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Opera 3 Scheduler

Accreditation
Training Courseware

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Introduction

About Opera 3

Opera 3 is the most versatile and user-friendly accounting, supply chain management, payroll & HR, manufacturing and reporting solution from Pegasus Software. A modular solution, Opera 3 enables you to select the components that match your current business model, whilst making it possible to add further functionality as requirements change. This means that the capability or capacity of a system can be seamlessly expanded whilst safeguarding the investment.

For more information about Opera 3, select the Solutions link on the Pegasus web site.

About this Guide

This Accreditation Training Courseware offers an accompanying guide to the accreditation training course.

If you are new to Opera 3, read the Getting Started section of the Opera 3 Help that covers the application in more detail. You can access this from the Windows Start menu, or by using the F1 Key or Help menu when you have logged in to the product.

Opera 3 is available for both Visual FoxPro and SQL Server database platforms. This Accreditation Training Courseware applies to both database platforms, however, there are certain elements that are only included in one or the other database, and as such, the relevant sections or paragraphs are clearly identified with the following labels:

[SQL] – only relevant if you are running the application on an SQL Server database.

[VFP] – only relevant if you are running the application on a Visual FoxPro database.

Sections that are not identified with these labels are relevant to both database types.

For more information, see the section Functional Differences between Opera 3 Enterprise & Opera 3 Enterprise SQL section in the release guide.

Introducing the module

Scheduler allows you to schedule some tasks in Opera 3 to run at any time on a chosen day. Running some tasks during normal working hours can interrupt other essential daily processing tasks in Opera 3 and reduce data processing time. This can disrupt the day-to-day running of your business and cost you time and money. Using the Scheduler you can plan and process the tasks outside of your normal working day and be confident that your staff can carry out their normal day to day processing tasks without interruption.

Feedback

Pegasus is interested to hear your views on the documents we provide. To give your feedback, send an email to training@pegasus.co.uk. Please type "O3Training_Accreditation_ADM55SchedulerR2.4.docx Accreditation Training Courseware" in the subject box.

Please note that product support is not offered through the above email address.

Key

Icon	Meaning
Example – Examples	Useful Hint, Tip or Note. General Comments / Notes
	Useful Report obtained from clicking on the print icon while sitting on the form
	During the literature, some basic Question and Answer / Troubleshooting points are discussed. May include a few did you knows…
	Website link
	Exercises / Example solution
	Report to XLS
	Potential Report Enhanced from Opera II (more than simple field adjustments)
Question *Answer* FAQ	FAQs - Only

Training Literature Releases

Release	Added Information
R1.0	Originating document
R1.1	New UDS Option to Copy Statutory Rates
R1.2	FAQs Added & V1.20 O3 Uplift
R1.3	Added Repeat Invoicing and User Changes for v1.3x Release & Chapter Style update
R2.0	Uplifted for 1.5x including further changes for Repeat Invoicing
R2.1	Uplifted for v1.7x (Scheduler 1.41) for Credit Management changes
R2.2	Uplifted for v2.x
R2.3	Minor Help changes for v2.12
R2.4	Updates for v2.21

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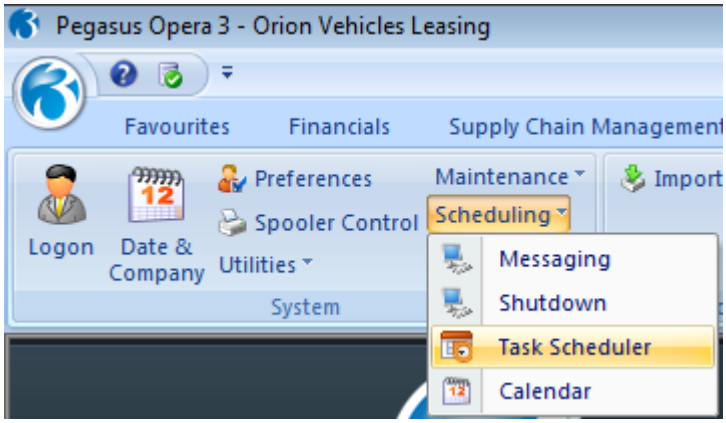
Module Menu Structure

The following sections will cover the functionality of the options in this module as outlined in the image below which shows each menu option contained in this feature.



NB: You must launch the Scheduler from within Opera 3

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Glossary (of Menu Structure)

Navigator Folder	Command	Purpose
System – Utilities – Scheduling	Scheduler	Launches the Scheduler function. Scheduler allows you to schedule some tasks in Opera 3 to run at any time on a chosen day. Running some tasks during normal working hours can interrupt other essential daily processing tasks in Opera 3 and reduce data processing time.

Notes

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The Module

Scheduler allows you to schedule some tasks in Opera 3 to run at any time on a chosen day. Running some tasks during normal working hours can interrupt other essential daily processing tasks in Opera 3 and reduce data processing time. This can disrupt the day-to-day running of your business and cost you time and money. Using the Scheduler you can plan and process the tasks outside of your normal working day and be confident that your staff can carry out their normal day to day processing tasks without interruption.

There are a number of tasks that you can schedule in this release of Opera 3, including routine daily tasks like backing up your data or monthly tasks like running a Nominal Ledger Period End. These tasks need exclusive access to your data, meaning that all your users must log out of Opera 3 before they can be run.

You can schedule tasks for these processes:

- Backing up your Opera 3 data
- Running Update Data Structures to update your data to the latest database structures
- Tidying the system files in Opera 3 to remove report layout, user and company profile records that have been marked for deletion, to clear temporary files, to clear event logs, and to tidy VAT files and exchange rates
- Running the Period End in the Nominal Ledger
- Rebuilding the periods in the Nominal Ledger
- Rebuilding the transaction history in the Nominal Ledger
- Running the Period End in the Sales Ledger
- Running the Period End in the Purchase Ledger.
- Posting Repeat Invoices. This task is set up differently to the others in Pegasus Scheduler. It is created in the Repeat Invoices command in either the Sales Order Processing or the Invoicing applications in Opera 3 and then scheduled in the Task Scheduler. For more information, see the Repeat Invoices (Deferred) Repeat Invoices (Deferred) Help topic.
- Reorganising the Web Xchange Audit files.

Note: Even though you will be able to select all the tasks, they only have a purpose if you have purchased the respective application.

You can define tasks to be run for several companies consecutively. If you use the 'Additional Systems' feature in Opera 3, which allows you to have more than 36 companies in the application, you can also define tasks to be run in companies in more than one additional system at the same time.

Certain processes have additional settings that you need to choose, for example, when running the Reorganise Systems command in Opera 3, you can choose to tidy one or more category of files - like system files, spool files, temporary files and event log files. When you schedule a task in the Scheduler, you also have the choice to include one or more category of files.

Important: These tasks can be set up by anyone who has access to the Task Scheduler, even if they cannot access the command in Opera 3. For example, if a user does not have access to the Period End command in the Nominal Ledger, they can still set up and run a task to do the Period End in the Task Scheduler. Care must therefore be taken to allow access to the Task Scheduler only for the people that have the responsibility to run these tasks.

Which processes can be scheduled in v1.0?

Backups, UDS, Nominal Sales and Purchase Period Ends, Rebuild Periods, Rebuild History and Tidy System

Can the Scheduler be bespoked v1?

Not at present.

Is there an Automatic notification like an e-mail?

No - you must currently use the Logs in Scheduler and O3 Scheduler. In the future phase we are planning to offer a notification facility (Non-E-mail)

Notes

Application	Task
Set up in Task Scheduler	
System Manager	Update Data Structures
	Backup
	Tidy System
Nominal Ledger	Period End
	Rebuild Periods
	Rebuild History
Sales Ledger	Period End
Purchase Ledger	Period End
Pegasus Web Xchange	Reorganising the Web Xchange Audit files
Set up in Opera 3	
Invoicing/SOP	Repeat Invoices
	Reorganise
Stock Control	Period End
Purchase Order Processing	Reorganise

Pegasus Scheduler (with server-side processing) allows you to schedule some tasks in Opera 3 to run at any time on a chosen day. Running some tasks during normal working hours can interrupt other essential daily processing tasks in Opera 3 and reduce data processing time. This can disrupt the day-to-day running of your business. Using Task Scheduler Editor you can plan and process the tasks outside of your normal working day and be confident that your staff can carry out their normal day to day processing tasks without interruption.

There are a number of tasks that you can schedule in this release of Opera 3, including routine daily tasks like backing up your data or monthly tasks like running a Nominal Ledger Period End. These tasks need exclusive access to your data, meaning that all your users must log out of Opera 3 before they can be run.

Note: Pegasus Scheduler (with server-side processing) uses Microsoft SQL Server for its data store. Please see the Opera 3 System Requirements Guide for details.

Scheduler

Pegasus Scheduler takes advantage of server-side processing, including the following:

- Merge of HTML template with Opera 3 data
- Conversion of HTML to PDF
- Creation of e-mail (with PDF attachment)
- Send of e-mails (via SMTP server).

The Opera 3 Debt Management facility in the Opera 3 Credit Management Centre and the Email Payslips and P60s feature in Payroll use Pegasus Scheduler (with server-side processing) to manage the PDFs and forward the emails to your email server to send to customers and employees.

Notes

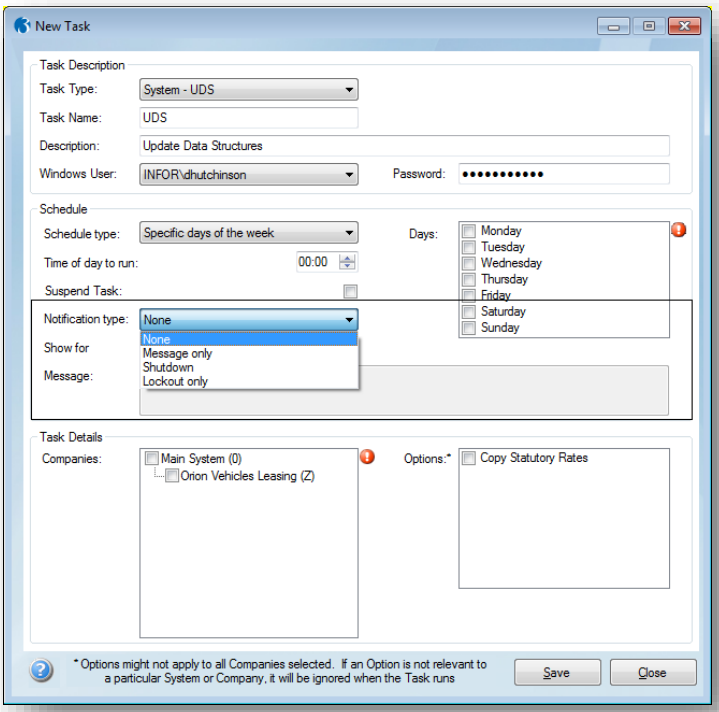
Additional Systems

You can define tasks to be run for several companies consecutively. If you use the 'Additional Systems' feature in Opera 3, which allows you to have more than 36 companies in the application, you can also define tasks to be run in companies in more than one additional system at the same time.

Shutdowns, Lockouts & Messages

Opera 3 Notification Services is available in Scheduler. Notification Services includes the options to shutdown Opera 3 and force everyone out of the product, deny access to new users of Opera 3 without forcing existing users out or send a defined message to all users before a task is run.

