AppSentinels
Business Logic Security

AppSentinels API Security Platform

Java-Nodejs Watcher Integration

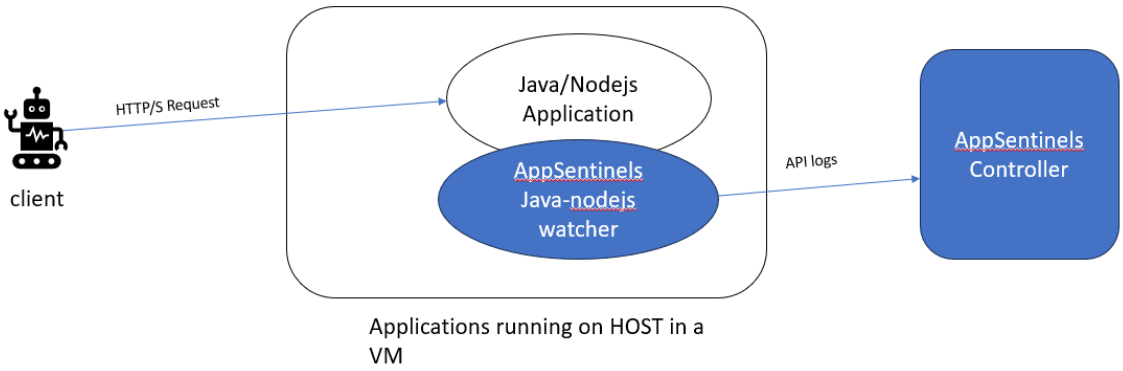
Revision	Date Modified	Author	Comments
1.0	01-Dec-25	Sagar	Initial spec for java-nodejs agent integration

Contents

AppSentinels Java-Nodejs watcher

The AppSentinels Java/Nodejs Watcher provides agent based auto-instrumentation using trusted Hypertrace to enable API visibility and monitoring. The approach uses the build-in java/nodejs agent functionality to instrument the java/nodejs application.

Architecture Diagram



AppSentinels Watcher for Java Application:

AppSentinels Java watcher instrument the application automatically to capture the below information:

- Request and response headers
- Request and response bodies

How to Install:

To install the AppSentinels Java Watcher, you need to install the RPM package provided. Follow these steps:

- **Download the RPM package**: Obtain the RPM package for the AppSentinels Java Watcher from the Below link:
  - https://downloads.appsentinels.ai/appsentinels-deployment/Java-Nodejs-Watcher/appsentinels-watcher-1.3.6-1.noarch.rpm
- **Install the RPM package:** Use the following command to install the package on your system:
  - sudo rpm -ivh appsentinels-watcher-<version>.<arch>.rpm

How to Configure:

After installing the watcher, you need to configure the reporting endpoint to ensure that the watcher can send data to the AppSentinels controller, In addition to that you can configure the allowedContentTypes, maxbodysize.

```yaml
# Basic Configuration
service_name: appsentinels-watcher
enabled: true  # Enable/disable the agent


# Reporting Configuration
reporting:
  endpoint: http://<controller IP or FQDN>:<Port Number>  # OTLP gRPC endpoint for traces
  protocol: http/protobuf
  metricReporterType: None

# Data Capture Configuration
dataCapture:
  bodyMaxSizeBytes: 131072  # 128KB - Maximum size of request/response bodies to capture
  httpHeaders:
    request: true  # Enable/disable request headers capture
    response: true  # Enable/disable response headers capture
  httpBody:
    request: true  # Enable/disable request body capture
    response: true  # Enable/disable response body capture
  allowedContentTypes:
    - application/json
    - application/xml
    - text/plain
    - text/html
    - application/x-www-form-urlencoded
    - application/graphql
```

- This config file will be present in below location and is configured by below environmental variable:
    - **HT_CONFIG_FILE=/opt/appsentinels-watcher/config.yaml**

- **Edit the Configuration File:** Open the **config.yaml** file located in the **HT_CONFIG_FILE** environmental variable and configure **reporting.endpoint**

