

# BT Data Center and Cloud Services

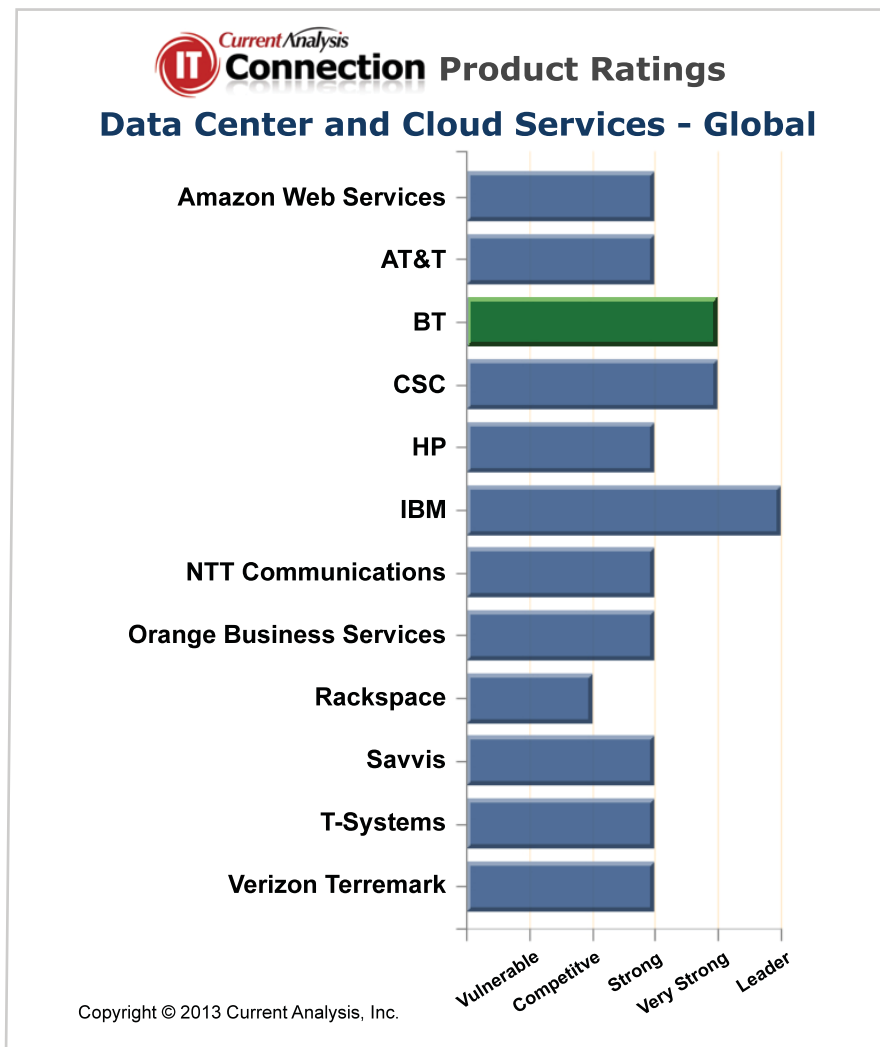
Market: Data Center and Cloud Services - Global