When a new task is created you can choose a notification type, enter a desired message and the amount of time it should be displayed to all Opera 3 users

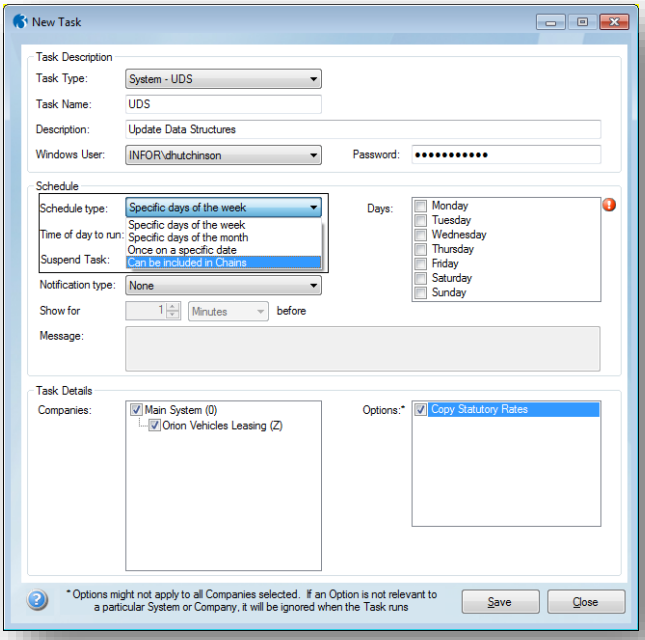


Chained Tasks

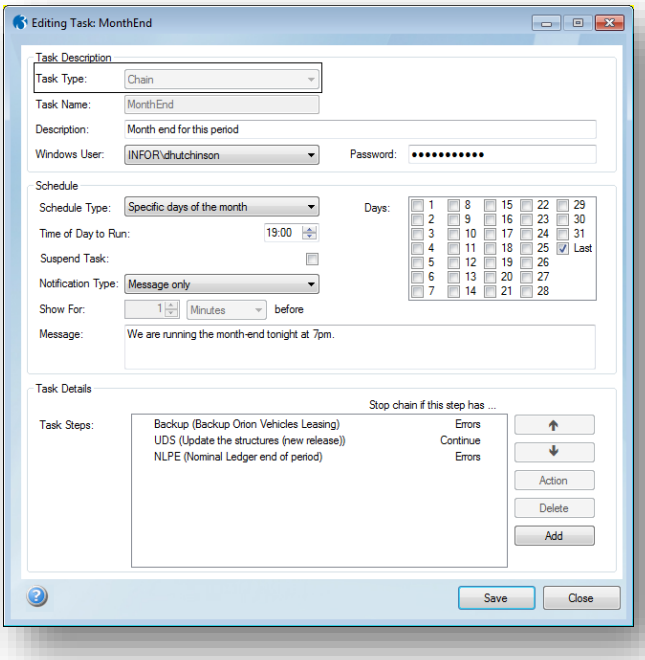
If you need more than one task to be processed in sequence you can link them together using a Chain task. You do not need to schedule each task in the chain. The first task is scheduled to run at the required time and the next tasks will follow automatically.

Before a task can be included in a chain, it must be given a Schedule Type of *Can be included in Chains*. You can define which companies the task applies to and the relevant options for the task, but you do not need to either schedule it or provide Windows' user details.

Notes



After a task has been set up as *Can be included in Chains* it can then be chosen to include in a Chain task using the Task Steps section of the Task form. This task links all the required tasks together so that they can be processed in sequence. You can change the position of each step after it has been added to the chain. A chain can be set up to stop further processing if errors or warnings are encountered or to continue to the next task even if errors or warnings are found.



Important: Tasks can be set up by anyone who has access to the Task Scheduler, even if they cannot access the command in Opera 3. For example, if a user does not have access to the Period End command in the Nominal Ledger, they can still set up and run a task to do the Period End in the Task Scheduler. Care must therefore be taken to allow access to the Task Scheduler only for the people that have the responsibility to run these tasks.

Notes

The Scheduler is structured into the following sections:

Section	Description
Task Schedule Editor	This section displays the tasks that have been defined in the Scheduler. It displays the name, description, type of task and the last time the task was run. You create new tasks, edit tasks and delete tasks from this form.
New Task	This form is used to create new tasks to be run in the Scheduler. You can choose to create a task from a list for specific days in a week, specific dates in a month or on a specific date. You can also specify a time for the task.
Edit Task	This form is used to edit tasks that have also been set up in the Scheduler.
View last Run Details	This displays the details of last time the task was run.
View History	This displays the history of all the times the task was run.
Set Options	*This is used to capture a default Microsoft Windows user account and password which can be used instead of the active Windows user when new tasks are created. This form is also used to add Opera 3 user codes or group codes for those people who are responsible for scheduling tasks created in Opera 3 (this currently applies only to repeat invoices that are set up in the Sales Order Processing or Invoicing applications).*

Technical Information

The Scheduler solution comprises a number of different components that are written using the Microsoft .NET 4 framework and are installed on either the Opera 3 Client or the Opera 3 Server computers.

Component	Description	Installed on ...
Scheduler Editor	This is where the tasks are created and updated.	Opera 3 Client
Schedule Runner	This refers to the Scheduler Editor to see whether tasks need to be run, and updates history files with information about the task.	Opera 3 Server
Task Runner	This component performs the task on the data, for example by running the Update Data Structures command.	Opera 3 Server

NB: *The Windows User assigned to the task must have Admin rights on the server.*

Windows Task Scheduler

Scheduler works with the Windows Task Scheduler. Depending on the Windows product you use, it uses either Windows Task Scheduler 1.0 or Windows Task Scheduler 2.0.

Windows Task Scheduler 2.0 includes more features that you can use when you define a monthly task.

Task Scheduler 1.0

Task Scheduler 1.0 is included with Windows 2000, Windows XP and Windows Server 2003. It is designed to run tasks at scheduled times or specified intervals.

Task Scheduler 2.0

Task Scheduler 2.0 is included with Windows Vista, Windows 7 and Windows Server 2008.

Notes

In addition to running tasks on scheduled times or specified intervals, Task Scheduler 2.0 also allows the following choices in the Scheduler when you define a monthly task:

You can select more than one day.

You can select an option called 'Last day of the month'. This is useful where the last of a month is not the same day as the last day in another month.

Once a task is set up in the Schedule Editor, a task is also set up in Windows Scheduler that includes the day/s and time that the task will be run. At the required time Windows Scheduler then calls the Schedule Runner that reads the tasks that were set up in the Schedule Editor. The Schedule Runner then calls the Task Runner which performs the update on the data.

The two versions of MS Scheduler cannot work together, be installed and linked to each other or amended to process successfully together. Basically the two versions (v1 and v2 of the MS Scheduler) do not work with each other in a support or tested environment. If you try to install between two versions, you may get the following error.

NB: You must install the Opera 3 Scheduler Server and Client on the same machine as the Opera 3 Server and client. You must also ensure that the PCs in use have the same Microsoft Windows Scheduler Versions (1 or 2).

The application will not work if this is not installed on the same server as Opera 3 Server and Client nor if installing on systems with mixed MS Scheduler versions.

Installing Scheduler in Networked Environments

The Scheduler client software must be installed on a workstation that uses the same Windows family as the Scheduler server installation. For example, the Scheduler client will work if it is installed on a Windows XP workstation and the Scheduler server software is installed on a Windows Server 2003 server. However, if the Scheduler client software is installed on a Windows 7 workstation, the Scheduler client will not work.

This is because Windows Task Scheduler 2.0 includes more features than Windows Task Scheduler 1.0. When Scheduler client software is installed on Opera 3 workstations, the same Windows family must be used on both the Opera 3 server and the Opera 3 workstation.

Notes

File Server	Workstations	Workstation can be used with server?
Windows Server 2003	Windows XP	Yes
Windows Server 2003	Windows Vista	No
Windows Server 2003	Windows 7	No
Windows Server 2008	Windows XP	No
Windows Server 2008	Windows Vista	Yes
Windows Server 2008	Windows 7	Yes
Windows Small Business Server 2011	Windows XP	No
Windows Small Business Server 2011	Windows Vista	Yes
Windows Small Business Server 2011	Windows 7	Yes

Required Windows User Network Permissions

Scheduler uses a Windows user login name when new tasks are set up and when the tasks are run. The Windows User box on the Tasks form displays either the domain name and login name for the user who is creating the task or it displays Default Scheduler Account if a default Windows user is used for new tasks.

Tip: *Before adding a new task, set up a default Windows user called 'SchedulerUser' or similar on your Windows server and update the Set Options form with the user's login name. Tick the New Tasks should be the Default Scheduler Account box; all new tasks will then use the default user. You then only need to set the necessary permissions for this user rather than each person who uses Scheduler.*

The Windows user must have necessary permissions to the following locations:

- *For a task to be created successfully:*
  - *the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed.*
- *For a task to be run successfully:*
  - *the Windows user must be an administrator on the Opera 3 server*
  - *the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed.*
  - *the Windows user must have full permissions to the network share name on the Opera 3 server called O3 Server XXX Dynamic (where XXX is either VFP or SQL). This share is created automatically on each workstation where Scheduler is installed.*
  - *if a repeat invoicing task has been set up from the Repeat Invoice command in the Sales Order Processing or Invoicing applications and it has been set up to print to a specified printer, that printer must have been set up by the Windows user at the Opera 3 server.*

Important: *Permissions are not set up automatically; they need to be set up manually in Windows.*

Notes

Emailing debt correspondence, payslips & P60s

Pegasus Scheduler (with server-side processing) also manages the creation of the debt correspondence, payslips and P60s and schedules them immediately for emailing (if customers and employees are set up for email in Opera 3). Server-side processing uses Windows Communication Foundation, which allows information to be sent asynchronously from Opera 3 to Pegasus Scheduler. This means tasks like creating a PDF document or sending emails to an SMTP server are processed in Pegasus Scheduler rather than in Opera 3. Opera 3 can then be used for other tasks whilst Pegasus Scheduler is working.

Prerequisites

Pegasus Scheduler (with server-side processing) requires a number of pre-requisite components to be installed and settings configured on the server before the Scheduler is installed, as follows:

- Microsoft SQL Server
- Microsoft SQL Server or SQL Server Express

Microsoft SQL Server or SQL Server Express (2008 R2 or 2012) is required to store the Pegasus Scheduler (with server-side processing)database. The Scheduler Service needs to connect to the SQL Server to access its database. Additionally, if Opera 3 SQL is used, then the Scheduler Service will need to access the company databases.

Tip: This article may be useful - Hardware and Software Requirements for Installing SQL Server 2012 - msdn.microsoft.com/library/ms143506(v=SQL.110).aspx.

SQL Server Management Studio

The required settings depend on whether Pegasus scheduler is using either:

- Windows Authentication mode - where the Windows User account is used to connect to SQL Server, or
- SQL Server Authentication mode - where a SQL Server login name and password are used to connect to SQL Server.

Windows Authentication mode

The Scheduler Service runs as the Local System account in Microsoft Windows. This Windows account is listed as NT AUTHORITY\SYSTEM in SQL Server. This login must be granted the dbcreator server role. If a standalone SQL server is being used then the SYSTEM account on the Opera 3 server must be added to SQL Server logins. To add a computer you must use a login name of “domain/computer$”, e.g. CORPDOMAIN/SERVER2$.

SQL Server Authentication mode

Do not use the 'sa' Login for the Scheduler as this account has very broad permissions. Add a new Login using SQL Server authentication and grant it the dbcreator Server Role. Password expiration should be turned off.

Notes

Opera 3 SQL Databases

If you are running Opera 3 SQL, then the Scheduler Service running on the Opera 3 server will need access to the company databases. Opera 3 SQL company databases are located on the Opera 3 server. The Scheduler Service runs as the Local System account in Windows. This Windows account is listed as NT AUTHORITY\SYSTEM in SQL Server. This Login must be allowed to access the SQL Databases.

Firewall Settings TCP ports

You must consider firewall settings for SQL Server and Scheduler.

TCP ports

Set these ports in the incoming rules:

- On the SQL Server allow TCP port 1433 in the incoming rules
- On the Scheduler server, allow TCP port 51920 in the incoming rules
- On the mail server, allow TCP port 25 in the incoming rules (port 25 is the default - change as required if the mail server uses a different port number). The mail server may need to open up the Simple Mail Transfer Protocol (SMTP) port if it has not previously been used, or if it was previously used, but was restricted to certain machines.

