Standard Operating Procedure

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**Avaya / Cisco**

**IP Telephony Comparison Points**

**Avaya Top Ten Advantages**

**1. Flexible architecture and migration strategy**

Your Path, Your Pace, Your Choice with full support for migration

and multi-vendor environments while maintaining a robust feature

set, scalability, and reliability of current systems.

**2. Investment protection**

Our evolutionary approach helps customers protect investments

and features while providing robust front-ending for other vendor

environments customers can even replace CallManager and

reuse Cisco IP phones in contrast to Cisco s infrastructure focus

that precludes IP telephony innovation.

**3. Interoperability**

Avaya offers easy integration and multi-vendor support for Cisco,

Extreme Networks, and other data networks multi-vendor voice

via QSIG and applications via APIs supporting the multi-supplier

model favored by 86% of senior IT executives surveyed by

*ComputerWeekly.*

**4. Rich, robust features**

Avaya MultiVantage Communications Applications offer over 700+

features, from call processing to collaboration to mobility unlike

Cisco, which requires an extra server for call coverage.

**5. Reliability and manageability**

Avaya has fewer points of failure fewer servers and fewer

components per installation as well as redundant architecture and

unified management, proactive monitoring, and certification by the

Department of Defense joint interoperability testing center.

**6. Mobility**

With Avaya Extension to Cellular, the Avaya/Motorola/Proxim

Seamless Communication Solution, and Avaya Unified

Communication Center Speech Access, Avaya can bridge distance,

Wi-Fi and cellular networks, and device types to deliver the

MultiVantage Communications Applications suite to remote and

mobile workers.

**7. Media encryption**

With end-to-end encryption for multiple IP phones and functions, even

through gateways, Avaya can protect business communications.

**8. Contact center solutions**

The standard in contact center technology, Avaya solutions offer exclusive

functionality and built-in ACD that improves service levels and revenues

from small business to FORTUNE® 500 leaders.

**9. Accessibility**

Avaya applications support all accessibility needs including TTY over IP,

mixed TTY and voice messaging, and Unified Communication Center

Speech Access.

**10. Services surround**

Avaya provides a single point of contact for all services planning, design,

implementation, Managed Services, patented Avaya EXPERT SystemsSM

Diagnostic Tools, and more for multi-vendor and migration technologies.

**Avaya Communication Manager Cisco CallManager**

Optional security for Meet Me

conferencing any phone, anywhere

Extension to Cellular

Do-not-Disturb, night service

Whisper page: discreet notification

Bridging and extensive call coverage

paths built in

Linux-based appliances with built-in

firewall

Supports 36,000 phone sets (analog,

digital, or IP) and a maximum of

12,000 IP sets

Supports 700+ features

**At a Glance: Unequal Opponents**

Meet Me conferencing without security

codes and only via an IP phone

Some coverage and intercom features

available with additional applications

Microsoft® Windows® 2000 no Linux

option

Claims support for 30,000 IP sets per

cluster and 7,500 per server

Claims 158 features

**Apples to Apples: Strategy**

Favors migration over forklift

Works within multi-vendor, voice-friendly

Quality of Service (QoS) network

environment

Support for IP is added

Starts with a rich, full-feature enterprise

telephony suite

Favors forklift

Approach is single-vendor

That small solution is scaled to handle

large enterprise telephony

Starts with Cisco s acquisition of a

company with a small IP-PBX solution

**Apples to Apples: Scalability**

250,000 BHCC per cluster\*

\*NO Documented testing on call

completion numbers or BHCC.

