Setting up a print environment with multiple Windows NT or Windows 2000 servers

Back to Administrator procedures

Some print environments require more than one Infoprint Manager server to handle their print management. If you are installing and configuring more than one Infoprint Manager for Windows NT and Windows 2000 server in your print environment, this topic will tell you what you need to do to make those servers work together.

When you install Infoprint Manager, the install process creates a namespace for that server. The *namespace* is a directory structure where Infoprint Manager stores the location information of all of your Infoprint objects, including the server itself, queues and destinations, and the Access Control Lists (ACLs) used by Infoprint Manager Security. On a Windows system, the namespace is located by default at `<install path>\var\pddir`, where `<install path>` is the directory that you installed Infoprint Manager in.

If you install a second Infoprint Manager server on another system on your network, that server will create its own namespace and the two serves will operate entirely independent of each other. In some cases, however, you may want your servers to be able to work together. To make Infoprint Manager servers work together, you set up an *interoperating environment* in which two or more Infoprint Manager servers share the same namespace. The namespace resides on one of the servers (the *namespace server*) and the other servers (the *non-namespace servers*) are granted permissions that allow them to use that directory.

With IBM Infoprint Manager for Windows NT and Windows 2000, Version 1, Release 1, you should only set up two or three servers to interoperate (not four or more). Those two or three servers can all be installed on Windows NT systems, all on Windows 2000 systems, or on a combination of Windows NT and Windows 2000 systems. In addition, if you have IBM Infoprint Manager for AIX, it can be one of the three interoperating servers as well.

If you want Infoprint Manager for Windows NT and Windows 2000 and Infoprint Manager for AIX servers to work together, refer to the IBM Printing Systems website. Go to http://www.ibm.com/printers and click the **Infoprint Manager** link, then the **Infoprint Manager for AIX** link. Under **Product Information**, click **3.2 Product Library**, and find the **Infoprint Manager Interoperability** topic for installation and configuration information.

Notes:

1. You can only install one Infoprint Manager server on a given Windows NT or Windows 2000 workstation or server.
2. For your Infoprint Manager servers to work together, they must all operate in the same domain.
3. If your users will be submitting jobs directly to actual destinations, the actual destination and the associated queue and logical destination must be on the same server.
4. Once you have your multi-server system running, if the system that one of your non-namespace servers is installed on shuts down or is restarted, that

Infoprint Manager server will not restart automatically when the system restarts, even if you have that option selected in the Management Console. You must open the Management Console for that server and start it manually.

5. You must set up each of your Infoprint Manager servers so that all of the other Infoprint Manager servers can access them using the same IP address. For example, Ipserv1 sometimes uses the IP address 9.99.155.122 and other times uses 9.89.214.162, depending upon the machine that is trying to connect to it. Ipserv2 and Ipserv3 must be able to access Ipserv1 through the same one of those addresses; if Ipserv2 uses 9.99.155.122 to access Ipserv1, Ipserv3 must use 9.99.155.122 as well.

6. If you have more than one network adapter card in the system that Infoprint Manager runs on, the other Infoprint Manager systems must be able to access the system through the IP address that corresponds to the first (or primary) network card in the system.

Configuration Example

The recommended way to set up interoperating Windows servers is to create one domain user account and let all of the Infoprint Manager services use it as their login account. The steps below describes how to set up this type of configuration.

Note: It is possible to configure your system so that each Infoprint Manager service has its own domain user account. If you want set up this alternate configuration, you can follow the same basic instructions. However, in step 4, you would create a domain user for each server. Then, when you assign user rights and set up sharing in subsequent steps, you must make sure you use the same user and password consistently on each system.

Follow these steps to have your Infoprint Manager services share a namespace and a log in account.

1. *Install all of your Infoprint Manager servers.*

   Follow the installation instructions in the *IBM Infoprint Manager for Windows NT and Windows 2000: Getting Started*. When you are finished, your servers will all be operating independently.

2. *Stop all of your Infoprint Manager servers.*

   On each system that an Infoprint Manager server runs on, open the Infoprint Manager Management Console and select **File --> Stop Server**.
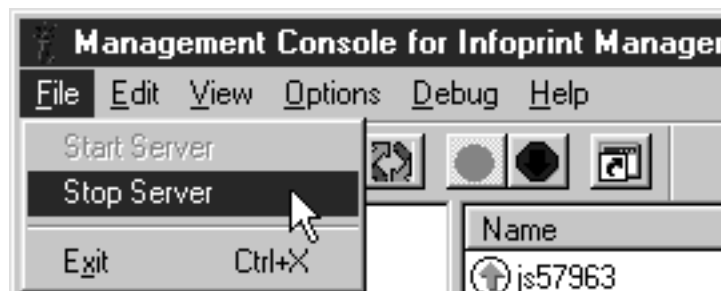
3. *Decide which server you want to use as the namespace server.*

   It is highly recommended that you choose your most reliable server to be the namespace server since any disruption of service in the namespace server has an impact on all of the servers in the configuration.

4. *Set up the common domain user account that the servers will run under.*
   Windows NT

a. Log on to the domain that your Infoprint Manager servers operate in as a domain administrator.

b. Click the Windows Start Button and select **Administrative Tools (Common) –> User Manager for Domains**.

> **Note:** The common user account must be a domain account, not a local user account. Be sure you create the account with **User Manager for Domains**, not the **User Manager** for the local system. If **User Manager for Domains** does not appear in your Start menu, you may have to create this user on the Windows server that is the Primary Domain Controller (PDC) for your domain.
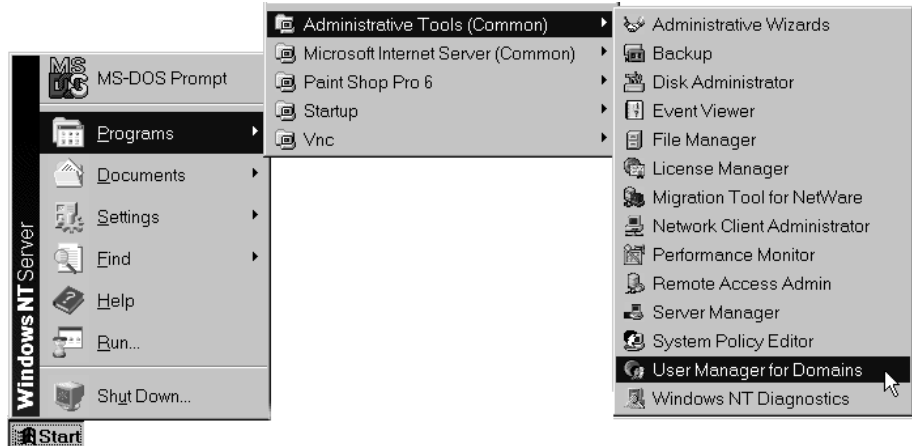

c. In the User Manager window, select **User –> New User**.

d. In the New User dialog, do the following:
   - Type a name for this user account.
   - Type a password in both of the password fields.
   - Select the **Password never expires** checkbox so you don't have to change the password and update all of your servers on a regular basis, and clear all of the others.
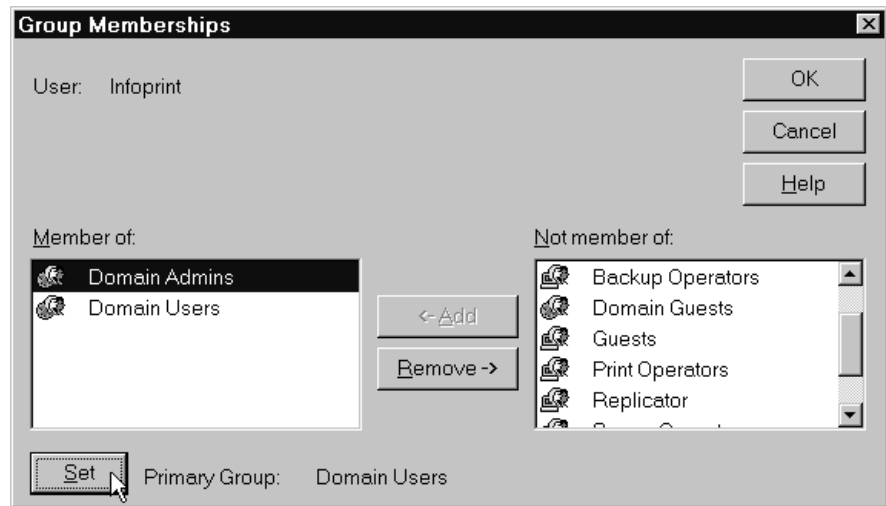   - Click **Groups**.
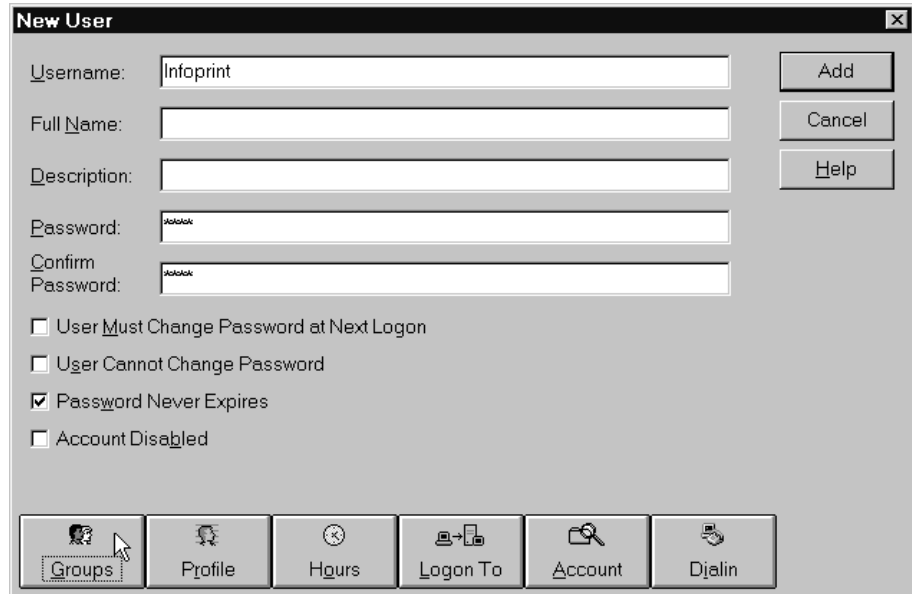
e. In the Group Memberships dialog:

