Release Notes
(March 2007)
Note!
Before using this information and the product it supports, read the information in “Notices” on page 31.

Ninth Edition (March 2007)
This edition of the IBM Tivoli System Automation for Multiplatforms® Release Notes applies to IBM Tivoli System Automation for Multiplatforms Version 2.1, program number 5724–M00, and to all subsequent releases of this product until otherwise indicated in new editions.

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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 prior to using this software.

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

The IBM Tivoli System Automation for Multiplatforms 2.1 Release Notes document includes information that will help 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. This product consists of two components, base and end-to-end automation management. Updates for the base component of IBM Tivoli System Automation for Multiplatforms are contained in Chapter 2, “IBM Tivoli System Automation for Multiplatforms 2.1 – Base Component,” on page 3. Updates for the end-to-end component are located in Chapter 3, “IBM Tivoli System Automation for Multiplatforms 2.1 - End-to-End Automation Management Component,” on page 15 of this document.

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
Chapter 2. IBM Tivoli System Automation for Multiplatforms

2.1 – Base Component

Required Hardware and Software

Supported Platforms and Distributions

IBM Tivoli System Automation runs on all IBM eServer machines running Linux, and on IBM eServer pSeries machines running AIX.

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

Table 1. Supported platforms and distributions for the base component of IBM Tivoli System Automation for Multiplatforms

<table>
<thead>
<tr>
<th>Platform Combination</th>
<th>System x</th>
<th>System z</th>
<th>System p</th>
<th>System i</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSE SLSS/SLES 8 (32 bit) Un</td>
<td>x^2</td>
<td>x^2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ited Linux 1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 9 (32 bit)</td>
<td>x</td>
<td>x^3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSE SLSS/SLES 8 (64 bit) United</td>
<td>x^2</td>
<td></td>
<td>x^3</td>
<td>x^5</td>
</tr>
<tr>
<td>Linux 1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 9 (64 bit)</td>
<td>x</td>
<td>x^3</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>RedHat RHEL 3.0 (32 bit)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RedHat RHEL 4.0 (32 bit)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RedHat RHEL 3.0 (64 bit)</td>
<td>x^6</td>
<td>x^4</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>RedHat RHEL 4.0 (64 bit)</td>
<td>x^8</td>
<td>x^8</td>
<td>x^8</td>
<td>x^8</td>
</tr>
<tr>
<td>AIX 5.2</td>
<td></td>
<td></td>
<td></td>
<td>x^2</td>
</tr>
<tr>
<td>AIX 5.3</td>
<td></td>
<td></td>
<td></td>
<td>x^2</td>
</tr>
</tbody>
</table>

Notes:
1. xSeries (except Intel IA64 based Server) 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 SLES8 SP3
3. Requires SuSE SLES9 SP1
4. Requires RedHat RHEL 3.5 as a minimum level
5. Requires SUSE SLES8 SP4
6. Requires RedHat 3.0 Update 2
7. Requires C++ Runtime Library for AIX version 7.0.0.1, which is included in PTF U800738 and U800739
8. Requires IBM Tivoli System Automation for Multiplatforms V2.1 with fix pack 1 or higher

Operations console on AIX and Linux: Disk space requirements for release 2.1.1.0 or later

Table 2 on page 4 lists the disk space that is required to install or upgrade the base component operations console to release 2.1.1.0 or later on AIX or Linux systems:

- **Initial install:** the values apply when you install release 2.1.0.0 from scratch
- **Update install:** the values apply when you install a fix pack to upgrade the operations console to level 2.1.1.0 or later (from level 2.1.0.0. or later)
Table 2. Disk space requirements for the operations console of the Base Component on AIX and Linux systems

<table>
<thead>
<tr>
<th>Description</th>
<th>Default directory</th>
<th>Initial install</th>
<th>Update install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base component installation directory</td>
<td>/opt/IBM/tsamp/eez</td>
<td>60 MB</td>
<td>60 MB</td>
</tr>
<tr>
<td>Operations console installation directory</td>
<td>/opt/IBM/ISC</td>
<td>700 MB</td>
<td>700 MB</td>
</tr>
<tr>
<td>Temporary disk space needed for the installation</td>
<td>/tmp</td>
<td>300 MB</td>
<td>500 MB</td>
</tr>
<tr>
<td>Tivoli Common Directory</td>
<td>/var.ibm/tivoli/common/eez</td>
<td>250 MB</td>
<td>250 MB</td>
</tr>
<tr>
<td>Installer registry</td>
<td>-root/vpd.properties</td>
<td>10 KB</td>
<td>10 KB</td>
</tr>
</tbody>
</table>

Prerequisites

This section and its subsections list the prerequisites that must be met for installing the base component of IBM Tivoli System Automation for Multiplatforms.

General prerequisites

- Perl is required to use the command line interface of IBM Tivoli System Automation for Multiplatforms including native RSCT commands. It is per default installed on your Linux or AIX systems as part of the operating system, but if you are using IBM Tivoli System Automation for Multiplatforms in a language other than English, a special version of Perl may be required. Due to known problems with Perl 5.8.0 and how it handles UTF-8 encoded locales, some characters may not be properly displayed. This can occur on systems with Perl 5.8.0 installed, while using a UTF-8 encoded locale. When previous or subsequent versions of Perl are used, or non-UTF-8 encoded locales are used, this problem does not occur. AIX 5.2 uses Perl 5.8.0 and there is currently no opportunity to order a different version of Perl for that AIX release. If you decide to upgrade your Perl version on a Linux distribution, perform the following steps:
  2. Unzip and tar -xvf on any directory.
  3. Compile and install on the UTF-8 machine, referring the instruction provided with the downloaded files.
  4. Change the symbolic link pointing to the directory of the Perl version that is used by IBM Tivoli System Automation from: /usr/sbin/rsct/perl5/bin/perl->/usr/bin/perl to the directory where the new version of Perl is per default installed: /usr/sbin/rsct/perl5/bin/perl->/usr/local/bin/perl.
- Set the following environment variable for all users of IBM Tivoli System Automation on all nodes: CT_MANAGEMENT_SCOPE=2 (peer domain scope). You can set the variable permanently if you set it in the profile.
- Also make sure that the directories /usr/sbin and /opt have at least 100 MB free space, and that the directory /var also provides at least 100 MB free space.
- For languages using the double-byte character set (DBCS), the Telnet dialog buffer must be large enough to ensure that long messages are properly displayed. If this is not the case, enlarge the Telnet dialog buffer.
- If you are both using the AIX 5.2 platform and the System Automation for Multiplatforms end-to-end automation adapter, make sure to have a pam.conf file in the /etc directory. You can find a sample pam.conf file in the SAM2100Base/AIX directory.
- When using the end-to-end automation adapter make sure that all nodes where the adapter can run are accessible with the same user ID and password.
Additionally, there are special prerequisites in order to install IBM Tivoli System Automation for Multiplatforms on an AIX system or Linux system:

**Prerequisites on AIX systems**

**Supported RSCT versions and required RSCT APARs**

The following RSCT prerequisites must be met before the Base Component can be installed:

- The file set rsct.basic must be installed. It is available on the AIX installation media.
- The RSCT versions and the corresponding APAR fixes listed in Table 3 must be available on the AIX system.