Analyst: John Marcus, Principal Analyst, Business Network and IT Services

Date: October 22, 2013

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- Product Metrics



Business Network and IT Services - Global Enterprise

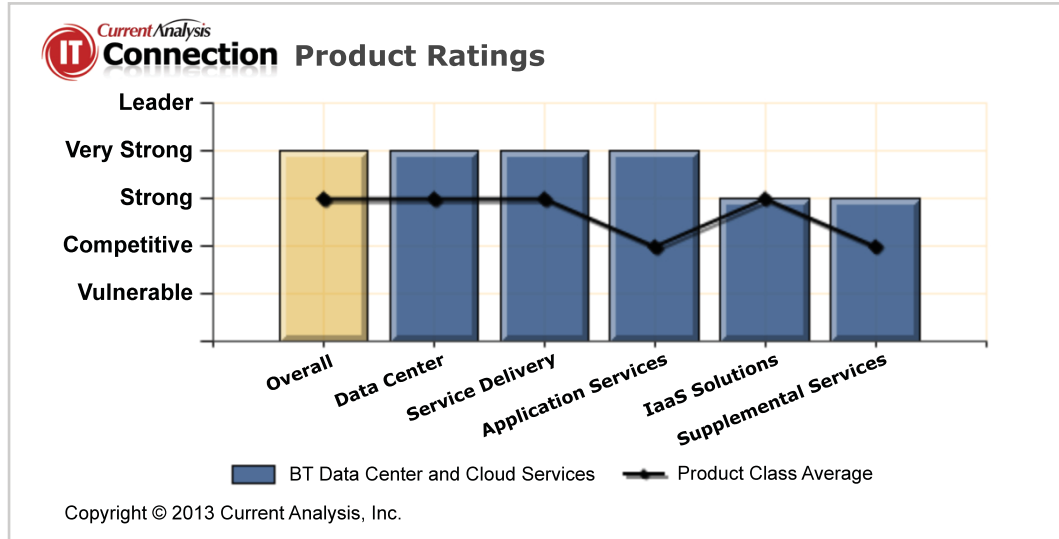
# BT Data Center and Cloud Services

October 22, 2013



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**Summary**



## Competitive Strengths

- BT offers a broad IaaS portfolio with a globally distributed footprint of cloud-enabled data centers in 12 countries and four continents.
- BT's broad data center services portfolio can address the diverse needs of customers at varying stages across the spectrum of traditional data center use and cloud services adoption.
- For example, BT's Private Compute eases the transition to the cloud by allowing customers to build dedicated private and hybrid clouds self-managed within their own data centers or hosted from a BT facility.
- BT brings experience and scale, with 45 customer-facing facilities, regional backup facilities, and 'centres of excellence' specializing in key areas. Many of these facilities have received ISO certifications (i.e., ISO9001, ISO20000, ISO27001, and ISO14001).
- BT's network affords it an advantage in the ability to control service delivery and provide meaningful SLAs to customers.

## Competitive Weaknesses

- BT does not offer SaaS capabilities to customers outside of the UK and the U.S., except for specific applications such as UCaaS and Cloud Contact.
- The BT-HP alliance has cooled down considerably, with dueling cloud strategies making the companies increasingly look like direct competitors rather than partners.
- Market perception of BT in the applications management space is improving but is still weaker than major and even smaller players that come from a systems integration heritage.
- In fully embracing the cloud, BT's strategy and communications have partially muted its continuing support of 'traditional' data center services, potentially hindering its pursuit of large, conservative clients.

## BT Data Center and Cloud Services - Global *(Continued)*

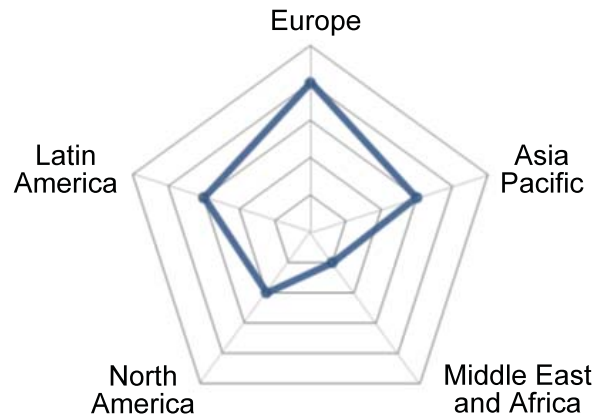
### Regional Perspective

#### Europe

Based in Europe BT has 31 data centers located in six countries in the region, with BT Cloud Compute IaaS available from data centers in the UK, France, Benelux, Italy, Spain, and Germany, on top of its own domestic MPLS IP VPN and Ethernet networks with global reach.

#### Asia Pacific

BT has established a useful presence in Asia Pacific with five customer-facing, local data centers. BT Cloud Compute IaaS services are available from Hong Kong and Singapore and China, with plans to launch cloud service delivery from a facility in India underway. There are direct connections to BT owned PoPs in 20 countries, with 42 BT owned GPoPs to providing native connectivity. Ethernet access is available in 12 countries. HVPN, in 32 countries, VSAT in 14 countries and NNIs in three countries with a total of 719 PoPs. There are direct connections to BT owned PoPs in 20 countries, with 42 BT owned GPoPs to providing native connectivity. Ethernet access is available in 12 countries. HVPN, in 32 countries, VSAT in 14 countries and NNI's are in place in three countries with a total of 719 PoPs.



