



PS/nVision in the PeopleSoft Internet Architecture

Contains:

- √ Roadmap of PS/nVision Web Capability
- √ PSn/Vision Environments and Check-lists
- √ Performance and Scalability
- √ Trouble Shooting Tips

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PS/nVision and the PeopleSoft Internet Architecture



7/26/2002

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7/26/2002

techniques is a customer responsibility and depends upon the customer's ability to evaluate and integrate them into the customer's operational environment.

Table of Contents

TABLE OF CONTENTS	4
CHAPTER 1 - INTRODUCTION	6
Structure of this Red Paper	6
Related Materials	6
CHAPTER 2 - MOVING PS/NVISION TO THE WEB	7
Moving PS/nVision Functionality to the Web Overview	7
Running PS/nVision Report via the web.....	7
Drilldown from a Excel Report on the web using an Optional Add-In	7
Create/Modify a PS/nVision Report via the PeopleTools Windows Client	7
Future Enhancements	8
Moving PS/nVision to the Web Timeline	8
When do you need the PeopleTools Client Install for PS/nVision?	9
CHAPTER 3 – PS/NVISION WEB ENVIRONMENTS.....	10
Environments Overview	10
Report Server Environment	10
Basic Requirement.....	11
Excel Version	11
Process Scheduler Configuration.....	11
Tuxedo Service.....	12
MSI and PS/nVision	14
Report Distribution Node	14
PORTAL_SETUP.DMS Script.....	15
Workstation vs. Server.....	15
Windows Terminal Services	16
Browser Workstation Environment	16
Basic Requirement.....	16
Excel Version	16
Excel Add-in	16
Windows Client WorkStation Environment	17
Basic Requirement.....	17
Excel Version	17
ODBC Setup and Workstation Installation	17
PS/nVision Directories on Windows Client.....	18
Clean Up After a Crash.....	18
Using Citrix.....	19
PS/nVision Environment Checklist	19
Report Server.....	19
Browser Client.....	20
Windows Client	20

CHAPTER 4 – PERFORMANCE AND SCALABILITY21

Performance Tuning 21

 Database Indexing.....21

 PS/Query Tuning21

 PS/nVision Performance and Trees21

 Summary Ledger22

CHAPTER 5 – TROUBLESHOOTING TIPS22

Common Report Server Problems 22

Common Browser Problems 24

Common Windows Client Problems 26

APPENDIX A – SPECIAL NOTICES28

APPENDIX B – VALIDATION AND FEEDBACK.....29

Customer Validation 29

Field Validation 29

APPENDIX C – REVISION HISTORY.....30

 Authors30

 Reviewers30

 Revision History30

Chapter 1 - Introduction

This Red Paper is a practical guide for installers, system administrators, programmers, and technical users who implement, maintain, or develop applications for your PeopleSoft system. In this Red Paper, we focus on common issues you may come across when implementing PeopleSoft PS/nVision on the web. PS/nVision is an end user reporting tool that in prior releases was a Windows based application. With PeopleSoft 8 we have delivered the ability to run and view PS/nVision reports via the web, while maintaining the Windows based designer. This Red Paper provides you basic background on PS/nVision related processes and offers you useful guidance in setting up a robust PS/nVision environment on the web that is stable and scalable with superior performance.

Much of the information contained in this document originated within the PeopleSoft Global Support Center and is therefore based on "real-life" issues. Although every conceivable subject matter that one could encounter with PeopleSoft Internet Architecture, Process Scheduler Server, or Tuxedo service is not addressed in this document, the topics that appear in this document are the most common or troublesome ones in the field.

STRUCTURE OF THIS RED PAPER

Chapter 1 is a brief introduction to this Red Paper. Chapter 2 discusses the major features and functions of PS/nVision as delivered in each version of PeopleSoft 8. Chapter 3 describes the basic processes involved when running PS/nVision on the web. Recommendations and tips are provided based on support details so that you can make informed decisions. Chapter 4 leads you to techniques that can enhance the performance and scalability of your system. Chapter 5 offers trouble-shooting tips on common PS/nVision issues.

Keep in mind that PeopleSoft updates this document as needed so that it reflects the most current feedback we receive from the field. Therefore, the structure, headings, content, and length of this document are likely to vary with each posted version. To see if the document has been updated since you last downloaded it, compare the date of your version to the date of the version posted on Customer Connection.

RELATED MATERIALS

This paper is not a general introduction to the PS/nVision functionality and we assume that our readers are familiar with the PS/nVision functionality that was available in prior releases. To take full advantage of the information covered in this document, we recommend that you have a basic understanding of PS/nVision, PeopleSoft Internet architecture, relational database concepts and SQL, as well as the basics of using PeopleSoft applications.

This document is not intended to replace the documentation delivered with the PeopleTools 8, 8.14 or 8.4 PeopleBooks. We recommend that before you read this document, you read the PeopleSoft Internet Architecture related information in the PeopleTools PeopleBooks to ensure that you have a well-rounded understanding of our PeopleSoft Internet Architecture technology. **Note:** Much of the information in this document eventually gets incorporated into subsequent versions of the PeopleBooks.

Many of the fundamental concepts related to PS/nVision are discussed in the PeopleSoft Reporting Technologies PeopleBook.

Chapter 2 - Moving PS/nVision to the Web

MOVING PS/nVISION FUNCTIONALITY TO THE WEB OVERVIEW

Running PS/nVision Report via the web

With PeopleSoft 8 users with Internet access can run, view, drilldown and distribute PS/nVision reports through a browser, without a PeopleSoft installation on client machines. Users can also send reports as email attachments rather than requiring recipients to navigate to a location on a file server.

PS/nVision on the web includes the following:

- Internet versions of report requests, report books, and scope definitions.
- Output in both Excel (XLS) and HTML formats.
- Drilldown for report outputs in HTML (8.10 and higher) or XLS format (8.14 and higher)
- Email options to send PS/nVision reports to individual users or users in specified roles.
- Integration with Process Scheduler and Report Manager to send bursted report instances to designated users or users in specified roles. In 8.4 a new Report Explorer provides a hierarchical folder view of the reports for users, in addition to the tabular listing provided by the Report Manager. In the Report Explorer you will find your bursted PS/nVision reports in a folder organization mimicking the directory structure defined by the directory and file templates in your report request.
- Support for concurrently running multiple PS/nVision sessions from PeopleSoft Process Scheduler.

Drilldown from a Excel Report on the web using an Optional Add-In

In addition to drilldown from an HTML output in a browser, end users have also got the capability of drilling directly from a report in Excel XLS format on the web starting from PS/nVision 8.14. This is accomplished by an optional Excel VBA (Visual Basic Application) add-in, *DrillToPIA.xla*, that PeopleSoft has made available. Note that this add-in is necessary only when your end users want to drilldown from a report in Excel while viewing it on a browser client. They do not need the add-in if they merely view report results in Excel XLS format.

This add-in does not require any other software to be installed on the browser client in order to connect to the server. When the user requests a drill to occur, the add-in composes a special URL to point to a PeopleSoft drilldown page on the web server. As this URL is the means by which this browser client connects to the web server, no connectivity software or other PeopleTools objects are required on the browser client. The report file itself contains the information the add-in needs to determine which web server to connect to.

The add-in requires only a one-time load in the end user's environment. For more information, please see *Chapter 3 – PS/nVision Web Environments*, "Browser Workstation Environment," Excel Add-in.

