

# **PLANTSCAPE SERVER**

## **ADMINISTRATION AND ANALYSIS - 2**

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## SESSION OBJECTIVES

At the end of this section of the course the student will be able to:

- Administer PlantScape Server Users
- Start and stop the PlantScape Server
- Load and unload the PlantScape Server database to and from the server memory
- Configure the PlantScape Control Panel settings
- Backup and recover the PlantScape Server database
- Analyse the Server's processor loading
- Analyse the non-Hybrid controller Point scanning load

## REFERENCES

*Knowledge Builder: Administration Guide*

# User Administration

## Users

To be able to use a Windows NT computer you must log in with a valid username and password.

## Groups

Each user is a member of one or more Groups.  
Each Group enables a different level of access to Windows NT administration tasks

Group	Description
Administrators	Members can perform all administration tasks on the computer
Backup Operators	Members can bypass file security to backup files
Guests	Users granted Guest access to the computer
Power Users	Members can share directories and printers
Replicator	Supports file replication in a domain
Users	Ordinary users

## PlantScape Server users

PlantScape Engineering Tools are installed on the server PC whilst logged on as username “ps\_user”. During the installation of PlantScape Server three further user accounts are created (in addition to any others that may already have been created by the system administrator, or during the installation of Windows NT):

Username	Group	Notes	
ps_user	Administrators	Used by PSc Engineering Tools.	<b>Caution</b> DO NOT DELETE THESE USERS. The only remedy is to re-install PlantScape Eng Tools / Server.
erserver	Administrators		
mngr	Administrators	Used by PSc Server	
engr	Administrators	Recommended for use when performing administration tasks.	
oper	Users	Recommended for use by operators and other, non-administrative, personnel.	

## User Administration.....continued

### Adding a User

<b>1</b>	Choose:  <b>Start→Programs→Administrative Tools→User Manager</b>
<b>2</b>	In the User Manager window double click on:  either:  Username <b>engr</b> if the new user will be a member of the Administrators group,  or:  Username <b>oper</b> if the new user will be a member of the Users group
<b>3</b>	Choose <b>User→Copy</b>  In the copy dialogue box complete the details for the new user and click <b>OK</b> .

### Changing Passwords

<b>1</b>	If your Username is not a member of the Administrators group go to step 5.
<b>2</b>	Choose:  <b>Start→Programs→Administrative Tools→User Manager</b>
<b>3</b>	In the User Manager window double click on the Username whose password requires changing.
<b>4</b>	Enter the new password in the Password and Confirm Password fields and click <b>OK</b> .  <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;"><b>Caution</b></p> <p>If you have just changed the password for the user account “mngr” you must now change the password for the logon user account of ALL the associated PlantScape Server Services and DCOM applications (refer to page 13).</p> </div> <p>You have now completed the password change.</p>

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## User Administration.....continued

<b>5</b>	Press <Ctrl>+<Alt>+<Del> and click on <b>Change Password</b> .
<b>6</b>	<p>Enter your old password in the <b>Old Password</b> field.</p> <p>Enter your new password in the <b>New Password</b> and <b>Confirm Password</b> fields and click <b>OK</b>.</p> <p>When prompted with the message</p> <p>Password has been changed</p> <p>click <b>OK</b> to clear the message window and then click <b>Cancel</b> to clear the login window.</p>

### Deleting a User

<b>1</b>	<p>Choose:</p> <p><b>Start→Programs→Administrative Tools→User Manager</b></p>
<b>2</b>	<p>In the User Manager window select the Username(s) that is(are) to be deleted</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;"><b>Caution</b></p> <p>Do not select the usernames “ps_user”, “erserver”, or “mngr”,</p> <p style="text-align: center;"><b>THESE ACCOUNTS MUST NOT BE DELETED.</b></p> <p style="text-align: center;">The only remedy is to re-install PlantScape Engineering Tools and/or Server.</p> </div>
<b>3</b>	<p>Either:     choose <b>User→Delete</b></p> <p>or:           press &lt;Del&gt;</p>
<b>4</b>	Choose <b>OK</b> to confirm the delete
<b>5</b>	Choose <b>Yes</b> or <b>Yes to All</b> to delete the user(s)



# Windows NT Services

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## What are Services?

