

Application Note: Installing Remote Management Agents Using Service Account Manager™

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Abstract

The Microsoft® Windows Server Resource Kit contains a number of agents that can make remote administration easy. These agents are composed of a series of support files that must first be transferred to each remote system. Next, the core service of each agent must be configured and started on each remote system.

Lieberman Software's **Service Account Manager™** makes the entire process of file copying and installation of services quick and easy. This paper provides step-by-step instruction for the installation of the most popular agents available in the Resource Kit.

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1. RCMD – Remote Command Service

The **Remote Command Service** provides a flexible command line interface that can be used interactively or via the command line interface (perfect for scripts).

The Remote Command Service consists of the following files:

Client program: **RCMD.EXE**
Remote Service: **RCMDSVC.EXE**

These two programs are located in the root directory of the Server Resource Kit. To access any remote system, you will need to copy the Remote Service (RCMDSVC.EXE) to all machines you want to administer. The remote service is then installed and started. Remote access is then provided from any machine using the Client Program (RCMD.EXE).

Installing the Remote Command Service

Although the following steps look intimidating, the entire set of entries to define the new service for installation can be done in less than a couple of minutes. The total installation time of the remote agents on hundreds of systems takes just a few minutes more. Try it and see for yourself:

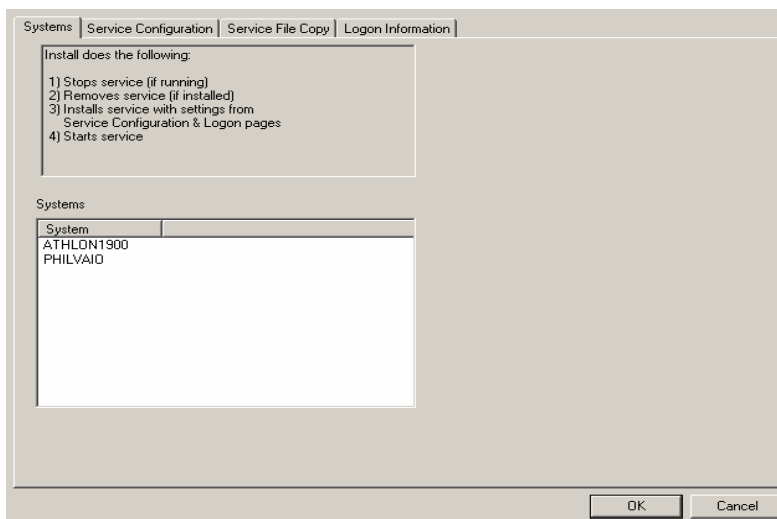
1. Highlight all of the machines that are to receive the new service. You may want to switch into System view by clicking on the menu:

View | Systems Only

2. Highlight the machines to receive the new agent
3. Click on the Install Service menu option (you can also right click to select the same option):

Set | Install Service...

4. You will now be presented with a multi-tabbed property sheet. Confirm that the list of machines is correct.

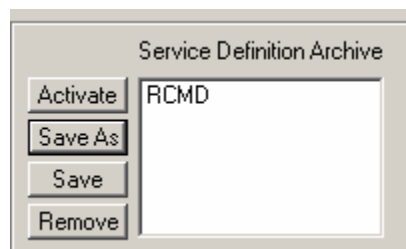


5. If everything looks OK, click on the “Service Configuration” tab.
6. Set the editable fields as follows:

Service Display Name: **Remote Command Service**
 Internal Service Name: **rcmd**
 Path to service executable: **rcmdsvc.exe**
 Service Type: **Own Process**
 Start Type: **Auto Start**
 Error Control: **Normal**
 TagID: **0**

Leave all other fields on this screen blank. You can ignore all the other fields.

6. Save this service definition by clicking on the “Save As” button. Give the configuration the name: “RCMD”.



7. Click on the “Service File Copy” tab.
8. Make a note of where your resource kit is installed on your machine. Confirm the path to the RCMD SVC.EXE file.

