

B&B HOTELS on track for growth with SD-WAN hotel network from m3connect

When B&B HOTELS opens a new location, their hotel network, including all services and provider interfaces, is implemented swiftly and effortlessly. With m3connect, the Aachen-based specialist for hotel networks, B&B HOTELS developed a “Future Network” concept with all the necessary structures. After rigorous preparation, this network was implemented in 2020 in all 138 hotels of the B&B HOTELS group in Germany, Austria and the Czech Republic. This year (2021), seven additional locations have already been added due to the strong growth of B&B HOTELS.

Once designed and integrated with all previous experience and possibilities, the model of a powerful hotel network was created. It had to be highly available, performant, and easily scalable while also covering the increasing bandwidth demand. The network required scalability and flexibility in order to effortlessly integrate new locations, new applications, and new providers. Ultimately, B&B HOTELS wanted to say goodbye to time-consuming maintenance, high provider costs, and non-transparent network operation.

The result is a hotel network that is no longer an obstacle, but a driver of digitalization and new applications. Key features include intelligent, redundant data center networking, a software-defined wide area network (SD-WAN), an LTE based back-up solution, and a centrally organized structure with multi-provider management.

The “Future Network” concept

The previous hotel network did not fit B&B HOTELS’s vision of the “Digital Guest Journey”: an end-to-end digitalization of all processes related to a hotel guest’s stay.



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B&B Hotels Germany GmbH

B&B HOTELS is one of the most important economic hotel groups in Europe. Founded in Brest in 1990, the group has a network of more than 850 hotels in 17 countries in Europe, Brazil and America. B&B HOTELS is positioned in the Value for Money sector and aims to offer its customers comfort and quality at the best value for money. B&B HOTELS has been present on the German market since 1998 and is currently represented with over 220 hotels in more than 110 cities. Further information can be found at bbhotels.com.

Limiting factors included the bandwidth and reliability, the lack of flexibility when setting up new properties, the high-maintenance local PCs, and the rigid provider structure. At the same time, with B&B HOTELS’s growth strategy, the standardization of the network infrastructure played a key role in quickly integrating new B&B locations. New hotels needed to use the infrastructure from day one and become fully migrated in just a few days.

“We decided to rebuild the IT infrastructure, our foundation for all digital services. Our “Future Network” project should securely position us for the future and become a driver for further digitalization projects,”

explains Niklas Unger, Chief Information Officer (CIO) Central & Northern Europe at B&B HOTELS. Thus, the idea for the “Future Network” concept was born. B&B HOTELS and m3connect invested six months into designing the network. This was followed by a three-month test

run in new B&B properties and then, within just one year, an entire rollout at all 138 locations. “Today, the network is the cornerstone for all the digital services and added value we offer guests,” Unger summarizes.

B&B HOTELS expected the highest quality of modernization for the hotel network. In addition to a fail-safe and scalable network infrastructure, the network had to meet hotel operations’ and guests’ increasing bandwidth requirements, actualize new cloud possibilities, and allow for remote network changes. Separate networks for guests and operations, and a customer firewall were implemented in order to protect the data and IT systems from attacks and damage.

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Other building blocks of the “Future Network” concept included:

- High performance, high-speed internet via fiber optic connection
- Reliability through redundant operation of the data centers
- LTE backup solutions at the sites, and data security.
- Scalability, flexible and efficient multi-provider strategy
- Centralized provisioning and maintenance of cloud-based applications
- Transparency of network status and application operation
- Controlled rollout and operational support from a single source
- Standardization of network components and their configuration in the hotel

With this concept, B&B HOTELS and m3connect agreed that it was possible to create an innovative hotel network never before seen in an European hotel group.

Growing Demand for Bandwidth Among Guests

After price and location, WiFi is considered the third most important priority when choosing a hotel. Network quality also plays a decisive role because guests expect the same level of network service that they receive at home. They use streaming services for entertainment, make private video calls with family, and hold video conferences with business partners. This requires high bandwidth to function smoothly. As a result, B&B HOTELS decided to make fiber optic connectivity the standard for all their properties. The bandwidth was increased to an average of 800 Mbit/s per room. The site network became highly available and thus provided the basis for reliable use of all other digital services.

