



## REFERENCE

# Lufthansa City Center

## Flying High with a Hybrid Cloud Solution.

### Project Environment

Lufthansa City Center (LCC) provides its approximately 300 travel-agency customers with IT resources via virtual desktops. The virtual desktops are fully managed by Lufthansa City Center. A flexible, scalable, and secure infrastructure and interconnection are required for this. Equinix meets the essential requirements, and was selected as the infrastructure provider on account of its highly failsafe performance and service guarantees. In the Equinix environment, LCC uses a hybrid solution combining the public cloud and dedicated servers, with 1&1 IONOS providing Infrastructure as a Service (IaaS) and dedicated hosts as a colocation service from Axians. The challenges were the license conditions and the guaranteed performance for each virtual machine.

LCC has to ensure constant availability of the systems and low-latency access around the clock. Ultimately, vacationers and business customers rely on fast, smooth handling of booking requests. Along with a cost-effective, flexible, and scalable solution, LCC was also keen to retain control of data in Germany, which the Equinix™ platform guarantees.

### Project Requirements & Project Objectives

One challenge was to combine the best of both worlds and transition to a hybrid solution via interconnection. This solution consists of dedicated servers on which the operating systems run as

well as a public cloud that can be switched on and off variably and quickly. The whole desktop environment runs in an Equinix IBX data center in Frankfurt on dedicated hardware provided by Axians. Corporate applications are located in the Enterprise Cloud by 1&1 IONOS. The reason for this segmentation is that operating systems are relatively static, and the space requirement is predictable. By contrast, corporate applications are continuously enhanced and refined. The cloud provides the ideal conditions for this by virtue of its flexibility. Because of this segmentation, a low-latency client connection of the travel agencies and flexible provision of development resources for IT are feasible. In addition, this allows attainment of a dedicated Internet breakout point at which the data traffic passes from a private network to the Internet.

The shorter the distance to be covered via the Internet, the better. And as the Enterprise Cloud environment is very close to Axians's servers, latency rates remain very low, and provision can be short-term. Nothing changes for users in the travel agency: they have no idea that their desktop is operated on another infrastructure. The travel agencies connected at LCC operate on a legally independent basis and have a franchise relationship with LCC. Consequently, LCC cannot buy and sublease licenses, i.e. for Microsoft applications. There are special license structures for this, known as SPLA licenses. Replication of these

legal conditions was another element of the project. Additional benefits for LCC were an increased security level and greater availability.

### Implementation

For the LCC platform, Equinix provided colocation and interconnection services, 1&1 IONOS was responsible for IaaS, and Axians performed consulting and implementation. At the same time, work on setting up the hardware for the LCC desktops and interconnection with the Enterprise Cloud by 1&1 IONOS via Equinix Cloud Exchange™ was carried out. After completion, the connected data centers were handed over to the customer along with the virtual machines and hosts contained within them, with the customer subsequently providing its own applications. In the next expansion stage, Office applications are also to be provided via the 1&1 IONOS infrastructure.

The developed concept can serve as a blueprint for franchising companies or companies with lots of branches. It scales seamlessly from smaller environments of approximately 20 virtual desktops or more to large enterprise environments. Separate set-up of the virtual-desktop infrastructure at Axians and the application infrastructure at the Enterprise Cloud by 1&1 IONOS makes it possible to combine license security for the Windows desktops with maximum scalability of resources for the travel-agency employees.

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### Project Outcome

The Equinix platform with Equinix Cloud Exchange as the central component forms the basis of the solution. The services of Axians and 1&1 IONOS are added to this, resulting in an optimum and powerful hybrid-cloud concept. In turn, the concept lays the foundation for an interconnection-oriented architecture™ (IOA). Equinix impressed in this project by virtue of certified and tested failsafe performance. Another advantage is that there are partners such as Axians and 1&1 IONOS on the Equinix platform who can plan and coordinate complex projects as well as providing and integrating various services such as dedicated servers or public-cloud solutions. The guarantee by all three solution partners that access and storage of data would take place solely within Germany also impressed. Ultimately, the Frankfurt data-center location also offers major advantages on account of its proximity to the international data exchange DE-CIX.

For security reasons, LCC's data centers are allocated to the two Equinix IBX data centers FR2 and FR4, which are connected via a Metro Connect™.

Through the integrated solution from Equinix, Axians and 1&1 IONOS, LCC gains the following advantages:

- Availability of flexible and cost-effective virtual desktops for travel agencies
- Fast and straightforward connection of new franchise partners with no loss of performance
- Cost savings through the ability to optimize infrastructure resources as required
- Cloud solution and dedicated infrastructure under one roof
- Guaranteed control of data in Germany
- Increased performance and stability of IT services
- Forward-looking approach through the first step towards an interconnection-oriented architecture (IOA)
- Optimum technical solution for properly licensed provision of Microsoft desktops of the LCC travel agencies

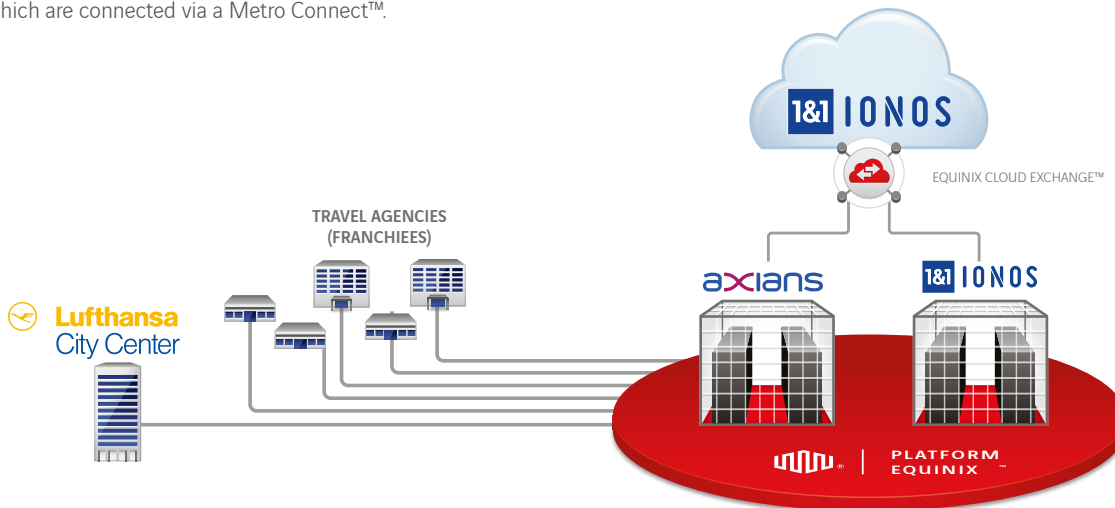
### CUSTOMER BENEFITS

Cost-effective, flexible, and scalable virtual-desktop environment. Integrated solution guarantees performance and data security.

### CUSTOMER INFORMATION



LCC provides 300 travel agencies in Germany with all-round IT via virtual desktops. LCC manages all systems—instead of having to worry about sourcing software, updating and maintenance, the travel agencies can focus on their core business.



### CONTACTS

Stefan Englert (Managed Services Sales Manager) · E-mail: stefan.englert@axians.de · Tel.: +49 6182 7869426

Cornelius Marks (Axians IT Operations Team Leader) · E-mail: cornelius.marks@axians.de · Tel.: +49 211 15767330

[axians.de](http://axians.de)

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