On our system it is located at: D:\NTReskit. Make the appropriate changes for the source directory on your system in the following steps.

9. Click on the “Add...” button and fill-in the “Source” and “Destination” fields. This is how we set up our source and destinations:

Source: **d:\ntreskit\rcmdsvc.exe**
 Destination: **\\%system%\admin\$\rcmdsvc.exe**

The destination arguments are as follows:

\\%system% - This argument will be replaced on each machine with the unique name of each machine.

\admin\$ - This is the share name to the operating system directory on each machine. This is the directory where services are normally installed. (%SystemRoot%\System32).

rcmdsvc.exe - Name of the service on the remote system

10. Click on the “OK” button to save the new source and destinations.

Source	Destination
d:\ntreskit\rcmdsvc.exe	\\%system%\admin\$\rcmdsvc.exe

11. Save the list of file(s) to copy by clicking on the “Save As” button. Give the configuration the name: “RCMD”.

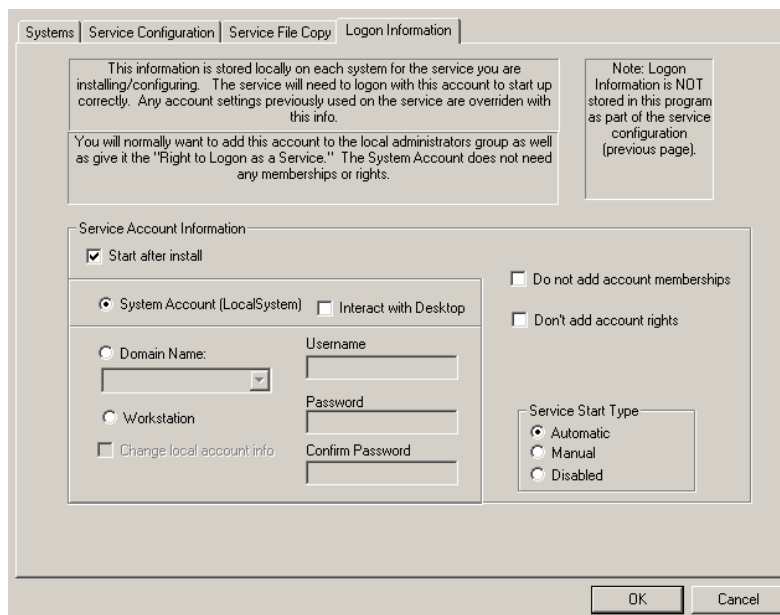
12. Set the checkbox to “Enable File Copying”.

Enable File Copying

13. Click on the “Logon Information” tab.

14. Set the fields as follows:

- Start after install: **Checked**
- System Account: **Selected**
- Interact with Desktop: **Unchecked**
- Do not add account memberships: **Unchecked**
- Do not add account rights: **Unchecked**
- Service Start Type: **Automatic**



15. Click on the “OK” button to begin the installation. The log should be similar to the following:

```

***** NTSAM Console - Build:011010
***** Start time: Fri Jun 21 00:56:48 2002
---- Running Service Add Cycle ----
FileCopy <OK>
Src:d:\ntreskit\rcmdsvc.exe
Dst:\ATHLON1900\ADMIN$\RCMDSVC.EXE
Add Svc: <OK> System: ATHLON1900 Service: Remote Command Service - Added
StartService <OK> System:'ATHLON1900' Service:'Remote Command Service'
FileCopy <OK>
Src:d:\ntreskit\rcmdsvc.exe
Dst:\PHILVAIO\ADMIN$\RCMDSVC.EXE
Add Svc: <OK> System: PHILVAIO Service: Remote Command Service - Added
StartService <OK> System:'PHILVAIO' Service:'Remote Command Service'
... Done...
***** Elapsed time: 00:00:07
No Errors Recorded
**** Job Error Summary ****
# Machines with Errors: 0
# Services with Errors: 0

