IBM Platform Symphony 6.1.1 Fix Pack 2 Readme File

Description

This fix pack includes various fixes for Platform Symphony 6.1.1. Apply it to your Platform Symphony management, compute, and client hosts.

Readme file for: IBM® Platform Symphony
Product/Component Release: 6.1.1
Update Name: Fix Pack 2
Fix ID: sym-6.1.1-build410162-citi
Publication date: 15 July 2016
Last modified date: 20 April 2017

1. Download location

Download this fix pack from the following location:
http://www.ibm.com/eserver/support/fixes/

2. Scope

Applicability	
Operating systems	Linux2.6-glibc2.3-x86_64
Platform Symphony version	6.1.1
Cluster types	This fix pack applies to a single Platform Symphony grid cluster or client. This fix pack does not apply to Platform Symphony Developer Edition.

Installation files	`ego-lnx26-lib23-x64-1.2.8.rpm`
	`egocomp-lnx26-lib23-x64-1.2.8.rpm`
	`soam-lnx26-lib23-x64-6.1.1.rpm`
	`symclnt-lnx26-lib23-x64-6.1.1.rpm`

3. Installation

3.1 Notes

1. This fix pack only affects Platform Symphony (including EGO). It does not affect an existing LSF cluster.
2. You need root permission to install the RPM package.
3. Stop all Platform Symphony and EGO daemons and processes before you install this fix pack.

4. If you do not have Platform Symphony 6.1.1 installed, install this fix pack instead as it contains Platform Symphony 6.1.1 and the updates included with RPM fix pack 1 and RPM fix pack 2.

   If you already have RPM fix pack 1 installed (which can be installed on top of Platform Symphony 6.1.1 or as a fresh installation), and you want to upgrade it to get the updates included with this fix pack, first apply sym-6.1.1-build393834 to upgrade your Apache Tomcat to version 6.0.45, and then install this fix pack.

   Note: This RPM (fix pack 2) can only be applied on the basis of RPM fix pack 1. Direct upgrade from Platform Symphony 6.1.1 is not supported.

5. For the RPM package:

   - Use RPM version 4.2.1 or later.
   - Use the same prefix that was used for the initial installation.
   - Use the same dbpath that was used for the initial installation.

   For example, if the dbpath `/opt/ibm/platformsymphony/db` and prefix `/opt/ibm/platformsymphony` were used in the initial RPM fix pack 1 installations, then the same dbpath and prefix must be used when installing this RPM (fix pack 2):

   ```
   rpm -Uvh ego-lnx26-lib23-x64-1.2.8.rpm --prefix
   /opt/ibm/platformsymphony --dbpath /opt/ibm/platformsymphony/db --
   nopreun --nopostun
   ```

6. Platform Symphony Developer Edition packages and SDK packages are beyond the scope of this fix pack.
7. All listed interim fixes are included in this fix pack. Refer to the list of fixes section for details.

3.2 Before installation

1. Shut down the cluster.

   Log on to the master host as the cluster administrator and run:

   ```
   > source cshrc.platform
   > soamcontrol app disable all
   > egosh service stop all
   > egosh ego shutdown all
   ```

2. Back up the cluster.

   Back up the whole cluster before you update.

   On management and compute hosts:

   ```
   > cd $EGO_TOP
   > tar zcf Sym6.1.1_backup.tar.gz .
   ```

   On client host:

   ```
   > cd $SOAM_HOME
   > tar zcf Sym6.1.1_client_backup.tar.gz .
   ```

3.3 Installation steps

- The RPM package is a full package that can be used to install a new cluster, run the RPM install option on each host in the cluster to install the EGO package first, then the SOAM package.

  For example, to install this fix pack on a Linux 2.6 management host, set the cluster environment variables such as `CLUSTERADMIN` and `BASEPORT`. Then, run:

  ```
  > rpm -ivh --prefix <sym611_mg_prefix> --dbpath <sym611_mg_dbpath> ego-lnx26-lib23-x64-1.2.8.rpm
  > rpm -ivh --prefix <sym611_mg_prefix> --dbpath <sym611_mg_dbpath> soam-lnx26-lib23-x64-6.1.1.rpm
  ```