- Find **Domain Admins** in the **Not member of** list and click to select it.
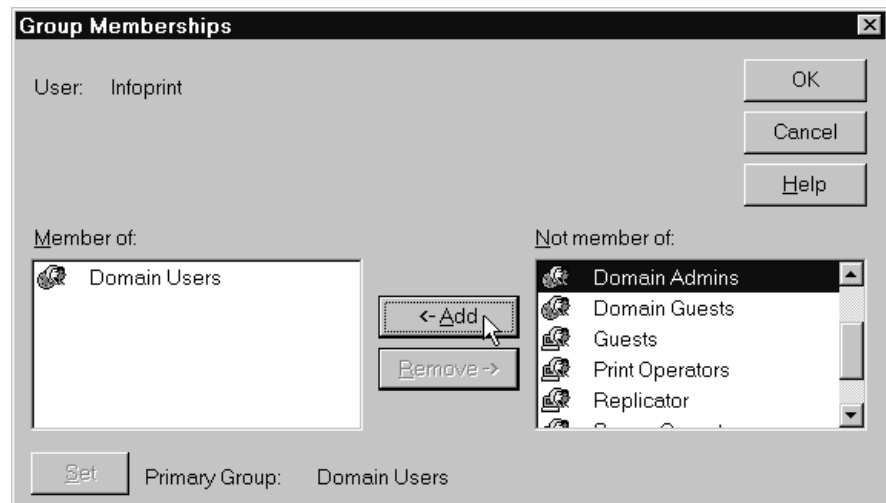
- Click **<- Add**.

- Select **Domain Admins** in the **Member of** list and click **Set**.

- OTF command.

f. In the New User dialog, click **Add** to create this user.

g. Click **Close** to dismiss the dialog.

h. Verify that the user you just created appears in the list of users in the User Manager window, then close it.

Windows 2000

a. Log on to the domain that your Infoprint Manager servers operate in as a domain administrator.

b. Click the Windows **Start** button and select **Programs --> Administrative Tools --> Active Directory Users and Computers**.

c. In the left pane of the **Active Directory Users and Computers** window, find the **Users** item.

d. Right-click the **Users** directory and select **New –> User** from the pop-up menu.

e. In the first dialog of the **New Object – User** wizard, type a name for this user in the **Full name** and the **User logon name** fields.

**Note:** You do not have to fill in the other name fields.

f. Click **Next**.

g. In the second dialog of the **New Object – User** wizard, enter a password for this user. It is recommended that you select the **Password never expires** check box so you don't have to change the password and update

all of your servers on a regular basis, and clear all of the others.

h. Click **Next** to verify the settings for the user and complete the wizard.
i. Once you have created the user, right-click the user in the right pane of the
    Active Directory Users and Computers window and select **Add members
    to a group** from the pop-up menu.
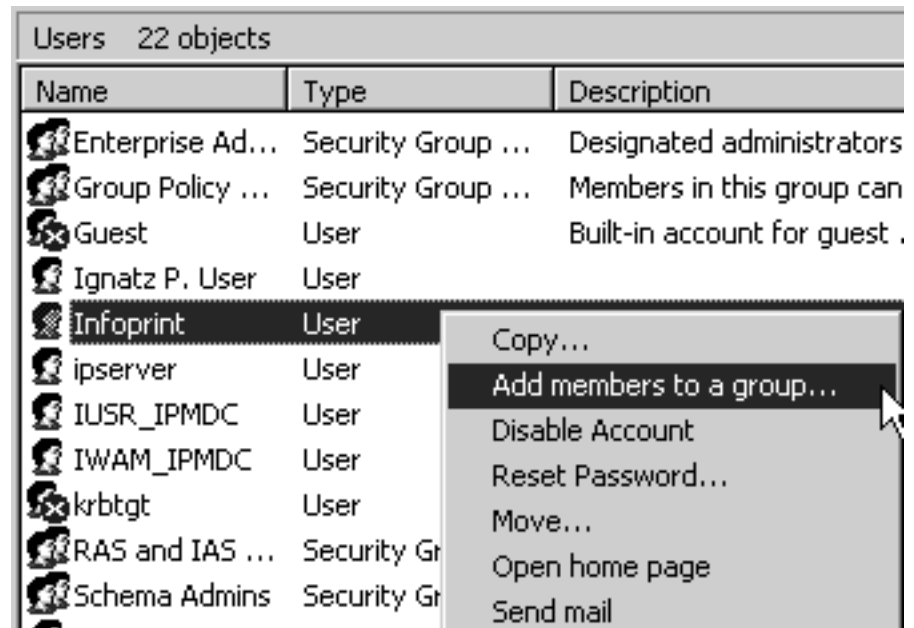
j. In the **Select Group** dialog, find and select the Domain Administrators (or
    Domain Admins) group. OTF command to add your user to the group.

> **Note:** You can leave the **Name** field blank.
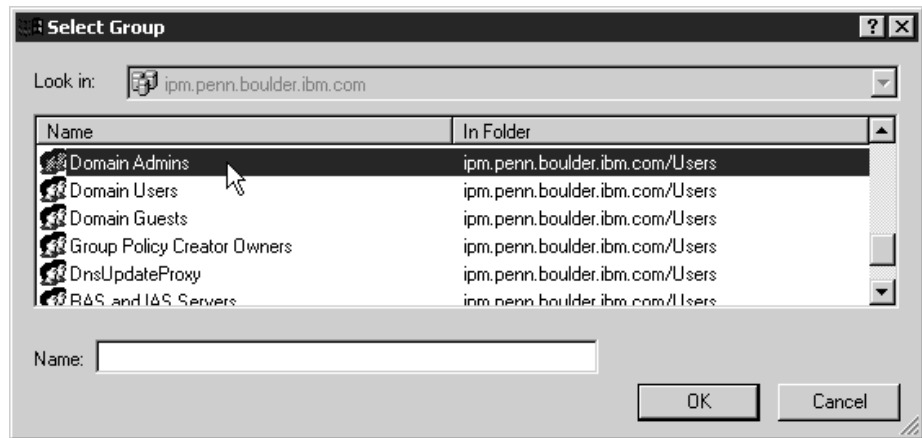
5. *Grant the appropriate user rights to the new domain user on all of the systems that Infoprint Manager is installed on.*

   Windows NT

   a. Log on to one of the systems as a user who is a member of the Domain Administrators group.
   b. Start the User Manager for that system by clicking the Windows Start button and selecting **Programs –> Administrative Tools –> User Manager**.
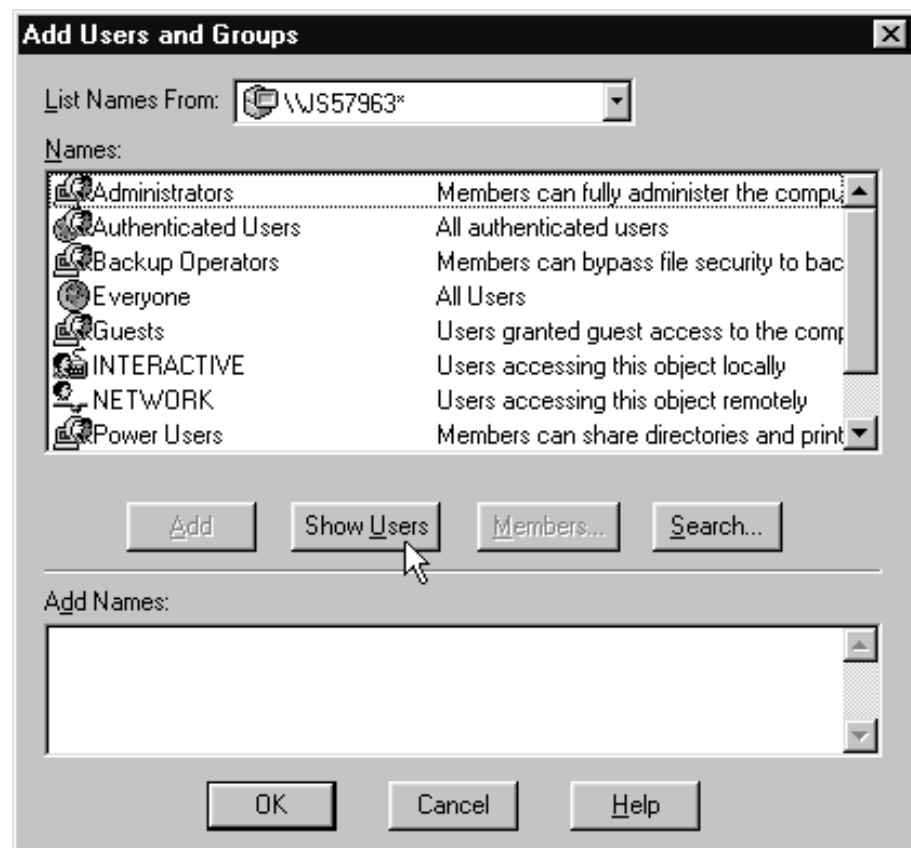   c. In the **User Manager**, select **Policies –> User Rights**.

   d. In the **User Rights Policy** dialog, select the **Show Advanced User Rights** checkbox, then select **Act as part of the operating system** in the **Right**

drop-down list and click **Add**.

User Rights Policy

Computer: JS57963

Right: Act as part of the operating system

Grant To:

☑ Show Advanced User Rights

OK

Cancel

Help

Add...