```

2. Running the RCMD Client Program

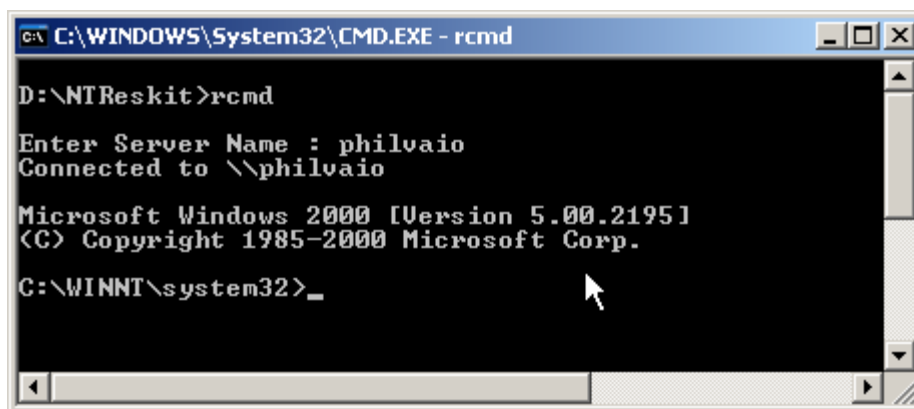
To Run an Interactive Session

1. At the command prompt, type `rcmd \\server_name`. You can also just type the command “rcmd” and the program will prompt you for the name of the remote system.
2. Enter multiple commands, if necessary.
3. Type CTRL+BREAK to terminate the session (or type EXIT at the command prompt) to exit RCMD.

If a program is executing on the target at the time the session is terminated, the program will be terminated, except for spawned, detached processes.

4. Type exit to terminate the remote command shell and break the session.

Below is an example of an interactive session:



```

C:\WINDOWS\System32\CMD.EXE - rcmd

D:\NTReskit>rcmd

Enter Server Name : philvaio
Connected to \\philvaio

Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\WINNT\system32>_

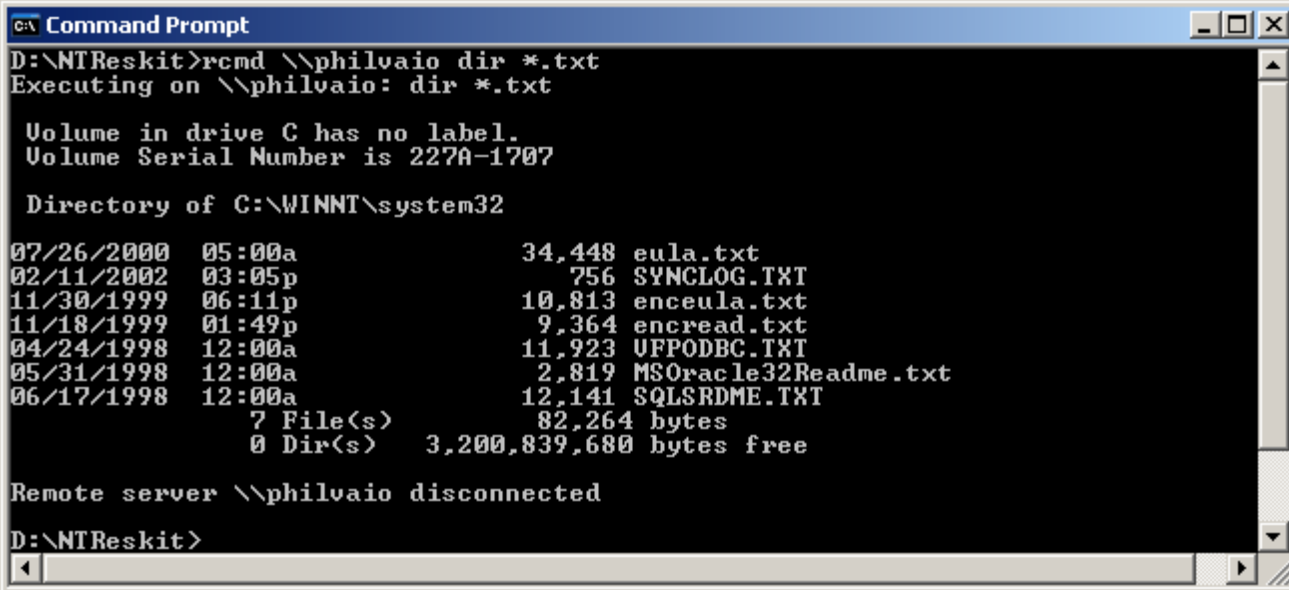
```

