

# Hosted Communication Services: An implementation of the Amanda Portal System for BroadVox Business Solutions.

## **Introduction:**

BroadVox, LTD headquartered in Garfield Heights, Ohio founded in August of 2001, is operating two telecommunications divisions - BroadVox Carrier Services and BroadVox Business Solutions. BroadVox, LTD is an organization focused on delivering wholesale VoIP carrier traffic via its Carrier Services division and hosted PBX and IP Centrex Services to the small and medium sized businesses via its Business Solutions division.

The BroadVox team is comprised of individuals focused on a common goal and belief in ubiquitous communications. Collectively there are over 30 years of VoIP experience within the organization. BroadVox Business Solutions combined with BroadVox Carrier Services is a next generation ASP/ITSP and VoIP Carrier. The Broadvox Carrier Services division network began operation in 2002, and currently serves wholesale carriers of voice and content minutes at an annual run rate of \$12M.

BroadVox Business Solutions is implementing technology that will allow for the provision of hosted communication services that complement those offered by the Carrier Services Division. The goal of the BroadVox Business Solutions division is to deliver the most pervasive suite of IP based, hosted communication services available to small and medium sized business customers in North America.

## **Why Hosted Solutions:**

The BroadVox view is that hosted solutions provide end users with access to the latest technologies without the need for enhancing or replacing locally owned equipment, and that these hosted solutions will be adopted by business users primarily because of the improved Total Cost of Ownership (TCO) benefit.

In the BroadVox business model, customers will simply lease end-point appliances that will connect to the BroadVox call control engines at the core of the network. This will enable businesses access to communications services such as:

- auto attendant
- voice mail
- fax distribution
- unified messaging
- find me / follow me
- voice-to-text and text-to-speech translation services
- foreign language message translation services
- customer relationship management capability
- automated call distribution.

These services will be available on an as required basis to individual subscribers of the system, and access to continuous improvements of these features will be guaranteed by subscription.

The business user of the hosted solution is freed from the risk of investing in and maintaining inadequate equipment, and is presented with a known cost for access to those services required for each individual user of the system. In addition, access to many of these advanced services is simply out of reach for the average business customer since the cost of acquiring and maintaining local equipment is prohibitive.

### The Amanda Portal Hosted Messaging Solution:

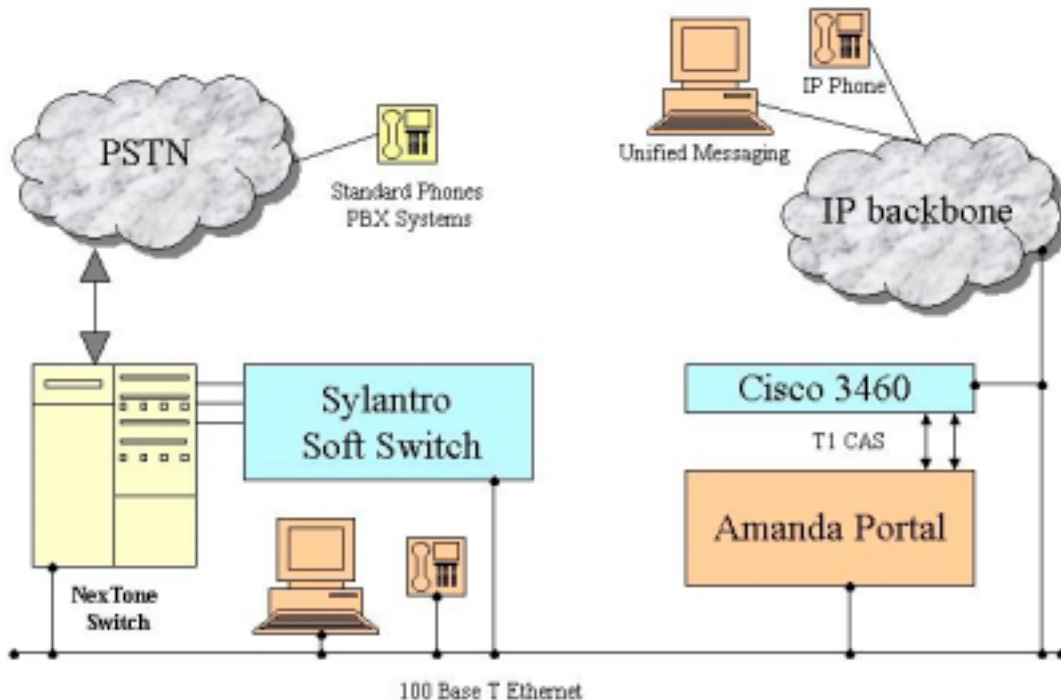
The primary BroadVox requirement is to provide hosted solutions to any small business or SOHO worker with broadband Internet access. The first and foremost hosted application deployed by BroadVox was automated attendant and unified messaging services provided by Amanda Portal. These features allow BroadVox clients to automatically have incoming calls routed within the enterprise, and to centralize their email, voice mail and fax messages into a single access point.