  To install this fix pack on a Linux 2.6 compute host, set the environment variables and run:

  ```
  > rpm -ivh --prefix <sym611_comp_prefix> --dbpath <sym611_comp_dbpath> egocomp-lnx26-lib23-x64-1.2.8.rpm
  > rpm -ivh --prefix <sym611_comp_prefix> --dbpath <sym611_comp_dbpath> soam-lnx26-lib23-x64-6.1.1.rpm
  ```

  To install this fix pack on a Linux 2.6 client host, refer to IBM Knowledge Center:

  https://www.ibm.com/support/knowledgecenter/en/SSGSMK_6.1.1/install_client_unix_sym/sym_install_client_rpm_linux.html

- To update a cluster (that already has RPM fix pack 1 installed) to this Platform Symphony 6.1.1 fix pack 2 level, run the RPM upgrade option on each host in the cluster to install the EGO package first, then the SOAM package.

  For example, to install this fix pack on a Linux 2.6 management host, run:

  ```
  > rpm -Uvh ego-lnx26-lib23-x64-1.2.8.rpm --prefix <same_sym611_mg_prefix> --dbpath <same_sym611_mg_dbpath> --nopreun --nopostun
  > rpm -Uvh soam-lnx26-lib23-x64-6.1.1.rpm --prefix <same_sym611_mg_prefix> --dbpath <same_sym611_mg_dbpath> --nopreun --nopostun
  ```

  To install this fix pack on a Linux 2.6 compute host, run:

  ```
  > rpm -Uvh egocomp-lnx26-lib23-x64-1.2.8.rpm --prefix <same_sym611_comp_prefix> --dbpath <same_sym611_comp_dbpath> --nopreun --nopostun

  > rpm -Uvh soam-lnx26-lib23-x64-6.1.1.rpm --prefix <same_sym611_comp_prefix> --dbpath <same_sym611_comp_dbpath> --nopreun --nopostun
  ```

  Note: While installing the SOAM package, you may see a warning message similar to this:
  `warning: /$EGO_TOP/soam/mapreduce/6.1.1/linux2.6-glibc2.3-x86_64/profile/MapReduce6.1.1.xml created as $EGO_TOP/soam/mapreduce/6.1.1/linux2.6-glibc2.3-x86_64/profile/MapReduce6.1.1.xml.rpmnew.`

You can safely ignore this warning message; the upgrade process will not change the old `MapReduce6.1.1.xml` configuration file in the cluster.

To install this fix pack on a Linux 2.6 client host, run:

```
> export CLUSTERADMIN=admin_user

> rpm -Uvh symclnt-lnx26-lib23-x64-6.1.1.rpm --prefix
<same_sym611_clnt_prefix> --dbpath <same_sym611_clnt_dbpath> --
nopreun --nopostun
```

3.4 After installation

1. Verify the installation.

   Verify that the upgrade succeeded using RPM:

   ```
   > rpm -qa --dbpath <sym611_dbpath>
   ```

   For example:

   ```
   > rpm -qa --dbpath /opt/ibm/platformsymphony/db
   ```

   RPM should return the following version and release numbers:

   For management host:

   ```
   ego-lnx26-lib23-x64-1.2.8-410162.noarch
   soam-lnx26-lib23-x64-6.1.1-410162.noarch
   ```

   For compute host:

   ```
   egocomp-lnx26-lib23-x64-1.2.8-410162.noarch
   soam-lnx26-lib23-x64-6.1.1-410162.noarch
   ```

   For client host:

   ```
   symclnt-lnx26-lib23-x64-6.1.1-410162.noarch
   ```

   If the correct binary version is not returned, contact IBM Support for assistance.

2. Clean up the GUI work directories and the browser cache. Delete all subdirectories and files in following directories:

   ```
   > rm -rf $EGO_TOP/gui/work/*
   ```

3. Configure the cluster.

   If you install the RPM pack on Red Hat Enterprise Linux 7, set the `EGO_VEMKD_SWITCH_UIDGID` variable to `Y` in the `$EGO_CONFDIR/ego.conf` file, as follows:

   ```
   EGO_VEMKD_SWITCH_UIDGID=Y
   ```

   The default value is `N`.