How to activate:

Once the configuration is complete, follow these steps to reload your shell and start the Java application:

- **Reload Your Shell:** This step ensures that any environment variables required to instrument the java application using watcher are updated.
- **Check the Environment Variable**: Ensure **JAVA_TOOL_OPTIONS** environment has been set or appended with the appsentinels watcher configuration file path:
    - JAVA_TOOL_OPTIONS=-javaagent:/opt/appsentinels-watcher/appsentinels-agent.jar=ht.config.file=/opt/appsentinels-watcher/config.yaml

- **Restart Your Java Application**: Restart your Java application in new shell.The AppSentinels Java Watcher will automatically instrument your application for monitoring.

By following these steps, you will have successfully installed and configured the AppSentinels Java Watcher for enhanced API visibility and monitoring.

How to uninstall:

- List the installed appSentinels package name
  - rpm -qa | grep appsentinels
- Remove the appSentinels package
  - sudo rpm -e appsentinels-watcher-1.3.6-1.noarch
- Come out of your current shell and launch a new shell, then restart your application.

AppSentinels Watcher for Nodejs Application:

AppSentinels Nodejs watcher instrument the application automatically to capture the below information:

- Request and response headers
- Request and response bodies

How to install:

Installation of AppSentinels Nodejs watcher is same as above mentioned in java watcher. Please follow the same for installation

How to configure:

To configure the AppSentinels Nodejs watcher Please follow the above steps mentioned for Java watcher

How to activate:

Once the configuration is complete, follow these steps to reload your shell and start the Nodejs application:

- **Reload Your Shell:** This step ensures that any environment variables required to instrument the Nodejs application using watcher are updated.
- **Check the Environment Variable**: Ensure **NODE_OPTIONS** environment has been set or appended with the appsentinels watcher configuration file path:
  - NODE_OPTIONS=-r @hypertrace/nodejsagent
- **Restart Your Nodejs Application**: Restart your Nodejs application in new shell. The AppSentinels Nodejs Watcher will automatically instrument your application for monitoring.

By following these steps, you will have successfully installed and configured the AppSentinels Nodejs Watcher for enhanced API visibility and monitoring.

How to uninstall:

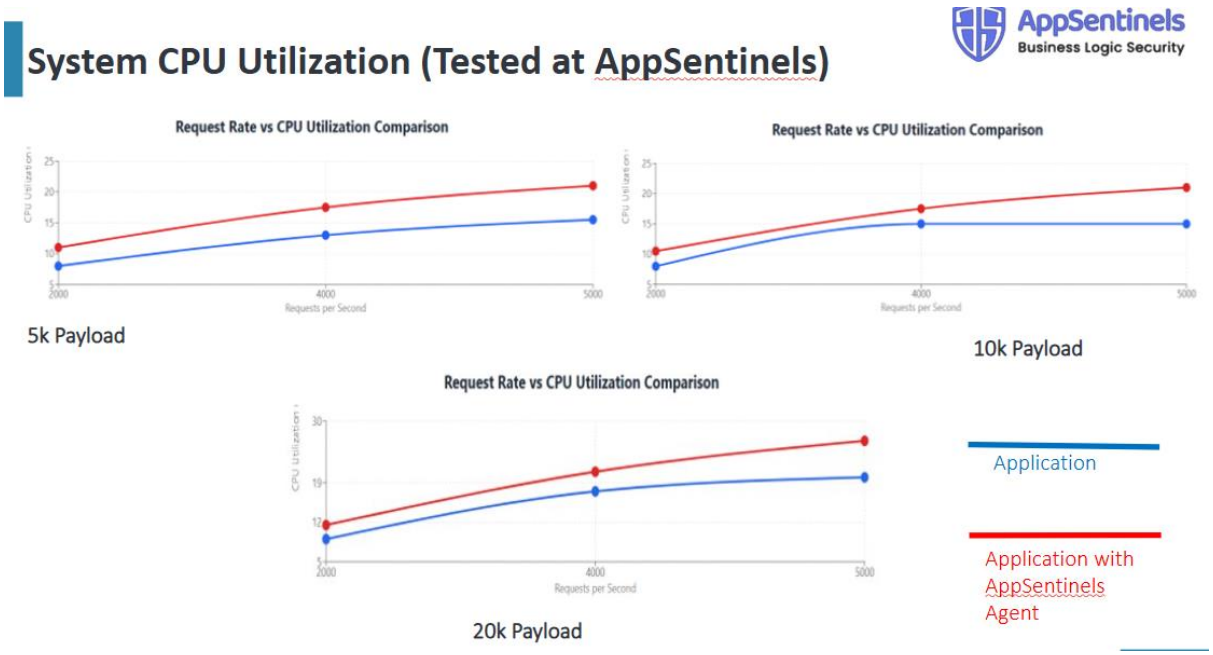
- List the installed appSentinels package name
  - rpm -qa | grep appsentinels
- Remove the appSentinels package