Create/Modify a PS/nVision Report via the PeopleTools Windows Client

In PeopleSoft 8 the ability to create and modify a PS/nVision layout still requires a client workstation installation of

7/26/2002

PeopleTools. As in earlier releases, layout design features are hosted in Excel using special PS/nVision menus. We have made major enhancements to PS/nVision user interface in release 8. Field criteria display and access have been simplified and nPlosion options have been enhanced.

In addition to the client UI change, PS/nVision has a much different architecture than previous releases. Standard OLE automation is now used in place of DDE when accessing Excel. PS/nVision has also adopted a much more efficient COM structure among its components. These enhancements have better facilitated the communications between PS/nVision and Excel and we have used the same improved architecture for PS/nVision on the Report Server. Because of these changes, you may observe some new behavior under the new PS/nVision architecture. We have provided corresponding instructions in this Red Paper for you to set up your system properly. Some of the instructions for Windows Client are also applicable to PS/nVision on the Report Server. For more information, please see *Chapter 3 – PS/nVision Web Environments*, “Windows Client WorkStation Environment,” ODBC Setup.

Future Enhancements

Future releases of PeopleSoft will considerably expand the web features for PS/nVision. Enhancing meta data for report design, providing layout design capabilities in a browser and improving report distribution are in the planning stages for a future PeopleTools release.

MOVING PS/NVISION TO THE WEB TIMELINE

PeopleTools Version	PS/nVision Web Functionality
8.10	Provided the ability to run PS/nVision reports from the web
8.12	With the ability to run Process Scheduler application service under Tuxedo, PS/nVision report engine can now be run as a background process on the Report Server.
8.13	Simplified web-based copy of a report request from one business unit to another. Users can now clone a report request on the web using a unique report ID. Users can also delete a scope in the Scope Definition page on the web. In layout designer the nPlosion option is defaulted to "none", making it easier to have the data for the specified field returned as a single row or column. Users can override the default nPlosion setting.
8.14	Enhanced web Drilldown capability for Excel output. Users can now perform browser-based drilldown on Excel (.xls) using an optional Excel add-in. A one-time setup is required to use the Drilldown add-in. Additionally, browser users can select a Report Server for drilldown and are no longer confined to use the same server that generated the parent instance. PS/nVision variables can now be used in Process Scheduler Request Page to specify output destination when the output type is <i>File</i> .
8.15	XLS files are now saved using the current version of Excel on the report server. Prior to 8.15, Excel output format was Excel 95, which meant features of Excel 97 and 2000 could be lost. Users are no longer restricted to running a single report instance on a report server at a time and nPlosion is enabled for more than 8 levels.

7/26/2002

PeopleTools Version	PS/nVision Web Functionality
8.16	PS/nVision drilldown report names are made unique. Multiple spaces in report names are now supported. Tree caching related issues addressed in both 2 tier and on the web. PS/nVision can now execute layouts producing more than 1000 reports using scope.
8.40	<p>New Report Explorer provides hierarchical folder organization. Folders can now be used to organize PS/nVision report results into meaningful groups. Sub-folders are created dynamically per PS/nVision templates.</p> <p>Execution of the portal_setup.dms is no longer required, which has simplified the configuration of drilling on the web.</p> <p>Tree caching issue addressed in 8.16 is now also addressed in 3 tier.</p> <p>Business unit keyed trees can be used in Scope definition. PS/nVision on the web supports row level security rules chosen for PeopleSoft Financials. In addition, 8.4 also contains changes to support unused field attribute.</p> <p>Microsoft Office XP is certified with PS/nVision in 8.4. However, users have to use PS/nVision navigation buttons in layout design dialogue box.</p> <p>Reverse nVision is no longer supported due discontinued support of message agent in 8.4.</p>
Future	Provide layout design capabilities in a browser, enhance meta data for report design and improve report distribution in a future PeopleTools release.

WHEN DO YOU NEED THE PEOPLETOLS CLIENT INSTALL FOR PS/nVISION?

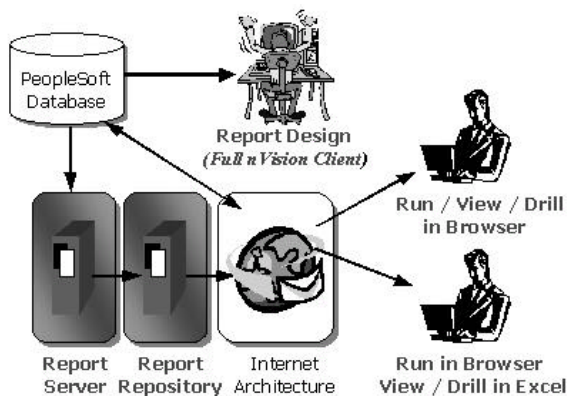
In PeopleSoft 8 the ability to design a new PS/nVision layout or modify an existing PS/nVision layout still requires a client workstation installation of PeopleTools.

User Profile	PS/nVision Functions Performed	PS/nVision Access Required
End User who runs and/or reads PS/nVision reports	Create Scopes, Create & run Report Requests, Create & Run Report Books, View Reports, Drilldown *.	Browser access for release 8.10 or higher * Drilldown from Excel report in browser client is available 8.14 and higher with an optional add-in. No Windows Client is necessary.
Analyst who designs PS/nVision reports	Create & modify Layouts	Windows Client access for release 8.10 or higher

Chapter 3 – PS/nVision Web Environments

ENVIRONMENTS OVERVIEW

The following diagram shows the integrated environment in which PS/nVision Layouts are created under PS/nVision Windows Client and reports are run, viewed and drilled via web browsers by using PeopleSoft Internet Architecture (PIA), Report Server and Report Repository.



PS/nVision Windows Client is used only to generate Layouts under this infrastructure. Once the Layouts are generated, they are uploaded to a configurable layout directory accessible by the Report Server. Users access database and the Report Server via browsers through PIA. Scopes and Report Requests can be created directly in the web and reports can be run through the web as well. When a Report Request is kicked off, Process Scheduler starts an instance of PS/nVision on the Report Server, which in turn initiates an instance of Excel. PS/nVision analyzes the Layout, retrieves data from database and saves the report to a specified format under a configurable instance directory. After the report is generated, Distribution Agent moves the report from the instance directory to the Report Repository. Users can view the report in browsers via a link in Report Manager.

When drilldown is performed through the web, the drilldown process is started as a special report request with related drilling cell (or parent) information passed. PS/nVision is again started by Process Scheduler on the Report Server. Distribution Agent copies the parent report back to the instance directory. PS/nVision retrieves additional criteria from the parent report and applies them onto user selected Drilldown Layout. After the drilldown report is generated, Distribution Agent copies it to the Report Repository like it does for a regular report. Users are then able to access the result through Report Manager.

There are substantial advantages of deploying PS/nVision under the Internet Architecture such as low maintenance cost and easy report distribution. It is important to note, however, that customers are not required to use the web infrastructure for PS/nVision. If you wish to run reports the same way they were run in release 7, you may still do that under release 8.