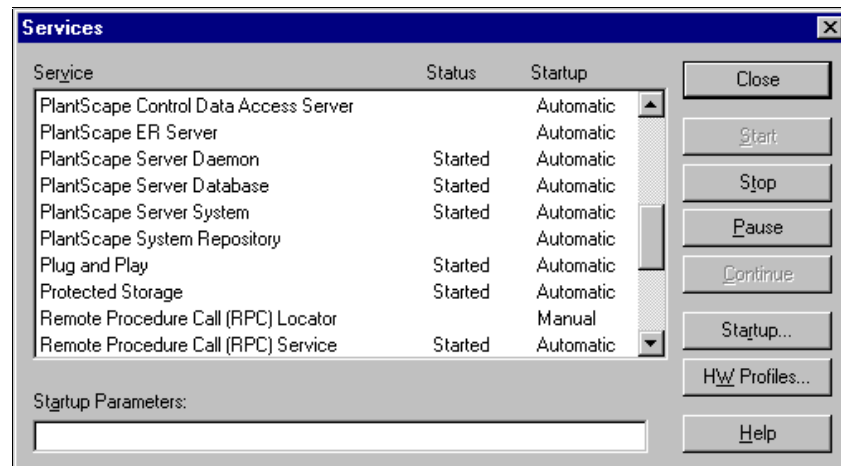
Services are programs that can run regardless of whether or not a user is logged in.

They also run regardless of who is logged in, and what groups they are members of.

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## Viewing Services

Choose **Start**→**Settings**→**Control Panel**→**Services**.



Each service:

- can be configured for automatic or manual startup, or disabled,
- can have its logon user account and password assigned,

### Caution

The logon user account should not be changed.

If the password for the user account “mngr” has been changed the logon password must be changed to match the new one (refer to page 13).

- has its “started” or “not started” status indicated,
  - can be started or stopped, if it has not been disabled
- 

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## Windows NT Services.....continued

### PlantScape Server Services

The following services are created during the PlantScape installation:

Service Name	Description
PlantScape Control Data Access Server	Controls communications between the PlantScape Server realtime database and the Hybrid Controller.
PlantScape ER Server	Enables access to the Engineering Repository
PlantScape System Repository	Loads / unloads the memory resident portions of the Engineering Repository
RSLinx	The program used to communicate between the CDA Server and the Hybrid Controller
XLNet Daemon	Controls the daemon for use with the Honeywell XL5000 controllers
PlantScape Server Daemon	Controls the various daemons running in the Server; for example, point building
PlantScape Server Database	Loads / unloads the memory resident portions of the PlantScape Server database
PlantScape Server System	Controls the PlantScape Server system programs

### PlantScape Server Services starting sequence

The starting sequence for the PlantScape Server services is:

1. PlantScape Server Database
2. PlantScape Server Daemon
3. PlantScape Server System

Therefore, to start ALL three services, start PlantScape Server System and the others will be started automatically

### PlantScape Server services stopping sequence

The stopping sequence for the PlantScape Server services is:


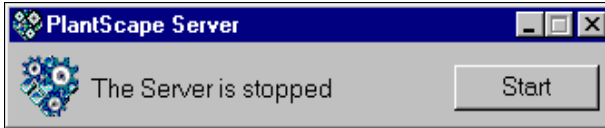


1. PlantScape Server System
2. PlantScape Server Daemon
3. PlantScape Server Database

Therefore, to stop ALL three services, stop PlantScape Server Database and the others will be stopped automatically

## Windows NT Services.....continued

### Controlling the PlantScape Server Services' Status

There are a number of methods available to control the status of PlantScape Server services.  
We will examine the simplest:

Step	Action
1	<p>Choose:</p> <p><b>Start→Programs→PlantScape Server→ Start-Stop PlantScape Server</b></p> <p>The PlantScape Server window will display:</p>  <p>or:</p> 
2	<p>Clicking <b>Start (Stop)</b> will start (stop) the System service</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p><b>Attention</b></p> <p>After stopping the System service in this way, the Database and Daemon services will still be running.</p> </div>
3	<p>In order to get more control over the Server services click on the Control Icon in the top left corner</p>  <p>Choose <b>Advanced→Full Mode</b></p>  <p>Access is available to all combinations of Server services.</p>

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## Windows NT Services.....continued

### Controlling the PlantScape Server Services' Status

.....continued

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In order to view the status of the Server services at all times click on the Control Icon in the top left corner



and check **Hide When Minimised** on.

