HP OpenView Operating System Manager Using Radia

for the Windows operating system

Software Version: 1.6

Upgrade Guide

February 2005

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Please select Support & Services from the following web site:

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There you will find contact information and details about the products, services, and support that HP OpenView offers.

The support site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information

About this document

This document is for customers currently using Radia OS Manager Version 1.4 or 1.5 and need to upgrade to Radia OS Manager Version 1.6.

About Radia OS Manager Version 1.6

The Radia OS Manager 1.6 is an important upgrade from previous versions (1.4 and 1.5). There are three major updates:

1. **Model** has been re-designed to handle Radia OS Manager connect separated from the other Radia Products. This implies changes in Radia OS Connect.
2. **Radia Information Base** has been replaced by Radia Management Portal Zone
3. **ROM Administrative Interface** has been integrated in Radia Management Portal.

> ROMS 1.6 introduces an important Model change in the resolution system for all products. The integration with Radia Management Portal may require some infrastructure re-design. HP Consulting and Services can assist you in this upgrade.

Preparing for the Upgrade Process

In preparation for an upgrade from Radia OS Manager 1.4 or 1.5 to version 1.6, carefully test the changes to the existing Radia OS Manager environment before implementing the migration process into a production environment. These changes are required to separate Radia OS Manager activity from other Radia activities such as Radia Application Manager or Radia Patch Manager.

HP highly recommends that you create a parallel Radia Infrastructure to test the migration process and host the Radia OS Manager 1.6.

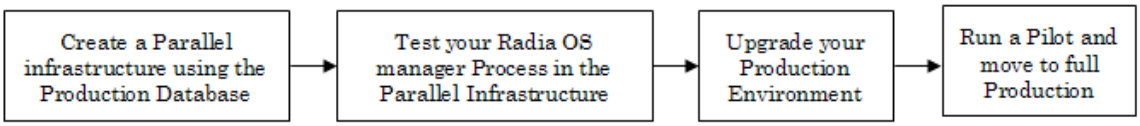


Figure 1 Upgrade process flow.

Radia Configuration Server Updates

Radia Configuration Sever (RCS) 4.5.4 SP4 is the minimum level required.

To prepare the Radia Configuration Server for update

2 Install a new Radia Configuration Server onto a server in your test environment. Make sure you use the same ID as your production ROMs RCS or one of the production ROMs you want to use as a reference.

4 Copy your Radia Configuration Server Database that handles ROMs to the test server directory: `<RCS>\DBupgrade`.

5 Make the following updates to **edmprof.dat** file in the Radia Configuration Server `\bin` directory:

Change DBPATH in [MGR_DIRECTORIES] section to point to DBupgrade.

```
[MGR_DIRECTORIES]
…
DBPATH == <fully qualified Directory path to DBupgrade>
…
```

Review all customization in your database to ensure this model change does not impact any of you customizations.

To update Radia Configuration Server methods

1. Stop the Radia Configuration Server service.
2. Copy `nvdkit.exe`, `rcsver.cmd`, `rcsver.tcl`, `expansmbios.tkd` and `nvdcrt.tkd` from `<CD>\configuration_server\bin` to `<RCS>\bin` folder.
3. Copy `romrcsmth.tkd` from `<CD>\configuration_server\modules\` to `<RCS>\modules\` folder.

   If the modules folder does not exist, create it.
4. Copy RIBRSOLV from `<CD>\configuration_server\rexx\NOVADIGM\` to `<RCS>\rexx\NOVADIGM\` folder.

To update the Radia Configuration Server Database

1. If you have a collocated Radia Proxy Server, stop that service now.
2. Make the following changes to `edmprof.dat` in the Radia Configuration Server `\bin` directory:

   Change [MGR_ROM] section:

   ```
   [MGR_ROM]
   …
   DSML_HOST = <RMP Server>
   DSML_PORT = <RMP Port>
   DSML_ZONE = cn=<Your Zone Here>,cn=radia
   …
   ```
3. Copy the `os_update` folder from `<CD>\migration\` to your Radia Configuration Server directory, which is usually `<Drive>\Novadigm\ConfigurationServer`.
4. Copy all files in `<CD>\configuration_server\database_decks` to `<Drive>\Novadigm\ConfigurationServer\os_update`.
5. Open a command prompt (`CMD.EXE`) and change the directory to `<RCS>\bin\` and run the following command:
   `Zedmams Zfile ../os_update/upgrade.dat`

This process will back-up your full OS Domain to `os_update` folder. Make sure you have enough space for it