To Run a Single Command Session

1. At the command prompt, type `rcmd \\server_name command`
This establishes a command session with the computer specified in `server_name`.

When the command completes, the session will be terminated.

Below is an example of a single command session to get a list of the TXT files in the system directory:



```
C:\ Command Prompt
D:\NTReskit>rcmd \\philvaio dir *.txt
Executing on \\philvaio: dir *.txt

Volume in drive C has no label.
Volume Serial Number is 227A-1707

Directory of C:\WINNT\system32

07/26/2000  05:00a           34,448 eula.txt
02/11/2002  03:05p             756 SYNCL0G.TXT
11/30/1999  06:11p          10,813 enceula.txt
11/18/1999  01:49p           9,364 encread.txt
04/24/1998  12:00a          11,923 UFPODBC.TXT
05/31/1998  12:00a           2,819 MSOracle32Readme.txt
06/17/1998  12:00a          12,141 SQLSRDME.TXT
            7 File(s)           82,264 bytes
            0 Dir(s)    3,200,839,680 bytes free

Remote server \\philvaio disconnected
D:\NTReskit>
```

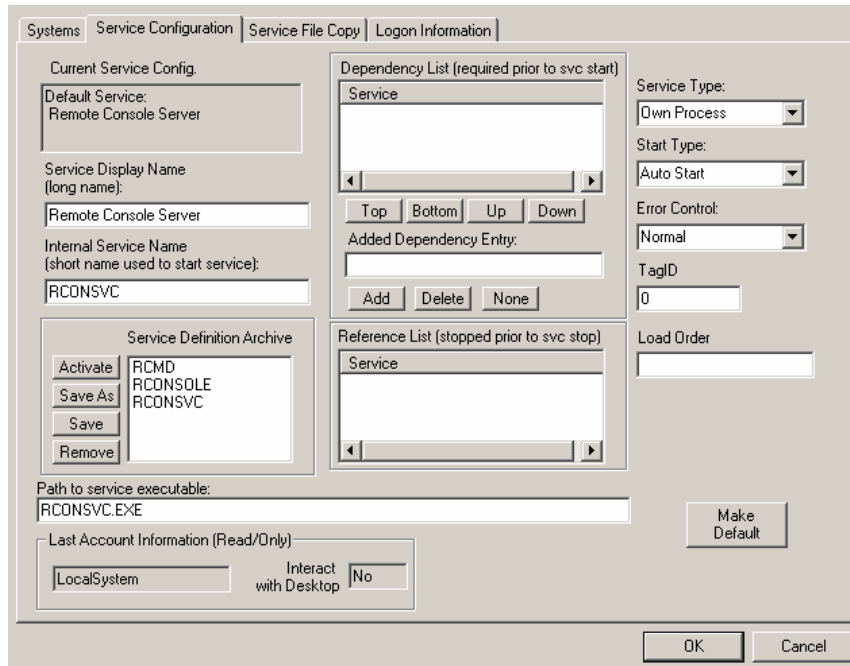
3. RCONSOLE – Remote Console

Another alternative is the **Remote Console** utility in the Resource Kit. This utility operates like a Telnet session in Unix. It is located in the Resource Kit directory under `\RCONSOLE`. This program consists of a remote network service that must be installed manually on every machine, and a remote control called `RCLIENT.EXE`.

Installing the Remote Console

The installation procedure is nearly identical except for the service name differences and the list of files to copy.

