Release Notes
(July 2010)
Tivoli System Automation for Multiplatforms
Version 3.1

Release Notes
(July 2010)

IBM
Note!
Before using this information and the product it supports, read the information in "Notices" on page 21.

This edition of the IBM Tivoli System Automation for Multiplatforms Release Notes applies to IBM Tivoli System Automation for Multiplatforms Version 3.1, program number 5724-M00, and to all subsequent releases of this product until otherwise indicated in new editions.

This edition replaces SC33-8418-07

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Chapter 1. Read this before installation

This software may contain errors that could result in critical business impact. It is highly recommended that you install the latest available fixes before using this software.

Fixes can be obtained from IBM® Tivoli® System Automation for Multiplatforms support at the following Web site:


The Release Notes document for IBM Tivoli System Automation for Multiplatforms, Version 3.1, includes information that helps you install this software. Always view the most current version of the release notes before installing and using the product.

The most current version of the release notes is available at the following Web site:


The release notes document contains the latest updates for the product IBM Tivoli System Automation for Multiplatforms.

Where to find IBM Tivoli System Automation for Multiplatforms documentation

Additional documentation about this software can be found either on the product CD, or on the product Web site at:

Chapter 2. Required hardware and software

Supported platforms and distributions

System Automation for Multiplatforms Version 3.1 supports the following environments: Linux on System z®, Linux on System x®, Linux on Power, AIX® 5.3 and 6.1, Solaris 10, and Windows.

System Automation for Multiplatforms runs on all IBM Systems machines running Linux, on IBM System p® machines running AIX, on Sun SPARC or compatible systems running Solaris, and on Windows.

Detailed information about support of specific Linux distributions, AIX and Solaris versions and Windows releases can be found in the following table:

**Table 1. Supported platforms for System Automation for Multiplatforms**

<table>
<thead>
<tr>
<th>Supported Platform</th>
<th>IBM System x®</th>
<th>IBM System z®</th>
<th>IBM System p®</th>
<th>IBM System p®</th>
<th>Sun SPARC®</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSE SLES 9 (32-bit)</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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<tr>
<td>SUSE SLES 9 (64-bit)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 10 (32-bit)</td>
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<td></td>
</tr>
<tr>
<td>SUSE SLES 10 (64-bit)</td>
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<tr>
<td>SUSE SLES 11 (32-bit)</td>
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<tr>
<td>SUSE SLES 11 (64-bit)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Red Hat RH EL 4.6 (32-bit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Red Hat RH EL 4.6 (64-bit)</td>
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<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Red Hat RH EL 5 (32-bit)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Red Hat RH EL 5 (64-bit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>AIX 5.3</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIX 6.1</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solaris 10 (64-bit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Windows Server 2003 Standard Edition (64-bit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Windows Server 2003 Enterprise Edition (64-bit)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Server 2008 Enterprise Edition (32-bit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

All Service Pack levels of the listed supported SuSE versions and all update levels higher than the listed supported Red Hat versions are also supported, unless a more specific minimum version requirement is indicated in one of the following notes.

**Notes:**

1. System x (except Intel IA64 based servers) and any other 32-bit Intel based server, or AMD Opteron based server (64-bit), or Intel EM64T based server (64 bit).
2. Requires SUSE SLES9 Service Pack 1.
3. Requires C++ Runtime Library for AIX, version 7.0.0.1, which is included in PTFs U800738 and U800739.
4. Service Pack 1 must be installed. Beginning with SuSE SLES 10 Service Pack 3, the 32 bit C++ libraries are no longer installed with the standard installation. The 32 bit C++ libraries are required for System Automation for Multiplatforms. Ensure that the 32 bit C++ libraries (libstd++33-32bit) are installed before you start to install System Automation for Multiplatforms.

5. Solaris 10 on Sun SPARC 64-bit systems or fully compatible SPARC 64-bit clones. The System Automation for Multiplatforms operations console is not available within the Solaris environment, but an operations console on another platform can be associated with a Solaris-based cluster.

6. AIX 6.1 supports Workload Partition (WPAR) mobility or relocation. In the V3.1 release, System Automation for Multiplatforms and RSCT do not support domains with nodes that are System WPARs.

7. Windows Server 2008 installed as Server Core or under Hyper-V is not supported.

8. In the V3.1 release, System Automation for Multiplatforms and RSCT do not support domains with nodes that are Solaris zone containers.