Up to 300,000+ busy hour call

completions (BHCC) With 100% Call

completion

Call Managers required: 4 primary, 2

backup

Up to 12,000 IP endpoints per server

Requires *at least 8 servers in a*

*cluster* to support 30,000 endpoints

Supports 36,000 digital endpoints on

one Avaya S8700 Media Server

**Apples to Apples: Applications**

IP Telephony

Lacks traffic reports and queuing for

administered hunt groups station

duplication is a multiscreen operation,

system and group speed dialing is

labor- and time-intensive

Full functionality, flexibility, ease of use,

and training

Fewer features supported in soft phone

than hard phone

Full feature transparency:

Across different platforms of

soft phone, digital phone, IP phone

A fraction of available Avaya features:

Some named the same, but not equal

in functionality

Requires 3-rd party applications for

some basic features

More than 700 software features:

Coverage path, Time Of Day Routing,

Station Lock, Malicious Call Trace with

auto-record, Service Observing

**Apples to Apples: Applications**

Contact Center

Is limited by Cisco s voice is data

approach no holistic strategy

Incorporates features that are used in

80% of large contact centers

Outdated overflow methodologies to

deal with peak times

Dynamically engage agents before a

service level objective is in jeopardy

No predictor to identify available

resources

No match rate methodologies to

ensure best-client-to-best-resource

pairing

Agent selection based on historical

data only truly predictive algorithms

not available for ACD routing

Enhanced call routing

Outdated decision makers used to

identify call arrival and center resources

Continuous stateful-awareness of all

calls in progress / in queue, etc.

Additional cost for functions like call

handling, queuing, announcements, etc.

Integrated ACD (call center) software

built-in functionality at no extra charge

**Apples to Apples: Phones**

Limitations:

Only high-end 7970,7960, and 7940

phones support encryption.

Only 7970,7971 support 802.3af

Requires web services to be enabled on

phone for customization & reporting

Flexibility:

Media encryption is supported on all Avaya

IP phones, conversations on TDM/analog

phones, and all gateways

All IP phones support 802.3af PoE

Detailed screen functionality and

customization without web services.

Cisco attendant console:

Limited features, requires IP hard phone

Maximum five speed dials (28 buttons can

be added with optional two-speed dial

extender purchase)

Avaya Softconsole :

Supports full attendant functionality

Customizable

IP version can use PC audio

Cisco Softphones:

Must put audio path into IP mainstream,

lowering quality

Do not support SIP technology

Avaya IP Softphone:

Supports dual connection for better

work-at-home audio

IM and presence notification with SIP

technology

**Apples to Apples: Reliability**

And Survivability

Small scale:

Survivable Remote Site Telephony

(SRST) is router based and provides

less features.

No call center support

Small scale:

Local Survivable Processor (LSP)

supports calls/features for 450 phones

with 700+ features

Call center Support

Large scale:

Redundancy via eight clustered

servers

Connection preservation no features

at time of failure

Quick failover and recovery (35

seconds)

Large scale:

Avaya S8700 Media Server provides

redundancy through single dual server

configuration

Call preserving, instantaneous failover

**Apples to Apples: Management**

And Administration

Windows 2000 based:

Not an appliance

Each server requires separate

upkeep

Third-party virus scanning program

required for security

Host intrusion detection included

UNIX or Linux based for larger systems:

Upgrade via single GUI, single file

Fewer points to touch

Multiple partitions for easy recovery

Integrated call center software

No operating system knowledge or

application installation required

Schedule command execution at specific Not supported

time, or periodic frequency

Not supported IP alarming,

fragmentation testing, traffic reports

available at additional cost

Securely test a host of system functions

Verify busy status and eliminate Not supported

resource failure as the cause

**Apples to Apples: Management**

And Administration

Patch needs over a one-year period:

19 patches (1375. 574 MB)

195 minutes to download

Patch needs over a one-year period:

Two patches (128 MB)

25 minutes to download

Average management tasks:

Require numerous patches and

upgrades

Require up to nine servers

Average management tasks:

Included in basic features or software

options

Require two servers

**Avaya = less to manage, less cost, less downtime**

**Apples to Apples: Mobility**

No competitive offers

Personal Assistant does not allow

remote phone users to transparently

transfer a call back to the desk phone

and pick it up (an Extension to

Cellular feature)

Also no capability to extend a call

transparently from a desk phone to a

mobile phone (another Extension to

Cellular feature)