BroadVox needed to quickly deploy a single hosted application capable of providing advanced messaging in a large scale, complex, multi-tenant environment. In addition, the hosted unified messaging solution needed to be fully interoperable with the BroadVox network. The implementation of the Amanda Portal System provides BroadVox with a system that is capable of supporting a large number of simultaneous users, while delivering advanced messaging services and supporting current and future interoperability standards.

### Hosted Solutions Architecture:

Communication between BroadVox's hosting platforms and the existing BroadVox network is managed via a NextOne/Sylantro softswitch cluster. This hosted solutions architecture is designed to support a wide variety of end-user appliances, and hosted applications. The Figure below provides a topological view of the architecture used to integrate the Amanda Portal system into the BroadVox network.

### BroadVox System Diagram



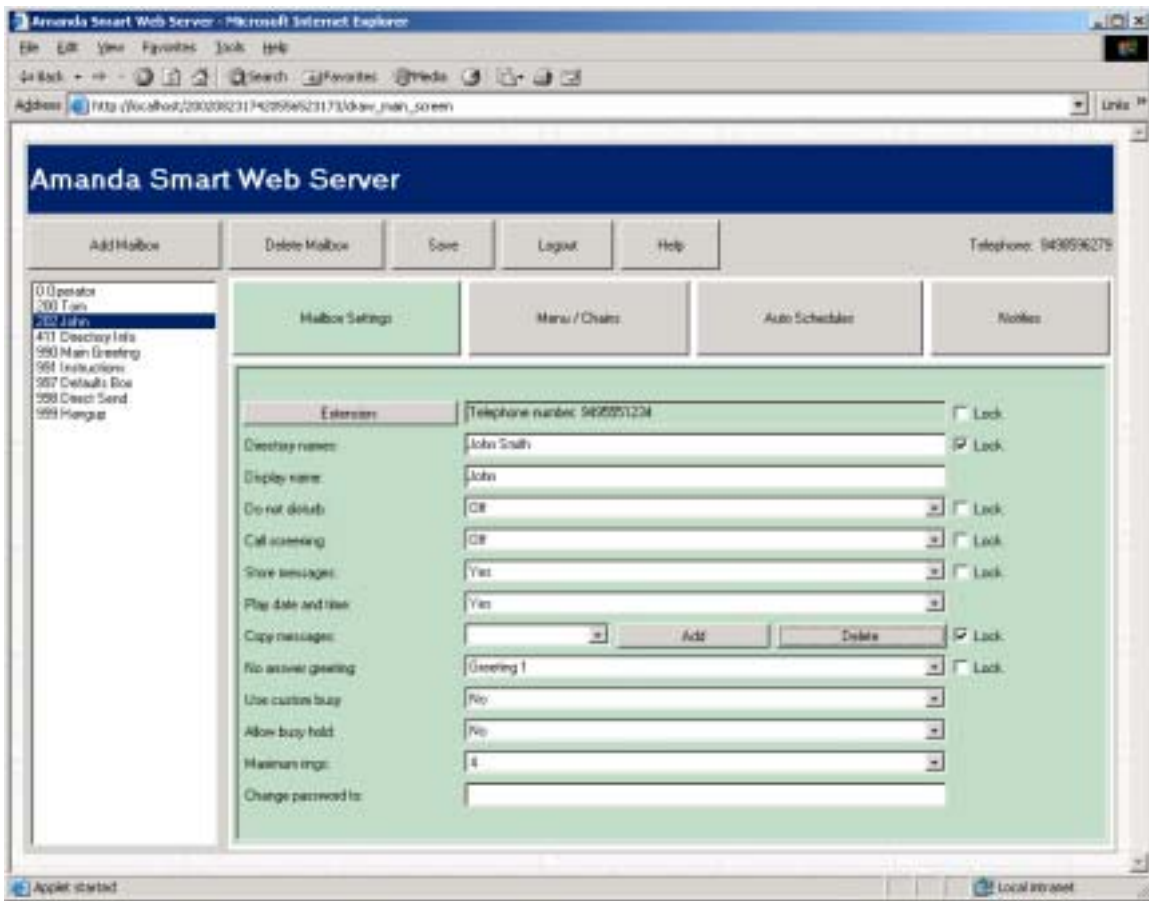
In the above diagram, the NexTone/Sylantro softswitch cluster is shown at the heart of the BroadVox integrated network. The combination of these switches provides BroadVox with class four and five PBX feature sets, as well as IP Centrex and hosted IP-PBX trunking capabilities.

