

Hierarchy of Timing Parameters

When a Map_Descriptor polls a data-point on a node, the timeout for this poll can be set as part of the Map Descriptor, Node, or Connection. The proper timeout for the poll is determined as follows:

- Map descriptor timeouts take highest priority.
- Node timeouts take medium priority.
- Connection timeouts take lowest priority.

All timeouts have the same default value (currently 2 seconds). If a timeout value equals the default, it is deemed not to have been specified, and the next lowest priority timeout value is then used. If a configuration file explicitly specifies a default value a warning is generated that this default value will not override a different value in a lower priority timeout.

In general, the best place to set timeouts is in the connection. Only if there are disparate devices on the same connection is it necessary to set device-specific timeouts. Only in the extremely unlikely case that the same device handles different operations (e.g. reads and writes) differently will it be necessary to set map descriptor-specific timeouts.

1. Example

Map descriptor timeout: not specified (default: 2 s)
Node timeout: 1 s
Connection timeout: not specified (default: 2 s)
Actual Timeout is 1 s

2. Example

Map descriptor timeout: 2 s
Node timeout: 1 s
Connection timeout: not specified (default: 2 s)
Actual timeout is 1 s

A kernel warning is generated (map descriptor timeout is specified same as default)

3. Example

Map descriptor timeout: 1 s
Device timeout: not specified (default: 2 s)
Connection timeout: 2 s
Actual timeout is 1 s

4. Example

Map descriptor timeout: not specified (default: 2 s)
Device timeout: not specified (default: 2 s)
Connection timeout: 3 s
Actual timeout is 3 s