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#### Middle East and Africa

BT has stepped up its network in the region with the purchase of cable landing in South Africa directly linked to Europe, complementing its IP Connect reach and network operations in 45 countries. The company offers BT Private Compute on customers' premises, but its lack of its own local data center facilities leave it reliant on BT Cloud Compute served out of its operations in other regions.

#### North America

BT has been present in North America for over 20 years and has five data centers and around 5,000 employees, 10% of whom are dedicated to professional services. BT's full range of network and IT services are offered with near-shore support. BT Cloud Compute services have been launched for specific verticals (including global financial services, logistics, and pharma/healthcare) and are now available from cloud-enabled data centers in the U.S. as well as from Latin American, European and Asia-Pacific operations. The company boasts its limited local network of 29 IP Connect GPoPs, Ethernet PoPs, hybrid VPN and DSL access offers, with national access through three suppliers. In addition, it has 655 aggregate PoPs managed by BT (owned by third parties) for a full native service to connect data centers.

#### Latin America

BT expanded its capability in Latin America during 2012 and now has four customer-facing data centers (two in Colombia and one each in Mexico and Brazil) and nearly 20% of its 1,000 local employees work in professional services. BT has 28 countries in region with direct connections to BT-owned PoPs. Additionally, BT offers native CoS in ten countries via its interconnects, and native service via Ethernet access from local partners in four countries. Hybrid VPN services (in 38 countries) and VSAT (in 21 countries) are also both available. The company offers its wide range of data center and cloud services in the region and is building local presence quickly, with Argentina on the road map for BT Cloud Compute rollout in 2013/2014.

## BT Data Center and Cloud Services - Global *(Continued)*

### Current Perspective: **Very Strong**

BT Global Services (BT) is very strong in comparison to other global enterprise IT services providers, because the company has made good on its promise to offer services out of Europe, the Americas and APAC, and is balancing signing up anchor tenants and 'build it and they will come' approaches for investment in data center and cloud services that complement its strong and growing global network infrastructure. The ITSP has rationalized its portfolio branding (BT Compute) for composed, relevant communication to clients. BT claims its BT Compute family of services will typically help customers migrating from traditional physical infrastructures to realize 40% TCO savings (15% TCO savings for those already with virtualized data center environments). BT now employs 4,550 professional services personnel to support a range of client needs that run the gamut from security assessments to cloud migration and data center transformation engagements. Professional service and help desk personnel are locally based with local language skills. BT has also trained its entire sales force to understand and sell BT data center services.

BT's 45 Tier3 and 4 data centers worldwide (in Europe, the U.S., Latin America, and Asia-Pacific), offer co-location, telehousing, and managed services. BT also provides proximity hosting for financial traders in nine major financial centers globally. BT Cloud Compute (cloud-based, 'infrastructure-as-a-service', utility computing platform, a product evolution from the company's former BT On Demand Compute) and BT Private Compute (managed or self-managed, dedicated private cloud) have been adapted for sub-verticals, such as BT Compute for Pharmaceutical, and are offered in customers' premises or out of BT data centers in 12 countries, making good on BT's promise of services out of the Americas, Europe and APAC.

Customer self-service is performed via the BT Cloud Management System portal for provisioning and management, and BT Cloud Compute includes dynamic computing, virtual servers (without sharing blades in servers), storage, load balancing, and security across a shared platform, with options for online back-up and storage and anti-virus. BT's data center infrastructure services are solid and offer a range of choices (from assessment, design and implementation to back-up and disaster recovery) appropriate for many customers. The company already offers, for instance, UCaaS and security that complement without cannibalizing traditional applications management. BT needs to continue expanding its portfolio to offer more standard applications as cloud services, and extending its vertical approach to achieve an ideal set of specialisms (without going too far and spreading resources thin). To progress further in the cloud world, BT has the advantage of its network and scale to afford data centers worldwide, and has built cloud-enabled facilities (beyond those in Europe) in the U.S., Hong Kong, Singapore, China, Brazil and Colombia, plans for launch in India, Argentina and Mexico. BT's distributed, 'Cloud services near you' strategy makes the ITSP a more compelling option than competitors with a more centralized footprint, taking into account customer concerns with data sovereignty and privacy as well as latency.