9. All supported operating systems are also supported when running under VMWare.


11. Requires Solaris 10 update 1 (Update 01/06), or later.

12. Requires System Automation for Multiplatforms V3.1 and fix pack 5, or higher.
Prerequisites on AIX systems

RSCT packages

During installation of System Automation for Multiplatforms on AIX, the levels of RSCT packages required by System Automation for Multiplatforms are checked against the levels of RSCT packages already installed with the operating system, and missing packages or higher levels of RSCT packages are installed if required. Under certain circumstances, you may need to manually install higher levels of certain RSCT packages. For example, if the RSCT basic package is not installed, and the level of the installed RSCT core package is higher than the level of the RSCT packages supplied with System Automation for Multiplatforms, the installation of the RSCT basic package may fail due to RSCT prerequisites not being met. You need to download and install the appropriate RSCT file sets from the AIX service center to ensure that all RSCT packages installed are at the same level.

Table 2. RSCT versions

<table>
<thead>
<tr>
<th>IBM Tivoli System Automation level</th>
<th>IBM Tivoli System Automation version</th>
<th>RSCT version</th>
<th>RSCT APAR number</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 GA</td>
<td>3.1.0.0</td>
<td>2.4.9.2 (AIX 5.3)</td>
<td>IZ21567 (AIX 5.3)</td>
</tr>
<tr>
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<td></td>
<td>2.5.1.2 (AIX 6.1)</td>
<td>IZ21568 (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 1</td>
<td>3.1.0.1</td>
<td>2.4.9.4 (AIX 5.3)</td>
<td>IZ26916 (AIX 5.3)</td>
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<td></td>
<td>2.5.1.4 (AIX 6.1)</td>
<td>IZ26915 (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 2</td>
<td>3.1.0.2</td>
<td>2.4.10.2 (AIX 5.3)</td>
<td>IZ36968 (AIX 5.3)</td>
</tr>
<tr>
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<td></td>
<td>2.5.2.2 (AIX 6.1)</td>
<td>IZ36965 (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 3</td>
<td>3.1.0.3</td>
<td>2.4.11.0 (AIX 5.3)</td>
<td>IZ45262 (AIX 5.3)</td>
</tr>
<tr>
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<td></td>
<td>2.5.3.0 (AIX 6.1)</td>
<td>IZ45259 (AIX 6.1)</td>
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<tr>
<td>3.1 fix pack 4</td>
<td>3.1.0.4</td>
<td>2.4.11.3 (AIX 5.3)</td>
<td>IZ55757 (AIX 5.3)</td>
</tr>
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<td>2.5.3.3 (AIX 6.1)</td>
<td>IZ55805 (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 5¹</td>
<td>3.1.0.5</td>
<td>2.4.11.5 (AIX 5.3)</td>
<td>n/a (AIX 5.3)</td>
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<td></td>
<td>2.5.3.5 (AIX 6.1)</td>
<td>n/a (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 6¹</td>
<td>3.1.0.6</td>
<td>2.4.11.6 (AIX 5.3)</td>
<td>n/a (AIX 5.3)</td>
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<td>2.5.3.6 (AIX 6.1)</td>
<td>n/a (AIX 6.1)</td>
</tr>
<tr>
<td>3.1 fix pack 7</td>
<td>3.1.0.7</td>
<td>2.4.13.2 (AIX 5.3)</td>
<td>IZ72931 (AIX 5.3)</td>
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<td>2.5.5.2 (AIX 6.1)</td>
<td>IZ72930 (AIX 6.1)</td>
</tr>
</tbody>
</table>

Notes:

1. This RSCT version includes fixes, that are not included in the higher RSCT versions :
   - AIX 5.3: 2.4.12.0 and 2.4.12.1
   - AIX 6.1: 2.5.4.0 and 2.5.4.1

   If you have installed one of those AIX levels or if you upgrade to one of those levels (for example when you install a new AIX technology level), make sure that you install the respective RSCT PTF2. PTF2 includes the following AIX APARs:
   - AIX 5.3: 2.4.12.2 IZ67749
   - AIX 6.1: 2.5.4.2 IZ67750

   PTF2 contains again the fixes that are missing in the lower PTF levels.

Prerequisites on Linux systems

The following prerequisites must be met before System Automation for Multiplatforms can be installed on a Linux system:

- The Korn shell must be installed.
• If Linux is running on System z under a VM environment, the fix for the following VM APAR must be applied for the ECKD™ tie breaker functionality to work properly:
  – VM63119
• Some 32-bit libraries must be installed on each RedHat 4.0 or RedHat 5.0 system, even if a 64-bit kernel is running, before System Automation for Multiplatforms can be installed. These libraries are contained in the following Rational Portfolio Manager packages:
  – compat-libstdc++-33-3.2.3
  – xorg-x11-deprecated-libs-6.8.1

For additional prerequisites on Linux systems, see the IBM Tivoli System Automation for Multiplatforms Installation and Configuration Guide, SC33-8273.

