



# Incident Report 00264909

Incident Date: 18 July 2017

## **Incident Report Date – 18 July 2017**

**Incident:** Loss of connectivity on Ball Green Data Centre network

**Incident Start:** 18/07/2017 12:48

**Incident End:** 18/07/2017 13:42

**Total Incident Length:** 54 minutes

**Metronet (UK) Services affected:** IP and MPLS Services

**Root Cause:** Broadcast storm resulting in Provider Edge (PE) devices 'pe2' and 'pe3' in Ball Green Data Centre serving customer and corporate services to drop both Intermediate System to Intermediate System (ISIS) and Internal Border Gateway Protocol (IBGP) neighbourhood's, causing disruption to service.

### **Timeline:**

18/07/2017 12:29 – A New customer connected their first network cable in to their equipment, which we saw come online.

12:47 – Customer connected second cable.

12:48 - Drops in ISIS, the Interior Gateway Protocol (IGP) used to establish connectivity for IBGP sessions to the network, Label Distribution Protocol (LDP) and IBGP drops then followed.

Engineers identify that the IP address used to establish the BGP session has been null routed, core infrastructure engineers connected to the device via console to continue debug steps

13:13 – Engineers disconnect the second uplink cable and IP connectivity to the affected devices was then restored.

Although IP connectivity was restored, it became apparent that some MPLS services wasn't routing correctly. Initial debugs showed that the interfaces used for the LDP bindings was correct, labels matched and were correct, but although routing tables being present, services still remained offline.

13:31 – LDP was cleared on the equipment in an attempt to rectify this problem, however the problem remained. ISIS metrics were adjusted to re-route traffic to fix this issue

13:42 – Services were fully restored

### **Lessons Learnt/Actions:**

After the issues experienced, the following actions are to be undertaken/accelerated:

- Review, update and amend templates and existing customer switch ports to implement storm-control and spanning-tree protection mechanisms
- Install additional chassis in each building to have further resilient paths
- Upgrade the supervisors in existing devices to SUP2T-XL,
- Migrate PE4 uplinks from PE2 and PE3 to core devices

M24Seven deeply regrets the disruption caused by this incident and we thank our customers for their patience and cooperation. Please be assured that we are committed to learning from all network incidents and have reviewed the events of this incident as part of our major incident review panel.

Connectivity without compromise

T: 0800 066 2739 E: hello@m24seven.com W: m24seven.com