*Table 3. RSCT prerequisites on AIX*

<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>2.1 GA</td>
<td>2.1.0.0</td>
<td>2.3.7.1 (AIX 5.2)</td>
<td>IY76769 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.3.1 (AIX 5.3)</td>
<td>IY75315 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 1</td>
<td>2.1.0.1</td>
<td>2.3.7.2 (AIX 5.2)</td>
<td>IY77590 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.3.2 (AIX 5.3)</td>
<td>IY77592 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 2</td>
<td>2.1.1.0</td>
<td>2.3.8.2 (AIX 5.2)</td>
<td>IY81397 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.4.2 (AIX 5.3)</td>
<td>IY81394 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 3</td>
<td>2.1.1.1</td>
<td>2.3.9.1 (AIX 5.2)</td>
<td>IY83473 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.5.1 (AIX 5.3)</td>
<td>IY83474 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 4</td>
<td>2.1.1.2</td>
<td>2.3.9.3 (AIX 5.2)</td>
<td>IY86758 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.5.3 (AIX 5.3)</td>
<td>IY86759 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 5</td>
<td>2.1.1.3</td>
<td>2.3.10.2 (AIX 5.2)</td>
<td>IY91597 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.6.2 (AIX 5.3)</td>
<td>IY91595 (AIX 5.3)</td>
</tr>
<tr>
<td>2.1 fix pack 6</td>
<td>2.1.1.4</td>
<td>2.3.10.2 (AIX 5.2)</td>
<td>IY91597 (AIX 5.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4.6.2 (AIX 5.3)</td>
<td>IY91595 (AIX 5.3)</td>
</tr>
</tbody>
</table>

**Prerequisites on a Linux system**

The following prerequisites are required on a Linux system, before this software can be installed:

- The korn shell (pdksh) must be installed.
- If the Linux is running on zSeries under a VM environment, the following VM APAR is required to be installed for the ECKD tiebreaker functionality to work properly:
  - WW63119
- Some 32-bit libraries must be installed on each RedHat 4.0 system, even if a 64-bit kernel is running, before IBM Tivoli System Automation can be installed. These libraries are contained in the following RPM packages:
  - compat-libstdc++-33-3.2.3
  - xorg-x11-deprecated-libs-6.8.1

**Prerequisites for IBM Tivoli System Automation for GDPS/PPRC Multiplatform Resiliency on System z (xDR)**

IBM Tivoli System Automation for Multiplatforms 2.1 fix pack 4 or higher requires the following prerequisites for IBM Tivoli System Automation for GDPS/PPRC Multiplatform Resiliency on System z (xDR):

GDPS 3.3 with APAR PK30315
Migration

This part describes what to observe when migrating IBM Tivoli System Automation for Multiplatforms.

Migration from IBM Tivoli System Automation for Multiplatforms 1.1

A direct migration from IBM Tivoli System Automation 1.1 to IBM Tivoli System Automation 2.1 is not supported.

Migrating from IBM Tivoli System Automation 1.2

IBM Tivoli System Automation for Multiplatforms 1.2 can be migrated to IBM Tivoli System Automation for Multiplatforms 2.1. The migration process is described in the IBM Tivoli System Automation for Multiplatforms Base Component User’s Guide manual, SC33-8210.

The migration installation of IBM Tivoli System Automation for Multiplatforms 2.1 on Linux systems may fail for some rsct.core.msg packages. If this happens execute the ./installSAM script a second time to complete the installation of these packages.

Recommendations when running on Linux on zSeries under zVM

When running IBM Tivoli System Automation for Multiplatforms 2.1 on Linux on zSeries in a zVM environment, the following configuration changes are highly recommended:

   In case you run a one or two node cluster you need some additional configuration to detect network interface failures. The cluster software periodically tries to reach each network interface of the cluster. If there is a two node cluster and one interface fails on one node, the other interface on the other node is not able to get response from the peer and will also be flagged offline. To avoid this behavior the cluster software must be told to contact a network instance outside the cluster. Best practice is to use the default gateway of the subnet the interface is in. On each node create following file:/usr/sbin/cluster/netmon.cf. Each line of this file should contain the machine name or IP address of the external instance. An IP address should be specified in dotted decimal format. If the machine is connected to more then one IP subnet using different network interfaces, then an entry for each IP subnet is required in the netmon.cf file. This is an example of a /usr/sbin/cluster/netmon.cf file:

   ```
   # default gateway for all interfaces in 192.168.1.0 network
   192.168.1.1

   # default gateway for all interfaces in 192.168.2.0 network
   gw.de.ibm.com
   ```

2. Turn off broadcast for all communication groups
   The RSCT heartbeat mechanism performs a broadcast ping from time to time. This is especially often the case in situations, where a network interface adapter is not available. The reason for this feature is to find out, whether the network interface adapter that sends this broadcast ping is still operational (this can be determined upon whether other machines reply to this broadcast ping or not). Now, this feature is not needed, if the netmon.cf file is setup correctly as described above, as in that case, there are other well-known network interface adapters to be checked for availability.

   While a broadcast ping on a stand-alone machine is not a performance issue, it will have a negative impact on the performance, if the machines are running in a zVM environment. This is because all other systems running under this zVM and within the same network segment (same IP network and net mask) will reply to this broadcast ping request. As a result, even VM guest systems, that are idle and currently paged out will be loaded into the zVM just to reply to this ping. Depending on the number of guest systems running under this zVM this may decrease the performance of the whole z/VM system.

   In order to prevent this situation from happening, the following setup changes are highly recommended:
   - get all the communication groups of the cluster
End-to-End Automation Adapter

Prerequisites

- On AIX systems the end-to-end automation adapter installation requires that Java 1.4 in the 32-bit version is installed.
- On AIX systems SSL/SSH packages must be installed and the sshd subsystem must be running to be able to complete the 'Replication' task of the adapter configuration.

Operations Console

Additional Information

Which user ID and password do I have to specify in the "Automation domain authentication" panel?

When selecting a first-level automation domain in the operations console for the first time, a panel will come up prompting for the user ID and password for this domain. You have to specify a user ID and password that is allowed to login to the system on which the domain's automation adapter is currently running.

Hint: You can also store the user ID and password for each automation domain in a credential vault, by selecting the option "Save this in the credential vault for further usage". For all automation domains for which you have stored the credentials in the credential vault, the login will be performed automatically. You will not get prompted again for credentials until you delete the credentials again using the Preferences dialog, or if the automatic login fails.

Service

See the IBM Tivoli System Automation for Multiplatforms Base Component User’s Guide for information about installing service for the base component and the operations console.

Fixes and Problem-Solving Databases

The information about fixes and service updates for this software can be found at the following web page:


Installing fix packs to obtain level 2.1.0.1

These are the archives you use for applying service to the base component to obtain level 2.1.0.1:

- 2.1.0-TIV-SABASE-AIX-FP0001.tar
- 2.1.0-TIV-SABASE-LIN-FP0001.tar

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

- 2.1.0-TIV-SAE2E-AIX-FP0001.bin
- 2.1.0-TIV-SAE2E-I386-FP0001.tar
- 2.1.0-TIV-SAE2E-PPC-FP0001.tar
- 2.1.0-TIV-SAE2E-S390-FP0001.tar
- 2.1.0-TIV-SAE2E-WIN-FP0001.exe
Installing fix packs to obtain level 2.1.1.0

Archives for upgrading the Base component to level 2.1.1.0
Starting with this fix pack level, the installation script \textit{installSAM} performs a prerequisites check before starting the installation. If your system does not pass the check, you must stop the installation, correct any problems, and restart the installation.