Remove
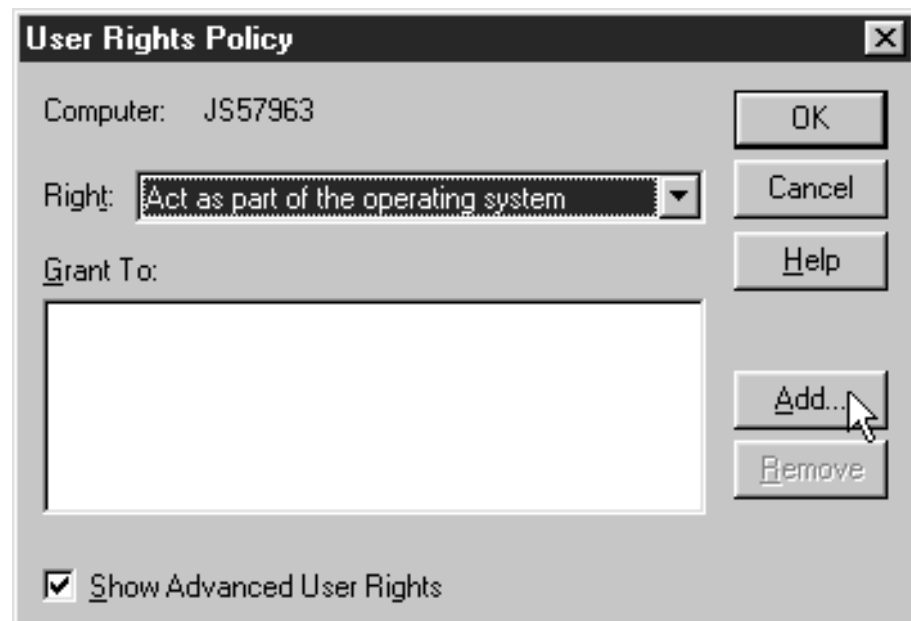
e. In the **Add Users and Groups** dialog, select the domain that your
    Infoprint Manager system operates in from the **List names from**
    drop-down list and click **Show Users**.

Add Users and Groups

List Names From: \\JS57963*

Names:

Administrators	Members can fully administer the compu
Authenticated Users	All authenticated users
Backup Operators	Members can bypass file security to bac
Everyone	All Users
Guests	Users granted guest access to the comp
INTERACTIVE	Users accessing this object locally
NETWORK	Users accessing this object remotely
Power Users	Members can share directories and print

Add   Show Users   Members...   Search...

Add Names:

OK   Cancel   Help

f. Find the domain user that you created in step 4 on page 2 in the **Names**
    box, and select it, then click **Add**. The domain user name will appear in the
    Add Names box.

g. OTF command.

h. Repeat from step 5d on page 9 for two other rights: **Create permanent shared objects** and **Log on as a service**.

i. Repeat from step 5a on page 9 on all of the other systems that Infoprint Manager runs on.

Windows 2000

a. Log on to one of the systems as a user who is a member of the Domain Administrators group.

b. Click the Windows **Start** button and select **Settings --> Control Panel**.

c. In the **Control Panel** window, double-click the **Administrative Tools** icon.

d. In the **Administrative Tools** window, double-click the **Local Security Policy** icon.

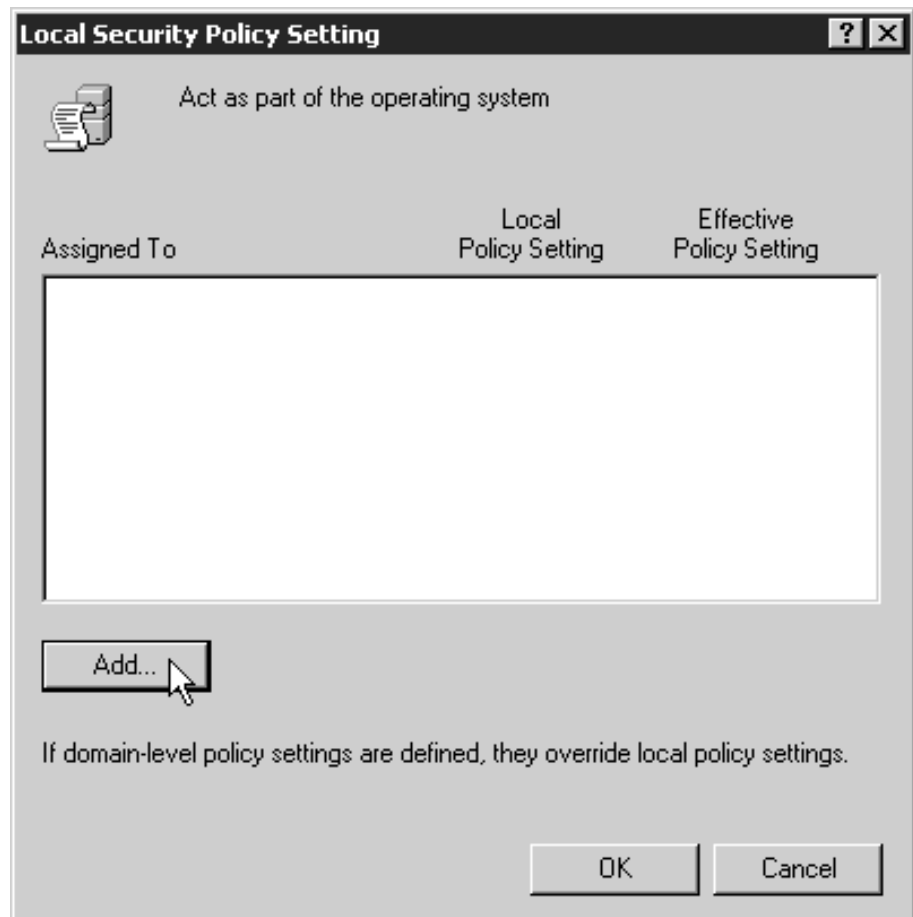e. In the right pane of the **Local Security Settings** Window, double-click **Local policies**.

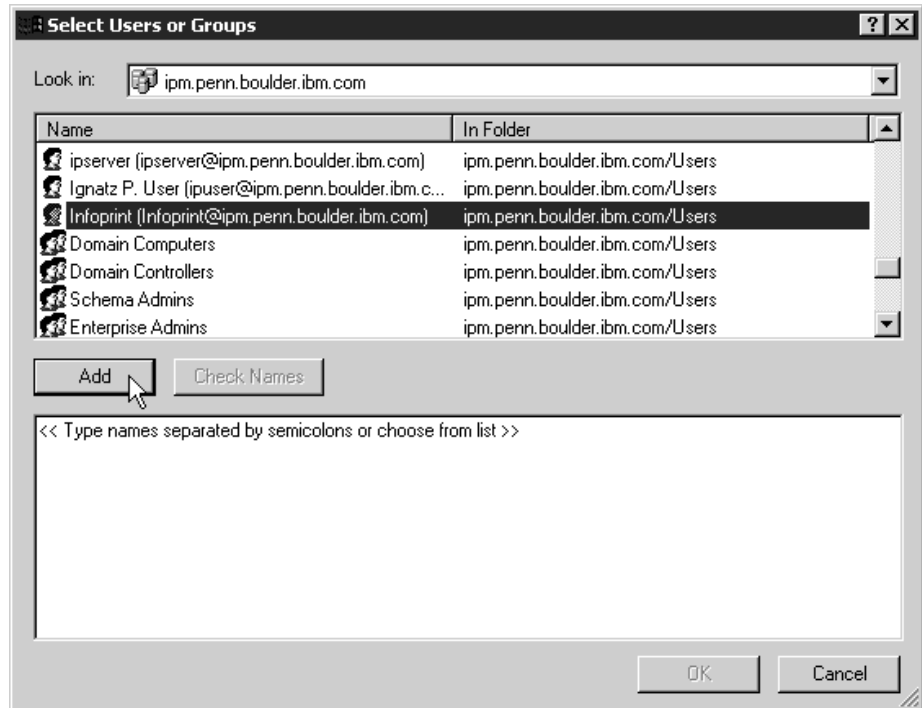f. Double-click **User Rights Assignment** in the right pane.

g. In the list of user rights, select **Act as part of the operating system** and double click it.
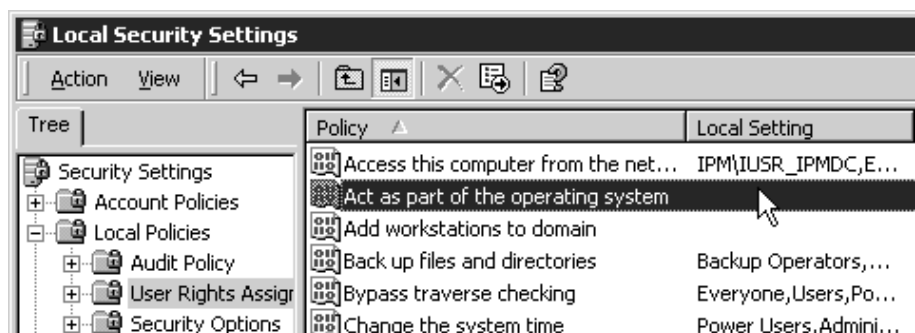
h. In the **Local Security Policy Setting** dialog, click **Add**.

i. In the **Select Users or Groups** dialog, click the arrow on the drop-down list box and select the domain that your Infoprint Manager servers exist in.


j. Find and select the domain user you created, and click **Add**.

k. OTF command in the **Select Users or Groups** dialog.

l. OTF command in the **Local Security Policy Setting** dialog.

m. Repeat from step 9g on page 11 for two other user rights: **Create permanent shared objects** and **Log on as a service**.

