

## ICT MAJOR INCIDENT REPORT

### 1 PURPOSE OF REPORT

- 1.1 To provide Members with the Major Incident Report (Appendix 1) which sets out actions to be taken following the recent ICT equipment failure.

### 2 INTRODUCTION

- 2.1 Due to equipment failure within the Council's ICT server room on the weekend of 18 August 2018 and a catastrophic electrical failure within Eduserv's data centre on 21 August 2018, telephone and computer systems were inaccessible. A Major Incident Report has been prepared that outlines the timeline of events and lists key recommendations.

#### **Major Incident Report Summary**

- 2.2 Full system failure was discovered at the start of the day on Monday 20 August 2018. The Leadership Team, Leader of the Council, Cllr T G Cutmore, Deputy Leader, Cllr M J Steptoe and Portfolio Holder for Enterprise, Cllr G J Ioannou were informed of the situation, and Business Continuity plans for each service area were initiated. Service areas such as benefits payments and Castle Point payroll were identified as a priority and measures were put in place for these to be provided.
- 2.3 The Council's ICT team identified the problem as a network issue. This was escalated to Eduserv's specialist network engineers as the Council does not have this expertise on site.
- 2.4 Eduserv's network engineer arrived on site on Tuesday, 21 August 2018 and was able to identify a Cisco Core Switch failure. This is the Council's main Local Area Network (LAN) link, which connects the Council to the software applications running in the datacentre and to the Azure cloud.
- 2.5 Whilst on site, Eduserv carried out all the necessary works and pre-preparation with the intention of completing the Core Switch configuration and connection on Wednesday, 22 September 2018. However, on Tuesday, 21 August 2018 Eduserv's data centre suffered a catastrophic electrical failure which meant the network engineer was unable to complete the works on Wednesday, 22 September 2018 as agreed.
- 2.6 Contingency measures were immediately begun by the Assistant Director, Transformation who alerted the Essex Online Partnership (EOLP) of the issues the Council was experiencing. The EOLP has a Sharing Talent Agreement to which the Council is a signatory. The Sharing Talent Agreement facilitates the deployment of local expertise to assist its members with technical issues. Accordingly, Southend Borough Council provided network engineers who came to the Council and installed and configured the replacement Core Switch.

- 2.7 As a result of the Eduserv data centre outage, the Council's software applications were unavailable for longer than was expected. This was because the catastrophic electrical failure meant that all the servers were turned off abruptly and simultaneously; when this happens the majority of the Council's main software applications have to be brought back into service in a controlled way.

#### **Post Major Incident Actions**

- 2.8 The Major Incident Report outlines actions to improve resilience within the Council's IT infrastructure.
- 2.9 The Assistant Director, Transformation is in discussions with Southend Borough Council to finalise a Service Level Agreement to form part of the ICT Business Continuity Plan, which will add resilience, and to enable Rochford to call upon expertise which it does not have in-house.

### **3 RISK IMPLICATIONS**

- 3.1 The main risk to the Council of IT failure is lack of business continuity, which could impact on its ability to provide services to residents and other customers/stakeholders. For this reason the Council has business continuity plans in place which enable the impact of any IT disruption to be minimised. The effectiveness of these plans will be reviewed in light of the Major Incident Report to see what lessons can be learnt to further increase the Council's resilience should such an incident occur again in future.
- 3.2 The Major Incident Report sets out a number of recommendations for implementation. Not putting into place the actions which have been identified would impact on the ability of the Council to respond as effectively as possible to such an incident in future. Whilst no organisation can fully mitigate the risk of ICT failure, it is imperative to take all identified steps to mitigate the consequences of such failure and to remediate it as soon as possible.

### **4 RESOURCE IMPLICATIONS**

- 4.1 The direct costs of responding to the incident will include the cost of IT hardware and any support costs recharged from Southend Council; however these are not expected to be material. A replacement switch has been purchased to replace the reserve switch at a cost of £275.00.
- 4.2 It is too early at this point in time to gauge whether there have been any indirect costs incurred as a result of the incident; for example, loss of productivity and impact on performance, which will be identified through review of Performance Indicators. Any associated budgetary impact will be monitored as part of the financial and performance framework over the course of the year.