SMTP Email Server

In order to configure the mail server settings in Pegasus Scheduler (with server-side processing) after the installation, you will first need to find out the appropriate SMTP settings in order to communicate with the mail server. The mail server may need configuring to allow emails to be sent to it from the Scheduler server. Instructions for this vary based on the type and version of the Mail Server software, so we cannot give exact instructions here.

Permissions for the Opera 3 data folder

The Scheduler Service account requires read-write permission for the Opera 3 data folder (the 'Opera 3 Server Dynamic' network share).

Notes

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1 Set-Up

1.1 Recommended Order of Set-up

It is suggested that you set up the Scheduler in the following order:

Scheduler

- Ensure Pre-requisites are installed (.Net Framework v4)
- Activate the system so that scheduler is part of the activation.
- Exclusive access to Opera
- Install the Scheduler server and client have been installed
- Ensure all other modules already set-up as appropriate

1.2 Pre-requisites

- Opera 3 (Server & Client)
- Microsoft .NET Framework 4 / 4.5
- Windows XP or higher

Note – must also install Scheduler Server & Client on Server (Opera Server)

Set-up

Do I have to install .Net 4 Framework before installing Scheduler?

Yes, otherwise the Scheduler will not install or work.

Do I need to reboot after installing .Net v4?

Most Likely yes. Installing the .Net v4 framework will prompt for a reboot of the machine. All PCS planning to use scheduler will need .Net v4 – It is always recommended to reboot the machine after a .Net installation.

Is the.Net v 4 provided on the install media?

Only v2.5… is provided on the media. 3.5 sp1 (approx. 240Mb) and v4 (approx.. 50Mb) will need to be downloaded from Microsoft Website. Main reason for the exclusion is no space on the media.

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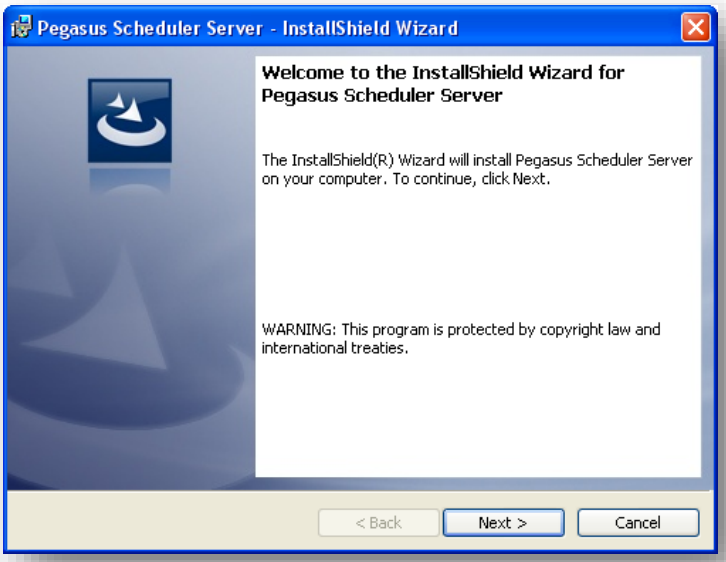
2 Installation

Installing Scheduler is covered in the next section

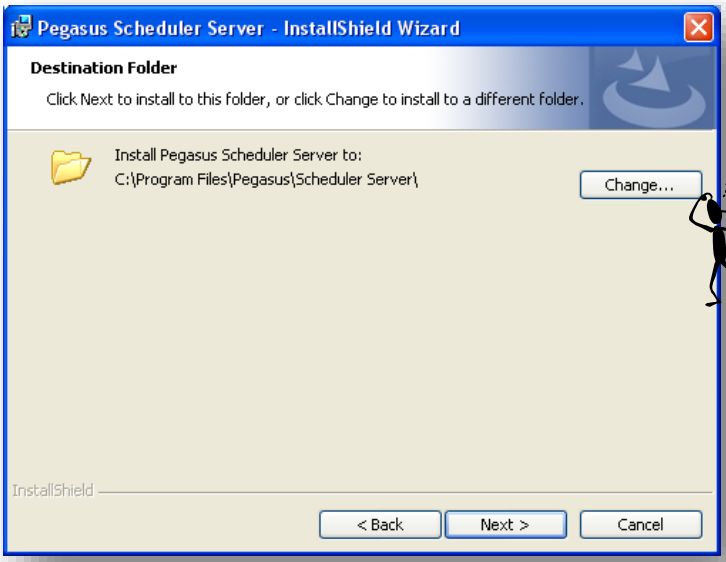
2.1 Installing Scheduler Server

NB: Ensure the Pre-requisites have been satisfied, prior to installing Scheduler.

Browse to the Scheduler set-up directory and double click on Pegasus Scheduler Server.msi or the setup.exe. A welcome screen will be displayed. Please note there is a server and client installation required. The Server installation will provide the Client set-up files (same concept as Opera 3).



Click Next to continue



Select the appropriate installation path for the Server install.

Notes

Do I need to install a client on the server?

Yes in order to ensure the scheduled tasks run correctly, you must install a client on the Server.

This means only the server needs to be on for the scheduled task to run.

Does the install split the installation folders even if the path is specified?

Yes, currently v1 installs a split installation regardless of specifying a path.

Installation

Please note that the Scheduler follows the same split installation rules as Opera 3 and places files in Documents and Settings as well as Program files.

Default Locations include;

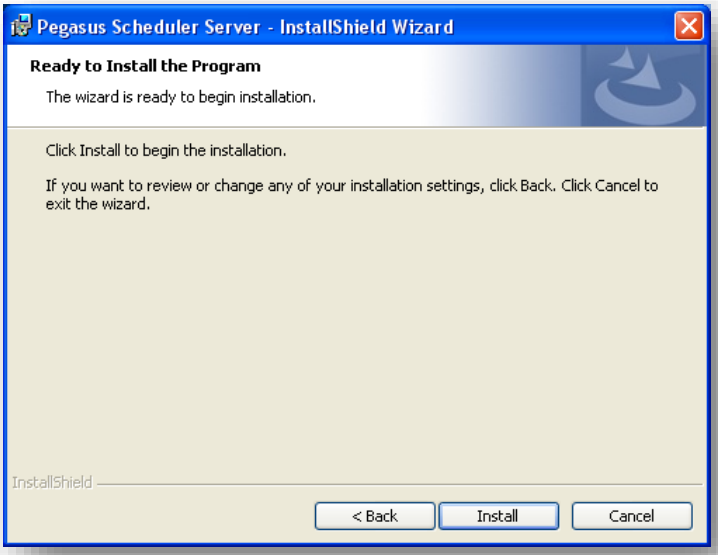
C:\Documents and Settings\All Users\Application Data\Pegasus\ Scheduler Server

And

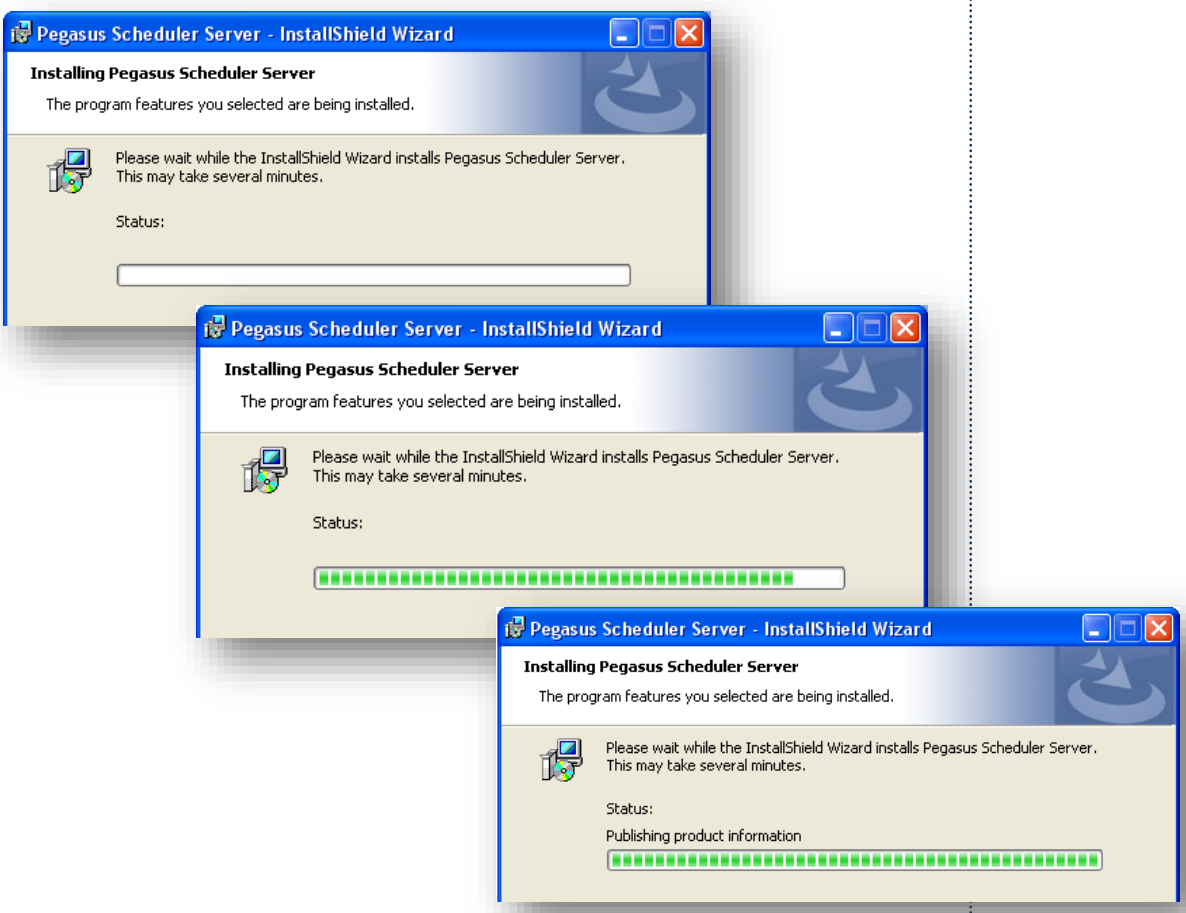
C:\Program Files\Pegasus\ Scheduler Server

To confirm installation, click install

Notes

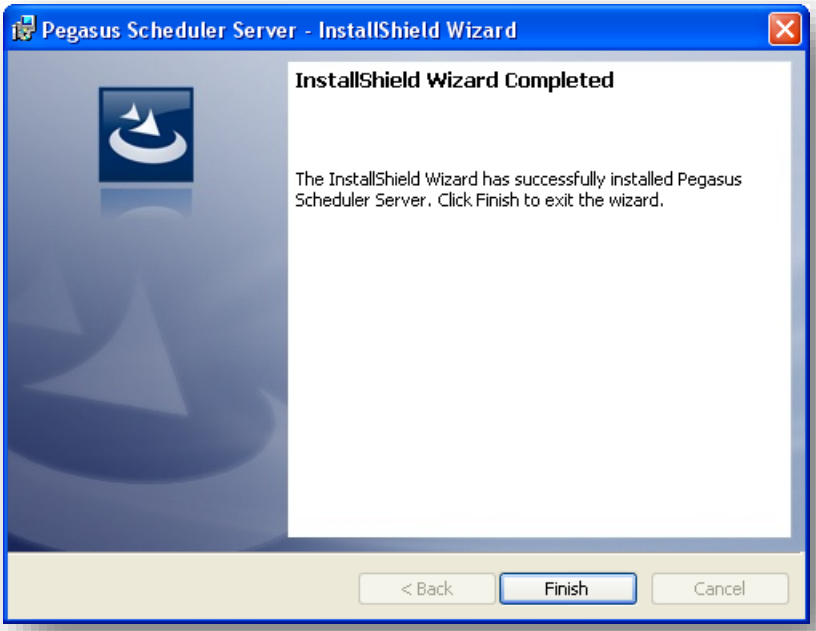


NB: The installation routine is very quick and you may miss seeing the progress bar. Everything should be installed fine and checking the folder and file locations will help to verify the successful installation.



