

Log Analysis Tool for SAP NetWeaver AS Java



Applies to:

SAP NetWeaver 6.40, 7.0x, 7.1x, 7.20 and higher

Summary

Log Analysis is an SAP tool for analyzing list formatted logs and traces in Application Server Java (AS Java). Initially, it was developed for the Logging Cleanup process but it can also be used for analyzing system logs from different scenarios. You can analyze several groups of logs (from several periods of the server operation) at the same time.

The tool is applicable for all SAP NetWeaver versions (from 6.40 to 7.20 and higher).

- [Download and test the tool](#)
- Go to [the wiki](#) for more information about Log Analysis

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Author Bio



Nikola Marchev has been at SAP for 10 years. His career developed from a junior developer through a senior developer to a team lead. He is currently the SCRUM master of the Supportability and Diagnostics team. Nikola is working in the Lifecycle Management (LM) area focusing on logging, configuration and administration of the AS Java.

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Concept and Usage

Log Analysis is an SAP tool for analyzing AS Java logs and traces. Initially, it was developed for the Logging Cleanup process but it can also be used for analyzing system logs from different scenarios. You can analyze several groups of logs (from several periods of the server operation) at the same time.

Prerequisites

You need Java 1.5 version and OS with GUI. The tool is tested only on Windows, but is expected to work also on Unix/Linux systems.

Before rushing to use it, bear in mind that:

- The tool does not have its own logging so you may observe traces and exceptions in the console even when the tool is working properly.
- The logs are completely filled (20 files for Default Trace or 5 files for the log file sets), so it is possible that some statistics are wrong. This should not be a problem, as all logs are deleted in the begging of logging cleanup scenarios. And if they are filled at the end, this is mostly due to a wrong log configuration (which must be fixed before starting logging cleanup scenarios).
- In case bugs appear, you can contact nikola.marchev@sap.com, but the request will be treated with low priority.
- Source code is attached in **src.zip**, so you can do any changes you need. New requirements will be hardly accepted.

Scenarios

Analyzing All Logs

As the logs cannot be deleted runtime, follow the steps to analyze the logs from the last startup:

1. Open the tool using the **la.bat** file. In case you do not use Windows, you can check the content of *la.bat* and create your own *sh* script file, or do whatever is comfortable for you.
2. Deselect the *Chain scenario analysis* checkbox. (It is selected by default on start.)
3. Select the current logs folder, keep *Old logs* empty and select the *Output* folder.

Recommendation:

We recommend that you leave it empty or choose a new folder as there will be more than one result files. We also recommend that the output folder is outside the logs folder.

4. Check the reports table and deselect the report you do not need. When a report is selected, you can see its description under the table.
5. Choose the *Analyze* button and wait until the progress bar reach 100%.

Using Old logs

Mostly, you are interested in the logs from a particular scenario and you do not want the logs from the startup or previous scenarios to interfere your analysis. In this case, you have to make a copy of the logs before starting your scenario, and one more copy afterwards.

For example: stop → delete all logs → start again → get the primary logs → deploy a new application → get the secondary logs. Then, you can analyze the logs only from the new application deploy. Procedure:

1. Open Log Analysis Tool.
2. Deselect the *Chain scenario analysis* checkbox. (It is selected by default on start.)
3. In the current logs, select the folder containing the secondary copy of logs, and in *Old logs*, select the primary copy.

4. Select the *Output* folder.

Recommendation:

We recommend that you leave it empty or choose a new folder as there will be more than one result files. We also recommend that the output folder is outside the logs folder.

5. Check the reports table and deselect the report you do not need. When a report is selected, you can see its description under the table.

6. Choose the *Analyze* button and wait until the progress bar reach 100%.

Analyzing Chain Scenarios

Typical and simple chain scenario is:

1. Stop AS Java (the application server).
2. Delete all logs.
3. Start again AS Java.
4. Get the first copy of logs.
5. Wait an hour.
6. Get the second copy of logs.
7. Stop AS Java.
8. Get the third copy of logs.

To make analysis of all 3 copies, you can first analyze the primary logs alone, then - the secondary copy via "*Old logs*" and finally - the tertiary copy again via "*Old logs*". In case there are 5 or more scenarios, the process takes more time, so it should be automated. Here is how you can do it:

1. Open Log Analysis Tool.
2. Select the *Chain scenario analysis* checkbox. Additional progress bar appears.
3. In *Current logs*, you can select more than one folder - enter the folder names separated by ";" or use the browse ("...") button. Be careful to add scenarios in the correct order; otherwise you will have wrong reports!
4. Select the *Output* folder.

Recommendation:

We recommend that you leave it empty or choose a new folder as there will be more than one result files. We also recommend that the output folder is outside the logs folder.

5. Check the reports table and deselect the report you do not need. When a report is selected, you can see its description under the table.
6. Choose the *Analyze* button and wait until both progress bars reach 100%.

Reports

Changing Reports Selected by Default

A file named "**DefaultReports.txt**" is available. It contains all names of reports ending with "=ON" or "=OFF". "ON" is case sensitive and means the report will be selected by default. Any other value means the report will not be selected by default.

Standard Reports

The typical report is a table of type "Severities per CSN component" or "Severities per location" and is stored in files named after the report and with extension **.xls**. These are not real XLS files, but tab-separated tables that can be opened with MS Excel.

Warning:

For versions 7.0x, the CSN component is not part of the log and is got from the **PackageToCsn.txt** mapping file. The mappings are not 100% correct, so in case of errors you can edit the mapping file.

Special Reports

- Excerpts by CSN component and file - this report creates its own folder and stores all logs and traces. A file contains the logs or traces written in one of the original files from the code in responsibility of only one CSN component. If you write a CSN for too many logs, attaching the correct excerpts is a quite helpful hint so that the developer often does not need any additional logs to resolve the problem (CSN).
- Agreed exceptions - this report gives a number of agreed exceptions of the main KPIs that are described in the **AgreedExceptions.txt** file. Note that this is a separate report and defining some logs as agreed exception will not exclude them from the other reports.
The format of the file is: each line is one exception definition with 3 fields separated by "|", i.e. **<Location>|<Text>|<CSN component>**.
The text is part of the log message and will be searched by the "contains" filter, so that any log containing the <text> will be treated as an agreed exception from that type. Therefore, we recommend that you write longer texts.

Example

The log which has to be excluded is the INFO log for starting application, resulted from the deploy. So, the agreed exception definition will look like **com.sap.engine.services.deploy|Operation startApp over application|BC-JAS-DPL** .

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