

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

When B&B HOTELS opens new locations, the hotel network with all services and provider interfaces is implemented at the push of a button. Together with m3connect, the Aachen-based specialist for hotel networks, the hotel chain developed a 'Future Network' concept that provides all the necessary structures for this. After intensive preparation, it was implemented in 2020 in all 138 hotels of the B&B HOTELS group in Germany, Austria and the Czech Republic. This year, seven additional locations have already been added due to the strong growth of B&B HOTELS.

Once designed and peppered 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 covering the increasing demand for bandwidth. Scalability and flexibility were required in order to integrate new locations, new applications and new providers without great effort. Last but not least, 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 no longer fits B&B HOTELS' vision of the 'Digital Guest Journey', an end-to-end digitalization of all processes related to the hotel guests' stay.



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B&B Hotels Germany GmbH

The fastest growing budget hotel chain B&B HOTELS specializes in modern, attractive and affordable accommodation. The concept is geared towards business and leisure travelers. With more than 500 hotels and over 40,000 rooms in 14 countries, B&B HOTELS has accommodations in Spain, Portugal, France, Germany, Italy, Poland, Czech Republic, Brazil, Austria, Switzerland, Slovenia, Belgium, Hungary and the Netherlands. In Germany, B&B HOTELS is positioning itself as the market leader with more than 145 hotels and around 15 new openings per year. Further growth to 400 hotels in Germany and up to 3,000 properties worldwide is planned by 2030.

Limiting factors were the bandwidth and reliability, the lack of flexibility when setting up new properties, but also the high-maintenance local PCs and the rigid provider structure. At the same time, with B&B HOTELS' growth strategy, the standardization of the network infrastructure played a key role in integrating new locations into the B&B world in the shortest possible time. New hotels thus use the infrastructure from day one and are 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. 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, the entire rollout at all 138 locations. 'Today, the network is the cornerstone for all the digital services and added value we offer guests', Unger sums up.

B&B HOTELS placed the highest demands on the modernization of the hotel network. In addition to a fail-safe and scalable network infrastructure, the increasing bandwidth requirements of guests and hotel operations had to be met, new cloud services had to be made possible, and changes had to be permitted even when no technician was on site. Separate networks for guests and operations and the implementation of a customer firewall were to protect the IT systems and data from attacks and damage.

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Other building blocks of the 'Future Network' concept were:

- 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 hotels

With this concept, B&B HOTELS and m3connect agreed that it was possible to create an innovative hotel network that had not been seen before in a European hotel group.

Growing demand for bandwidth among guests

After price and location, WiFi is considered the third most important decision criterion when choosing a hotel. Network quality also plays a decisive role, because guests have the same expectations of services as they do at home. They use streaming services for movie and series entertainment, make private video calls with family, and hold video conferences with business partners. These and other applications require high bandwidth to function smoothly. B&B HOTELS therefore decided to make fiber optic connectivity the standard for all B&B properties. The bandwidth thus increased to an average of 800 Mbit/s per house. The site networking became highly available and

thus provided the basis for reliable use of all other services related to the digitalization strategy.

Establishing the network infrastructure

Within a year in 2020, the complete infrastructure of all 138 houses at the time was upgraded with modern ethernet and WiFi installations. A total of more than 4,000 RUCKUS access points from the provider CommScope were installed.

The modern wireless infrastructure is controlled via a central, virtualized and highly available cluster of Virtual Smart-Zone controllers. This enables administration, monitoring and maintenance of all components in the sites from a central instance. This time and cost saving makes network management very efficient and less prone to faults. Changes for all sites can thus be made and rolled out centrally, which, among other things, has a positive effect on the uniform appearance of the site networks across all sites.

RUCKUS enterprise switches from the ICX family are used for the switch infrastructure. A uniform concept was developed, which considerably simplifies and accelerates the setup and commissioning of new sites. The identical structure of all sites and the elimination of 'uncontrolled growth' in the infrastructure of the sites made administration and fault management much more efficient and significantly reduced the occurrence of faults overall.