### ■ Strengths and Weaknesses

#### Strengths

- BT Cloud Compute offers customers public, private and hybrid 'infrastructure-as-a-service' solutions for computing power, storage, servers, firewalls, and load balancing in a virtual environment, with a single interface allowing users to turn resources up or down. The service is available from in 12 countries and four continents boasting cloud-enabled data centers. The increasing diversity of physical locations helps customers comply with data privacy regulations and enables BT to deliver on high service level guarantees, as well as giving BT credibility for following through on its expansion promises. Expect to see further expansion in up to eight additional countries between now and the end of 2014.
- BT has constructed a pragmatic data center services portfolio to address the diverse needs of customers at differing stages between traditional data center (BT Telehousing and BT Managed Hosting) and cloud services adop-

## BT Data Center and Cloud Services - Global *(Continued)*

tion (BT Cloud Compute and BT Private Compute). This allows customers an ongoing migration path, which BT can exploit with customers during long, valuable relationships. It also gives BT access to the fast-growing colocation market, which some of its telco/ITSP peers have neglected in favour of concentrating only on IaaS and SaaS.

- BT Global Services has completed a major marketing drive to support its whole portfolio, including cloud and data center services. The company has benefited from the attention gathered via the push begun in 2012 and by network and cloud data center upgrades. The simplified naming and verticalization of the portfolio are progressing quickly, and help customers and salespeople to relate data center and cloud services more closely to clients' needs – whether approached from vertical industry or horizontal solution contexts.
- BT's Private Compute offer helps make the transition to the cloud more palatable by allowing customers to build dedicated private clouds and hybrids that are a notable and ongoing trend. These environments can be self-managed within the customer's data center or hosted from a BT facility. BT takes a vendor-agnostic approach to these services, working with industry-recognized partners to help customers drive efficiencies and keep ahead of evolving business needs and resource requirements.
- BT has a lot of experience and scale in data center services, with 45 customer-facing facilities and regional backup facilities. The total has not grown but the number of cloud-enabled data centers among them is rising to 12 in H1 2013 for BT Cloud Compute and 17 for BT Private Compute. The company has also developed 'centres of excellence' across its European footprint specializing in remote application management, SAP environments, and security, as well as in supporting the global practice. A lot of these facilities and local operations have ISO certifications (i.e., ISO9001, ISO20000, ISO27001, and ISO14001). The Benelux operations have SAS70 certification. This is important for winning trust, as well as helping customers meet various governance, regulation, and compliance (GRC) guidelines.
- BT's network affords it an advantage in the ability to control service delivery and provide meaningful SLAs to customers. Competitors such as IBM and HP that lack a network rely on carrier partners (or customers' own arrangements) to complete connectivity. The advantage is not total, however, as BT also often needs in-country, third-party suppliers for Ethernet and DSL access and network-to-network interfaces for customer connectivity, using a management dashboard to ensure suppliers perform to the agreed-upon SLAs and improve delivery and reliability.

### Weaknesses

- BT does not offer SaaS capabilities to customers outside of the UK and the U.S., except for specific applications such as UCaaS and Cloud Contact, choosing instead to develop an application onboarding and packaging solution to help customers' individual migration to the cloud. The market is no longer new, leaving the company vulnerable as more carriers begin to invest and launch such services on a pan-European or global basis. T-Systems, for example, has been very aggressive with SAP on-demand, which supports approximately 50% of all of its SAP users, and its Enterprise Marketplace, while others such as HP and Fujitsu have set up application stores from which customers can provision SaaS.
- The BT-HP alliance has cooled down considerably over the past three years. While it was once all-encompassing, data center services, especially transformation, were some of the services that the duo successfully sold together. Existing customers are supported, but there is no longer the drive to target new accounts with strong go-to-market messages, and HP has rolled out its own cloud portfolio based on its own data centers. In addition, as BT continues to improve its offer, especially around cloud IT and professional services, it will increasingly look like a direct competitor and less like a partner to HP.
- Market perception of BT in the applications management space is improving, albeit slowly, but is still weaker than major and even smaller players that come from a systems integration heritage. This can impede BT's ability