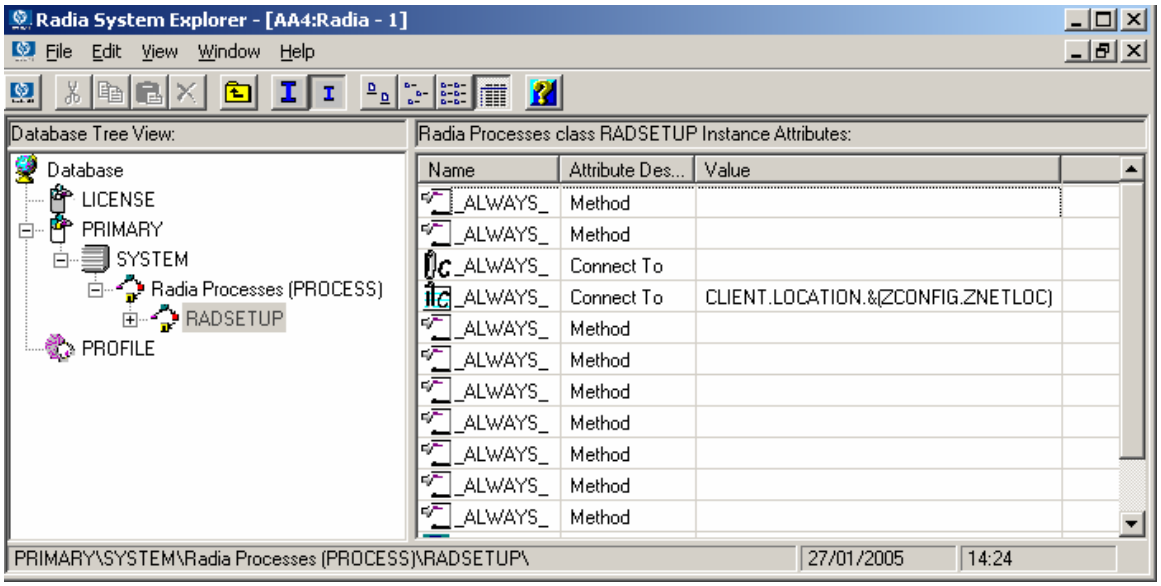
MACHINE._NULL_INSTANCE_ will be overwritten during the upgrade Process, if you customized this instance, you will have to reapply the customizations.

6 Review `Zedmams.log` in `<Drive>\Novadigm\ConfigurationServer\bin`, you may have a return code of 4, this is a warning that can be ignored.

7 Start the Radia Configuration Server service.

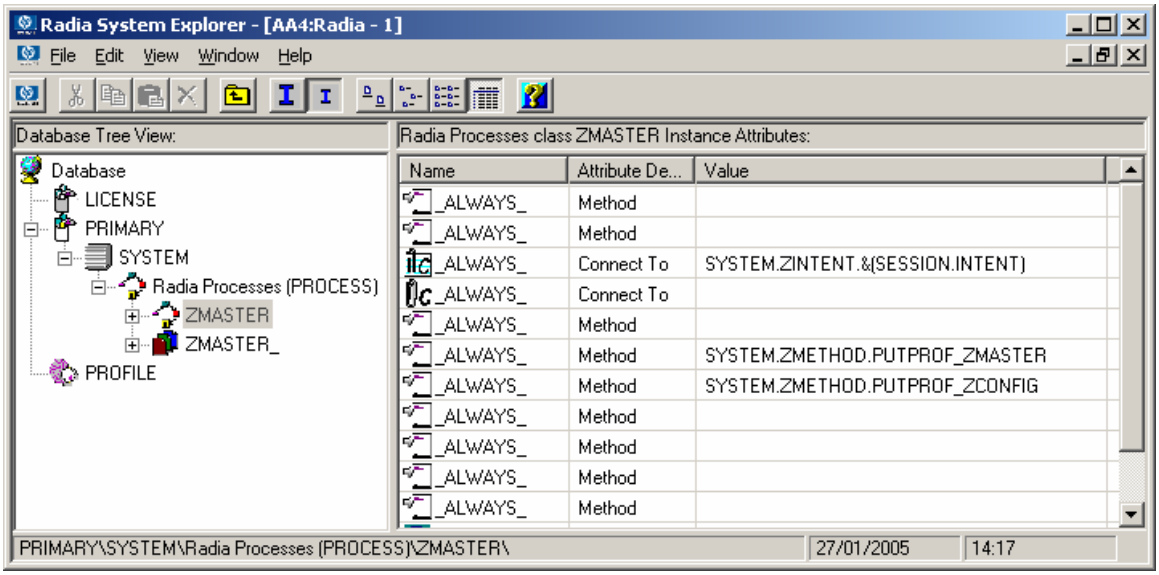
8 Use the Radia System Explorer and change the following instances:

a In PRIMARY.SYSTEM.PROCESS.RADSETUP, remove connection to SYSTEM.ZMETHOD.RIB_RADSETUP or SYSTEM.ZMETHOD.RADSETUP (If the connections exist).