REPORT SERVER ENVIRONMENT

7/26/2002

Basic Requirement

The Report Server is the place where PS/nVision reports are run when requested by end-users. Because PS/nVision uses Excel to generate report output, the Report Server must run on Windows NT or 2000. The server must also have the following components:

- Microsoft Excel
- Process Scheduler Server
- PeopleTools client installation (this installs PSNVS.EXE, which is what runs nVision reports)
- Database connectivity software

Under PIA, the Web Server, the Application Server, the Report Repository and the database may be on separate machines and are not limited to Win NT or 2000 as the Report Server is. Therefore, these components may run on any PeopleSoft supported operating system platform. Please refer to PeopleTools Installation Guide for your platform for complete information on installing and configuring these components.

Excel Version

We recommend that you use Excel 2000 on your Report Server. PS/nVision supports result formats in both XLS and HTML in release 8. When an HTML format is requested, PS/nVision uses Excel's Save As Web Page function to generate the HTML output. This function is only available from Excel 2000 and up. Therefore, if Excel 97 is used on the Report Server, users will not be able to generate reports in HTML format.

Prior to release 8.15, PS/nVision .XLS output was saved in Excel 95 format. This precluded the use of more advanced Excel formats and features in its later releases. For PS/nVision 8.15 and higher, the XLS output is generated in the format of the Excel version on the Report Server.

For release 8.17 and higher, we have also certified Excel XP on the Report Server. When you use Excel XP on the server, the XLS output will be in the format of Excel XP. As a rule, you need to make sure your end-users have compatible versions of Excel to open the XLS output generated from the Report Server. We have learned from our experience that Excel XP files can usually be opened by Excel 2000 and up. And Excel 2000 files can usually be opened by Excel 97 and up.

Process Scheduler Configuration

It is important to note that when running PS/nVision on the web it is kicked off as a batch process by Process Scheduler on the Report Server. **Under this web configuration, PS/nVision related directories have to be specified in a Process Scheduler configuration file located at %PS_HOME%\APPSERV\PRCS\%DB_NAME%\psprcs.cfg.** Configuring similar directories using PeopleTools Configuration Manager only enables you to run PS/nVision as a Windows Client on the Report Server. PS/nVision will not run properly under PIA unless you configure psprcs.cfg correctly. You can find PS/nVision settings under [nVision] section of the psprcs.cfg file as showing below. The corresponding directories may or may not be the same as the ones you set from PeopleTools Configuration Manager for the Windows Client depending on how and where you want PS/nVision to access the corresponding files when running on the web.

```
[nVision]
;=====
; General settings for nVision
;=====
DrillDownDir=%PS_HOME%\NVISION\LAYOUT\DRILLDN
```

7/26/2002

InstanceDir=%PS_HOME%\NVISION\INSTANCE**LayoutDir**=%PS_HOME%\NVISION\LAYOUT**MacroDir**=%PS_HOME%\EXCEL**StyleDir**=%PS_HOME%\EXCEL\STYLESHEETS**TemplateDir**=%PS_HOME%\EXCEL

DrillDownDir contains all the drilldown layouts available on the web. The InstanceDir is where output files are temporarily saved. It is also used by Distribution Agent when it transfers files between the Report Server and the Report repository. The LayoutDir is the directory where PS/nVision layouts are uploaded for the Report Server to access.

When it is necessary to have two or more locations for the PS/nVision layouts, you can specify the LayoutDir to have multiple directory paths separated by semicolon, such as:

LayoutDir=%PS_HOME%\NVISION\LAYOUT1;%PS_HOME%\NVISION\LAYOUT2

When some of these directories are on the network, it is recommended to use UNC path for these locations instead of mapped network names to avoid potential access issues under Tuxedo, e.g.

InstanceDir=\MACHINE_NAME\NVISION\INSTANCE

In release 8.1x you may see an extra entry under the [nVision] section for **ExcelDir**. You can delete or comment out that line as you like. As PS/nVision reads Windows registry to find the location of Excel in release 8, that entry is not used any more. We have removed it from release 8.4x and will soon remove it from 8.1x as well.

As mentioned earlier, Process Scheduler should be started by the administrator who logs on the Report Server. **This administrator should have granted access to all PS/nVision related directories specified in psprcs.cfg.**

Tuxedo Service

PS/nVision can be run on the Report Server as either a foreground or background process started by Process Scheduler. PeopleSoft recommends running nVision as a background process. However, there are some important tradeoffs you may need to consider.

nVision as a Background Process

Running nVision as a background process is PeopleSoft's recommended configuration. This is most consistent with Process Scheduler running under Tuxedo. Most customers choose to run PS/nVision in background for security reasons. When running in background, PS/nVision processing will not be interrupted by any mouse or keyboard actions. It is more complex, however, to detect or debug problems, such as issues in network access or Tuxedo layer configuration.

PS/nVision will be run as a background process when the *Maintained by Tuxedo* flag is set to "Y" in psprcs.cfg and the selection is either *This account* or *Local System account*. Additionally, be sure the *Allow service to interact with desktop* option on the Log on tab of Windows Tuxedo IPC Helper service is not checked. *Local System account* is often used for trouble shooting purposes in the Report Server local environment. It is not commonly used for production reporting because network access is restricted under this option. You should choose *This account* when you need to access network resources and enter correct network login domain\ID and password as required.

Please Note: **Process Scheduler must be started by the administrator who logs on the Report Server. If Process Scheduler is maintained by Tuxedo, the same administrator's account must be used for Tuxedo IPC Helper logon.** The password you enter for *This account* is not automatically updated when you change your

7/26/2002

password on the network. Therefore, **you should remember to manually update your password under Tuxedo IPC Helper immediately after the network password is changed.**

We recommend running nVision as a background process with no more than 6 concurrent processes allowed in the configuration. During our testing using Windows 2000 Workstation and Server (with about 600 MB - 2 GB RAM and 450 MHz processors) we successfully a continuous queue of report requests with nVision as a background process configured for up to 8 concurrent nVision processes. However, when the number of concurrent processes allowed was 8, we occasionally encountered failed nVision processes. Due to variability in report layouts and environments you may not encounter any issue, even at 8 concurrent processes. This is something we are continue to investigate in our testing environment.

If you require more concurrent processes and/or you encounter nVision failures running as a background process, try running as a foreground process in a test environment to eliminate other possible environment issues with the Tuxedo or network configuration. However, if such possible configuration issues are not identifiable, contact PeopleSoft Global Support. We will want to discuss the load, processing power and configuration and help you determine if some modifications to the environment will solve your particular problem or if running as a foreground process is an appropriate option for you in production.

nVision as a Foreground Process

Running nVision as a foreground process can be a viable option. This can be a useful option in testing or debugging. Due to various considerations unique to each implementation, some customers have successfully implemented this option in their production system.

When running in the foreground, it is easier to monitor the processes and diagnosis subtle issues on the system. In case there is an unexpected error or Excel dialogue, Report Server administrator can directly interact with it. However, PS/nVision can be accidentally interrupted when running in the foreground. For example, clicking mouse on the Excel interface can cause Excel to wait for user input and PS/nVision to stop processing. Most customers choose to run PS/nVision in background for security reasons. When running in background, PS/nVision processing will not be interrupted by any mouse or keyboard actions. However, it is not as easy to detect issues and the additional Tuxedo layer may bring extra complexity and network access issues if it is not setup correctly.

PS/nVision can be run as a foreground process either by default, if Process Scheduler is not run under Tuxedo (pre 8.4), or by taking specific configuration steps if Process Scheduler is run under Tuxedo.

