BT

Flying in front of the clouds

With testing from Accenture, BT launches an industry-strength virtual data centre proposition

Hardened, resilient... and user friendly

There's consensus that massive physical data centres have had their day. For a start they present cost and complexity issues: not to mention the fact that monolithic data centres constrain organisational agility. Furthermore, they're unfriendly to the planet, with recent reports estimating the annual power consumption of Western Europe's data centres at a staggering 40 terawatt-hours.

Commodity cloud computing may hold out an answer for some; but there are doubts over the absolute applicability of such a model to the deep corporate environment.

In response to this conundrum, BT has developed its virtual data centre (VDC) proposition, which embraces cloud computing characteristics such as shared and hosted resources. However, VDC is differentiated through highly resilient network architectures and hardened carrier-class security, server, and storage platforms – together with a brand new BT-designed user-friendly front end. Advanced existing BT management, monitoring, and reporting tools support it.

Independent tracking and testing

In developing the service, BT is working with Accenture to ensure that VDC meets the requirements of major companies and government departments. The fact that it does not own customer data centres itself makes Accenture an ideal independent sounding board for BT.

In fact, BT has shared the VDC road map with Accenture. Thomas Mulledy, an Accenture Senior Manager, talks about his role in the VDC launch: "Accenture tested VDC functionality from an end-user perspective to determine its performance. Our objectivity is key to ensuring that the customer experience lives up to the exacting standards of operability and dependability stipulated in the BT VDC specification."

Virtually built from scratch

In order to conduct the Phase I test, Accenture and BT agreed on a set of testing criteria. On the initial report dated October 2009, just prior to the product's soft launch, Accenture awarded BT an overall score of 60 per cent. That result should have been even better, but a rogue score of 20 per cent negatively skewed the figures. Thomas Mulledy explains: "The pre-production system required the user to individually configure each virtual server, which was pretty laborious, so we marked that aspect down."

Case study
Virtual Data Centre

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Craig Parker
Head of IT Services Proposition Development
BT Global Services

In the next software release, BT is providing innovative bulk configuration tools and automated cut and paste options to address these concerns. It is estimated that such measures will slash set up time for Large Systems by as much as 90 per cent.

On the other hand, Provisioning was awarded 100 per cent, while for both Small System Interface and Usability and In-life Server Configuration the rating was a very worthwhile 80 per cent. This excellent alpha-stage performance is all the more powerful when set against the fact that BT has developed the VDC proposition virtually from scratch.

"Despite what some may claim, there is no single-vendor management tool for virtual environments out there in the marketplace. No software utility exists that enables the capture, configuration, and reconfiguration of logical designs – and takes that through into the manipulation and control of physical and virtual networks, servers, and storage – let alone offering supporting functions such as reporting, monitoring, and billing," says Craig Parker, Head of IT Services Proposition Development at BT Global Services. "So we literally had to build it ourselves."

The resulting customer portal is based upon 22,000 unique lines of XML code, which interfaces with proprietary enterprise-class control tools deployed in the virtual environment. Offering unsurpassed levels of self-service and process automation, that software is extremely valuable BT intellectual property.

Pushing the boundaries

The Phase I test results provided BT with invaluable insights into the areas that needed addressing in VDC beta testing with pilot customers. Phase II testing will not only revisit Phase I functionality to check the integrity of corrective measures, but will also look at such things as load and stability testing. It will include, for example, the deliberate invocation of overload situations to observe failover processes in action.

Thomas Mulledy predicts: "By that stage we'll be pushing the outer boundaries of the VDC architecture, to stress test its resilience and fully validate the service level agreements on offer, such as 99.95 per cent availability." Further Phase II examinations will probe management and reporting interfaces, and support procedures. This will include artificially and randomly inducing major faults, and measuring how the VDC service organisation responds in such circumstances.

Apart from the rigorous Accenture quality assurance exercises being carried out via the customer portal, exhaustive BT acceptance testing has focused on crucial risk factors such as the robustness, security, and scalability of the virtual environment.

Craig Parker gives an example: "The architecture that we adopted provides the assurance that one customer's data will never be visible to another. But we didn't just take that as read; we went in and tried again and again to break the system over a period of six months. We only stopped when we were fully satisfied that theory was borne out in practice."

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Thomas Mulledy
Senior Manager
Accenture

The network becomes the business platform

With the strength of the VDC architecture, and its market-leading customer portal, BT believes it is way ahead of the game. The VDC is already being scoped into BT sales proposals, including such metrics as the ability to set up a customer's virtual environment in no more than five days – no matter how big or busy – and make in-life changes in just one hour. In a first demonstration of that policy's success, one early-adopting client is now talking about migrating large parts of its data centre into the VDC domain.

Thomas Mulledy concludes: "When it comes to infrastructure as a service, the BT vision and the Accenture vision are closely aligned. With the architectural possibilities opened up by VDC, the idea of the network as the business platform is finally coming of age."

The VDC rollout sees Europe targeted next after the UK, followed by Asia Pacific and North America. That will not only allow multi-national customers to access VDC services in their regions of choice, but also it will further build the robustness of the proposition by offering service from multiple sites almost anywhere in the world.