

Ask Questions Until You Get the Right Answers and the Right Network

“The Middle”

For mid-sized business, being stuck in the middle between the small-business-budget “rock” and the enterprise-high-dollar “hard place” makes business and IT decisions difficult. As your company has expanded into the 150-500 employee range, you’ve outgrown your existing network infrastructure. But upgrading to network equipment priced to support thousands of global employees exceeds your budget and the capabilities of your current technology support staff.

Two points become apparent:

1. You can no longer continue to piecemeal your network infrastructure and still provide the type of foundation your larger business demands.
2. You need a partner who can guide you through building a network today that will support any new technology your business needs tomorrow.

Small companies with small budgets and even smaller IT staffs build networks that support their business today, rather than for the future. For many companies, the “good enough” network is all they can imagine or afford. As companies grow, what was good enough for 50 users often breaks down completely with 250 users. The more users your network must accommodate, the more planning and support your network needs.

Business managers constantly make decisions. Your company’s growth illustrates you have already made many right choices. You can blaze your own trail through the thousands of technology decisions ahead as you grow. Or you can find a guide with experience in such technology areas as routing, switching, security, wireless networking, virtualization and Unified Communications. Making the important choice of investing in an intelligent network now to support your company’s business growth means fewer decisions will need to be redone in the future. Investing in network infrastructure today that will meet tomorrow’s needs provides the best path forward.

Finding a Partner

All technology companies demand some level of certification from their better resellers. At the lowest certification level, resellers have little or minimal training in the products they are selling. For small companies, those resellers are good enough. As companies grow and their technology needs become more sophisticated, resellers with more training and expertise are needed.

For example, let’s take Cisco partner certification levels. There are four levels of certification for domestic resellers:

- Select: Partners focus on the small business market.
- Premier Certification: Technical competency in the integration of Routing and Switching, Wireless LANs, and Security technologies.
- Silver Certification: Premier plus two specializations from among Unified Communications, Routing and Switching, Security, Wireless LAN, and Express Unified Communications Specialization.
- Gold Certification: The broadest range of expertise across Unified Communications, Routing and Switching, Security, and Wireless LAN.

There are two other areas where the right partner for your business will help you build a network to support your business today and tomorrow: breadth of product line and compliance.

A reseller partner with a broad product line offers numerous advantages for medium-sized companies.

- They bring their experience to technical areas that may be new to you.
- They learn your business and help you choose the right tools today that will support your company in the future.
- They offer a single point of contact for your technical needs, in other words, the famous “one throat to choke.”
- They have strong support from their technology vendor, providing you with a second level of support when needed.

The right reseller partner understands compliance regulations in multiple areas, such as:

- Payment Card Industry (PCI) for retailing and e-commerce
- Health Insurance Portability and Accounting Act (HIPAA) for healthcare
- IPv6 deployment requirements for all networks as the new standard becomes the norm
- Federal Information Processing Standards (FIPS)

To find a reseller partner that can help your company grow, ask questions of every reseller in your area. When you find a partner that gives you the answers you need, you should keep asking questions. But now, ask questions about the technologies you must integrate to get the right network for your business.

Ask About Routing and Switching

Business today demands reliable communications, and that means reliable connections. The start of every company network is the router that connects the internal network to the Internet. Today, a router provides more than an Internet connection, it provides a foundation for security services, remote branch connections, and mobile user access.

Companies start with routers that have only a single Internet connection, a single power supply, a basic firewall, and a few unmanaged switch ports. In other words, they connect to the world with a device destined to be a single point of failure. One hiccup on the router and the network connection breaks, stranding the company on a communications island.

Consult your reseller to decide how best to provide high reliability for your network access. This includes utilizing two or more Internet Service Providers – one as a primary and a second for backup or using both at once for higher reliability and throughput. When supporting multiple branch offices with remote workers, losing your router means losing productivity. A router with dual power supplies may be used, or two routers can provide a completely redundant system. Cisco Integrated Services Routers from the 1900 Series and the 2900 Series include all these features for worry-free, highly secure network access. They also include options for wireless support and Unified Communications to support all your voice and data needs.

Intelligent network switching provides reliability, manageability, and performance. Your router should include some switched ports, but more ports will be needed inside your network to manage video sessions and endpoints, provide additional levels of security, and even control energy consumption. Manageability and integration with the routers for voice and data support also

maximize hardware investment and save support time. The Cisco 300 Series Switches serve many smaller companies, while larger companies favor the Cisco Catalyst 2960 and 3750 Series switch families.

Ask About Security

Companies that bolt-on security after their network is built always struggle. Add in the explosion of intelligent mobile devices that need protection against new malware attacks, and the need for a comprehensive security plan becomes clear.

