

# Monitoring Node Instances

When operating services on a Bridge, it might happen that unexpected errors occur. In such cases, as a rule the system should respond on such incidents, for example send a message to the system administrator. The built-in monitoring feature gives you a global monitoring functionality, which can catch failure events for any service running on the Bridge. Such events can be errors that were not caught within a service and are written to its Bridge server log, a service that terminates unexpectedly or an adapter call that does not return within a given length of time. The monitoring is defined globally for all deployed services and is not set up for a single service only.

If such an error event occurs, the Bridge calls the registered monitoring service, that executes whatever has to be done in this case, for instance sending an e-mail to the system administrator. The monitoring service is just another SOAP service that is running on the Bridge and is registered as monitoring service. If any service on the Bridge has an error (level Fatal or Error) or even is terminating unexpectedly, the Bridge calls the registered monitoring service. In this service, you are free to implement anything you want, all Bridge features are available. The only requirement is that the service provides a specific frontend SOAP or HTTP interface, corresponding to the Bridge calls. For details, refer to the [xUML Services Reference Guide](#).

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## Registering the Monitoring Service

After you have deployed the monitoring service to the Bridge, you need to register it with the **Bridge** at the node preferences page. For that purpose, you have to define the SOAP URL of the monitoring service. Usually, the SOAP URL of the monitoring service is **`http://<hostname>:<port>/<package name(s)>/<E2ESOAPPortType>`**.

Figure: Node Instance with Monitoring Service Registered

The screenshot shows the 'e2ebridge.e2e.ch' node preferences page. The 'Overview' tab is active, displaying system information like 'Schnee PAS BRIDGE', 'Operating System: Linux 3.10.0-682.14.4.el7.x86\_64', 'Bridge API: 2.9.0', 'Node Instance Name: e2ebridge.e2e.ch', 'Port Number: 8080', 'Domain Name: Education', and 'Domain Id: 201903111407'. Below this is the 'Memory for Bridge Process' section. The 'Preferences' tab is also visible, showing settings for 'Delete Logs Older Than: 30', 'Log Level: Info', 'Trace Requests: [ ]', 'Disable Automatic Service Startup: [ ]', 'Display Name: Bridge', and 'Maximum Upload Size: 128'. The 'Monitoring SOAP URL' field is highlighted with an orange box, and the 'Monitoring SOAP URL Fallback' field is also visible. The 'Monitoring HTTP URL' and 'Monitoring HTTP Fallback' fields are also present. The 'Long Running Session Threshold' is set to 30. The 'Last check' is 'Sep 19, 2019, 1:44:22 PM'.

Actually, it is even possible that the monitoring service fails. Thus, a fallback monitoring service can optionally be specified in field **Monitoring SOAP URL Fallback**. This fallback service can even run on another Bridge.

- If you register **no** monitoring service then nothing happens.
- If you register **one** monitoring service then this service is called.
- If you register **two** monitoring services then the first service is called. If the call fails, means the monitor throws an exception by itself or does not response within three seconds, then the second service is called.

The service call time out is three seconds, so the monitoring service should respond within this time.

## Monitoring Long Running Sessions

Services often need to access backends via adapter calls. If a service is executing an adapter call longer than the threshold given in **Long Running Session Threshold**, the monitoring service is called. The threshold is specified in minutes and is checked twice during that period of time. To disable the threshold check, enter 0.

You can monitor running sessions of xUML services using the [Status tab](#) of the service.