NAME

logksi integrate - Integrate the log signature blocks file and respective KSI signatures file into a final log signature file.

SYNOPSIS

logksi integrate <*logfile*> [**-o** <*out.logsig*>]

DESCRIPTION

Integrates the two temporary files created while asynchronously signing the log file <*logfile*>:

- the log signature blocks file: <*logfile*>*.logsig.parts/blocks.dat*; and
- the log signature file containing the respective KSI signatures: <*logfile*>*.logsig.parts/block-signatures.dat*.

If the output file name is not specified, it is derived from the name of the log file <*logfile*> by adding the standard suffix *.logsig*. An attempt to overwrite an existing log signature file will result in an error, unless the **--force-overwrite** option is specified.

The integration of the files can be performed once both files are complete. **logksi integrate** waits to acquire a read lock on the files before integrating them. The read lock is advisory and relies on the same implementation in the signing application.

If the temporary files do not exist, but a matching log signature exists, it is assumed that the log signature is the output of a synchronous signing process. **logksi integrate** waits to acquire a read lock on the log signature file and then skips the actual integration. The read lock is advisory and relies on the same implementation in the signing application.

During integration the following is checked:

- The order of log blocks in *blocks.dat* and KSI signatures in *block-signatures.dat* needs to match.
- The root hash of each block in the log signature blocks file needs to be equal to the one in the KSI signatures file.

If some KSI signatures are missing from the log signature file *block-signatures.dat*, a respective *no-sig* field is recognised and integration is performed anyway. A warning message is printed about the missing KSI signatures with a recommendation to run **logksi sign** to acquire the missing signatures.

OPTIONS

<*logfile*>
: Log file to which the temporary files belong to.

-o <*out.logsig*>
: Specify the name of the integrated output log signature file; recommended file extension is *.logsig*. If not specified, the log signature file is saved as <*logfile*>*.logsig* in the same folder where the <*logfile*> is located. An attempt to overwrite an existing log signature file will result in an error. Use '-' as file name to redirect the output as a binary stream to *stdout*.

--insert-missing-hashes
: Pre-emptively repair the log signature by inserting missing final tree hashes. Final tree hashes might be missing if the Merkle tree is not perfectly balanced. If the option is not used during integration, a warning message is printed about missing hashes with a recommendation to run **logksi sign** with the **--insert-missing-hashes** option. Inserting missing hashes improves verifiablity, but a log signature without final tree hashes is verifiable as well.

--force-overwrite
: Force overwriting of an existing log signature. If the existing log signature contains KSI signatures obtained during sign recovery, these signatures are lost and must be obtained again by running **logksi sign**.

-d Print detailed information about processes and errors to *stderr*.

--log *file*
Write *libksi* log to the given file. Use '-' as file name to redirect the log to *stdout*.

EXIT STATUS

See **logksi**(1) for more information.

EXAMPLES

1 To integrate temporary files */var/log/secure.logsig.parts/blocks.dat* and */var/log/secure.logsig.parts/block-signatures.dat* into a complete log signature file with the default name */var/log/secure.logsig*:

logksi integrate */var/log/secure*

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SEE ALSO

logksi(1), **logksi-extend**(1), **logksi-extract**(1), **logksi-sign**(1), **logksi-verify**(1), **logksi-conf**(5)