Performant and secure banking desktops with HPE Moonshot

The challenge
- Desktop workstations provided for customers and employees with a traditional industry solution
- Desktop users have to share resources in data centers
- Performance bottlenecks when workload is high
- Complex management of the non-homogeneous desktop environment
- High energy costs and large-space requirements for server farm

The solution
- Replacement of the traditional server with the HPE Moonshot server
- Six HPE Moonshot 1500 chassis with redundant components for power supply, cooling, and network
- 210 Moonshot cartridges
- Desktops are provided via Citrix Virtual Apps and Desktops
- Deployment of operating system and application stack via Citrix® Provisioning Services

The result
- Better performance, thanks to dedicated resources, as well as improved graphic performance for users and user pools
- Central administration of the desktop environment in the data centers
- Excellent data security by means of central data storage in the company’s own data centers
- Granular scaling option, easy expansion
- Single image approach simplifies operation and maintenance
- Less space required in the computer center, thanks to compact Moonshot chassis, less cabling
- Reduced TCO results in more attractive end prices for customers

As an IT service provider, Inventx AG provides consultancy, information technology, and application management services to leading financial providers in Switzerland. The service portfolio also includes desktop workstations, which were virtualized in the past via a traditional industry solution.

As an early adopter Inventx replaced this solution three years ago with the innovative Moonshot technology from HPE. A step which the finance IT professionals have not regretted for a second.

Customer portrait
Inventx AG is a leading Swiss IT service provider, which focuses on the finance industry.

The company with offices in Chur, Bruttisellen, and St. Gallen provides consultancy, information technology, and application management services to leading Swiss finance providers. The customer promise “Bank on IT” covers the whole range of IT systems—from the data center and the network infrastructure, through the application level—including Core Banking System—through to ATMs and the desktop workstations of the bank employees.

Company activities also focus on digital transformation in the finance sector, as well as security and compliance services. Established in 2010 with 90 people, Inventx now employs over 220 members of staff. The company operates two of its own data centers, but also offers its customers hybrid cloud solutions including public cloud platforms.
The HPE Moonshot system-on-a-chip architecture and the option to automatically switch off unused cartridges reduce energy consumption significantly.

“We make competitive new technologies available as early as possible for our customers.”
– Urs Rhyner, Business Manager, Inventx AG

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**Initial situation**

**Desktop workstations with terminal servers were no longer adequate.**

As part of its full IT service, Inventx also provides its customers with complete desktop workstations. In the past virtualized terminal servers were used for this.

Growing end-user requirements, particularly in the area of graphics and media, increasingly resulted in performance bottlenecks. Inventx Business Manager Urs Rhyner: “Innovation is part of our company name and is in our DNA. The outdated terminal server environments were no longer adequate for our high demands. The user experience was unsatisfactory, we were overwhelmed by the number of support cases and the system management was complex.”

In the course of a new project, Inventx AG decided to evaluate a new state-of-the-art solution for its customers and employees’ desktop workstations. Different approaches were evaluated in terms of performance, costs, and manageability. Urs Rhyner: “Our key requirements for the new solution were: top performance in everyday finance, simple, granular scalability, as well as centralization of management and operation. The new solution was to support Citrix and be deployable using the PVS Golden Image.”

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**Solution**

**Classic servers have been replaced by HPE Moonshot.**

After a successful “proof of concept,” Inventx decided on HPE Moonshot. Unlike traditional virtualization solutions, Moonshot does not rely on a Hypervisor Layer, in which hardware resources are virtualized, but rather provides users with published desktops with a powerful GPU and integrated SSD in the data center. Users share the resources of a cartridge.

Thanks to the performant HPE Moonshot m710x cartridges (15x15x2 cm) with Intel® Iris Pro GPU, the highest user demands are met, even under heavy user density. The plug-and-play Moonshot cartridges are plugged into the compact Moonshot chassis. Additional servers can therefore be provided quickly and easily. A Moonshot chassis (form factor 4.3U) can carry up to 45 cartridges. All elements for management, power supply, cooling, and network are already pre-installed.

“HPE Moonshot increases the performance for the end user and reduces the TCO.”
– Gian-Marc Venzin, Systems Engineer, Inventx AG
Moonshot desktops are published via Citrix Virtual Apps and Desktops for customers and employees. The deployment of the operating system and application stack takes place centrally via Citrix PVS with a Golden Master Image. The new solution has been implemented by Inventx itself, with HPE providing advice and support.

**Result**

Performant desktop workstations, managed efficiently and centrally. The workstation solution by Inventx is high-performance and offers users a fast and seamless PC experience, combined with the benefits of a centrally managed Citrix environment. Each Moonshot cartridge contains an Intel Iris Pro GPU supported by Citrix Virtual Apps and Desktops as well as a dedicated NVMe-SSD drive. The option to off-load the Citrix Provisioning Cache to this ultra-fast drive significantly increases performance. Up to 30 users work on one HPE Moonshot Cartridge simultaneously and benefit from accelerated graphics and a direct connection to the peripheral systems.

The HPE Moonshot system-on-a-chip architecture and the option to automatically switch off unused cartridges reduce energy consumption by up to 70%. The consolidation of the network hardware in the chassis removes the need for switches and cables, and at the same time the compact Moonshot Chassis require significantly less space in the data center.

“Moonshot is absolutely unique in the market in terms of convergence, form factor, and flexibility.”

– Cyrill Hug, Business Development Manager, Converged Servers, Edge & IoT Systems, HPE

Especially in the financial sector, the advantages of Moonshot technology can be fully exploited. Urs Rhyner: “Employee productivity is crucial in the financial sector. With Moonshot, all employees benefit from significantly enhanced desktop performance across the entire application spectrum.”
“HPE has a clear road map for Moonshot. This gives our customers the required security when deciding to invest in this innovative technology.”

– Christoph Widrig, Enterprise Account Manager, HPE

The solution at a glance

Hardware
• 6x HPE Moonshot 1500 Chassis
• 210x HPE ProLiant m710x
• Moonshot Server Cartridges
• 12x 45Gc Switch
• 6SFP+ Uplink Modules

Software
• Citrix Virtual Apps and Desktops: Various Releases

For example, the vital Banking Core application now starts much more quickly. Nevertheless, data storage in Swiss data centers, which is hugely important for financial service providers in terms of security and compliance, remains guaranteed. The clear advantages for the end customer are combined with those for the provider Inventx.

Thanks to the homogeneous and stable technology, Inventx saves a lot of time in relation to support. The project manager speaks highly of the cooperation with HPE.

“We are among the early adopters of Moonshot technology. We found working with HPE pleasant and solution-oriented. We benefit from the broad knowledge of the HPE Technical Consultants over and beyond HPE Moonshot, as well as from individual training and courses. Thanks to the excellent partnership, it was possible for isolated challenges in the initial phase to be resolved quickly. We have never regretted choosing Moonshot and will continue to rely on this platform, which HPE is continuously refining.”

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