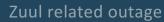
Root Cause Analysis





The following is a detailed accounting of the service outage that Agile Central users experienced on January 26, 2016 at 11:00am.

Root Cause Analysis Summary

Event Date	January 26, 2016
Event Start	11:00am
Downtime Start Time	11:00am
Time Detected	11:03am
Time Resolved	12:06pm
Downtime End Time	11:08am (ALM), 12:06pm (Watches & Webhooks)
Event End Time	12:06pm
Root Cause	Real root cause is not known. Took a number of definitive actions to increase resilience of Zuul node issues and fix our monitoring and metrics related to Zuul authentication.
Duration	Total Downtime: 8 minutes (ALM), 64 min (Watches & Webhooks) Total Impaired Availability: 58 minutes Time to Detect: 3 minutes Time to Resolve: 1 hour, 6 minutes

Future Preventative Measures

Actions that should be taken to prevent this Event in the future.

Actions	Description
Fix all the Zuul graphs	Connection pooling graph and fixed broken graphs
ALM resilience of Zuul node failures	We made ALM more tolerant of single or double node failures of Zuul. Note: Implement as a VMtoggle

Add Curator graphs	Created necessary curator graphs
Enhance Zuul healthcheck	Zuul healthcheck now fails when timeout is >5 seconds
Enhance ops doc	Added a Zuul section to Ops docs
Should we get rid of Hystrix for Zuul	Investigate getting rid of Hystrix for Zuul. Next planning meeting.