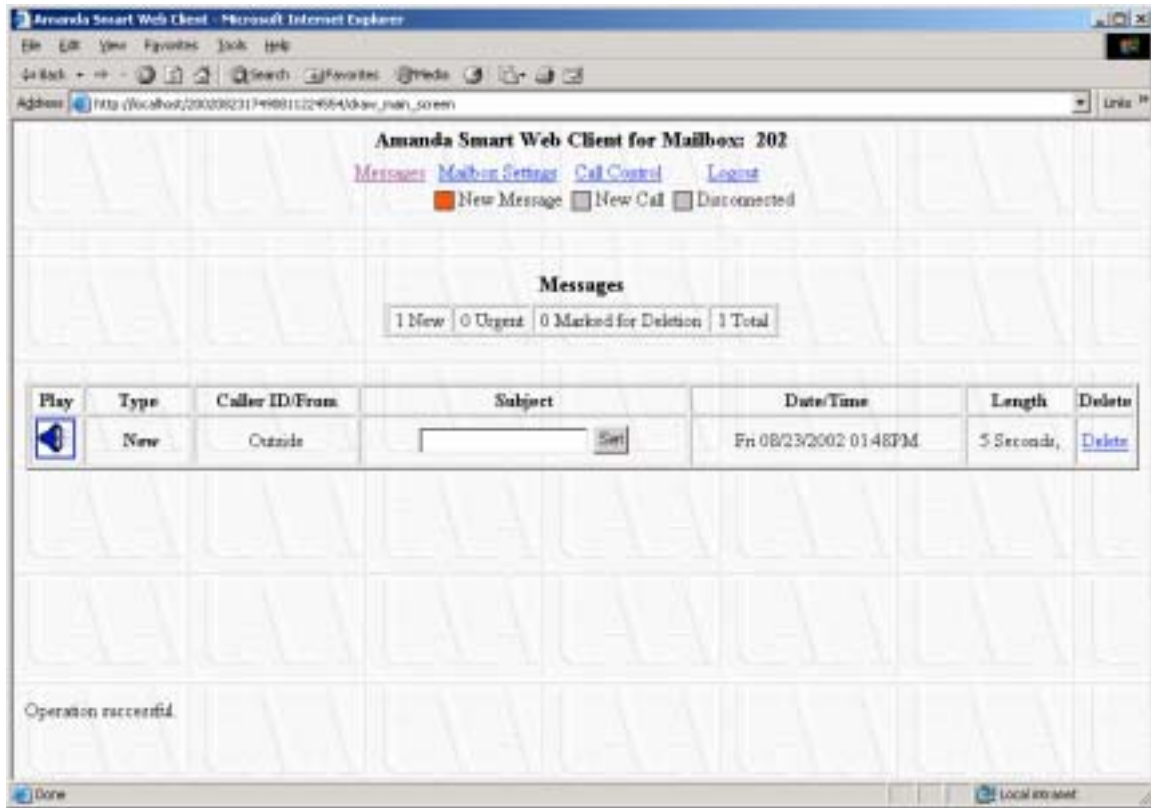
The Cisco 3460 router communicates to the Sylantro softswitch using UDP over the Ethernet distribution. Voice messages from IP enabled devices, such as IP phones and network PCs are converted by the Cisco

router into T1 CAS signals for processing by Amanda Portal. Voice messages originating from standard PSTN telephones and PBX systems are also processed by Amanda Portal through the CISCO T1-CAS interface. Full access to the Amanda Portal is available from any PSTN or IP phone set or any internet enabled PC.

Amanda Portal converts stored voice messages and fax messages into WAV or audio basic files and TIFF files for delivery to a remote SMTP email account that is accessed by the end user. Amanda Portal also offers MS Windows based client software for users that have a direct IP connection to the server. All other users have secure access to the Amanda Portal system from any web enabled PC with a compatible browser, and both system administrator functions and end user operations are available through the web interface.

### Amanda Portal Web Browser Interface for Administrators and End Users





### **Amanda Portal Features:**

While unified messaging is the first application of the Amanda Portal system for BroadVox Business Solutions, there are other key features that will be made available in the near future. The Amanda Portal platform supports multiple and simultaneous personalities (applications) using Tcl, SQL, ODBC, voice, and web interfaces. End users are able to provide to their customers access to critical information through both voice and web interfaces. Voice access would include touch-tone and/or speech access to information such as order tracking, open balances, and shipping information, and to services such as marketing requests and ordering. Web access would allow for similar information and services via a browser. Through these access points, BroadVox clients will use the Amanda Portal system for the following applications:

- Customer Relationship Management
- Predictive Dialing
- Automatic Call Control
- Call Utilization Management Reporting
- Multi-office integration of call handling
- Multi-office distributed call queues (ACD)
- Text to speech for email access over the telephone

### **Conclusion:**

BroadVox Business Solutions Division is committed to the deployment of the most robust suite of hosted communications applications available to small and medium business customers in North America. The application of the Amanda Portal as their first hosted application provides a highly capable advanced messaging platform in a large scale, complex, multi-tenant environment. In addition, the implementation of Amanda Portal provides BroadVox with a system that is capable of supporting current and future interoperability standards.