If Process Scheduler is not maintained by Tuxedo, the setting is in the same process scheduler configuration file, *psprcs.cfg*, as discussed in the last topic. When the *Maintained by Tuxedo* flag is set to "N" in the [Tuxedo Settings] section, PS/nVision will be run on the foreground. Administrators with access to the Report Server can then see PS/nVision loading Excel and retrieving data.

To run PS/nVision as a foreground process while maintaining Process Scheduler under Tuxedo, you need to choose *Local System account* and check the *Allow service to interact with desktop* checkbox. This can be a very powerful trouble shooting option because it best simulates PS/nVision behavior when it is run in the background. Again, because of the limited network access, this configuration is not commonly used in normal production environments.

Running nVision as a foreground process can be more fragile. If you chose to run nVision as a foreground process on your server machine, we recommend you take active measures to prevent accidental interruptions that can be caused by mouse or keyboard actions.

7/26/2002

MSI and PS/nVision

With Office 2000, Microsoft uses its Microsoft Windows Installer (MSI) technology to make Office installation and self-repair easier for an end user. MSI introduces the concept of "install on first use", which allows features to be dynamically installed or configured at runtime. In a server-side environment this may slow down performance and increase the likelihood that a dialog box may appear that asks for user to approve the install or provide an appropriate install disk. When the dialog appears, Task Manager on Report Server may show an executable MSIEXEC.EXE perhaps taking a large amount of CPU. In addition, concurrent PS/nVision processes may appear to hang and some of the queued up reports may begin to abort. MSI is designed to increase the resiliency of Office as an end-user product. However, the side effects are undesirable for nVision processes. To support nVision, there are some active steps to take:

Our first recommendation is that you complete a full installation of Excel on the Report Server. If Excel is already installed, uninstall it. Some customers have reported issues when they tried to install Excel on top of existing versions. Those problems are usually fixed after uninstall existing versions and reinstalling a complete version of Excel to be used.

You second step is to stop other active processes on the Report Server, start Excel and select the Help >> Detect and Repair... menu item. This will run MSIEXEC.EXE on the Report Server. This one-time procedure can also be used when something goes wrong. PS/nVision processes should run much faster after the problem is fixed.

The third step is to run a PS/nVision report in Windows Client on the Report Server. Any Excel installation or dialogue that would happen when running PS/nVision on PIA through Process Scheduler should occur when running PS/nVision directly on the Report Server in Windows Client. Again, this is a one-time procedure. Subsequently PS/nVision processes will run under Tuxedo without encountering the MSI installation or dialog box any more. The same goal of completing an MSI initiated installation under interactive supervision can also be accomplished by running PS/nVision under Process Scheduler without Tuxedo or using *Local System account* and check the *Allow Service to interact with Desktop* option.

Because of the nature of MSI, it may become active again after you make changes to your Report Server that affect the Excel environment, for example, by changing settings or install/uninstall software. We recommend that you be pro-active in preventing this from affecting your reporting system by going through step two and three above whenever your Excel environment may have been affected. If you suspect that MSI may be affecting your system, you can always monitor your Report Server for several PS/nVision processes. If you are running PS/nVision in background, you can temporarily turn the *Maintained by Tuxedo* switch to "N" or use *Local System account* and check *Allow Service to interact with Desktop* check box.

Report Distribution Node

Because file transfer processes by Distribution Agent are involved when running PS/nVision on the web, it is important to setup Report Distribution Node properly based on the release version of PeopleTools and the operating system of your Report Repository. There are three protocols available for transferring files between the Report Server and the Report Repository. They are XCOPY, FTP and HTTP.

For PeopleTools release 8.1x, if your Report Repository is on NT, you should use XCopy. If your Report Repository is on UNIX, we recommend that you use FTP. HTTP can only handle file transfer from the Report Server to the Report Repository in 8.1x. Therefore, it is not a suitable protocol if your users plan to do any drilldown on the web. When using UNIX Report Repository in 8.1x and FTP protocol, drilldown may not be performed successfully when the parent report is in HTML format **and** it contains charts or multiple worksheets. When Excel saves a file with charts or multiple tabs HTML format, it saves them as separate HTML files and place them in a folder for an index file to access. Distribution Agent is able to transfer the set of files from Report Server to the Report Repository, which means reports can be generated successfully and viewed on the web even when there are multiple files. However, as Distribution Agent is not able to transfer the set of files from UNIX Report Repository back to the

7/26/2002

Report Server, drilldown fails on this type of reports. Again, this limitation with UNIX Report Repository using FTP protocol only applies to drilldown on parent reports in HTML format and only when the parent reports contain charts or multiple worksheets. For more information, please see 8.14 *PeopleTools PeopleBook: PeopleSoft Process Scheduler*, "Process Scheduler Development," Setting up the Report Node.

For PeopleTools release 8.4 and above, we recommend that you use HTTP/HTTPS for both NT and UNIX Report Repositories. Enhancements have been implemented in 8.40 to handle bi-directional multiple file transfer between PS/nVision Report Server and Report Repository under HTTP. PS/nVision files can now be transferred properly no matter which file output format you choose regardless of the operating system of the Report Repository. Using HTTPS can further ensure the security between your Report Repository and web server during file transfer. When HTTPS is to be used, digital certificates need to be installed on both the Report Server and the Web Server in addition to providing correct settings on the Report Node Definition. For more information, please see 8.40 *PeopleTools PeopleBook: PeopleSoft Process Scheduler*, "Setting Server Definitions," Defining Report Nodes.

PORTAL_SETUP.DMS Script

This is an area that has led to some confusion. It can be your major source of error during drilldown in 8.1x if you do not run the script or have incorrect values in it. PS/nVision uses the information provided by portal_setup.dms slightly differently depending on the report output types. When a report is generated in HTML format, PS/nVision constructs a unique URL for each drillable cell. When a user initiates a drilldown by clicking on a cell, the URL is used to bring up the drilldown PIA page for users to fill in additional information. The first part of this link is the path to your PIA installation, which includes your web server name. When a report is generated in XLS format, the path to your PIA installation is assigned to an Excel defined name, NvsDrillHyperLink. When a drilldown is initiated using nVisionDrill menu, that information is used to construct a URL to bring up the drilldown PIA page. In both of these processes, PS/nVision needs the exact path to your PIA installation including the name of your web server when the parent report is generated. As each customer environment is different, you need to provide the path to your PIA to PS/nVision by (1) putting it into the portal_setup.dms script and (2) running the script. The way to configure the path is explained at the beginning of the script, which you can open using any text editor. For more information related to portal_setup.dms, please refer to *PeopleTools Installation Guide: Setting Up the PeopleSoft Internet Architecture*, "Installing the PeopleSoft Internet Architecture," To set up the Portal.

After the proper setting is put into the system, PS/nVision picks up the correct path and incorporates it into the URL links for each drillable cell when reports are generated. When a drilldown is requested, PS/nVision uses the URL to invoke the correct drilldown page. As the settings is picked up when the parent report is generated, you will be able to drilldown properly only on the reports created after portal_setup.dms is properly run in 8.1x. If you have multiple PIA installations connected to a single database, depending on what PIA path or web server you have set in the portal_setup.dms script, you may be prompted to log on again when you initiate a drilldown. This is because the PIA connection under which you started your drilldown is different from the one with which you are trying to connect. The latter is determined by the PIA path set in portal_setup.dms when the parent report was generated. As the path is written to the database, you can set only one valid value on a single database.

