INSTANA

Instana Release Notes - Build #112

22. July 2016

Features

Search

Until now the search was limited to the Table View - now the search works on the map and also knows first expressions (more coming - looking forward to your feedback).
Just enter a free text search query into the search field and the map and table will show you the results. If you want to get more specific you can use expressions like type=elasticsearch or host.cpuCount>1.
More details how the search works are shown when you click on the ? mark near the search field.
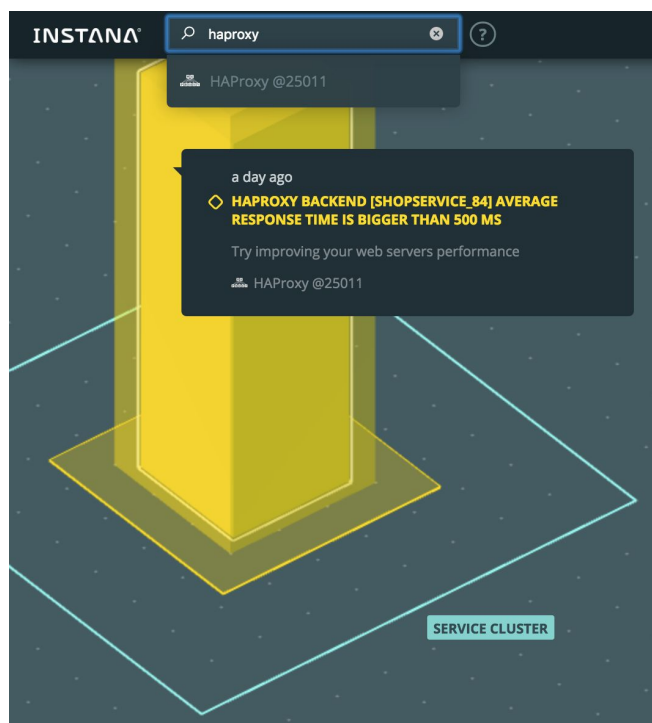
Agent as container

We now support running the Instana agent in a docker container using our Alpine Linux based image. We also provide a Kubernetes Pod definition. Both are in beta at the moment. Let us know if you want to try our container or Kubernetes files.

Extended Tracing support

We are supporting distributed Tracing for Java at the moment and instrument standard libraries and frameworks to assure stability and lowest impact (please read more about our approach to safely instrument in the Blog post How Instana Safely Instruments Applications for Monitoring)

INSTANA

We are adding support for libraries fast and in close cooperation with you - our users and customers. Please contact us in case something is missing that you need.

Instrumentation is done by supporting certain technologies (frameworks, libraries, clients). A new Trace is created when an execution hits at least one as Entry Point instrumented method and is not called through an already instrumented call (aka has a Parent Span ID tagged to the payload and will be correlated to another trace in the backend).
If within a Trace a method is hit that is instrumented as an Exit Point a Span is created for it and - if possible/it makes sense - the ID for the trace is added to the call in order to enable correlation.

Framework/Library	Supports
Apache HttpClient	Exit
Cassandra	Exit
EJB (Glassfish, JBoss, OpenEJB)	Entry and Exit
Elasticsearch	Exit
HTTP UrlConnection	Exit
JDBC	Exit
Jedis	Exit
Jersey	Entry
JMS	Entry and Exit
Kafka	Exit
Lettuce (3&4)	Exit
Mongo	Exit
Play2	Entry
RabbitMQ	Entry and Exit
Servlet	Entry
Spring-Web	Entry
Vertex	Entry and Exit

INSTANA

Configurable "Secrets"

The agent can now be configured to a list of "secrets", that are keywords marking sensitive or secret data. The agent by default will filter out key/value pairs named "key", "password" or "secret". Currently only the process command line is filtered by this setting. More sensors will be updated to respect this configuration in further updates.

The corresponding configuration.yaml looks like this.

```
# Secrets
# To filter sensitive data from collection by the agent, all sensors respect
# the following secrets configuration. If a key collected by a sensor matches
# an entry from the list, the value is redacted.
#com.instana.secrets:
#  matcher: 'contains-ignore-case' # 'contains-ignore-case', 'contains', 'regex'
#  list:
#    - 'key'
#    - 'password'
#    - 'secret'
```

Additional configuration files for the agent

By default the agent will look for the configuration file called configuration.yaml. To support easier automation integration, the agent now will look for files named "configuration*.yaml" which are applied in the order provided by the file system (that is usually alphabetically). So values from configuration-bcde.yaml overwrite values in configuration-abcd.yaml which overwrite values from configuration.yaml.

