Case Study: Delivering Oracle Applications and Infrastructure in the Cloud

How BT in Spain used Oracle’s Private Cloud Appliance to deliver flexible cloud services
Summary

Catalyst

Companies in Spain are looking to optimize the infrastructure that helps run critical business processes while they can focus on their core business. Many organizations running Oracle want to have a highly optimized hardware and software stack that is finely tuned, well managed, and has the flexibility to change in response to their needs.

BT in Spain has provided a unique solution to this issue. Using Oracle’s Private Cloud Appliance (PCA) as the building block, located in its main data center in Madrid, it is able to offer an Oracle application service to enterprise clients. Its solution enables customers to access and use internal business-critical Oracle applications without having to host these on their own infrastructure.

Ovum view

Adopting a hybrid infrastructure architecture is important to organizations looking to make a more measured move to the cloud while still maintaining control of critical applications. Organizations are demanding hybrid infrastructures that can run business-critical applications and business processes whether they are on an organization’s own infrastructure or on a service provider’s cloud. BT’s project in Spain is unique in that it uses Oracle’s Private Cloud Appliance to offer managed Oracle services as well as integrating these applications with other environments outside of the Oracle space.

Key messages

- BT in Spain has invested in a solution that will allow it to offer Oracle applications in the cloud to its customers, enabling them to deploy Oracle solutions up to seven times faster than alternative platforms, while minimizing configuration problems and optimizing operating costs.
- This project is part of BT’s Cloud of Clouds strategy that provides a single point of management to ensure service with high standards of security for customers.
- Customers’ cloud capabilities can immediately expand to every service that BT has privately pre-connected, including its own Cloud Compute and Private Compute services, and can orchestrate to third-party clouds such as (in this case) Oracle applications.
- The solution allows BT to help customers in Spain outsource part or all of their infrastructure. It gives customers using Oracle all the benefits of a cloud environment.
- Licensing flexibility and extensibility are proving important differentiators when choosing a service provider offering Oracle applications in the cloud.
- The use of Oracle PCA means that customers can move Oracle applications and databases to the cloud and still get official Oracle support for their applications. This has simplified and enabled the delivery of this service and provided benefits to the end customers.
BT’s journey to offering customers Oracle Cloud applications

Company overview

BT in Spain, as part of BT Global Services, provides solutions to meet the business communications and IT needs of its customers. These include IT and network services, unified communications, contact centers, security, and professional services, delivered across one of the most advanced networks in the world. With more than 25 years of operation in Spain, it is well respected by Spanish companies in all sectors for its service, quality, and innovation. BT serves 29 of the IBEX 35 companies (a list of organizations with the highest trading volume in the Spanish stock market) and 2,000 of the 5,000 largest companies in the country. It also has more than 30,000 customers in the SME market.

The organization is headquartered in Madrid with offices in Barcelona, Bilbao, La Coruna, Seville, and Valencia, with a total of around 1,000 employees in Spain. BT has also three data centers and a Cyber Security Operations Centre, and shares research and innovation with its customers from its BT Showcase in Madrid.

Offering integrated network, data center, and IT managed services is at the core of BT strategy

Customers of BT in Spain are demanding the development and management of increasingly complex hybrid IT environments that combine diverse kinds of IT infrastructures. This entails high-performance environments, dedicated cloud environments, public cloud environments, and software-as-a-service. As a solution to this need, BT offers integrated network capabilities, data center infrastructure, and managed IT services. Its managed services also include offerings such as collaboration and contact center solutions.

BT’s network in Spain is part of the BT global network, and it is through this network that it can link diverse environments and provide an end-to-end solution it calls a “cloud of clouds”. This is done while adhering to high levels of service through defined SLAs, both in terms of service uptime and security. The offering has also developed to include orchestration capabilities. In order to link these hybrid environments, BT uses what it terms Compute Management System (CMS), a consistent cloud platform with more than 20 delivery locations across 19 countries on five continents. It uses CMS for its teams to work out all potential scenarios and complexities within a customer environment.

BT in Spain responded to a demand from customers for outsourced Oracle applications and infrastructure solutions

The trend to move mission-critical applications and infrastructure to the cloud is gathering pace. In conversations with customers, BT identified that customers in Spain had needs around Oracle applications that were supporting critical processes within their businesses. One of the key issues was that customers needed official Oracle technical support for their applications but were unsure if this was available in a cloud-based environment. They were also telling BT that they wanted to have flexible licensing models, with the ability to port existing licenses to a cloud environment.
Customers also asked the company for assurances about the performance of Oracle applications in the cloud. Other critical factors were the ability to quickly deploy applications in order to decrease time to market and align IT with business needs, and to integrate their Oracle environments with other environments outside the Oracle space. These concerns had been coming up consistently among BT customers in Spain and this spurred BT into action.

As a solution to this need, BT offers enterprise clients Oracle applications and other cloud infrastructure solutions as a service. By deploying Oracle Private Cloud Appliance as the building block for these services, BT in Spain has improved its bottom line and enhanced the company’s competitiveness in both new and existing markets.

**Implementation and rollout**

In September 2014, driven by this customer demand, BT in Spain chose an Oracle Private Cloud Appliance (PCA) as the best way to deliver Oracle services to its customers. The appliance is located in BT’s data center in Madrid, one of three data centers the organization has in the country. These are all interconnected, not only to each other but to BT’s global network of 46 data centers. BT has one data center in Spain acting as a backup recovery/failover for the other to create a secure and reliable disaster recovery solution. The solution is flexible enough that customers can port some or all their infrastructure to the BT environment, and also enables BT to connect its infrastructure to third-party public clouds on behalf of the customer.

