

IBM Platform Symphony 7.1 Fix Pack 1 RFE56318 readme file

About seamlessly moving your SSM from one server to another

This fix enables you to seamlessly migrate your SSM from one server to another, so that the recoverable and unrecoverable sessions can be used with the new SSM after the migration. The running workload will keep running, and SIM will send the result to SSM after the migration.

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1. Scope

Applicability	
Operating system	Linux x86_64 RHEL 5/6/7
Symphony version	7.1 Fix Pack 1
Cluster types	This feature applies to Platform Symphony cluster
Dependencies	
File system	None
Limitations	
Known Issues	None

2. Configuration of this patch

1) Prerequisites

To apply this fix, you must have a Platform Symphony 7.1 Fix Pack 1 cluster.

2) Installation files

The package includes the following files:

File name	Description
<code>sym-7.1-management-build362208-linux2.6-glibc2.3-x86_64.tar.gz</code>	The package that contains the new feature for Linux x64bit for Platform Symphony 7.1 Fix Pack 1 management hosts.
<code>sym-7.1-compute-build362208-linux2.6-glibc2.3-x86_64.tar.gz</code>	The package that contains the new feature for Linux x64bit for Platform Symphony 7.1 Fix Pack 1 compute hosts.
<code>checksum.md5</code>	The file that contains the MD5 checksum for <code>sym-7.1-management-build362208-linux2.6-glibc2.3-x86_64.tar.gz</code> and <code>sym-7.1-compute-build362208-linux2.6-glibc2.3-x86_64.tar.gz</code> .

3) Installation procedure

a. Before installation

1. Shut down the cluster using the following commands:

```
soamcontrol app disable all -f
egosh service stop all
egosh ego shutdown
```

2. Clean up the GUI work directory and the browser cache:

```
rm -rf gui/work/*
```

b. Installation steps

1. Back up the following directories on all management hosts:

```
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/bin
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/etc
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/lib64
$EGO_TOP/gui/soam/7.1/soamgui
```

2. Back up the following directories on all compute hosts:

```
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/bin
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/etc
$EGO_TOP/soam/7.1/linux2.6-glibc2.3-x86_64/lib64
```

3. Copy the sym-7.1-management-build362208-linux2.6-glibc2.3-x86_64.tar.gz file to the \$EGO_TOP directory on all management hosts, and decompress the package.

4. Copy the sym-7.1-compute-build362208-linux2.6-glibc2.3-x86_64.tar.gz file to the \$EGO_TOP directory on all compute hosts, and decompress the package.

5. Start the cluster:

```
egosh ego start
```

6. Source the Symphony environment in a new shell window:

For csh:

```
source cshrc.platform
```

For bash:

```
. profile.platform
```

c. Configuration

You can configure a folder for the migration reconnection files by adding the SOAM_MIGRATION_RECONNECT_DIR environment variable in the sd.xml file. For example, to use the /opt/migration folder for the migration reconnection files, configure the sd.xml file as follows:

```
<ego:EnvironmentVariable
name="/opt/migration">/opt/migration</ego:EnvironmentVariable>
```

Note that since migration reconnection files will be created under this folder, ensure this folder already exists with appropriate permissions.

d. Verification

Run the soammigrate command to migrate the SSM from one management host to another. All recoverable and unrecoverable sessions in the original SSM can be migrated to the new SSM.

3. Usage

1) How this feature works

This fix includes a new command:

soammigrate app start appName [-f] [-s simReconnectionTimeout] [-r resReq]

Use it to migrate the SSM from one server to another.

where:

-f:

If specified, indicates that this command will be executed without a confirmation prompt.

-s simReconnectionTimeout:

Timeout in seconds for the SIM to connect to the new SSM. Valid values are from 300 to 216000. The default value is 300. If a SIM cannot connect to the new SSM within simReconnectTimeout seconds after the new SSM sends out the reconnection notification, that SIM will be terminated. SSM will re-queue the workload in it and will re-run it later.

-r resReq:

A resource requirement string for the migration destination host. Note that this resReq only applies to migration; it does not change the SSM resReq in the application profile for future SSM failover.

If you do not specify resReq in the command, one of the following happens:

- If resReq is not defined in the application profile, the command uses "select(!current_ssm_hostname)".
- If resReq is defined in the application profile (such as "select(A)"), the command uses "select((A) && !current_ssm_hostname)".

2) Examples

Case 1: Use soammigrate command to migrate SSM from one management host to another.

Summary

Use soammigrate command to migrate SSM from one management host to another.

Pre-Conditions

1. Two or more management hosts in the cluster.
2. Submit recoverable and unrecoverable workload.

Scenario

Run soammigrate command for the application.

Post-Conditions

All recoverable and unrecoverable sessions in the original SSM can be migrated to the new SSM.

4. Notes

- With the `simReconnectionTimeout` parameter provided to the “soammigrate” command, the SIM will connect to the new SSM within `simReconnectionTimeout` (default value is 300 seconds). Attempting a second migration within `simReconnectionTimeout` will cause SIMs that have not connected to the new SSM to exit. It is recommended not to run the “soammigrate” command twice within the `simReconnectionTimeout` period.
- During the SIM reconnection period (`simReconnectionTimeout`), the new SSM needs to collect task and SIM information progressively. During this period, using `soamview` command to view the workload details may show incomplete information. After the SIM reconnection period, the session/task/SIM information will be complete.
- **For Multi SSM feature:**
 - 1) Migrate logical application:
No impact to physical application and client. Client could submit workload during logical application migration
 - 2) Migrate physical application:
 - a) `taskLevelRedirection`
Tasks for a logical session are spread across multiple physical applications/SSMs. Client will be blocked for workload submission until the SSM finishes migration.
 - b) `sessionLevelRedirection`
The configuration transparently determines which physical application/SSM each session will be submitted to. If a client happens to be submitting workload to the migrating SSM, the client will be blocked until the SSM finishes migration; otherwise, the client could submit workload normally.
- **For Recursive workload feature:**
When migrating an application that contains Recursive workload, the SSM will reject the `soammigrate` request and CLI will get a message describing that the application contains Recursive workload. SSM migration does not support Recursive workload. When migrating an application that created Recursive workload during migration, the SIM that manages the Recursive workload will be restarted and the task on that SIM will re-run after the SSM finishes migration.
- In the design, it is not allowed to kill or suspend the migrating tasks from CLI or GUI. If you attempt to kill or suspend the migrating task from GUI, you will get the exception message “Cannot kill task <taskno>”. The task has already completed. You can only kill RUNNING or PENDING tasks”.

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