

# TECHFOCUS

The background of the entire page is a vibrant blue with a complex pattern of glowing white and light blue circuit lines and nodes. In the center, a hand in a dark blue suit sleeve is pointing its index finger towards the viewer. The fingertip is glowing with a bright yellow and orange light, and several vertical lines of light extend downwards from the hand. The word 'TECHFOCUS' is written in large, bold, white capital letters at the top. The letter 'O' is stylized with a red triangle pointing to its right side.

Shining the spotlight on outstanding  
technology progress in the Middle East

Published by



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# Smart stories



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Welcome to TechFocus, a learning resource compiling the outstanding Middle Eastern projects that have streamlined systems and processes as well as driving business value – all through the use of Huawei technology.

Cutting edge Smart technology is at the core of these projects. Smart healthcare, hospitality and education are some of the leading examples in Tech Focus; these are some of the leading pillars that now contribute to the Internet of Things. They are also providing the building blocks for futuristic Smart cities.

CPI Media Group journalists have carefully scoured the region to find how cutting-edge solutions have enabled businesses across a range of verticals to achieve their full potential – and lay the foundations for the years ahead.

This essential groundwork has had a marked impact on a broad group of people across industries, including internal IT operations teams, company employees, and, most importantly, customers.

These changes will, directly or indirectly, have a positive impact on bottom lines, which is fundamentally the main driver for any IT project.

The solutions covered in TechFocus cover a breadth of technology issues, ticking boxes across the spectrum, proving that Huawei is a dynamic, versatile technology force in anything that it turns its hand to.

From futuristic software-defined data centres to top-of-the-range Virtual Local Area Networks, Huawei's technology clearly demonstrated to CPI its ability to connect people through its devices.

A common theme throughout this booklet is the support offered by Huawei to its partners. Without fail, following every implementation, IT leaders who have put their faith in Huawei have not been disappointed with the quality of service and support.

They have taken pleasure in telling us how the company is incredibly receptive and pro-active when it comes to solving their technical problems, dissecting the root causes of any issues and then swiftly offering a remedy.

We hope you find this book both informative and engaging, a document of Huawei's impact in evolving the regional IT industry.

# Perfect host

Looking to automate IT processes and consolidate its data centre, Jumeirah Group's IT team embarked on a journey to implement a software-defined data centre.



## Background

With 21 five star properties in its portfolio – including the world-renowned seven-star Burj Al Arab Hotel – Jumeirah Group has an obligation to provide high quality, non-stop services for its guests and operations teams. Neil Menezes, Vice President, Information Technology Operations, Jumeirah

Group, wanted to enable the use of smarter services within the company, and saw the move to a software-defined data centre as an essential catalyst that could allow this to happen.

## Key challenges

Menezes wanted to split his single central data centre into two

parts, forming a single cloud in the process. As the volume and complexity of the company's data and applications had increased over time, it had become harder to manage Jumeirah's separate sites. Menezes wanted to create a faster provisioning system for the company's applications and online environments, so he could "move



knowledge from the heads of employees into the system.”

In October 2013 Menezes set about implementing a simple, smart and open next-generation data centre that could accelerate the deployment and delivery of applications within and across multiple sites and clouds. The architecture would have to

work around the complexity and compromises associated with the geographic distribution of data centres and their compute storage nodes. “When the network, and the applications it carries, interact at a pace that ensures that neither has to wait on the other, productivity soars and the cost of the network tumbles,” Menezes says. “Consequently, employees get the best application experience and the overall availability of the data centre improves.”

The desire to integrate the various components of Jumeirah’s technology was a key driver in the move. “We had a lot of great technology at Jumeirah, but nothing to connect it together,” Menezes says. “It was crucial that we could find a way to glue our investments so that the business could benefit. From an IT point of view it is difficult to justify to the management that you can spend millions on technology that people never actually see. Before the implementation we could deploy services but there were problems with our processes.”