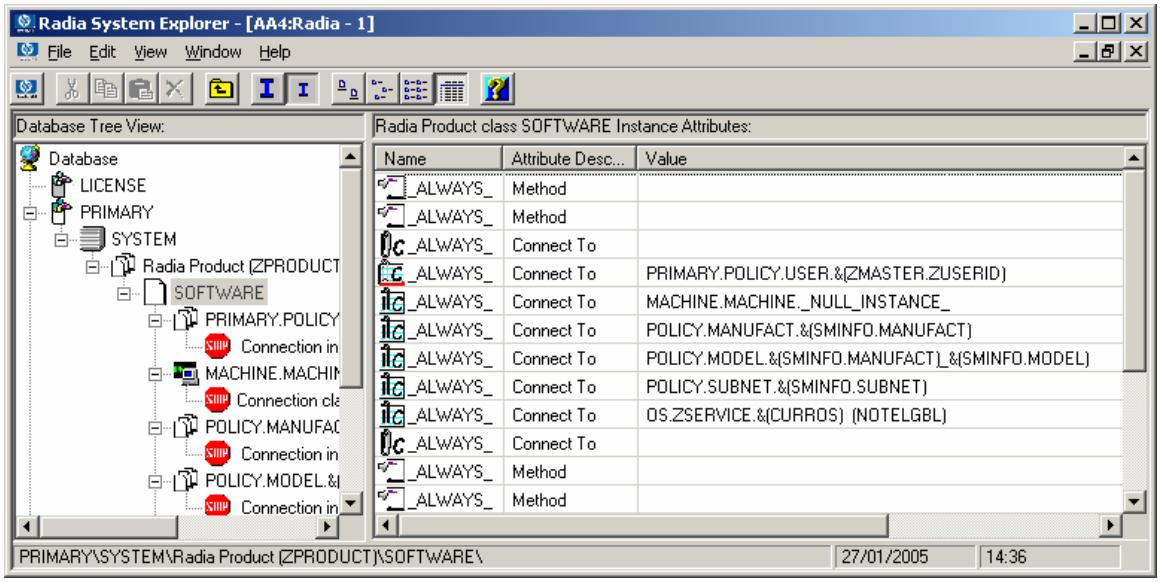
b In PRIMARY.SYSTEM.PROCESS.ZMASTER, replace SYSTEM.POLICY.STD_* or PRIMARY.POLICY.USER.&(ZMASTER.ZUSERID) to SYSTEM.ZINTENT.&(SESSION.INTENT).

When you installed Radia OS Manager 1.4/1.5, connections in PROCESS.ZMASTER were migrated to MODEL.STD_USER or POLICY.STD_USER. With Radia OS Manager 1.6, these connections are in different places in SYSTEM.PRODUCT based on the product connecting to Radia Configuration Server accordingly to dname.



c In PRIMARY.SYSTEM.ZPRODUCT.SOFTWARE add the following _ALWAYS_ connections using a “Connect to”:

- MACHINE.MACHINE._NULL_INSTANCE_
- POLICY.MANUFACT.&(SMINFO.MANUFACT)
- POLICY.MODEL.&(SMINFO.MANUFACT)_&(SMINFO.MODEL)
- POLICY.SUBNET.&(SMINFO.SUBNET)
- OS.ZSERVICE.&(CURROS)(NOTELGBL)



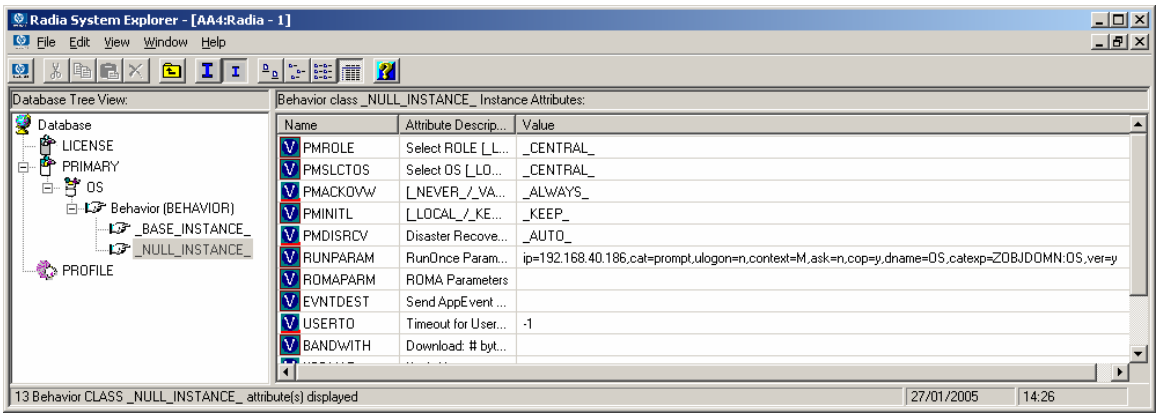
If your Radia Application Manager connect uses a dname parameter rather than SOFTWARE you will have to update these previous connections to PRODUCT._NULL_INSTANCE_.