1. Here is the page for “Service Configuration”:

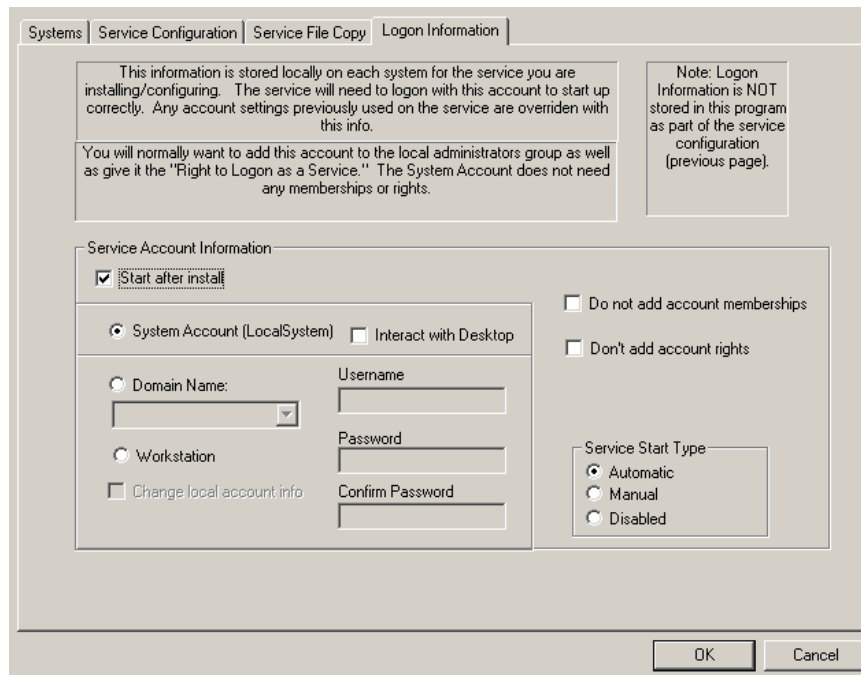


You can ignore the list of “Service Definition Archives”.

2. Here is the “Service File” copy list. Notice that the files are copied from a subdirectory beneath \NTRESKIT called: \NTRESKIT\RCONSOLE.

Source	Destination
d:\ntreskit\rconsole\rcongrp.exe	\\%system%\admin%\rcongrp.exe
d:\ntreskit\rconsole\rconmode.exe	\\%system%\admin%\rconmode.exe
D:\NTReskit\rconsole\RCONMSG.DLL	\\%system%\admin%\RCONMSG.DLL
D:\NTReskit\rconsole\RCONSTAT.EXE	\\%system%\admin%\RCONSTAT.EXE
D:\NTReskit\rconsole\RCONSVK.EXE	\\%system%\admin%\RCONSVK.EXE
D:\NTReskit\rconsole\RCRUNCMD.EXE	\\%system%\admin%\RCRUNCMD.EXE