You can ensure that all prerequisites are met before you invoke the installation script by running the prerequisites check separately, using the new script \textit{prereqSAM}. For more information about the scripts \textit{installSAM} and \textit{prereqSAM}, refer to the \textit{IBM Tivoli System Automation for Multiplatforms Base Component User's Guide}.

These are the archives you use for applying service to the Base component to obtain level 2.1.1.0:
- 2.1.0-TIV-SABASE-AIX-FP0002.tar
- 2.1.0-TIV-SABASE-LIN-FP0002.tar

Archives for upgrading the operations console of the Base component to level 2.1.1.0
These are the archives you use for applying service to the operations console:
- 2.1.0-TIV-FAE2E-AIX-FP0002.bin
- 2.1.0-TIV-FAE2E-I386-FP0002.tar
- 2.1.0-TIV-FAE2E-PPC-FP0002.tar
- 2.1.0-TIV-FAE2E-S390-FP0002.tar
- 2.1.0-TIV-FAE2E-WIN-FP0002.exe

Installing fix packs to obtain level 2.1.1.1

Archives for upgrading the Base component to level 2.1.1.1
\textbf{Note:} When you invoke the script \textit{installSAM} to install a fix pack, the script first performs a prerequisites check. If your system does not pass the check, you must stop the installation, correct any problems, and restart the installation.

You can ensure that all prerequisites are met before you invoke the installation script by running the prerequisites check separately, using the new script \textit{prereqSAM}. For more information about the scripts \textit{installSAM} and \textit{prereqSAM}, refer to the \textit{IBM Tivoli System Automation for Multiplatforms Base Component User's Guide}.

These are the archives you use for applying service to the Base component to obtain level 2.1.1.1:
- 2.1.0-TIV-SABASE-AIX-FP0003.tar
- 2.1.0-TIV-SABASE-LIN-FP0003.tar

Archives for upgrading the operations console of the Base component to level 2.1.1.1
These are the archives you use for applying service to the operations console:
- 2.1.0-TIV-FAE2E-AIX-FP0003.bin
- 2.1.0-TIV-FAE2E-I386-FP0003.tar
- 2.1.0-TIV-FAE2E-PPC-FP0003.tar
- 2.1.0-TIV-FAE2E-S390-FP0003.tar
- 2.1.0-TIV-FAE2E-WIN-FP0003.exe
Installing fix packs to obtain level 2.1.1.2

Archives for upgrading the Base component to level 2.1.1.2

Note: When you invoke the script installSAM to install a fix pack, the script first performs a prerequisites check. If your system does not pass the check, you must stop the installation, correct any problems, and restart the installation.

You can ensure that all prerequisites are met before you invoke the installation script by running the prerequisites check separately, using the new script prereqSAM. For more information about the scripts installSAM and prereqSAM, refer to the IBM Tivoli System Automation for Multiplatforms Base Component User’s Guide.

These are the archives you use for applying service to the Base component to obtain level 2.1.1.2:
- 2.1.0-TIV-SABASE-AIX-FP0004.tar
- 2.1.0-TIV-SABASE-LIN-FP0004.tar

Archives for upgrading the operations console of the Base component to level 2.1.1.2

These are the archives you use for applying service to the operations console:
- 2.1.0-TIV-SAE2E-AIX-FP0004.bin
- 2.1.0-TIV-SAE2E-I386-FP0004.tar
- 2.1.0-TIV-SAE2E-PPC-FP0004.tar
- 2.1.0-TIV-SAE2E-S390-FP0004.tar
- 2.1.0-TIV-SAE2E-WIN-FP0004.exe

Installing fix packs to obtain level 2.1.1.3

Archives for upgrading the Base component to level 2.1.1.3

Note: When you invoke the script installSAM to install a fix pack, the script first performs a prerequisites check. If your system does not pass the check, you must stop the installation, correct any problems, and restart the installation.

You can ensure that all prerequisites are met before you invoke the installation script by running the prerequisites check separately, using the new script prereqSAM. For more information about the scripts installSAM and prereqSAM, refer to the IBM Tivoli System Automation for Multiplatforms Base Component User’s Guide.

These are the archives you use for applying service to the Base component to obtain level 2.1.1.3:
- 2.1.0-TIV-SABASE-AIX-FP0005.tar
- 2.1.0-TIV-SABASE-LIN-FP0005.tar

Archives for upgrading the operations console of the Base component to level 2.1.1.3

These are the archives you use for applying service to the operations console:
- 2.1.0-TIV-SAE2E-AIX-FP0005.bin
- 2.1.0-TIV-SAE2E-I386-FP0005.tar
- 2.1.0-TIV-SAE2E-PPC-FP0005.tar
- 2.1.0-TIV-SAE2E-S390-FP0005.tar
- 2.1.0-TIV-SAE2E-WIN-FP0005.exe
Installing fix packs to obtain level 2.1.1.4

Archives for upgrading the Base component to level 2.1.1.4

Note: When you invoke the script installSAM to install a fix pack, the script first performs a prerequisites check. If your system does not pass the check, you must stop the installation, correct any problems, and restart the installation.

You can ensure that all prerequisites are met before you invoke the installation script by running the prerequisites check separately, using the new script prereqSAM. For more information about the scripts installSAM and prereqSAM, refer to the IBM Tivoli System Automation for Multiplatforms Base Component User's Guide.

These are the archives you use for applying service to the Base component to obtain level 2.1.1.4:

- 2.1.0-TIV-SBASE-AIX-FP0006.tar
- 2.1.0-TIV-SBASE-LIN-FP0006.tar

Archives for upgrading the operations console of the Base component to level 2.1.1.4

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

- 2.1.0-TIV-SAE2E-AIX-FP0006.bin
- 2.1.0-TIV-SAE2E-I386-FP0006.tar
- 2.1.0-TIV-SAE2E-PPC-FP0006.tar
- 2.1.0-TIV-SAE2E-S390-FP0006.tar
- 2.1.0-TIV-SAE2E-WIN-FP0006.exe

National Language Support

IBM Tivoli System Automation for Multiplatforms 2.1 is NLS enabled. The Base component supports all locales, including bi-directional locales. The list of supported languages is described in the IBM Tivoli System Automation for Multiplatforms Base Component User's Guide.

Some RSCT related messages may be displayed in English only. This is because the translation of the RSCT messages was done for the initial shipment of the RSCT release, whereas IBM Tivoli System Automation for Multiplatforms bases on a higher level of the RSCT release.

Known Problems and Issues

Base Component

Known problems and issues:

On AIX 5.3, the RSCT prerequisite level is not enforced correctly when smit(ty) or the installp command is used to install the Base Component

Releases: SA for Multiplatforms 2.1.1.0, 2.1.1.1, and 2.1.1.2; Operating system: AIX 5.3

Problem: On AIX 5.3, the RSCT prerequisite level is not enforced correctly if the Base Component is installed using smit(ty) or the installp command.

