

Asterisk at the Heart of the Enterprise

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About Matrix

Matrix is one of the leading providers of voice and data communications services in the SMB (Small Medium Business) and multi-location distributed enterprise markets.

- ▶ Annual revenues in excess of \$100 million
- ▶ Portfolio company of Platinum Equity – a private investment firm with holdings generating over \$23 billion in aggregate revenue and #27 on Forbes magazine’s “Largest Private Companies” list.
- ▶ Solid financial foundation providing stability with the focus of a customer-driven technology provider



Product Portfolio

Our customers are increasingly technologically sophisticated.
So are our products

► Collaboration

- Audio Conferencing
- Web Conferencing
- Email and Web Hosting

► Data/Internet

- Dedicated
- Integrated Voice/Data T1
- IP VPN
- Frame Relay
- ATM
- Private Line
- DSL

► Voice

- Local Dial Tone
- Switched Long Distance
- Dedicated Long Distance
- Switched Toll Free
- Dedicated Toll Free
- Calling Cards
- Call Detail Reporting



Re-aligning Cost Structure

Matrix required a cost structure that would allow it to operate effectively in a highly competitive industry, while retaining the flexibility to respond quickly to opportunities

- ▶ Reduce capital budget
- ▶ Develop an operating budget that includes a variable cost component that can be adjusted to reflect changes in the overall business
- ▶ Deliver a platform that does not constrain the ability of the organization to meet the needs of its current and future customers
- ▶ Create an infrastructure that can integrate acquisitions quickly



Implementation Approach

The ability to deploy an open source solution across the entire enterprise required a series of implementations that allowed technical and operational sides of the business to learn the appropriate skills in low risk projects

- ▶ Deploy a basic asterisk system to remote offices
- ▶ Replace aging infrastructure that has a high cost to the organization
- ▶ Link implementation projects to larger organizational initiatives
- ▶ Speak in terms of financial savings, data transparency, shorter deployment cycles and operational efficiencies



Key Components

Asterisk was the foundation for a number of the components of the enterprise infrastructure

- ▶ Four distributed Asterisk PBX Systems for local and long distance calling
- ▶ One 24x7x365 centralized, and load balanced Asterisk/OpenSER-based cluster system providing multiple line-of-business telephony applications
- ▶ A rules based IVR system built on the call center platform for enhanced call routing and self service options
- ▶ Carrier class voicemail platform including customer travel card dial-through services, find me/follow me hunting, hierarchical mailbox support, and IVR/web-based configuration assistance



