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QUANTIFYING THE VALUE OF IP ARCHITECTURE

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The industry pundits offer a presumptive close on the issue of 'if' versus 'when' a company embarks on an IP Telephony journey. Their vote: 'when'. A specific definition of 'when' is personal and unique to each business; sometimes to each division, physical location, or employee within that business. That's the beauty of the Avaya solution (couldn't resist a plug); it fits your uniqueness.

Sometimes a business makes the jump to IP telephony when a new location needs a solution. Sometimes the right learning-curve project comes along and you deploy IP telephony for that reason. Sometimes there is an application that drives the choice. Most of the time, however, the decision to deploy IP telephony architecture in your business rides on cold, hard cash and how much of it you can save. Since that cold, hard cash calculation probably rests on your shoulders, let's investigate the parameters.

Several categories impact your IP Telephony ROI calculation. We'll need to identify those aspects of the technology that will save your business money. Some of the savings takes the form of eliminated costs; some is productivity related; some takes the form of eliminated budget items. And, of course, we need to calculate how much you need to spend to realize those savings.

We'll start our data gathering on the cost side of the equation. It's likely that you will need to invest in the Avaya Communication Manager platform to support your VoIP project. Your proposal will include expected components like an upgrade, VoIP hardware (CLAN, MedPro cards), IP telephones, etc. NACR or Avaya provided quote for the ACM components is only part of the puzzle. You need to factor in costs associated with:

Switches and Routers Do you still have hubs buried somewhere in your data network? Are any of your switches old enough that they are unable to support queuing mechanisms needed for QoS? Do they support queuing, but have too few queues to effectively support your applications? You may need to make an investment in new switches and routers for this deployment to be successful.

Operating System/Firmware Loads While your hardware may be ready to support your QoS needs, the firmware and operating system loads may need updating to provide the necessary support. Do you have a service agreement to cover updates or does this add cost to the project? Do you have the internal staff bandwidth to accomplish that or do you need to engage a contractor for assistance? Time is money, whether it is an internal or external resource.

Bandwidth Are you still running 10M to the desktop? You may need new switches to step up to 100M if you want your IP telephone and a heavily used PC to enjoy timely response. What are your bandwidth requirements to carry your projected call volume between sites? Add that to your existing data usage. You may need to add capacity or increase service level agreements between sites.

Power over Ethernet IP Telephones can be powered locally or centrally. Local power often eliminates offering UPS support for the phones, so is a minority choice. The IP telephones use an industry standard, IEEE 802.3af, to power the phones from a central source. That source can be a mid-span power supply, which connects to older Ethernet switches that are not 802.3af compliant. NACR or an Avaya representative can include these devices in their price quote if they know your plans. If your switches are 802.3af compliant, be sure and calculate the total number of phones multiplied times their worst-case power draw and compare that result with the total PoE capacity of your Ethernet switch. You may need an additional power supply to power all

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Quantifying the Value of IP Architecture continued

available ports. Or, you may need two 24-port switches instead of one 48-port switch to power 48 IP telephones.

UPS The mid-span power supply or 802.3af compliant switches you use to power your telephones, may be located in workgroup closets, not in your central computer or switchroom. Do you have UPS units in those closets today, or do you need to purchase them?

Network Assessment You will need to review your data network infrastructure to insure it is ready to support quality voice. This involves setting up separate voice VLANs and QoS, then testing the voice-readiness of the network. This critical service may be part of your quote from your vendor or you may want to secure it elsewhere. Don't treat it as optional until you and your team have gained some experience in deploying VoIP over your company's infrastructure. The learning curve can be more expensive than the assessment!!

Once we add up all the investment required, we need to calculate the resulting benefit. Here are some areas that may generate a savings for you:

Are you spending substantial dollars for inter-site long distance calls? Toll bypass doesn't pack the punch it once did, but shouldn't be ignored either.

Do you have point-to-point T-1's either supporting DS-1 remoted EPN's or connecting systems integrated with DCS, QSig or Best Services Routing software? If so, you may be able to eliminate them and share the same facilities as your data network, netting you savings associated with economies of scale.

Do you support several PBX's and adjuncts at multiple sites within your corporate enterprise? IP architecture facilitates a centralized Media Server, running Avaya Communication Manager, and supporting Media Gateways at all your remote offices. That single platform, integrated with centralized Voice Mail and Call Management System can serve your entire enterprise. From that architecture, you may experience savings associated with:

- Upgrading one ACM platform instead of several.
- Upgrading one Voice Mail, CMS or other adjunct instead of several.
- Purchasing chargeable feature functionality (like Advocate) for one system and having it accessible across the enterprise.
- Reduced administrative time demands to administer one database instead on several.

Is your company growing? If so, it will be less costly to buy and install IP telephones which share the Ethernet port you already purchased for the user's PC than to buy a digital phone and a PBX circuit pack. And, since you no longer need two wire runs at the desk, there may be savings there as well.

Do you spend a significant amount of personnel time in MAC (Move/ Add/ Change) work? IP telephony can substantially reduce the administrative demands associated with MAC work.

There are several, IP-related applications that are aimed at improving worker productivity. These enhancements may allow your existing workforce to handle an increased workload with ease, which is measurable savings, or may greatly increase customer satisfaction, which is more important and harder to quantify.

- Loaded cost of IT staff, Call Center Agents and knowledge workers
- Basic Telecom costs (toll, cell service, etc.)
- PSTN costs
- Private Voice Network costs
- Implementation investment (defined above)

Using your input, and the practical results of thousands of businesses with similar projects (data gathered by Gartner Group), NACR or an Avaya representative can generate an ROI tailored to your business.

For more information about a Network Assessment contact NACR at 888.321.6227 or qar@nacr.com.

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