Tool Producer Boosts Efficiency with Networking Technology

Apex Tools Group deploys Cisco switching to rapidly complete major IT infrastructure project.

EXECUTIVE SUMMARY

Customer Name: Apex Tool Group
Industry: Tool manufacturing
Location: Sparks, Maryland
Number of Employees: 8000

BUSINESS CHALLENGE

- Rapidly build networking infrastructure to support new business needs
- Help ensure highly reliable IT and communications support
- Deliver value for investment

NETWORK SOLUTION

- Standardize networking infrastructure with Cisco switches to support rapid business growth

BUSINESS RESULTS

- Supported business continuity with highly resilient and redundant network infrastructure
- Gained ability to create new facility within month
- Simplified management and operations

Business Challenge

Apex Tool Group was formed in July 2010 as a joint venture combining two premier tool manufacturers: Danaher Tool Group and Cooper Tools. Apex earned revenues of approximately US$1.5 billion in 2012 by offering industrial, commercial, and do-it-yourself customers an unparalleled selection of over 30 leading brands, including Crescent, GearWrench, Armstrong, and Weller.

Because both companies had been divisions of larger companies, Apex saw an opportunity to build a new networking infrastructure including the access layer, the communication environment, and new data centers to meet its requirements and support its growth. Above all, Apex needed a stable network environment to support reliable companywide access to the SAP applications that it uses to run all aspects of its business. Apex turned to Cisco for the company's data infrastructure, from networking to telecommunications to running the bolt-on applications that enhance the SAP applications.

"For many of the executives in this newly merged company, this was the first time they'd been involved in such a large IT infrastructure project," says Patrick Miller, manager of architecture services at Apex. "Cisco enabled us to rapidly deliver a stable and secure environment for the company to conduct its business, helped establish our credibility, and won us support to take on other projects."

Network Solution

Apex standardized on Cisco Catalyst® 3750-X Series stackable switches for their built-in redundant power capabilities, higher backplane, and flexibility to grow from 1 GB to 10 GB uplinks if needed over the long term. Apex uses Cisco StackPower™ technology to link 3750-X switches within any communications closets with two or more switches. For closets with one switch, it uses Cisco® Catalyst 3560-X Series standalone switches.

Apex built its primary data center at its North Carolina headquarters and a second in South Carolina. Two Cisco Nexus® 7000 Series Switches at the core, subdivided into four virtual route forwarding units (VRFs), support virtualization of more than 80 percent of Apex's servers. The data center VRF, which connects to a 10G Nexus 5548 Switch, connects from there to the Cisco Unified Computing System™ (UCS®) 6120 Fabric Interconnects. Direct-attached fiber channel over Ethernet connects the UCS 6120 Fabric Interconnects to NetApp filers.

At a virtual level, the network looks like it consists of just one Nexus 7000 Series Switch, one Cisco Nexus 5000 Series Switch, and one UCS 6120 Fabric Interconnect. But physically, everything is redundant with two 10G connections between devices, and 20G connectivity between physical servers, for 40G of network capacity.

Apex also upgraded its old private branch exchange (PBX) system using Cisco Unified Communications (UC) on UCS running in a virtualized environment. “We previously had four refrigerator-sized cabinets for the company’s telecommunications service,” says Miller. “Now, our phone system runs on two blades and my WebEx MeetingPlace is one blade, so just three blades in a Cisco UCS 5100 Series Blade Server Chassis handle all of our telecommunications.” Apex also has a redundant UC environment in Sparks, Maryland running on UCS C210 M2 servers.

Apex’s wireless environment is in transition. Each company previously had a wireless environment in place, resulting in multiple devices. The team is in the process of implementing Cisco 5508 Wireless Controllers at both data centers, for redundancy and fault tolerance, with Cisco Aironet® 3602 Access Points.