### **Solutions**

Menezes knew that in order to “glue” the company’s technology together, a migration to a software-defined IT infrastructure was necessary. A single management platform would be necessary so the IT team could analyse all components through a single dashboard, and provide swift remedies to any issues. “There are three pillars that drive my philosophy on data centre design,” Menezes says. “Simple, smart and



**Neil Menezes, Vice President,  
Information Technology Operations,  
Jumeirah Group**

open. It was important that all aspects of the centre could speak the same language, with everything based on OpenStack.”

With this openness in mind, bringing storage, network and security solutions together in the infrastructure was the obvious choice to allow for faster application and service provisioning, which would facilitate the introduction of automated processes and better allocation of human resources.

Menezes says Huawei’s support would prove to be a key factor in the project’s success, offering 24/7 phone assistance, as well as direct contact with the regional General Manager. “Unlike the way certain vendors may attempt to wash their hands of you once initial work has been done, Huawei always went out of their way to help us,” he says. “There is a great deal of entry level support, and they offer help when not even asked, which runs parallel to our work as a hotel, whose job it is to do just that.”

### Customer Benefits

Following the implementation, the speed at which IT managers for each hotel can provision services has hugely increased. The systems needed to provision these new services can now be accessed in minutes through a built-in process that orchestrates all tasks needed to access it. With processes now approved through workflows, Menezes' IT team are able to offer swifter advice to IT managers based on their current infrastructures.

All IT components – including storage, network and security solutions - can now be seen through a single management dashboard. Menezes' decision to virtualise the company's data centres has, in short, increased transparency and ease-of-use between the centres' components. "We now have far greater visibility in how we see the process performing end-to-end," says Menezes. "By removing inconsistencies in processes and reducing the capacity for people to make errors, we have greatly increased our go-to-market agility." "Let's say the business wanted

to provision the infrastructure for a new mobile application," Menezes says. "Typically this request would have to go through the server teams, storage teams and security teams etc. This would involve seven or eight people and would be relatively time consuming. Now, IT managers can go to a portal and lodge the specifications of their request in terms of what they need. This form is then presented in terms of how the environment needs to be deployed, and the solution is able to orchestrate itself, creating VLANs using OpenStack. The operating system is deployed along with appropriate storage and infrastructure. All processes are decided; relevant software updates are completed when needed." The orchestrated environment now allows the IT team to focus on helping customers, rather than doing the jobs that automated technology could.

Looking ahead, Menezes says his next aim is to move all components in his data centre – including routing, switching and fabric - from being virtualised to fully-orchestrated. In doing this,

**"We had a lot of great technology at Jumeirah, but nothing to connect it together. It was crucial that we could find a way to glue our investments so that the business could benefit. Before the implementation we could deploy services but there were problems with our processes."**

## EXECUTIVE SUMMARY

Customer name: **Jumeirah Group**

Industry: **Hospitality**

Location: **UAE**

### Challenges

- Designing an architecture that could overcome the complexity of geographic data centre distribution and compute storage nodes
- Avoid any network downtime
- Finding an effective way to unify Jumeirah's existing technology

### Solution

- Move to Huawei's software-defined data centre
- Bring storage, network and security solutions together in a single infrastructure

### Results

- Quick provisioning of IT services within Jumeirah
- Ability to view all IT components through a single dashboard

he is anxious to work with Huawei yet again, "Huawei completely exceeded our expectations throughout the project," he says. "We were able to speak to the back-end, developers and programme managers. They always had a 'never say no' mentality and never stopped looking beyond tomorrow.

# Doctors' orders

Charged with supporting a network of four institutions at Gulf Medical University and their teaching hospitals, Thumbay Group looked to Huawei to implement a LAN that could provide high bandwidth for the transfer of vital patient information.



## Background

International conglomerate Thumbay Group, headed by founder President Thumbay Moideen, has business in thirteen sectors, and owns and runs Gulf Medical University and its teaching hospital network. With a focus on medical education,

healthcare and research, the quality of Internet within GMU is vitally important to a variety of aspects across the business. With a need to put a large amount of software online, Vignesh S. Unadkat, Director, IT and Promotions and Brigitha Kurian, IT Manager, Thumbay

Group, looked to implement a robust network that could cope with the necessary patient and student demands. Thumbay Group management decided a comprehensive LAN solution was needed to boost the hospitals' overall operating performance.

