BT simplifies and improves service quality with agile network cloud

BT Group has embarked on a transformational journey to create a highly scalable and robust cloud core which can service the diverse needs of all its network applications across broadband, mobile and other mission critical services.

This Network Cloud has scaled to accommodate many of BT's key network centric applications and tens of millions of users without a huge scale up in staffing numbers and using a technology footprint which keeps space and power requirements as low as possible. BT's Network Cloud provides applications that underpin BT's U.K. consumer and business network services and emergency services. This demands a level of stability and robustness which is not typical of high availability DC deployments.

OVERVIEW

Company	BT Group
Industry	Service Provider
Products Used	QFX10002, QFX5100, QFX5120, SRX Series, vSRX
Region	EMEA

With support from Juniper, BT Network Cloud offers the high level of availability and performance demanded of a carrier's core applications. Moving from dedicated compute platforms for each application to a shared infrastructure conserves and optimizes resources leading to better utilization and lower environmental impact.

BT Group's mobile network, EE has been ambitious and aggressive in its use of cloud to ensure this critical business remains competitive and agile. The network has currently migrated millions of mobile subscribers and is well on the way to successfully deploying all its mobile application infrastructure on a private cloud. By leveraging Juniper's professional services, BT Group has successfully completed the project on time and ensured that the challenging availability and performance targets of BT mobile network's applications are met. BT Group relies on Juniper for software-defined networking (SDN), switching and firewall solutions for its network cloud.

CUSTOMER SUCCESS AT-A-GLANCE

27 million

Mobile subscribers live on BT Network Cloud

NetOps

Drives automation, along with cloud-native networking

OpEx

Savings due to smaller data center footprint

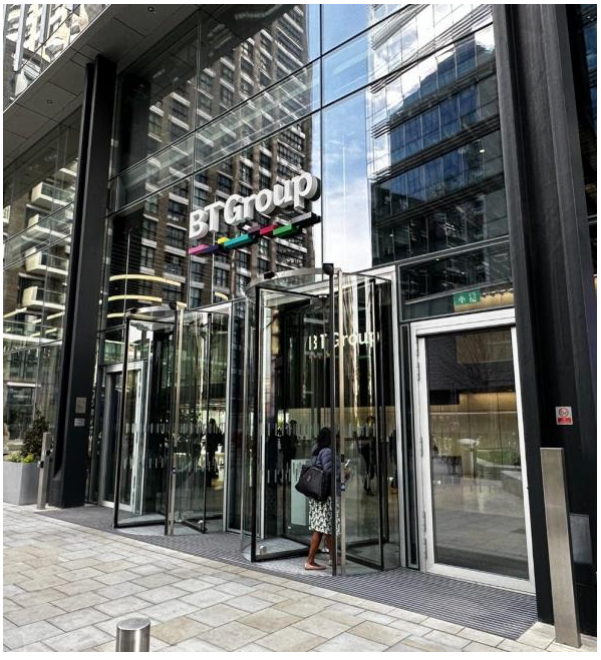
CHALLENGE

Roll out 5G and scale to meet digital demand

The introduction of 5G created a unique opportunity for BT Group to transform its core network to ensure it was well positioned to offer new services to customers at unprecedented scale. BT Group chose to build a new network cloud to provide a common shared platform for core applications, which operate its broadband, fixed and mobile services.

The goals of the ambitious multiyear journey at BT were to deploy a state-of-the-art container-based mobile core that will boost BT's business agility, operational efficiency and sustainability.

This infrastructure also forms part of the BT Group's U.K. consumer and business network services and will replace multiple legacy application deployments with a cloud-native platform that will meet growing capacity demands with greater agility, operational efficiency and security compliance.



SOLUTION

Build an agile network cloud

BT Group uses Juniper's SDN platform, to automate the creation and management of its OpenStack-based telco cloud. It provides hybrid SDN orchestration and centralized control of virtual switching, routing and security. BT's data centers contain more than 1,000 Juniper QFX Series Switches and 2,000 vRouters. Juniper vSRX Virtual Firewalls protect and secure the data center traffic.

BT's cloud-native platform is deployed at multiple locations across the U.K. to form a distributed architecture that is designed to scale seamlessly with demand and to provide services closer to the end user than with traditional, more centralized deployments.

BT Group selected Juniper due to its engineering excellence and ability to provide a joined-up, end-to-end network solution which includes hardware, software and tools which can integrate reliably with the complete cloud stack. In this case BT is running containerized applications and optimizing costs from use of an OpenStack platform.

Juniper QFX provides the high performance, high availability fabric needed to support BT's Network Cloud which has rapidly become the largest container-based cloud infrastructure in the world, and is still growing.

OUTCOME

Boost service quality and operational efficiency

BT Group built a network that delivers value to its customers and its mobile division EE is currently recognized by independent U.K.-wide tests as providing the best mobile network in the U.K.

The deployment now represents the largest cloud-native mobile core in the world, operating all of BT's 4G/5G services.

The use of BT Network Cloud streamlines operational deployment and management of the core applications, which keep the network running to its full potential and allows for innovation and agility in bringing new services to market.

"The pace of collaboration between the BT and Juniper teams is born out of a ground-breaking pace of innovation and alignment of cultures. We will continue to work with Juniper to optimize the network."

Reza Rahnama
Managing Director, Mobile Networks, BT Group

Corporate and Sales Headquarters
Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
www.juniper.net

APAC and EMEA Headquarters
Juniper Networks International B.V.
Boeing Avenue 240 1119 PZ Schiphol- Rijk
Amsterdam, The Netherlands
Phone: +31.207.125.700

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