Java Logging Frameworks

When it comes to troubleshooting Java application performance, JVM metrics are no longer enough. To fully understand the environment you also need Java logs and traces. Today, we're going to focus on your Java application logs.

1. SLF4J

The Simple Logging Facade for Java or simply SLF4J is an abstraction layer for various logging frameworks allowing us, as users, to choose the logging framework during the deploy time, rather than during the development time. This enables quick and easy change of logging framework of choice when it is needed.

If you're new to SLF4J, we have just the blog post for you. In our SLF4J tutorial, we explain everything there is to know about the abstraction layer so that you can log easier and smarter.

2. Java.util.logging

The java.util.logging package provides the classes and interfaces for Java core logging facilities. It comes bundled with the Java Development Kit and is available for every developer using Java since Java 1.4.

3. Logback

Logback started as an intended successor to the first version of the Log4j project claiming faster implementation, better tests, native SLF4J integration, and more. It is built out of three main modules and integrates with Servlet containers such as Tomcat or Jetty to provide HTTP-access log functionality. If this is your framework of choice, check out our Logback tutorial where we go over how it works and how to configure it for logging Java applications.

4. Log4j

Log4j is one of the most widely known Java logging libraries and the predecessor for such projects as Logback or Log4j 2. Log4j reached its end of life on 5th of August 2015 and users are recommended to use Log4j 2. If you are still using this framework, check out our Log4j tutorial where we go over its functionality.

5. Log4j 2

Log4j 2 is the newest in the list of all the mentioned Java logging frameworks. It incorporates lots of improvements over its predecessor and promises to provide Logback improvements while fixing issues with some of its architectural problems. If you are starting a new project and you are looking for a library of choice Log4j 2 should be the main focus. You can read more about how to use it for logging Java applications from our Log4j 2 tutorial.

Full blog : https://sematext.com/blog/java-logging/