There are two methods to determine whether a drilldown problem is related to incorrect web server information. If you are drilling from HTML format, check the beginning portion of your URL to see whether it matches your web server name and path. If you are drilling from XLS output, select Excel Insert >> Name... >> Define... and click the NvsDrillHyperLink entry to see whether the defined name contains correct information of your PIA path.

It's important to note that you are NOT required to use or license PeopleSoft Portal for this purpose. All required fields and records are included on all PeopleSoft databases.

In release 8.40, enhancements have been made to retrieve the correct setting automatically based on the PIA connection under which the parent report is generated. This eliminates the need for you to run the script.

Workstation vs. Server

As we have put substantial efforts in our development and testing to make sure PS/nVision work smoothly on all

7/26/2002

PeopleSoft certified platforms, you should be able to use either Windows NT (2000) Workstation or Server as your operating system for your Report Server.

During our testing cycles, we have not seen any noticeable differences in either performance or stability between NT (or 2000) workstation and server. Our customers report success using either for the Report Server.

Windows Terminal Services

Because we recommend a single Process Scheduler environment to be configured for no more than 6 concurrent nVision processes, large volume concurrent batch processing may require setting up multiple environments with a Process Scheduler for each. The challenge is not confusing Excel with the multiple environments. Customers with large volume nVision report batch needs have successfully used Windows Terminal Server to manage up to 25 concurrent sessions, with a multiprocessor machine with ample memory.

BROWSER WORKSTATION ENVIRONMENT

Basic Requirement

To create Scopes, create and run Report Requests, create and run Report Books, view reports in HTML format and drilldown from an HTML report on the web, only a PeopleSoft certified browser is required in PS/nVision 8.10 and higher.

Excel Version

Excel is required on the browser client only when you want to view PS/nVision reports in Excel XLS file format.

We recommend that you use the same version of Excel on the browser client as the one on the Report Server. Doing so can ensure the maximum compatibility. Prior to release 8.15, reports in XLS type were saved in Excel 95 format no matter which version of Excel was on the Report Server. In order to preserve the advanced Excel features, PS/nVision now saves the XLS outputs in the same version of Excel as the one on the Report Server.

As a rule, you need to make sure your end-users have compatible versions of Excel to open the XLS reports generated from the Report Server. We have learned from our experience that Excel 2000 files can usually be opened by Excel 97 and up. And Excel XP files can usually be opened by Excel 2000 and up.

Excel Add-in

DrillToPIA.xla is an optional Excel VBA (Visual Basic for Application) add-in that we have provided for your end users' convenience in PS/nVision 8.14 and up. Your end users need to install this add-in only when they want to drilldown directly from reports in Excel on a browser client. They do not need this add-in if they only view reports in Excel XLS format through the web.

7/26/2002

DrillToPIA.xla is delivered with PeopleTools CD. You can find it under %PS_HOME%\EXCEL or your related language sub-directories. As your end users may not have access to this file, you need to make arrangements to distribute it to them and provide instructions for them to upload it.

The add-in requires only a one-time load in the end user's environment. They need to first place a copy of *DrillToPIA.xla* into their corresponding Excel add-in directory. (If Microsoft Office is installed in %MS_OFFICE%, then Excel add-ins directory is %MS_OFFICE%\Office\Library.) They can then use Excel menu item Tools >> Add-ins and select DrillToPIA to load it into the Excel environment.

Once loaded, the 'nVisionDrill' menu will appear on the Excel menu bar. This is the menu an end user will use to trigger the drill after a data cell for drilldown is selected. Drilldown result reports inherit the output format of their parents: if a parent instance is in Excel format, the drilldown result will also be in Excel format.

There are clear advantages in generating, viewing and drilling PS/nVision reports consistently in XLS format in terms of your system performance and storage. When an HTML output format is requested, PS/nVision essentially has to generate the result first in XLS format, then use the advance features in Excel 2000 and up to convert the XLS output into an HTML format. The conversion can take noticeably more time for large reports. In addition, HTML outputs are usually several times larger than the corresponding XLS outputs. We have noticed that Excel output is the preferred output formats for most customers, especially after we made it possible to drilldown directly from Excel report on the web using the optional add-in in 8.14.

WINDOWS CLIENT WORKSTATION ENVIRONMENT

Basic Requirement

To create or modify PS/nVision 8 report layouts, the PeopleTools client installation and Excel are still needed on your analysts' workstation. This environment is similar to that required for PS/nVision 7 and 7.5 installations. Administrators can deploy the web-based setup for running and viewing reports via a browser, but still need to deploy the client workstation installation for report design.

Excel Version

We recommend that you use the same version of Excel on the Windows Client as the one on the Report Server if you are responsible for creating/modifying layouts to be uploaded to the Report Server. Doing so can ensure the maximum compatibility. If this is impossible, you should at least use a version of Excel that the version of Excel on the Report Server is able to understand.

If you create and run PS/nVision in your own Windows Client environment, any version of Excel certified by PeopleSoft will work. From release 8.17 and up, Excel XP is also certified with PS/nVision Windows Client. One difference with layout design using Excel XP is you can not directly select a cell or row/column with the mouse while the Layout Definition dialogue box is active. You will need to navigate using the navigation arrows provided by PS/nVision or close the dialogue, make the selection and relaunch the Layout Definition dialogue box.

ODBC Setup and Workstation Installation

You may encounter several new issues when implementing PS/nVision 8 because of the new UI and architecture change. In almost all circumstances, you can fix the problems by simply running ODBC setup or workstation installation on the Client Setup tab of PeopleTools Configuration Manager.

The new front end of PS/nVision 8 (*nvsuser.xls*) uses ODBC Data Source for PeopleSoft PeopleTools. When the required DSN is missing, Microsoft Visual Basic generates a run-time error indicating [Microsoft][ODBC Driver Manager] Data source name not found and no default driver specified. We have trapped this error in PS/nVision 8.4

7/26/2002

and provided meaningful instructions for users to quit nVision, use Configuration Manager Client Setup, check Install PeopleSoft ODBC Driver, click Apply and reload nVision, which is the way to fix the problem. As this is an easy step and you have to load Configuration Manager to setup PS/nVision for Windows Client anyway, **we recommend that you do this during your configuration process to prevent possible errors later.** This is a one-time procedure and it is only necessary when you use PeopleSoft delivered PS/nVision 8 Windows Client front-end, nvsuser.xls.

There is another issue that may actually affect both Windows Client and PS/nVision on the Report Server. When COM is used in PS/nVision, related interfaces need to be registered on Windows Registry. This is usually done during PeopleTools installation. However, when there is a registration failure or an incompatible version of a component is introduced to the system (e.g. during some software installation), the information on the registry needs to be repaired. This can be accomplished by selecting the Install Workstation option on the Client Setup tab of Configuration Manager.

PS/nVision Directories on Windows Client

To setup Windows Client in release 8, you still need edit PS/nVision related directories on the Profile tab of Configuration Manager like you did in previous releases. These directories is very similar to the those you have to configure under the [nVision] section of Process Scheduler configuration file, psprcs.cfg, discussed earlier in *Chapter 3 – PS/nVision Web Environments*, “Report Server Environment,” Process Scheduler Configuration. However, they server for completely different purposes. **The settings in psprcs.cfg are only used by Report Server when PS/nVision is run under Process Scheduler via the web, while those in Configuration Manager are used by each individual Windows Client.** Therefore, if you set up Windows Client on your Report Server, you can use completely different directories for your local client than those for PS/nVision on the web. This is a powerful feature that you can use when trouble-shooting Report Server issues because you can use different setup for your Windows Client on the Report Server to isolate potential problems efficiently.