Notes

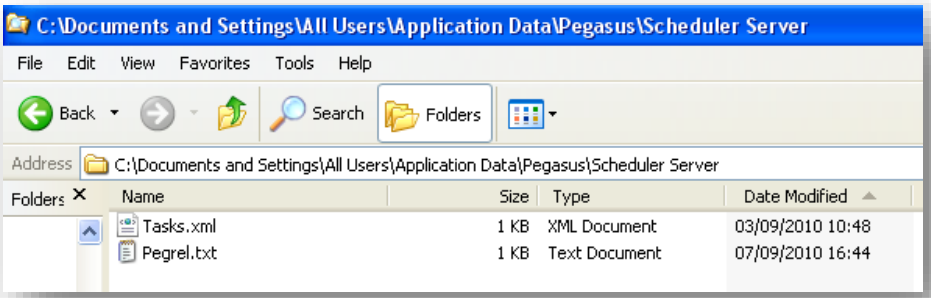
When the install is complete, a message stating successful install will be displayed. Click Finish to confirm the installation and close the InstallShield Wizard



2.1.1 File and Folders

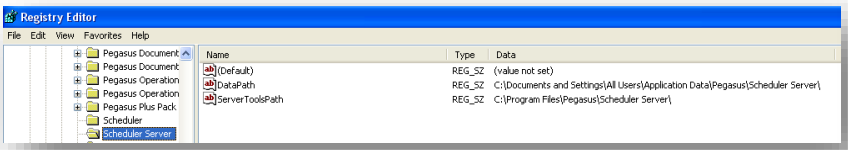
The screenshots below are a guide to what files and folders are created during the installation of scheduler.

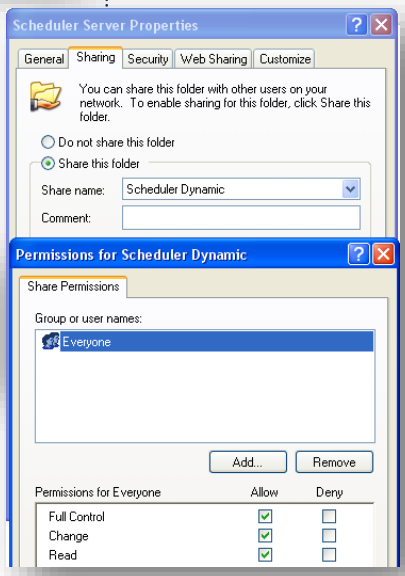
Docs & Sets



Shared to Everyone with full control as "Scheduler Dynamic" by default. However ensure the folder is shared. A respective path in the registry is also created.

HKEY_LOCAL_MACHINE\SOFTWARE\Pegasus\Scheduler Server

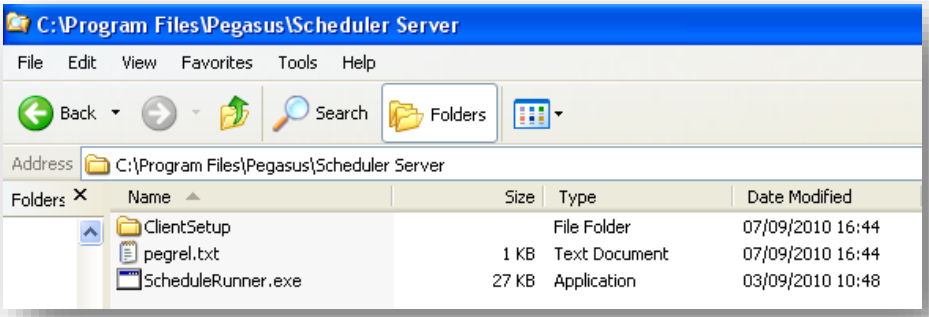




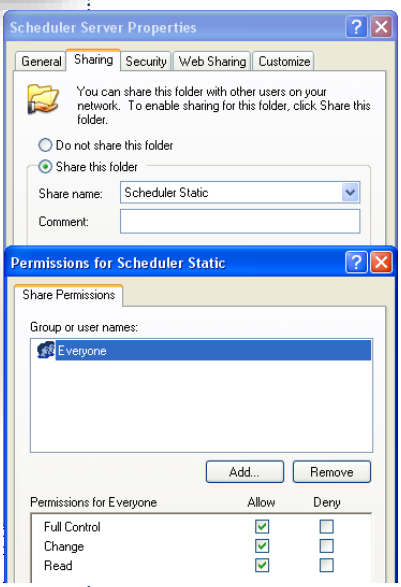
NB: You may have to adjust permissions to set required and appropriate security.

Program Files

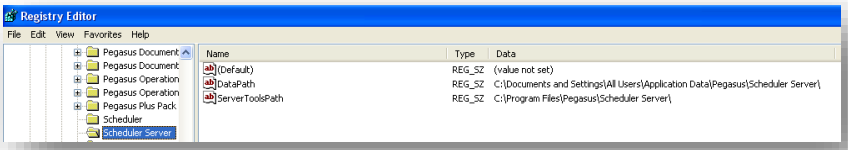
Notes



Shared to Everyone with full control as "Scheduler Static" by default. However ensure the folder is shared. A respective path in the registry is also created.



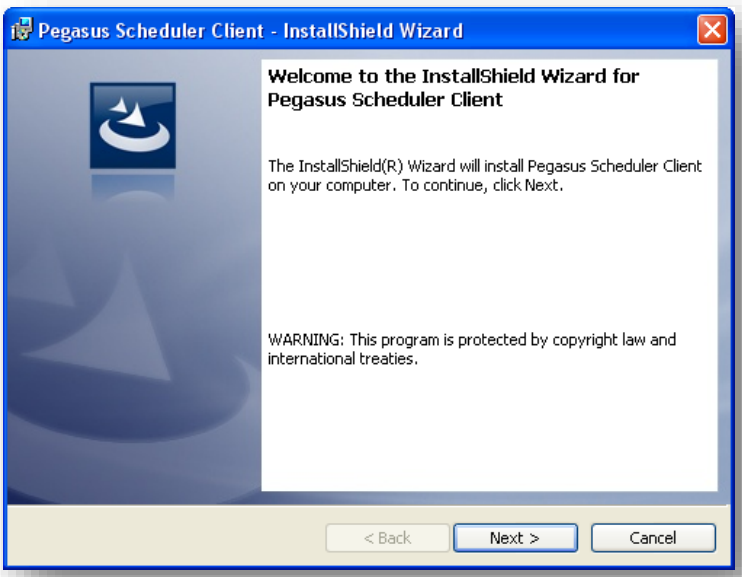
HKEY_LOCAL_MACHINE\SOFTWARE\Pegasus\Scheduler Server



NB: You may have to adjust permissions to set required and appropriate security.

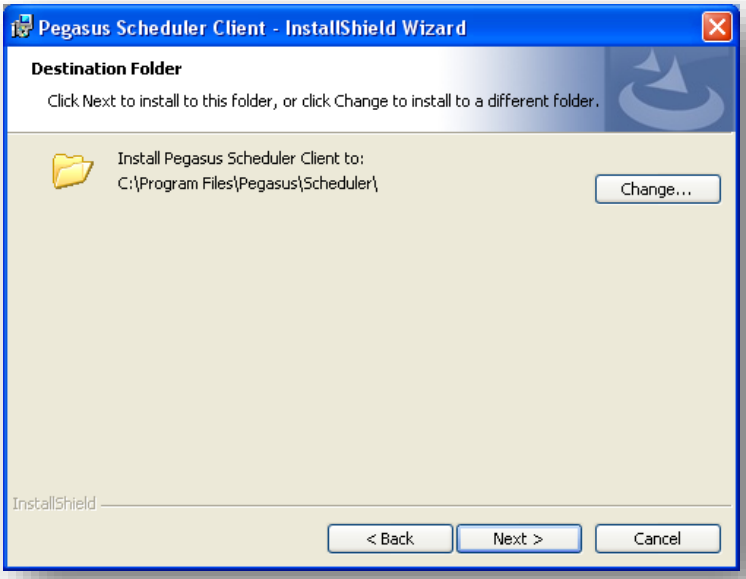
2.2 Installing Scheduler Client

To install the client, browse the Server folder under program files and find the Client Setup directory (default path C:\Program Files\Pegasus\Scheduler Server\ClientSetup). Double click Pegasus Scheduler Client.msi.

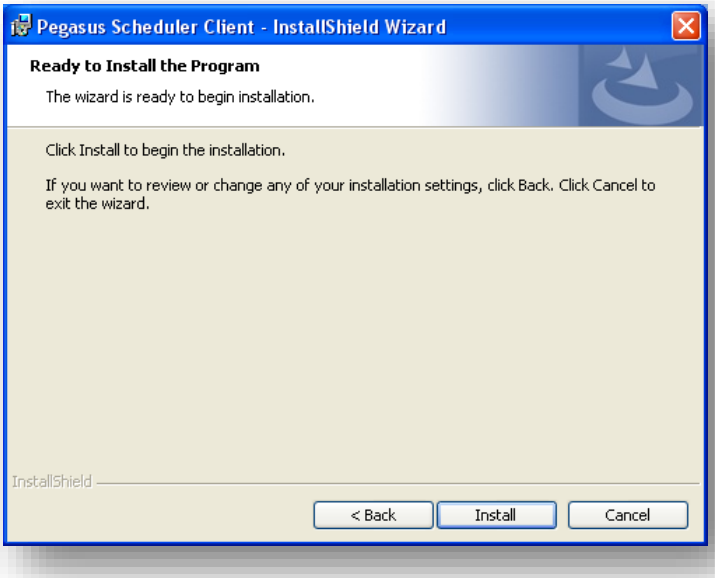


Notes

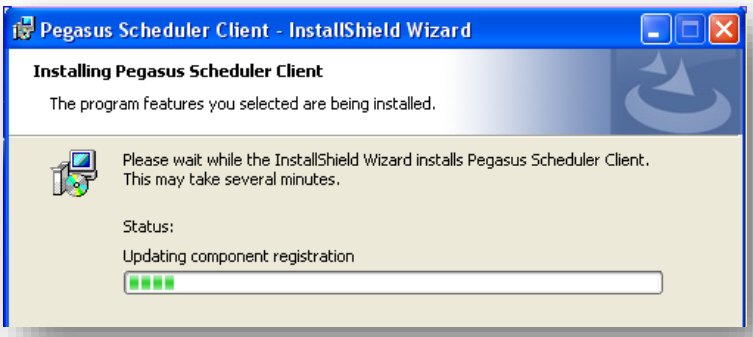
Click Next to continue



Select the appropriate installation path for the Client install, to confirm installation, click install

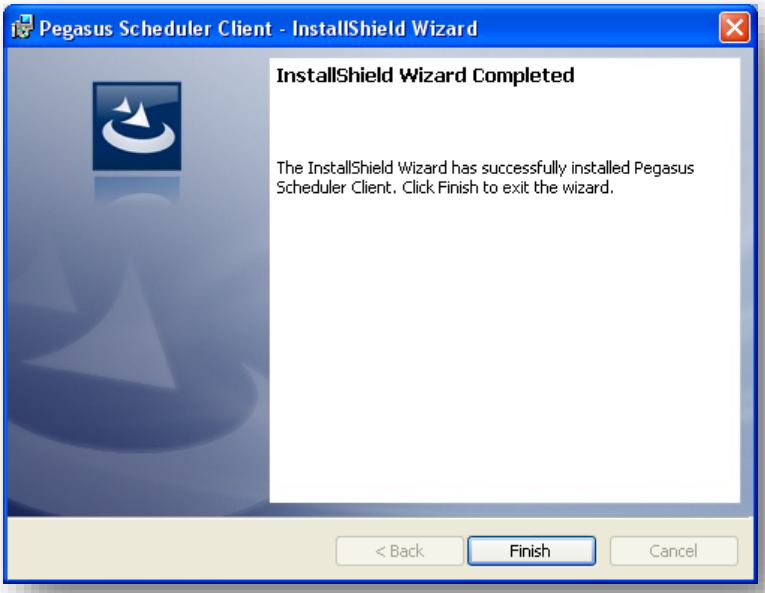


NB: The installation routine is very quick and you may miss seeing the progress bar. Everything should be installed fine and checking the folder and file locations will help to verify the successful installation.