If you do not specify a value for dname, the default is SOFTWARE.

d In PRIMARY.OS.BEHAVIOR, update all INSTANCES to use dname=OS

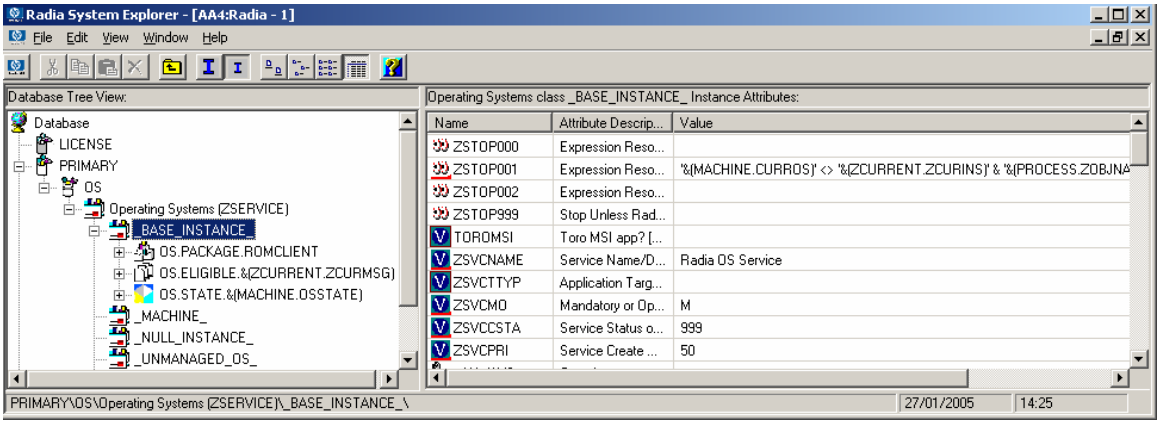
OS.BEHAVIOR._BASE_INSTANCE_ should look like:

ip=<RCSserver>,cat=prompt,ulogon=n,context=M,ask=n,cop=y,dname=OS,catexp=ZOBJDOMN:OS,ver=y

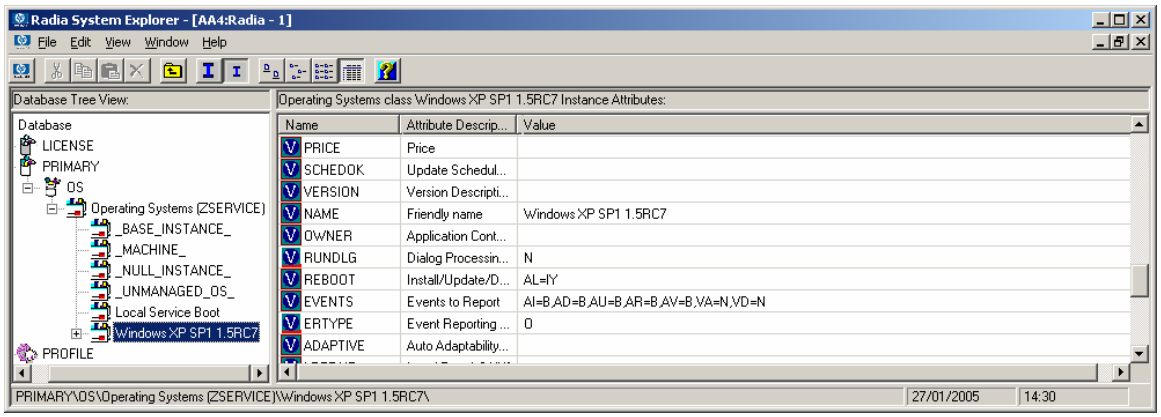


e In PRIMARY.OS.ZSERVICE.BASE_INSTANCE remove the first ZTOP expressions: UPPER('&(PREFACE.ZDOMNAME)') <> 'OS'