When you configure the directories for PS/nVision using Configuration Manager, you may notice that the Excel location directory does not exist anymore in release 8. We now obtain the necessary information from Windows Registry. Some users are not sure which Excel instance PS/nVision uses when they have multiple versions installed. The answer is the default version Windows chooses on their systems, which usually is the version installed the last. Even though PS/nVision works when you have multiple Excels installed, **we highly recommend that you install only one version of Excel for your system, especially in your Report Server environment.**

Clean Up After a Crash

This clean up procedure is NOT involved during normal PS/nVision installation. We document it here because it is an important technique to get your system quickly back to its normal condition. When you encounter errors and PS/nVision stops processing, sometimes you may see PS/nVision behaves erratically even after you re-launch it. This is likely caused by some run-away PS/nVision or Excel processes in the background even though the user can not see anything on the screen. An easy way to detect these processes is to open Windows Task Manager (by hitting Ctrl+Alt+Del, for example), select the Process tab and look for processes of psnvs.exe or Excel.exe. Sometimes there may be multiple psnvs.exe or Excel.exe processes on the system and they may not appear next to each other under Task Manager. The best way to find them all is to click on the Image Name heading to sort all the processes alphabetically. After you end all psnvs.exe and Excel.exe processes, you system should function normally after you re-load PS/nVision.

You can monitor all PS/nVision and Excel processes using Windows Task Manager on any machine regardless of how the processes were initiated. Therefore, this clean up procedure also works in the Report Server environment when PS/nVision (and in turn, the Excel process) is kicked off by Process Scheduler via the web.

7/26/2002

Using Citrix

PeopleSoft supports the use of Citrix for nVision designer activities.

Because creating or modify PS/nVision 8 report layouts, the PeopleTools client installation and Excel are needed on your analysts' workstations. Many customers have a centralized report development model; many have a decentralized report development model. In the centralized report development model, customers put report design capability in the hands of a small community of users. If this is your model, you may consider simply deploying the install directly to that small number of users' workstations, as described above. In a decentralized report development model, customers put report design capability in the hands of many, perhaps hundreds of users throughout the organization. If your report development model is a decentralized one, you might consider installing the PeopleTools client and Excel on a network server using Citrix.

PS/NVISION ENVIRONMENT CHECKLIST

The following are checklists for the three different types of PS/nVision environments. They are intended to give you a quick view of the major areas you need to ensure in order to set up a robust environment and start running PS/nVision reports smoothly. Please refer to the above sections and PeopleBook for explanation of the checklist items and the procedures to accomplish them.

Report Server

1. Have you set up proper connectivity to your database?
2. Have you installed both PeopleTools and a proper version of Excel?
3. Are you able to run PS/nVision Windows Client on your Report Server and generate reports successfully?
4. Have you taken appropriate steps to prevent the adverse effect of MSI on server?
5. Have you provided appropriate values to all directories under the [nVision] section of psprcs.cfg?
6. Does your network account have full access to all directories mentioned above?
7. Have you checked that all the above directories contain the necessary files?
8. Have you logged on the Report Server and started Process Scheduler under your network account?
9. If Process Scheduler is to be maintained by Tuxedo, have you configured Tuxedo network logon to use the same network account?
10. Have you set up Report Distribution Node and configure your file transfer protocol based on your environment and PeopleTools release?
11. If you are on PeopleTools release 8.1x, have you entered the correct name of your web server into portal_setup.dms based on the instruction at the beginning of the script?
12. Have you run the above script successfully using Data Mover?
13. If you will perform drilldown, have you registered your drilldown layouts with the appropriate Report Server?

7/26/2002

Item #3 is a crucial test because it can check your basic PS/nVision setup under local PeopleTools & Excel installation on the Report Server without involving PIA, Process Scheduler or Distribution Agent. You will get lots of benefits out of it even though it requires that you also configure Windows Client on your Report Server. If you cannot run this test successfully, you should fix your local PS/nVision setup immediately instead of doing any test from the web. Your Report Server will not be able to serve any PS/nVision requests on the web until it can successfully generate reports in Windows Client environment. To further isolate network related issues when troubleshooting under Windows Client, you can set all nVision directories to local using Configuration Manger, which should not affect any of you web settings as described earlier. By running some initial tests under Windows Client, you can also catch and fix issues related to MSI as discussed in *Chapter 3 – PS/nVision Web Environments*.

Browser Client

1. Do you have a PeopleSoft supported browser on the workstation?
2. Do you have a compatible version of Excel if you plan to view reports in XLS format?
3. Did you install the Excel add-in *DrillToPIA.xla* if you plan to drill directly from reports viewed in Excel?

Windows Client

1. Do you have proper connectivity to your database?
2. Did you install both PeopleTools and a proper version of Excel?
3. Did you run ODBC setup from PeopleTools Configuration Manager?
4. Do you have access to all directories listed under Configuration Manager >> Profile >> nVision tab?
5. Do all the above directories contain the necessary files?

Chapter 4 – Performance and Scalability

PERFORMANCE TUNING

There are several things you can do to enhance the performance of your system. The following are the very basics that you should consider for your system and your long-running reports.

Database Indexing

Establishing appropriate indexes on your databases can substantially improve your system performance. As reporting data vary from customers to customers and layouts are different from reports to reports, there is no single rule that is applicable to all environments. You need to analyze your data and reporting needs to design appropriate indexes for your system. It usually takes some trials coupled with individual report tuning to attain optimal performance. We have provided some general guidance in PeopleBooks to help you get started.

See 8.4 *PeopleTools PeopleBook: PS/nVision Performance Tuning*, “Using Indexes.”

PS/Query Tuning

When writing PS/nVision reports using queries, long running queries will directly result in long running reports. In order to isolate performance bottlenecks, you can run the queries separately using the PeopleTools Query Manager. When using PS/nVision, you should also consider the option of writing simpler queries then making use of the functionality of PS/nVision to construct report outputs in the way you want.

In PeopleTools 8.4 we have introduced the Query Monitor tool to help administrators monitor the frequency and duration of queries run on the system. Queries run during the execution of PS/nVision reports are also logged in the Query Monitor.

See 8.4 *PeopleTools PeopleBook: PeopleSoft Query*, “Appendix C: Query Monitor.”

PS/nVision Performance and Trees

Using Trees is a powerful feature in PS/nVision. However, it can also affect your system performance. On some database platforms, tree joins can cause database optimizers to choose wrong access paths, rendering tree selector tables an obstacle to performance rather than an aid. To address these issues, PS/nVision includes techniques for building SQLs that are readily understood by database optimizers. You can control which technique is used for a tree or an individual PS/nVision report. Choosing an appropriate technique can significantly improve your report performance. Our customers have benefited substantially by experimenting with these techniques together with database tuning as showing in the later examples.

See 8.4 *PeopleTools PeopleBook: PS/nVision Performance Tuning*, “Using Trees.”

