InTouch: Building Scalable Location Independent Hosting Sites with Riverstone Networks

InTouch is a network services organization based in Amsterdam, Holland. InTouch provides advanced customized networking solutions to solve its customers' business problems. The company is privately owned and was founded on 1994 by Rager Ossel and Willy Brinksma. Having started life as a network solution company, InTouch has evolved to become one of the leading network service providers in the market today.

The company is a compilation of a number of organizations. Each organization delivers specialized services to InTouch's customers and partners. For instance, the InTouch project management group delivers extensively researched and sophisticated network designs at a level of detail not normally seen from traditional project management organizations. By focusing exclusively on customers' needs, InTouch is able to successfully deliver large and complicated projects which other organizations would not even contemplate proposing.

The InTouch sales support group helps partners deliver complex sales projects. This group specializes in projects that require integration of a large number of services supplied by different vendors. Since an individual vendor only understands his or her own projects, InTouch sales support consultants who understand the real needs of the customer can work with the different vendors to deliver a successful solution to the customer.

InTouch is a Riverstone Networks value added-reseller and has been working with the Riverstone products on many advanced network projects for Internet Service Providers and telecommunications carriers.

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> *Rager Ossel*
> *Chief Network Architect, InTouch*

The Challenge

InTouch needed a platform that could provide network solutions that would scale seamlessly and provide complete redundancy for its business customers. For instance, an ISP customer wanted a solution that would scale from 100,000 subscribers to over 500,000 subscribers without skipping a beat. Another content hosting customer wanted to provide transparent access over the Internet to data located on servers in multiple co-location facilities without requiring users to change their access methods or use different IP addresses.

With their knowledge of advanced routing algorithms, InTouch found that the vendor with the equivalent level of advanced routing features was Riverstone Networks. More so, by building a strong technical relationship with Riverstone's senior engineering team, InTouch was able to suggest and implement new features that other vendors would have taken months to complete.

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The Solution

To implement all these solutions and more, InTouch built their advanced network designs around Riverstone Networks' RS Switch Router family. Riverstone's unique hardware design means that extra capacity can be added by simply adding another interface card or another box. As more customers subscribe to a service provider, extra ports can be added knowing that there is no performance ceiling. Each new port can run at wire speed whether it is E1/E3, Packet over Sonet, ATM, or Ethernet – even at gigabit speed. And as extra boxes are added to increase capacity, routing techniques such as BGP, OSPF, and VRRP allow the network to be self-healing and give consistent performance even when a link drops or the power fails.

Riverstone's IP address-management services allow InTouch to build a virtual IP space for its customers. This virtual IP space means that the physical network can change and evolve without having to force customers to change the way they access the network or reach their services. Servers can be replicated in the same data center or shadowed in a different data center by a different provider. For instance, one of InTouch's customers replicated its servers in both the local Telecity and Cityreach colocation facilities to give full redundancy and failover. But the customer did not even need to know whether they were accessing Telecity or Cityreach – Riverstone's switch router's ability to map a single VLAN across the two sites meant it was transparent to the customer.

"Riverstone's policy-based routing and advanced VLAN features allow us to separate the logical network design from the physical network implementation," commented Rager Ossel, chief network architect at InTouch. "This means that the user can treat the network as a flat LAN even though it is implemented in multiple data centers in different geographic locations. They don't even need to know."

The Advantages

Moving fast to implement customers' solutions has been key to InTouch's success. In designing and configuring his customers' networks, Ossel was able to talk directly to Riverstone's senior engineers to formulate ideas and suggest new features to help deliver better services to his customers. For instance, for an ISP customer, Ossel worked directly with Riverstone to implement special routing policies based on individual subscriber addresses to control the routing of these subscribers' traffic to specific servers and network links. Each community of subscribers perceives its own virtual network space which can be given its own special identity and branding based on the service provider's market goals.

"Having access to Riverstone's best engineers helps both companies," added Ossel. "InTouch gets to implement new features in weeks rather than the months it takes larger companies to bring out new software releases. And Riverstone gets an excellent test-bed to try out their new product features."

The RS 8000 and RS 8600 Switch Routers

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Infrastructure

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Policy-based routing provides other advantages. By being able to direct traffic based on subscriber communities or predetermined preferences, traffic can be directed over a choice of backbone networks using BGP to peer with different providers. And the same subscriber policies can be continuously checked using Riverstone's unique LFAP accounting protocol to gather traffic statistics based on actual application flows. This creates a continuous feedback loop to tune the networks and adjust routing polices based on actual traffic patterns rather than on guesswork.

The Future

InTouch's vision is to build the global metro network. New optical-based networks will provide enough bandwidth to enable even wider separation of the physical and logical networks. A customer in Germany will be able to access mail in France; databases in the UK, and web pages in the U.S. yet see these services as if they are sitting on the same LAN. Ossel calls this new network paradigm Location Independent Hosting. With Riverstone Networks, InTouch plans to be at the forefront of this new network wave.

The RS 32000 Switch Router

e.nabling Service Provider Infrastructure

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