Solution: To ensure that the required RSCT level is enforced correctly, use the installSAM command to install or upgrade the product.

If you do use smit(ty) or installp to install or upgrade the product, you must ensure that the required RSCT level is already installed on the target machine. To check the RSCT level before starting the installation, use one of the following approaches:
To perform a complete prerequisites check, which is highly recommended, run the **prereqSAM** command that is shipped with the product.

To only check that the required RSCT APAR is installed, you can run the following command:

```
instfix -ik <APAR_number>
```

See [Table 3 on page 5](#) for the appropriate APAR number.

**Prerequisites check for RSCT version 2.3.10 or higher fails on AIX 5.2**

*Releases: SA for Multiplatforms 2.1.1.0, 2.1.1.1, and 2.1.1.2; Operating system: AIX 5.2*

*Problem:* On AIX 5.2, the RSCT prerequisites check incorrectly fails when RSCT version 2.3.10 or higher is installed.

*Solution:* Contact IBM support to obtain an updated version of the scripts that are used for prerequisites checking. If no other prerequisite checks failed (with return code 21), you can also rerun the **installSAM** command with the option `--noprereqcheck`.

**Open file limit change for IBM.Application resources**

*Releases: 2.1.1.1 or later; Operating system: Linux*

The soft limit for the number of open files has changed (decreased) from 'maximum possible' to 1024. The change was implemented to resolve a performance issue. The hard limit is still at the maximum, so the soft limit can be adjusted if needed within the scripts executed as StartCommand, StopCommand, or MonitorCommand for a resource.

To increase the limit, add the following statement below the header of the *Command scripts for the resource:

```
# ulimit -S -n <new-limit-for-number-of-open-files>
```

This change may only have an impact on applications requiring a huge number of open files, for example, WebSphere Application Server.

**Known limitation:**

**Resource names must not contain the slash (/) character**

Names of resources that are automated by IBM Tivoli System Automation for Multiplatforms must not contain the slash (/) character. If a resource whose name contains a slash is added to a resource group, the IBM.RecoveryRM cannot work with the resource and no automation will be performed.

**Known problem:**

**Support for IBM.StorageRM resource manager**

Starting with level 2.4.4.2, RSCT provides the optional installation package `rsct.opt.storagerm`, which is also packaged with the Linux version of IBM Tivoli System Automation for Multiplatforms 2.1.1.0 (release 2.1, fix pack 2), but not automatically installed. This package contains the new resource manager IBM.StorageRM, which can work with storage resources like disks and file systems.

However, on the AIX operating system this resource manager harvests the file system resources of resource class IBM.AgFileSystem with resource names containing the slash (/) character. These resources cannot be automated by IBM Tivoli System Automation for Multiplatforms because such resources are not supported. To avoid the problem, do not use resources of resource class IBM.AgFileSystem within resource groups if the resource name contains a slash (/).

**End-to-end automation adapter**

**Known problem with Java 5:**

**End-to-end automation adapter on AIX fails to start if only Java 5 is installed**

*Releases: all 2.1 release levels; operating system: AIX*

**Conditions:**
1. The end-to-end automation adapter (that is, the package `sam.adapter`) is installed at version 2.1.0.0 or later.

2. No Java 1.4 (32 bit) is installed, but Java 5 (32 bit) is installed:
   Java 1.4 is installed if the directory `/usr/java14` exists. Java 5 is installed if the directory `/usr/java5` exists.

   **Symptom:**
   The command `samadapter start` fails to start the adapter.

   **Solution:**
   To resolve the problem, install Java 1.4 (32 bit) JRE or JDK in addition to Java 5. Both versions can coexist.

**Known problems with National Language Support (NLS):**

**Non-ASCII characters are not displayed correctly in the end-to-end automation adapter configuration dialog when a UTF-8 locale is used in a console on KDE 3.2.1/Qt 3.3.1 (SUSE)**

*Releases: 2.1.0.0, 2.1.01, 2.1.1.0; operating systems: Linux (SUSE)*

If you use a UTF-8 locale in a console on KDE 3.2.1/Qt 3.3.1, the title bars on the pages of the adapter configuration dialog may not display non-ASCII characters correctly.

   **Solution:** As a workaround, switch to a non UTF-8 locale before starting the adapter configuration dialog. This is a SUSE problem, for which a problem report has been opened.

**Input method editor (IME) cannot be activated on the adapter configuration dialog**

*Releases: 2.1.0.0, 2.1.01, 2.1.1.0; operating systems: all*

The input method editor (IME) cannot be activated on the adapter configuration dialog. Because IME is required for entering DBCS characters, non-ASCII characters cannot be entered.

   **Solution:** Use a copy and paste function to enter DBCS characters.
Operations console of the Base Component

Known problems:

Uninstallation of the operations console or installation of fix pack 1 stalls on Windows

Releases:
Uninstallation: All
Fix pack installation: Installation of fix pack 1 to obtain level 2.1.0.1
Operating systems: Windows

Symptom: The progress bar in the wizard panel “Starting operations console” stalls at 99 %.
   during the uninstallation of the operations console or during the installation of fix pack 1.

Cause: The ISC server and the ISC Help server are not installed as Windows services.

Solution:

  • To avoid the problem, leave the check box “Register ISC server and ISC Help server as system
    service” in the corresponding panel of the installation wizard selected when you install release
    2.1.0.0 or 2.1.1.0. This ensures that the servers are installed as Windows services.
  • If the problem occurs, you must stop the Eclipse Help System server manually to resume the
    uninstallation or fix pack installation. To do so, issue the following command:
      \isc_runtime_root\PortalServer\ISCEclipse\StopEclipse.bat

Installation of the operations console fails

Releases: 2.1.0.0; operating systems: all

The installation of the operations console fails if the default installation directory is changed in the
Installation directory panel. In this case the summary panel that appears before the actual
installation begins shows the incorrect entry end-to-end Automation Manager and the installation
fails with this error message:

DB2 Config RC = 1. For details
see: /opt/IBM/itsamp/eez/console/install/logs/DB2Config.log

Solution:

  1. To avoid the problem, do not change the default installation directory in the installation wizard
     panel "Installation directory". The default installation path is:
        • Windows: C:\Program Files\IBM\tsamp\eez
        • AIX/Linux: /opt/IBM/itsamp/eez
  2. If the problem occurs, restart the installation and click Next in the Installation directory panel
     without changing the default installation directory.

Installation of the operations console cannot be resumed after Cancel was clicked during
preinstallation

Releases: 2.1.0.0; operating systems: all

When you click Cancel in an installation panel during the preinstallation phase, a confirmation
dialog appears ("Do you want to exit?"). However, cleanup has already been performed and the
preinstallation process cannot be resumed.