Notes

When the install is complete, a message stating successful install will be displayed. Click Finish to confirm the installation and close the InstallShield Wizard



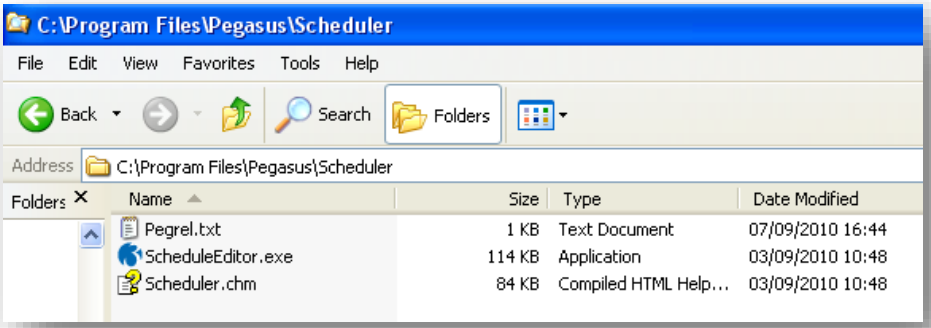
2.2.1 File and Folders

The screenshots below are a guide to what files and folders are created during the installation of Scheduler Client.

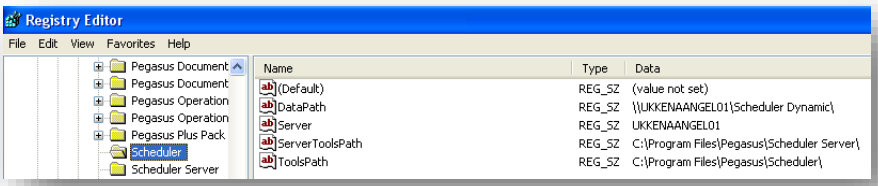
Docs & Sets

N/A

Program Files



A respective path in the registry is also created.
HKEY_LOCAL_MACHINE\SOFTWARE\Pegasus\Scheduler



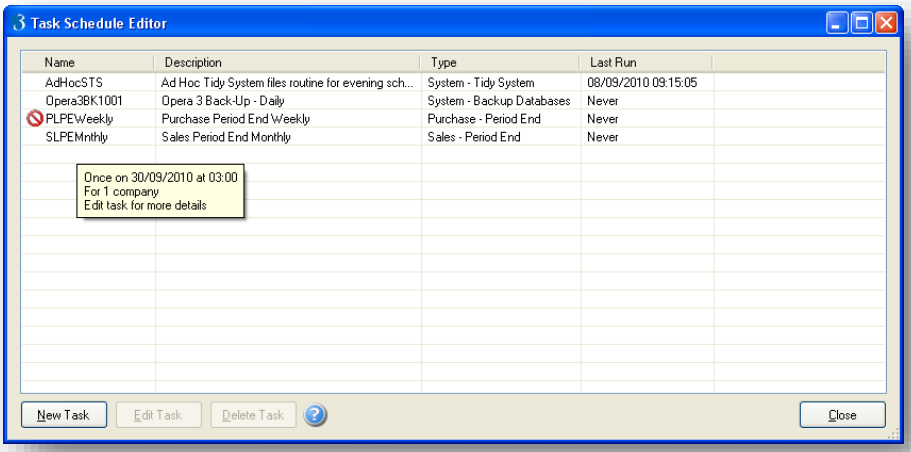
Accreditation Training Courseware

3 Processing in Scheduler

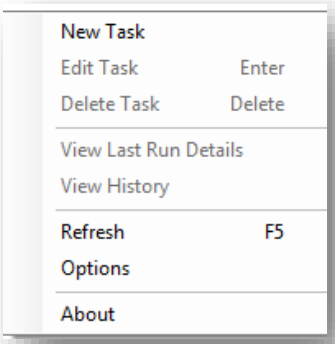
The next section covers the processing aspect of the Scheduler.

Task Schedule Editor

This is the main form in the Task Schedule Editor. You create new tasks, edit tasks and delete tasks from this form. The form displays the tasks that have been defined including the name, description, type of task and the last time the tasks were run. The form also displays different icons adjacent to each task's name to indicate its status.



You can use the Right-Click menu to:



- Create a new data-update task or a new chain task to link data-update tasks together
- Edit a task
- Delete a task. If you delete a task you will not be able to un-delete it.
- View the details of the task's last run
- View the history of all the task's runs
- Refresh the form
- View the version number of the Task Scheduler
- Options to set the Default Scheduler Account

Notes

What happens if you install on XP with the older MS Scheduler version and select a 29, 30 or 31st date and it falls on a month that does not have this date?

The system will just ignore the scheduled task for that month and will not run it.

Can you schedule tasks for the last day of the month?

It depends, it uses the functionality from Windows Task Scheduler. If you are using Windows Vista, 7 or Server 2008 you can.

Can you create identical / conflicting tasks?

Yes they can be created - however for identical, conflicting tasks - the first task runs, the 2nd tasks forces an error and crashes out. You can see this in the Error log (differing exit codes). Scheduler shows the errored task as never being run - check the log in Windows Scheduler. Not recommended.

Can more columns be shown in the scheduler?

For technical reasons this is currently not available. It is not currently planned to be investigated, however an enhancement request may be logged to see if a work - around is available

Processing in Scheduler

Notes

Box	Description
Name	A unique reference to identify the task, which cannot include spaces or special characters (like '!' or '?'). Different icons are displayed before the name to indicate different states for the task: If the task has been suspended If the task has been run successfully If the task has been run but did not complete If the task is currently running The task has been created in Opera 3 but has not yet been finalised by an administrator. Currently this only applies to a task that has been created in the Repeat Invoice command in the Sales Order Processing and Invoicing applications in Opera 3. The person who is responsible for setting up the repeat invoices posting has asked their administrator to schedule the date and time when the task will be run in Task Scheduler. After the administrator has scheduled the task this icon is removed. **Tip**: To see the details of the task after it has run use the View Last Run Details or the View History commands on the mouse-click command menu. If your primary mouse button is the left button, click the right button to display the command menu. If your primary mouse button is the right button, click the left button to display the menu.
Description	The task's description or 'friendly name'.
Type	The type of process for the task which is one of the following: • Chain (used to link different tasks together so that they are processed in sequence) • Update Data Structures • Backup Databases • Tidy System • Nominal Ledger Period End • Nominal Ledger Rebuild Periods • Nominal Ledger Rebuild History • Sales Ledger Period End • Purchase Ledger Period End • Repeat Invoices. This task is set up differently to the others in Pegasus Scheduler. It is created in the Repeat Invoices command in either the Sales Order Processing or the Invoicing applications in Opera 3 and then scheduled in the Task Scheduler. For more information, see the Repeat Invoices (Scheduled) Help topic. Repeat Invoicing: This task is set up differently to the others in Pegasus Scheduler. It is created in the Repeat Invoices command in either the Sales Order Processing or the Invoicing applications in Opera 3 and then scheduled in the Task Scheduler. For more information, see the Repeat Invoices (Deferred) Repeat Invoices (Deferred) Help topic.
Last Run	The date and time the task was last run. This is updated even if the task could not be completed.

3.1 Set Options (Default Scheduler Account)

You have the ability to set up a Default "Windows User" Scheduler Account that may be used to be assigned to each task created in the scheduler. This will help to avoid any potential permission problems the logged in User Account may have if running the Windows Tasks with their credentials.

Notes

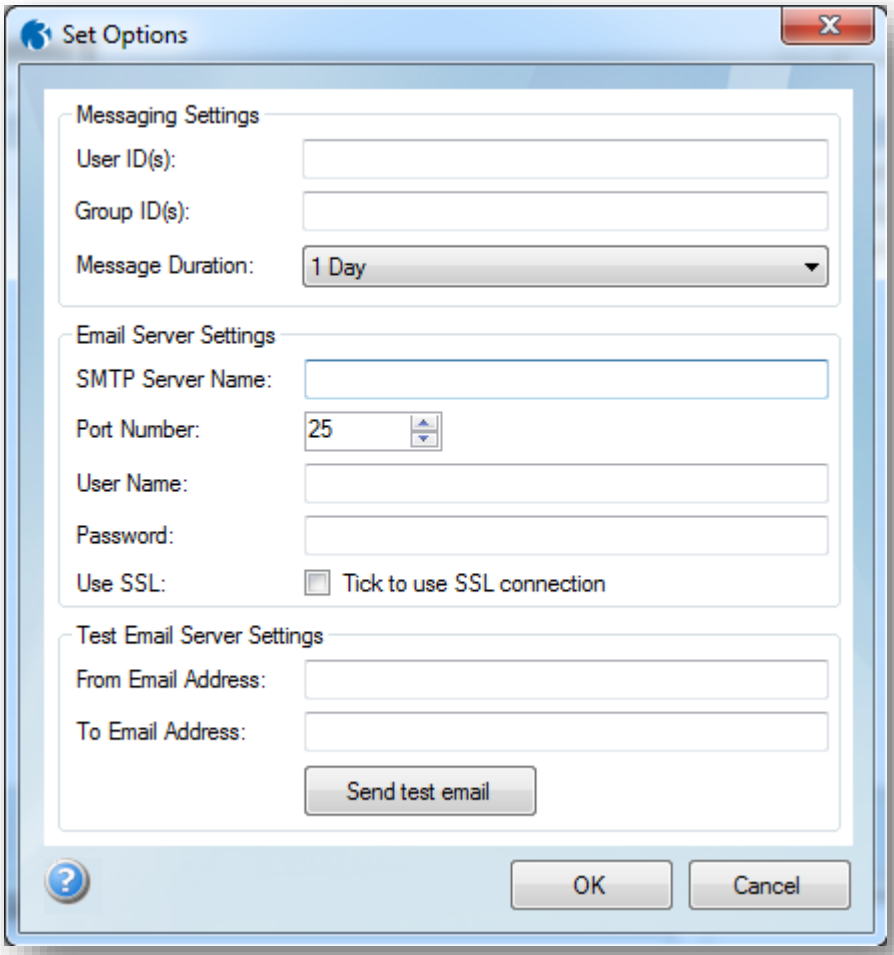
The Set Options form is used to capture Opera 3 user and group codes for those people who are responsible for scheduling repeat invoicing tasks created in the Sales Order Processing or Invoicing applications. This form is also used to capture email server settings, which must be entered for email debt correspondence, payslips and P60s generated in Opera 3.

To Set Up Scheduler Options

1. Open the System folder and click Scheduling or click the Administration tab on the Ribbon Bar and then click System - Scheduling.
2. Click Task Scheduler. The Task Schedule Editor form is displayed.
3. Mouse-click to select Set Options.

   If your primary mouse button is the left button, click the right button to display the command menu. If your primary mouse button is the right button, click the left button to display the menu.

4. Update the boxes on the form.
5. Click OK to save your settings.



The Set Options form is used to capture a default Microsoft Windows user account and password which can be used instead of the active Windows user when new tasks are created. It is also used to add Opera 3 user and group codes for those people who are responsible to scheduling tasks created in Opera 3 (this currently applies only to repeat invoices that are set up in the Sales Order Processing or Invoicing applications).