Make sure OS.PACKAGE.ROMCLIENT is connected to OS.ZSERVICE._BASE_INSTANCE_

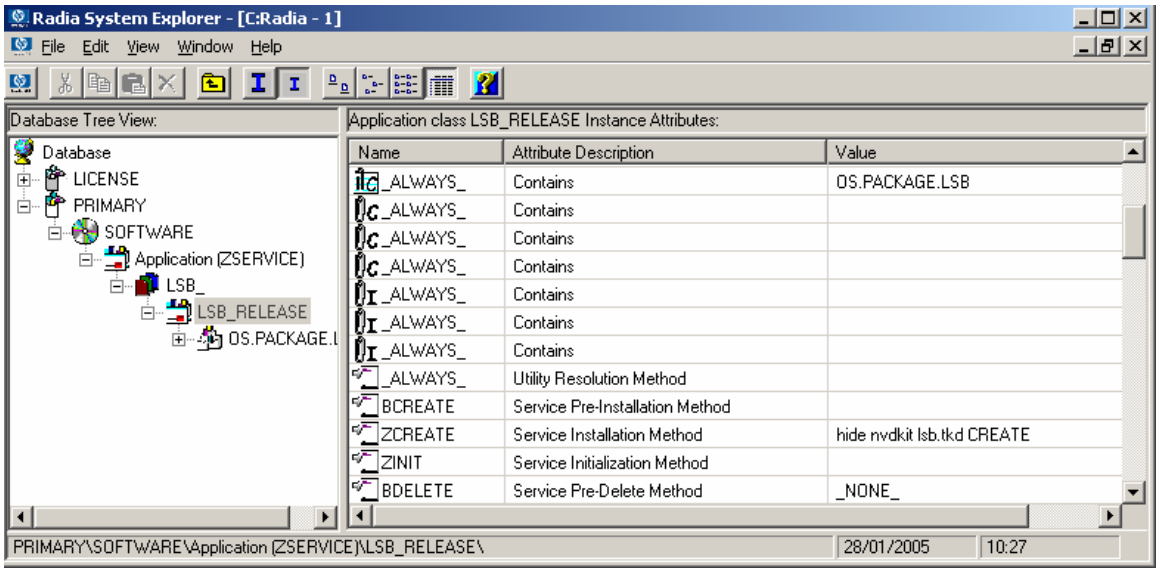


f In all OS.ZSERVICE instances of your managed Images update REBOOT variable to AL=IY.



g In PRIMARY.SOFTWARE.ZSERVICE, update INSTANCE LSB_RELEASE:

Set BDELETE Method to _NONE_ and change the Package connection from LSB_RELEASE to OS.PACKAGE.LSB.



Radia Management Portal Updates

- Install a Radia Management Portal 2.0 SP1 with the same ZONE used for the RCS in the update steps above. If you have multiple Radia Information Bases you will need multiple Radia Management Portal Zones, one per Radia Information Base. For this preparation task, use a Radia Information Base that is relevant for your environment.

Radia OS Manager Administrative Interface Updates

- Install the Radia OS Manager Administrative Interface (ROMAD). See the *Radia OS Manager 1.6 Guide* for installation instructions.

  Radia OS Administrator interface uses ROM_MAST to connect the Radia Configuration Server; this is configured in the Radia Management Portal Directory Service. The ROM_MAST ID is created during the Radia Database update.