7/26/2002

Summary Ledger

Pre-aggregating data to appropriate levels has proven to be an excellent way of improving reporting performance whenever it is applicable. PS/nVision provides the capability to drilldown easily to a detailed ledger, so that you can still see your data on a detailed level when you need to. Some of our customers have achieved impressive volume outputs on their reporting system with the aid of summary ledgers, database indexes and tree performance options as showing in the following examples.

See 8.4 *PeopleTools PeopleBook: PS/nVision*, "Using Drilldown," Drilldown and Summary Ledger and "PS/nVision Performance Tuning," Assigning Ledger Tables. Also see 8.14 *PeopleTools PeopleBook: nVision*, "PS/nVision Reporting on the Web," Setting Advance Options for Your Report Request and "PS/nVision Performance Tuning," Ledger Tables.

Chapter 5 – Troubleshooting Tips

COMMON REPORT SERVER PROBLEMS

Excel Exception (SCODE Errors) and 'RPC Server Unavailable'

Possible Reason: SCODE (Status Code) error is a very generic code that Excel returns through COM interface whenever there is a failure. As the reasons for the SCODE error can be varied, they are best handled on a case-by-case basis. When these types of exceptions happen on a Report Server, Excel may display a message box, which holds up all PS/nVision processing. When users are able to interact with the message box (for example, on a Windows Client), they may in turn get an error saying 'RPC Server Unavailable', which is a clear indication that the communication between PS/nVision and Excel is lost.

One preventable source of SCODE errors is special characters in PS/nVision file names. Excel does not support the following characters in its file names: < > ? [] : | or *. PS/nVision has an additional restriction of not allowing the characters of / \ " ' in report names and not allowing % or a space at the beginning of report names. These characters may cause SCODE errors and/or hanging PS/nVision processes.

What you can do: Check whether any restricted characters are used in report names. Because PS/nVision uses dynamically assigned report names on the File Template, you not only have to look into what is specified there, but also check you data and make sure those characters will not be loaded via PS/nVision variables such as %SFN or %SFD. When your users have access to Report Request, you need to inform them not to use the restricted characters in Report Title when they use %RTT% in the File Template.

Other SCODE errors have been known to occur rarely, and as such, are hard to reproduce. We recommend you note down the exact error, the reports being run, the status of the processes, the server environment and other processes that might be running on the same system when you notice any SCODE error. Please call our PeopleSoft Global Support Center with that information so they may help narrow down the exact cause of your SCODE error.

Because SCODE errors may leave Excel and/or psnvs processes hanging on the Report Server, the server may need to be forced to shut down and the dangling processes cleaned up using Windows Task Manager. For more information on the procedure, please see Chapter 3 – PS/nVision Web Environments, "Windows Client WorkStation Environment," Clean Up After a Crash.

7/26/2002

Additional Note: Our development is working to remove some of the restrictions PS/nVision has placed on report naming. We are also implementing better ways to handle the exceptions generated when these special characters are used in report names.

nVision process “hangs” or remains in the processing stage

Possible Reason: There may be several possible reasons:

1. If you just installed Excel 2000 or you just made changes to your Report Server environment, MSI "install on first use" may very likely be the cause because it can potentially put out a dialogue box on the Report Server waiting for user inputs as discussed earlier.
2. Excel exception (SCODE error) may also hang PS/nVision processes as discussed in the previous section.
3. Some improperly designed Excel Macros in report layout may cause a dialogue box on the server. Because the macros are run totally inside of Excel process, PS/nVision does not have control over their processing. An oversight in a Macro can cause an Excel error when the Macro is used to process a different set of data than the test data used to develop the Macro.
4. Bugs in PS/nVision may also cause it to hang in some rare conditions. We are enhancing our testing on high-volume/multi-concurrent processes and working to identify all potential issues that may still exist when running PS/nVision in a server environment.

What you can do: The first step in dealing with hanging PS/nVision processes is to identify the source of error. Lots of useful information can be gathered by monitoring the Report Server. If you are running PS/nVision in the background maintained by Tuxedo, you can temporarily switch to use either *Local System account* with *Allow service to interact with desktop* option, or *Maintained by Tuxedo = "N"* in *psprcs.cfg* file, so that you can see the actions on the Report Server directly. When you need to further isolate variables, you may also run PS/nVision Windows Client with different settings. For more information related to running PS/nVision in the foreground vs. background, please see *Chapter 3 – PS/nVision Web Environments*, “Report Server Environment,” Tuxedo Service.

1. If MSI is identified as the cause, it can be easily fixed by following the procedures listed in *Chapter 3 – PS/nVision Web Environments*, “Report Server Environment”.
2. If an Excel exception is the reason, you should check whether Excel and PS/nVision reserved characters have been used in your report names in any way. If not, you should record all the information and contact PeopleSoft Global Support Center as recommended in the previous section.
3. If an Excel Macro is causing issues during final report processing, you should adopt defensive coding techniques to prevent similar issues from happening. One way to identify such a problem is to temporarily disable all the macros in your layout, if possible, to see whether the report can be run successfully.

PS/nVision processes exiting without completion

Possible Reason: This may also be caused by different reasons:

1. PS/nVision processes may abort or exit without completion if there are many queued up processes and the currently running PS/nVision process is hanging.
2. PS/nVision processes may also abort when there is a report name contention (i.e. a submitted process attempts to use the same report name as a running process). This can happen under the following occasions: (1) running two recurring processes concurrently and their reports share the same name (2) submitting an ad-hoc report that has the same name as that from a running recurring process (3) running two ad-hoc reports that generate reports with the same name. Depending on the precise timing, report name contention can cause one or the other process to abort, which may not be the same every time.

7/26/2002

What you can do: If the first is the cause, you will need to handle the culprit as discussed in the previous section.

To prevent report name contention, you should use different names for PS/nVision reports that need to be submitted concurrently:

- Your administrator should take the first step of making sure all system-scheduled reports have different names.
- With Report Books it is important to look into each report request as report name contention can occur if concurrent Report Books generate reports with the same name even when the Report Book themselves have different names. It is the best if you can separate the time slot for you system-scheduled reports from that for ad-hoc reports.
- With ad-hoc reports, work practices can help ensure the uniqueness of report names. A simple practice might be to pre-pending individuals' network login names to the report name. As PS/nVision uses Report Request name (%RID%) as default report name, you may have to copy some of the Report Requests to different names in order to avoid name conflicts.

Report Book stays in initiated status when maintained by Tuxedo.

Possible Reason: If your Report Book works fine without Tuxedo, the problem may have been caused by using a mapped network drive for your InstanceDir in your Process Scheduler configuration file psprcs.cfg as shown below.

```
InstanceDir=I: \TEST
```

What you can do: Changing the InstanceDir to refer to the UNC path may resolve your problem.

```
InstanceDir=\\ptntfs01\quality\test
```

Additional Note: We are still investigating some issues related to network access when Process Scheduler is maintained by Tuxedo. Using local disk drives for your PS/nVision related directories can ensure your access. If your setup requires access to network drives, we recommend that you use UNC paths instead of mapped drives.

Process Monitor shows the status of success after only the first instance is generated for Report Requests or Report Books producing multiple instances

Possible Reason: It was caused by a coding error, which has been addressed in PeopleTools 8.15 and higher.

Additional Note: Since instances are posted as they are produced it's not meaningful to flip between "Processing" and "Posting" for the duration of the multiple instance processes. Starting with PeopleTools 8.15 PS/nVision no longer sets the "Posting" status in Process Monitor.