Prerequisites for the tie breaker resource

The tie breaker is a very important resource within a cluster with an equal number of nodes. Therefore it is very important to ensure that the defined tie breaker works as expected. Consider the following list of potential issues to verify whether the defined tie breaker resource is valid or not:

• Disk tie breaker
  The disk tie breaker performs a SCSI-2 reserve against the defined SCSI disk. To be a valid tie breaker, the resource has to meet the following requirements:
  1. The disk must be accessible from all nodes at the same time (directly attached to each node).
  2. The SCSI-2 reserve must be able to reserve the disk.
  3. The SCSI-2 reserve must 'exclusively' reserve the disk. A reserve request of any other node is rejected.

The third requirement may not be given for virtual environments like VIO attached disks on a System p. Use the following procedure to test whether the exclusive reserve is working for a given disk:
  1. Create a 2-node domain and define a disk tie breaker resource as described in the Administration and Users Guide. To make sure that no resource is currently Online, stop any defined resource and do not create any resources.
  2. Log on to the console of both nodes and start a listing of the syslog (for example, tail -f /var/log/messages on a Linux system).
  3. Disable the network connection on one of the nodes, for example, unplug the network cable (or cables) or use ‘ifconfig <if> down’.
  4. Check the output of the syslog listing: after several seconds one of the nodes should show 'PENDING_QUORUM', immediately followed by 'HAS_QUORUM', whereas the other node should only show 'PENDING_QUORUM'. If both nodes show 'HAS_QUORUM', the disk cannot be used because the reserve is not exclusive. The disk is not able to handle real split brain situations.

If the domain is composed of a larger number of nodes, the test is similar: the network needs to be split in half the number of nodes on both sides, and then the quorum state needs to be determined on one node of either subcluster.

• Network tie breaker
  The network tie breaker should only be used for domains where all nodes are in the same IP sub net. Having the nodes in different IP sub nets makes it more likely that both nodes can ping the network tie breaker, while they cannot communicate to each other. Additionally, the default gateway IP address must not be used if it is virtualized by the network infrastructure. Choose an IP address that can only be reached by a single path from each node in the domain.

Use of ECKD TieBreaker in z/VM environments

System Automation for Multiplatforms requires most nodes to be Online in the domain to start automation actions. If the domain consists of an even number of nodes, it can happen that exactly half the nodes of
the domain are Online. In this case, System Automation uses a TieBreaker to decide the quorum state, which determines whether automation actions can be started (HAS_QUORUM), or if no automation actions are possible (PENDING_QUORUM, NO_QUORUM).

On Linux for zSeries®, an ECKD DASD can be used as TieBreaker resource. In case only half the number of nodes are Online in a subdomain, System Automation tries to reserve the Tie-Breaker (ECKD DASD) using the “DASD reserve/release” functionality. If the reserve is successful, the subdomain gets the quorum, and System Automation may continue to automate resources. The reservation of the ECKD DASD is kept until another node joins the domain, so that more than half the number of nodes are Online in that domain.

The above facts have some implications regarding the definition of the ECKD DASD used as TieBreaker, because a reserved ECKD DASD cannot be accessed by the z/VM®. In consequence, z/VM cannot attach or vary online such a device reserved by another system. In order to work around this situation, a set of configuration actions is required, the requirements of which are explained in the following sections:

**The System Automation domain runs in a single z/VM system**

If all nodes of the System Automation domain are guests of the same z/VM system, the following definitions are required for the ECKD DASD:

- A full pack minidisk should be defined
- If minidisk cache is used, its value should be set to off
- The ECKD DASD is shared between both guest systems

**The System Automation domain spans two z/VM systems**

If the nodes of the System Automation domain are guests of two different z/VM systems, the following definitions are required for the ECKD DASD:

- The TieBreaker disk needs to be defined as a DEVNO disk in a minidisk statement in the user profile (no minidisk, no fullpack minidisk, no dedicated or attached DASD)
- The ECKD disk (DEVNO) is shared between both nodes
- The ECKD DASD must not be system attached when the z/VM is IPL’ed

Logging on to the Linux guests shows the following device attachment, a virtual device (291 in our example) with the real address (4a82 in our example). The device becomes shared in our example with the command cp set shared on 4a82. Note that this needs to be done on both sides.

```
00: CP Q 4A82
00: DASD 4A82 CP SYSTEM DEVNO 1 SHARED
00:
00: CP Q V 291
00: DASD 0291 3390 VM4A82 R/W 3339 CYL ON DASD 4A82 SUBCHANNEL = 000F
```

In case one of the z/VM systems is shut down, the ECKD DASD is reserved by the surviving Linux guest on the other z/VM system. On the surviving side, you can see the following:

```
00: CP Q DA RESERVE
00: DASD 4A82 CP SYSTEM DEVNO 1 RESERVED BY USER test1
```

After starting the z/VM again, the DASD 4A82 is still offline and cannot be set online because it is still reserved by the other system.