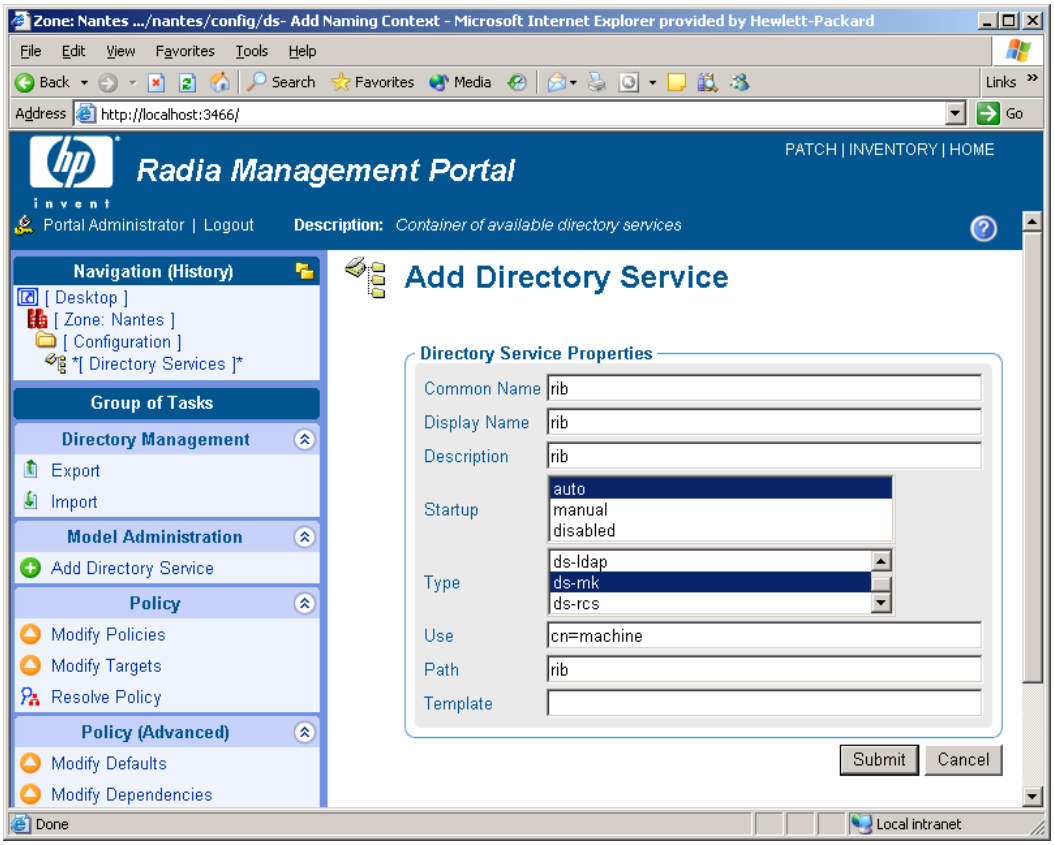
Device Migration

Migrate any devices from the Radia Information Base to the RMP Zone.

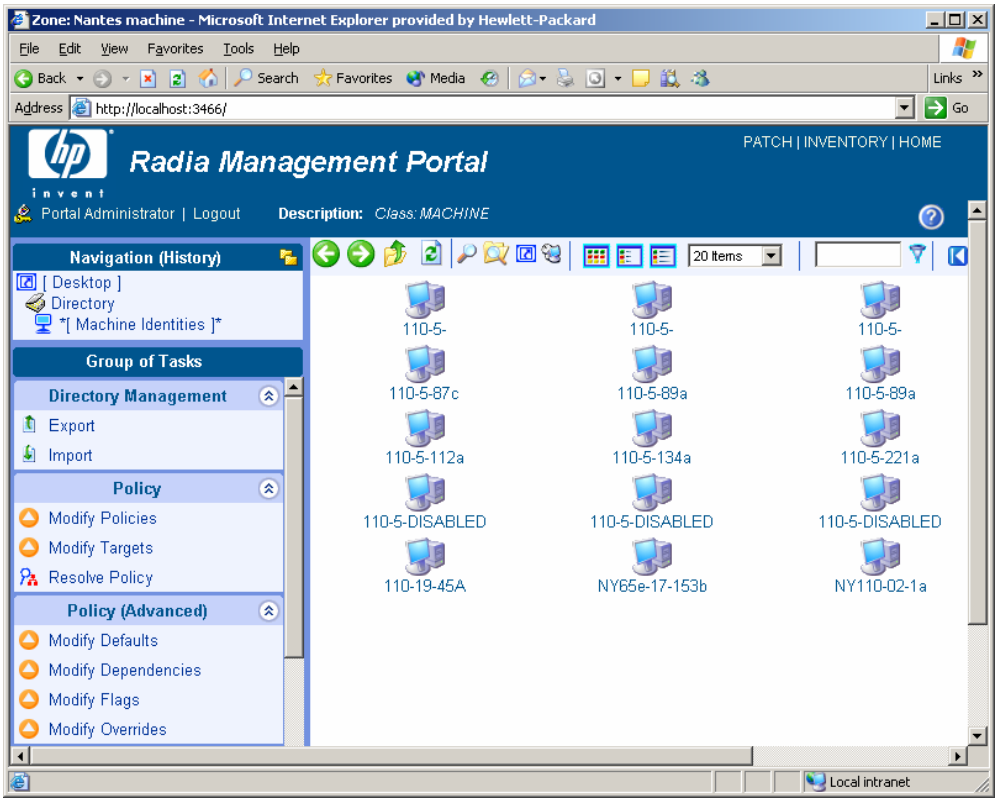
To migrate devices

1. Stop the RIB server service.
2. Copy `<RIB>\etc\rib.mk` to the `<RMP>\etc` folder.
3. Mount `RIB.MK` in RMP 2.0.
4. Go to `Zone/Configuration/Directory Services` and select the Model Administration task, **Add Directory Service** with the following parameters:

Common Name	rib
Display Name	rib
Description	rib
Startup	auto
Type	ds-mk
Use	cn=machine
Path	rib
Template	(leave blank)



You can now browse Radia Information Base Machines within Directory/Machine Identities.



5 Copy `machine2device.tcl` from `<CD>\migration\info_base_conversion` to your Radia Management Portal directory, usually `<Drive>\Novadigm\IntegrationServer\`.

6 From a command prompt (`CMD.exe`) go to the RMP directory and type:

`Nvdkit machine2device.tcl -zone cn=<your Zone>,cn=Radia`

This script can be run remotely. You will need to specify –host and –port for RMP server and RMP port used.

If you have multiple Radia Information Bases (RIBs), you will have to execute this process for each Radia Management Portal ZONE replacing your Radia Information Base.

Radia OS Manager Server

Install the Radia OS Manager Server. See the *Radia OS Manager Guide* for installation instructions. During installation, use the ZONE specified in for Radia Configuration Server and Radia Management Portal

Radia Boot Server (PXE)

If you use PXE technology, install a new PXE Server limited for your test.