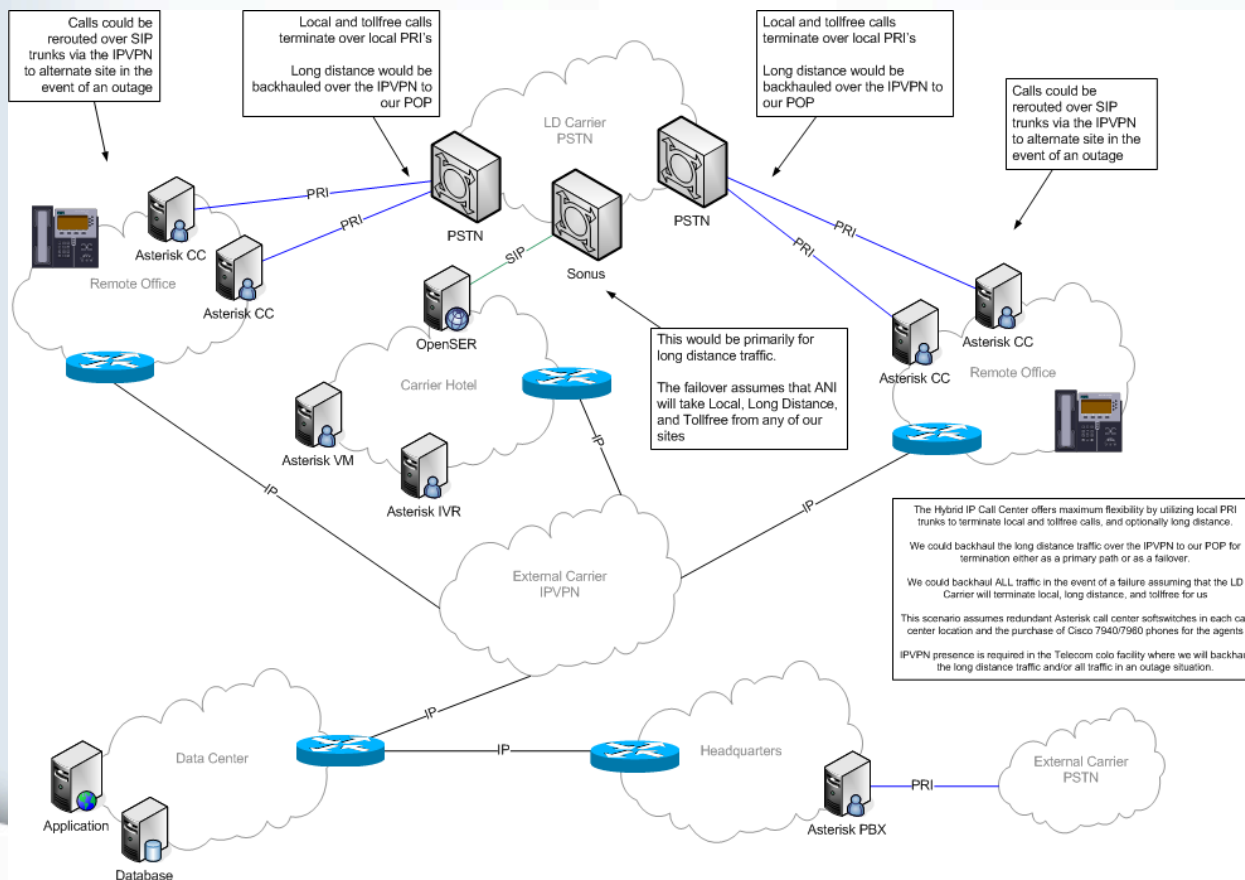
Cost Elements

Using internal resources lengthened the development timeframe, but improved control and reduced the loss of key knowledge from the organization

- ▶ Internal development effort included 2.5 FTEs over 6 months
- ▶ Standard linux-based servers were purchased and configured for failover and redundancy
- ▶ Multi-rack legacy system was replaced with single rack 9U configuration, saving space and energy costs
- ▶ A third party call center reporting package was purchased and configured for the new environment

Network Architecture

The architecture is a hybrid that combines IP and PSTN elements





Deployment Performance

All components were deployed over an 14 month period and have met or exceed performance goals

Voicemail Platform

- ▶ > 1MM Messages/mth
- ▶ 48k Voicemail Boxes
- ▶ 8k Findme Functionality
- ▶ > 4MM Calls Handled/mth
- ▶ 100% Uptime

IVR Platform

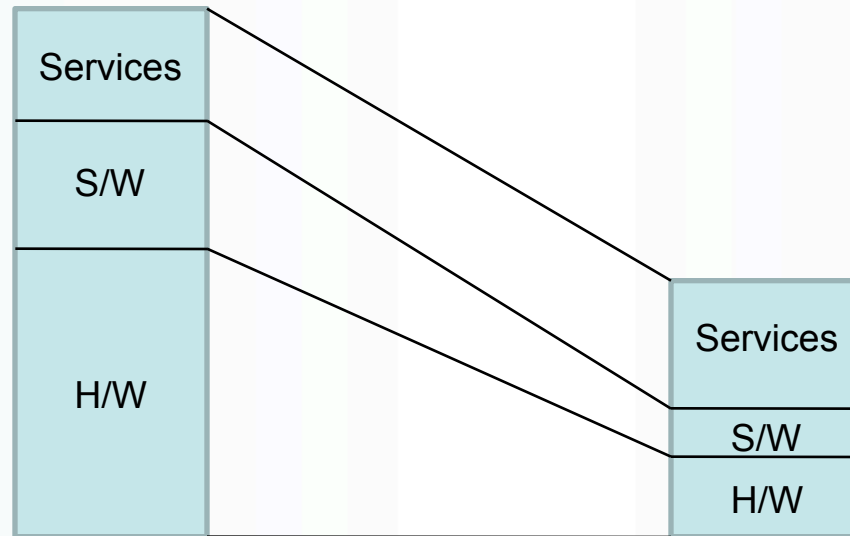
- ▶ 19 Queues
- ▶ 100+ Agent Stations
- ▶ Time of Day Routing

Office PBXs

- ▶ 220 Stations
- ▶ 150k+ Calls/mth

Open Source Paradigm Shift

Open source reduces the overall cost of application development and system deployments by reducing the dependence on proprietary hardware and software, while increasing the percentage of the available budget dollars for services





Next Steps

The full platform is operational enhancements for the next release of functionality have been identified

- ▶ Custom Outdialer
- ▶ Conference Calling Platform
- ▶ Call Disposition Reporting



Results Orientation

The objective of this initiative was to flip the cost structure from fixed to variable, but the true benefit was increased control over critical business functions

- ▶ Reduced Complexity – fewer servers, common code set
- ▶ Reduced Maintenance – lower costs for S/W and H/W, no software maintenance costs
- ▶ Reduced Capital Costs – standard servers
- ▶ Reduced Building Costs (floor space and HVAC) – smaller footprint
- ▶ Increased Responsiveness to Business Strategy Requirements – fast turnaround on requests for system modifications with Information Systems seen as a business partner