When the window is minimised its notification icon will appear at the extreme right of the taskbar next to the time display



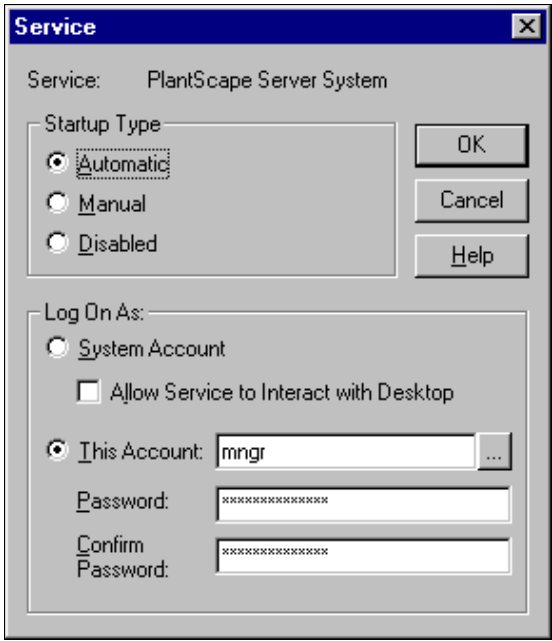
When the mouse pointer is held over this icon for a short time a notification will pop up indicating the status of the PlantScape Server services.

The indication will vary depending on whether **Full Mode** is on or off.

## Changing password of mngr account

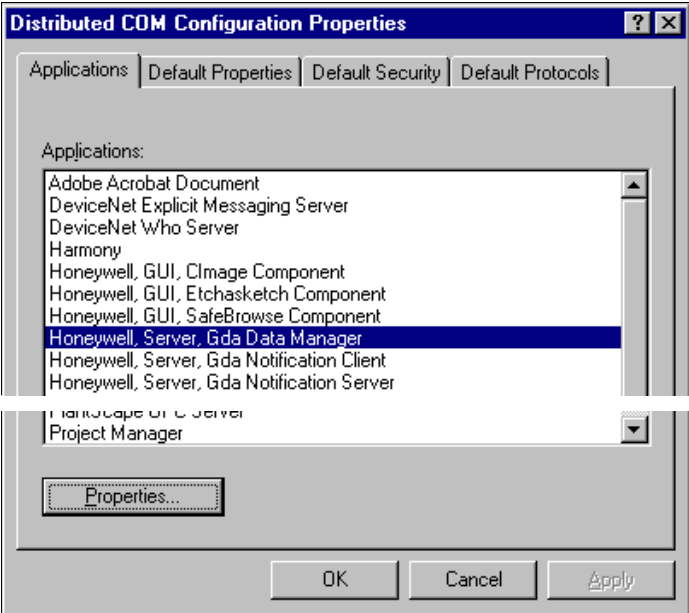
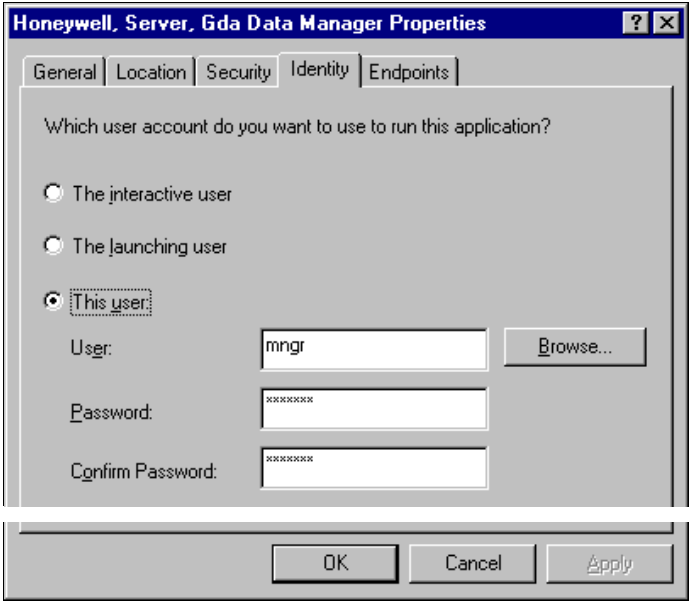
**Not as simple as it seems!**

