# Performance Test Outcomes

## Overview

Initial results from the performance tests show that the current combination of fincrime payment screening and napier (testfox2 environment) cannot scale to the required 2 rps (requests per second) for prolonged periods. We can cope with spikes at that rate but if we receive, on average, 2 rps then the screening backlog queue will start to fill. After 30 minutes at this load a screening request will take 90 seconds to be processed. The maximum sustained rate we can currently handle, based on the worst napier performance we have seen today, is **0.8 rps**.

## Breakdown of perf by components in testfox2 environment

* Napier performance varies but it is able to screen a single payment in around 550ms - 1200ms, attempting to screen requests in parallel does not appear to improve overall throughput i.e. if 3 requests are sent simultaneously they will each take 1650ms - 3600ms.
* Fincrime Payment Screening is able to process the initial screening request and return an accepted response to clients in around 30ms.
* Fincrime Payment Screening can process the entire round trip in around 150ms. This scales out well with additional service instances.

# Test Runs

**2 tps, real napier, 3 fincrime payment screening instances**

**26/8/2021 13:54 - 14:24**

Initial call response (202)

A picture containing table

Description automatically generated

Complete roundtrip

Chart, histogram

Description automatically generated

Napier response times

Chart, histogram

Description automatically generated

Incoming messages and queue size

Chart, line chart

Description automatically generated

**2 tps, real napier, 9 fincrime payment screening instances**

**26/8/2021 14:54 - 15:26**

Initial call response (202)

Table

Description automatically generated

Complete roundtrip

Chart, histogram

Description automatically generated

Napier response time

Chart, histogram

Description automatically generated

Incoming Messages and Queue Size

Chart, line chart

Description automatically generated

**2 tps, mocked napier (0ms), 9 instances of fincrime payment screening**

**26/8/2021 16:34 - 17:06**

Initial call response (202)

A picture containing table

Description automatically generated

Complete roundtrip

Graphical user interface, text, application, email

Description automatically generated

Napier response time

n/a

Messages

Chart, line chart

Description automatically generated

**10-12 tps, mocked napier (0ms), 3 instances of fincrime payment screening**

**26/8/2021 19:15 - 19:47**

Initial call response (202)

Table

Description automatically generated

Complete roundtrip

Chart, waterfall chart

Description automatically generated

Napier response time

n/a

Messages

Chart, line chart

Description automatically generated

**Queue drain rate**

**Chart, line chart

Description automatically generated**

500 messages in 10 minutes -> 0.83 rps