6. *Set up sharing for the namespace directory on the namespace server.*

a. Log on to the namespace server.

b. Open the Infoprint Manager Management Console and select **Edit --> Service Configuration**.
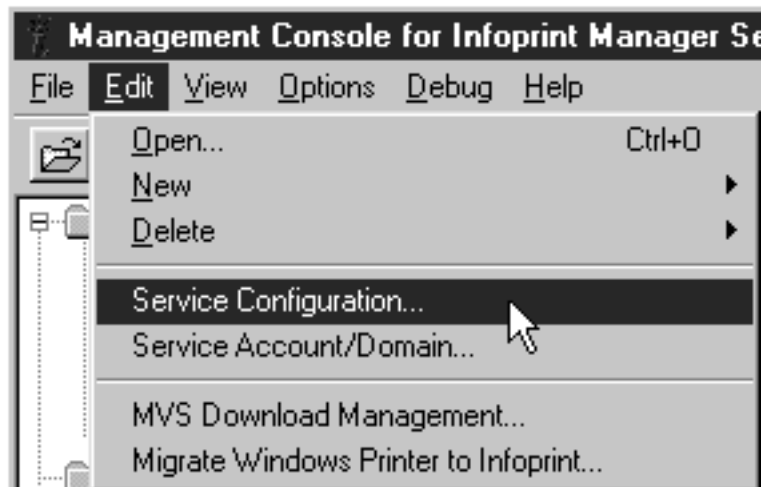
c. Make note of the directory listed in the **Base namespace path** field. The path will be <install path>\var\pddir.
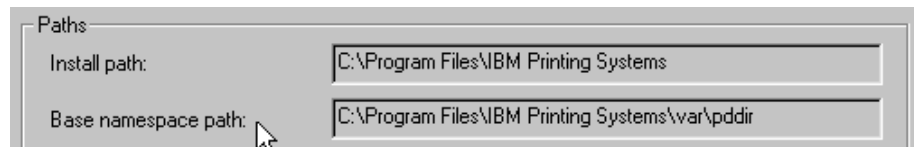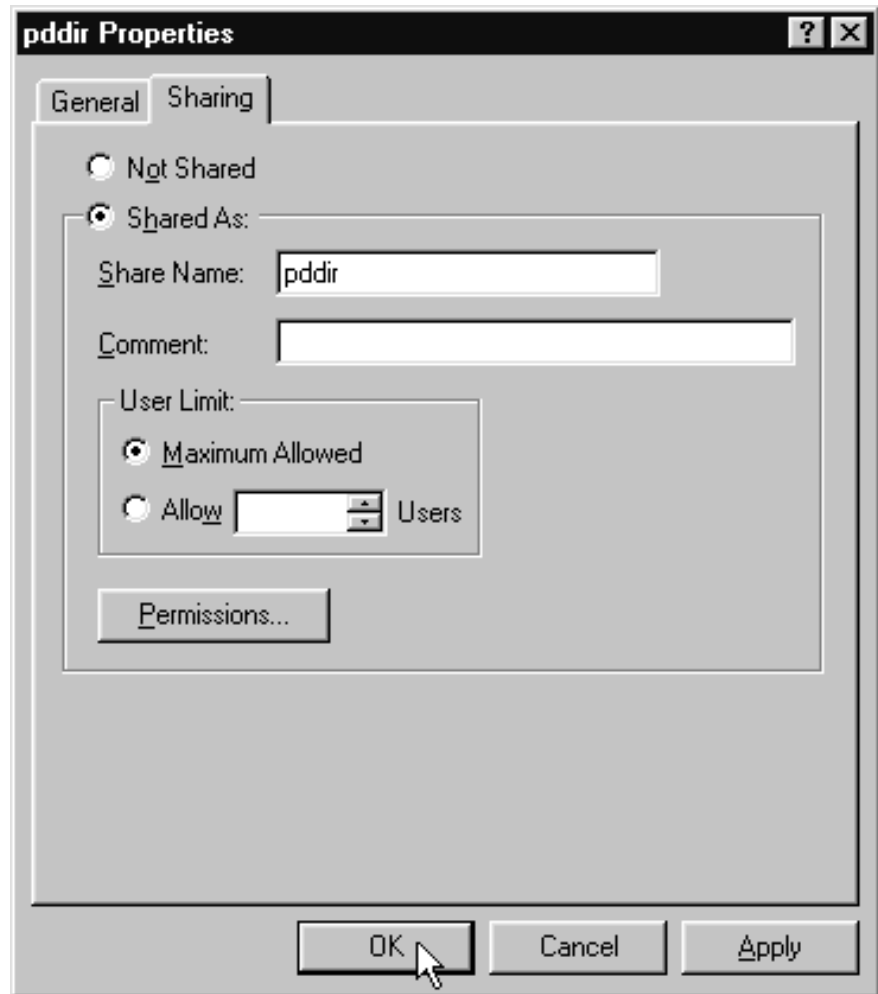

d. Open Windows NT/2000 Explorer and navigate to that directory.
e. Right-click the folder for that directory and select **Sharing...** from the pop-up menu.
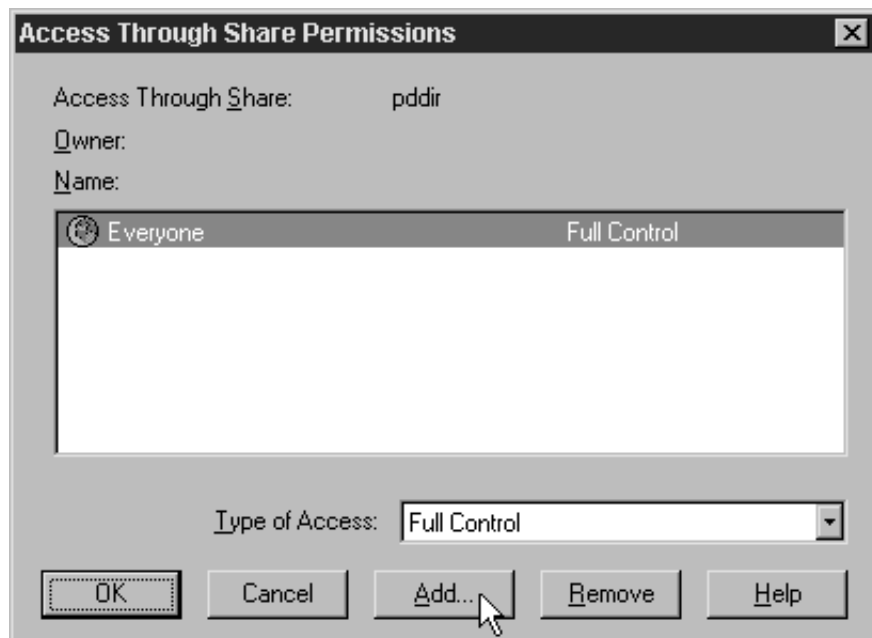

f.
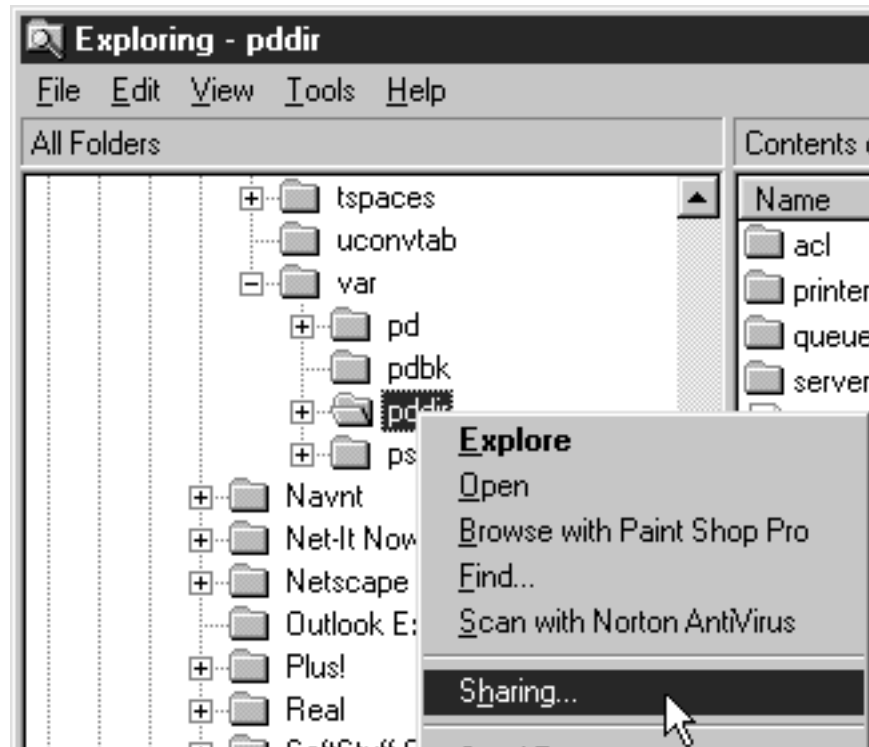
   On Windows NT:

1) In the dialog that opens, select **Shared as**, and verify that **pddir** appears in the **Share Name** text box.

