# AIX 4.1 Installation Tips

## Special Notices

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## About This Document

This document contains the latest tips for successful installation of AIX 4.1.4, and will be updated as new tips become available.

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## 604 SMP Update Tips

The upgrade of RS/6000 601 Symmetric Multi-Processor (SMP) systems to 604 processors requires AIX 4.1.4 and a small set of fileset updates, or AIX 4.2. No updates are required for AIX 4.2.

## How to Install Updates

**NOTE**: Regardless of the software update path, the system must be rebooted immediately after installing the updates. Until the system is rebooted, users will not be able to login to the system.

## APAR IX57164

The 604 SMP updates can be obtained by ordering APAR IX57164 from FixDist, or from the IBM Support Center. APAR IX57164 is only a packaging APAR to allow easy ordering of the update package. It will not appear in the list of APARs on the Install Fileset Updates by Fix panel SMIT, nor will you be able to see this APAR using the instfix command after the updates are installed. To install the update package, use the command:

```
smit update_all
```

## AIX 4.1.4 for Server for G5 Processors

The AIX 4.1.4 for Server for G5 Processors media has also been updated to include the required fileset updates. The label on the updated media includes the words "Includes SMP Support". To update an existing AIX 4.1 system from the AIX 4.1.4 product media, use the command:

```
smit update_all
```

## 604 SMP Upgrade CD-ROM

Customers who are part of the 604 SMP Early Support Program (ESP) will receive a CD-ROM and installation instructions as part of their 601 to 604 SMP upgrade kit. This CD-ROM can be identified by the part number 604UPGR on the bottom of the CD-ROM label. This CD-ROM contains the AIX 4.1.4 maintenance level and the required 604 SMP updates. There has been a problem found with the TCP/IP update on this media that can, under some circumstances, cause TCP/IP connections to hang. This problem can be avoided by using one of the following circumventions:

1. Set tcp_keepinit to less than 5 seconds. This can be accomplished with the the following command:

   ```
   no -o tcp_keepinit=5            (default value = 150)
   ```

2. Set tcp_keepidle to the same value as tcp_keepinit. This solution could result in normal connections timing ut more quickly than desired. To set tcp_keepidle and tcp_keepinit to the same value, use the following commands:

```
no -o tcp_keepinit=150          (default value = 150)
no -o tcp_keepidle=150          (default value = 14400)
```

You can avoid installing the TCP/IP update from the 604 upgrade CD-ROM if the system is already at AIX 4.1.4 by using the following procedure.

* Login as root

* Insert the AIX 4.1.4 Update CD-ROM

* Install only selected filesets using the command:

```
smit install_selectable_all
```

- Press F4 and select the CD-ROM drive as the installation device.
- Press F4 to list the filesets to install and select the following filesets using the F7 key. When all filesets have been selected, press the ENTER key.

```
4.1.4.4  Hardware Diagnostics
4.1.4.12 Base Operating System Multiprocessor Runtime
4.1.4.2  ISA Keyboard & Mouse Diagnostics
4.1.4.7  Common Async Adapter Support
4.1.3.1  MCA Keyboard & Mouse Adapter (f6f8) Diagnostics
4.1.4.2  Keyboard Tablet & Mouse Device and Adapter
Diagnostics
4.1.4.6  AIXwindows Runtime Environment
```

- Set other installation options as desired and press ENTER to begin the installation.

**NOTE**: Some selected filesets may fail to install if the base level software is not installed on the system. This is normal.

* Reboot the system using the command:

```
shutdown -r
```

## System Hang Using ORACLE on SMP Systems

A problem, which manifests itself as a system hang, has been discovered in the ORACLE kernel extension pw-syscall4.1 running on SMP processors. The problem has only been experienced on the 604 with 6 or more CPUs running Oracle Version 7.1.6 and applications with heavy insert activity.

ORACLE is providing a new kernel extension with ORACLE version 7.3.2 that fixes the problem. Customers should upgrade their ORACLE post wait kernel extension before the installation of the 604 processor to avoid this situation. Please, contact your ORACLE support representative (and refer to BUG 397843 filed for SAP) if you have any questions about this problem.

# 4.1.4.0 bos.rte.install Problems

Listing "SOFTWARE to install" from the "Install/Update From All Available Software" panel of SMIT (smit install_selectable_all), in AIX 4.1.4 can take an excessive amount of time. The problem is resolved by APAR IX56941, which is currently available from FixDist.