## BT Data Center and Cloud Services - Global *(Continued)*

to position itself as a provider able to offer fuller stack, end-to-end services, and inclusion as a default on some buyers' shortlists. Other telco-backed ITSPs have the same challenge, but some, such as T-Systems and Dimension Data have an established pedigree independent of the telco parents that acquired them.

- In fully embracing the cloud, BT's strategy and communications has partially muted its continuing support of 'traditional' data center services. This could be a hindrance to BT when it targets large, conservative clients. The challenge could become more acute as the easiest targets are converted to cloud and the most conservative or otherwise difficult to convert clients remain.

### ■ Product Metrics

## BT Data Center and Cloud Services - Global

| Data Center/Cloud Services                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rating                                                 | Very Strong                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Dedicated Managed/ Hosting Services</b>             | The BT Compute portfolio includes: telehousing, colocation, managed hosting, IaaS, professional services for application and infrastructure assessment and migration. BT's Private Compute is a managed hosted service, modular and scalable on-premises or hosted and managed as a service from a BT data center. Global service with data hosted locally. Resources are dedicated with physical and virtual options. Customers choose operating system options from BT's templates or can upload their own system image. Optionally BT manages the operating system on each server. BT Radianz proximity hosting services are available in major financial centers. BT Cloud Compute is BT's latest cloud-based data center infrastructure service being rolled out globally. This allows customers to self-service and access cloud-based infrastructure services globally, delivered with local infrastructure in region. The service is currently available in 12 countries across UK and EMEA, US, AMEA and LATAM with additional countries being rolled out in 2013. BT's Cloud Compute service includes the provision for shared and dedicated availability zones or a hybrid model. This allows customers to build out cloud infrastructure on a utility basis on private cloud resource alongside their public cloud infrastructure. A single management portal allows customers to build hybrid cloud infrastructure services they need, when and where required. |
| <b>Colocation Services</b>                             | BT Co-location and Telehousing services are available globally, providing power, housing, environmental control, and physical security, with additional service management options. BT offers colocation facilities in 25 EMEA, 5 U.S., 4 Latin American and 5 Asia Pacific data centers. BT Locate solutions use BT's UK Exchanges to offer bespoke colocation facilities. BT Radianz proximity hosting services are specialized for the global banking and financial markets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>On-Demand Compute Services and Storage Services</b> | BT Cloud compute: Utility based cloud infrastructure service. Virtual machines are offered from £0.06 per hour on hourly, monthly or annual Compute Bundles. Storage and bandwidth is charged based upon usage (i.e., per GB storage or Gb internet usage). Cloud Compute offers choice and flexibility at all layers of the service, public and private resources from global availability zones, hypervisor choice, operating system choice, snapshot backup services. BT's Cloud Compute service includes the provision for shared and dedicated availability zones or a hybrid model. It has the ability to connect Private IP networks into its cloud offering on a global basis. This is carrier neutral.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Disaster Recovery/ Business Continuity Services</b> | BT offers site mirroring, site recovery, and local failover, data replication, archiving, and storage on a bespoke basis underpinned by industry recognised practices (e.g., RPO, RTO) through for example, synchronous site mirroring between Nieuwegien and Amsterdam data centers, and Cardiff Bay and Cardiff Stadium House data centers. BT has implemented DR services for customers on Cloud Compute and is now working towards a repeatable cloud based disaster recovery offering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