**5 LEGAL IMPLICATIONS**

5.1 None arising out of this report.

**6 EQUALITY AND DIVERSITY IMPLICATIONS**

6.1 An Equality Impact Assessment has not been completed as no decision is being made.

**7 RECOMMENDATION**

7.1 It is proposed that the Committee **RESOLVES** to note the contents of the report.



Dawn Tribe

Assistant Director - Transformation

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**Background Papers:-**

None.

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# Rochford Major Incident Report



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### 1 INCIDENT SUMMARY

Rochford's Core Switch failed over the weekend of 20<sup>th</sup> August 2018 which affected our ICT systems and Telephone systems at both Rochford and Rayleigh Offices and rendered them unavailable for use. In conjunction with this incident on the 22<sup>nd</sup> August 2018 Eduserv's datacentre at Swindon suffered a significant electrical event which caused catastrophic damage to an electrical panel and communications equipment. The effect of this incident took the data centre offline in an uncontrolled manner which left Rochford and several of Eduserv's other clients' systems in an unavailable and unstable state.

### 2 INCIDENT TIMELINE

#### 2.1 DAY 1 - 20<sup>th</sup> August

At approximately 08:30 on Monday 20<sup>th</sup> August the Service Desk and Technical Principal Officer on arrival at the offices were notified by several staff that no services were available. This was immediately logged with Eduserv as a P1 call. Eduserv and Rochford's ICT team carried out some diagnostics from the Swindon data centre but could find no issues. A call was raised with Claranet's support desk - INC1858373 to ask them to test the line and router; no issues were found but it was noted that the MPLS feed had flatlined at 21:50 Friday evening.

Approximately 10:00 Assistant Director – Transformation updates Managing Director, Leader and Deputy Leader.

**10:50** Rochford ICT are asked to restart the Cisco router and Juniper firewall to no effect.

**12:00** Eduserv escalated the issue with Claranet to their second line of support.

Rochford staff worked with Eduserv to perform trace routes on servers, checking all patches display green link lights and restarting the Cisco and Juniper firewall servers again.

At approximately **14:30** all obvious checks to on site equipment had been carried out, the following was confirmed.

- There were no problems with the infrastructure; and
- RDC are unable to Ping out (reach a server).

A request was made for a copy of the SLA agreement which Eduserv have with Claranet and for a committed time for a fix.



**15:15** Second line of support cannot see any issues at Rayleigh or Rochford, Claranet say our router is online and Eduserv believe it's a localised problem at Rochford with our switches or router.

**15:20** Assistant Director – Transformation contacts Eduserv Service Delivery Manager to escalate the fault and requests onsite expert assistance - Engineer to be on site Tuesday morning approximately 12:00 (subject to trains). In the meantime Rochford and Eduserv continue to carryout diagnostic checks.

### **2.2 DAY 2 – 21<sup>st</sup> August**

**09:00** Meeting with Assistant Directors, Emergency Planning and Comms to discuss Business Continuity.

**09:40** Daisy Ducl are called and a call logged to check the telephone system to ensure that there was not a separate issue.

**10:30** Daisy call and ask that the Mitel box is rebooted and confirm that the correct lights are currently showing, no changes are seen. Engineer has been requested to be on site to carry out a network check.

**13:15** Eduserv network engineer arrives to carryout onsite diagnostics.

**14:15** Fault found to be Cisco Router (Main Core Switch) mother board.

**15:40** Conference call with Eduserv who have suggested that as the configuration files are back in Bristol network Engineer will come back first thing tomorrow with fully configured core switch. Network engineer wants to use switch from Data Centre rather than take Rochford's spare switch. Cables are labelled in preparation for tomorrow's work to replace the switch.

**15:50** Assistant Director – Transformation makes a decision to call EOLP contact to have the use of the Talent Pool agreement offered to EOLP members as a contingency measure in case it is needed.

**18:00** Several members can assist and will be on standby Southend have a similar switch should it be needed.

### **2.3 DAY 3 – 22<sup>nd</sup> August**

**11:00** no communication received from Eduserv, AD – Transformation contacts them for an update @ **11:00, 11:10, 11:20, 11:45** to find out if network engineer is on his way. Contact could not be made with either Service Delivery Manager (SDM) James Breadmore, Network Engineer who came on site, Chief Operations Manager Mark Ebdon or Chief Executive Jude Sheeran.