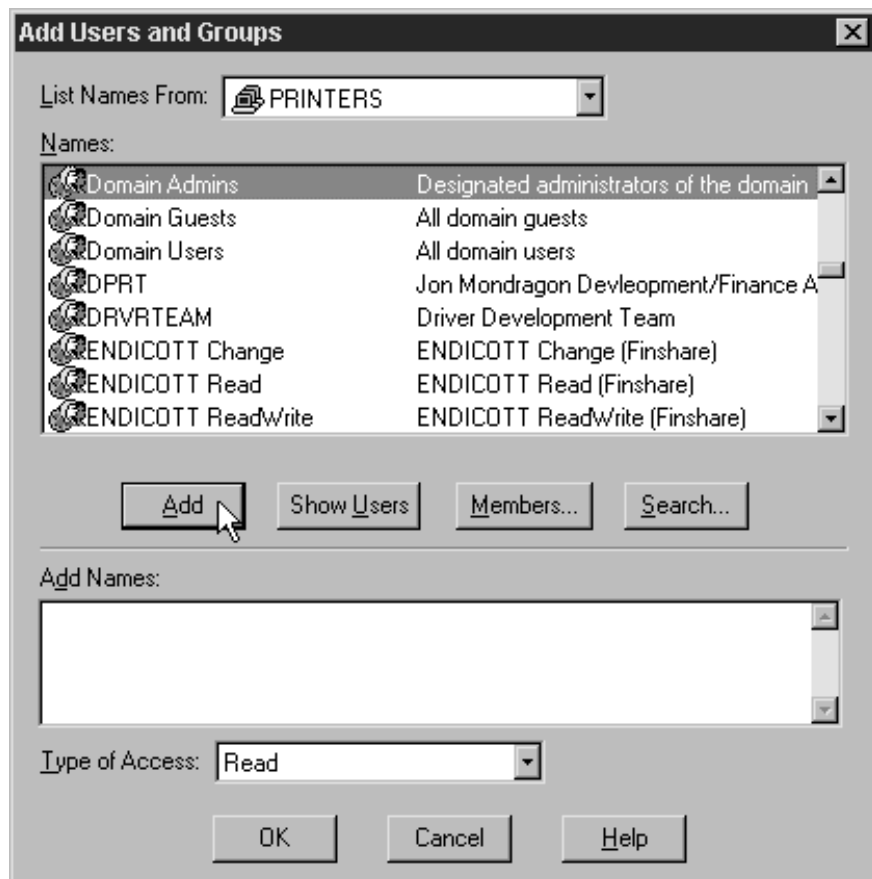2) Click **Permissions**.

3) In the **Access through Share Permissions** dialog, click **Add**.

```
Access Through Share Permissions                          ×

    Access Through Share:        pddir
    Owner:
    Name:

    ┌─────────────────────────────────────────────────────┐
    │  Everyone                              Full Control  │
    │                                                      │
    │                                                      │
    │                                                      │
    │                                                      │
    │                                                      │
    │                                                      │
    └─────────────────────────────────────────────────────┘

            Type of Access:  │ Full Control              ▼ │

    ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
    │    OK    │  │  Cancel  │  │  Add...  │  │  Remove  │  │   Help   │
    └──────────┘  └──────────┘  └──────────┘  └──────────┘  └──────────┘
```

4) In the **Add Users and Groups** dialog, select the correct domain from the **List Names From** drop-down list and select **Domain Admins** in the **Names** box.

```
Add Users and Groups                                      ×

    List Names From:  │ 🖳 PRINTERS               ▼ │
    Names:
    ┌─────────────────────────────────────────────────────┐
    │  Domain Admins      Designated administrators of the domain ▲│
    │  Domain Guests      All domain guests               │
    │  Domain Users       All domain users                │
    │  DPRT               Jon Mondragon Devleopment/Finance A│
    │  DRVRTEAM           Driver Development Team          │
    │  ENDICOTT Change    ENDICOTT Change (Finshare)      │
    │  ENDICOTT Read      ENDICOTT Read (Finshare)        │
    │  ENDICOTT ReadWrite ENDICOTT ReadWrite (Finshare) ▼│
    └─────────────────────────────────────────────────────┘

      ┌──────────┐  ┌────────────┐  ┌──────────┐  ┌──────────┐
      │   Add    │  │ Show Users │  │ Members..│  │ Search.. │
      └──────────┘  └────────────┘  └──────────┘  └──────────┘

    Add Names:
    ┌─────────────────────────────────────────────────────┐
    │                                                      │
    │                                                      │
    │                                                      │
    └─────────────────────────────────────────────────────┘

    Type of Access:  │ Read                       ▼ │

        ┌──────────┐  ┌──────────┐  ┌──────────┐
        │    OK    │  │  Cancel  │  │   Help   │
        └──────────┘  └──────────┘  └──────────┘
```
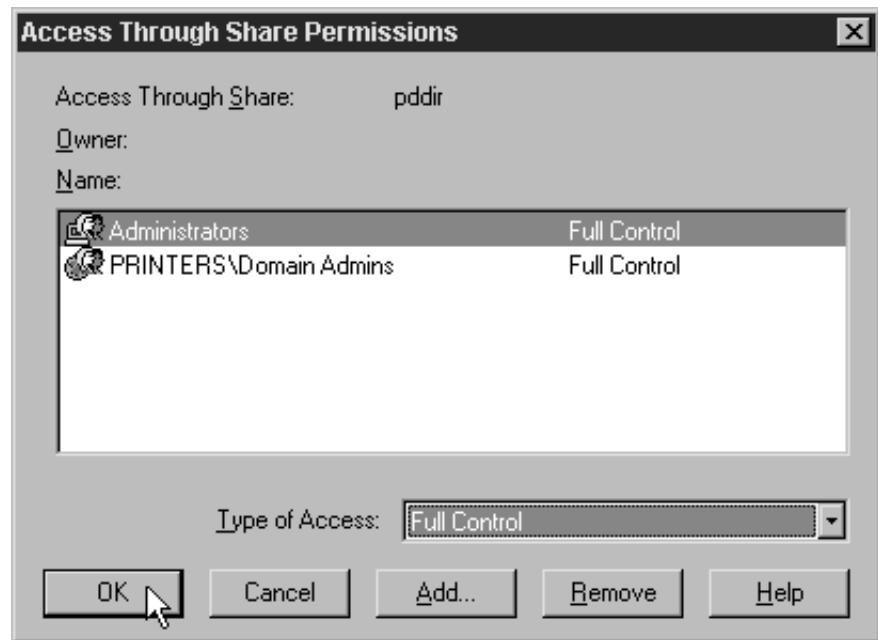
5) Click **Add**.

> **Note:** You may want to add the local administrators group to the list as well.

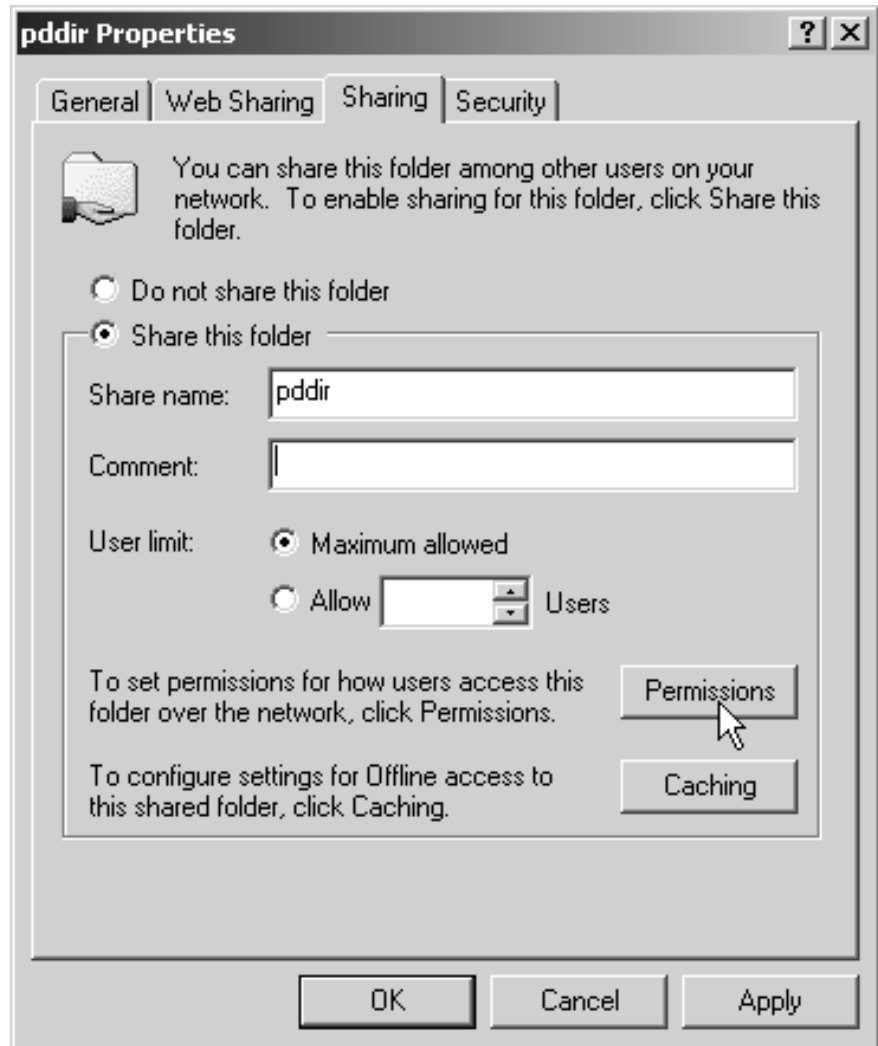6) Select **Full Control** from the **Type of Control** drop-down list.
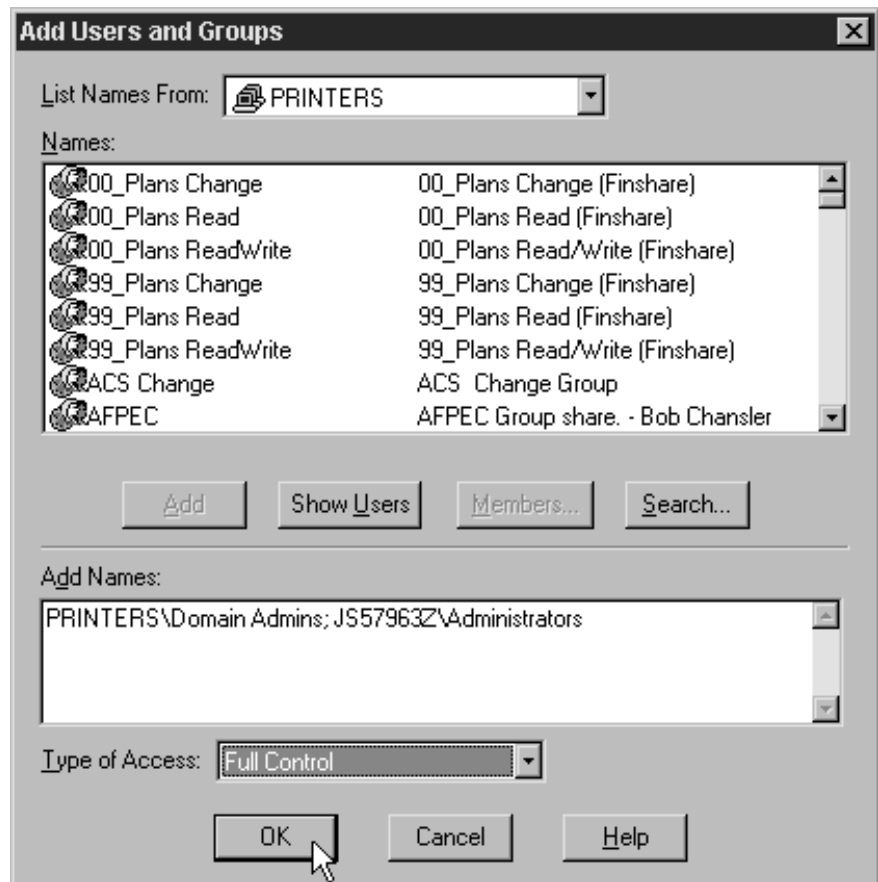
7) Click **OK**.