    - sudo rpm -e appsentinels-watcher-1.3.6-1.noarch
- Come out of your current shell and launch a new shell, then restart your application.

Appendix

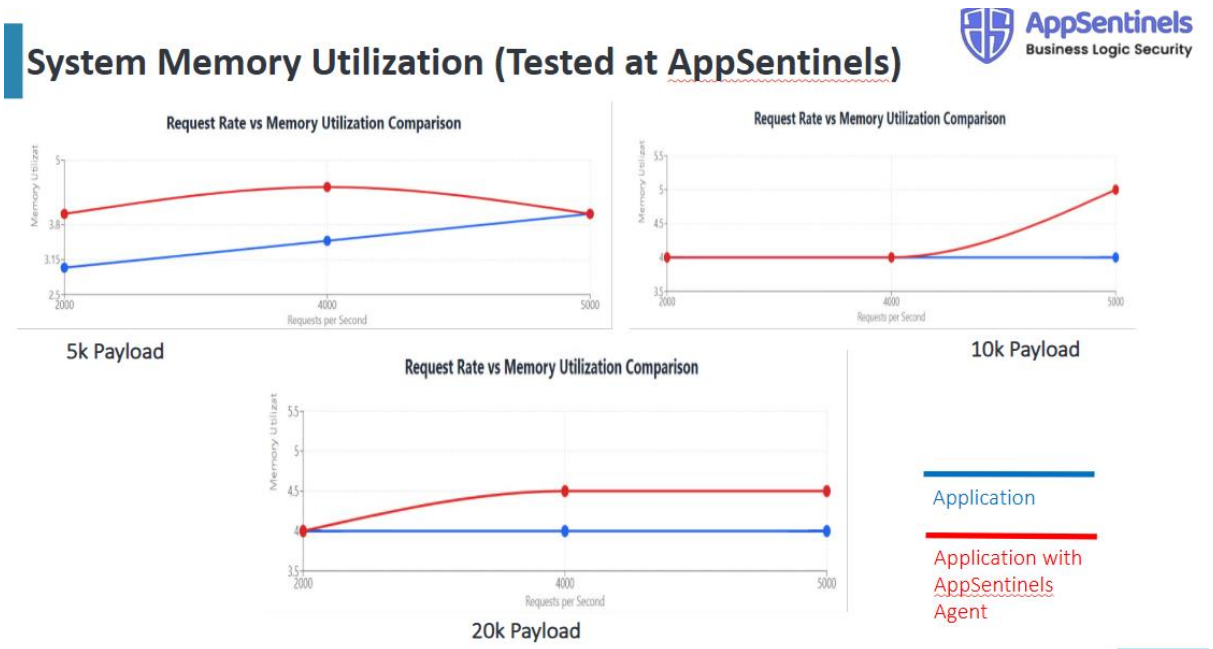
System CPU Utilization

- Below is the comparative view of system CPU utilization



System Memory Utilization

- Below is the comparative view of system Memory utilization



API Latency

- Below is the comparative view of API latency