Incident Report
#2108-249

Barracuda System Unable to Handle Excessive Volume of Mail

Summary

On Friday, March 23rd, 2018 and again on Saturday, March 24th, 2018 the Barracuda appliances (which are used as a email gateway) stopped some emails from being delivered or in other cases, delayed the sending of emails from automated systems and scanners on campus. One of the Barracudas was experiencing an extremely high volume of activity so connections to other email systems trying to send email through the on-campus relay were unavailable. In some cases, the email system gave up trying to communicate and the email was lost.

Impact

Applications on campus that send emails through the Barracuda mail gateway – mailgw.queensu.ca where affected by this incident. Some applications are capable of queuing email and retrying, in which case messages were delayed but ultimately delivered. Some applications cannot handle errors or delays and that email was dropped with no notice to the systems administrators or end users.

Multifunction printers on Campus also experienced errors scanning to email during this time.

Root Cause

On Friday, one of the Barracudas had significantly higher volume of activity than the other and was not able to accept all incoming connections for several hours. Saturday's incident had a similar impact but was due to massive spamming from an on-campus device.

Resolution

Clearing the outgoing queue of undeliverable messages reduced volume and backlog to allow messages to be processed normally.

Communications (Internal)

ITS staff communicated internally in face-to-face meetings as well as by telephone.

ITSPP Communications (External)

In both cases ITS posted notices as soon as the issue was identified. Individuals who reported incidents via ITrack were contacted. When the issue was resolved, the notice was updated.

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Lessons Learned

One of the Barracudas had significant volume which reduced its ability to respond to incoming requests. Some systems or devices unable to recover and resend email may need an alternate application relay server (non-barracuda) or install local mail relay systems on individual application servers (not ideal).

Action Items

The Infrastructure group is currently investigating the replacement of the Barracuda Mail Gateway servers. This may include a specialized mail relay for application servers to utilize on campus.

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