3. Logon information is identical to that of RCMD:



4. Click on "OK" and in just a few seconds the installation is completed.

```

***** NTSAM Console - Build:011010
***** Start time: Fri Jun 21 01:38:38 2002
---- Running Service Add Cycle ----
FileCopy <OK>
Src:D:\ntreskit\rconsole\rcongrp.exe
Dst:\ATHLON1900\ADMIN$\RCONGRP.EXE
FileCopy <OK>
Src:D:\ntreskit\rconsole\rconmode.exe
Dst:\ATHLON1900\ADMIN$\RCONMODE.EXE
FileCopy <OK>
Src:D:\NTReskit\rconsole\RCONMSG.DLL
Dst:\ATHLON1900\ADMIN$\RCONMSG.DLL
FileCopy <OK>
Src:D:\NTReskit\rconsole\RCONSTAT.EXE
Dst:\ATHLON1900\ADMIN$\RCONSTAT.EXE
FileCopy <OK>
Src:D:\NTReskit\rconsole\RCONSVC.EXE
Dst:\ATHLON1900\ADMIN$\RCONSVC.EXE
FileCopy <OK>
Src:D:\NTReskit\rconsole\RCRUNCMD.EXE
Dst:\ATHLON1900\ADMIN$\RCRUNCMD.EXE
Add Svc: <OK> System: ATHLON1900 Service: Remote Console Server - Added
StartService <OK> System:ATHLON1900' Service:'Remote Console Server'

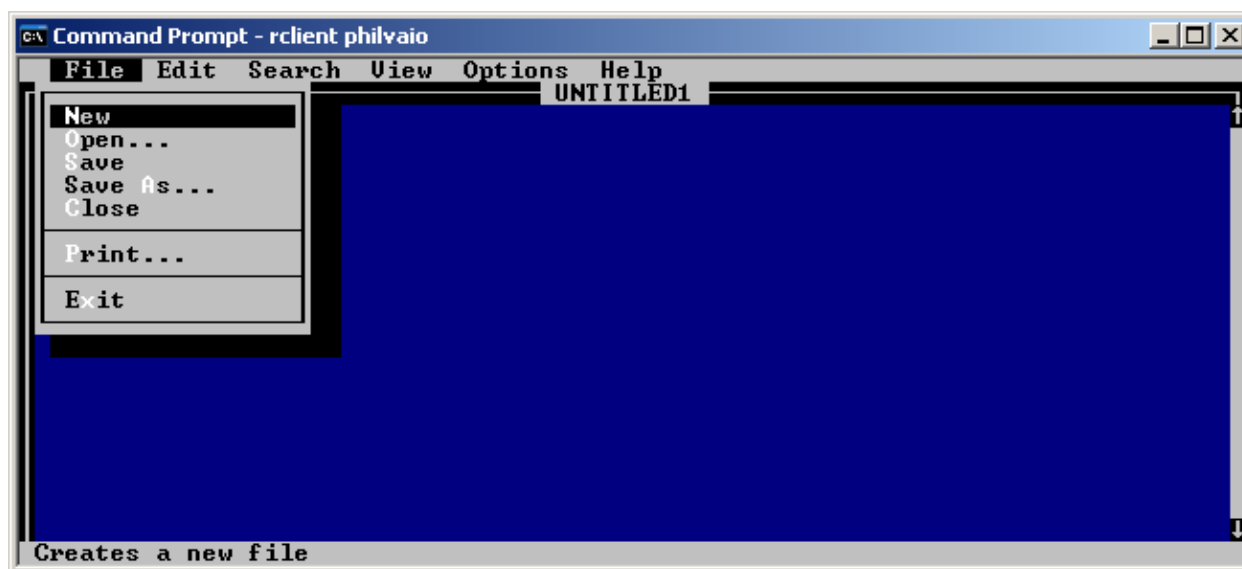
```

Running the Remote Console

Here is the syntax for this remote console client:

```
rclient [\\]servercomputername [/e[ncrypt]]  
[/logon:[domainname\]username] [password] [/s[lowlink]]  
[/r[unbatch] batchfilename]
```

This is an example of running the RECLIENT.EXE program and starting the remote program EDIT.EXE (a text mode editor). If you attempted to run the EDIT.EXE program using RCMD, you would have a locked-up session with no output. In RCLIENT, you have a much more functional interface that is similar to the UNIX Telnet program.