8) In the **Access through Share Permissions** dialog, select the **Everyone** group and click **Remove**.
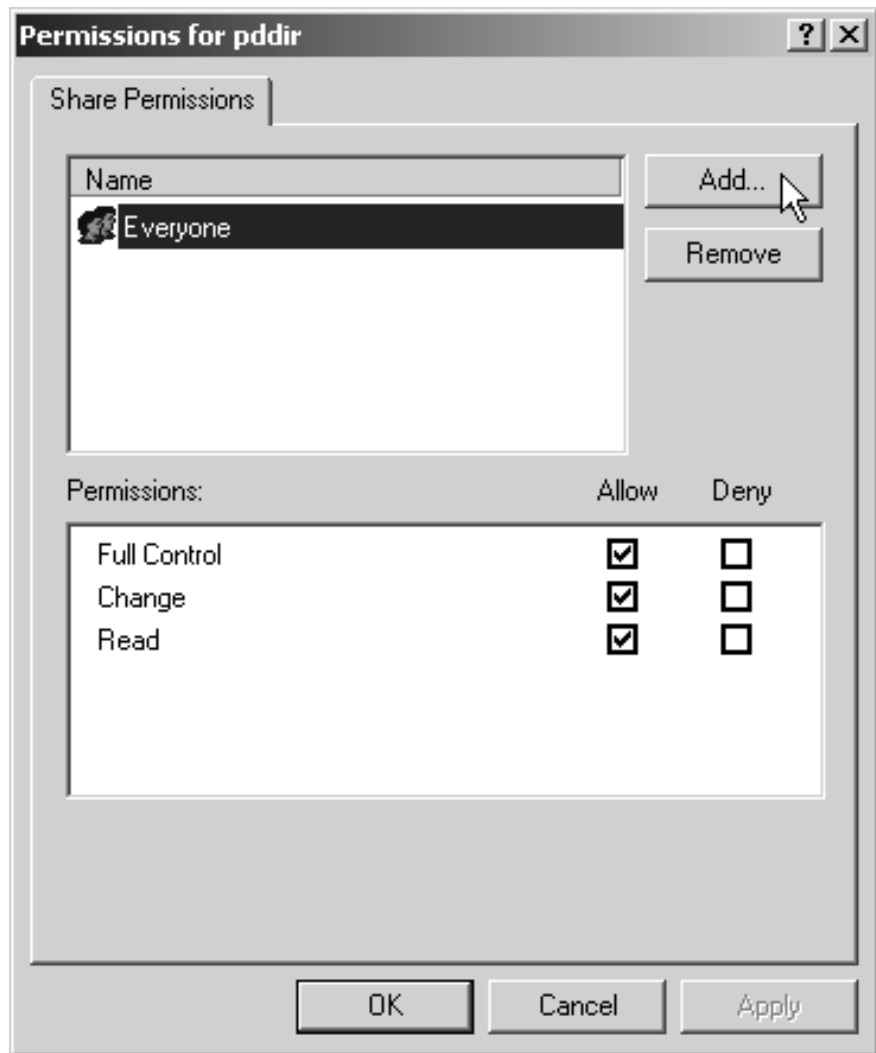

9) Click **OK**.

Windows 2000:

1) In the dialog that opens, select **Share this folder**, and verify that **pddir** appears in the **Share Name** text box.
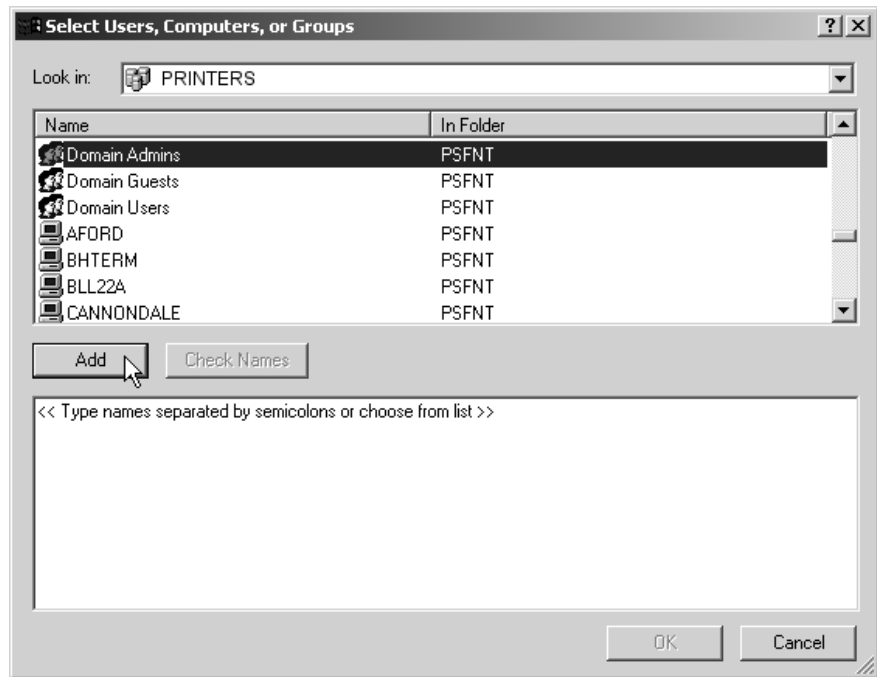

2) Click **Permissions**.

3) In the **Permissions for pddir** dialog, click **Add**.

4) In the **Select Users, Computers, or Groups** dialog, select the correct domain from the **Look in** drop-down list and find **Domain Admins** in

the **Names** box.

5) Click **Add**.

   Note: You may want to add the local Administrators group to the list
   as well.

6) Click **OK**.

7) In the **Permissions for pddir** dialog, select **Domain Admins** in the
   Name box, and make sure **Full Control** is allowed in the **Permissions**