Solution: Confirm the cancellation and restart the installation.
## Chapter 3. IBM Tivoli System Automation for Multiplatforms
### 2.1 - End-to-End Automation Management Component

**Required Hardware and Software**

**Supported Platforms and Distributions**

*Table 4. Supported platforms and distributions for the end-to-end automation management component of IBM Tivoli System Automation for Multiplatforms*

<table>
<thead>
<tr>
<th>Operating system</th>
<th>IBM x/Series</th>
<th>IBM i/Series</th>
<th>IBM p/Series</th>
<th>IBM z/Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX 5.2 (32 bit) (AIX 5L Version 5.2) ML 5</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIX 5.2 (64 bit) (AIX 5L Version 5.2) ML 5</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIX 5.3 (32 bit) (AIX 5L Version 5.3) ML 2²</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>AIX 5.3 (64 bit) (AIX 5L Version 5.3) ML 2²</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 8 SP 3 (31 bit/32 bit²)</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 8 SP 3 (64 bit⁴)</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 9 (32 bit³)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SUSE SLES 9 (64 bit⁴)</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X⁸</td>
</tr>
<tr>
<td>Red Hat RHEL 3.0 AS QU 3 (31 bit/32 bit²)</td>
<td>X⁵</td>
<td></td>
<td></td>
<td>X²</td>
</tr>
<tr>
<td>Red Hat RHEL 3.0 AS QU 3 (64 bit⁴)</td>
<td></td>
<td>X⁶</td>
<td>X⁶</td>
<td></td>
</tr>
<tr>
<td>Red Hat RHEL 4.0 AS (32 bit³)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red Hat RHEL 4.0 AS (64 bit⁴)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X⁸</td>
</tr>
</tbody>
</table>

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Notes:
1. IBM x/Series systems with IA32, EM64T, or AMD64 architecture.
   Any other systems with IA32, EM64T, or AMD64 architecture are also supported.
   Systems with IA64 architecture are not supported.
2. The following Linux kernel architectures are supported for running with 31 bit:
   • s390 on IBM z/Series
3. The following Linux kernel architectures are supported for running with 32 bit:
   • x86 on IBM x/Series
4. The following Linux kernel architectures are supported for running with 64 bit:
   • ppc64 on IBM i/Series and IBM p/Series
   • s390x on IBM z/Series is supported for some distributions
5. Red Hat RHEL 3.0 AS QU3 with x86 kernel architecture requires the following packages:
   • compat-gcc-7.3-2.96.122
   • compat-libstdc++-7.3-2.96.122
   • compat-libstdc++-devel-7.3-2.96.122
   • compat-glibc-7.x-2.2.4.32.5
   • compat-gcc-c++-7.3-2.96.122
   • compat-db-4.0.14-5
   • rpm-build-4.2.1-4.2
6. Red Hat RHEL 3.0 AS QU3 with ppc64 kernel architecture requires the following package:
   • rpm-build-4.2.1-4.2
7. Red Hat RHEL 3.0 AS QU3 with s390 kernel architecture requires the following packages:
   • compat-libstdc++-7.2.2-2.95.3.77
   • compat-db-4.0.14-5
   • rpm-build-4.2.1-4.2
   • compat-pwdb-0.62-3
8. SUSE SLES 9 and RHEL 4.0 AS on s390x kernel require IBM DB2 UDB Version 8.2 Run-Time
   Client with Fix Pack 10 running as 31 bit application. This precludes IBM DB2 UDB
   Version 8.2 server from running on the same system, that is, remote DB2 setup is required.
9. APAR IY65979 must be installed

Disk Space Requirements on AIX and Linux for Release 2.1.1.0 or later

Table 5 lists the disk space that is required to install or upgrade the end-to-end automation management component to release 2.1.1.0 or later on AIX or Linux systems:

- Column Initial install: the values apply when you install release 2.1.1.0 from scratch
- Column Update install: the values apply when you install a fix pack to upgrade to level 2.1.1.0 or later (from level 2.1.0.0 or later)

Note that the table does not include the disk space required to install the middleware software.

Table 5. Disk space requirements on AIX and Linux systems

<table>
<thead>
<tr>
<th>Description</th>
<th>Default directory</th>
<th>Update install</th>
<th>Initial install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation directory of the end-to-end automation management component</td>
<td>/opt/IBM/tsamp/eez</td>
<td>70 MB</td>
<td>70 MB</td>
</tr>
<tr>
<td>Automation manager and operations console deployed in WebSphere Application Server</td>
<td>AIX: /usr/IBM/WebSphere/AppServer Linux: /opt/IBM/WebSphere/AppServer</td>
<td>150 MB</td>
<td>150 MB</td>
</tr>
<tr>
<td>Operations console installation directory</td>
<td>/opt/IBM/ISC</td>
<td>850 MB</td>
<td>500 MB</td>
</tr>
<tr>
<td>DB2 database</td>
<td>~db2inst1</td>
<td>120 MB</td>
<td>120 MB</td>
</tr>
<tr>
<td>Temporary disk space needed for the installation</td>
<td>/tmp</td>
<td>500 MB</td>
<td>300 MB</td>
</tr>
</tbody>
</table>
Table 5. Disk space requirements on AIX and Linux systems (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Default directory</th>
<th>Update install</th>
<th>Initial install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration file directory and policy</td>
<td>/etc/opt/IBM/tsamp/eez/cfg</td>
<td>1 MB</td>
<td>1 MB</td>
</tr>
<tr>
<td>pool directory</td>
<td>/etc/opt/IBM/tsamp/eez/policyPool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tivoli Common Directory</td>
<td>/var.ibm/tivoli/common/eez</td>
<td>250 MB</td>
<td>250 MB</td>
</tr>
<tr>
<td>Installer registry</td>
<td>~root/vpd.properties</td>
<td>10 KB</td>
<td>10 KB</td>
</tr>
</tbody>
</table>

Prerequisites

The list of prerequisites is available in the IBM Tivoli System Automation for Multiplatforms End-to-End Automation Management User’s Guide and Reference, SC33-8211.

Installation prerequisites

Setting up the DB2 environment

On Linux and AIX systems, the DB2 environment must be prepared in such a way that the DB2 environment is automatically available in every sub-shell that is opened. This is usually accomplished by extending a startup shell script. The user ID that is used to run the installed end-to-end automation management component must have the same DB2 environment setup.

Note: On Linux and AIX systems this DB2 environment setup is not automatically done by a DB2 server or DB2 client installation and needs to be done manually. If this is not done, the installation of the end-to-end automation management component will fail.

Ensuring that the correct DB2 instance port number is specified during the installation of the end-to-end automation management component

During the installation of DB2, the port number 50000 is assigned to DB2 by default. However, if the port is not free, a different port number is assigned automatically. When you subsequently install the end-to-end automation management component, you must ensure that you specify the correct DB2 port number in the corresponding installation wizard panel. If a port number other than 50000 was assigned during DB2 installation, you must overwrite the recommended default value in the field DB2 instance port number.

You can determine the correct DB2 instance port number in one of two ways:

- The port number is displayed in the report panel that appears when the DB2 installation is complete.
- The port number is listed in the file /etc/services

Operations Console

This is some additional information regarding the operations console.

Additional Information

Which user ID and password do I have to specify in the "Automation domain authentication" panel?

When selecting a first-level automation domain in the operations console for the first time, a panel will come up prompting for the user ID and password for this domain. You have to specify a user ID and password that is allowed to login to the system on which the domain’s automation adapter is currently running.

Hint: You can also store the user ID and password for each automation domain in a credential vault, by selecting the option “Save this in the credential vault for further usage”. For all automation domains for
which you have stored the credentials in the credential vault, the login will be performed automatically. You
will not get prompted again for credentials until you delete the credentials again using the Preferences
dialog, or if the automatic login fails.