Avaya/Motorola/Proxim Seamless

Mobility offer

Full mobility outside the enterprise

with Motorola device

Seamless transition to wireless LAN

when coming into enterprise

Seamless handoff between wireless

LAN access points within enterprise

Secure, always-on access to

applications mobile users need

Personal Assistant offers basic Find

Me / Follow Me functionality, but can t

ring desk and mobile phones

simultaneously or support CallManager

features in the remote phone

Extension to Cellular bridges calls to

desk phone to user s cellular phone

**Apples to Apples: Security**

Requires a separate server for e911

No standard crisis alert feature

Only high-end 7970,7971,7960, 7940

IP phones support end-to-end media

encryption

Locking endpoints, security violation

notification, optional conferencing

security code not supported

IP alarming, fragmentation testing of

routers, traffic reports available at

additional cost

e911 built in, works equally well with

any IP infrastructure

Crisis alert to stations, attendant,

pager supported for 911 notification

End-to-end media encryption for all

endpoints supported

Locking and password access

supported for endpoints

Security violation notification supported

Optional security code for Meet Me

conferencing access supported

**Apples to Apples: Business Continuity**

Failure of SRST router loss of all

features and information

Latest SRST only runs on newer

routers

Limited SRST capabilities depending

on router model

Avaya Multi-Tech MultiVoIP Gateway

available for small locations (less than

10 users) where less than full feature

functionality is required

Service automatically switches back to

central site once connection is

reestablished

Testing/additional inspection not

possible

System administrator decides when

system is restored to normal operation

Significant error rate in anything other

than a loss-free network with G.711

encoding

Avaya S8300 Media Server / G700

Media Gateway system maintains all

features when connectivity is lost to

central server

**Apples to Apples: Accessibility**

Requires third-party software for

visually impaired users

Supports special software for visually

impaired users

Requires separate telephone numbers

for TTY and voice

Supports same phone number for mixed

TTY and voice messaging

Does not support simultaneous use of

TTY device and IP phone

TTY devices supported to work

alongside IP or DCP phones

Significant error rate in anything other

than a loss-free network with D.711

encoding

Robust TTY over IP capability

**Avaya Global Services Cisco Services**

**Apples to Apples: Services**

Cisco SMARTnet® provides 24-hour

technical assistance from its Technical

Assistance Center via telephone or

Web and advance hardware

replacement by mail (SMARTnet onsite

technician replaces part)

24/7 uplift provides out-of-hours dispatch

on major alarms and customer-initiated

trouble tickets

Cisco warranty: 90 days on software

(7800 series media convergence

servers), one year on ICS 7750 IP

phones and gateways but no TAC or

on-site support

Avaya Warranty and Maintenance

Agreement: 24-hour remote monitoring,

diagnostics and resolution, intelligent

dispatch 8 a.m. 5 p.m. for Avaya IP

telephony hardware and software

Advanced Services, Cisco Technology

and Networking Support, and Technical

Support Services IP only

Planning and design, implementation,

maintenance, and sourcing for multivendor

and migration technologies

6,500 employees (in Q1 03) in four

primary organizations, and six U.S.-

based development and demonstration

centers

Over 7,000 employees in 93 countries

around the world including 24 Network

Operations Centers and 13 Technical

Support Centers

**Cisco Services**

**Apples to Apples: Services**

Heavily partner-dependent for most

services from proactive monitoring to

regular maintenance with multiple

points of contact and accountability

A complete service solution from a

single source single point of

accountability convenience, even when

partner network provides services

No security advisory, toll fraud

indemnification, on-site preventive

maintenance, or disaster recovery plan

available with Cisco warranty or

SMARTnet offers

Quarterly security advisory, toll fraud

indemnification, preventive maintenance,

and disaster recovery plan included in

the Avaya Maintenance Agreement

Remote monitoring via channel

partners only

Enhanced IP Support offer (during and

after warranty) includes support even

when Avaya hardware or software faults

are not detected, basic WAN analysis,

review of hardware configurations and

network topology, and network

emulation in a lab

**Meeting Business Challenges**

Do More with Less

QSIG Networking supports full features in multi-vendor networks, using

existing assets.

