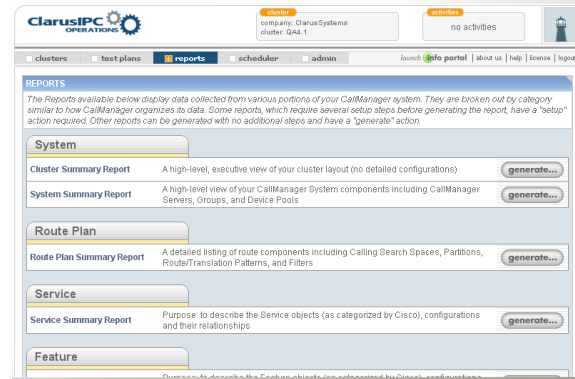
The Solution: *ClarusIPC® Operations*

ClarusIPC Operations was chosen by Menlo College's Office of Information Technology to help manage and test the campus IP phone network and perform comprehensive nightly health check testing. Features of particular importance to the calling plans of administrative offices are gateway, voicemail and fax machine availability. Nightly automated testing of these features yields an always-on, always-working IP telephony network for an institution which prides itself in use of real-world technology and innovative thinking.

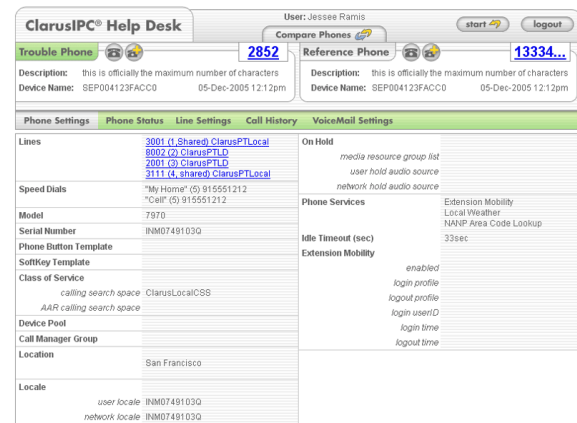


An automated nightly test plan was developed that tested individual phones' availability and connectivity, device registration, network signaling delay, class of service, routing and gateway availability, and each user's individual calling plan. Complex tests like Meet-Me n-way conference calling, voicemail port loading, softkey corporate directory availability, and on and off-network calling are performed. The nightly execution of over 450 test components that now run from a centralized server in just a few un-manned hours yields an unprecedented treasure of valuable data that is delivered in clear, useful, pre-designed and standardized reports.

Help desk issue resolution tools are available if needed to streamline user data collection, reporting and escalation of trouble tickets, compare configurations before and after issues appear, and recreate user problems without the help desk engineer visiting the user's desk. There is now systematic phone configuration change detection and regression testing. The operations team members are alerted to any issues before they impact users and confidence in the IP telephony network is at an unprecedented high. No other testing solution can perform end-to-end testing of real user needs.



ClarusIPC's extensive reports aid in tracking, diagnosing and troubleshooting the health of an IP Telephony deployment.



Use the ClarusIPC Operations Help Desk module to quickly streamline trouble ticket data collection and escalation.



Case Study: Menlo College

Management Benefits

By automating IP telephony testing, scarce and expensive operations engineering resources can be focused on issue resolution rather than on test development and manual testing. The manual testing alone can take anywhere from 2 to 15 minutes per handset. In a several-thousand phone, distributed campus environment, manual, end-to-end testing is extremely expensive and not possible for all phones. Distributed campus networks and complex user calling plans introduce additional complexity, as do ongoing moves, adds and changes, and scaling the network with campus and IT growth. Remote site testing without automation requires travel costs.

Comprehensive automated testing and standardized reporting not only address these issues, but can also identify problems that manual testing cannot. Installation, post deployment and upgrade baseline configurations are documented to minimize time spent troubleshooting after a new deployment or upgrade. Configuration validation can be performed nightly and the data fed into network management solutions. A maintenance best support practice can be developed and business logic can be proactively tested and reinforced or realigned. Issues can be identified and corrected before impacting the user as confidence and availability soar.

Conclusion

Menlo College's use of ClarusIPC automated testing software saves them testing time and costs through increased insight into their IP telephony environment. ClarusIPC is the only solution to deliver end-to-end testing of user requirements. Contact Clarus Systems today to find out how you can benefit from increased insight into your IPT network.

test plan	description	created	test run	results
Device Reg		Feb 16, 2008 9:28 PM	Feb 23, 2008 3:01 AM	
Sig Center		Feb 16, 2008 9:37 PM	Feb 23, 2008 3:01 AM	
Call Permissions		Feb 16, 2008 9:40 PM	Feb 23, 2008 3:02 AM	
VP On		Feb 16, 2008 9:41 PM	Feb 23, 2008 3:11 AM	
VP Off		Feb 16, 2008 9:42 PM	Feb 23, 2008 3:12 AM	
Directory Handler		Feb 16, 2008 9:46 PM	Feb 23, 2008 3:15 AM	
FastDial		Feb 16, 2008 9:48 PM	Feb 23, 2008 3:21 AM	
Rollover		Feb 16, 2008 9:49 PM	Feb 23, 2008 3:28 AM	
Ad-hoc_conf		Feb 16, 2008 9:50 PM	Feb 23, 2008 3:30 AM	
Transfer		Feb 16, 2008 9:50 PM	Feb 23, 2008 3:36 AM	
Hold		Feb 16, 2008 9:51 PM	Feb 23, 2008 3:50 AM	
Recall		Feb 16, 2008 9:52 PM	Feb 23, 2008 3:57 AM	
Call Park		Feb 16, 2008 9:53 PM	Feb 23, 2008 3:53 AM	
Corp Dir		Feb 16, 2008 9:53 PM	Feb 23, 2008 3:41 AM	
Gateway port loading		Feb 16, 2008 10:14 PM	Feb 23, 2008 4:01 AM	
Move		Feb 16, 2008 10:11 PM	Feb 23, 2008 3:20 AM	

Standardize testing across the organization with ClarusIPC's ability to create, copy, import and export test plans.



Clarus Systems, Inc.
 2200 Bridge Parkway, Suite 101
 Redwood City, CA 94065
 650.632.2800 TEL
 650.632.2810 FAX
 info@clarussystems.com
 www.clarussystems.com

Menlo College
 1000 El Camino Real
 Atherton Ca 94027
 (800) 556-3656
 www.menlo.edu