Installation of a central telephone system via VoIP

Local telephone systems were replaced by central, cloud-based telephone systems. By designing and setting up a new telephone platform and replacing or renewing the components, it was possible to generate cost benefits on the one hand and improve performance and operations monitoring on the other. In order to operate the solution geo-redundantly, m3connect installed a new vSphere cluster with a central database both in its own data center in Frankfurt/M. and at the customer's in Hochheim. This new component manages all SIP accesses and serves as a central gateway between the providers and the m3connect 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 could be set up easily to migrate analog telephone technology where it still existed.

Redundant data centers and LTE backup for failsafe operation

Three additional data centers in Frankfurt, Essen and Oberhausen are networked with B&B HOTELS' headquarters in Hochheim and its own on-site data center. Two data centers are used to connect the hotel locations, and the other two data centers operate Binary's server farm and provide applications that the hotels access. The m3connect hosts the hardware (server and storage) on which several services of B&B Hotels are operated.

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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 needed for hotel employees to log on to the 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 center, all services and applications are reliably available at all sites. The new structure thus offers maximum reliability, fail-safety and data security.



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Intelligent site networking with SD-WAN

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

QoS puts the quality of a communications service in relation to the requirements. For example, business-critical services are prioritized more highly if faults occur in the WiFi network, and hotel operations can continue without interruption. At the same time, the SD-WAN serves as the basis for the multi-provider strategy, through which B&B HOTELS can now integrate line products from local providers with an attractive price-performance ratio in addition to its preferred partners across countries. In this way, potential savings can be realized.

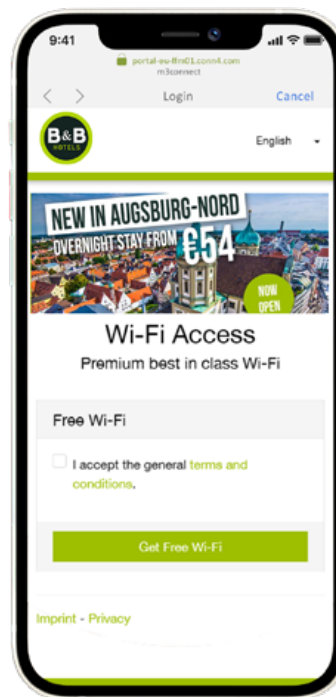
Central network management and remote desktop

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. For this purpose, all PCs are gradually being replaced by interface VMs, whose intelligence is located in the data centers. New applications can also be implemented centrally in this way, which means an enormous saving in effort. The cloud-based PMS (property management system) solution from B&B HOTELS could thus 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. From reservation and check-in to stay and check-out, all processes are digitalized. Guests

can check in and out conveniently via their smartphone. This not only avoids long lines at the reception desk, but also supports hygiene rules. In addition to the guest WiFi, another Internet-of-Things network is available for the kiosk. This separately secured network has been 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 integrated quickly and easily thanks to the solid basis and can also be rolled out as pilot projects at just a few locations for test phases.



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WiFi Portal with free login

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Integration of services via the B&B Group data bus for a digitalized guest journey

In the latest project, B&B HOTELS Germany GmbH has taken another development step together 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, digital services will be connected via the BBUS to enable new use cases related to the digitalization of processes.

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. Here, the correctness of the data is checked and it is determined whether the mail server entered on the WiFi start page exists. 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 completely automatically and use them for marketing activities. This is another major milestone in the strategic cooperation with B&B HOTELS Germany.

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 m3connect as a partner.

Last but not least, transparency was also an argument for the cooperation with m3connect. Emilio Dragas, CEO of m3connect, knows how valuable it is to have an overview at all times: 'We have created a transparent network that gives B&B HOTELS all control options, from the 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.'

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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