As companies grow, they throw hardware at security issues. They add a module to their router. They add an intrusion detection and prevention appliance to their network. They add a spam appliance. They spend hours each week managing different user data bases on various security devices, because the router can't communicate with the spam appliance or the intrusion detection and prevention appliance. The more operational overhead you have in security, the more vulnerabilities you will expose, as details get missed and leave openings.

Cisco's SecureX architecture provides security control and management with full context-awareness throughout the Cisco infrastructure. Cisco Identity Services Engine (ISE) is the only network-wide policy engine appliance that tracks users across the network and can enforce security policies based on who, what, where, when, and how, for every user no matter their location. Also ask about IronPort e-mail protection appliances.

Dave, a Cisco reseller in the Washington D.C. area, understands the need to educate his smaller customers on the advantages of Cisco. However, he says, "Our larger customers know Cisco products always work, and that reliability makes sense for them."

Ask About Mobility

The "mobile workforce" depends upon smart phones, laptops, and tablets. Often these devices are owned by the users, not the company—a trend labeled as the "consumerization of IT". No matter who owns the device, the demands on your network are growing with each new iPhone version and tablet model.

Mobile workers are typically sales and field support, and both groups need access to company information. IT must provide access to confidential company information simply but securely. Controlling access to data based on user security profiles demands access control, acceptable use policy integration, data loss prevention, and threat prevention.

Persistent but secure connections from mobile devices to the company network require end-user applications with robust security and management tools for IT. Solutions like Cisco's AnyConnect Secure Mobility cover both ends of that mobile connection.

Three component families make up the Cisco AnyConnect Security Mobility solution:

- Cisco AnyConnect Secure Mobility Client for highly secure connectivity
- Cisco IronPort Web Security Appliance for policy enforcement
- Cisco ASA Series for the firewall and secure mobility head-end

Frank, a Cisco reseller in Tampa, loves the iPad. It provides an opportunity to enter into more strategic discussions with customers about the future direction of their network. Frank says, "When you ask the right questions and get the right network, iPad support is an easy add. That's why we always recommend Cisco to our customers."

Ask About Voice and Unified Communications

Unified Communications (UC) evolves IP Telephony from a simple phone system into a new way to communicate with co-workers, partners, and customers. UC includes conferencing, messaging, mobile applications, presence, and customer collaboration.

IDC reported in November 2011 that nearly three-quarters of mid-sized companies (100-999 employees) use at least one UC component already. For example, some companies use dual-ring technology to ring both the desk phone and mobile phone of salespeople. This gives customers a single number to dial, reducing frustration. Other companies use conferencing technologies with voice, video, and interactive Web screens for meetings between distributed employees.

In the past, resellers focused on data or telephony, but not both. Modern IP Telephony demands the reseller master both data and telephony. Resellers working with a manufacturer with a broad product line across both data and telephony offer their business customers the following UC benefits:

- Systems that can grow to hundreds of users linked across multiple locations
- Mobility tools to keep employees connected at all times
- Modern voicemail and attendant features to help route critical calls and messages
- Soft-phone applications for deskphone functionality from a PC
- Efficient purpose-built equipment that combines the server and voice gateway
- Cost savings through Session Initiation Protocol (SIP) trunking
- Multiple interfaces to supporting integrated ISDN Primary Rate Interface (PRI), SIP trunks, and analog gateways
- A proven record of data and telephony integration success

The Cisco UC solutions for mid-sized businesses are the Cisco Business Edition 3000 and 6000 systems. These cover small-to-medium businesses with 100-1000 employees, and include capabilities like voice, point-to-point video calls, and reduced cost-per-user via embedded virtualization support.

Ask About Video

The explosion of video traffic caught many companies, and their networks, by surprise. For many existing networks, handling the roughly 50 percent of network traffic today comprised of video streams is difficult. Looking forward, those companies without a modern network will be swamped in 2014 when 90 percent or more of all traffic is video.

Michael, a Cisco reseller in San Antonio, works primarily with government and other public sector customers. His customers realize the value of packaged Cisco Unified Communications solutions, which are easy to install and manage. He says, "They really appreciate the single vendor network mentality, where we provide all their network components."

Video brings huge advantages to companies, including videoconferencing, surveillance integrated within the primary company network, and educational presentations. Controlling the video flood requires an intelligent network.

Ask your reseller partner about the following video issues:

- Delivering superior user experience with optimized video streaming
- Sharing video across any device, local or mobile
- Prioritizing video streams, to keep critical video high quality while streaming non-critical video adequately
- Routing that optimizes performance, acceleration, and route selection for video
- Receiving real-time metrics, fault identification, and isolation capabilities

Designed and built properly, the right network will transport video for desktop videoconferencing, telepresence, and surveillance with ease. Solutions such as Cisco's Medianet including the Media Services Interface, and Application Visibility and Control (AVC) will keep your critical video streaming smoothly.