### Key Challenges

One of the group's most important needs was the transportation of a variety of digital high resolution images between the four hospitals. X-rays, computerised tomography (CT) scans and ultrasound images all had to move seamlessly across the business, and Unadkat says this was a huge "bandwidth eater". The new LAN network would therefore have to be of sufficient quality to support the transportation of this business-critical information.

In the same vein, the need to upgrade dated technology was another obstacle that had to be overcome. "A big problem we faced was that of our relatively old layer 2 switches," Unadkat says. "We needed LANs for managing the high volume of traffic that moves between hospitals, and different segmentation within the LAN to manage it. Nowadays, every aspect of the business uses the network; wires carry the entire business."

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**"It was not a normal vendor-customer relationship. They gave us the same feedback in terms of improving our network; they were always proactive in their attempts to assist us. They made the effort to train our staff, which has certainly made our lives easier."**

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This tied in with perhaps the biggest problem that Unadkat and his team would have to face – alleviating the risk of network downtime. "No organisation can afford to have downtime on their network, least of all one who has people's safety - and lives - in its hands. The switching over time was minimal, so execution had to be precise and well-orchestrated."

Unadkat believes that GMU's geographical location in Ajman was yet another potential problem. With few elite vendors having offices in the northern Emirate, he feared that quick-fire support would be hard to come by. "In terms of getting instant support, being based in Ajman, service gets delayed," he says. "We have an in-house team, who we have had to rely on more in previous cases than support from the vendor themselves. I do believe that in Dubai things are easier in that respect, but we asked Huawei to train our staff beforehand."



**Vignesh S. Unadkat, Director, IT and Promotions and Brigitha Kurian, IT Manager, Thumbay Group**

### Solution

In light of various technical concerns as well as the company's location, GMU underwent a rigorous evaluation process to determine which vendor would be best equipped to support them on their journey. With technology changing fast and new offerings always emerging, Unadkat says he used three key criteria to determine that Huawei's offering was the right fit, "Before opting for a new technology, you have to consider the support you will receive, pricing, and of course, the technology provided," he says. "Huawei provided the best all-round option. We were given additional peace of mind by their five-year warranty."

GMU would go on to work closely with Huawei throughout the implementation. "It was not a normal vendor-customer

relationship. They gave us the same feedback in terms of improving our network; they were always proactive in their attempts to assist us. They made the effort to train our staff, which has certainly made our lives easier."

Based on LAN, firewalls and Ethernet switches, the Huawei solution sought to reduce the hospital's network downtime and increase performance.

### Customer Benefits

Following the implementation of the LAN - which was completed inside an impressive four months - the whole campus of GMU is now wireless. Patients can now be discharged from the hospital from the comfort of their beds. Hospital staff bring tablets to the rooms, where the patients can be electronically discharged. "This has had a huge effect on patient satisfaction," Unadkat says. "Not only that, but this greatly improves efficiency by saving the time it takes to prepare a patient for discharge. This frees up hospital staff so their time can be better spent helping other patients."

Tablets have been a key tool in making the most of the new LAN. They are also used for prescribing medicine, giving feedback in terms of nursing treatment and health report checking. All these capabilities have facilitated the work of staff, and improved patient experience. Unadkat believes this is just the beginning in terms of wireless services

provided to patients and staff, "Nowadays patients demand the use of services like WhatsApp, and expats in particular expect the use of money services straight from the hospital," he says. "We are able to provide them, and this could be the start of a broad range of services we offer to patients."

The introduction of the LAN has also hugely benefitted the student population, who now have more comprehensive access to learning materials. "From an end-user perspective, the speed of network applications is faster, and this obviously saves them time by accelerating their ability to complete tasks," Unadkat says. "Their demands in terms of their experience have been met, through the quality of the Internet, in particular throughout interactive student video tutorials, as well as other educational applications."