**12:00** Rochford's Business Systems Officer receives a call from an Engineer from Eduserv to advise that they have experienced a complete outage at their Data Centre. Request is made for Service Delivery Manager or the Senior Engineer to ring to advise what the current situation is with the network engineer attending Rochford Offices.

(Message left for Eduserv CEO by Rochford's MD to contact him.)

**12:10** AD - Transformation contacts EOLP to evoke Talent Pool Support and asks if Southend can offer network expertise.

AD - Transformation updates MD and Portfolio Holder for ICT.

**12:30** Kim Harvey EOLP administrator confirms that Southend are able to assist through the EOLP members agreement. MD is updated.

**12:40** Still no response from Eduserv even though they have committed themselves to do the work text message sent to Eduserv SDM (who is on annual leave) requesting contact.

**13:10** SDM phones to confirm Eduserv's data centre has experienced catastrophic failure they are working through the issue and that all network engineers are at the Swindon site, he confirms that the network engineer who came to site at Rochford has the configuration file and they can have a switch available with the configuration on it. He will contact me when he can speak with the network engineer and let me know what the options are for him to attend site.

**14:10** MD has contacted Eduserv CEO who confirms that they will do all they can to 'get us back up and working'.

**15:10** SDM confirms that no network engineer can attend at Rochford until the issues at Swindon have been resolved.

**15:30** AD – Transformation contacts EOLP to confirm assistance is needed. MD contacted Southend Deputy Chief Executive to request on site assistance from Southend Network Engineers.

**16:20** Network Engineer Southend makes contact and can assist with loading the configuration file onto the switch and will arrive with another switch as well for resilience.

**16:45** Contact made with Eduserv CEO, SDM, who confirmed that the configuration file will be available to send to Southend network engineer (SNE).

**17:30** AD - Transformation receives confirmation that the configuration file has been sent down a secure network.



**17:40** Southend SNE confirms that the configuration file has been sent. He will arrive as soon as possible the following morning.

MD and Portfolio Holder updated.

### 2.4 DAY 4 – 23<sup>rd</sup> August

**09:00** am Briefing with MD and Leadership team to update them on current situation.

**10:30** SNE are on site to configure the switch and connect fibre connection.

**15:15** Switch has been configured and cables connected but IP addresses cannot be seen likely to be due to the problem being experienced at Eduserv's Data centre this is making configuration a lot more challenging. AD- Transformation and MD attempt to contact Eduserv but no response.

**15:50** Eduserv CEO contacts MD and gives a contact No to call at Eduserv. AD Transformation speaks with Chief Technology Officer who agrees for the Eduserv Network Engineer to be available at **4:45** for a conference call with SNE's to help establish network problem.

**16:45** Conference call – it has been established that SNE need further network details from Eduserv to establish whether the problems being experienced are due to the switch or the outage from Eduserv's data centre, the switches are not currently talking to each other and internet access is still not available. Once information has been received SNE's will work to try and establish any missing components tonight.

Advised that resource from Eduserv has been allocated to datacentre problem so no dedicated resource can be allocated to Rochford.

MD has spoken again to CEO who is flying back early from holiday. Arrangement for Southend to attend site tomorrow will be made with Southend Deputy Chief Executive.

**17:30** EOLP contact to say further support is available if needed and also equipment.

**18:20** AD – Transformation updates Portfolio Holder.

**18:30** AD – Transformation speaks with Chief Technology Officer who advises that the data centre is almost back to normal. Eduserv network engineers will be available on the phone tomorrow.

### 2.5 DAY 5 – 24<sup>th</sup> August

**09:30** SNE on site needs passwords from Eduserv to look at configuration on the other switches just to ensure that there are no compatibility issues.

**12:30** Routing problems have been identified and work to solve these will be carried out. Rochford Business Systems Officer (BSO) is able to see applications and is working with network engineers to identify issues

**15:45** Systems starting to come back telephones now working SNE and BSO will try to get as many systems as possible working tonight.

**16:30** Switch configuration seems to be ok SNE liaising with Eduserv to get the other services up and working. SNE, AD – Transformation, RBO and MD will stay to get as much done as possible. Eduserv are working on restarting servers. Have given Eduserv a list of problems all will reconvene tomorrow at **09:30**.