*Continued*

Product Metrics

**BT Data Center and Cloud Services - Global** *(Continued)*

| Service Delivery Infrastructure                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Rating</b>                                                    | <b>Very Strong</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Data Center Infrastructure</b>                                | Traditional managed hosting and telehousing services through 45 customer-facing, ITIL, ISO20000/27001, Tier 3 or 4 data centers globally (UK, 7; DE, 6; FR, 4; ES, 3; Benelux, 5; IT, 6; US, 5; Singapore, 2; HK, 1; Japan, 1; Australia, 1; Columbia, 2; Brazil, 1; and Mexico, 1). Cloud-based IaaS services hosted from 12 BT data centers in UK (2 sites), France, Italy, Spain, Benelux, Germany, India, Colombia, Brazil, Hong Kong, Singapore, US -- with local languages, currency conversions, local billing, and IT support. BT is continuing its roll out of Cloud Compute with China, Argentina and Saudi Arabia in scope for 2013/14.                                                                                                         |
| <b>Network Connectivity</b>                                      | Common front end for VPN termination and networking services; 1 Mbps (Ethernet) to 10 Gigabit Ethernet, Internet traffic allowance included with flexible usage-based options, load-balanced server pools supported, one primary network by default (multi VLANs optional), MPLS, virtual routing -- VLAN and load balancing. Enterprise Cloud Network linking datacentres together. Optional BT network services to 90 countries with E-line and E-LAN in 28 countries.                                                                                                                                                                                                                                                                                   |
| <b>Redundancy Measures</b>                                       | BT Data Centre estate conforms to Tier 3 principles which provide for redundancy at the mechanical and electrical level. In terms of specific redundancy measures, BT offers site mirroring, site recovery, and local failover, data replication, archiving, and storage (a bespoke basis underpinned by industry recognised practices (e.g., RPO, RTO) through for example, synchronous site mirroring between Nieuwegien and Amsterdam data centers, and Cardiff Bay and Cardiff Stadium House data centers.                                                                                                                                                                                                                                             |
| <b>Site Security</b>                                             | At the Data Centre level, all BT facilities conform to BT Group security policies from both a physical and logical perspective. And within the data center, there are various security offerings such as redundant firewalls, load balancing, IDP, IDS, and mail-scanning solutions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Packaged Managed/Hosted Application Services                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Rating</b>                                                    | <b>Very Strong</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Commercial Hosted/Managed Enterprise Application Services</b> | ERP: SAP R/3, Oracle. Supply Chain: SAP, Oracle, BT Trace. E-Commerce: BT Expedite point-of-sale/Epicor available from the Croydon, UK data center. Cloud Compute for the UK National Health Service N3 network is a standard packaged service. BT Assure security as a service, BT One for communications as a service, and BT Contact for contact centre services. Legato and KVault software (for e-mail archiving).                                                                                                                                                                                                                                                                                                                                    |
| <b>On-Demand/SaaS solution availability</b>                      | E-Commerce: BT Expedite point-of-sale/Epicor available from UK data centers. BT Trace supply chain data collection, storage, sharing and analysis. Pharma Cloud services accelerating life sciences research, Cloud Compute for the UK National Health Service N3 network. Mobile device Management. BT will be launching a SaaS service based on its Cloud Compute portfolio in 2013/14 adding the most customer-requested functionality, including "Bring Your Own Zone" to allow customers to leverage their own server capacities, object storage (S3 compatible), secure cloud desktops, click-to-deploy apps, self-service network connectivity and also ready to deploy utility business services through its incubation service for Cloud Compute. |
| <b>On-Demand Collaboration Applications</b>                      | Microsoft; Cisco for unified communications; SharePoint, OCS, and Lync. The BT One portfolio includes BT One Voice and BT One Cloud -- Cisco for global (APAC and the U.S.) capabilities, and Cisco, Genband, and Featurenet for UK cloud variants. BT One voice and unified communications include Microsoft Lync in the cloud.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| IaaS Solutions                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Rating</b>                                                    | <b>Strong</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Use Cases</b>                                                 | Reducing costs and time to market for new products; moving to pay-per-use models; using OpEx rather than scarce CapEx funding; improving service levels for customers; rapid provisioning; making changes in hours not weeks; seasonal peaks in demand; addressing pressure (or lack of) on in-house skills/resources. Vertical applications delivering industry specific solutions in Pharma (speeding up non-competitive drug research), GB&FM (low-latency services for algorithmic financial trading), Education (lean provisioning of secure education environments), High Street Retail & Health.                                                                                                                                                    |