Service
See the IBM Tivoli System Automation for Multiplatforms End-to-End Automation Management User's
Guide and Reference for general information about installing service for the end-to-end management
component.

Fixes and Problem-Solving Databases
The information about fixes and service updates for this software can be found at the following web page:
www.ibm.com/software/sysmgmt/products/support/IBM_Tivoli_System_Automation_for_Linux.html

Installing fix packs to obtain level 2.1.0.1
To update the end-to-end automation management component to version 2.1.0.1, you need to install a
WebSphere Application server interim fix and a product fix pack.

Archive Names
The following table lists the archives you use for installing the WebSphere Application server interim fix.

Table 6. WebSphere Application server interim fix archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAWAS-WIN-FP0001.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAWAS-AIX-FP0001.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAWAS-I386-FP0001.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAWAS-PPC-FP0001.tar</td>
</tr>
<tr>
<td>Linux on z/Series</td>
<td>2.1.0-TIV-SAWAS-S390-FP0001.tar</td>
</tr>
</tbody>
</table>

The following table lists the archives you use for installing the product fix pack.

Table 7. Product fix pack archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP0001.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP0001.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAE2E-I386-FP0001.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0001.tar</td>
</tr>
<tr>
<td>Linux on z/Series</td>
<td>2.1.0-TIV-SAE2E-S390-FP0001.tar</td>
</tr>
</tbody>
</table>

Installing the WebSphere Application Server Interim Fix
Before you install fix pack 2.1.0.1 for the end-to-end automation management component, you must install
the WebSphere Application Server interim fix.

This is how you install the interim fix:
1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   The archive contains the interim fix and the update installer program required for installing it.
Directory structure after extraction:

Table 8. Contents of the WebSphere Application Server interim fix archive

<table>
<thead>
<tr>
<th>Directory</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>Empty</td>
</tr>
<tr>
<td>Fixes</td>
<td>Contains:</td>
</tr>
<tr>
<td></td>
<td>• The archive that contains the update installer program. The name of the update installer archive has the following syntax: &lt;PLATFORM&gt;UpdateInstaller.&lt;EXT&gt; where &lt;PLATFORM&gt; and &lt;EXT&gt; are platform-specific strings. You find the documentation for the update installer program in the subdirectory updateinstaller/docs.</td>
</tr>
<tr>
<td></td>
<td>• The interim fix is located in the subdirectory PK01294. The complete name of the interim fix file is 6.0.0.2-WS-WAS-MultiOS-IFPK01294.pak</td>
</tr>
</tbody>
</table>

3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.

Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.

Installing the product Fix Pack 2.1.0.1

For a description of how to install a fix pack to update the end-to-end automation management component, refer to the End-to-End Automation Management Component User's Guide and Reference.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.

Installing fix packs to obtain level 2.1.1.0

To update the end-to-end automation management component to level 2.1.1.0, you need to install a WebSphere Application server interim fix and a product fix pack.

Archive Names

The following table lists the archives you use for installing the WebSphere Application server interim fix.

Table 9. WebSphere Application server interim fix archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAWAS-WIN-FP002.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAWAS-AIX-FP002.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAWAS-i386-FP002.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAWAS-PPC-FP002.tar</td>
</tr>
<tr>
<td>Linux on z/Series</td>
<td>2.1.0-TIV-SAWAS-S390-FP002.tar</td>
</tr>
</tbody>
</table>

The following table lists the archives you use for installing the product fix pack to obtain level 2.1.1.0.

Table 10. Product fix pack archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP002.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP002.bin</td>
</tr>
</tbody>
</table>
Table 10. Product fix pack archives (continued)

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAE2E-i386-FP0002.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0002.tar</td>
</tr>
<tr>
<td>Linux on z/Series</td>
<td>2.1.0-TIV-SAE2E-S390-FP0002.tar</td>
</tr>
</tbody>
</table>

Installing the WebSphere Application Server Interim Fix

Before you install fix pack 2.1.1.0 for the end-to-end automation management component, you must install the WebSphere Application Server interim fix.

This is how you install the interim fix:

1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   
   The archive contains the interim fix and the update installer program required for installing it.
   
   Directory structure after extraction:

   Table 11. Contents of the WebSphere Application Server interim fix archive

<table>
<thead>
<tr>
<th>Directory</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>6.0-WS-WAS-Winx32-RP0000002.zip</td>
</tr>
<tr>
<td>Fixes</td>
<td>Contains:</td>
</tr>
<tr>
<td></td>
<td>• The archive that contains the update installer program. The name of the update installer archive has the following syntax: &lt;PLATFORM&gt;UpdateInstaller.&lt;EXT&gt; where &lt;PLATFORM&gt; and &lt;EXT&gt; are platform-specific strings. You find the documentation for the update installer program in the subdirectory updateinstaller/docs.</td>
</tr>
<tr>
<td></td>
<td>• The interim fix is located in the subdirectory 01-PK07351/02-PK09347. The complete name of the interim fix file is 6.0.2-WS-WAS-MultiOS-IFPK07351.pak/6.0.2-WS-WAS-MultiOS-IFPK09347.pak</td>
</tr>
</tbody>
</table>

3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.

   Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.

Installing the product Fix Pack 2.1.1.0

For a description of how to install a fix pack to update the end-to-end automation management component, refer to the *End-to-End Automation Management Component User's Guide and Reference*.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.
Installing fix packs to obtain level 2.1.1.1

Depending on the release level of IBM Tivoli System Automation for Multiplatforms from which you are upgrading to level 2.1.1.1, you must install the following fix packs:

<table>
<thead>
<tr>
<th>Release level that is currently installed on your system</th>
<th>What you must install to upgrade to level 2.1.1.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1.0</td>
<td>The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 13)</td>
</tr>
</tbody>
</table>
| 2.1.0.0 or 2.1.0.1                                       | 1. The WebSphere Application Server interim fix (see Table 12)  
|                                                          | 2. The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 13) |

Archive Names

Table 12 lists the archives you use for installing the WebSphere Application server interim fix.

Notes:
1. The interim fix must be installed before the product fix pack.
2. You must install the interim fix only if you are upgrading from a IBM Tivoli System Automation for Multiplatforms release level other than 2.1.1.0.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAWAS-WIN-FP0003.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAWAS-AIX-FP0003.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAWAS-I386-FP0003.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAWAS-PPC-FP0003.tar</td>
</tr>
<tr>
<td>Linux on z/series</td>
<td>2.1.0-TIV-SAWAS-S390-FP0003.tar</td>
</tr>
</tbody>
</table>

The following table lists the archives you use for installing the product fix pack to obtain level 2.1.1.1.