Ask About Branch Office Support

Branch offices often suffer, as growing companies give branches hand-me-down equipment and connect them with slow and unmanaged local broadband providers. The results are more support issues, lower branch office productivity, and higher maintenance costs.

Server and application virtualization allows companies to provide branch offices access to the exact same data and network resources as users in headquarters. To do so, however, requires intelligent WAN management with products integrated into the corporate network.

Next generation routers support Wide Area Application Services to provide user-transparent WAN connections with low latency and high rates of data transfer. Bandwidth compression enables branch office scaling without incurring increased bandwidth costs. The same QoS and security services supporting headquarters users will then support users in branch offices, amortizing your security investment across all users.

Ask your reseller about integrated WAN optimization with Cisco Wide Area Application Services (WAAS) Express and the Cisco family of Integrated Services Routers for large to small branch offices. The Cisco 1900 and 800 series also include wireless support, so one fully-managed remote device can provide wired and wireless network access for branch office users.

Marilyn works for a reseller in the Denver area. One of her customers runs a string of small branch health clinics around the state. She says, "The company has a couple hundred employees, but only three IT techs, so we back them up. Only one of their techs handles the network. He can get about two-thirds of a new clinic installation done himself, and we finish the rest for him."

Ask About Virtualization

The majority of medium-sized companies have now put some manner of virtualization into production. Many companies start by replacing multiple aging physical servers with a new virtualized server supporting the applications of the old servers. This reduces the physical server count and saves energy for power and cooling.

But the world of virtualization has expanded far beyond this today. When replacing seven year old servers with one new server with virtualization, companies with trusted reseller partners know to add an additional server to gain a level of redundancy lacking before.

One might think reducing server count drives virtualization efforts at midsized company, but a recent survey by IDC found different reasons. When asked the key reasons for virtualizing and consolidating their IT resources, companies with 100-249 employees replied their top three reasons were to improve performance and throughput, increase flexibility, and enhance network management. Companies with 250-500 employees listed their top three reasons as improving performance and throughput, enhancing network management, and increasing flexibility.

These answers clearly illustrate that performance, manageability, and flexibility to address future issues rate highest with midsized companies. Looking forward, these companies realize an intelligent network approach will better serve their companies as they grow.

Chris, a Cisco reseller in Houston, helped a local law firm with about 75 users move from an on-premise, single server per application model to a virtualization system he hosted in his secure data center. Why? When the next hurricane hits Houston, the lawyers and support staff will be able to work from any location with a computer and an Internet connection, and access the same data they used every day in the office. The project was a success. Chris says there was a bonus: "When the law firm decided to open a second office in Pittsburgh, the virtualized infrastructure meant that all the IT needs to support the new office were already in place."

Virtualization is more than just a new server and software; it requires supporting equipment for storage, routers, switching, management, and backup. Ask your reseller about products that are designed to be part of a virtualized system. For example, Cisco has a Unified Computing Virtualization Services program to help you analyze server consolidation opportunities, design and deploy resources, and manage them once in production.

UCS components include B-Series Blade Servers, C-Series Rack-Mount Servers, and UCS 6200 and UCS 6100 Series Fabric Interconnects. The Cisco UCS Manager provides a unified, policy-driven extensible management architecture.

Ask About Cloud Computing (Public and Private)

Cloud computing is all the rage, and is almost completely out of reach for companies with piecemeal, good-enough networks. Why? Let's look at the definition of cloud computing, and see how many technical areas are involved.

According to the National Institute of Standards and Technology, "cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction." Applications hosted by third-parties are public clouds. They support many users from many different companies while keeping each company's information separate. Applications hosted by your company for your users exemplify the private cloud. The user, however, may not know the difference.

Private cloud computing impacts many technologies:

- Mobility and remote user access
- Server virtualization
- Application virtualization
- Shared data resources
- User access rights and security
- Unified Communications

The Cisco Unified Computing System (UCS) ties together all elements of the private cloud. Stepping beyond mere integration, UCS connects servers, networks, and IO resources into a single converged system, improves enterprise applications availability and performance, scales service delivery to increase business agility, streamlines data center resources, and radically reduces the number of devices requiring setup, management, power, cooling, and cabling.

Summary

Reseller partners with Cisco certification have experience leading companies through the process of transforming a piecemeal, just good-enough network into an intelligent network. As your company grows, and makes the leap to the next level, it is important that you establish a "trusted advisor" relationship with a local reseller. They will help you build the right network to match your current and future business aspirations.




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