**Note:** A vary on of this device will not be successful at this time. Instead, a timeout of 20–30 minutes occurs.

The recommendation is to start Linux on the restarted z/VM without the TieBreaker DASD. This succeeds because the DASD is not needed for starting Linux. After Linux is started, System Automation will start automatically on the Linux guest, and then Linux will automatically join the System Automation domain again. At this time, the reservation of the ECKD DASD is released. From now on, it is possible to vary on
the device of the tie-breaker disk (4a82 in our example), then to commit the share command and link the virtual address of the tiebreaker disk (291 in our example) on the newly IPL'ed system. After a chccwdev -e 291 on the restarted Linux, everything should be up and running. No further interaction on the surviving Linux is necessary.

All the commands necessary are CP commands. Therefore, a script that issues those commands using VMCP can be written to automate the restoration of the failed Linux.

For the above example, the script might contain the following commands:

```
vmcp vary on 4a82
vmcp set shared on 4a82
vmcp link * 291 291 mr
chccwdev -e 291
```

System Automation recognizes the newly defined DASD automatically.

---

**Updates for GDPS/PPRC Multiplatform Resiliency for zSeries (xDR) functionality**

Disk error detection is extended to detect z/VM MIH conditions. GDPS reacts to this condition error and triggers an unplanned HyperSwap based upon z/VM policy.

**Note:** When using System Automation for Multiplatforms 3.1 Fix Pack 4, the following APARs are required to handle the new HyperSwap trigger correctly:

- APAR PK85476 for GDPS 3.6
- VM APAR VM64647 for z/VM versions 5.3, 5.4, and 6.1 (when released)

You may consider to install SLES10 Service Pack 3 to ensure successful GDPS HyperSwap functionality. Service Pack 3 includes a fix in the ECKD disk driver.

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**Service**

See the *IBM Tivoli System Automation for Multiplatforms Installation and Configuration Guide* for information about installing service for the Base Component and the Base Component operations console.

**Fixes and problem-solving databases**

Information about fixes and service updates for this software can be found at the following Web site: [www.ibm.com/software/sysmgmt/products/support/IBMtivoliSystemAutomationforLinux.html](http://www.ibm.com/software/sysmgmt/products/support/IBMtivoliSystemAutomationforLinux.html)

**Installing fix packs to obtain level 3.1.0.1**

These are the archives you use for applying service to the Base Component to obtain level 3.1.0.1:

- 3.1.0-TIV-SAMP-AIX-FP0001.tar
- 3.1.0-TIV-SAMP-LIN-FP0001.tar
- 3.1.0-TIV-SAMP-WIN-FP0001.exe
- 3.1.0-TIV-SAMP-SOL-FP0001.zip

These are the archives you use for applying service to the operations console:

- 3.1.0-TIV-SAMPOC-AIX-FP0001.bin
- 3.1.0-TIV-SAMPOC-I386-FP0001.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0001.tar
- 3.1.0-TIV-SAMPOC-S390-FP0001.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0001.exe
Installing fix packs to obtain level 3.1.0.2
These are the archives you use for applying service to the Base Component to obtain level 3.1.0.2:
- 3.1.0-TIV-SAMP-AIX-FP0002.tar
- 3.1.0-TIV-SAMP-LIN-FP0002.tar
- 3.1.0-TIV-SAMP-WIN-FP0002.exe
- 3.1.0-TIV-SAMP-SOL-FP0002.zip

These are the archives you use for applying service to the operations console:
- 3.1.0-TIV-SAMPOC-AIX-FP0002.bin
- 3.1.0-TIV-SAMPOC-I386-FP0002.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0002.tar
- 3.1.0-TIV-SAMPOC-S390-FP0002.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0002.exe

Installing fix packs to obtain level 3.1.0.3
These are the archives you use for applying service to the Base Component to obtain level 3.1.0.3:
- 3.1.0-TIV-SAMP-AIX-FP0003.tar
- 3.1.0-TIV-SAMP-LIN-FP0003.tar
- 3.1.0-TIV-SAMP-WIN-FP0003.exe
- 3.1.0-TIV-SAMP-SOL-FP0003.zip

