IBM

Credit Suisse improves data center connectivity with eNetwork Software.

Credit Suisse Group

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Enhancing network operability with APPN/HPR

The Credit Suisse data centers have completely migrated to IBM Advanced Peer-to-Peer Networking® (APPN®) and High-Performance Routing (HPR) with one composite network node (CNN) operating as a communication management configuration host (CMC), five interchange nodes (ICNs) and 14 migration data hosts (MDHs), all operating the VTAM® Version 4 Release 4 functions of Communications Server for OS/390, an eNetwork™ Software product.

System	IBM Parallel Sysplex
Software	IBM Communications Server for OS/390 IBM OS/390 IBM VTAM IBM NCP
Hardware	IBM 3746 Nways Multiprotocol Controller IBM 3745 Nways Communications Controller

Credit Suisse Group building in Zurich, Switzerland

Credit Suisse runs corporate applications between two data centers located 25 kilometers apart and linked with IBM® ESCON® high-speed connections. The data centers, which operate IBM OS/390® systems software on 20 host images deployed across six IBM Parallel Sysplex® configurations, are connected to the network by 38 IBM 3745 Nways® Communications Controllers running Network Control Programs (NCP) and coupled with the IBM 3746 Multiprotocol Controller.

Heinz Huerlimann, a member of Credit Suisse's networking team, identifies high availability as the main objective of their migration to APPN/HPR. He attributes Credit Suisse's ability to achieve their objective to several features. He explains, "First of all, generic resources enabled our applications to be cloned across the Parallel Sysplex system, ensuring the load balancing of end-user sessions and guaranteeing immediate access to the applications when an outage occurs on a given system image."

Heinz Huerlimann is also impressed with HPR's dynamic path switching. "This is automatic and nondisruptive to existing end-user sessions, and also takes place when a new and better route becomes available," he adds, enthusiastically.

Heinz Huerlimann also points to greater resilience and reliability achieved with high-performance data transfer multipath channel (HPDT MPC), which is also known as MPC+. HPDT MPC offers better channel utilization than previous channel technologies. Similarly, the cross-system coupling facility (XCF), combined with HPR, provides additional paths in emergency situations requiring backup routes. The early phases of the Credit Suisse migration from subarea to APPN/HPR protocols were simplified by virtual route-based transmission group, which enables APPN and HPR to operate over traditional subarea format identification field 4 (FID4) links that are used in production today.
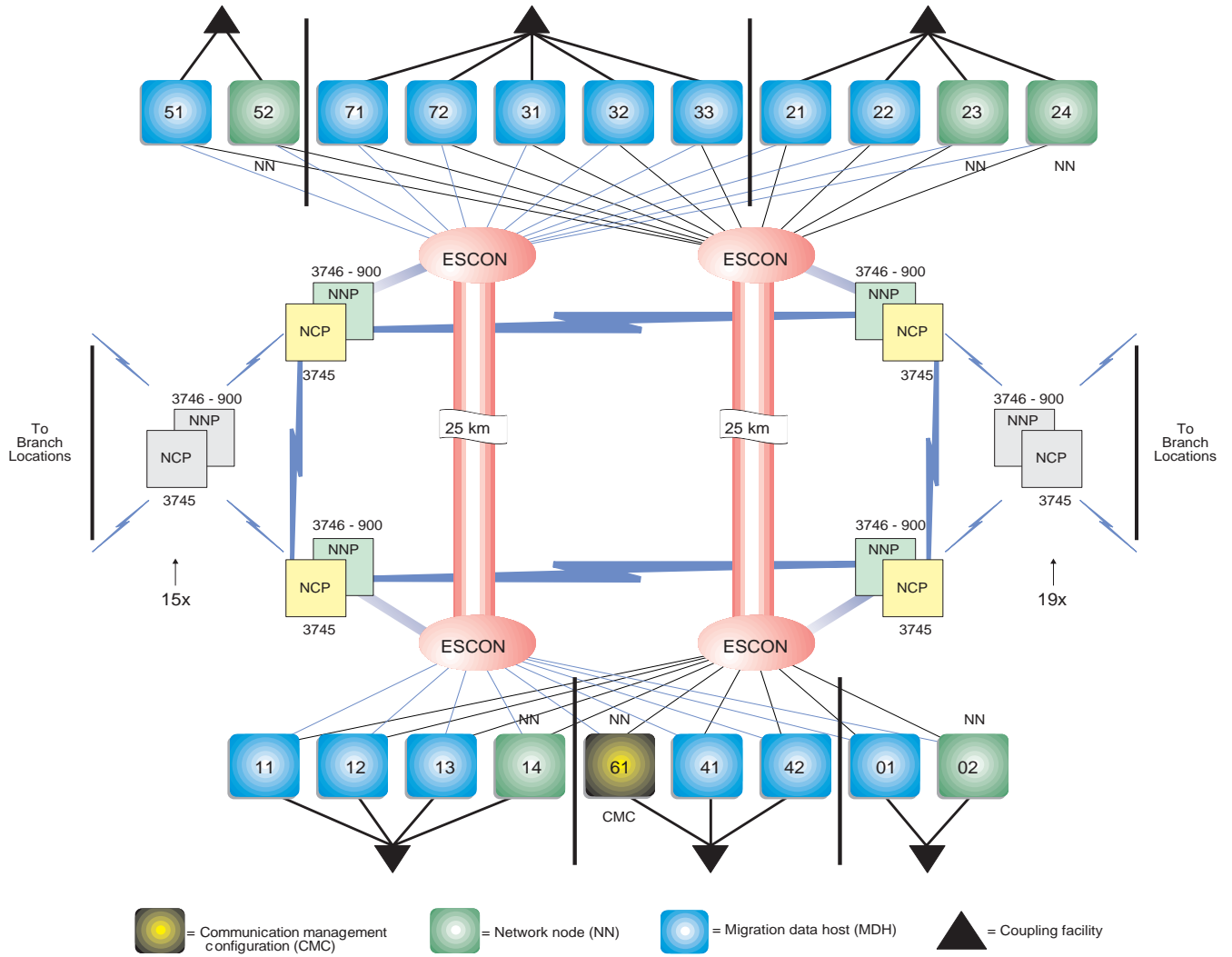
"Several nice features also make it easier for information technology (IT) staff to respond more quickly to day-to-day production needs," Heinz Huerlimann concludes. Among them, he includes making dynamic changes to the network topology, such as adding new APPN nodes, and altering the start options of Communications Server for OS/390.

Future implementation plans
Credit Suisse is considering extending High-Performance Routing (HPR) into their branch network.

"APPN/HPR works surprisingly well."

Heinz Huerlimann, Credit Suisse

51	52	71	72	31	32	33	21	22	23	24

NN   NN   NN

3746 - 900
NNP
NCP
3745

3746 - 900
NNP
NCP
3745

ESCON   ESCON

3746 - 900
NNP
NCP
3745

To
Branch
Locations

25 km   25 km

To
Branch
Locations

3746 - 900
NNP
NCP
3745

3746 - 900
NNP
NCP
3745

15x

3746 - 900
NNP
NCP
3745

19x

ESCON   ESCON

NN   NN   NN

11	12	13	14	61	41	42	01	02

CMC

= Communication management
configuration (CMC)

= Network node (NN)

= Migration data host (MDH)

= Coupling facility

Credit Suisse Group data centers configuration design for APPN/HPR

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