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP0003.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP0003.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAE2E-I386-FP0003.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0003.tar</td>
</tr>
<tr>
<td>Linux on z/series</td>
<td>2.1.0-TIV-SAE2E-S390-FP0003.tar</td>
</tr>
</tbody>
</table>

Installing the WebSphere Application Server Interim Fix

This is how you install a WebSphere Application Server interim fix:
1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   - The archive contains the interim fix and the update installer program required for installing it.
Directory structure after extraction:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>6.0-WS-WAS-Winx32-RP0000002.zip</td>
</tr>
<tr>
<td>Fixes</td>
<td>Contains:</td>
</tr>
<tr>
<td></td>
<td>• The archive that contains the update installer program. The name of the update installer archive has the following syntax: &lt;PLATFORM&gt;UpdateInstaller.&lt;EXT&gt; where &lt;PLATFORM&gt; and &lt;EXT&gt; are platform-specific strings. You find the documentation for the update installer program in the subdirectory updateinstaller/docs.</td>
</tr>
<tr>
<td></td>
<td>• The interim fix is located in the subdirectory 01-PK07351/02-PK09347. The complete name of the interim fix file is 6.0.2-WS-WAS-MultiOS-IFPK07351.pak/6.0.2-WS-WAS-MultiOS-IFPK09347.pak</td>
</tr>
</tbody>
</table>

3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.

Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.

**Installing the product Fix Pack 2.1.1.1**

For a description of how to install a fix pack to upgrade the end-to-end automation management component, refer to the *End-to-End Automation Management Component User's Guide and Reference*.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.

**Installing fix packs to obtain level 2.1.1.2**

Depending on the release level of IBM Tivoli System Automation for Multiplatforms from which you are upgrading to level 2.1.1.2, you must install the following fix packs:

<table>
<thead>
<tr>
<th>Release level that is currently installed on your system</th>
<th>What you must install to upgrade to level 2.1.1.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1.0 or 2.1.1.1</td>
<td>The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 16 on page 23)</td>
</tr>
</tbody>
</table>
| 2.1.0.0 or 2.1.0.1                                       | 1. The WebSphere Application Server interim fix (see Table 15 on page 23)  
|                                                           | 2. The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 16 on page 23) |

**Archive Names**

Table 15 on page 23 lists the archives you use for installing the WebSphere Application server interim fix.

**Notes:**

1. The interim fix must be installed before the product fix pack.
2. You must install the interim fix only if you are upgrading from IBM Tivoli System Automation for Multiplatforms release level 2.1.0.0 or 2.1.0.1.
The following table lists the archives you use for installing the product fix pack to obtain level 2.1.1.2.

Table 16. Product fix pack archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP0004.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP0004.bin</td>
</tr>
<tr>
<td>Linux on IBM/x/Series</td>
<td>2.1.0-TIV-SAE2E-I386-FP0004.tar</td>
</tr>
<tr>
<td>PPC Linux</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0004.tar</td>
</tr>
<tr>
<td>Linux on z/Series</td>
<td>2.1.0-TIV-SAE2E-S390-FP0004.tar</td>
</tr>
</tbody>
</table>

Installing the WebSphere Application Server Interim Fix

This is how you install a WebSphere Application Server interim fix:

1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   - The archive contains the interim fix and the update installer program required for installing it.
   - Directory structure after extraction:
     
     | Directory   | Contents                                      |
     |-------------|-----------------------------------------------|
     | Upgrade     | 6.0-WS-WAS-Winx32-RP0000002.zip               |
     | Fixes       | Contains:                                     |
     |             | • The archive that contains the update installer program. The name of the update installer archive has the following syntax: |
     |             | <PLATFORM>UpdateInstaller.<EXT>               |
     |             | where <PLATFORM> and <EXT> are platform-specific strings. |
     |             | You find the documentation for the update installer program in the subdirectory updateinstaller/docs. |
     |             | • The interim fix is located in the subdirectory 01-PK07351/02-PK09347. |
     |             | The complete name of the interim fix file is 6.0.2-WS-WAS-MultiOS-IFPK07351.pak/ 6.0.2-WS-WAS-MultiOS-IFPK09347.pak |
3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.
   - Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.
Installing the product Fix Pack 2.1.1.2
For a description of how to install a fix pack to upgrade the end-to-end automation management component, refer to the End-to-End Automation Management Component User's Guide and Reference.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.

Installing fix packs to obtain level 2.1.1.3
Depending on the release level of IBM Tivoli System Automation for Multiplatforms from which you are upgrading to level 2.1.1.3, you must install the following fix packs:

<table>
<thead>
<tr>
<th>Release level that is currently installed on your system</th>
<th>What you must install to upgrade to level 2.1.1.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1.0, 2.1.1.1, 2.1.1.2</td>
<td>The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 19)</td>
</tr>
</tbody>
</table>
| 2.1.0.0 or 2.1.0.1 | 1. The WebSphere Application Server interim fix (see Table 18)  
2. The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 19) |

Archive Names
Table 18 lists the archives you use for installing the WebSphere Application server interim fix.

Notes:
1. The interim fix must be installed before the product fix pack.
2. You must install the interim fix only if you are upgrading from IBM Tivoli System Automation for Multiplatforms release level 2.1.0.0. or 2.1.0.1.

Table 18. WebSphere Application Server interim fix archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAWAS-WIN-FP0005.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAWAS-AIX-FP0005.bin</td>
</tr>
<tr>
<td>Linux on System x</td>
<td>2.1.0-TIV-SAWAS-I386-FP0005.tar</td>
</tr>
<tr>
<td>Linux on POWER</td>
<td>2.1.0-TIV-SAWAS-PPC-FP0005.tar</td>
</tr>
<tr>
<td>Linux on System z</td>
<td>2.1.0-TIV-SAWAS-S390-FP0005.tar</td>
</tr>
</tbody>
</table>

The following table lists the archives you use for installing the product fix pack to obtain level 2.1.1.3.

Table 19. Product fix pack archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP0005.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP0005.bin</td>
</tr>
<tr>
<td>Linux on System x</td>
<td>2.1.0-TIV-SAE2E-I386-FP0005.tar</td>
</tr>
<tr>
<td>Linux on POWER</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0005.tar</td>
</tr>
<tr>
<td>Linux on System z</td>
<td>2.1.0-TIV-SAE2E-S390-FP0005.tar</td>
</tr>
</tbody>
</table>

Installing the WebSphere Application Server Interim Fix
This is how you install a WebSphere Application Server interim fix:
1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   The archive contains the interim fix and the update installer program required for installing it.
   Directory structure after extraction:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>6.0-WS-WAS-Winx32-RP0000002.zip</td>
</tr>
<tr>
<td>Fixes</td>
<td>Contains:</td>
</tr>
<tr>
<td></td>
<td>• The archive that contains the update installer program. The name of the update installer archive has the following syntax:</td>
</tr>
<tr>
<td></td>
<td>&lt;PLATFORM&gt;UpdateInstaller.&lt;EXT&gt;</td>
</tr>
<tr>
<td></td>
<td>where &lt;PLATFORM&gt; and &lt;EXT&gt; are platform-specific strings.</td>
</tr>
<tr>
<td></td>
<td>You find the documentation for the update installer program in the subdirectory updateinstaller/docs.</td>
</tr>
<tr>
<td></td>
<td>• The interim fix is located in the subdirectory 01-PK07351/02-PK09347.</td>
</tr>
<tr>
<td></td>
<td>The complete name of the interim fix file is 6.0.2-WS-WAS-MultiOS-IFPK07351.pak/</td>
</tr>
<tr>
<td></td>
<td>6.0.2-WS-WAS-MultiOS-IFPK09347.pak</td>
</tr>
</tbody>
</table>

3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.
   Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.

**Installing the product Fix Pack 2.1.1.3**

For a description of how to install a fix pack to upgrade the end-to-end automation management component, refer to the *End-to-End Automation Management Component User's Guide and Reference*.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.