These are the archives you use for applying service to the operations console:
- 3.1.0-TIV-SAMPOC-AIX-FP0003.bin
- 3.1.0-TIV-SAMPOC-I386-FP0003.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0003.tar
- 3.1.0-TIV-SAMPOC-S390-FP0003.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0003.exe

Installing fix packs to obtain level 3.1.0.4
These are the archives you use for applying service to the Base Component to obtain level 3.1.0.4:
- 3.1.0-TIV-SAMP-AIX-FP0004.tar
- 3.1.0-TIV-SAMP-LIN-FP0004.tar
- 3.1.0-TIV-SAMP-WIN-FP0004.exe
- 3.1.0-TIV-SAMP-SOL-FP0004.zip

These are the archives you use for applying service to the operations console:
- 3.1.0-TIV-SAMPOC-AIX-FP0004.bin
- 3.1.0-TIV-SAMPOC-I386-FP0004.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0004.tar
- 3.1.0-TIV-SAMPOC-S390-FP0004.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0004.exe

Installing fix packs to obtain level 3.1.0.5
These are the archives you use for applying service to the Base Component to obtain level 3.1.0.5:
- 3.1.0-TIV-SAMP-AIX-FP0005.tar
- 3.1.0-TIV-SAMP-LIN-FP0005.tar
These are the archives you use for applying service to the operations console:

- 3.1.0-TIV-SAMPOC-AIX-FP0005.bin
- 3.1.0-TIV-SAMPOC-I386-FP0005.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0005.tar
- 3.1.0-TIV-SAMPOC-S390-FP0005.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0005.exe

Installing fix packs to obtain level 3.1.0.6

These are the archives you use for applying service to the Base Component to obtain level 3.1.0.6:

- 3.1.0-TIV-SAMP-AIX-FP0006.tar.Z
- 3.1.0-TIV-SAMP-LIN-FP0006.tar
- 3.1.0-TIV-SAMP-WIN-FP0006.exe
- 3.1.0-TIV-SAMP-SOL-FP0006.zip

**Note:** The deliverable for AIX is compressed. You need to uncompress the file before you can unpack as described in the documentation. Use the following command:

```
uncompress 3.1.0-TIV-SAMP-AIX-FP0006.tar.Z
```

These are the archives you use for applying service to the operations console:

- 3.1.0-TIV-SAMPOC-AIX-FP0006.bin
- 3.1.0-TIV-SAMPOC-I386-FP0006.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0006.tar
- 3.1.0-TIV-SAMPOC-S390-FP0006.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0006.exe

Installing fix packs to obtain level 3.1.0.7

These are the archives you use for applying service to the Base Component to obtain level 3.1.0.7:

- 3.1.0-TIV-SAMP-AIX-FP0007.tar.Z
- 3.1.0-TIV-SAMP-LIN-FP0007.tar
- 3.1.0-TIV-SAMP-WIN-FP0007.exe
- 3.1.0-TIV-SAMP-SOL-FP0007.zip

**Note:** The deliverable for AIX is compressed. You need to uncompress the file before you can unpack as described in the documentation. Use the following command:

```
uncompress 3.1.0-TIV-SAMP-AIX-FP0007.tar.Z
```

Fixpack 3.1.0.7 provides no updates for the operations console. If fix pack 3.1.0.6 is already installed for the operations console no further action is required. If you have installed a fixpack lower than 3.1.0.6 apply service from the following archives:

- 3.1.0-TIV-SAMPOC-AIX-FP0006.bin
- 3.1.0-TIV-SAMPOC-I386-FP0006.tar
- 3.1.0-TIV-SAMPOC-PPC-FP0006.tar
- 3.1.0-TIV-SAMPOC-S390-FP0006.tar
- 3.1.0-TIV-SAMPOC-WIN-FP0006.exe
Migrating AIX version 5 to 6

To migrate the AIX operating system from version 5 to 6 on the node where System Automation for Multiplatforms runs, the following steps need to performed.

- Stop System Automation for Multiplatforms before the migration starts.
- Migrate System Automation for Multiplatforms to the required version to run on AIX 6.
- Start System Automation for Multiplatforms after the migration again.

Execute the following commands:

1. Exclude the node that you want to update:
   ```
   samctrl -u a <node-name>
   ```

2. Stop the node that you want to update:
   ```
   stoprpnode <node-name>
   ```

3. Execute a migration installation from AIX 5 to AIX 6 on the node that you stopped.
   
   Note: If you have the default configuration installed and syslog.out is located in the /tmp directory, recreate /tmp/syslog.out again using the touch command. The /tmp directory is deleted during the AIX migration.
   
