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Manual start of Integrator tasks

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**Integrator V2/V3**

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## **PURPOSE OF THIS DOCUMENT**

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The purpose of this document is to familiarize Integrator V2/V3 user with the step by step procedure to start the product and to monitor it during this time.

## **WHO SHOULD READ THIS DOCUMENT**

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This document is intended for any user interested in diagnosing a product start issue.



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## 1. Introduction

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This procedure is intended for the users that desire to start the product one task at a time, the manual equivalent of the "Start all" command from Task Monitor or the result of the command line "core\_servers start".

One of the biggest advantage of the manual start is that the tasks process can be monitored in real time for CPU or memory usage. Another advantage is that in case of error, the user can easily identify the task that is causing the issue.

## 2. Prerequisites steps before starting the product

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Before starting the product, no Integrator process should be running. Integrator process may remain active after an incorrect stop of the product. A list of all processes should be done before the start and in the case that Integrator processes are already running, a force stop should be executed : "core\_servers stop -F".

The start command will be executed using the parameter "-S" ( core\_servers start -S ). This parameter will start the product without starting the tasks.

After the start command is executed the file "\$CORE\_DATA/log/starter.log" should be verified for error messages. In case of errors in the "\$CORE\_DATA/log/starter.log", before starting the tasks, these errors should be analysed and addressed accordingly.

## 3. Manual start of Integrator Tasks

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The Integrator tasks have certain dependencies between them therefore a specific order needs to be followed for the tasks to start in the correct order.

During the manual start, the CPU usage of the processes should be monitored at all time as well as the XIB trace.



### 3.1. Manual start of Core Tasks

The starting of the core tasks is the most important step. This is the list of the core tasks as it is displayed in Task Monitor:

- Alerter Task
- Filer Task
- Hierarchical Messaging Task
- Logger Task
- Processing Engine Task
- Queue Task
- Table Task
- Timer Task
- Trace Task
- Transfer Gateway Task

There are several dependencies between these tasks and in order to have them started one at the time the above order should be taken into account.

#### 3.1.1. Starting the Trace Task

All tasks in Integrator depend on the Trace server, therefore before starting any other task the trace task should be started. Please note that If the trace task is stopped all other tasks will stop also.

The screenshot shows two windows from the rs44 system. The top window is 'rs44 - Task Monitor', which displays a tree view of tasks under the 'CORE' category. The tasks listed are: Archiver Task, Alerter, Filer, Hierarchical Message Processor, Logger, Processing Engine, Queue, Table, Timer, Trace, and Transfer Gateway. The bottom window is 'rs44 - Trace Viewer', which shows a table of trace entries. The table has columns for Favourite Filters, Date-Time, Program, and Message. The table is currently empty. To the right of the Task Monitor window is a terminal window titled 'eva.lab.buch.axway.int - PUTTY'. It displays system status information, including CPU states, memory usage, and swap usage. Below this information is a list of processes with columns for PID, USER, PRI, NI, SIZE, RSS, SHARE, STAT, %CPU, %MEM, TIME, CPU, and COMMAND. The processes listed include 'top', 'init', 'migration/0', 'migration/1', 'migration/2', 'migration/3', 'keventd', 'ksoftirqd/0', 'ksoftirqd/1', 'ksoftirqd/2', 'ksoftirqd/3', 'bdflush', 'kswapd', 'kscand', 'kupdated', 'mdrecoveryd', 'scsi\_eh\_0', 'kjournald', 'kreiserfsd', 'irgbalance', 'portmap', 'rpc.statd', 'mdadm', 'dcd\_tmr\_threa', 'Megaserv', 'rpciod', 'lockd', 'xinetd', and 'vsftpd'.

Once the Trace has been started, a continuous search can be run in the Trace Viewer in order to identify any possible Error or Warning message.

### 3.1.2. Starting the Alerter, Filer, Logger, Queue, Table and Timer tasks

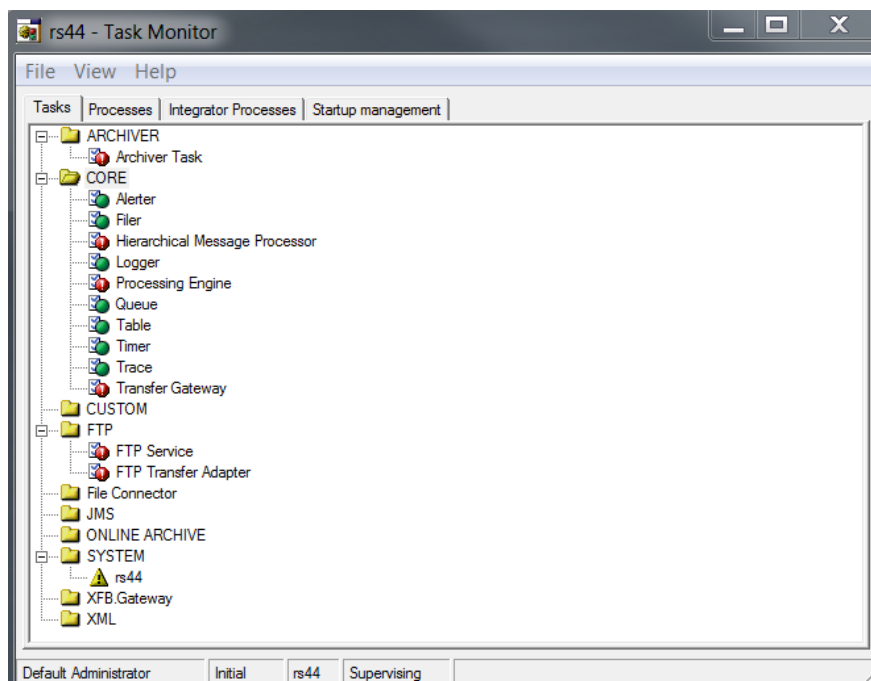
The Alerter, Filer, Logger, Queue, Table and Timer tasks have as dependencies only the Trace task. These tasks should be started one at the time verifying after each task if there are any error messages in Trace Viewer or if the process is consuming CPU.