Unadkat's IT team has felt the benefits of having a centralised network monitoring system, allowing them to configure the network across all four hospitals. This means problems can be analysed from a single dashboard, ultimately allowing medical administrative staff the means to be more productive in their daily operations.

Looking forward, Unadkat says the implementation has equipped GMU for a future that will be dominated by technology. "In the long term we will be able to do business faster and better following the use of the

## EXECUTIVE SUMMARY

Customer name: **Thumbay Group**

Industry: **Healthcare, Education**

Location: **UAE**

### Challenges

- Avoid network downtime
- Provide high bandwidth LAN that can support a vast array of high-res medical documents
- Geographical location away from large vendors

### Solution

- Provide high quality segmented LAN throughout four hospitals
- Close contact, support and training from Huawei

### Results

- Swift access to a range of digital hospital services
- Ability to manage all services from one central location

Huawei solution," he says. "Every industry – healthcare especially – is now IT-enabled, and this is in line with our motto of 'Growth through innovation' – technology is an essential part of that philosophy. We will certainly look to Huawei again for future partnerships."

# Education on demand

The Technical Vocational and Training Centre, headquartered in Riyadh, Saudi Arabia, is the Saudi government's leading provider of technical training in the Kingdom, but lacked a solution to connect its 150 campuses with access to critical data and information. Huawei's Cloud OS has since linked all campuses to a central educational resource portal, and the company has provided domestic Smartlab facilities as well as training courses at its Shenzhen HQ.



## EXECUTIVE SUMMARY

Customer: **Technical Vocation and Training Centre**

Industry: **Education**

Location: **Saudi Arabia**

### Challenges

- Growing student population with increasing technology demands.
- Remote campuses and students in need of access to educational resources
- Need to provide international working experience for students.

### Solution

- Cloud FusionAccess points rolled out over 35 campuses
- Virtual classes provided to over 600 students and instructors
- Training program at Huawei HQ in China

### Results

- Students connected via updated technology to TVTC campuses
- Expanded access for remote campuses
- First class of 100 students completed training at Huawei HQ

### Challenge

As Saudi and its youth modernise, so too must TVTC. With that in mind, the network of centres realised that they needed to provide students with real-time, intelligent access to classroom information and instructional material. With over 150 campuses in the Kingdom, connecting students, instructors, administrators and staff alike was no easy task. “We wanted to provide opportunities for all of our students. We wanted to give them a chance to experience world-class labs and experts,” says Sami Al-Hussayen, Assistant Vice Governor, General Directorate for IT, TCTV, “but we have students all over the country, even in rural areas, so access was going to be an issue.”

In addition to its current enrolment, TCTV knows that growth is inevitable. “Saudi has an enormous youth population,” says Al-Hussayen, “and we are going to need to expand our operations to serve the up-and-coming generation.” With that in mind, TVTC knew it would have to create a partnership with a technology vendor that could last, and that they could grow with. They also wanted to provide their students with expanded educational opportunities in the IT industry as the Kingdom shifts into a country that relies on knowledge and technology-based employment.

With the need to develop sustainable, accessible global education initiative and to support a student population that is spread across Saudi, TVTC looked to begin a long-term, collaborative



*Sami Al-Hussayen, Assistant Vice Governor, General Directorate for IT, TCTV*

relationship with a trusted vendor that would support their needs. “We wanted to harness the benefits of innovative technology to support our students,” says Al-Hussayen.

### Solution

The solution was a strategic and lasting partnership with Huawei. More than a simple plug-and-play solution implementation, Huawei committed to working with TVTC in the long-term. Huawei was chosen as the vendor as a result of their previous collaborations with government organisations in the Kingdom, as well as their growing presence as a provider of IT solutions in the region. The relationship between TVTC and Huawei is multi-faceted and has the two organisations collaborating on a variety of academic technological projects and academic programs.