   Refresh syslogd with the command:
   ```
   refresh -s syslogd
   ```

4. Install the same SA MP level that is already installed on top of the currently installed version. This is necessary to get the correct AIX install package installed, for example SA MP 3.1.0.0 upgrades to SA MP 3.1.5.0.
   
   Enter the following command:
   ```
   installSAM
   ```

5. Start the updated node from an online node within the domain:
   ```
   startrpnode <node-name>
   ```

6. Include the updated node:
   ```
   samctrl -u d <node-name>
   ```
Chapter 3. Known problems and limitations

This chapter describes known problems and limitations for the following task areas:

- "Installation"
- "Configuration" on page 14
- "Operations console and policy editor" on page 16

### Installation

**Domain-joined Windows Server 2003: Installing SA MP with another user**

*Affected System Automation version: SA MP 3.1.0.x, Windows 2003 domain-joined only*

**Problem:** Uninstalling and reinstalling SA MP on a domain-joined Windows Server 2003 system with another user may result in unwanted file permission problems. This may make parts of SA MP nonfunctional.

**Solution:** We recommend uninstalling and reinstalling the SUA SDK & Utilities Update and SUA if you plan to use another user ID to reinstall SA MP. Switching user IDs between installations can lead to unwanted file permission problems. Make sure that the folder C:\Windows\SUA has also been removed after SUA is uninstalled.

**Silent installation under Windows fails**

*Affected System Automation version: Windows only, version 3.1.0.0*

**Problem:** If you install silently with `setup.exe -f <ResponseFile>`, the installer may stop and report an error in the log file if the following conditions apply to your Subsystem for UNIX-based Applications (SUA) installation:

- SUA Setuid Option disabled
- SUA Case Insensitivity disabled

**Solution:** These SUA options are only recommended and not required anymore, but the silent installer still reports an error in this case (the GUI installer does not check these options). If no other failed checks are reported, you can override the checking procedure with `setup.exe -f <ResponseFile> -Dnoprereqcheck=true`, which disables the requirements check.

### Installation of the license fails under Solaris

*Affected System Automation version: Solaris only, version 3.1.0.0*

**Problem:** If the license on Solaris is not properly installed by `installSAM`, you get the following error messages in the log and on screen during installation:

- `installSAM: Errors occurred - package installation is incomplete.`
- `installSAM: Cannot upgrade because no valid license was found.`

**Solution:** Double-check with `samlicm -s` to see if there really has been no license installed. If so, you have to install the license manually with `samlicm -i <license_file>` in order to use the product.

### Installation prerequisites for all systems that are accessed with browsers that are configured to display multibyte-character languages

*Affected System Automation version: All 3.1.0.0*

**Problem:** Multibyte characters are not displayed correctly on the pages of the System Automation for Multiplatforms operations console policy editor.

**Solution:** After you have installed the System Automation for Multiplatforms operations console on a system that will be accessed with internet browsers having their preferred language set to a
multibyte-character language, make sure to copy the following fonts in binary mode into the Java fonts subdirectory of the WebSphere® application server installation directory.

- mtsansdj.ttf (you can download this font from ftp://submit.boulder.ibm.com/download/typography/fonts/worldtype/archive/wtsd/2002-02-26/).
- tnrw_j.ttf (you can download this font from ftp://submit.boulder.ibm.com/download/typography/fonts/worldtype/archive/wt__/2002-02-13).

The WebSphere Java fonts directory is "<WAS_HOME>/java/jre/lib/fonts", where WAS_HOME is the home directory of the embedded WebSphere Application Server that is installed as part of the System Automation for Multiplatforms operations console. In addition, create a subdirectory as fallback directory of the WebSphere Java fonts directory and make the font files listed above also available from this directory, either by copying the files into the fallback directory or by creating symbolic links. Ensure that all users have read access to these font files, both for the files located in the WebSphere Java fonts directory and for the files located in the fallback subdirectory. Restart the WebSphere application server after the fonts have been installed.

The installation of SA MP may fail, if some RSCT packages are already installed at a higher version as part of the CSM product

Affected System Automation version: Linux on POWER® only, all versions

Problem: installSAM may fail to install System Automation because some RSCT packages are already installed at a higher version, but rsct.basic is not installed. The failure is the following:

installSAM: Installing ./ppc/rsct.basic-2.4.7.3-07183.ppc.rpm
installSAM: Installation failed with return-code: 1 : ./ppc/rsct.basic-2.4.7.3-07183.ppc.rpm

The RSCT packages rsct.core and rsct.core.utils can be installed in a higher version than packaged in SAMP. Only rsct.basic is not installed on the system and the SAMP installation tries to install this package.