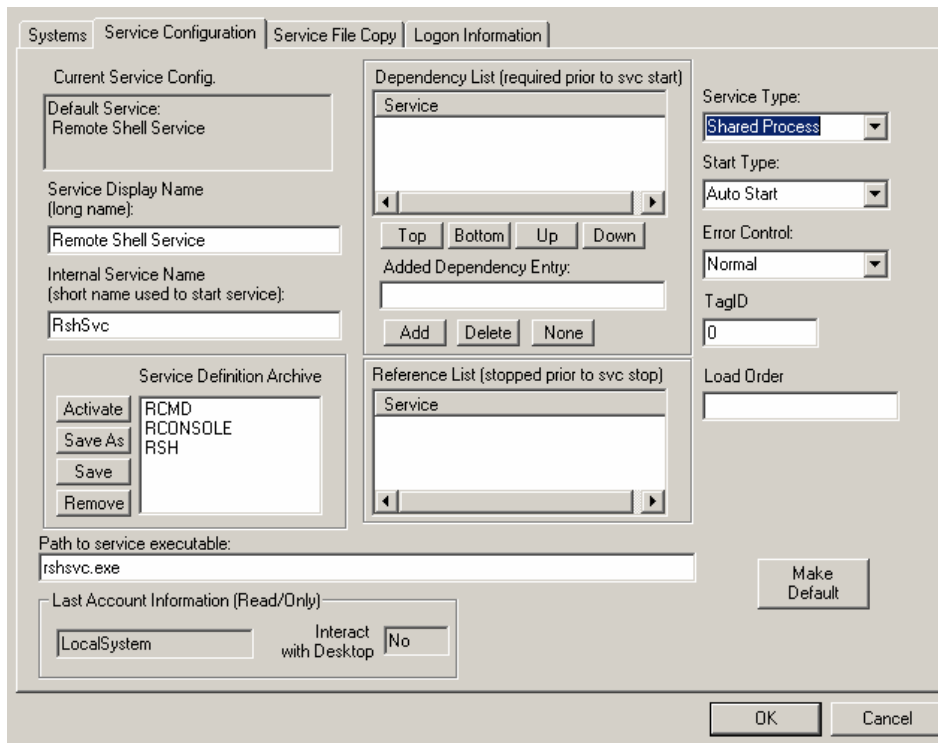
4. TCP/IP Remote Shell Service (rsh)

The **TCP/IP Remote Shell Service** operates like the Unix Remote Shell Service (rsh). This is a service based package also provided in the Server Resource Kit. This tool can also be remotely installed using the same methods as the Remote Command Service (RCMD). Its security depends on the creation of a custom RHOSTS file that specifies all machines and users that are allowed remote access via this service.

Installing the Remote Console

The installation procedure is nearly identical except for the service name differences and the list of files to copy. An added file called rhosts is necessary to provide the list of machines and optional users allowed to connect.

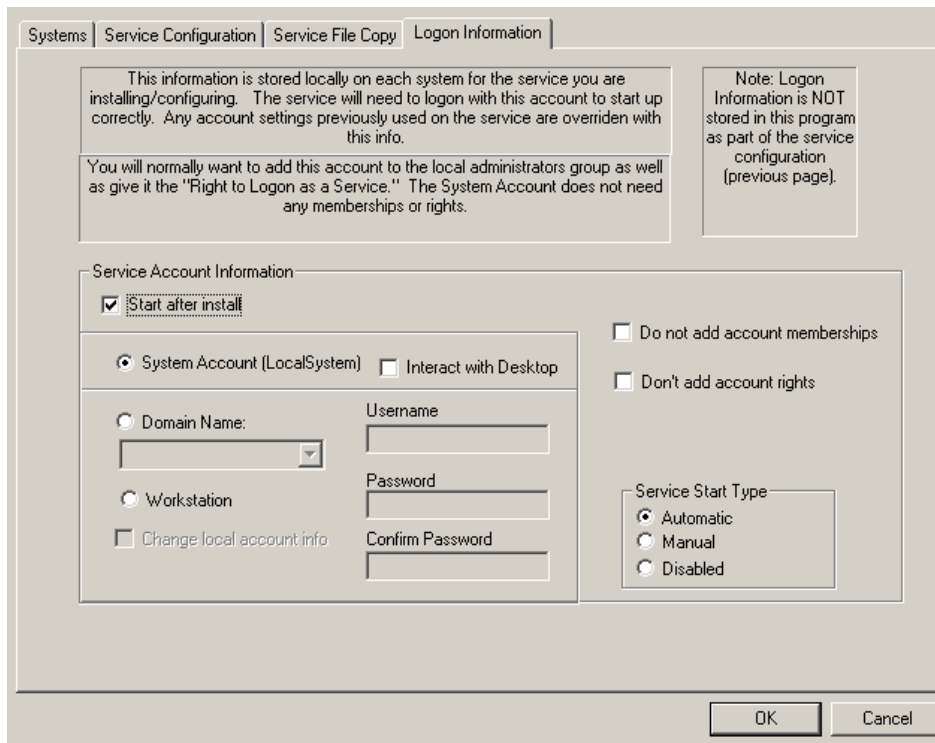
1. Here is the page of for “Service Configuration”. This program seems to prefer the setting of Service Type to “Shared Process”.