Establishing the Network Infrastructure

Within the year 2020, the complete infrastructure of all 138 locations were upgraded with modern ethernet and WiFi installations. A total of more than 4,000 RUCKUS access point were installed.

The modern wireless infrastructure is controlled via a centralized, virtualized, and highly available cluster of Virtual Smart-Zone controllers. This enables administration, monitoring, and maintenance of all site components from a central instance. This time and cost saving method allows for efficient network management that is less prone to faults. Additionally, this allows for site changes to be made and rolled out centrally, which, among other things, creates a uniform appearance of all site networks.

RUCKUS enterprise switches from the ICX family were used for the switch infrastructure. A uniform concept was developed in order to considerably simplify and accelerate the setup and commissioning of new sites. The identical structure of all sites and the elimination of “uncontrolled growth” in the site infrastructure made administration and fault management much more efficient. It also significantly reduced the occurrence of faults overall.

Installation of a Central System via VoIP

Local telephone systems were replaced with central, cloud-based telephone systems. By designing and setting up a new telephone platform and replacing or renewing the components, it is now possible to save time and effort while also monitoring operations. In order to operate the

solution geo-redundantly, m3connect installed a new vSphere cluster with central databases both in its own data center in Frankfurt and at the customer’s data center in Hochheim. This new component manages all SIP accesses and serves as a central gateway between the providers and m3connect’s telephone solution. As a result, the B&B hotel group can now choose favorable SIP providers, rates, and constellations across its locations in Germany, Austria, the Czech Republic, and the Netherlands. Downstream, an Asterisk telephone server is used to manage the individual telephones in the B&B hotels and to switch calls. With no limits, VoIP services was set up to easily migrate analog telephone technology.

Redundant Data Centers and LTE Backup for Failsafe Operation

Three additional data centers, in Frankfurt, Essen, and Oberhausen, are networked with B&B HOTELS’s headquarters in Hochheim and the headquarter’s own on-site data center. Two of these data centers connect each hotel location, and the other two operate Binary’s server farm and provide applications for the hotels to access. m3connect hosts the hardware (server and storage) that operates multiple B&B Hotels services. These include the IFC systems, the central interface servers that issue the PIN codes to the door locks, the hotels’ file and print servers, and the domain controllers used by hotel employees to log on to central services. All systems are redundant to ensure that both communications and server tasks can be performed without interruption in the event of a failure. At the same time, all sites were equipped with LTE backup. This means that, even in the event of a total failure of a data

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center, all services and applications are reliably available at all sites. This new structure offers optimal reliability, fail-safety, and data security.

Intelligent Site Networking with SD-WAN

The key to robust networking lies in the intelligence of the SD-WAN. It enables scalability and flexible network use. Depending on the situation and local conditions, the speed of the data packets can be controlled and the performance of the network can be optimized. If the fiber optic line is damaged, due to civil engineering work for example, the LTE-based backup is activated in order to ensure outages are avoided in the affected locations. Right away, prioritization of services are initiated by means of previously defined Quality of Service (QoS).



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QoS puts the quality of a communications service in relation to the requirements. For example, business-critical services are prioritized higher if faults occur in the WiFi network, and hotel operations can continue without interruption. Additionally, the SD-WAN serves as the basis for the multi-provider strategy. This allows B&B HOTELS to integrate line products from local providers with an attractive price-performance ratio, in addition to its preferred partners across countries. B&B HOTELS can save a great deal of money as a result.