**Leverage Assets, Reduce Networking Costs**

**Avaya Communication Manager**

**Increase Productivity**

Avaya Extension to Cellular and Avaya IP Softphone improve mobile

productivity.

**Manager**

**Meeting Business Challenges**

Increase Operational Efficiency and Effectiveness

Tools like Avaya Integrated Management provide real-time and historical

statistics to ensure optimal performance.

**Optimize Network Performance and Investments**

Avaya MultiVantage Communications Applications allow cost-effective,

consistent distribution of applications like Unified Communication, Speech

Access, and Contact Center.

**Improve Resource Distribution through Convergence**

**Manager**

**Meeting Business Challenges**

Drive Revenue and Serve Customers Better

Integration with leading CRM packages enables maximum value from

customer information, while comprehensive reporting adds insight.

**Leverage Business Intelligence to Increase Segment Revenues**

Avaya MultiVantage Software allows customization of contact center

capabilities to meet unique business and customer needs.

**Increase Customer Satisfaction and Buying Loyalty**

**Cisco Claims**

**A single-vendor approach has a lower TCO.**

Infotech says 57% of enterprises have multi-vendor environments.

*ComputerWeekly* survey of 800 senior IT executives:

58% had negative experiences with single supplier lock-in

35% had to purchase products that did not meet their needs

18% had to purchase unnecessary hardware

67% said they had experienced pressure from vendors to buy only

from them

Avaya solutions work in multi-vendor environments, require no

forklift, and use lower-cost (and lower-downtime) Linux operating

systems.

**Cisco Claims**

**Cisco s new strength in managed services**

Acquiring NetSolve only gives Cisco remote monitoring without

intelligent dispatch does not monitor call processing or support

out-of-band communications (modems).

Avaya offers a full continuum of Managed Services, from remote

network operation support to outsourcing and hosted solutions, and

expertise from planning to design to implementation and

operation all with global support.

**Recent claims to world-leading security**

Avaya offered manageable media encryption for IP telephony two

full years before Cisco Miercom characterizes the Cisco solution

as mind boggling in its complexity.

**Recent front ending solution announcements**

Is Cisco realizing the error of its ways? Avaya is already network

and vendor neutral, and it has the Interoperability Test Lab.

**Avaya Counters to Cisco Claims**

**Hybrid systems cannot support more than voice.**

Avaya provides Voice, Video and conferencing/collaboration at high

quality in hybrid and IP environments.

**Avaya may not be financially stable.**

We have seven consecutive quarters of profitable growth, a strong

balance sheet, and Q4 results that beat Wall Street estimates.

**Top Ten: Questions That Clarify**

**Flexible architecture and migration strategy**

Some customers don t want to put all their eggs in one basket

and prefer to have a hybrid solution where they can mix TDM with

the benefits of IP. Can Cisco provide a solution like this?

**Investment protection**

What is the upgrade path for existing phones? What happens to

current Cisco investments when Cisco moves to the UNIX/Linux

platform? Will new server purchases or management of multiple

platforms be required?

**Rich, robust features**

When will CallManager stop relying heavily on third-party

applications at additional cost to achieve feature parity?

**Top Ten: Questions That Clarify**

**Interoperability**

Are all of Cisco s telephones compliant with the 802.3af inline

power standard? What is the upgrade path? Will the customer

get locked into a Cisco network?

**Reliability and manageability**

If a CallManager fails or its services are shut down for upgrades,

do telephones lose all features? How can it simplify management

when clusters require independent management? Why do you

have to post patches every month? Are you certified to supply IP

telephony to the U.S. government?

**Mobility**

Do you have the ability to link cellular phones to CallManager

phones in order to create a true one number service ? Is it native

to CallManager or will it require additional products and servers?

Why can t Personal Assistant support transparent transfer from a

mobile phone to a desk phone, and vice versa?