

Tru64 UNIX

Upgrading and Configuring Advanced Printing Software in a TruCluster Server Environment

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This Best Practice describes how to upgrade and configure the Advanced Printing Software to Version 1.1 in a TruCluster upgrade and environment.

Contents

Updating and Configuring Advanced Printing Software in a TruCluster Server Environment

Is This Best Practice Right for You?	1
Before You Begin	2
Applying the Best Practice	3
Verifying Success	4
Troubleshooting	5
Comments and Questions	5
Legal Notice	5

Updating and Configuring Advanced Printing Software in a TruCluster Server Environment

This Best Practice describes how to upgrade and configure the Advanced Printing Software to Version 1.1 in a TruCluster™ environment. The enhancements in Version 1.1 include:

- Automatic failover.
- Clients can access services using a cluster alias.
- When relocating servers, the name space does not need to be updated..
- CAA scripts and profiles aid administrators in configuring Advanced Printing Software as a highly available, single-instance application.

A highly available server is configured using the TruCluster Server cluster application availability (CAA) subsystem. CAA monitors the resources required by the server in a cluster and ensures that they run on a cluster member that meets these resource needs. If the cluster member that the server is running on fails, CAA relocates or “fails over” the server to another member that also meets the resource needs.

See the Tru64 UNIX Best Practices Web page for more information about Best Practices documentation.

Is This Best Practice Right for You?

Not all Best Practices apply to all configurations, so you must be sure that it is appropriate for your system and circumstances. To use this Best Practice, your system must meet the requirements described in the following table:

Requirement	Description
Operating System	Compaq Tru64™ UNIX Version 5.0 or higher.
Product Version	TruCluster Server Version 5.0 of higher.
Printing Software	Advanced Printing Software V1.0 or V1.01 previously installed on the cluster.

Requirement	Description
Memory	<p>Advanced Printing Software Version 1.1 requires the same amount of memory as Version 1.0 or 1.01:</p> <ul style="list-style-type: none"> • 64 MB of memory for server systems. This includes command-line and graphical user interfaces. • 32 MB of memory for client systems supporting only the command-line interface. • 64 MB of memory for client systems supporting both the command-line interface and the graphical user interface.
Disk Space	<p>At least 15 MB of space in the /usr directory. Advanced Printing Software Version 1.1 requires the same amount of disk space as Version 1.0 or 1.01.</p>
Impact on Availability	<p>No reboot is required, but printing services will not be available while you perform the configuration.</p>

Before You Begin

Before you apply the Best Practice for Upgrading and Configuring Advanced Printing Software in a TruCluster Server Environment, you must understand some background information and perform some preliminary tasks.

- This Best Practice describes how to upgrade from Version 1.0 or V1.01 to V1.1 and how to configure Advanced Printing Software as a highly available, single-instance application.

If you are installing Advanced Printing Software for the first time, please go to Step 5.

- You should know how to install software subsets from the Associated Products CD-ROM set.
- You must inform the user community that printing services will be temporarily unavailable while you upgrade and configure the Advanced Printing Software. You should plan the upgrade for a time when it will cause minimal disruption.

Compaq recommends that you backup the disk files before you upgrade system software. Before performing this upgrade, backup your print system configuration database, located in /var/pd and /etc/printers.conf.

For information on how Advanced Printing Software servers are run as highly available, single-instance applications, see the TruCluster ServerCluster *Highly Available Applications* manual for your version of the TruCluster product.

Applying the Best Practice

Before you configure Advanced Printing Software in a cluster, be sure to follow the recommendations in *Before You Begin*.

You can install the software on any cluster member that has or has access to a CD-ROM drive.

You must be the root user to perform the following steps.

To upgrade and configure Advanced Printing Software Version 1.1:

1. Determine the version you are running:

```
# setid -i | grep APX
```

Information similar to the following is displayed, where *nnn* is either 100 or 101:

```
APXADMINnnn installed Advanced Printing Software Administrator Utilities
APXBASEnnn installed Advanced Printing Software BASE and Client Commands
APXGUInnn installed Advanced Printing Software Graphical User Interface
APXGWnnn installed Advanced Printing Software lpr/lpd Gateways
APXSVRnnn installed Advanced Printing Software Spooler and Supervisor
```

2. Shut down the servers:

```
/sbin/inited/apx stop
```

Also, stop any Advanced Printing client GUI tools that are running on the cluster hosts members.

3. Uninstall the subsets:

```
# setid -d APXADMINnnn APXBASEnnn APXGUInnn APXGWnnn APXSVRnnn
```

The uninstallation process automatically saves the existing printer configuration in a file called `/var/opt/APXsavedata.tar`. The Version 1.1 installation process automatically finds this file and restores the configuration.

4. Remove the entries from the name space.

If the `printers.conf` file contains references to hosts' entries other than those for Advanced Printing services, remove **only** the server,

printer, and queue entries that provide your Advanced Printing services.

If the cluster you are updating provides **all** of your Advanced Printing services, and does not contain references to other hosts' entries, you may remove all of the server, printer, and queue entries from the `printers.conf` file.

When editing is complete, push the updated (it may be empty) `printers.conf.byname` NIS map using the procedure described in Chapter 3 of the Advanced Printing Software System Administration and Operation Guide.

5. Install the Advanced Printing Software Version 1.1 software subsets from the appropriate Associated Product CD-ROM (APCD).

The installation process creates a default CAA resource.

6. Register the resource by entering:

```
# /usr/sbin/caa_register apx-default
```

7. Start the Advanced Printing servers by entering:

```
# /usr/sbin/caa_start apx-default
```

When CAA starts the default Advanced Printing resource, it displays a message similar to the following:

```
Attempting to start 'apx-default' on member 'membername'  
Start of 'apx-default' on member 'membername' succeeded.
```

If the gateway daemon is configured, start it by entering the following on each cluster member:

```
# /sbin/init.d/apx start
```

8. If you are using an NIS server, push the new `printers.conf.byname` map to the network environment. See Chapter 3 of the Advanced Printing Software System Administration and Operation Guide.

Verifying Success

After you apply the Best Practice for Upgrading and Configuring the Advanced Printing Software in a TruCluster Server Environment, you can verify whether it was successful by doing one or both of the following:

- Display the statistics by entering:

```
# /usr/sbin/caa_stat
```

- Query the servers by entering:

```
# pdls -cs spooler_name
```

```
# pdls -cs supervisor_name
```

If the Best Practice was not successful, see *Troubleshooting* for information about identifying and solving problems.

Troubleshooting

If you are having trouble with CAA commands, verify that the caad daemon is running by entering the following command:

```
# ps aux | grep caad
```

See the Troubleshooting section in the Advanced Printing Software System Administration and Operation Guide to identify and solve other Advanced Printing Software problems.

Comments and Questions

We value your comments and questions on the information in this document. Please mail your comments to us at this address:

```
best_practices@zk3.dec.com
```

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