Notes

Box	Description
Default Scheduler Account	These settings allow an alternative Windows user ID to be used when the task is run. If this feature is not used the Windows user ID for the user who created the task is used when the task is run.
Windows User	The default Windows User for new tasks that are created in Task Scheduler. This applies if the **New Tasks should be the Default Scheduler Account** box is ticked.
Password	The password for the default Windows User.
Messaging Settings	These settings apply to tasks that are created in the **Repeat Invoice** command in the Sales Order Processing or Invoicing applications. The **Repeat Invoice** command includes a feature to defer the posting of contract documents until a date and time that is defined. This feature works with the Task Scheduler application which is where the date and time for the actual posting are set up. A task can either be scheduled at the same time as setting up deferred repeat invoicing or a message can be sent to an administrator to schedule it for when it needs to be posted. This is useful for those users who do not have **Task Scheduler** installed on their computer or they have not been trained to use it.
User ID(s)	The login IDs for the people who will schedule repeat invoicing postings in Task Scheduler. If you want more than one person to receive the message, separate each login ID with a comma. For example, if you wanted both the MANAGER and ADMIN users to receive the message, enter ***MANAGER, ADMIN*** in this box. **Note:** User IDs are set up on the **System - Maintenance - User Profiles** form.
Group ID(s)	The group IDs for the people who will schedule repeat invoicing postings in Task Scheduler. If you want more than one group to receive the message, separate each group ID with a comma. **Note:** Group IDs are set up on the **System - Maintenance - User Groups** form.
Message Duration	The length of time you want the message to be active for the selected recipients. For example, if you select **1 day** the message will be displayed for up to one day before it expires. If a user is not logged in to Opera at the time but does log in up to a day after the message is sent, the message will still be displayed. If they log in after a day is passed, the message will not be displayed. Once a message is read it is not displayed again.

Box	Description
Messaging Settings	These settings apply to tasks that are created in the **Repeat Invoice** command in the Sales Order Processing or Invoicing applications. The **Repeat Invoice** command includes a feature to defer the posting of contract documents until a defined date and time. This feature works with the Task Scheduler application which is where the date and time for the actual posting are set up. A task can either be scheduled at the same time as setting up deferred repeat invoicing or a message can be sent to an administrator to schedule it for when it needs to be posted. This is useful for those users who do not have **Task Scheduler** installed on their computer or they have not been trained to use it.
User ID(s)	The login IDs for the people who will schedule repeat invoicing postings in Task Scheduler. If you want more than one person to receive the message, separate each login ID with a comma. For example, if you wanted both the MANAGER and ADMIN users to receive the message, enter ***MANAGER, ADMIN*** in this box. **Note:** User IDs are set up on the **System - Maintenance - User Profiles** form.
Group ID(s)	The group IDs for the people who will schedule repeat invoicing postings in Task Scheduler. If you want more than one group to receive the message, separate each group ID with a comma. **Note:** Group IDs are set up on the **System - Maintenance - User Groups** form.
Message Duration	The length of time you want the message to be active for the selected recipients. For example, if you select **1 day** the message will be displayed for up to one day before it expires. If a user is not logged in to Opera at the time but does log in up to a day after the message is sent, the message will still be displayed. If they log in after a day is passed, the message will not be displayed. Once a message is read it is not displayed again.

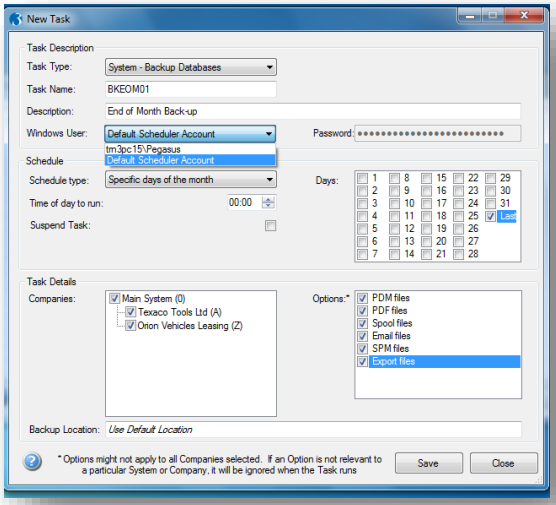
Email server details must be entered so that debt correspondence, payslips and P60s generated in Opera 3 can be sent by email to customers and employees.

Email Server Settings	Enter the settings of your SMTP mail server. As a minimum you must update the **SMTP Server Name** and **Port Number** boxes. **Tip:** To test the settings then you can send a test email by entering a from and to email address in the **From Email Address** and **To Email Address** fields respectively and clicking the **Send test email** button. **Note:** It is a pre-requisite of using the e-mail features in Opera 3that an SMTP mail server is configured within the Scheduler. Note:

Notes

3.2 Creating a New Task

Use the **New Task** form to set up a task to be run on your Opera 3 data. Each relevant box on the form must be updated before the form can be saved. An exclamation mark icon is displayed next to each box that must be updated.



Tip: Before adding a new task, set up a default Windows user called 'SchedulerUser' or similar on your Windows server and update the Set Options form with the user's login name. Tick the New Tasks should use the Default Scheduler Account box; all new tasks will then use the default user. You then only need to set the necessary permissions for this user rather than each person who uses Scheduler.

To create a new task;

1. Open the System folder and click Utilities or click the Administration tab on the Ribbon Bar and then click System - Utilities.
2. Click Scheduler. The Task Schedule Editor form is displayed.
3. Either click the New Task button or right-click to select New Task.
4. Select the Task Type for the task, and then complete the other boxes on the form.
5. Click Save to save the task and close the form.
6. Click Close to close the Task Schedule Editor form.

Notes

Once a task is set up in the Schedule Editor, a task is also set up in Windows Scheduler that includes the day/s and time that the task will be run. At the required time Windows Scheduler then calls the Schedule Runner that reads the tasks that were set up in the Schedule Editor. The Schedule Runner then calls the Task Runner which performs the update on the data.

Tip: Once a task has been run, use the View Last Run Details form to see an audit trail of the process.

Box	Description
Task Type	The type of task that has been set up. The available tasks are listed below. Some of the tasks have options that should be considered when tasks are created. All the options are enabled so you can use them. However, they may not all be relevant to your installation of Opera 3. For example, in the Backup Databases task, there is an option to include documents that were scanned using the Document Management module. So if you do not use Document Management, you can ignore this option. See the Task Types Help topic for detailed information about the tasks and their options.
Task Name	A unique reference to identify the task, which cannot include spaces or special characters (like '!' or '?').
Description	The task's description or 'friendly name'.
Windows User	Scheduler uses a Windows user login name when new tasks are set up and when the tasks are run. The Windows User box on the Tasks form displays either the domain name and login name for the user who is creating the task or it displays Default Scheduler Account if a default Windows user is used for new tasks. **Tip**: Before adding a new task, set up a default Windows user called 'SchedulerUser' or similar on your Windows server and update the Set Options form with the user's login name. Tick the New Tasks should be the Default Scheduler Account box; all new tasks will then use the default user. You then only need to set the necessary permissions for this user rather than each person who uses Scheduler. The Windows user must have necessary permissions to the following locations: • For a task to be created successfully: ○ the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed. • For a task to be run successfully: ○ the Windows user must be an administrator on the Opera 3 server ○ the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed. ○ the Windows user must have full permissions to the network share name on the Opera 3 server called O3 Server XXX Dynamic (where XXX is either VFP or SQL). This share is created automatically on each workstation where Scheduler is installed. ○ if a repeat invoicing task has been set up from the Repeat Invoice command in the Sales Order Processing or Invoicing applications and it has been set up to print to a specified printer, that printer must have been set up by the Windows user at the Opera 3 server. **Important**: Permissions are not set up automatically; they need to be set up manually in Windows.
Password	This is the password for the user displayed in the **Windows User** box. The Scheduler uses this password when a task is run on your data. If the password is entered incorrectly the task will not run. **Important:** A message will normally be displayed if you enter your password incorrectly. However a message is not displayed if the Scheduler components are installed in the same computer.

Schedule Type	You can choose to run the task on a certain day every week, certain dates every month, or once on a specific date. Depending on the option you choose, further boxes and displayed on the form so you can select the required days, dates or a specific date. *Scheduler works with the Windows Task Scheduler. Depending on the Windows product you use, it uses either Windows Task Scheduler 1.0 or Windows Task Scheduler 2.0.* *Windows Task Scheduler 2.0 includes more features that you can use when you define a monthly task.* ***Task Scheduler 1.0*** Task Scheduler 1.0 is included with Windows 2000, Windows XP and Windows Server 2003. It is designed to run tasks at scheduled times or specified intervals. ***Task Scheduler 2.0*** Task Scheduler 2.0 is included with Windows Vista, Windows 7 and Windows Server 2008. In addition to running tasks on scheduled times or specified intervals, Task Scheduler 2.0 also allows the following choices in the Scheduler when you define a monthly task: • You can select more than one day. • You can select an option called 'Last day of the month'. This is useful where the last of a month is not the same day as the last day in another month.
Time of day to run	The time the task will be run. If you schedule more than one task to run at the same time, Scheduler will run the first task that is allowed access to the data. For example, if you schedule to run the Sales Ledger Period End and the Purchase Ledger Period End at midnight on the last day of the month, if the Sales Ledger process gets access to the required data first, it will run. The Purchase Ledger process will then not run. Tip: If you need more than one task to be processed in sequence you can link them together using a Chain task. You do not need to schedule each task in the chain. The first task is scheduled to run at the required time and the next tasks will follow automatically.
Suspend Task	Tick to prevent the task from running.
Notification type	Opera 3 Notification Services is available in Scheduler. This feature makes it possible to have messages sent to Opera 3 users, to schedule a shutdown for some or all users in Opera 3, or to prevent users from logging on to Opera 3. • Select Message Only to send desktop messages to selected users or groups of users in Opera 3 when the task starts. Scheduled messages are displayed on each user's desktop when they are using Opera 3. Any users who are not using Opera 3 when a message is scheduled to be displayed will be notified when they log in to the application if the message is still relevant. You enter the message in the Message box. There may be a slight delay between the task starting and the message being displayed. • Select Shutdown to schedule a shutdown for selected users to force them out of Opera 3 when the task starts and to lock them out until the task has finished. If the task is a chain, users will be prevented from using Opera 3 until all tasks in the chain are completed. Users will receive three messages before a shutdown happens. The time when the first message is displayed is controlled by what you enter in the Show for option. The time when the second and third messages are displayed is controlled by the entries in the Notification Service messages boxes on the System - Utilities - System Preferences form. • Select Lockout Only to prevent users from logging on to Opera 3 when the task starts. If the task is a chain, users will be locked out of Opera 3 until all tasks in the chain are completed.
Show for	This controls the amount of time that the message is displayed for if the Notification Type box is set to 'Shutdown'. You can enter the time in minutes or hours.

Notes

Notification Notes –

Notifications workings

Overlapping notifications – it does not combine them as such and only tends to show the first one. So if there are more than 2 and are starting at the same time, it takes the longest notification and does not show the short one or any overlapping following ones and is also controlled with system/company specific messages.

Lookout – general enhancement

The message is now available for editing – as for both Lockout and shutdown the message is visible. This was from v1.5x onwards due to the Scheduler and Notification integration functionality.

Further integration information

Can be found in the Utilities section of the training manual

Message	This is the message that is displayed if 'Message Only' is selected from the Notification Type drop-down list box.
Companies	Tick the companies you want the task to be run on. You can select as many companies as required. The task will update first the company at the top of the list, then the next company and so on. **Important:** The time required to complete the task depends on the number of companies selected and the size of the data.
Task Details	This displays the details of a repeat invoice task, including the chosen dates and options, and the printer that was selected in the Repeat Invoice command in the Sales Order Processing or Invoicing applications. If a message was sent to one or more administrators by the person who sent up the deferred repeat invoices, that is also displayed.
Backup Location	This is relevant only for the System - Backup Databases task. You only need to change this if you want to save the backup file in a non-default location. The default location is the O3 Server XXX Dynamic share on the Opera 3 server (where XXX is either VFP or SQL). This share is created automatically on each workstation where Scheduler is installed. Note: Mapped network drives cannot be used as a backup location.

Notes

3.2.1 Task Types and their Options

This Help topic describes each of the available tasks and if relevant, the options that are available for each task.