## Required 7135-110 Microcode Update

Customers upgrading systems with attached 7135-110 Raidiant Array subsystems to AIX 4.1 must also obtain and install the latest version of controller and drive microcode. This microcode update can be obtained via hardware service channels (800-IBM-SERV in the U.S.) by requesting ECA 005.

A new publication for the 7135, containing information on microcode and device driver installation, should also be ordered. This publication is titled 7135 Raidiant Array for AIX: Installation Guide and Reference, form number SC23-1742.

## Missing DCE Filesets

When installing the dce.compat package, some filesets in the package have requisites to separately purchasable filesets that may not be on your installation media. If you attempt to install all of DCE from your media, you will see an error message similar to the following:

Missing Requisites: The following filesets are required by one or more of the selected filesets listed above. They are not currently installed and could not be found on the installation media.

```
dce.dfsnfs.rte 2.1.0.0        # Base Level Fileset
dce.cds.rte 2.1.0.0           # Base Level Fileset
dce.security.rte 2.1.0.0      # Base Level Fileset
dce.edfs.rte 2.1.0.0          # Base Level Fileset
```

This message does not indicate that there is a problem, but rather that your media does not contain every separately purchasable option of DCE.

## Missing devices.isa_sio.IBM001F Fileset

During installation of device support on the RISC System/6000 Model E20 Workgroup Server, a message indicating that the devices.isa_sio.IBM001F fileset is missing can occur. This is due to the presence of a system feature that is not supported in AIX 4.1. This message can occur during initial system installation, or when configuring devices after IPL using the "Install/Configure Devices Added After IPL" SMIT option.

## Kernel Debugger Changes

Prior to AIX 4.1.4, the system key had to be in the service position for the kernel debugger to be activated. This restriction was removed in AIX 4.1.4 to facilitate the use of the kernel debugger on systems without a key.

If you have the kernel debugger enabled on a system that is using one of the native serial ports for something that could do binary data transfers, the kernel debugger will be activated if the data happens to contain the binary value for

the key sequence used to bring up the debugger. This can occur if you're using the S1 or S2 ports for a SLIP or PPP connection and you've enabled the kernel debugger.

## AIX Man Pages

The AIX man command searches the Hypertext Information Libraries in addition to traditional man pages. The Hypertext Information Base Libraries are available on CD-ROM, or may be installed on disk from the AIX 4.1 Installation media. The AIX commands and file formats man pages are in the following Hypertext Information Libraries, each of which can be installed separately.

```
Fileset Name          Size in MB
------------          ----------
Commands Database         28
Files Database            11
```

Refer to IBM-4FAX document #4619 for additional information on AIX man pages.

## Missing Package Installation Database

The AIX 4.1.4 Package Installation Database (pkg_gd fileset), which contains information about the contents of the separately installable filesets on the AIX 4.1.4 installation media, was omitted from the media. A copy of the fileset can be obtained from FixDist by ordering APAR IX55799. Use the command smit install_latest to install the Package Installation Database.

## 8/128 Port ISA Adapter Configuration

Configuration of the 8-port and 128-port ISA adapters fails using SMIT. This problem is fixed by APAR IX55876. APAR IX55876 can be obtained from FixDist.

The following procedure can be used to configure the adapters from the command line without APAR IX55876.

1. List the ISA adapters

   Use the command 'lsdev -Cc bus | grep ISA'. Note the bus number in the output.

2. Obtain the adapter I/O address

   The adapter I/O address can be determined from the switches on the adapter.

3. Configure the adapter

   Use one of the following commands depending upon the adapter type. Substitute the bus number and I/O address determined in the previous steps.

```
8-port ISA adapter
 mkdev -t pcxr -c adapter -s isa -p bus# -a bus_io_addr=0x###
128-port ISA adapter
 mkdev -t cxia -c adapter -s isa -p bus# -a bus_io_addr=0x###
```

## Lppchk errors on ESSL 2.2.2

After successfully installing and committing ESSL 2.2.2 on AIX 4.1 or 4.2, lppchk -c may produce the following errors.

```
lppchk: 0504-206  File /usr/lpp/essl/essl.rs1.rte/2.2.2.1
        could not be located.
lppchk: 0504-206  File /usr/lpp/essl/essl.rs2.rte/2.2.2.1
        could not be located.
```

These errors are due to temporary directories, removed as part of the commit process, having entries in the ODM inventory object. The errors can be safely ignored.

# Reader's Comments

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Be sure to print your name and fax number below if you would like a reply:

Name: Fax Number:

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