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> **— Patrick Miller, Manager of Architecture Services, Apex Tool Group, http://www.apextoolgroup.com/**

Business Results

Always-on Performance

The Cisco Catalyst 3750-X Switches and Cisco StackPower technology deliver built-in power redundancy, so Apex does not have to buy additional hardware to create a redundant power supply (RPS) for always-on phone service and connection to business-critical applications. “If we had to buy a separate RPS, we’d also need to spend more money on cables and even then still have some issues to make sure we are fully powered, because that’s critical with a phone system,” says Miller.

Apex plans to begin migrating to the Cisco Catalyst 3850 Series Switches. The Catalyst 3850 Series Switch offers a faster backplane and easier cabling than many other options and is also less expensive. “Anytime we can reduce costs, that is huge,” says Miller. Apex also sees the opportunity to expand the role of the Catalyst 3850 Series Switches, planning to turn on the wireless functionality of the switches. This capability will help enable Apex to deploy a new wireless standard across the organization using the 5508 Wireless Controllers and push this functionality to the switch level.

Enhanced Business Efficiency

Apex can create a new facility in just one month, a fraction of the time that it would have taken before. Having standardized on its preferred equipment and network design, and with the ability to easily reference all the Cisco components needed to implement those systems, Miller can create a site design, generate a bill of materials, and get a quote and approval within a week. When the lease expired on one of the company’s distribution centers and the center had to relocate to another site, all Miller needed to know was the port counts and the size of the facility. The data infrastructure for the new facility (routing, switching, wireless, cabling, voice, and data circuits) was up and running within a month, to help ensure that distribution could proceed and that customer needs be met. Based on the ease of that experience, Miller is confident in his plans to build two new infrastructure deployments, one in Germany and one in China, both standardized on the Cisco networking equipment.

Ease of Management Enables Apex to Do More with Less

Standardization also delivers ongoing ease of management. “We can walk into any of our sites and know the infrastructure is the same,” says Miller. This consistency makes it easier if a problem develops at one site: all members of Miller’s team are familiar with the infrastructure and so are able to help resolve the issue. This capability is important, because as part of the joint venture process, head count was reduced from approximately six staff managing computing infrastructure to just two. Fortunately, with the stability of the Cisco infrastructure, two people can manage the systems and support 8000 users, and it is not even a full-time job for them, so they take on other projects, too.

Having won the confidence of the executives, Miller and his team are planning several Cisco projects that will add even more value for Apex. Videoconferencing would save the company a huge amount of time and money by helping enable key personnel, including engineers or executives, to confer with their counterparts in other countries without the expense and delay of travel. Apex has facilities at 60 locations throughout Asia, Europe, Australia, and the Americas. “A video call with an engineer can get a problem fixed in a fraction of the time it would take otherwise,” says Miller. “That could be a huge benefit, especially if the problem is impacting production.”

A Bring Your Own Device (BYOD) project is also being planned, an effort Miller believes will be much easier to implement with the Cisco foundation that Apex has in place. The company is also evaluating the Cisco ISE platform to support BYOD and enhance security of its networks.

PRODUCT LIST

Unified Computing System (UCS)

- Cisco UCS 6120 Fabric Interconnects
- Cisco Unified Communications
- Cisco UCS 5100 Series Blade Server Chassis

Routing and Switching

- Cisco Nexus 5000 Series Switches
- Cisco Nexus 7000 Series Switches
- Cisco Catalyst 3560-X Series Switch
- Cisco Catalyst 3750-X Series Switch
- Cisco Catalyst 3850 Series Switch
- Cisco 5508 Wireless Controller
- Cisco Aironet 3602 Access Point

Network Management

- Cisco StackPower

Miller says that he and his team are consistently impressed by the long-term power and reliability of Cisco switches. “Some switches we’re replacing are Cisco Catalyst 2950 Switches that have been in place for 10-15 years and still work,” says Miller. “Our team and my management learned that the reliability and room for growth built into Cisco products ultimately saves costs and enhances the agility of the business.”

For More Information

To find out more about the Cisco Switching, go to: http://www.cisco.com/go/switching.

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