Usually a large amount of CPU is used after the start by the Logger task in the case when it needs to do the re-indexing. If the re-indexing will start a message will be provided in the Trace Viewer that will notify the user.

The re-indexing is done by the Logger if the server has not been shut down correctly or if there are any inconsistencies in the Logger files.

Unless the environment variable "LOGGER\_OPTION= -D" is used, until the Logger finishes the re-indexing no processing will be done in Integrator, therefore no other tasks should be started until the re-indexing is finished.

Similar behaviour may be encountered for the other tasks, meaning that the CPU usage should be checked constantly after the start of each task. If a high usage of CPU is noticed then the user should wait until the usage decreases before starting any other tasks.



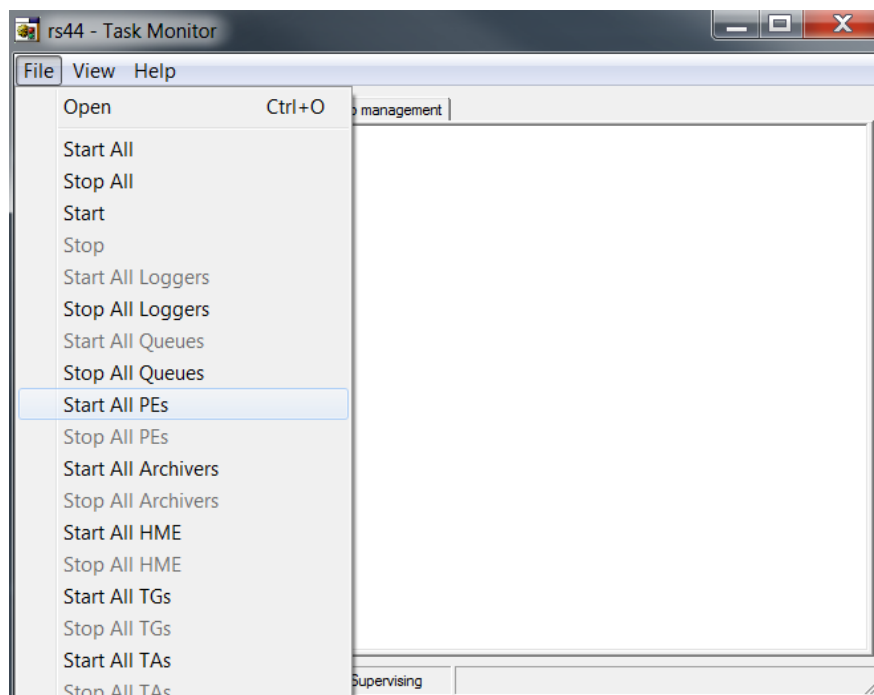
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### 3.1.3. Starting the Processing Engine Tasks

All the Hierarchical Message Environments (HME), the Transfer Gateway and the Transfer Adaptors (or CommAdaptors) have as a dependency one or more Processing Engine Task. In conclusion, before starting the any other task the Processing Engines should be started.

All Processing Engines can be started by using the option "Start All PEs" (see image below).

Before proceeding to the next step make sure that all the Processing Engine tasks from the Task Monitor are green.



### 3.1.4. Starting the Hierarchical Message Environment and the Transfer Gateway

Before starting the Hierarchical Message Environment and the Transfer Gateway, if a Sentinel task is used, it should be started and checked that there are no errors in connecting to the Event Router or the Sentinel Server. If the Sentinel Task is not correctly started, the HME and the TG will not start.

As for the Processing Engines, the HME and TG can be started all from the Task Monitor using the options "Start All HEM" and "Start All TGs".

After the HMEs are started, if there are messages left in the Queues, the Integrator will start processing them.

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Even if the TG has been started, no messages can enter or exit the product until the Communication tasks are started.

### **3.2. Manual start of Communication tasks and other tasks**

Once the Core tasks have been successfully started, the Communication tasks can be started as well as the Archivers and the Logger Restore task if present.

The Communication tasks should be started as well one at a time. If there are separate task for input and output then the output task should be started first in order to allow the files that were in the queues to be send before receiving new messages.

If the product has been stopped for a long time, error and warning messages may be seen in the Trace Viewer caused by timeouts.