**Installing fix packs to obtain level 2.1.1.4**

Depending on the release level of IBM Tivoli System Automation for Multiplatforms from which you are upgrading to level 2.1.1.4, you must install the following fix packs:

<table>
<thead>
<tr>
<th>Release level that is currently installed on your system</th>
<th>What you must install to upgrade to level 2.1.1.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1.0, 2.1.1.1, 2.1.1.2, 2.1.1.3</td>
<td>The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 22 on page 26)</td>
</tr>
<tr>
<td>2.1.0.0 or 2.1.0.1</td>
<td>1. The WebSphere Application Server interim fix (see Table 21 on page 26)</td>
</tr>
<tr>
<td></td>
<td>2. The IBM Tivoli System Automation for Multiplatforms fix pack (see Table 22 on page 26)</td>
</tr>
</tbody>
</table>

**Archive Names**

Table 21 on page 26 lists the archives you use for installing the WebSphere Application server interim fix.

**Notes:**

1. The interim fix must be installed before the product fix pack.
2. You must install the interim fix only if you are upgrading from IBM Tivoli System Automation for Multiplatforms release level 2.1.0.0 or 2.1.0.1.
The following table lists the archives you use for installing the product fix pack to obtain level 2.1.1.4.

### Table 22. Product fix pack archives

<table>
<thead>
<tr>
<th>Platform</th>
<th>Archive name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>2.1.0-TIV-SAE2E-WIN-FP0006.exe</td>
</tr>
<tr>
<td>AIX</td>
<td>2.1.0-TIV-SAE2E-AIX-FP0006.bin</td>
</tr>
<tr>
<td>Linux on System x</td>
<td>2.1.0-TIV-SAE2E-I386-FP0006.tar</td>
</tr>
<tr>
<td>Linux on POWER</td>
<td>2.1.0-TIV-SAE2E-PPC-FP0006.tar</td>
</tr>
<tr>
<td>Linux on System z</td>
<td>2.1.0-TIV-SAE2E-S390-FP0006.tar</td>
</tr>
</tbody>
</table>

### Installing the WebSphere Application Server Interim Fix

This is how you install a WebSphere Application Server interim fix:

1. Download the WebSphere Application Server interim fix archive for your platform.
2. Extract the archive to a temporary directory.
   - The archive contains the interim fix and the update installer program required for installing it.
   - Directory structure after extraction:

<table>
<thead>
<tr>
<th>Directory</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upgrade</td>
<td>6.0-WS-WAS-Winx32-RP0000002.zip</td>
</tr>
<tr>
<td>Fixes</td>
<td>Contains:</td>
</tr>
<tr>
<td></td>
<td>• The archive that contains the update installer program. The name of the update installer archive has the following syntax:</td>
</tr>
<tr>
<td></td>
<td>&lt;PLATFORM&gt;UpdateInstaller.&lt;EXT&gt;</td>
</tr>
<tr>
<td></td>
<td>where &lt;PLATFORM&gt; and &lt;EXT&gt; are platform-specific strings.</td>
</tr>
<tr>
<td></td>
<td>You find the documentation for the update installer program in the subdirectory updateinstaller/docs.</td>
</tr>
<tr>
<td></td>
<td>• The interim fix is located in the subdirectory 01-PK07351/02-PK09347.</td>
</tr>
<tr>
<td></td>
<td>The complete name of the interim fix file is 6.0.2-WS-WAS-MultiOS-IFPK07351.pak/6.0.2-WS-WAS-MultiOS-IFPK09347.pak</td>
</tr>
</tbody>
</table>
3. Use the update installer for your platform to install the interim fix. For information about how to use the update installer program, refer to the update installer documentation in the directory fixes/updateinstaller/docs.
   - Do not install any additional interim fixes unless you are explicitly advised to do so by SA for Multiplatforms Support.
Installing the product Fix Pack 2.1.1.4
For a description of how to install a fix pack to upgrade the end-to-end automation management component, refer to the End-to-End Automation Management Component User's Guide and Reference.

Before starting the installation of the fix pack, make sure that the WebSphere Application Server "server1" and the Integrated Solutions Console server (ISC_Portal) have been stopped.

National Language Support
IBM Tivoli System Automation for Multiplatforms 2.1 is NLS enabled. The list of supported languages is provided in the IBM Tivoli System Automation for Multiplatforms End-to-End Automation Management User's Guide and Reference.

Note that the end-to-end automation management component does not support bi-directional locales.

Known Problem and Issues

Installation and uninstallation
Known problems:
You are prompted for login information during the installation

Releases: 2.1.1.0; operating systems: all
During the installation of the end-to-end automation management component, a window may appear, prompting you for login information.

Solution: No action is required. The window disappears automatically after some time and the installation completes successfully. The installation also completes successfully if you do enter information in the panel and click OK, or if you close the window by clicking Cancel.
Uninstallation of the end-to-end automation management component or installation of fix pack 1 stalls on Windows
Releases:
Uninstallation: All
Fix pack installation: Installation of fix pack 1 to obtain level 2.1.0.1
Operating systems: Windows

Symptom: The progress bar in the wizard panel “Starting operations console” stalls at 99 % during the uninstallation of the operations console or during the installation of fix pack 1.

Cause: The ISC server and the ISC Help server are not installed as Windows services.

Solution:
- To avoid the problem, leave the check box “Register ISC server and ISC Help server as system service” in the corresponding panel of the installation wizard selected when you install release 2.1.0.0 or 2.1.1.0. This ensures that the servers are installed as Windows services.
- If the problem occurs, you must stop the Eclipse Help System server manually to resume the uninstallation or fix pack installation. To do so, issue the following command:
  `<isc_runtime_root>\PortalServer\ISCeclipse\StopEclipse.bat`

Installation cannot be resumed after Cancel was clicked during preinstallation
Releases: 2.1.0.0; operating systems: all
When you click Cancel in an installation panel during the preinstallation phase, a confirmation dialog appears (“Do you want to exit?”). However, cleanup has already been performed and the preinstallation process cannot be resumed.

Solution: Confirm the cancellation and restart the installation.

Login to Integrated Solutions Console fails after the installation of the end-to-end automation management component is complete
Releases: all; operating systems: all

Symptom: The initial login to Integrated Solution Console fails.

Cause: An incorrect DB2 port number was specified during the installation of the end-to-end automation management component (for details, see "Ensuring that the correct DB2 instance port number is specified during the installation of the end-to-end automation management component" on page 17).

Solution: Uninstall and reinstall the end-to-end automation management component.

During the installation of fix pack 3 a message appears, indicating that a newer version of a file is already installed
Releases: 2.1.1.1; operating systems: all

Symptom: The following message is displayed:

![Replace Existing File](image_url)

Solution: The file must be replaced. Click Yes to proceed with the installation of the fix pack.

National Language Support
Known problems:
Input method editor (IME) cannot be activated on the end-to-end automation manager configuration dialog

Releases: 2.1.0.0, 2.1.01, 2.1.1.0; operating systems: all

The input method editor (IME) cannot be activated on the configuration dialog. Because IME is required for entering DBCS characters, non-ASCII characters cannot be entered.

Solution: Use a copy and paste function to enter DBCS characters.
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