Meeting Joint Needs of German Cities

Customer Case Study

Data center advances local e-government agenda while offering the financial and sustainability benefits of shared services

EXECUTIVE SUMMARY

Customer Name: KDZ (Kommunale Datenzentrale Westfalen-Süd)

Industry: Public Sector

Location: Germany

Number of Employees: 65

Challenge

- Enlarge menu of cost effective services for multiple municipal customers
- Help enable a smooth transition to e-government and improve frontline citizen services
- Enhance collaboration among city employees and reduce travel

Solution

- Cisco Unified Communications, virtualized on Cisco UCS Servers, and delivered over Cisco Borderless Network as on-demand service using Cisco Unified Workspace Licensing
- Cisco Wireless LAN, extending information, communications, and collaboration tools to staff on the move

Results

- Virtualization cut costs by centralizing resources and reducing server needs
- Faster service development and deployment to interested customers
- Shared services model lowered costs, improved municipal collaboration, and helped enable citizen service innovation

Challenge

The German federal government system requires most citizen services to be managed and delivered locally. As the size of many German municipal authorities makes it uneconomic to run separate IT infrastructures, communal data centers offer economies of scale through shared services. KDZ (Kommunale Datenzentrale Westfalen-Süd) is typical. It serves 20 cities and municipalities and is owned by its customers, who invest in it and wield voting power according to their population size. They are billed at cost for common infrastructure usage, while specialized services, not used by all customers, incur hourly charges.

As a public body, KDZ is obliged to put technology purchasing out to tender. Nevertheless, its relationship with Cisco dates back 15 years and, today, around 95 percent of the network infrastructure is based on Cisco technology. “The superior performance of Cisco equipment and its seamless connectivity in a complex ICT environment accounts for that choice,” says Martin Blaesser, a network engineer at KDZ. “We previously faced formidable challenges in linking heterogeneous solutions from multiple vendors.”

A surge in demand for KDZ to offer more advanced applications to its owner-customers has been triggered by enthusiasm for e-government savings and efficiencies. Progress in meeting that demand is gathering pace, and the KDZ service development strategy is both proactive and reactive. “We propose technologies customers may wish to adopt,” says Blaesser, “and proceed to a trial on the basis of feedback to presentations and demos.” KDZ engineers also respond to requests from individual or groups of customers, cultivating close relationships with the organizations they support. As demand for such new services gathers momentum, Cisco plays a key role in helping launch them quickly, efficiently, and cost effectively.

Solution

The KDZ infrastructure combines the flexibility of a Cisco® Borderless Network with Cisco Unified Communications solutions. Although adoption of the multitude of applications enabled by this cross-architectural approach has been gradual, KDZ engineers are planning a wide range of new features and services.

"One big challenge was that customers were using many different kinds of telephony systems each locally managed and running on many different platforms. By switching to the Cisco solution, we now have a highly integrated and cost effective telephone system with full business continuity."

Martin Blaesser
Network Engineer
Kommunale Datenzentrale Westfalen-Süd

The latest phase in the KDZ push for continuous service improvement was launched with the installation of powerful Cisco Unified Computing System™ (UCS®) servers. Deployed as the virtualized host for a Cisco Unified Communications solution, UCS combines ample capacity to handle peak traffic with an almost unlimited scope for virtualization. The data center network is built on Cisco Catalyst® Series Switches and Integrated Services Routers in the distribution and access layers respectively.

Municipal KDZ customers link their LAN to the data center using a network running over optical fiber and high-speed microwave towers. The latter operate at up to 800Mbps and are strategically positioned to avoid interference. Each city thus enjoys a reliable high-speed connection, allowing all services to run simultaneously. This set-up also helps ensure that KDZ is able to support centralized broadband Internet access for all its customers, providing consistent speeds for both main municipal buildings and branch offices that deal with the public.

The telephony system is similarly centralized, with Cisco Unified Communications Manager software running on redundant UCS servers in the KDZ data center, instead of each city needing to manage its own duplicate set of servers. Links to individual cities use Cisco Integrated Services Routers, while a Cisco Survivable Remote Site Telephony (SRST) solution provides back-up and controls automated failover. Cisco Unified IP Phones are deployed throughout the region.

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Taking advantage of Cisco Unified Workspace Licensing (Standard and Professional), KDZ has created a cost effective, agile collaboration platform. The foundation for this is Cisco Unified Communications Manager, which transforms voice and video capabilities, providing mobility, raising productivity, and improving collaboration. KDZ has also unified messaging. By integrating voicemail with email, for example, Cisco Unity® Connection has significantly improved response times for hundreds of employees.