As a managed service provider, BT must meet higher SLAs than most organizations deliver to their internal customers. BT in Spain uses the Private Cloud Appliance to meet these challenges, which improved customer satisfaction, while also reducing costs and increasing the profitability of the service for BT.

Oracle Private Cloud Appliance is an engineered (or converged) system that brings together storage, network, virtualization, operating system, and applications into a fully supported, fully certified stack. A further advantage of combining these components into a converged system is that it can be supported by a single unified management team delivering a higher level of expertise, rather than requiring separate system, network, and virtualization teams.

The appliance is engineered for rapid cloud and application deployment and combines the flexibility of a general-purpose machine with the elasticity of cloud computing in one integrated system. The appliance provides a large pool of resources that scales linearly from two to 25 compute nodes. These nodes feature Intel Xeon CPUs, high-speed dual inline memory modules (DIMM), redundant 40 Gb/sec InfiniBand host channel adapters (HCAs), and redundant disk storage.

Compute nodes can be added or removed from the Private Cloud Appliance and reconfigured automatically without incurring downtime. Controller software is embedded in the Private Cloud Appliance and monitors system hardware and virtual resources (virtual servers, virtual networks, and storage), and manages utilization of all system resources.

The Private Cloud Appliance includes a built-in Oracle ZFS Storage Appliance, while any Oracle or third-party Fibre Channel, NFS, or iSCSI storage system can also be connected to the appliance as external storage. The appliance allows customers to not only run different versions of Oracle Database (Oracle Database 9, 10g, 11g, and 12c, and Oracle RAC) but also Microsoft Windows and other operating systems.
In the case of using Oracle, customers can migrate any Oracle databases or applications to the Private Cloud Appliance running in the Madrid data center. To accelerate this process, BT used Oracle Enterprise Manager, which provides blueprints for common applications which are designed and pre-tested to work on the PCA device. This means that BT in Spain can assure performance and quick deployment to its customers. With the applications and databases running on BT’s data center, customers can also manage these services as part of their own networks.

What BT in Spain found with Oracle Private Cloud Appliance was that Oracle could provide a single point of contact supporting the entire hardware and software stack. This enables support issues to be identified and resolved quickly and comprehensively.

Consulting with customers to understand their requirements

Prior to any migration of data or applications to BT’s cloud in Spain, the company consults with customers to understand the challenges they want to address. Challenges are then evaluated by BT’s team and turned into part of a transformation project. These are often complex in nature, and the team consults with the client about how best to migrate the workload to BT’s cloud, and how it can be optimized as part of the transformation process. BT in Spain says this has become much easier with the appliance, because it provides customers with additional benefits over traditional environments.

The migration team comes up with proposals alongside possible scenarios and then recommends the most appropriate solution. It found that Oracle PCA has helped in addressing some complex situations that can arise when moving Oracle infrastructure to the cloud, and has enabled BT to offer better-value services to customers in Spain.

Assessing the outcome

BT officially launched its Oracle cloud services in Spain early in 2015, managing to get to this important market in the country before the competition. BT’s initial deployment with Oracle PCA in Spain was highly successful and since then BT has managed to pick up seven customers and has many more in the pipeline.

BT estimates that a single Oracle Private Cloud Appliance has space for 25 customers in total, although this number depends on the types of customer using the service and how they are using it. BT’s Oracle platform in Spain has so far given it the ability to offer many more services to clients. It said that as its customers are becoming aware of these capabilities, they are increasingly interested in asking for proof of concepts and demo labs.

Reduced infrastructure and management complexity have resulted in cost savings for BT while allowing it to compete for customers with a wider range of services, and enabling it to gain a first-mover advantage in the market. The appliance has also simplified BT’s regime of system patching, updating, deployment, and overall management, and has enabled it to better respond to customer needs, greatly increasing customer satisfaction and growing business potential.
Lessons learned

Vendor support is a key consideration

Service providers that intend to embark on offering Oracle Cloud applications should consider learning from similar implementations, taking into consideration the fact that individual requirements and circumstance will vary. The Oracle Private Cloud Appliance gives organizations the opportunity to move Oracle application and database workloads to the cloud with ease in the full knowledge that the hardware and software are fully supported by Oracle.

Respond to customer requests and needs

Rather than employ a “build it and they will come” approach to service offerings, BT in Spain built a proposition around Oracle applications and databases in response to customer requests for services such as these. BT used Oracle Private Cloud Appliance as the base of its consulting business helping firms in cloud transformation projects. It meant the company didn’t have to worry about the hardware and software, and allowed BT to concentrate on serving its clients’ business needs rather than getting stuck with sorting out technology issues around integration.

Look at how hardware and software work together for best performance

The Oracle Private Cloud Appliance combines compute and network capabilities alongside management tools to support the performance and availability of Oracle workloads. The appliance uses Oracle Virtual Machine hypervisor, and on top of this, any kind of Oracle application can run. The appliance has been designed to work with Oracle software and also comes with Oracle warranties. This gives customers the combination of cloud benefits alongside the capabilities of the full Oracle technology stack.

Be aware that customers may only want to outsource what they are comfortable with

BT in Spain realized that providing a service based around Oracle applications would only be part of the solution for its customers. They wanted the flexibility to outsource Oracle applications on their own or as part of a mix of heterogeneous infrastructure in the cloud. BT’s business model is flexible, keeping the customer experience at the forefront of business operations. Doing so enables it to work quickly to make the necessary adjustments to cater for all the customer’s needs.

Appendix

Methodology

This independent research report was prepared with the support and approval of BT in Spain. It is based on interviews with BT executives in Spain and information provided by the service provider.
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