Newly supported technologies

- **Jetty**
  - Serverinfo, Threads and deployed apps
- Elasticsearch 1.0 - 1.3
  - Some customers still have old versions of Elasticsearch which we did not support so far. Now we read available metrics on a best effort basis. However we strongly suggest to upgrade Elasticsearch to a recent release.

INSTANA

Improvements

- **Docker Improvements**
  - Added metrics
    - CPU (total, kernel, user + throttling count, throttling time)
    - Memory (Usage, Max Usage, RSS, Cache)
    - Block IO (Reads, Writes)
  - Added Knowledge
    - Memory and CPU Saturation
  - Now supports docker configurations not returning any stats (like kubernetes)
- **Apache HTTPd Improvements**
  - Support for multiple httpd sharing same config files.
  - Added CPU and Traffic metrics
  - Added Knowledge
    - Workers, DNS lookup, Logging performance
- **Tomcat Knowledge added**
  - Connection Saturation
  - Thread Saturation
- **Stack Traces collected for all Exits**
- **Capturing HTTP Errors in Traces**
- **Spring Boot Knowledge added**
  - Http Sessions saturated
- **Redis Knowledge added**
  - Short Drop in Hit Rate/ in Throughput

- **Cassandra Knowledge added**
  - Sudden Drop in Write Requests
- Further overhead reductions on parsing linux metrics from the OS.
- More accurate timings for HTTP URL Connection
- Play2 tracing now captures actual time needed for promises to return.

- **Shareable URL now includes Timeline Settings**
  Whatever you open on Instana is reflected in the URL. Now it also includes the time range you are investigating and the moment in time you picked. You can now share the URL with your colleagues and they will see exactly the same.
- **Minimize Timeline**
  You can toggle the timeline to a minimal height. Simply hover over it to reveal it again.
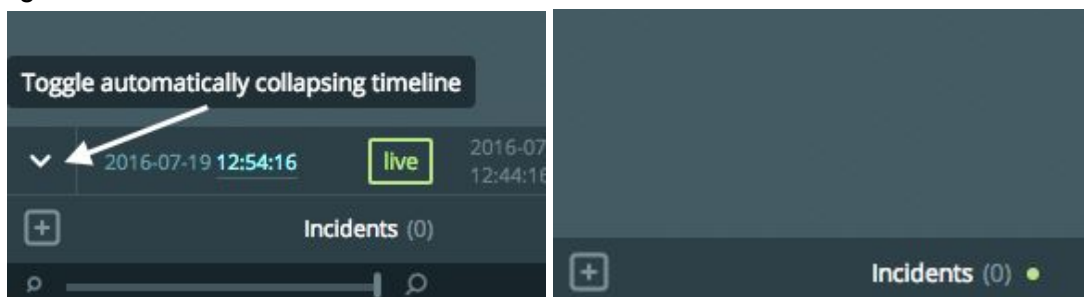
- Smaller intervals to adjust time range of the timeline using the magnifying glass buttons
- First Hotkeys: ESC - closing dashboards and sidebars, F - focus on selected Entity/if nothing selected: focus map, N - toggle Notifications
- Notifications do not overlay metrics, labels and table anymore
- SIM Usage information is now also available for Customer deployed in the US region and on premise

Fixed Issues

- JVM attachment now compatible with strict java security managers
- Monitoring Spring Boot running within Docker containers works now
- Monitoring Postgres running within Docker containers works now as well
- Attaching to a J9 JVM would fail
- Attaching to a JVM could fail on ubuntu with certain limitations on sudo
- Attaching to a JVM with a proxy configured could fail
- Reading metrics from MS IIS servers could leak memory due to a bug in an IIS dll
- On virtualized Windows, the agent might have failed to obtain a unique id
- Nginx Sensor cannot work when status location is defined as regex

Known Issues

- When searching without search expression for strings containing - (hyphen) search will not return results - working on it. When searching e.g. a hostname please use the expression to search it. There hyphens work.

Please feedback via Slack or Mail to michael.krumm@instana.com around the new features, the improvements and especially your ideas and other points you have around Instana. We have a lot cooking at the moment so stay tuned - more to come soon!