4. Start the upgraded cluster:

   ```
   > source cshrc.platform
   > egosh ego start all
   ```

```
> soamcontrol app enable AppName
```

Note: If you use a non-root user account to start Symphony on Red Hat Enterprise Linux 7, use the following command to start the upgraded cluster:

- On every management host, run the following command:
  ```
  > source cshrc.platform
  > sudo LD_LIBRARY_PATH=`echo $LD_LIBRARY_PATH` egosh ego start
  ```
- On the master host, run the following command:
  ```
  > egosh ego start all
  > soamcontrol app enable AppName
  ```

3.5 Uninstalling this fix pack

1. Shut down the cluster.

   Log on to the master host as the cluster administrator and run:

   ```
   > source cshrc.platform
   > soamcontrol app disable all
   > egosh service stop all
   > egosh ego shutdown all
   ```

2. Restore the files on all hosts with the backed-up file:

   On management and compute hosts:

   ```
   > source cshrc.platform
   > rm -rf $EGO_TOP/*
   > tar zxfo Sym6.1.1_backup.tar.gz –C $EGO_TOP
   ```

   On client host:

   ```
   > source cshrc.client
   > rm -rf $SOAM_HOME/*
   > tar zxfo Sym6.1.1_client_backup.tar.gz -C $SOAM_HOME
   ```

3. Clean up the GUI work directories and the browser cache. Delete all subdirectories and files in following directories:

   ```
   > rm -rf $EGO_TOP/gui/work/*
   ```

4. List of fixes

Citi requests:

394300 P101643	**Summary**	Authentication fails because of incompatible security settings between the client and server, and the system does not display an appropriate error message.
	Description	Authentication will fail when security plug-in settings specified in the EGO_SEC_PLUGIN parameter in the `ego.conf` file on both the client and server are incompatible. With this fix, the system will prompt you with an appropriate message to help you check the security plug-in setting issues.
	Platforms	Linux
	Component	libsoam_resources.so

401538 P101699	**Summary**	Vemkd crashes on Red Hat Enterprise Linux (RHEL) 7 with Platform Symphony in advanced workload execution mode.
	Description	Vemkd cannot inherit the LD_LIBRARY_PATH value from the lim process due to system limitations in advanced workload execution mode. This causes vemkd to load the libz library from the system default path and causes a core because of incompatibility issues. After applying this fix, vemkd can successfully inherit the LD_LIBRARY_PATH value and avoid crashing.
	Platforms	Linux
	Component	Lim, vemkd

408158 P101742	**Summary**	EGO fails to detect that a container in ZOMBIE state is older than host uptime.
	Description	EGO sends a kill -9 command to an old service PID when it fails to detect that a container in ZOMBIE state is older than host uptime. Apply this fix to avoid wrongly killing the old service PID.
	Platforms	Linux

	Component	Pem

410153	**Summary**	Enhance output messages when authentication fails because of incompatible security settings between the client and server.
	Description	Authentication will fail when security plug-in settings specified in the EGO_SEC_PLUGIN parameter in the `ego.conf` file on both the client and server are incompatible. With this fix, the system will prompt you with the client plug-in name message to help you check the security plug-in setting issues.
	Platforms	Linux
	Component	libsoambase.so

Product security incident response team (PSIRT):

375368 P101497	**Summary**	Apache Commons Collections requires update to 3.2.2 to fix COLLECTIONS-580.
	Description	Apache Commons Collections requires update to 3.2.2 to fix COLLECTIONS-580. The specific problem with COLLECTIONS-580 is that serialization support for unsafe classes in the functor package is disabled by default as this can be exploited for remote code execution attacks. To re-enable the feature the system property "org.apache.commons.collections.enableUnsafeSerialization" needs to be set to "true". Classes considered to be unsafe are: CloneTransformer, ForClosure, InstantiateFactory, InstantiateTransformer, InvokerTransformer, PrototypeCloneFactory, PrototypeSerializationFactory, WhileClosure. After applying this fix, there is no longer a security issue.
	Platforms	All
	Component	commons-collections-3.2.2.jar

388480 P101590	**Summary**	Upgrading IBM JRE to 6.0 SR16FP20, 7.0 SR9FP30, or 8.0 SR2FP10 for use with Platform Symphony.
	Description	Java specific SLOTH vulnerabilities associated with the MD5 signature hash requires upgrading IBM JRE to 6.0 SR16FP20, 7.0 SR9FP30, or 8.0 SR2FP10 for use with Platform Symphony.
	Platforms	All
	Component	JRE

393834 P101627 P101628	**Summary**	Upgrading Apache Tomcat to version 6.0.45 for use with Platform Symphony.
	Description	Open Source Apache Tomcat vulnerable for CVE-2015-5174 and requires upgrading Apache Tomcat to version 6.0.45 for use with Platform Symphony.
	Platforms	All
	Component	JRE