### 2.6 DAY 6 – 25<sup>th</sup> August

**09:30** Eduserv have been working on as much as they can overnight at the data centre to restart servers and ensuring that they are stable. We are able to access the portal, G & L drives most application servers can be accessed but due to them not having been re-booted in the right order there are still some issues. Phones including voicemail out of hours message service all working.

**11:00** Leader of the Council and Portfolio Holder Informed.

Due to staff availability over the weekend all will resume at **07:30** 28<sup>th</sup> August.

### 2.7 DAY 7 – 28<sup>th</sup> August

Systems which were working on Saturday remain stable. Prioritising known Issues which are Revs and Bens, Civica Images, external emails are an issue although 0365 users are ok no internet.

Three engineers have been working on the connectivity issues at the data centre they have contacted and made BSO aware of the status.

**09:30** Leadership Team meeting held to find out if any service areas are having any major issues which are not already known. No new issues have been raised.

**13:00** VPN up and working and emails are starting to be released but there are still problems with external connections but these are inconsistent, Eduserv have been asked to check data centre end.

SNE has not been able to come on site as one of their projects has experienced network issues but will start to put together up to date network diagrams and as much documentation as is known. Configuration file is now at Rochford, Southend and Eduserv.

**16:00** BSO has managed to get Revs and Bens up and working. SNE have identified a firewall issue which is believed to be linked to a Juniper box AD- Transformation has spoken to Eduserv as firewall is dropping, the connection may be data centre problems.

**17:00** Eduserv will restart Comino in the early hours of the morning to ensure stability image server is working as is all the applications. Internet is working but keeps dropping out.

SNE's will be on site tomorrow as internet issues could be firewall problem.

### 3 MAJOR INCIDENT RESOLVED

#### Resource Involvement

INCIDENT OWNER	Dawn Tribe Assistant Director - Transformation
ROCHFORD ICT STAFF	Ami Goulter – Service Desk and Technical Principal Officer 20 <sup>th</sup> August Only  Paul Skelton – Business Systems Officer (BSO)
ROCHFORD INCIDENT SUPPORT	Shaun Scrutton – Managing Director (MD)  Angela Law – Assistant Director Legal Service
EXTERNAL SUPPORT	Southend Council ICT Network Team SNE  Eduserv Manager Service Provider  Axial Support Team.

### 4 INCIDENT OVERVIEW

#### Incident Management

The incident started to unfold early morning on the 20<sup>th</sup> August. A number of officers were reporting that they had no systems and switchboard staff reported that the telephones were all offline.

BSO and the ICT Service Support Principal Officer recognised that this was potentially a major issue and acted quickly to notify Senior Officers and Eduserv our Manage Service Provider so the process of diagnosing the problem could be started.

Throughout the incident the website was being up dated with messages to the public informing them of the different ways in which they were able to contact us, telephone numbers of key service areas were quickly up loaded to the website. All services to the public were able to be provided through a number of different channels including Benefits Payments and Castle Point's payroll.

The Leadership Team were regularly updated either through meetings or using Leadership Group Whatsapp. Business Continuity procedures were deployed as necessary.

### 5 RECOMMENDATIONS

Equipment failure is always a possibility and in this particular incident business continuity measures were in place to avoid loss of services for a prolonged period but having now had the opportunity to test out our plans there are clearly some areas for improvement. It was unfortunate that due to the catastrophic incident at the data centre that this did impact on our ability to get services up and working more promptly.

#### 5.1 Table of Recommendations

	EVENT	Recommendation
1	Core Switch failure	Replacement switches available which have the most up to date configuration on them either racked for fail over and spares available within the server room.
2	Network Diagrams	Have full network diagrams displayed within Rochford's server room.
3	Switch/Router Configurations	Ensure all configurations are up to date and are immediately available when required.
4	Server Rack Audit	Conduct an audit of all equipment within the server room and decommission unwanted equipment.
5	Availability of Technical Support (Technical Support is provided by Eduserv through an informal agreement, which is not part of the original contract.)	Draw up a more formal arrangement with Southend's ICT team as Eduserv's team are too far away to react quickly to an incident.
6	Battle box	Build a battle box to be kept off site.