

Tracing Address-Assignment Pool Processes

The JUNOS software trace operations feature tracks address-assignment pool operations and records events in a log file. By default, the tracing operation is inactive. To trace address-assignment pool processes, you specify flags in the **traceoptions** statement at the **[edit system processes general-authentication-service]** hierarchy level. The default tracing behavior is the following:

- Important events are logged in a file called **authd** located in the **/var/log** directory. You cannot change the directory (**/var/log**) in which trace files are located.
- When the file **authd** reaches 128 kilobytes (KB), it is renamed **authd.0**, then **authd.1**, and so on, until there are three trace files. Then the oldest trace file (**authd2.** is overwritten. For more information about how log files are created, see the *JUNOS System Log Messages Reference*.
- Log files can be accessed only by the user who configures the tracing operation.

To configure address-assignment pool tracing operations:

1. Specify that you want to configure tracing options.

```
[edit system processes general-authentication-service]
user@host# edit traceoptions
```

2. (Optional) Configure the name for the file used for the trace output.

See “Configuring the Address-Assignment Pool Trace Log Filename” on page 2.

3. (Optional) Configure the number and size of the log files.

See “Configuring the Number and Size of Address-Assignment Pool Processes Log Files” on page 2.

4. (Optional) Configure access to the log file.

See “Configuring Access to the Log File” on page 2.

5. (Optional) Configure a regular expression to filter logging events.

See “Configuring a Regular Expression for Lines to Be Logged” on page 3.

6. (Optional) Configure flags to filter the operations to be logged.

See “Configuring the Trace Operation” on page 3.

The tracing options are described in the following sections:

- Configuring the Address-Assignment Pool Trace Log Filename on page 2
- Configuring the Number and Size of Address-Assignment Pool Processes Log Files on page 2
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Configuring the Address-Assignment Pool Trace Log Filename

By default, the name of the file that records trace output for address-assignment pools is `authd`. You can specify a different name by including the `file` statement at the `[edit system processes general-authentication-service]` hierarchy level:

To configure the filename for address-assignment pool tracing operations:

- Specify the name of the file used for the trace output.

```
[edit system processes general-authentication-service traceoptions]
user@host# set file aap_logfile_1
```

Configuring the Number and Size of Address-Assignment Pool Processes Log Files

By default, when the trace file reaches 128 kilobytes (KB) in size, it is renamed `filename.0`, then `filename.1`, and so on, until there are three trace files. Then the oldest trace file (`filename.2`) is overwritten.

You can optionally configure the maximum file size to be from 10 KB through 1 gigabyte (GB). You can also specify the number of trace files to be from 2 through 1000.

For example, you can set the maximum file size to 2 MB, and the maximum number of files to 20. When the file that receives the output of the tracing operation (`filename`) reaches 2 MB, `filename` is renamed `filename.0`, and a new file called `filename` is created. When the new `filename` reaches 2 MB, `filename.0` is renamed `filename.1` and `filename` is renamed `filename.0`. This process repeats until there are 20 trace files. Then the oldest file (`filename.19`) is overwritten by the newest file (`filename.0`).

To configure the number and size of trace files:

- Specify the name, number, and size of the file used for the trace output, by including the `files` and `size` options with the `traceoptions` statement.

```
[edit system processes general-authentication-service traceoptions]
user@host# set file aap_logfile_1 files 20 size 2097152
```

Configuring Access to the Log File

By default, log files can be accessed only by the user who configures the tracing operation. You can allow all users to read the log file and you can explicitly set the default behavior of the log file.

To specify that all users can read the log file:

- Configure the log file to be world-readable.

```
[edit system processes general-authentication-service traceoptions]
```

```
user@host# set file aap_logfile_1 world-readable
```

To explicitly set the default behavior, in which the log file can only be read by the user who configured tracing:

- Configure the log file to be no-world-readable.

```
[edit system processes general-authentication-service traceoptions]  
user@host# set file aap_logfile_1 no-world-readable
```

Configuring a Regular Expression for Lines to Be Logged

By default, the trace operation output includes all lines relevant to the logged events. You can refine the output by including regular expressions (regex) that will be matched.

To configure regular expressions to match:

- Configure the regular expression.

```
[edit system processes general-authentication-service traceoptions]  
user@host# set file aap_logfile_1 match regex
```

Configuring the Trace Operation

By default, only important events are logged. You can specify which trace operations are logged by including specific tracing flags. The following table describes the flags that you can include.

Flag	Description
address-assignment	All address-assignment pool events
all	All tracing operations
configuration	Configuration events
framework	Authentication framework events
ldap	LDAP authentication events
local-authentication	Local authentication events
radius	RADIUS authentication events

To configure the flags for the event to be logged:

- Configure the flags.

```
[edit system processes general-authentication-service traceoptions]  
user@host# set flag address-assignment
```

