Key Communications Systems Are Always Available, Highly Responsive for Global Mining Company

Teck

Mining company Teck Resources wanted to ensure high availability and responsiveness for its critical employee communications systems. To achieve this goal, Teck chose a comprehensive F5 traffic management and secure access solution that provides high availability and give users a more responsive experience. The solution eliminates downtime and will easily support Teck's expanding virtual desktop infrastructure.

Business Challenges

As Canada's largest diversified resources and mining company, Teck Resources mines for copper, coal, zinc, and other specialty metals. The firm owns or has an interest in 13 mines in Canada, the United States, Chile, and Peru, and it actively explores for minerals in the Americas, Asia Pacific, Europe, and Africa.

Because Teck employees work in mines and offices all over the world, effective communications systems are essential to the company's business. The firm's Microsoft Exchange Server email system, for example, is used daily by almost all of the company's 13,500 employees. "Email is our most critical application. Our CEO basically lives on his Blackberry, and a lot of our senior managers rate the email system in our top five critical systems, if not number one," says Peter Hass, Manager of Client Core Applications at Teck Resources. "And Exchange isn't just used for email. One of our largest copper mines, for example, relies on Exchange public folders to manage and track all of their purchase orders."

Teck employees also depend on Microsoft Lync and Microsoft SharePoint Server for instant messaging, presence, and conferencing. Some of Teck's remote workers access various applications from their iPhones or iPads using Citrix XenApp; others have access to virtual desktops through VMware Horizon View.

As these applications became more critical to Teck's day-to-day operations, the company's existing Cisco ACE load balancers began to fall short of expectations. "Our servers just weren't responding quickly enough. Performance had gotten bad enough that employees were beginning to lose trust in the systems," says Hass. "Also, the ACE monitoring tools didn't provide the depth of information and visibility we needed. They could tell us whether a system was up or down, but they didn't allow us to get down to the mailbox level to see what email response time was actually like for an individual user."

Finding a new solution that could address these challenges became critical when Teck decided to migrate to Exchange Server 2010. "Delivering the best possible user experience is one of our highest priorities," says Hass. "We were looking for that 'dial tone' kind of experience where you pick up the phone and just know the dial tone will be there every time. We wanted our users to have that same kind of trust, not just with

Customer: Teck Resources

Products:

Application Security Manager

Access Policy Manager

Local Traffic Manager

Global Traffic Manager

Benefits:

Reliable around-the-clock communications

No downtime, better user experience

Simple, time-saving configuration and monitoring tools

Support for growing VDI environment

Challenges:

Poor response time in critical communications apps

Service interruptions, inconsistent user experience

Insufficient system monitoring tools

Inadequate capacity for VDI environment

email, but with all the applications they rely on."

Solution

As Teck Resources began searching for a new solution, F5's name kept coming up. "The CIO and I went to conferences and did a lot of networking, asking people what solution they used," says Hass. "Everyone said 'F5.' In fact, we couldn't find anyone that *didn't* use it." F5 was also highly recommended by Microsoft, who worked closely with Teck to redesign the Exchange Server environment for 2010.

Teck chose an F5 solution for several reasons, among them the fact that BIG-IP Local Traffic Manager (LTM) has very strong monitoring capabilities. "BIG-IP LTM allows us to go into an individual Exchange mailbox to see what user response time is like," says Hass. "That basically sold us on the solution."

Teck deployed BIG-IP LTM in its data centers in Calgary, Alberta, and Toronto, Ontario, to provide high availability not only for Exchange Server 2010, Microsoft Lync, and SharePoint but for its Citrix XenApp and VMware Horizon View environments as well. The company also deployed BIG-IP Global Traffic Manager (GTM) in both existing data centers and a new data center in Santiago, Chile. BIG-IP GTM routes traffic to the best performing servers at any one of these locations, ensuring that users always get the best performance.