The logon user account for the PlantScape Server Services is “mngr”. If the password for “mngr” has been changed then it is necessary to perform the following procedure:

Step	Action
1	<p>Select the service <b>PlantScape Server System</b> and choose <b>Startup...</b></p> 
2	Enter the new password and confirmation, and click <b>OK</b> .
3	Repeat steps 1 and 2 for the services: <ul style="list-style-type: none"><li>• PlantScape Server Daemon</li><li>• PlantScape Server Database</li><li>• XLNet Daemon (if used)</li></ul>
4	Close the Services dialogue box.

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## Changing password of mngr account.....continued

5	<p>Open a Command Prompt and enter the command: <b>dcomcnfg</b></p> 
6	<p>Select <b>Honeywell, Server, Gda Data Manager</b>, click <b>Properties...</b> and then select the <b>Identity</b> tab</p> 
7	<p>Enter the new password and confirmation, and click <b>OK</b>.</p>
8	<p>Repeat steps 6 and 7 for the applications:</p> <ul style="list-style-type: none"> <li>• Honeywell, Server, Gda Notification Client</li> <li>• Honeywell, Server, Gda Notification Server</li> <li>• PlantScape OPC Server</li> </ul>

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## Changing password of mngr account.....continued

<b>9</b>	If this PlantScape Server is part of a system using Distributed Servers Architecture then you must make these changes on ALL the Servers in the system.
<b>10</b>	If this PlantScape Server is using either the OPC Driver or Interface, and the corresponding OPC client or server is on another PC, then you must update the password for the mngr account on that PC.
<b>11</b>	<div><p style="text-align: center;"><b>Attention</b></p><p>If this PlantScape Server is re-installed, or upgraded to a new release, the password for the mngr user account will be reset to mngr123.</p><p>The above procedure must be repeated if the changed password for the mngr user account is required.</p></div>

# PlantScape Server Control Panel

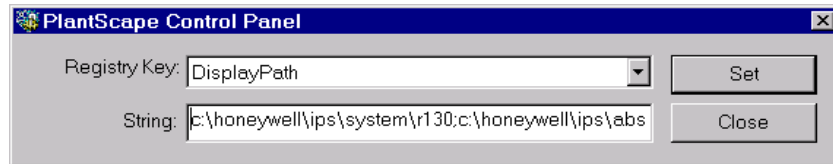
## Introduction

A control panel is provided to set certain parameters that exist in the Windows NT Registry.

To view the control panel choose:

**Start→Programs→PlantScape Server→**

**PlantScape Server Control Panel**



The parameters that can be set are:

- Archive Directory
- Display Path
- Log File Size
- Report Font

### Attention

Any changes to these settings will not be activated until the PSc System Service has been stopped and restarted.

## Archive Directory

Defines the directory under which History Archives will be saved.

## Display Path

Defines the display search path for the Server.

Required for named pages since they are exported to the Server realtime database at the time of request from a Station

## Log File Size

Defines the size of the Server log file c:\honeywell\server\data\loga.

## Report Font

Defines the font that will be used when printing reports.

## Other Registry Keys

Clicking on the icon in the top left corner and choosing **Advanced Mode** provides access to many more keys in the NT Registry.

### Caution

Care should be taken in Advanced Mode as random adjustments to entries may cause the Server to fail.



## Configuring a Secure Station

### Why?

It may be desirable to configure Stations in such a way that users with minimal authorisation are restricted in the features of the PC that they can access.