Central Network Management and Remote Desktop

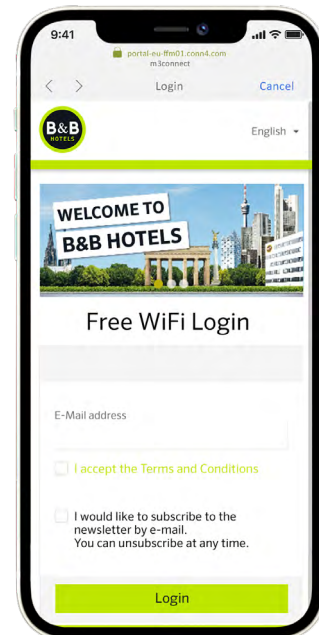
With the changeover, network management has been centralized wherever possible. Previously, local PCs were high-maintenance, and local network extensions were tedious. Whereas in most cases on-site technical staff were required, routine tasks, such as applying patches and security updates, can now be handled centrally. Central solutions have even been created for local applications with virtual, central environments. Additionally, all PCs are gradually being replaced by interface VMs, whose intelligence is located in the data centers. In this way, new applications can also be implemented centrally, which saves a great deal of work. The cloud-based PMS (property management system) solution from B&B HOTELS can now be distributed to all locations at the touch of a button.

The Digital Guest Journey

The “Future Network” concept is the basis for a digitalized guest journey. Every process, from reservation and check-in to stay and checkout, is digitalized. Guests can check in and out conveniently via their smartphones. This helps with avoiding long lines at the reception desk and adhering to hygiene protocols. In addition to the guest WiFi, another Internet-of-Things network is available for the kiosk. This separately secured network is created specifically for end devices, such as check-in devices or digital payment solutions for vending machines at the reception desk. Other applications can be quickly and easily integrated thanks to this solid foundation, and can also be rolled out in just a few locations as pilot projects.

Integration of Services via the BBUS for a Digitalized Guest Journey

In this latest project, B&B HOTELS Germany GmbH has taken another step towards development with m3connect to pursue the common goal of a digital guest journey. For this purpose, the B&B hotel group provides its self-developed data bus, “BBUS”, which regulates the data exchange between systems and includes all hotel processes. Together with B&B HOTELS Germany, the BBUS will connect digital services in order to enable new use cases related to the digitalization of processes.



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WiFi Portal with free login

In a first integrative step, the newsletter registrations, which are made via the WiFi start page, are transmitted to the BBUS. The transmitted e-mail addresses are first prequalified by the BBUS. Then, the data is checked for correctness and the BBUS determines whether the mail server entered on the WiFi start page exists.

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The data records are then transferred to B&B's internal CRM system. With the help of m3connect's WiFi portal and integration via the BBUS, B&B HOTELS Germany can now transfer the acquired newsletter leads automatically and use them for marketing activities. This is another major milestone in our strategic cooperation with B&B HOTELS Germany.

"We have created a transparent network that gives B&B HOTELS all control options, from current network status to rollout progress, and monitoring of commercial parameters. We are more than satisfied with the result. Hardly any other hotel group in Europe has such a network."

A Successful Collaboration with a Future

"When we launched the project, we were looking for someone who could turn ideas into concepts. With m3connect, we found a flexible partner, from the requirements analysis to the realization, who dealt with our wishes individually. This enabled a cooperative and partnership-based collaboration throughout the entire value chain"

Niklas Unger sums up the choice of partnering with m3connect. Finally, transparency was also an argument for working with m3connect. Emilio Dragas, CEO of m3connect, knows how valuable it is to have an overview at all times.

Are you looking for a reliable and innovative partner for future-proof networking of your sites? Then please feel free to contact us!



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From WiFi Pioneer to Market Leader

Since 2001, m3connect has grown into one of the largest Wireless Internet Service Providers in Europe, with offices in Aachen, Karlsruhe, Munich, San Francisco, the United Arab Emirates, and Šibenik (Croatia). Globally, m3connect serves approximately 17,000 customer locations across more than 27 countries and has been expanding its self-developed platform as a pioneer in cloud technologies for over 20 years. As a technology leader, m3connect provides wireless best-in-class internet connectivity with flexible design. m3connect utilizes state-of-the-art technologies such as WiFi, private LTE, and 5G, and creates innovative software solutions like SD-WAN and various digital applications. The service portfolio includes digital signage, guest infotainment systems, VoIP, VoD, and location-based services. m3connect is a platform developer and integrates its solutions into the existing processes of its customers.



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