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## TECHNOLOGY EMERGING COMPANIES

# A Forecast for Better Firewall Performance

*Rainfinity's node clustering software breaks firewall server bottlenecks*

BY STEVE ULFELDER

**R**AINFINITY INC. thinks it has found a better way to address the three “-abilities” of the Internet age: scalability, reliability and flexibility. The Mountain View, Calif.-based start-up sells clustering software that allows information technology administrators to quickly create nodes on a network.

Rainfinity claims that its technology allows servers with different functions — Web, firewall and load balancing, for instance — to be grouped into a single cluster.

The goal: to widen network bottlenecks and reduce single points of failure through simplicity.

The company's tools “duplicate information for robust throughput,” according to William Hurley, an analyst at The Yankee Group in

Boston. “It simplifies the process and requires so little input from the IT staff.”

Rainfinity's biggest competitors may turn out to be cheap “appliance boxes” — dedicated, single-function servers. The company's glaring weakness is that its products work only with software-based firewalls from Check Point Software

Technologies Ltd. in Redwood City, Calif.

### When It RAINS

Rainfinity is built around a technology called Reliable Array of Independent Nodes (RAIN). It began as a California Institute of Technology research project funded by NASA's Jet Propulsion Laboratory and the Defense Advanced Research Projects Agency.

The original goal of the RAIN project was to “reduce the cost of reliable systems” in space missions, says Charles



**RAINFINITY'S CO-FOUNDERS** (from left) Shuki Bruck, chairman; Charles Fan, CTO; senior engineers Phillip Love, Paul LeMahieu and Vincent Bohossian; and Gil Magalit, board member

### Rainfinity Inc.

**Location:** 2740 Zanker Rd.  
San Jose, Calif. 95134

**Telephone:** (408) 382-5000

**Web:** [www.rainfinity.com](http://www.rainfinity.com)

**Niche:** Internet traffic management software

**Why it's worth watching:** This software uses clustering

technology to alleviate Web server and firewall traffic bottlenecks and improve reliability.

#### Company officers:

- Olivier Helleboid, CEO
- Charles Fan, chief technology officer
- Steve Wong, CIO

#### Milestones:

- 1998: Founded
- 1999: First product introduced

**Employees:** 75; 400% annual growth projected

**Burn money:** \$15 million from New Enterprise Associates and Alloy Ventures Inc.

**Products/pricing:** Rainwall 1.5 and Rainfront 1.0 both start at \$4,995.

**Customers:** Chicago Stock Exchange, Scandinavian Airlines System, Olde Discount Corp. and Xerox Corp.

**Partners:** Check Point Software Technologies

#### Red flags for IT:

- Works only with software firewalls from Check Point.
- With hardware costs dropping, IT managers may prefer to reduce bottlenecks by adding servers.



Fan, Rainfinity's co-founder and chief technology officer. NASA wanted high performance and high reliability with off-the-shelf hardware.

Fan says he believes Rainfinity has achieved this goal by reducing the number of network "hops," or devices through which traffic must pass. This also tends to strengthen the weak links in the network chain by eliminating single points of failure.

Rainfinity's software installs on one server per cluster and then propagates itself to the rest of the cluster — including servers that are installed later.

This time-saving feature is a big benefit to Dresdner Bank AG in Frankfurt, says Norbert Schaar, a network security manager at the bank.

### Widening a Bottleneck

Ease of implementation was

also a factor when Boise-Cascade Corp. recently chose Rainfinity's Rainwall over its competitors' products.

"We looked at some hardware implementations," says Victor Thompson, a network engineer at Boise-Cascade in Boise, Idaho. "But we have seven legs off our firewall, so that got unwieldy and expensive."

Rainfinity software, which works on any combination of Solaris, Windows NT and Linux platforms, sits between the Internet and the corporate intranet. Rainwall, aimed at firewalls and virtual private networks (VPN), lets several firewalls act as a cluster, widening a common bottleneck. A recent upgrade added concurrent VPN load balancing and VPN fail-over features.

Rainfront, a newer product, also bolsters firewall

availability but sweetens the pot with traffic management functions such as Web server load balancing. The latter feature was important to Dresdner Bank, according to Schaar.

"As far as I know, Rainfinity is still unique with this feature," he says.

The bank has used Rainfinity on many clusters of Web servers running Solaris. "We're using it for resilience," Schaar says. "As the e-commerce stuff gets more and more important, it's more important that the apps are always available."

### More Add-Ons

Of course, there are plenty of ways to address availability. These days, throwing servers at problems is easy, popular and cheap.

And therein lies the rub for Rainfinity: In today's climate, the company may have the best answer to a question that nobody has asked.

Then again, maybe not. "Our competitors might add load-balancing [tools] on either side of the firewall," Fan says. "OK, they expanded the firewall — but they added two more links." That adds up to extra network hops that traffic must traverse.

Whether understaffed, harried IT shops will pay for this elegance is an open question. "Appliance boxes are cheaper and more robust day-to-day," says Hurley.

Rainfinity's task, he says, is to "add new features to stay ahead of the curve." ■

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