### What?

When Station is loaded on Windows NT (Workstation or Server) the following features can be achieved when nominated users log in:

- Station runs in a window that cannot be minimised or closed
- the Taskbar remains hidden and inaccessible
- Windows Explorer is inaccessible
- the user cannot start Knowledge Builder and hence gain access to the NT system through Internet Explorer
- there is no other access to any other application
- the user cannot Shutdown Windows NT, only log off
- Shutdown of Windows NT is inhibited when no user is logged on (optional, requires editing of the Registry)
- Auto log on of a nominated user when Windows NT starts (optional, requires editing of the Registry)

### How?

Step	Description
1	Log on as an NT Administrator, for example, engr.
2	<p>Open Notepad and create the following batch file:</p> <pre>rem***** rem  change to station directory rem***** cd \honeywell\client\station rem***** rem  the following line need only be rem  included if you are on the PSc Server rem  PC and also using automatic NT logon. rem  It delays Station startup to let the rem  PSc Server start completely first. rem***** sleep 70 rem***** rem  start station with "full screen lock" rem  and all "Station" menu options rem  inactive. rem  stnsetup.stn is optional, delete if rem  not required. rem***** start station.exe [stnsetup.stn] -ssfxc</pre> <p>Save the file as \\winnt\system32\repl\import\scripts\start_station.bat</p>

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## Configuring a Secure Station.....continued

3	<p>Click <b>Start→Programs→Administration Tools→User Manager</b> and copy the “oper” account to create “newoper” (use preferred name, password, and password administration options, for example, check ONLY password never expires).</p> <p>Click <b>Profile</b> and in the Logon Script Name field enter <b>start_station.bat</b></p> <p>Click <b>OK→OK</b></p> <p>Select <b>Policies→User Rights</b></p> <p>Select the Right Shutdown System</p> <p>Remove all users except Administrators</p> <p>Click <b>OK</b> and close User Manager</p>
4	<p>From Explorer right-click on the file winnt\system32\taskmgr.exe choose <b>Properties→Security→Permissions→Add→Show Users</b></p> <p>scroll down to find, and select, "newoper"</p> <p>click <b>Add</b> and set Type of Access to No access</p> <p>click <b>OK→OK→OK</b></p>
5	<p>Repeat Step 4 for the file \winnt\explorer.exe</p>
6	<p>Edit the Station menubar to remove the two menu items <b>Help→Knowledge Builder</b> and <b>Help→Knowledge Builder Search</b></p> <p>Copy the files menu.txt and menu.ini to all other Stations and add them to the system backups for future use.</p>
7	<p>Use Display Builder to edit the System Menu (sys011.dsp) to remove the pushbutton that starts Knowledge Builder.</p> <p>Save this page file to the PSc Server, copy it to all other Stations and add it to the system backups for future use.</p>

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## Configuring a Secure Station.....continued

<b>8</b>	<p>This step is optional and is only required to inhibit Windows NT Shutdown when no user is logged on.</p> <p>Start Regedit</p> <p>Locate the key</p> <p>HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon\ShutdownWithoutLogon</p> <p>Set its value to be "0"</p> <p>Exit Regedit if Step 9 not required, restart the PC and log on as "newoper" to run a secure Station. The only way out is to log off, then log on as "engr" to perform any administration tasks required and Shutdown NT when required.</p>
<b>9</b>	<p>This step is optional and is only required if automatic Windows NT logon is required.</p> <p>Continue from step 8...</p> <p>Set the DefaultUserName to <b>newoper</b></p> <p>If it does not exist add the new key DefaultPassword by selecting</p> <p><b>Edit→New→String value</b></p> <p>Set its value to the password for "newoper"</p> <p>If it does not exist add the new key AutoAdminLogon by selecting</p> <p><b>Edit→New→String value</b></p> <p>Set its value to "1"</p> <p>Exit Regedit</p> <p>Restart the PC and sit back and watch as "newoper" logs on automatically and Station starts in "full screen lock".</p> <p>The only way out is to log off and then hold down the &lt;Shift&gt; key to prevent AutoLogon, then log on as "engr" to perform any administration tasks required and Shutdown NT when required.</p>

# Backups and Recoveries

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## Emergency Repair Disk

An emergency repair disk increases your chances of recovering a Windows NT system in the event of failure.

Refer to your Windows NT manuals for information on running the program **rdisk.exe**.

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## What to backup

If space on your backup medium is not at a premium then the simplest and most foolproof method is to backup the c:\honeywell folder and all its contents.

However, if you wish to reduce the time and space required for a backup then the following list of files and folders will act as a check list.