The installation on SA MP may fail, if the package 'pam' is not installed on a RedHat Linux system

Affected System Automation version: RedHat Linux only, all versions

Problem: installSAM can fail to install System Automation end-to-end adapter package because it does not check that the package pam is installed on the system. This package and the 32–bit pam libraries are required for the System Automation end-to-end automation adapter.

Solution: Manually check and ensure that the package pam is installed on the system before installSAM is executed on a RedHat system. If the installation already failed, use rpm to install the package for the automation adapter.

Configuration

Replication of the samadapter configuration fails on Windows with an I/O exception error

Affected System Automation version: SA MP 3.1.0.x, Windows only

Problem: The replication task of the samadapter configuration on Windows fails with the following I/O exception error message:
Solution: The replication fails because an incorrect user has been specified. If you are attempting to replicate to a domain-joined system, make sure that you specify a domain user ID with <DOMAIN>\<USER> syntax.

The configuration for samadapter is not restored with an XML policy file

Affected System Automation version: All versions, all platforms

Problem: The samadapter configuration data is lost after a complete reinstallation of SA MP (that is, not just an upgrade, but uninstallation followed by reinstallation, and then activation of a saved XML policy file with resources for the samadapter). Although the resources for the samadapter are available, all the information that was collected with the adapter configuration dialog, cfgsamadapter, is missing, and thus the samadapter cannot start.

Solution: You must configure the samadapter again using the cfixgsamadapter utility. After you have finished the samadapter configuration, if the samadapter is FailedOffline, reset the samadapter resource using

```
resetsrc -s "Name='samadapter'*" IBM.Application
```

The samadapter should start again.

For customers using GDPS/PPRC Multiplatform Resiliency for zSeries (xDR)

With System Automation for Multiplatforms version 3.1.0.1 a new part xdrchkeifcfg is shipped. Its authorization has to be changed after the installation.

Change to directory /usr/sbin/rsct/xdrvm and issue the following commands:

```
chown root:xdrgr xdr*
chmod 750 xdr*
chmod u+s xdrchkeifcfg
```

IP-Multipath setup is not supported under Solaris at SA MP 3.1.0.0

Affected System Automation for Multiplatforms version: Solaris only, version 3.1.0.0

Problem: If the IP-Multipath setup is used on Solaris then the cluster nodes may not be connectable after the Solaris OS failovered an IP address.

Solution: Do not use the IP-Multipath setup on Solaris at level 3.1.0.0. IP-Multipath setup can be used with SA MP 3.1.0.1 and above.

GDPS® Agent resource cannot be automated within the System Automation Application Manager HA policy

Affected System Automation Application Manager version: zLinux version 3.1.0.0

Problem: The System Automation Application Manager HA policy contains a resource that cannot be brought online when started by System Automation for Multiplatforms. This resource is called <eez-name-prefix>gdpsagent-rs. Where <eez-name-prefix> is the prefix chosen in the Configuration dialog - Configuring high availability for the end-to-end automation manager - Automation manager tab - Automated resources prefix. Its default value is 'eez-'.

Solution: Remove this resource from the policy by using the following commands:

```
rmrgmbr -g <eez-name-prefix>gdpsagent-rg IBM.Application:gdpsagent-rs
rmrg <eez-name-prefix>gdpsagent-rg
```
Start it manually on all nodes using:

```
eezgdpsagent -start
```

The command 'eezgdpsagent -start' must be repeated whenever the node was restarted.

**If the adapter configuration is modified, samadapter cannot be stopped as long as the adapter is online**

**Affected System Automation for Multiplatforms version: All platforms, version 3.1.0.0**

**Problem:** If you use the command `cfgsamadapter` to change the parameters **Request port number** or **Host name or IP address** of the samadapter configuration as long as the adapter is online, then the adapter cannot be stopped. You can find these parameters on the Adapter tab in the section **Automation adapter host**.

**Solution:** Undo the changes you made in the samadapter configuration and stop the samadapter. Apply your changes.

**Network Name Resolution in Windows SUA**

**Affected System Automation version: SA MP 3.1.0.x, all supported Windows platforms**

**Problem:** Microsoft Windows Subsystem for Unix-based Applications (SUA) checks the binding order of the network interfaces before the information in the file `/etc/hosts` is used. This can lead to confusion when a user changes the information in `/etc/hosts` and expects it to be used by the subsystem. But if the binding order in the network connection list of Windows does not match the one in `/etc/hosts`, the network connection list takes precedence over `/etc/hosts`.