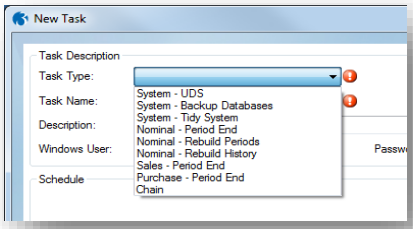
These tasks can be scheduled:

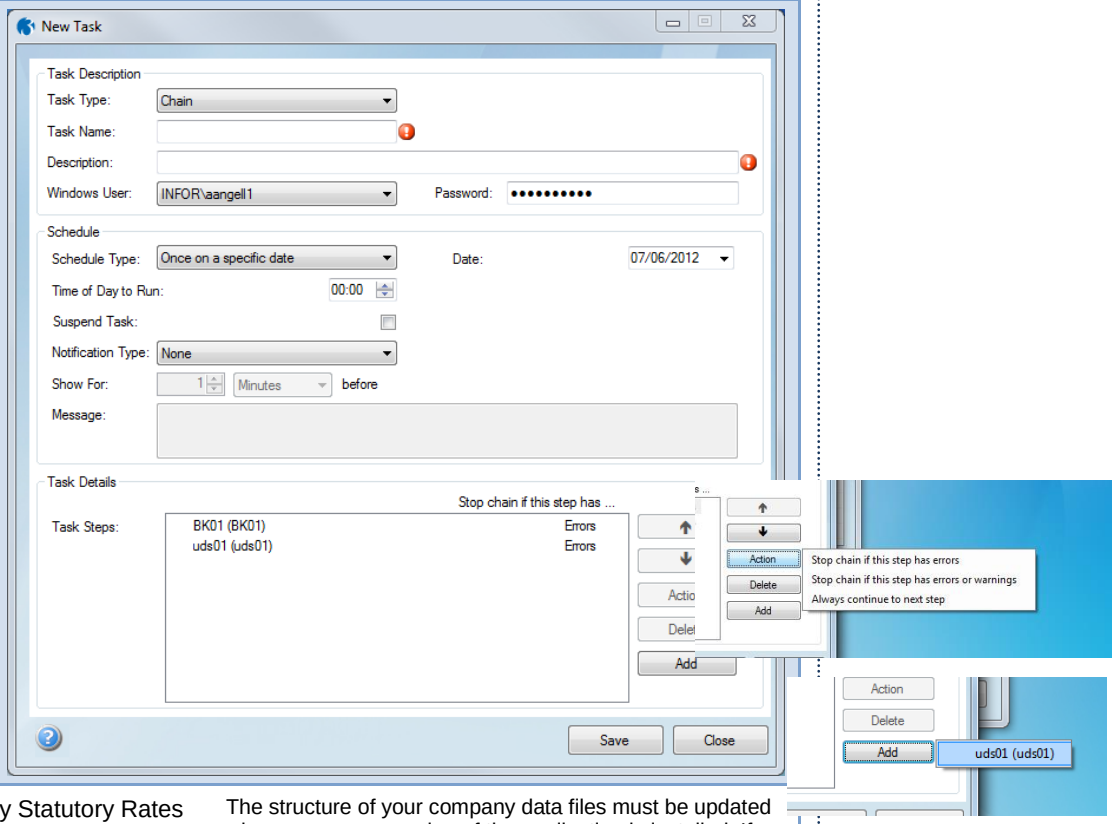
- Chain (used to link different tasks together so that are processed in sequence)
- Update Data Structures
- Backup Databases
- Tidy System
- Nominal Ledger Period End
- Nominal Ledger Rebuild Periods
- Nominal Ledger Rebuild History
- Sales Ledger Period End
- Purchase Ledger Period End
- Repeat Invoices. This task is set up differently to the others in Pegasus Scheduler. It is created in the Repeat Invoices command in either the Sales Order Processing or the Invoicing applications in Opera 3 and then scheduled in the Task Scheduler. For more information, see the Repeat Invoices (Scheduled) Help topic.
- Web Xchange - Reorganise Files.

Tip: *Before adding a new task, set up a default Windows user called 'SchedulerUser' or similar on your Windows server and update the Set Options form with the user's login name. Tick the New Tasks should be the Default Scheduler Account box; all new tasks will then use the default user. You then only need to set the necessary permissions for this user rather than each person who uses Scheduler.*

What happens if a task is running and a user logs in?

It should lock the files and not allow a user to log in if the task requires exclusive access - example was the back-up routine - mentioned an SEQCO Locked by another user. For a Period end, a user could still log in, but not access the process with locked files (Sales Period end would mean you cannot access element associated with Sales.



Task	Options	Notes
		System Manager tasks
Chain	None	If you need more than one task to be processed in sequence you can link them together using a Chain task. You do not need to schedule each task in the chain. The first task is scheduled to run at the required time and the next tasks will follow automatically. A chain can be set up to stop further processing if errors or warnings are encountered or to continue to the next task even if errors or warnings are found.
		
Update Data Structures	Copy Statutory Rates	The structure of your company data files must be updated whenever a new version of the application is installed. If you tick this box, the existing data files are updated to accommodate changes or enhancements in the new programs that have an impact upon them. If you have more than one company profile, you must carry out the Update Data Structures command on each company. ***Copy Statutory Rates*** Pegasus Software update the demonstration data with the latest rates for income tax, national insurance, and statutory payments' rates as announced by the Chancellor of the Exchequer. The best way to update your company's tables is by using the **Copy Statutory Rates**
	Update Transaction PDF Refs.	Select this option to correct paths to invoice and credit note PDF images in the stock transactions table (?_CTRAN) using the equivalent paths in the sales transactions table (?_STRAN). This may be necessary if an image does exist but you see the message 'No PDF image exists for this transaction' in Stock Control when you try to view a PDF. **Note**: This option is relevant for editions of Opera using the Stock Control application and Visual Foxpro as its data store. If you do not use Stock Control or use SQL Server for your Opera data store the option is hidden.
	Force Rebuild Tables and Indexes	This controls whether the selected company/s database and their indexes are rebuilt. This may be necessary if you are experiencing database errors or performance issues when you use Opera.

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Note: This option is relevant for editions of Opera using Visual Foxpro as its data store.

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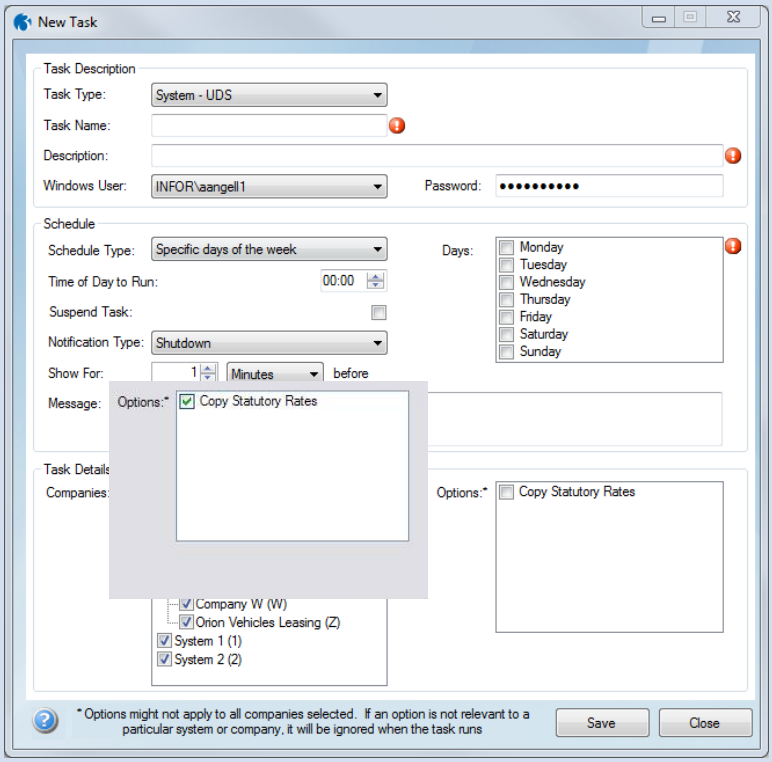
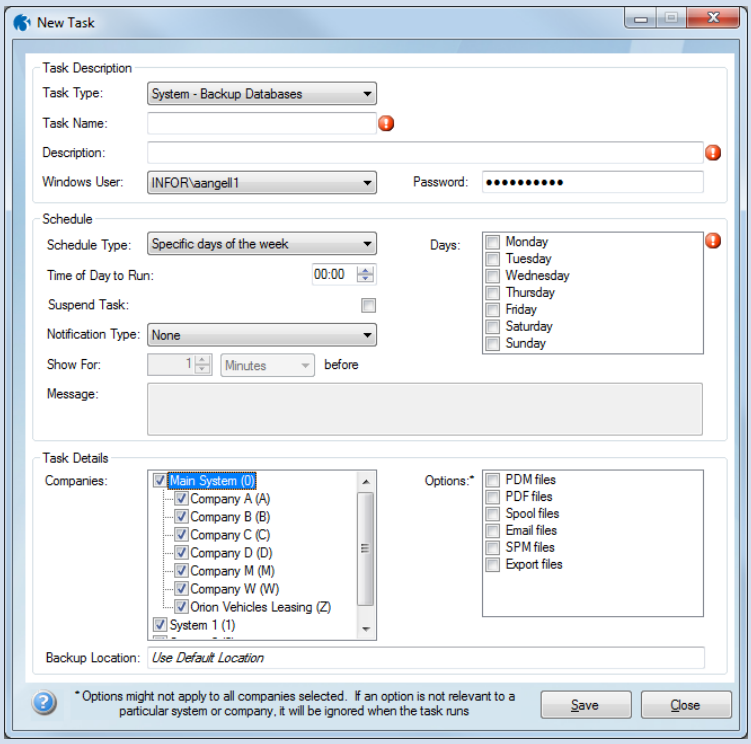


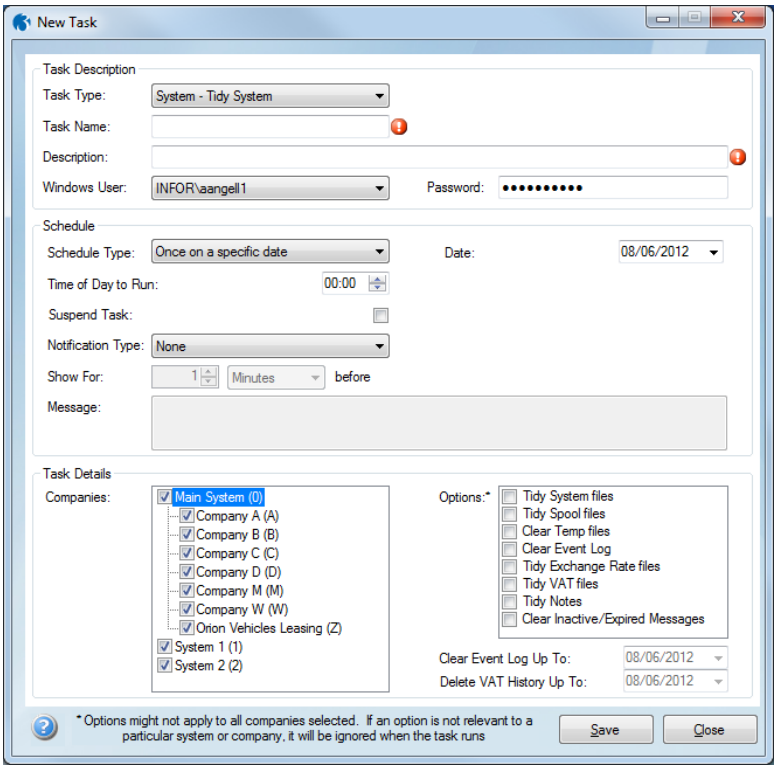
Backup Databases	PDM files	The Pegasus Document Management database retains PDM system-wide data like users and user roles. The DM_? database (where ? is the company's code) retains PDM company-specific data like document information types and the information library that links to the document image. The actual document images are stored beneath the '?_DOCUMENTS' subfolder of the application's Data folder (where ? is the company's code). **NB:** The images are held in an encrypted format in files suffixed with 'WEI'. If you tick this box, the contents of the '?_DOCUMENTS' folder as well as backing up the SQL Server databases are included in the backup.
	PDF files	Portable Document Format files are saved in the '?_PDF' subfolder (where ? is the company's code) of the application's dynamic data folder (the location of the dynamic read-write data on the server used for multi-user installations, or stand-alone computer for single-user installations). If you tick this box, PDF files are included in the backup.
	Spool files	Spool files are saved in the '?_SPOOL' subfolder of the application's dynamic data folder (where ? is the company's code). If you tick this box, spool files are included in the backup.
	Email files	Emails are saved in the '?_MAIL' subfolder of the application's dynamic data folder (where ? is the company's code). If you tick this box, emails are included in the backup.
	SPM files	The Sales Pipeline Management module works with Microsoft Excel spreadsheets, Microsoft Word documents and Microsoft Outlook emails. The files are saved in the '?_SPREADSHEET', '?_MAILMERGE', and '?_LETTERTEMPLATE' folders (where ? is the company's code). If you tick this box, these additional files are included in the

Notes

		backup.
Backup Databases…	Export Files	An option called Export files is displayed on the System – Backup Databases task form. When selected, all files that are in the Export folder are included in the data backup. This folder is the default folder for storing reports saved as Microsoft Excel files in Opera 3. It is also the default folder for reports saved in the Nominal Ledger - Matrix Reports command.
	Backup location	This is relevant only for the System - Backup Databases task. You only need to change this if you want to save the backup file in a non-default location. The default location is the O3 Server XXX Dynamic share on the Opera 3 server (where XXX is either VFP or SQL). This share is created automatically on each workstation where Scheduler is installed."
		
