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Application Management Growing as Apps Move Online

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As cost-conscious enterprises look to improve the efficiency of their networks, application management and application delivery control (ADC) tools are helping companies increase performance without adding bandwidth.

Rather than continually adding bandwidth or increasing the load on data centers that have power or cooling challenges, companies are looking to use existing bandwidth more efficiently.

Application management software helps prioritize network traffic for important applications such as voice or financial reporting, identify security threats, and reduce bandwidth used for online videos.

"Companies can customize traffic requests to handle applications in a particular way, so you can apply a bandwidth limit or route a request to servers that are optimized to that [specific] task, or control how you want to control or cache a request," says Owen Garrett, product manager with ADC provider Zeus Technology Ltd.

Application management and delivery technologies have become important as companies develop Web-based and mobile versions of internal applications such as customer order systems and databases.

David Messina, vice president of product management for software provider Xangati, said at the Interop conference in New York that instead of expanding capacity, enterprises are emphasizing application performance as they design networks.

"Companies don't want to add bandwidth, but they don't want network bottlenecks like having several applications competing for the same storage resources," Messina said.

To help reduce network slowdowns, application management software studies normal network behavior, and can direct users' requests for applications or Web sites to improve overall network performance.

"When users report they're having problems with the network, often it's a network management problem," said Kevin Conklin, vice president of marketing for network behavior analysis provider Mazu Networks.

Understanding 'Normal' Performance

Conklin said that when a user requests an application, inspecting the time it takes for

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data packets to travel between the server and the user can give network operators a good understanding of "normal" performance, as well as how configuration errors or outside events can affect performance.

For example, according to Jim McQuaid, director of product management for network management software provider NetQos, holidays and major news or sports events can generate Web traffic that reduces the overall amount of bandwidth available for applications.

Application management software can also help reduce the amount of bandwidth allocated to uses such as online video or social networking that may not have a legitimate business purpose. Companies may choose to allow employees to access specific sites at certain times or when access to important applications isn't challenging network capacity.

"YouTube isn't going to bring a network down, but it can take [performance] a little lower," McQuaid said. "You can get brownouts where some applications start to slow down, and how do you deal with that? The challenge is that there's more than one thing you need to know about how traffic affects your network's health."

Mazu Networks' Conklin says because companies have complex environments, monitoring the flow of network traffic isn't enough. To ensure applications are delivered to users effectively, companies need to identify which applications are running, and the servers, paths and users that are involved.

"It's important to understand the application delivery path," he said.

Zeus' Garrett says companies can monitor network traffic to ensure the most important applications receive enough bandwidth to perform effectively. For example, an online retailer conducting a sale can identify its best customers and provide them with steeper discounts or other offers.

Or a Web site supporting a presidential candidate changes its infrastructure in response to campaign events. If it needs to, the candidate can reduce the bandwidth to pages supporting blogs or local events to ensure the donations pages operate smoothly.

"Companies can have a sliding scale of business-critical activities, and they can pick and choose which ones they bring down or scale back, or how much bandwidth goes to each application," Garrett says.

Identifying Variations

ADC technology can also help companies identify variations from normal traffic patterns that can indicate security disruptions. For example, a sudden surge in outbound traffic from a particular server might mean a virus or other form of malware has compromised a device.

Application delivery controllers can also help with maintenance, according to Garrett. For instance, a company can upgrade a Web application without taking it offline. Once the shift is complete, the older version can be taken down.

"Internal systems often grow organically, without discipline, so you can find an organization with a large intranet with different back-end systems for legacy reasons," Garrett says. "Then you can get an infrastructure rigor mortis where companies can't change a system because a lot of applications depend on it."

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