box.
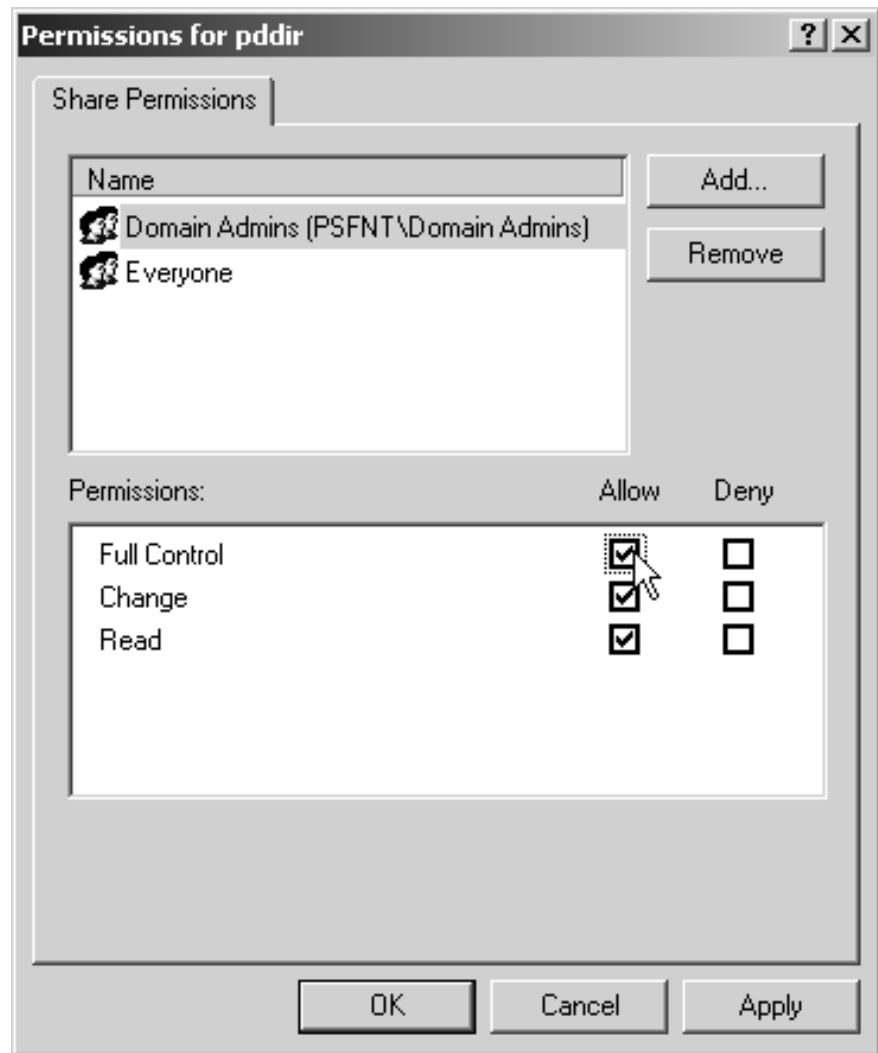
8) Remove the **Everyone** group from the **Name** box and click **OK**.
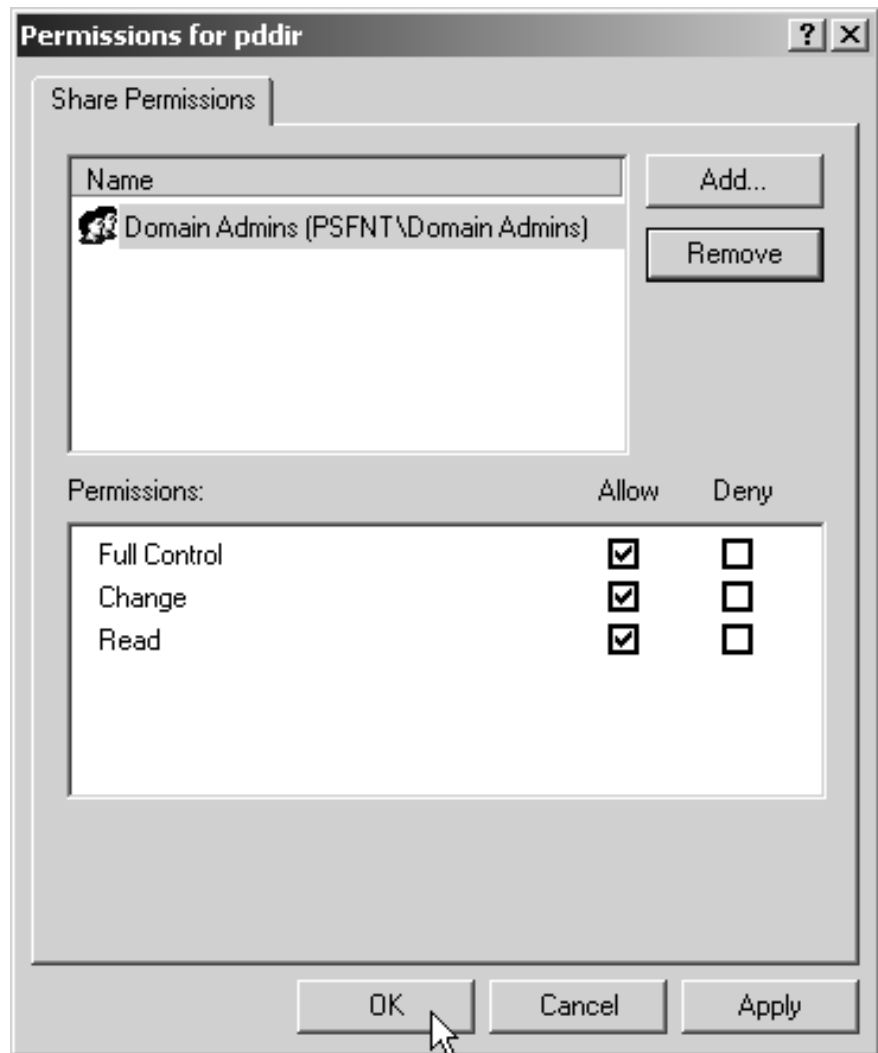
7. *Map the connections to the namespace directory on all of the other servers.*

   a. Log on to one of your non-namespace systems as a user who is an administrator on that system.

   b. Open Windows NT/2000 Explorer and select **Tools --> Map Network Drive**.
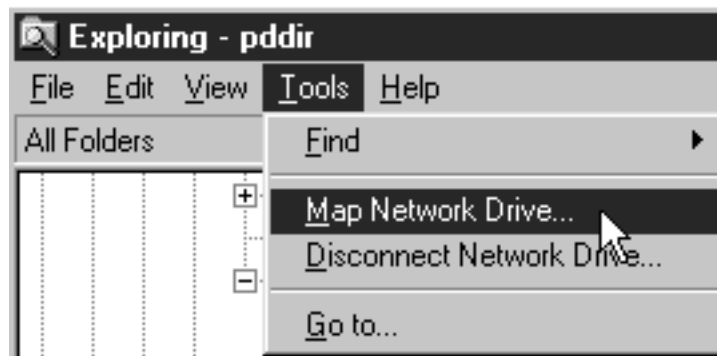
   c. Specify the user and password to use.

      Windows NT

1) In the **Map Network Drive** dialog,
   a) In the **Drive** field, select a drive letter that you are not currently using.
   b) In the **Path** field, type the Universal Naming Convention (UNC) name of the directory you shared on the namespace server in this format: *namespaceserver**sharename*.
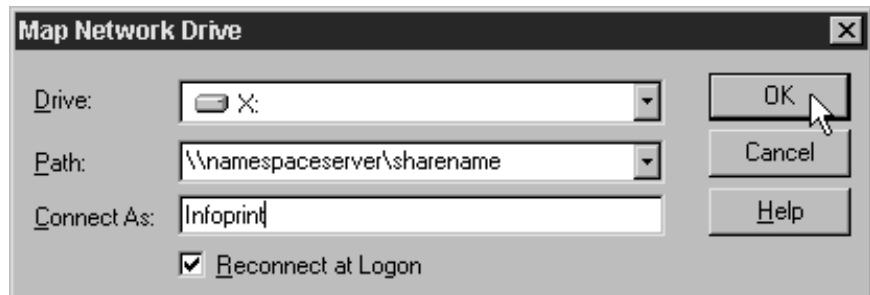
2) Type the user that you created in step 4 on page 2 in the **Connect as** field, and select **Reconnect at logon**.
3) OTF command. A dialog will open and will ask you to enter the password for this user.
4) Type the password that you set for this user in step 4 on page 2, and click **OK**.

Windows 2000

1) In the **Map Network Drive** dialog, select a drive letter that you are not currently using from the drop-down menu in the **Drive** field.
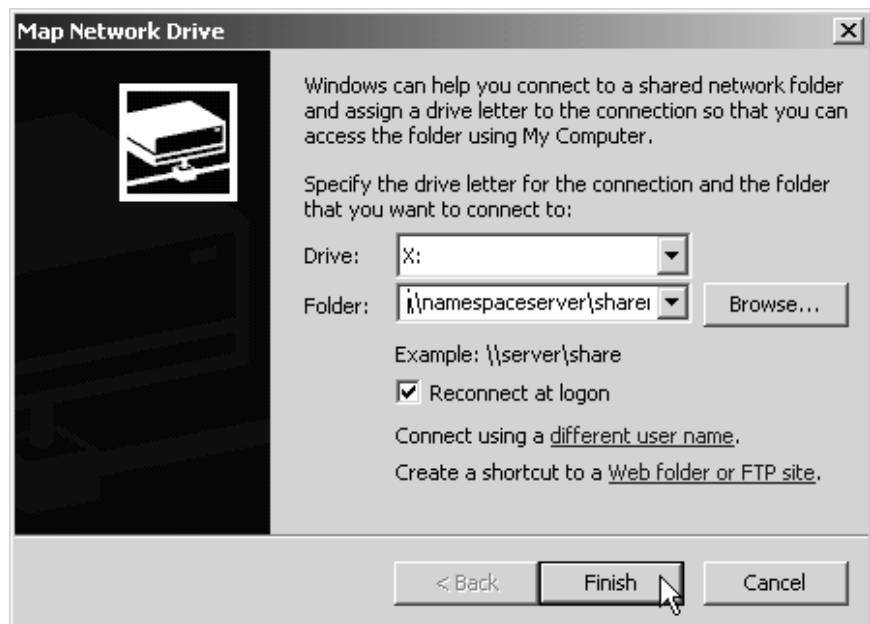
2) In the **Folder** field, type the Universal Naming Convention (UNC) name of the directory you shared on the namespace server in this format: *namespaceserver**sharename*.
3) Select **Reconnect at logon**.
4) Click the **Connect using a different user name** link.

5) In the **Connect As** dialog, type the user name and password that you created in step 4 on page 2.
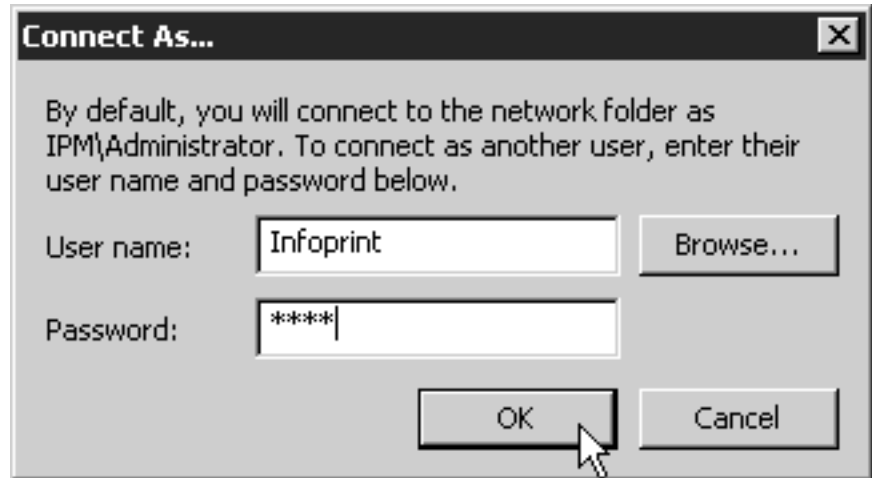
6) OTF command in the **Connect As** dialog.

7) Click **Finish** in the **Map Network Drive** dialog.

d. Repeat on all of your Infoprint Manager systems except the namespace system.

8. *Set up each Infoprint Manager server to use the new user account and namespace.*

On the namespace system

a. Log on as a user who is a member of the Administrators group.