With so many remote users accessing email and other applications over the web from mobile devices, Teck chose BIG-IP Access Policy Manager (APM) as its global access security solution. "The ability to use BIG-IP APM to manage and enforce user access policies was something we hadn't considered before. That was another reason we chose the F5 solution," says Hass, referring to the advantages offered by the BIG-IP unified architectural platform.

Finally, Teck implemented BIG-IP Application Acceleration Manager,(AAM) which speeds the delivery of application content over the network and reduces bandwidth usage.

Benefits

Since deploying the F5 solution, Teck Resources can now guarantee high availability and provide a reliable user experience for its Microsoft Exchange Server 2010, Microsoft Lync, and Microsoft SharePoint Server systems. Teck can also update its systems during business hours, eliminating downtime, and the solution fully supports the company's expanding virtual desktop environment.

Ensures that employees can communicate around the clock

With BIG-IP LTM intelligently managing network traffic, Teck Resources employees always have reliable access to its critical communications systems, including Exchange Server 2010 and Microsoft Lync. "Using F5, we've achieved that 'dial tone' experience we were looking for—that's what BIG-IP LTM together with BIG-IP GTM gives us," says Hass. "Our users can just expect the email service to be up and running around the clock, each and every day." Teck employees now use Lync's video and audio conferencing capabilities for 95 percent of their meetings. "Providing this kind of reliability was our sole focus for this entire implementation, and we have it now."

BIG-IP GTM provides high availability for the firm's global intranet, which is based on SharePoint Server. "We have multiple servers around the world that host SharePoint, and BIG-IP GTM directs users to the best performing server," Hass says. "That's where F5 is showing its value to us."

Delivers better, more responsive experience for end users

The F5 solution is also giving Teck employees a better, more responsive user experience—something that's highly important for the company. "With F5, we have a solution that's not only always on, but also very responsive for our users. That's important because we're very end-user focused as a company," says Hass. "In addition, I now have a way to monitor Exchange Server 2010 end-user performance at the mailbox level. That's key, especially with such a complex Exchange environment, with multiple services running on each node."

The web mail experience for remote users has also improved with BIG-IP Application Acceleration Manager. "Employees have commented that scrolling through Outlook Web Access and reading emails is lightning fast now," says Hass. And with the company-branded log-in page for web mail, users can quickly get into Outlook Web Access. "Single sign on was something we really wanted to give our users, and we were able to do that easily using BIG-IP APM," Hass adds. "Users just enter their name and password once to get into their web mail. Once they're in, they get the improved performance that BIG-IP Application Acceleration Manager provides."

Enables frequent system upgrades with no service interruptions

Teck can now install system patches and updates for Exchange and Lync without disrupting users. "Previously, it was not uncommon for us to do software patching from 7:00 p.m. until 3:00 a.m. at least once a month," says Hass. "With BIG-IP LTM, we can patch the Exchange environment during normal business hours. We can take an Exchange database availability group server completely out of production in the middle of the day and nobody will notice any change in performance."

Gives IT simple configuration tools

The Teck IT team is also taking advantage of tools such as F5 iApps, which provide application-specific templates for easy deployment and updating of the organization's Exchange Server and SharePoint Server environments. "The F5 iApps templates are second to none, and they are simple to implement," says Hass. "You don't need to actually understand the code in depth to use iApps templates. They save me time deploying new SharePoint servers."

Supports growing virtual desktop environment

The F5 solution also supports the organization's Citrix and VMware Horizon View environments, which continue to expand. "Before we brought in BIG-IP LTM, our manager of architecture encouraged the whole team to find a solution powerful enough to handle more than just Exchange," says Hass. "The architecture team quickly recognized that, for example, BIG-IP APM could really simplify security for the edge points of many applications and services, including VMware View and Citrix."

Whether the BIG-IP solution is directing network traffic for Exchange Server or

securing virtual applications, Hass is confident that it will provide high availability, easy configuration, and a great user experience well into the future. Hass says, "'Utopia' was the end picture we wanted to get to, and we've actually achieved that with F5."