

How To Start External Adapters in a Unix Environment

Document Information

- XI Area: External Adapters
- Release: XI 1.0
- Keywords: UNIX

Problem Descriptions and Procedures

Capturing standard output and errors in a flat file.

The following instructions allow for the launching of an external adapter from the Unix prompt, enabling the capturing of standard output as well as error output into an OS based file.

Generically speaking the following formats can be used:

For C Shell (csh):

- ProgramName >& Outfile

For Korn Shell (ksh):

- ProgramName > Outfile 2>&1

For Bourne Shell (bsh):

- ProgramName 2> Outfile 1>&2

Running the adapter as a background process.

On occasions it becomes necessary to launch programs as background processes, this can be achieved by placing an '&' character at the end of the command.

For example, from the above statement:

For Korn Shell (ksh) without background processing:

- ProgramName > Outfile 2>&1

The command for background processing would read:

- ProgramName > Outfile 2>&1 &

The only limitation of this is that if the window (terminal) that was utilized to launch the command were closed, the process would be terminated. To avoid this problem, the **nohup** instruction could be utilized to intercept the hang-up signal sent by the OS to the program in question.

The command would now look like this for a Korn shell:

- **nohup** ProgramName > Outfile 2>&1 &

For the Bourne shell, it is also possible to utilize the **trap** command with the purpose of catching signals that are sent to the shell process that invoked the adapter, this would require the modification of the run_adapter.cmd. by entering **trap ' 1** prior to invoking the adapter (java....), for example :

```
#!/bin/sh

trap ' 1

java -classpath
"aii_msg_adapter.jar;aii_msg_runtime.jar;aii_util_log.jar;inqmyxml.jar;logging.jar;jms.jar;servlet.jar;$CLASSPATH;."
com.sap.aii.messaging.adapter.AdapterImpl
```



Ensuring the adapter runs when the Unix OS is started.

To ensure that the external adapter is started when the Unix OS is started, you will need to coordinate with the system administrator to:

- 1) Create (or have the System Administrator create) a startup script for the XI External Adapters utilizing guidelines given by the system administrator. In many cases parameters are passed to these scripts such as 'start' or 'stop' that need to be taken into consideration.
- 2) Once the script is done, place this file in the directory specified by the System Administrator, typically this directory is the /etc/rc3.d directory. It is possible that you could be provided with another location for this script and the Administrator would reference the script indirectly. The /etc/rc3.d directory contains a number of startup scripts that get invoked directly when the system reaches run-level 3 (multi-user).
- 3) Consult with the system administrator to see if a script would be needed for the case when the system is being shutdown.

These steps are only a general guideline; please consult the Administrator for more details.

Ensuring that External Adapter modules get started automatically.

The instructions provided above allow for the automatic startup of the adapter itself. All modules specified in the following line of the properties file will be brought to a state of Initialized:

```
modules= A, B, C
```

If modules need to be brought to a started state automatically, the following combination is needed in the properties file:

```
modules= A, B, C  
modules.startup=A, B
```

The above example will bring A,B and C modules to the initialized state and subsequently bring modules A and B to a started state.

Regarding use-ids needed to startup the adapter.

The Adapter get installed with root user id privileges. If you would like to start the program with a user id other than root please be aware that some Unix versions will not start a program listening on ports 0 through 1024.