2. Here is the “Service File” copy list.

Source	Destination
d:\ntreskit\rshsvc.exe	\\%system%\admin\rshsvc.exe
d:\ntreskit\rshsvc.dll	\\%system%\admin\rshsvc.dll
d:\ntreskit\rhosts	\\%system%\admin\Drivers\Etc\rhosts

3. Logon information is identical to that of RCMD:



This information is stored locally on each system for the service you are installing/configuring. The service will need to logon with this account to start up correctly. Any account settings previously used on the service are overridden with this info.

You will normally want to add this account to the local administrators group as well as give it the "Right to Logon as a Service." The System Account does not need any memberships or rights.

Note: Logon Information is NOT stored in this program as part of the service configuration (previous page).

Service Account Information

Start after install

System Account (LocalSystem) Interact with Desktop

Do not add account memberships

Don't add account rights

Domain Name: Username:

Workstation: Password:

Change local account info Confirm Password:

Service Start Type

Automatic

Manual

Disabled

OK Cancel

5. Click on "OK" and in just a few seconds the installation is completed.

```

***** NTSAM Console - Build:011010
***** Start time: Fri Jun 21 02:28:40 2002
---- Running Service Add Cycle ----
Stopped service on System:'PHILVAIO' Service:'Remote Shell Service'
ControlService-Stop <OK> - System:'PHILVAIO' Service:'Remote Shell Service'
Delete Svc: <OK> System: PHILVAIO Service: RshSvc - Deleted
FileCopy <OK>
Src:d:\ntreskit\vrshsvc.exe
Dst:\PHILVAIO\ADMIN$\RSHSVC.EXE
FileCopy <OK>
Src:d:\ntreskit\vrshsvc.dll
Dst:\PHILVAIO\ADMIN$\RSHSVC.DLL
FileCopy <OK>
Src:d:\ntreskit\vrhosts
Dst:\PHILVAIO\ADMIN$\DRIVERS\ETC\RHSTSS
Add Svc: <OK> System: PHILVAIO Service: Remote Shell Service - Added
StartService <OK> System:'PHILVAIO' Service:'Remote Shell Service'
... Done...
***** Elapsed time: 00:00:03
No Errors Recorded
**** Job Error Summary ****
# Machines with Errors: 0
# Services with Errors: 0

```

Running the Remote Shell

Here is the syntax for this remote console client:

RSH host [-l username] [-n] command

host	Specifies the remote host on which to run command.
-l username	Specifies the user name to use on the remote host. If omitted, the logged on user name is used.
-n	Redirects the input of RSH to NULL.
command	Specifies the command to run.

The user interface to rsh is identical to that of rcmd. The advantage of rsh is that it is fully compatible with all other platforms that use rsh such as UNIX.

The tricky thing about rsh is that it depends on the existence of entries in your DNS table and your RHOSTS file to verify your identity. See the documentation on rsh for more details.

5. Summary

The installation of remote management services is a very simple and fast operation with Service Account Manager™. Remember, if you need to revise the installation parameters of a service, just highlight the same set of machines, select the Install Service option, change the parameters and click on OK. Because the Install Service option first removes then installs the service, all of the details are taken care of for you automatically.

Our support staff is available to answer your technical questions whether you are a customer or not.

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