Radia OS Manager Client Connect

Radia OS Manager client connect should include dname=OS on the radskman command line. You have to review you connect strategy (notify, Timer) to ensure dname is used.

Radia Publisher (OS Image Publishing)

Radia Publisher is now part of the Radia Administration Workstation 4.0.

Testing the Upgraded Radia OS Manager 1.6

Since the database upgrade changes resolution paths for all Radia applications, it is strongly recommended you test all Radia applications (for example, processes against the updated infrastructure).

For Radia OS Manager, you must test all the processes you may have implemented, for example:

- Bare Metal installs. Devices with no operating system are successfully discovered and an OS is installed according to Policy.
- On-going Management. Run an OS connect (dname=OS) on one of the production devices to ensure there are no changes, then re-evaluate OS to reinstall the OS.
- OS Migration: Run your migration process from old OS to new OS including Personality capture if applicable.

- Local Service Boot: if you use Local Service Boot in place of PXE, test all your OS management processes. The Local Service Boot service will be updated with the new Linux Kernel used for OS management.

Upgrading the Production Environment to Radia OS Manager Version 1.6

After you've successfully tested the Radia OS Manager 1.6 within your test infrastructure you can upgrade your production environment.

Preparing Upgrade on Your Production Environment

1. Stop Boot Server/PXE server.
2. Stop Radia OS Manager Server.
3. Stop and disable Radia Info Base Service.

Upgrade Boot Servers

- Copy files `bzImage`, `rombl.0`, `rombl.bin`, and `rootfs.gz` from the `<CD>\boot_server\win32\media\BootServer\X86PC\UNDI\linux-boot\` to the `<BootServer>\X86PC\UNDI\linux-boot\` folder

If you are using Radia OS Manager 1.4, the folder `pxelinux.cfg` in `<BootServer>\X86PC\UNDI\linux-boot\` has been changed to `linux.cfg`.

Radia Management Portal 2.0 SP1

If you have multiple Radia Information Bases you will need multiple Radia Management Portal Zones, one per Radia Information Base.

If you want to upgrade an existing Radia Management Portal 2.0, you will first have to apply the Radia Management Portal 2.0 SP1.

After installing and upgrading the Radia Management Portal 2.0 SP1, install the Radia OS Manager Administrative Interface (ROMAD). Use the *Radia OS Manager Guide* for installation instructions. Migrate devices from the Radia Information Base to the Radia Management Portal Zone as explained in the *Migrate Devices* section above. You may have to complete this task multiple times based on number of Zones (Radia Info Bases) you have.

Directory Size of a Single Zone

The Portal Directory, `zone.mk` (in the Radia Integration Server's `\etc` directory), loads all configuration and entitlement information for the Radia Management Portal as well as devices, groups, managed infrastructure, job status, network and mounted services information.

A single Radia Management Portal zone has an absolute limit of 10,000 devices. We recommend limiting the number of devices managed by a single zone to the following:

- Recommended: 1,000 to 2,000 devices
- Maximum: 5000 devices

Multiple Radia Management Portal Zones can be installed to meet the needs of enterprises of any size.

Upgrade Radia OS Manager Servers

- Copy files `httpd.tkd` and `nvdcrt.tkd` from `<CD>\common_components\` to `<Radia OS Server>\` folder.
- Copy `nvdkit.exe` from `<CD>\os_manager_server\win32\` to `<Radia OS Server>\` folder.
- Copy files `expandSmbios.tkd`, `roms.tkd`, and `roms_udp.tkd` from `<CD>\os_manager_server\win32\media\modules\` to `<Radia OS Server>\`modules.
- Edit `Httpd.rc` in `<Radia OS Manager Server>\etc\` directory usually `<Drive>\Novadigm\IntegrationServer\` to load only ROMS module:

```
# Radia Management Portal

#module load rmp


# Radia Explorer (MUST follow load rmp)
```

```
#module load expl

# Radia OS Management Server
module load roms

# Radia ROM Administrator (MUST follow load expl)
#module load romad
…
```

- Edit `roms.cfg` in `<Radia OS Manager Server>\etc\` to update Radia Management Portal Zone information:

```
…
RIB_HOST = <RMP Server>
RIB_PORT = <RMP Port>
ZONE = cn=<Your Zone Here>,cn=radia
…
```

Upgrade Radia Configuration Servers

Back-up your Radia Configuration Server Database prior to any upgrade.

Apply the RCS updates as described above, beginning with the section To Update the Radia Database.

If you have multiple RCS and multiple ZONEs, edit the edmprof.dat file on each Radia Configuration Server and enter the ZONE information to which they are connected. This will be the same ZONE used by Radia OS Manager Server where the same devices are connecting.