*Continued*

Product Metrics

**BT Data Center and Cloud Services - Global** *(Continued)*

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Server Configurations</b>                 | BT offers support for a broad range of server configurations based on Microsoft, Linux and Unix builds. It has prebuilt templates based on these offering, plus customers can bring onboard any x86 OS build through the templating facility. BT can also provide a wide range of server configurations to meet various applications or customer demands.                                      |
| <b>Storage Options</b>                       | BT offers tiered storage to match customers application/service performance requirements. Utility based consumption based on a Per GB, pay-as-you-go tariff with Cloud Compute. Delivered as part of 'Private Compute' as a managed rental service: EMC, HP, NetApp; BT offers network-attached storage (NAS) and storage area network (SAN) solutions.                                        |
| <b>Virtualization Technology</b>             | VMware vSphere ESXi, Citrix XenServer. BT's cloud service is hypervisor neutral.                                                                                                                                                                                                                                                                                                               |
| <b>Database Options</b>                      | Any X86/X64-compliant database technology supported by the OS vendor (Microsoft, Red Hat, and GNU Linux ) can be installed on Cloud Compute/Private Compute. Cloud Compute includes the option to self-service Microsoft SQL Server on Windows virtual machines and MySQL on Red Hat Linux virtual machines.                                                                                   |
| <b>Security/Compliance Controls</b>          | ITIL Framework, ISO27001, multi firewall options, virtual routing creating access control lists or port forwarding, role-based access control, network address translation. Optional 'BT Assure' services for IDS/IPS/Firewalling/Content management.                                                                                                                                          |
| <b>Portal Features</b>                       | For its Cloud Compute offering, BT's portal offers full lifecycle compute storage and network management -- design, provision/deploy, in-life management, destruction. Remote management by console, VPN or using clients (e.g. Secure Shel, Remote Desktop Protocol). BT will continue to add additional features to its cloud portal over 13/14.                                             |
| <b>Provisioning/Decommissioning Time</b>     | Cloud Compute services are provisioned in minutes and changes made in real time. Customers self-service the Infrastructure as and when they need it, via the service portal.                                                                                                                                                                                                                   |
| <b>APIs</b>                                  | EC2 and native OpenStack on BT's Cloud Compute platform.                                                                                                                                                                                                                                                                                                                                       |
| <b>Pricing Model/Minimum Contract Terms</b>  | On a per-GB OpEx model (with flexible pricing per hour, per month or per annum). Virtual machines are offered from £0.06 per hour on hourly, monthly or annual Compute Bundles. Charges for storage and bandwidth are based upon usage (i.e., per GB storage or Gb internet usage). For BT's Private Compute cloud model, there is an initial set up fee, and ongoing additional rental costs. |
| <b>Supplemental Services</b>                 |                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Rating</b>                                | <b>Strong</b>                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Application Integration Services</b>      | Advise Compute Assess services (Advise Compute Assess and Advise Compute Migrate) include: BT Advise Compute Quickstart service for rapid assessment of application suitability and business case for virtualized platforms, and migration using BT's migration testing platform. Support for Active Directory and LDAP.                                                                       |
| <b>Data Center Strategy Services</b>         | Advise Compute Assess' services include: BT Advise Compute Quickstart service for rapid assessment of application suitability and business case for virtualized platforms; 'Virtualization Readiness' to assess server-based optimization and suitability; and 'Optimize' services for full application review for target platform.                                                            |
| <b>Supplemental Cloud Migration Services</b> | Advise Compute Migrate services include: 'Empower' for migration training and guidance; 'Enable' for server-specific migration delivery; and 'Enhance' for full application and optimization services.                                                                                                                                                                                         |
| <b>Key Ecosystem Partners</b>                | EMC, Cisco, HP, NetApp, Microsoft, SAP, Oracle, VMware, Citrix. In conjunction with its cloud services specifically, BT is also working with Caringo, Appcara, Infonova and Mvine.                                                                                                                                                                                                             |