COMMON BROWSER PROBLEMS

Signon page invoked with drilldown on a report in XLS format while a report in HTML format works fine without any problem.

Possible Reason: This may be caused by Internet settings on the user's browser, which controls how a browser should make use of stored pages for quick viewing purposes.

7/26/2002

What you can do: Select Tools >> Internet Options in your browser, then click Settings under Temporary Internet files. Check the option to check for newer versions of stored pages on every visit to the page. That should correct the problem.

Page not found error when trying to do a Drilldown.

Possible Reason: A wrong URL is used to point to a drilldown page on a web server. The web server exists, but it does not have the requested drilldown page.

What you can do: The drilldown page is delivered with all PeopleSoft databases. Therefore this problem is usually caused by a reference to the wrong web server. In 8.1x, enter the correct web server name into portal_setup.dms script and run it using Data Mover. The parent report needs to be re-generated after that in order to perform the drilldown successfully. For more information, please refer to *Chapter 3 – PS/nVision Web Environments*, "Report Server Environment," PORTAL_SETUP.DMS Script.

Server not found when drilling from web.

Possible Reason: A wrong PIA path is used to connect to the drilldown page. This can happen when portal_setup.dms script has not been run or the name for the web server was not correct when the script was run.

What you can do: In 8.1x, enter correct web server name into portal_setup.dms script and run it. For more information, please refer to *Chapter 3 – PS/nVision Web Environments*, "Report Server Environment," PORTAL_SETUP.DMS Script.

Unable to find content provider ... for DrillDown hyperlink.

Possible Reason: portal_setup.dms script has not been run correctly. As mentioned earlier, PS/nVision picks up the value for drilldown during all report generation. When PS/nVision cannot find the value, it logs the error while continue processing your report, which is why you normally see this error during normal report processing.

What you can do: In 8.1x, enter correct web server name into portal_setup.dms script and run it. For more information, please refer to *Chapter 3 – PS/nVision Web Environments*, "Report Server Environment," PORTAL_SETUP.DMS Script.

Drilldown menu comes up, but drilldown never runs.

Possible Reason: This is because the web server in the portal_setup.dms connects to a PeopleSoft database different from the one that the drilldown is being run. This occurs most often in environments with both testing and development setups. It can be caused by creating the testing database as a restore of a production database or by copying PeopleTools tables directly between the databases.

What you can do: In 8.1x, enter correct web server name into portal_setup.dms script and run it. For more information, please refer to *Chapter 3 – PS/nVision Web Environments*, "Report Server Environment," PORTAL_SETUP.DMS Script.

nVisionDrill menu doesn't appear on the browser menu

Possible Reason: DrillToPIA add-in has not been loaded in users' environment yet. When users access PS/nVision from web browsers, they do not automatically receive the add-in because there is no PeopleTools installation required. System administrator has to deliver the optional add-in to users who need it. Users have to load the add-in in Excel before they see the menu.

7/26/2002

What you can do: User Tools >> Add-in menu in Excel to load DrillToPIA add-in. For more information, please see *Chapter 3 – PS/nVision Web Environments*, “Browser Workstation Environment,” Excel Add-in.

Additional Note: When you view reports in XLS via a browser, the menu items you see are a combination of those from the browser and those from Excel. Once you load the DrillToPIA add-in in Excel, you will see the nVisionDrill menu in the browser when you view an XLS report on-line.

DOS error number 3 when running reports to the web .

Possible Reason: If you are on 8.1x, this is likely caused by some PS/nVision variables on the Directory Template of your Report Request. As PS/nVision does not automatically clear the Directory Template entry when you switch output types between File and Web, you need to be extra careful especially when your original output type was File and you used PS/nVision variables (such as %SFD%) in your Directory Template. This Directory Template entry is not supported by PS/nVision 8.1x for output type of Web.

What you can do: It is easy to check whether you have PS/nVision variables on the Directory Template – just click on the second tab, *Advanced Options*, on your Report Request then select the link *Enter Delivery Template Options – View All*. You should see all the entries related to your Report Request there. Clear the Directory Template entry and save the Report Request should take care of the problem. Note that you should not use the *Enter Delivery Template Options* link on the *nVision Report Request* tab to verify the entry because Directory Template will not be displayed there when Web is the selected output type.

Additional Note: Directory Template IS used for PS/nVision 8.4 and up. A folder like Report Explorer is delivered in PeopleTools 8.4 for you to organize your reports. Directory Templates is the place to specify sub-folder structures and PS/nVision variables can be used to create sub-folders dynamically.

COMMON WINDOWS CLIENT PROBLEMS

There are multiple windows of Excel when using Office 2000.

Possible Reason: This is a new default behavior in Office 2000.

What you can do: From the Tools menu within Excel select Options and go to the View tab. De-select the “Windows in Taskbar” checkbox. This will fix the multiple Excel window issue if you still like the old way Excel worked.

New queries not showing up in the Layout Definition Source Tab, Query Name List box.

Possible Reason: Once PS/nVision is loaded, it uses cached information when displaying the query list. This is also why entering a partial name does not help in locating the query until PS/nVision is reloaded.

What you can do: Type the query name *in full* and the query will be found in the edit process. You will then be able to use the newly created query without having to reload PS/nVision.

PS/nVision dialog screen blinks in Windows taskbar.

Possible Reason: This happens for users on Windows 2000 operating system. Microsoft’s user experience folks learned that users dislike their current work to be interrupted by background tasks popping up windows in the

7/26/2002

foreground and stealing focus. Windows behavior has therefore been modified so that a background task does not pop to the foreground but instead blinks its taskbar icon, which tells the user it needs attention. When users work in Excel interface, Windows treats PS/nVision as a background process, which was the reason for the behavior.

What you can do: Click on the blinking icon in the taskbar will display the dialog box.

NVSUSER.XLS file sometimes becomes Read-Only.

Possible Reason: It is likely that the NVSUSER task is held by another Excel session. This is sometimes an indication that PS/nVision has crashed and there is a phantom Excel session with a lock on NVSUSER.

What you can do: You should search and end all the Excel.exe and psnvs.exe processes from Task Manager. For more information on the procedure, please see Chapter 3 – PS/nVision Web Environments, “Windows Client WorkStation Environment,” Clean Up After a Crash.

Excel Exception (SCODE Errors) and ‘RPC Server Unavailable’.

Possible Reason: General SCODE errors are explained in an earlier section under the same topic for Report Server. When running on the Windows Client, these errors are displayed in message boxes.

What you can do: Please record the environment and actions you just performed which caused the error. At this point PS/nVision will not function unless all Excel.exe and psnvs.exe processes are cleaned up from the Task Manager. For more information on the procedure, please see Chapter 3 – PS/nVision Web Environments, “Windows Client WorkStation Environment,” Clean Up After a Crash.

Appendix A – Special Notices

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Appendix B – Validation and Feedback

This section documents that real-world validation that this Red Paper has received.

CUSTOMER VALIDATION

PeopleSoft is working with PeopleSoft customers to get feedback and validation on this document. Lessons learned from these customer experiences will be posted here.

FIELD VALIDATION

PeopleSoft Consulting has provided feedback and validation on this document. Additional lessons learned from field experience will be posted here.

Appendix C – Revision History

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Reviewers

The following people reviewed this Red Paper:

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Revision History