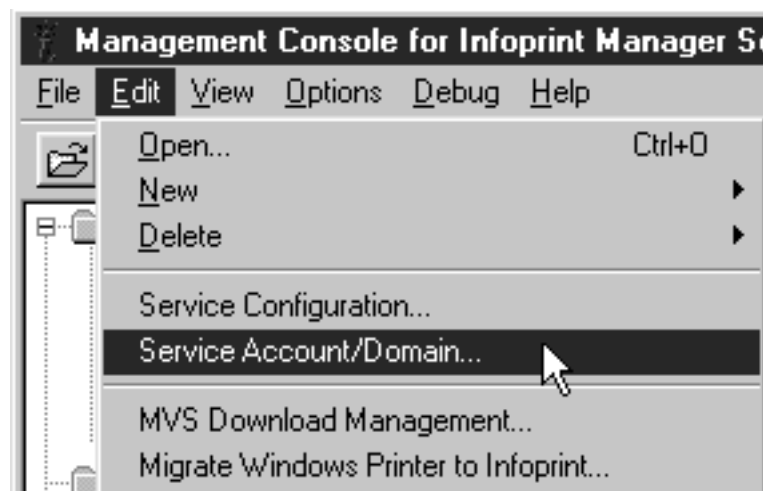b. Open the Management Console and select **Edit --> Service Account/Domain**.
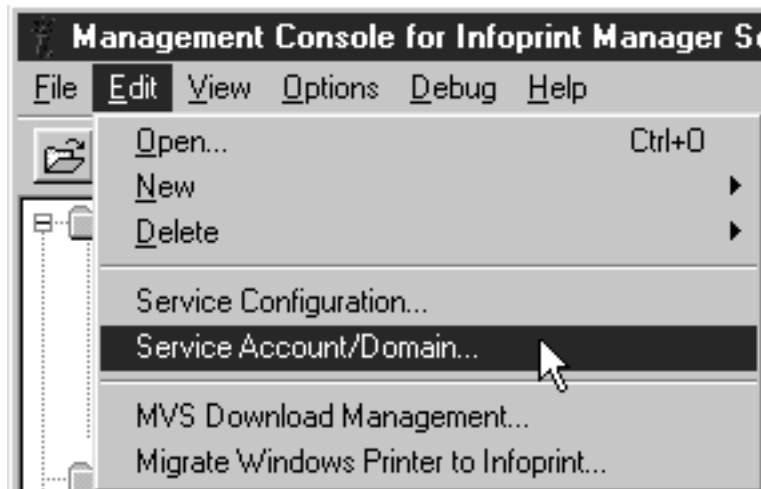
c. Enter the name of the domain that the Infoprint Manager servers are installed in and the user name and password from step 4 on page 2.
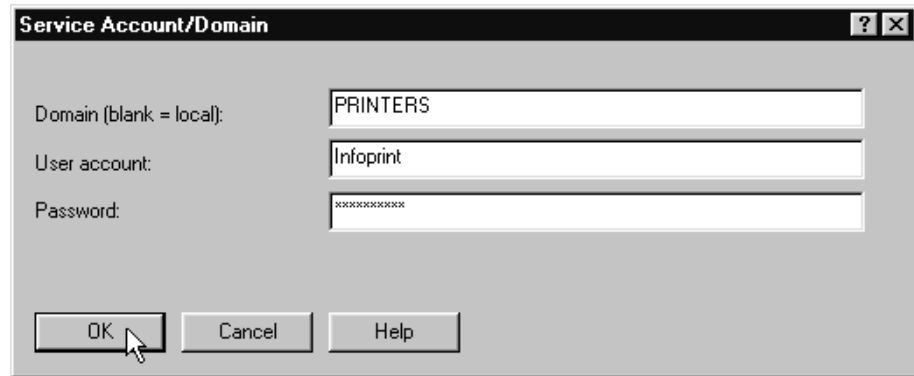
d. OTF command.

On the other systems

a. Log on as a user who is a member of the Administrators group.

b. Open the Management Console and select **Edit --> Service Account/Domain**.

c. Enter the name of the domain that the Infoprint Manager servers are installed in and the user name and password from step 4 on page 2.
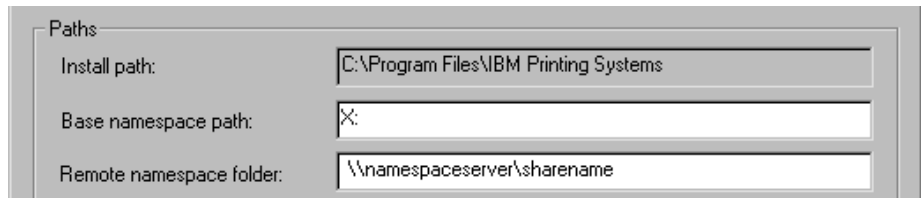

d. OTF command.

e. Select **Edit --> Service Configuration**.
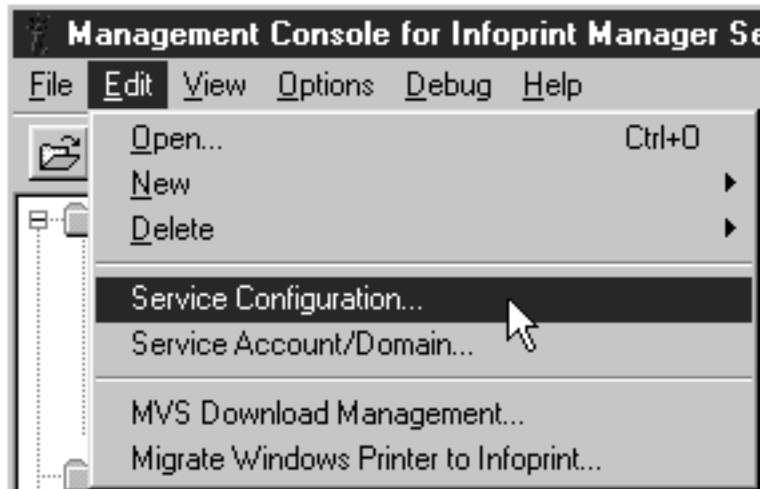
f. Clear the **Base namespace path** field and type the drive letter that you mapped to the namespace in step 7 on page 23 followed by a colon.


g. In the **Remote namespace folder** field, type the Universal Naming Convention (UNC) name of the directory you shared on the namespace server in this format: *namespaceserver**sharename*.

h. OTF command.

i. Repeat on all of the other non-namespace Infoprint Manager server systems.

9. *Disable all of the Infoprint Manager Notification servers except the one on your namespace system.*

A notification server was installed and started with each of your Infoprint Manager servers. Now that the namespace is shared, however, you only need to run one. To disable the notification servers, do the following on each system except your namespace system.

a. In the Management Console, select **Edit --> Service Configuration**.
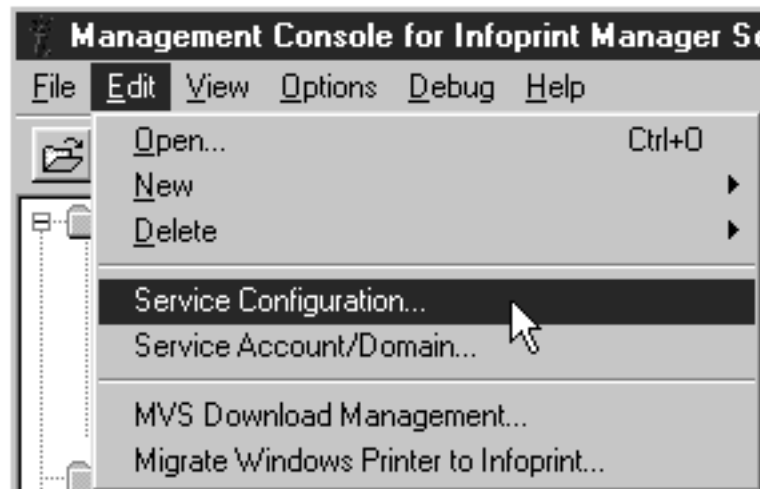
b. In the **Settings** group box, clear the **Run notification server on this system** checkbox.
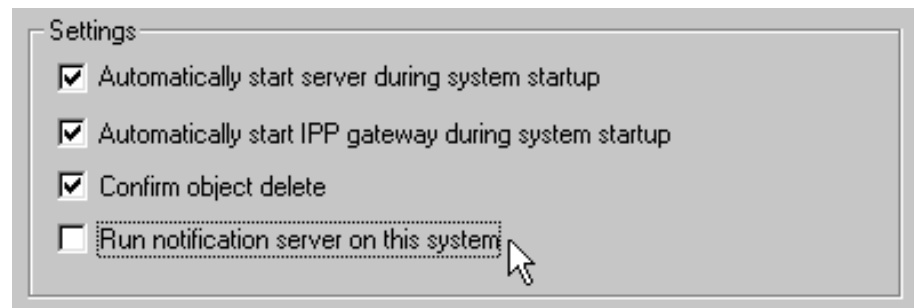
c. Click **OK**.

d. Repeat on all of your non-namespace systems.

10. *Restart all of the Infoprint Manager servers.*

On each system that the Infoprint Manager server runs on, open the Management Console and select **File --> Start Server**.

11. *Verify that all of the servers now share the namespace.*

a. Log on to your namespace system.

b. Start the Infoprint Manager Administration GUI.

c. Select **Server –> Show all servers**.

You should see a list of all of the servers that are using the namespace. If any of the servers that you configured to use this namespace do not appear, stop the servers and check the settings that you changed in step 7 on page 23 for that server.

12. *Configure Infoprint Manager Security.*

Use the Management Console on the namespace server to set up security for your printing system. See the **Managing Security** Administration topic and the online help in the Management Console for more information on administering security groups and Access Control Lists (ACLs).

Note: Because Access Control Lists (ACLs) are shared across the namespace, the ACLs for your namespace server now apply to all of the servers.

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