For the Hybrid Controller only:

- c:\honeywell\tps50\system\er\erdb\_\*.mdb
- c:\honeywell\tps50\system\er\cpm\*.snapshot

For the Server:

- c:\honeywell\server\data\\*
  - c:\honeywell\server\user\\*
  - c:\honeywell\server\report\\*
  - c:\honeywell\server\archive\\*
  - c:\honeywell\server\evtarch\archive\\*
  - c:\honeywell\client\abstract\\*
  - c:\honeywell\client\system\r300\menu.txt and menu.ini  
(if the Station menubar has been customised)
  - c:\honeywell\client\system\r300\sysnnn.dsp  
(if system page *nnn* has been customised)
  - c:\honeywell\client\qckbld\\*.qdb
  - c:\winnt\system32\drivers\etc\hosts
- 

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## Backups and Recoveries.....continued

### Points Database

Server stores its points database in a file named “points” which is located in the c:\honeywell\server\data directory.  
Since the contents of the file “points” could be changed at any time a static copy must be made to protect against any possible corruption whilst the \data directory is being copied and/or backed up.  
To do this open a Command Prompt and enter the command:

```
shheap 1 backup
```

This will produce a file named points.bak which is also located in the c:\honeywell\server\data directory.

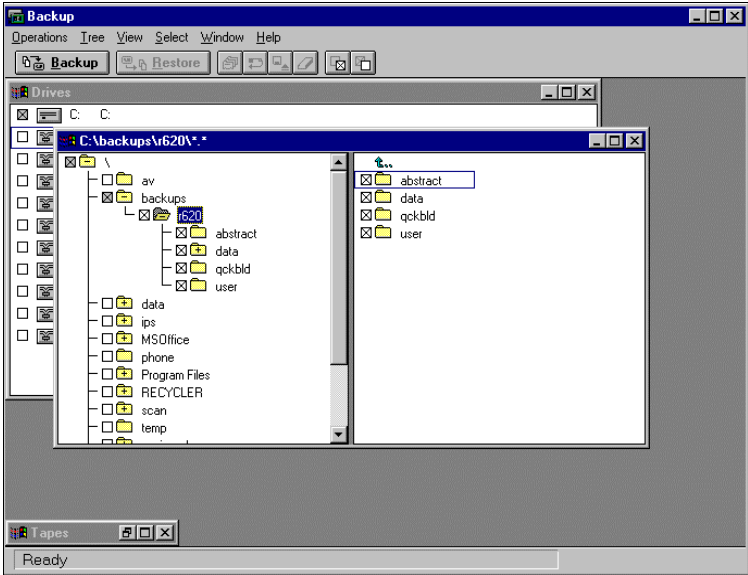
### Creating Backups

There are a number of ways to backup your PlantScape Server system:

- Backing up selected files to a tape drive
- Copying selected files to an external disk drive

### Backing Up to a Tape Drive

A backup utility **ntbackup.exe** is included in Windows NT.  
However, it is not possible to use **ntbackup.exe** to backup files that are open, but it is possible to copy files that are open.  
Therefore, to backup the server realtime database, the following procedure must be used:

1	Make a copy of the contents of c:\honeywell\server\data to a backup directory; for example, c:\backups.
2	<p>Choose: <b>Start→Programs→Administrative Tools→Backup</b> This starts the Windows NT backup utility, <b>ntbackup.exe</b></p> 

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## Backups and Recoveries.....continued

### Backing Up to a Tape Drive

.....continued

<b>3</b>	Double click on the C: drive icon and on the subsequent directory names that you wish to expand.
<b>4</b>	Check the checkboxes next to the directory names that you wish to backup.
<b>5</b>	Click on <b>Backup</b>

---

### Backing up to a Hard Disk Drive

It is a simple process to use the Microsoft Network and Explorer facilities to copy the c:\honeywell\server\data directory to either a removable hard disk drive connected to the PlantScape Server or a hard disk drive on a network connected computer.

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### Recovering the Server Database

To recover the PlantScape Server realtime database follow this procedure:

<b>1</b>	Stop the PlantScape Server Database service to unload the existing PlantScape Server database from memory.
<b>2</b>	Using <b>ntbackup.exe</b> , or Explorer, depending on how the backup was created, replace all the files in the directory c:\honeywell\server\data from the backups directory.
<b>3</b>	Start the PlantScape Server System service.

