CISCO™

District Office Takes IT Service to Next Level

Executive Summary

- **Customer Name:** District of Rastatt / Landratsamt Rastatt
- **Industry:** Government
- **Location:** Germany
- **Population** 223,500

Challenge

- Modernize data center to meet evolving requirements for customers
- Achieve high availability to improve customer satisfaction
- Save resources for environmentally friendly solution

Solution

- Deployed FlexPod infrastructure featuring Cisco UCS servers, Cisco Nexus switches, NetApp storage, and VMware virtualization
- Leveraged Stemmer Professional IT Services for infrastructure design, backup solution services, and operations support

Results

- Improved scalability and flexibility
- Increased availability
- Reduced power consumption by 50 percent and cooling by two-thirds

Partner

- Stemmer GmbH

District of Rastatt implements converged FlexPod infrastructure to provide customers with flexible and reliable service.

Challenge

Located in the Rhine valley, the administrative district of Rastatt in Germany oversees nearly a quarter of a million people in 23 cities and communities. In addition to beautiful forests and picturesque valleys, Rastatt has a strong manufacturing economy and numerous trade schools, including the only paper-making school within Europe. The result is a population that values both technology and nature.

The district office of Rastatt delivers IT and telecommunications services throughout Rastatt, including to schools and all government offices, big and small. The district wanted to provide customers with reliable service and new applications, but the 10-year-old infrastructure lacked the power required to meet growing needs.

"As a government service, user satisfaction directly affects our resources," says Gerd Zumkeller, Head of Information and Telecommunication, for the district of Rastatt. "If local citizens are satisfied with our service, they are more likely to agree to budget increases, making it even easier to meet service requirements."

Rastatt approached established IT integrator Stemmer to help the district establish a state-of-the-art data center. Stemmer has more than 40 years of experience in IT integration and more than 800 customers in Germany and around the world. With close ties to market-leading technology companies, Stemmer's consultants have high levels of expertise that enable them to develop flexible solutions that meet the specific needs of each customer.

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>
> – **Gerd Zumkeller**
> Head of Information and Telecommunication
> District of Rastatt

Stemmer worked with Rastatt to identify the district's challenges, which included relatively frequent downtimes and a lack of consistent backup and recovery solutions. Rastatt wanted to transform its data center with efficient management, high availability, and faster infrastructure that could evolve to deliver new applications for customers.

Stemmer recommended the integrated FlexPod infrastructure that combines Cisco Unified Computing System™ (UCS®) servers, Cisco Nexus® switches, and NetApp unified storage systems with VMware virtualization. "FlexPod delivers all of the benefits of Cisco and NetApp in a converged solution that is easier to manage," says Zumkeller. "We gain the flexibility and power that we need to take our services to the next level."

Solution

Before implementing FlexPod, Rastatt was using a network based on HP Procurve equipment, NetApp storage, and a VMware hypervisor. The overall infrastructure was complex, involving hundreds of servers and multiple management tools. Stemmer built upon the district's good experiences with NetApp and VMware, designing a comprehensive data center and backup solution to renew the IT environment with FlexPod infrastructure.

"As an integrated platform, FlexPod is incredibly easy to manage and scale, which improves productivity for IT staff," says Henning Heimann, managing director at Stemmer. "The converged solution builds upon top-class Cisco and NetApp technologies, so performance and reliability are assured as well. With FlexPod, we could fulfill all requirements for the District of Rastatt quickly with a single platform."

The FlexPod platform includes 14 Cisco® UCS B200 M3 Blade Servers as the compute core of the system. The blade servers pack 384 GB of RAM into a half-width form factor, providing high performance without compromising space. Since Cisco UCS blade servers are architected to connect power, networks, and cooling via the chassis rather than through each individual server, IT teams can easily remove, replace, or add servers without downtime. The result is excellent availability and expandability to meet future capacity needs.

A redundant pair of Cisco UCS 6248UP Fabric Interconnects provides uniform access from the server chassis to networks and storage, while Cisco Nexus 5000 Series Switches form the foundation of the Cisco fabric. Unified ports support Ethernet, Fibre Channel, and Fibre Channel over Ethernet connections, bringing the NetApp storage closer to the servers for faster response times. The resulting high-performance network enables FlexPod to provide superior speeds to all of its customers.

Results

Cisco UCS Manager, combined with the VMware vSphere Suite and Dell Foglight, provides the IT team with centralized management that simplifies how the team scales and manages FlexPod. From a unified management interface, IT can monitor all equipment in the FlexPod implementation and workflows across both physical and virtual environments. In addition to wide support for data center automation, service profiles improve productivity by streamlining server deployment. Once created, service profiles can be reused to deploy new servers– both physical and virtual–in just a few clicks.

"Cisco saves us a lot of time by making it so easy to set up and maintain the Cisco UCS blade servers," says Zumkeller. "Fast deployment means that we can scale quickly to add capacity or expand the applications we're offering to customers." Before Rastatt implemented the FlexPod solution, deploying a new server took days; now it's done within

Product List

FlexPod
- Cisco Unified Computing System (UCS)
- Cisco UCS B200 M3 Blade Servers
- NetApp storage
- VMware ESXi 5.5

Routing and Switching
- Cisco Nexus 5596 UP Switches
- Cisco Nexus 5548 UP Switch

Fabric Interconnects
- Cisco UCS 6248UP Fabric Interconnects

Services
- Stemmer Professional IT Services
- FlexPod and Backup Design
- Project Management
- Project Implementation
- Migration and Operational Support

seconds using service profile templates. The IT team can now deliver server versions and applications to a new release in addition to spending less time repairing server hardware.

The FlexPod infrastructure improves both speeds and stability for Rastatt. A suitable backup concept based on NetApp SnapManager and Dell NetVault products was designed by Stemmer. This backup solution reduces downtimes and helps prevent complete loss of data. Since the Cisco UCS blade servers are hot-swappable and can be deployed quickly, FlexPod enables the IT team to perform maintenance or even exchange failed servers without stopping the entire data center. "In the past when a server crashed, some applications were not available for up to a week," says Zumkeller. "With the new FlexPod datacenter solution, Rastatt has experienced no downtime, and we can easily monitor and manage everything from our desks."

"With faster connections and less downtime, we can provide better service to our customers," says Zumkeller. "FlexPod provides us with a solid foundation that we can use to offer customers more business-critical services or applications that require more resources."

Rastatt also places priority on environmentally-friendly practices that help to preserve the district's natural resources. The compact Cisco UCS B200 blade servers, combined with a simplified Cisco cabling layout, results in a powerful system that can handle greater capacity in a fraction of the equipment. With the FlexPod Design, all compute and storage components of the district that previously required seven racks could be placed in two racks.

"Using FlexPod and Cisco UCS, we halved power consumption and reduced cooling by over two-thirds," says Zumkeller. "This not only reduces our immediate costs and gives us more room for expansion, but it also promotes green practices that are very important to our administration and our citizens."

Next Steps

Rastatt currently runs more than 280 applications on FlexPod for its customers, but it plans to increase this number even further. Rastatt signed a five-year service agreement with Stemmer Professional IT Services to support operations, as well as assist with migration and implementation support. After the smooth migration, Stemmer is working with the district to increase capacity through more Cisco UCS servers, which will enable Rastatt to continue expanding through more diversified services in the future.

For More Information

To find out more about Cisco UCS, please visit: www.cisco.com/go/ucs.

To find out more about Cisco Nexus, please visit: www.cisco.com/go/nexus.

To learn more about FlexPod, please visit: www.cisco.com/go/flexpod.