The alliance was officially started with the recent deployment of Huawei’s new Cloud FusionAccess solution. A clear choice to meet

the current and evolving needs of TVTC, this Cloud Virtual Desktop Infrastructure created a greater accessibility to educational materials and resources for students and instructors alike. A huge undertaking, Huawei rolled out a whopping 13,200 Access Points across the nation. Serving 35 campuses, nearly 600 students and instructors have taken advantage of the new learning system. Soon to be made available to more students, the system allows users to share resources by simply using their smart device.

The partnership also included the creation of smart learning environments and labs, as well as access to experts and training for TCTV instructors and staff. To address the needs of students living in rural areas of the Kingdom, or that are otherwise unable to attend physical classes, Huawei provided remote learning capabilities. “We want students to be able to have access to their classes and course information,” says Al-Hussayen, “regardless of their situation at home or their location.”

Partnering with Huawei, says His Excellency the Governor of

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TVTC, Dr. Ali bin Nasser Al-Ghafis, enables the educational organisation to implement fruitful educational initiatives, build new platforms and introduce new educational possibilities for TVTC to develop and offer to prospective students looking to expand their options for the future. In this new, virtualised learning environment, students are able to take on their classes anywhere, at any time.

In addition to physical updates such as the Huawei Cloud Virtual Desktop solution, the partnership has also allowed for new educational experiences for TVTC students. In an effort to not only bolster accessibility to existing resources, but become a resource for students in and of itself, Huawei has hosted 100 TVTC students at Huawei’s International Research and Development

headquarters in Shenzhen, China. For many students, it was their first international experience, expanding their understanding of global markets. As well, Huawei aims for high-achieving students of each Huawei Academy graduating class to then be offered positions as full-time employees at the Saudi Arabia Huawei offices, or to work with partner organisations within Saudi.

#### **Results**

Students attending TVTC classes are able to learn from anywhere in the country on almost any smart device or computer. No longer will physical distance or other obstacles create hurdles for students that may live in rural areas or be unable to reach their local campus. Students have been offered international opportunities, and the possibility of working for Huawei as their first employment post-graduation. Huawei has worked with a number of Saudi universities over the years, and their relationship with TVTC is sure to be a success.

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**“Saudi has an enormous youth population and we are going to need to expand our operations to serve the up-and-coming generation.”**

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# Data surge

Oman Electricity Transmission Company had disparate data centres and no solution to unify its business-critical information. Saif Albadi, Head of Network Administration, Information Technology, OETC, opted to implement Huawei's modular data centre solution to allow remote monitoring of the company's IT.



## Background

Following the privatisation of Oman's electricity sector in 2005, OETC became one of the largest electricity companies in

the Sultanate. The firm relays electricity from production plants across the country to distribution companies, where the transmission process is managed

by multiple branches and plants. OETC operates the high voltage energy grid in the north of Oman with a total area of 130,000 sq. km, alongside an additional

transmission grid in Dhofar governorate. It is the sole provider of electricity services on the main network in the north of Oman. As a major source of power for Omani citizens, OETC relies heavily on the security and continuity of its ICT network. In the event of an IT failure, OETC would be responsible for thousands of people across the country being without any power.

#### Key challenges

Outside its HQ in Muscat, OETC has two other main sites that were required to manage mission critical data and streamline communications between the other offices across the country. Having only previously deployed rack space at these two sites, OETC identified the need for data centres at each location to support its communications, offer crucial mission critical services and allow for secure and reliable data transfer and analysis.

“Due to our various remote locations, we urgently needed to upgrade and expand our

existing auxiliary ICT facilities,” says Saif Albadi, Head of Network Administration, Information Technology, OETC. “With no IT resource at remote locations, IT personnel had to make weekly trips to individual sites and fix problems manually, so we needed a remote management solution.”

OETC’s data centres had reached their recommended capacity, but needed additional resources to support increased data transfer capabilities and further network expansion. Remote locations only had racks, which provided no cooling systems, no UPS back-up solution and no monitoring capabilities.