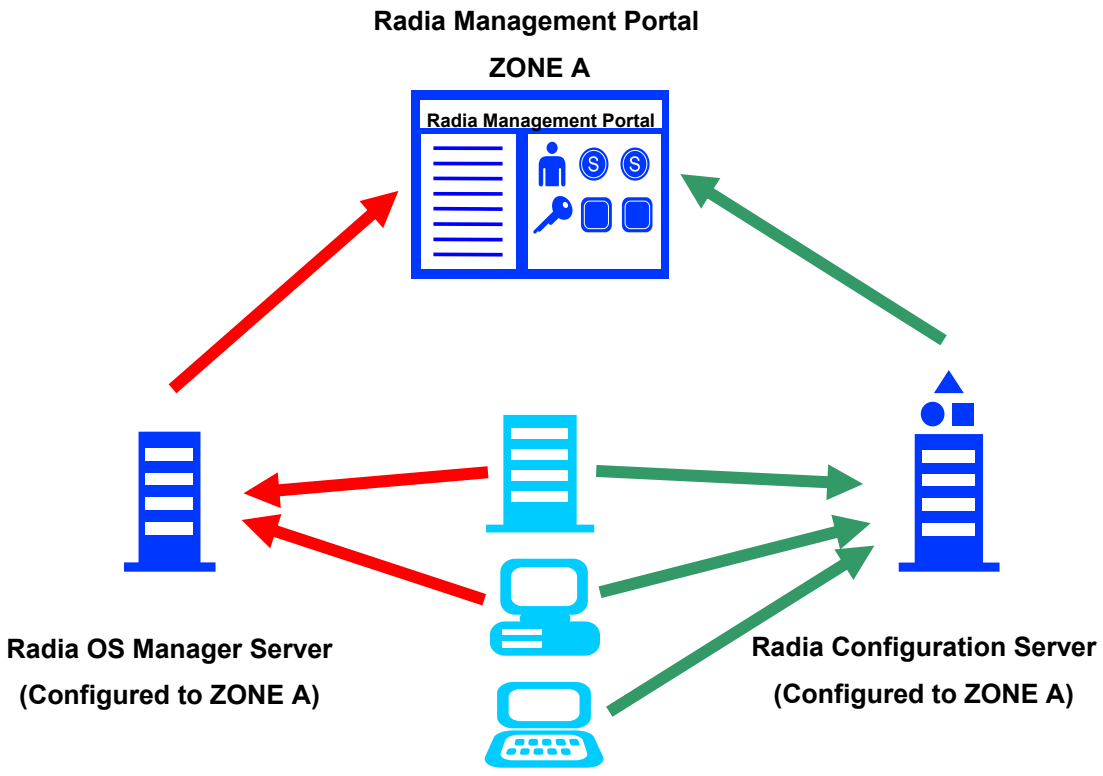


Figure 2 Radia OS Manger zone diagram.

If you are using a Radia Distributed Configuration Server, you can upgrade the Master Database and synchronize it, but you will have to update any Radia Configuration Server methods and edit edmprof.dat on every distributed Radia Configuration Server to match the Radia Management Portal ZONE.

Radia OS Client Connect

Radia Client connect strategy should be reviewed to use dname=OS to separate Radia OS Manager connect from other Radia Client Products, including Radia Application Manager, Radia Patch Manager, etc…. Based on

your implementation, this may require an update for Radia TIMER and Radia Notify Tasks.

It is strongly recommended the Radia Client connects using **dname=OS** just after the upgrade in order to update Radia OS Manager Client methods. For backward compatibility, the Radia Application Manager client connect will still see Radia OS Manager Services, but this will not impact the OS management anymore (Radia OS client methods have been modified to skip OS connects that do not have **dname=OS**). After the upgrade, be sure all Radia OS Client connects use **dname=OS.**

When all devices have successfully connected with Radia OS Client connect (dname=OS), you can remove the following connections from PRIMARY.SYSTEM.ZPRODUCT.SOFTWARE:

- MACHINE.MACHINE._NULL_INSTANCE
- POLICY.MANUFACT.&(SMINFO.MANUFACT)
- POLICY.MODEL.&(SMINFO.MANUFACT)_&(SMINFO.MODEL)
- POLICY.SUBNET.&(SMINFO.SUBNET)
- OS.ZSERVICE.&(CURROS)(NOTELGBL)

The new Model and Connect option with dname=OS allows you to have an OS connect strategy independent of the other Radia Client connects. HP Consulting and Services can assist you with these changes.

Finishing the Production Environment Upgrade

1. Restart all Radia OS Manager Servers.
2. Restart all Boot Servers.
3. Make sure you are performing at least one Radia OS Manager connect (dname=OS) for all your devices.
4. When the upgrade is completed successfully you can retire the Radia Information Base service.