**Solution:** To change the binding order in the network connection list, follow the information in the Microsoft Knowledge Base article 894564 [How to change the binding order of network adapters](#). This article explains the process for Windows XP and Windows 2000, but the information is also applicable to Windows Server 2003 and Windows Server 2008 R1.

**Operations console and policy editor**

**Activation of a new policy without resources for samadapter removes the policy for the samadapter and leaves the domain disconnected**

**Affected System Automation version: All versions, all platforms**

**Problem:** Activating a new policy from the Operations console that does not contain resources for the samadapter results in removing those resources and leaving the domain disconnected from the Operations console.

**Solution:** All policies that are activated from the Operations console must have resources for the samadapter. When you create a policy with the policy editor, start with a policy that already contains the resources for the samadapter to ensure that those resources are part of the policy.

**The installer for SA MP 3.1 FP1 for the Operations Console shows SA Application Manager**

**Affected System Automation for Multiplatform version: all platforms, version 3.1.0.1**

**Problem:** The installer for the operations console appears to be intended for System Automation Application Manager:
Solution: Ignore the misleading information in the window title and main panel of the installer, and proceed with the installation. The installation correctly updates the operations console.

Configuration of the automation adapter fails

Affected System Automation version: All 3.1.0.0

Problem: The following error dialog pops up when trying to change the event port number with cfgdirect:

Solution: On the Security tab, delete the tab space in the Keystore field, then click Save again.
No confirmation dialog appears, when storing or deleting a file from the policy pool

Affected System Automation version: All 3.1.0.0

Problem: If storing a file to the policy pool or deleting a file from the policy pool, the policy editor performs the requested action without asking for further confirmation.

Solution: Be careful if storing or deleting a file in policy pool using the policy editor, as the action is performed without additional confirmation even if you, for example, are just overwriting a policy file you did not intend to overwrite.

User credentials are needed for the policy editor to work

Affected System Automation version: All 3.1.0.0

Problem: The policy editor uses the ISC credential vault to store Tivoli System Automation user credentials. If the credential vault does not contain the required credentials, the user is not asked for the credentials but an error message is shown.

Solution: Add the credentials in the Tivoli SA Operations Console (Tivoli System Automation - Settings - Stored domain credentials) or in the WebSphere ISC credential store (Settings - Credential Store).

New resources are flagged as "Automation is suspended" in operations console

Affected System Automation version: All versions, all platforms

Problem: In the following situations, the operations console may displays resources and groups incorrectly flagged with "Automation is suspended".

- Resource group members are added by the commands sampolicy or addrgmbr.
- Resource group is deleted and recreated with members.

Solution: Change the policy and restart the automation adapter.

Upgrading the operations console causes that user settings are deleted

Affected System Automation versions: 3.1.0.1, 3.1.0.2, 3.1.0.3, 3.1.0.4, 3.1.0.5, 3.1.0.6

Problem: Installation of a fix pack for the operations console does not save settings like:

- Defined user IDs
- Automation domain credentials
- Customized user startup pages
**Solution:** If you install a fixpack for the operations console, proceed as follows to save your settings. Apply your settings after the upgrade:

1. **Shutdown EWAS:**
   
   `<EEZ_ROOT>/ewas/AppServer/bin/stopServer.sh server1`

2. **Backup WAS config.** You can proceed using one of the following options:
   
   - **Option 1:** Manually backup the following directory:
     
     `<EEZ_ROOT>/ewas/AppServer/profiles/AppSrv01/config`
   
   - **Option 2:** Issue the following command:
     
     `<EEZ_ROOT>/ewas/AppServer/bin/backupConfig.sh /tmp/ewas_config.zip -nostop -profileName AppSrv01`

   This will create a zip file `/tmp/ewas_config.zip` containing the contents of `<EEZ_ROOT>/ewas/AppServer/profiles/AppSrv01/config`. After the upgrade, the command `restoreConfig` can be used to restore the contents of the zip file.

3. **Backup System Automation specific settings, such as operations console preferences:** Create a copy of the following directory:
   
   `<EEZ_ROOT>/ewas/AppServer/profiles/AppSrv01/Tivoli/EEZ/`

4. **Backup user specific settings of the administration console:** Create a copy of the following directory including all subdirectories:
   
   `<EEZ_ROOT>/ewas/AppServer/profiles/AppSrv01/wstemp/`

5. **Upgrade your installation.**

6. **Restore backups to the original locations specified above.**
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