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### Recovering the Points Database

To recover the PlantScape Server points database follow this procedure:

<b>1</b>	Stop the PlantScape Server Database service to unload the existing PlantScape Server database from memory.
<b>2</b>	Rename the file named "points" to "points.old"
<b>3</b>	Rename the file "points.bak" to "points"
<b>4</b>	Start the PlantScape Server System service.

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## Trouble Shooting

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**What software and/or options is/are installed?**

From Station choose:

**System Menu→System Configuration→System Licence Details...**

Or:

**Start→Programs→PlantScape Server→Setup.**

Click on **Next** then choose **List Installed PlantScape Server software** or **View software licence details.**

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**Monitor system load**

Choose:

**Start→Programs→Administrative Tools→Performance Monitor**

Choose **Edit→Add to Chart**

Select:

Object: **Processor**

Counter: **% Procesor Time**

Click **Add** then **Done.**

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**Task Manager**

The Task Manager displays information about running tasks.

To start the Task Manager, Right Click on an empty portion of the Taskbar and choose **Task Manager**, or press <Ctrl>+<Alt>+<Del> and choose **Task Manager**

Click on the **Processes** tab to view data about the running processes.

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**PS**

From a Command Prompt enter the command:

**ps**

The data displayed could be required by Honeywell Support staff when investigating possible problems with your Server.

---

**Monitor scanning load**

View Station page 10.

For details of each field refer to

*Knowledge Builder*:Guides→Server and Client Configuration→Advanced Point Configuration→Checking the scanning performance of your system.

Run **lisscn** to view all the scan packets.

Refer to *Knowledge Builder*:Guides→Server and Client Configuration→Appendices.

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## Trouble Shooting.....continued

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### PlantScape Server Log file

The server keeps a log of error messages in a text file named:

**c:\honeywell\server\data\loga**

which backs up to **logb** when it is full.

An updating window of the most recent entries can be viewed by choosing:

**Start→Programs→PlantScape Server Diagnostic Tools→**

**PlantScape Server Log**

Viewing the Server Log should be one of the first actions when attempting to identify the cause of a Server problem.

#### Attention

Not all entries in the log file indicate that there is a problem with the Server, check with your local Honeywell support.

### Communications Trace

The utility **trace** records the communications activity between the Server and a Station or a Channel.

To start a trace open a Command Prompt and enter the command:

**trace nn**

where: *nn* = 20 + Station Number, or

*nn* = 59 + (2 x Channel Number)

To stop the trace enter the command:

**trace 0**

To view the contents of the trace register enter the command:

**trace > trace.dmp**

and open the file c:\users\default\trace.dmp with a text editor.

### Station Trace

A Station link can be traced from the Station end by:

1. Stopping the Station application
2. Start Station using the command:  
**station.exe setupfile.stn -t trace.txt**
3. Perform the action causing problems
4. Stop Station and open the file c:\honeywell\client\station\trace.txt to review the results.

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## Trouble Shooting.....continued

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### Controller Interface Testing

Choose:

**Start→Programs→PlantScape Server Diagnostic Tools**

to view all the non-Hybrid controller test programs.

Details of each one can be found in

*Knowledge Builder: Guides→Server and Client Configuration→Appendices.*

---

### Points in a Controller

To view all the points in the Server database that have been configured in a specific non-Hybrid controller, from Station

choose: **System Menu→System Configuration→Controllers,**

or: **Configure→Hardware→Controllers**

and click **View Points** for the required controller.

The following page will be displayed listing all the parameters addressed in the controller:

Controller Point List	Controller	5	DBase Cont
LT301	PV		F:350 R:1 W:19 REAL
LT302	PV		F:350 R:1 W:21 REAL
LT303	PV		F:350 R:1 W:23 REAL
LT304	PV		F:350 R:1 W:25 REAL
LT305	PV		F:350 R:1 W:27 REAL
LT306	PV		F:350 R:1 W:29 REAL
LT307	PV		F:350 R:1 W:31 REAL
LT308	PV		F:350 R:1 W:33 REAL
LT309	PV		F:350 R:1 W:35 REAL
LT310	PV		F:350 R:1 W:37 REAL

#### Attention

This page will NOT display “dummy” or Server Redundancy points that have been associated with the selected controller, only those with an actual hardware address in the controller.

Further parameters can be viewed by pressing <Page Up> or <Page Down>.

Double Click on a Point ID to display that point’s Detail page.

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