

iT-AUSTRIA Reduces Transaction Response Times by 20 Percent with Cisco Routers and SNA Switching Services

When you make a bank transaction in Austria, chances are good that transaction is handled by one company—INFORMATIONSTECHNOLOGIE AUSTRIA GMBH (iT-AUSTRIA), which is the country's largest information technology service provider for the finance industry. With thousands of network connections servicing Austria's bank locations, iT-AUSTRIA needed a reliable solution that would guarantee access to the financial sector's mission-critical SNA applications while improving transaction times. Cisco SNA Switching Services (SNASw) with Enterprise Extender (EE) was the logical choice.

iT-AUSTRIA supports two major savings banks in Austria: Bank-Austria Creditanstalt and Erste Bank, with individual savings banks (Sparkassen) across Austria. Along with common computing services such as system management and production control, iT-AUSTRIA also provides planning, management, and support of the LAN and WAN infrastructure; extensive banking telephony; and growing internal Internet Service Provider (ISP) operations for its client banks. Computer operations are distributed across three separate production data centers situated some 10 km apart from one another within the confines of Vienna, with more than 12,000 km of dedicated fiber cable connecting the sites. Approximately 15,000 MIPS of S/390 CPU power is required to process the 20 million online banking transactions each day for the clients' businesses.

According to Josef Killmeyer, operations manager in charge of communication servers for iT-AUSTRIA, the company's problem was twofold. First, the Virtual Telecommunications Access Method (VTAM) limit of 64,000 elements per subarea was too restrictive.

iT-AUSTRIA had seen this problem when one of its own customers had migrated from Unisys to IBM hosts. Second, iT-AUSTRIA was eager to implement Cisco Catalyst® 6500 Series switches and IBM's Open Systems Adapter-Express (OSA-Express), with its Gigabit Ethernet connectivity, but OSA-Express only supported IP.

Network planners at iT-AUSTRIA devised some challenging criteria for their solution. They needed 100 percent application availability (especially for mission-critical applications based on LU 0, LU 2, LU 3 or LU 6.2), dual homing, and load balancing, and they wanted all hardware up and running with no equipment on standby. Furthermore, it was critical that the same design handle planned or unplanned failures in the network. Finally, they wanted iT-AUSTRIA's network to be ready for high-speed access (64 Kbps up to 1 Gbps).

iT-AUSTRIA tried other solutions first, like Cisco Data-Link Switching Plus (DLSw+) and using Frame Relay RFC1490 as a transport layer for SNA. "But both solutions transport SNA as is, within a tunnel or isolated using Frame Relay," says Killmeyer. "In reality, there



are no other solutions if your focus is SNA Priority, avoiding a single point of failure, and reduction and simplification [via IP transport].” The Cisco SNASw EE solution allowed iT-AUSTRIA to avoid the use of central front-end processors (FEPs) and allowed it to leverage the Gigabit Ethernet interface.

According to Killmeyer, the migration was implemented rapidly and without impact on customers. After evaluating an SNASw EE pilot project in September 2000, iT-AUSTRIA began the rollout across all locations in July 2001. Six months later, with the support of Cisco experts in Austria and from around Europe and the United States, more than 1000 Cisco routers were running SNASw EE. Small branch locations generally use a single SNASw EE-enabled Cisco 2600 Series router attached to the same LAN (Token Ring/Ethernet) as the Microsoft SNA Server. In medium and large branches, two Cisco 2600 or Cisco 3600 Series routers are implemented. They are configured in a way that supports load balancing and redundancy, providing the branch with continuous connectivity and optimal performance. The production data centers and some large branch locations have replaced the FEPs and eliminated the 64,000 VTAM element limit by using SNASw EE-enabled Cisco 7206VXR routers.

iT-AUSTRIA's two major clients use different versions of the SNASw EE solution. Erste Bank and Sparkassen use the decentralized version, with SNASw EE at the branch level. Bank Austria Creditanstalt uses the centralized version with Microsoft SNA Servers at the branch level transporting SNA over IP. In the production data center, a second Microsoft SNA Server translates this SNA over IP back into native SNA. iT-AUSTRIA uses SNASw EE to send this SNA into the IBM host. Killmeyer says, “The decentralized version is the more powerful one. So we have an ongoing process to also change Bank Austria Creditanstalt to SNASw EE at each branch. Removing the central Microsoft SNA Server saves hardware and software costs.”

Today, there are more 1200 SNASw EE-enabled Cisco routers across iT-AUSTRIA's branches and the next phase of the project, replacing SNA Network Interconnect (SNI) with EE and Extended Border Node (EBN), is well underway. According to Killmeyer, the results have been astonishing. “Since we use SNASw, typical banking transaction response times have improved up to 20 percent. We also use EE and EBN as a replacement for SNI to other banks.” Killmeyer adds, “SNASw EE is delivering everything it promised, and I am very happy that we have it in production! Our systems are ready to fallback anytime and easily, regardless of whether an outage was planned or not.”

Internetworking Topology

- IBM mainframes and servers

Cisco Systems Products

- Cisco 2600 Series routers
- Cisco 3600 Series routers
- Cisco 7206VXR routers
- Cisco Catalyst 6500 Series switches

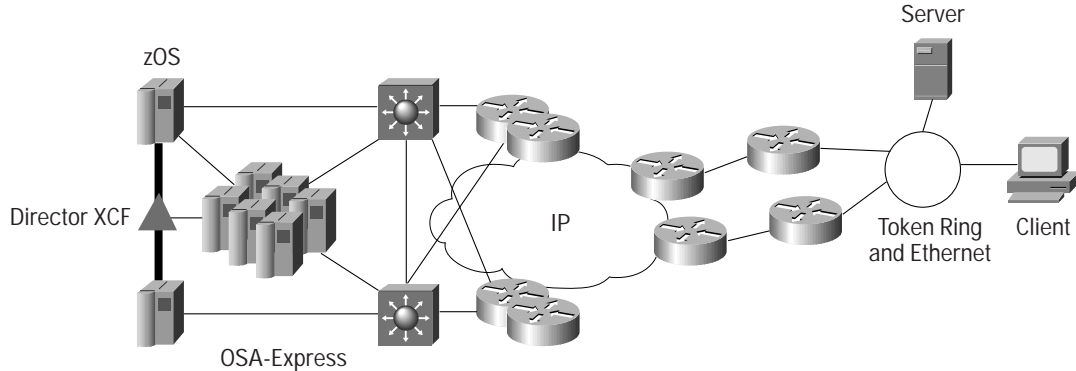
Protocols

- TCP/IP
- SNA

Network Interfaces

- Gigabit Ethernet
- Fast Ethernet
- Ethernet
- X.25
- Frame Relay
- ATM
- Token Ring
- PTT lines
- Dark fiber

The SNASw EE solution improves response time for iT-AUSTRIA while providing load balancing and redundancy.



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