As with any major company that has thousands of dependents, OETC could not afford network downtime and needed a smooth migration to the new data centre model.

A single point of contact to solve end-user needs was also a priority for Albadi, “We needed a sole partner that could provide consultancy, the solution,

the implementation and the maintenance,” he says.

#### Solution

OETC selected Huawei’s modular data centre, which was installed in two of its branch offices across the country.

Albadi attributes a variety of factors to the selection of Huawei’s offering, “Huawei offered all things related to the data centre in one solution,” he says. “The data centres could be implemented so that they could be synchronised with our Muscat HQ, using a UPS soft application that provided remote management and monitoring. This was the most effective and flexible solution as it came as a package which was quickly and easily assembled and installed without making any major changes to the building.”

The data centre now has all the requisite sub-systems including power supply, cooling, fire-fighting, premises distribution, monitoring and lightning ground protection. It also features IT-enabled cabinets.

Most importantly, the solution has fulfilled its principal aim: being able to have continuous communication between OETC’s various branches and its head office in Muscat.

“It ensured that we had a reliable and centralised solution offering business continuity services that would extend to all our branches,” Albadi says. “Even to the ones that were as far away as Salalah and Sohar.”

Albadi speaks highly of the support offered from Huawei,

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**“Due to our various remote locations, we urgently needed to upgrade and expand our existing auxiliary ICT facilities. With no IT resource at remote locations, IT personnel had to make weekly trips to individual sites and fix problems manually, so we needed a remote management solution.”**

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**Saif Albadi, Head of Network Administration, Information Technology, OETC**

“The support we received – and continue to receive - from Huawei throughout the process has been fantastic,” he says. “They took the time to explain to us what needed to happen at each stage, in terms of what we had to do. Their training has always been comprehensive, which has allowed us to manage our own data centres effectively.” He also speaks highly of the support they continue to receive, “We can always easily contact them in case of problems,” he says. “They’ve done a fantastic job of establishing and then adhering to the SLAs.”

#### **Customer benefits**

OETC successfully completed the migration within 16 weeks. Centralised management of the data centres has allowed for the team to address any problems directly from their HQ in Muscat without having to physically send ICT personnel to the remote sites.

Now any issues at either of its sites in Salalah and Sohar can be remotely managed directly from HQ, reducing operational costs and increasing efficiency of its systems.

Albadi is clear on the direct benefits the implementation has had for OETC’s customers, “Beforehand, if there was an IT fault it could take up to two days to undertake the necessary maintenance, meaning recipients of our services would be affected,” he says. “Our branch in Salalah is 1,000 km away but we are able to monitor its status remotely. If problems arise within the data centre we receive SMS notifications, which reduce downtime and allow us to pre-empt problems.”

The implementation has also formed a basis in which OETC’s data centre infrastructure is more secure from cyber threats or unauthorised access. Albadi believes it has created an environment that is more flexible for the business to move with the demands of the business.

This increased flexibility of the data centre solution has convinced Albadi that Huawei is a brand OETC can trust and partner with in future. “As we increase our number of branches, we will look to Huawei for further data centre implementations,” he says.

The implementation has also facilitated the means towards a more mobile environment, where employees will be able to stay connected on the move, syncing their personal mobile smart phones with the company network.

In line with its policy of green

## EXECUTIVE SUMMARY

Customer name: **Oman Electricity Transmission Company**

Industry: **Energy**

Location: **Oman**

#### **Challenges**

- Implement data centres at remote locations that could provide secure and reliable data transfer and analysis
- Avoid any network downtime
- Have a single point of contact to solve end-user needs

#### **Solution**

- Installing Huawei’s modular data centre at two remote sites
- Comprehensive and continued support from Huawei

#### **Results**

- Successfully completed migration to centrally managed data centres within 16 weeks
- Errors that may have resulted in a power outage in the past, are now detected before customers experience any downtime

IT, Huawei’s solution has allowed OETC to reduce its power usage effectiveness (PUE) of its data centres to less than 1.25, which saves up to 40 percent on operational electrical costs.