Cisco Jabber® for Windows has streamlined communications further still, giving teams the tools to see, hear, and think together; on any device, at any time. They can also interact in new ways, for example, by using presence information to see who is available and reaching them instantly using click-to-call or click-to-IM. Customer service has become easier to personalize. With Jabber 9.1 users can now identify the caller from their own personal Outlook contacts as well as from Active Directory. Plans to extend Jabber to iPhones, iPads, Androids, and Linux clients are currently under consideration.

Mobility is enabled by a Cisco Wireless LAN, comprising Cisco Aironet 1131 AG and 3600 Series Access Points and Cisco 5508 Wireless Controllers. As well as enabling staff to access information on the move, this wireless infrastructure extends VoIP, via Cisco Unified Wireless IP Phones 7921, and is currently being evaluated for Jabber and Jabber IM on Android and iPhones.

In late 2012, virtual private networks were implemented for smaller branch offices and in support of a growing trend for home working. Network security is underpinned by Cisco ASA 5520 and 5505 Adaptive Security Appliance and Network Access Control 5.4.

"KDZ supported us in developing a web-based solid waste management system with a set of highly available network services, as well as helping us distribute the system to other cities."

Thorsten Schulte
Network Administrator
Stadt Drolshagen

Results

The clearest benefit of the Cisco solution is in empowering KDZ to offer a set of standardized services to all its customers. Guaranteed levels of performance and delivery can now be assured. Meanwhile, the ability to tailor new services on request creates a test-bed for future development, helping KDZ to extend its service portfolio. Cisco technology allows for rapid deployment, helping ensure that a new service is available as soon as a customer wishes to take it.

This approach, for instance, has seen IP telephony spread to municipal employees serving more than a quarter of a million citizens. Beside operational efficiencies gained from improved collaboration, increasing on-net calls between customers are set to generate savings.

Further financial savings have come from server centralization and virtualization. The benefits accrue both to KDZ customers, who can cut their server estates, and to KDZ itself. For instance, virtualization has cut the number of servers used by the data center to support unified communications by two-thirds, with a corresponding reduction in power and cooling costs of up to 70 percent for that service.

With Cisco Unified Workspace Licensing, KDZ now has the ability to respond quickly to changing customer needs, allowing managers to switch on a requested service at will. Shared services benefit from centralized LAN management, with second- and third-level support for client workstations, while the municipalities have established service-sharing arrangements to support each other. "Using Cisco Unified Workspace Licensing originally gave us a clearly defined upgrade path over five years, but we now plan to extend that to ten years," says Blaesser.

The communal data center brings tangible benefits to its customers. Thorsten Schulte, who just joined KDZ from the city of Stadt Drolshagen in Westfalen-Süd, says: "KDZ supported us in developing a web-based solid waste management system with a set of highly available network services, as well as helping us distribute the system to other cities." Other KDZ-enabled innovations at Stadt Drolshagen include its switch to IP telephony, individual voicemail boxes for all users, and the use of CTI to identify incoming callers by name. Schulte adds: "Citizens can now leave a message if municipal employees are not at their workstation, which increases satisfaction with our services."

Next Steps

In 2013, KDZ is set to add mobility to its services using VPN and Jabber. Another hot topic for 2013 could be Cisco TelePresence providing an immersive and lifelike way to hold meetings online and save significant sums on travel.

For More Information

To learn more about the Cisco architectures and solutions described within this case study, please go to:

www.cisco.com/go/borderless
www.cisco.com/go/collaboration
www.cisco.com/go/ucs

Product List

Data Center

- Cisco Unified Computing System
  - Cisco UCS C210 Rack-Mount Servers

Routing and Switching

- Cisco Catalyst 2950, 2960, 3550, 3560, and 3750 Series Switches
- Cisco 3845 Router
- Cisco 876, 2811, 2851, 2901, 2911, and 3925 Integrated Services Routers

Security

- Cisco ASA 5520 and 5505 Adaptive Security Appliance
- Network Access Control 5.4

Wireless LAN

- Cisco 5508 Wireless Controller
- Cisco Aironet 1131 AG Series Access Point
- Cisco Aironet 3600 Series Access Point

Management

- Cisco Prime Infrastructure 1.2
- Cisco Unified Operations Manager

Unified Communications

- Cisco Unified Communications Manager 8.6
- Cisco Unified IP Phones [models 6901, 6941, 7911, 7921, 7941, 7961, 7971, 8941, 8961, and 9951]
- Cisco Jabber
- Cisco Unity Connection
- Cisco Presence
- Cisco Survivable Remote Site Telephony

Cisco Unified Workspace Licensing

- 3017 licenses covering various services

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