403383 P101700	**Summary**	Upgrading IBM JRE to version 6.0 SR16FP25, 7.0 SR9FP40, or 8.0 SR3 for use with Platform Symphony.
	Description	There are IBM-specific vulnerabilities (CVE-2016-0363, CVE-2016-0376, and CVE-2016-0264) with the IBM JRE. Upgrade and configure your Platform Symphony cluster while upgrading IBM JRE to 6.0 SR16FP25, 7.0 SR9FP40, or 8.0 SR3.
	Platforms	All
	Component	JRE

General availability (GA):

370393 P101467 P101468 P101469	**Summary**	PAM security plug-in within Platform Symphony requires three fixes.
	Description	When the EGO PAM security plug-in authenticates a user during logon, it changes the euid to root, which causes a renaming failure on NFS with the root_squash flag. When the EGO PAM security plug-in authenticates a user during logon, it changes the uid of the security credential file to root, which causes subsequent operations, which need the credential, to fail. Regardless of the log level setting, the EGO security plug-in log file contains DEBUG level messages. This leads to the log files becoming very large in a short amount of time.
	Platforms	Linux
	Component	sec_ego_pam_default.so, sec_ego_ext_co.so

400441 P101679	**Summary**	On some Linux hosts, lim crashes due to problematic sysfs cache info.
	Description	The 1.5 version of Portable Hardware Locality (hwloc) library contained a known issue that causes lim on some Linux hosts to crash. This fix includes an updated version of the lim binary, which contains the updated hwloc library, to avoid the crash.
	Symptoms	Lim core dumps
	Platforms	Linux
	Component	Lim

368037 P101416	**Summary**	Platform Symphony Java client changes the SIGTERM signal handler.
	Description	Platform Symphony Java SDK registers a signal handler, which causes the program to be unable to handle the TERM signal function written by the customer.
	Symptoms	The program to be unable to handle the TERM signal function written by the customer.
	Platforms	Linux
	Component	SDK

369024 P101454	**Summary**	Hosts join the cluster slowly because master announcements are not correctly distributed.
	Description	In a Platform Symphony environment, compute hosts join the cluster slowly because master announcements are not correctly distributed.
	Symptoms	Compute hosts join the cluster slowly.
	Platforms	Linux
	Component	Lim

374802 P101509	**Summary**	Reclaiming hosts terminates the symexec task immediately, regardless of the reclaim grace period set.
	Description	When a reclaiming operation occurs on a symexec task, the system does not wait for the reclaim grace period and immediately kills the task workload. This fix uses allows the task running during the grace period.
	Symptoms	When a reclaiming operation occurs on a symexec task, the system does not wait for the reclaim grace period and immediately kills the task

		workload.
	Platforms	Linux
	Component	symexecservice, symexecservice32

376837 P101507	**Summary**	When a user logs onto the PMC (management console) using the consumer user role, blocked host information does not correctly display in the console.
	Description	When a user logs onto the PMC using the consumer user role, that user does not have permission to see the blocked host information (such as in a table column or on a tab). Empty blocked host information is not accurate and not useful to the consumer user. After applying the fix, consumer user will not able to see the blocked host information.
	Symptom	Consumer users can see incorrect block host information.
	Platforms	All
	Component	PMC

384400 P101563	**Summary**	When running the SyncClient sample, the Java HotSpot Performance Engine (HotSpot) 64-bit server VM causes a stack guard warning.
	Description	When running the SyncClient sample, the HotSpot 64-bit server VM causes a stack guard warning.
	Platforms	Linux
	Component	JavaSoamApi.jar

412358	**Summary**	For some workload patterns in Platform Symphony MapReduce, tasks are pending when sessions contain free slots.

	Description	For some workload patterns in Platform Symphony MapReduce, the SSM policy assigns slots to sessions, but a session can return the slot to the policy instead of running the task. This wrong behavior will lead the task to be pending when sessions have free slots.
	Symptoms	In MapReduce workload, tasks are pending when sessions contain free slots.
	Platforms	Linux
	Component	SSM

Note: Fixes included in RPM Fix Pack 1 are listed in the `Readme_SYM6.1.1_Citi_RPM_1.pdf` file.

5. Copyright and trademark information