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T-Mobile CPCN NextGen Expansion
Project Scope: Procurement, build, DWDM cutover, existing sites integration

Dates: Oct 2008 – June 2009 Duration: 8 months

Intrascope Team: programme manager, project manager, build manager

Introduction

T-Mobile is one of the World's largest mobile operators with more than 90 million Customers worldwide, in the UK it is the network of choice for approaching 17 million customers. T-Mobile is rapidly expanding its 3G network across the UK to support its aim of being the best data services provider of choice.

The Converged Packet Core Network (CPCN), an MPLS Network (running over SDH transmission), is the IP Transport network across which both mobile and WLAN Access connectivity is carried. With the introduction of Next generation (NextGen) 3G Switching architecture, T-Mobile's core transport network (CPCN) was required to support both voice and data services with reduced latencies to ensure voice quality is not compromised. Intrascope was Commissioned to expand the CPCN and reduce latencies for voice over IP traffic (VOIP).

Objectives

T-Mobile's objective was to introduce two new core CPCN sites in The Midlands to Reduce latencies between the country wide switching sites and the existing north and south CPCN core sites. The result being that all south sites would connect o the south CPCN core and the new Midlands core (negating the need to connect to the north core) . The same scenario would apply to the north sites. To support this requirement it was necessary to create new transmission circuits across the north And south DWDM (Dense wavelength Division multiplexing) SDH transmission rings.

Approach

Intrascope was tasked with delivering the end-end solution, this was to include the Incorporation and management of an Ericsson turnkey DWDM change project within the overall programme plan. The delivery was further complicated by the ongoing next generation Switch migrations which were dependent on reduced latencies for VOIP services. This required good communications and working relationships between the projects.

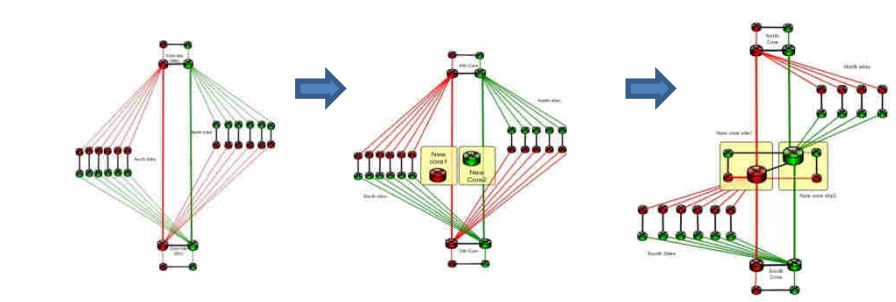
Achievements

T-Mobile achieved its aim of reducing latencies across the IP Transport network thus ensuring the quality of voice traffic (VOIP) via the new switching platforms was maintained. Intrascope was instrumental in delivering this required Functionality, managing both the end-end deliverable within budget and Timescales as well s managing the interdependencies.

Implementation

The initial work centred around validating the feasibility of the solution with the design team , this entailed ensuring the solution was fit-for-purpose and would support forecasted traffic capacity and latency requirements. Having secured sufficient commitment from the business, the Intrascope lead project manager put together a project and communication plan to manage both the upstream and Downstream dependencies. Implementation was centred around a multi-Stage plan:

- New core sites build
- DWDM circuits build & provisioning phase1
- New Core connection to existing core
- DWDM circuits build & provisioning phase2
- Migration of north sites to new core
- Migration of south sites to new core



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Methodology

The project was delivered using a specific set of stages suited to Infrastructure implementations for T-Mobile:

- Feasibility
- Requirements Capture and Analysis
- Detailed Design
- Build
- Cutover
- Migration
- Closure

Project team meetings were held weekly due to the need to ensure control and rapid decision making.