Tidy System	Tidy System files	If you tick this box, any report layouts, company and user profile records marked for deletion are removed from the disk. When a company profile record is removed, the company is also removed from Allow Access to Company Codes list box on the User Profiles form. You can choose whether you want to remove data files associated with the company profile.
	Tidy Spool files	If you tick this box, any print spool files marked for deletion on the Spooler Control form in the System module are removed from the disk.
	Clear Temp files	If you tick this box, any temporary data files are removed from the disk. Temporary files, created during certain processes, are stored in the application's Temp folder. Temporary files are normally deleted automatically when the processes that use them are completed successfully. System faults, such as power failures, may result in unused temporary files remaining in error.

Notes

	Clear Event Log ***Clear Event Log…***	If the User Event and User Logs options are used, the application automatically maintains a log file that records when users log on and off the system. Each entry in the log includes the date and time of logging on or off, the terminal name and user ID. You can view the contents of this log file using the View Event Log command. Depending on the amount of activity associated with the application, this log can become quite large and may require clearing periodically. If you tick this box, you must also enter a date up to which the files will be tidied. This is an inclusive date so all events up to and including that date are cleared.
	Tidy Exchange Rate files	If you tick this box, any exchange rate records marked for deletion are removed from the disk. Exchange rate records are maintained using the Exchange Rates form in the System module.
	Tidy VAT Files	If you tick this box, any VAT rate code records marked for deletion are removed from the disk. VAT code records are maintained using the VAT Processing form in the System module. If you tick this box, you must also enter a date up to which the files will be tidied.
	Tidy Notes	If you tick this box,any note records marked for deletion are removed from the disk. These records are maintained using the Notes command on the toolbar for those records provided with the facility.
	Clear Inactive/Expired Messages	An option called Clear Inactive/Expired Messages is displayed on the System – Tidy System task form. When selected, inactive or expired messages and shutdown records that were created from the System – Scheduling menu in Opera 3 are removed. Messaging and Shutdown are new features of Opera 3.



Nominal Ledger tasks		
Period End	Compress Brought Forward Transactions	For balance forward accounts, each transaction in the period is consolidated into a brought-forward balance transaction if this box is ticked.
Period End..	Block postings from ... *Block postings from ...*	If you use the Open Period Accounting feature, you can block the period you are closing to prevent any further transactions being posted to the period. You can decide to block any of these modules on an individual basis:Nominal Ledger • Sales Ledger • Purchase Ledger • Fixed Assets • Payroll • Stock Control. The following happens in the new period after the Period End is run: 1. The period status on the Financial Calendar form for the Nominal Ledger, Sales Ledger, Purchase Ledger, Fixed Assets, Stock Control and Payroll modules is set to 'Open'. You can change the status to 'Blocked' in Opera 3 for any module other than the Nominal Ledger after the Period End process is completed. 2. The Year To Date and Period To Date balances are updated for every Nominal Ledger account that had transactions posted in advance to the new period because they become current transactions. For example, if in period 1 a posting was made to period 3, when the Period End is run at the end of Period 2, the transaction becomes current, and the balances are updated. **NB:** Open Period Accounting is available in Opera 3 Enterprise and Opera 3 Enterprise SQL.
	Continue With Untransferred Transactions	Untransferred transactions from other modules are posted into the next Nominal period if the transaction date falls either before the current nominal period or in the new period. If you do not want these transactions to be posted into the new period, you must run the respective Transfer command on the Nominal Utilities menu to transfer them into the current period before running the Period End.

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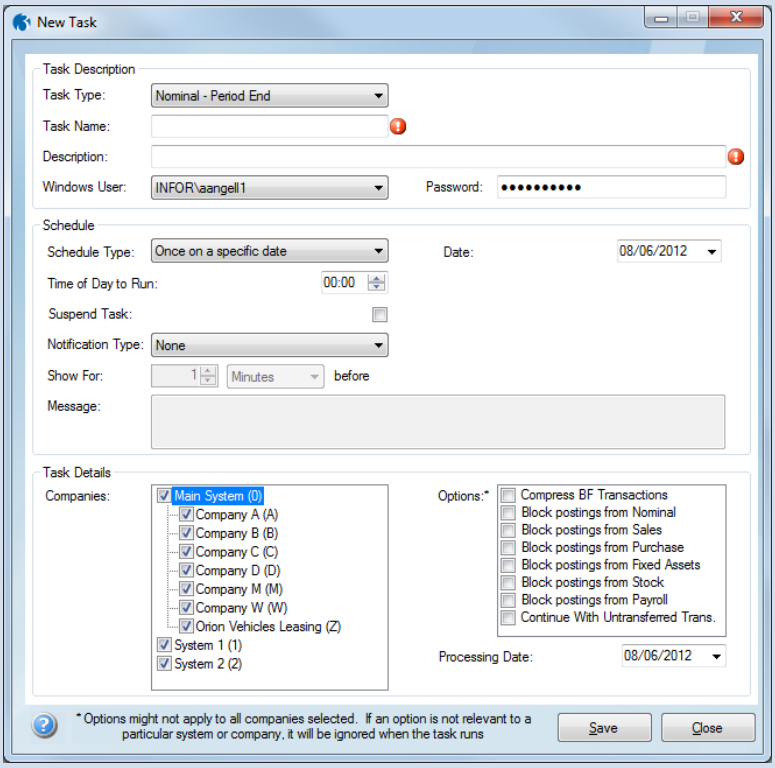
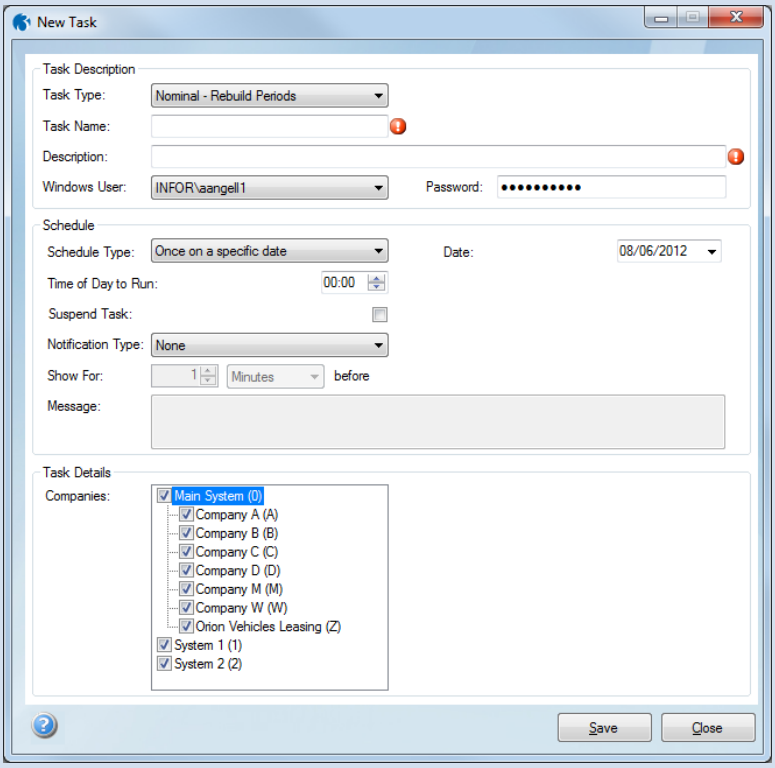


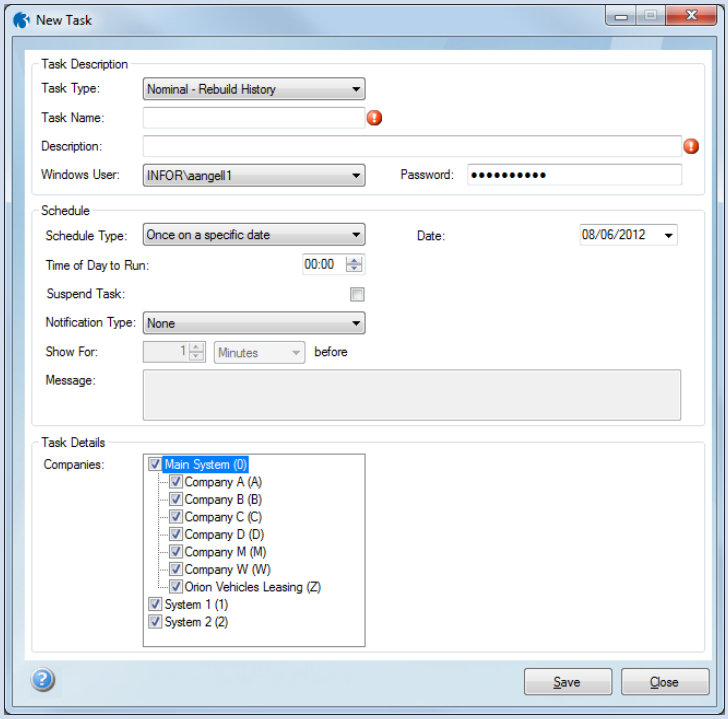
Rebuild Periods	None	If you tick this box, the Nominal Ledger account balances are recalculated for each period in the current financial year, and future financial years if the Open Period Accounting feature is used. Previous year balances are not changed by this process. **NB:** Open Period Accounting is available in Opera 3 Enterprise and Opera 3 Enterprise SQL.



Rebuild History	None	Whenever transactions are stored in the Nominal module, corresponding entries are made in a history data file. Once the history file is created, it should be maintained automatically and only require rebuilding

Notes

		in the event of any database corruption, for example due to a computer or power failure. If you tick this box, the history files associated with the Nominal Ledger are rebuilt.



	Sales Ledger task	
Period End	Zeroise Turnover	If you tick this box, the Turnover box on the each customer's record on the Processing form will be zeroised.
	Block postings to Nominal	If you use the Open Period Accounting feature, you can set the status for the current period in the Nominal Ledger to 'Blocked' for Sales Ledger, SOP and Invoicing postings. This prevents any further postings from these modules to the period in the Nominal Ledger. **NB:** Open Period Accounting is available in Opera 3 Enterprise and Opera 3 Enterprise SQL.
	Remove Completed Diary Actions	If you tick this box, the completed diary actions will be removed
	Remove Lapsed Diary Actions	If you tick this box, the lapsed diary actions will be removed

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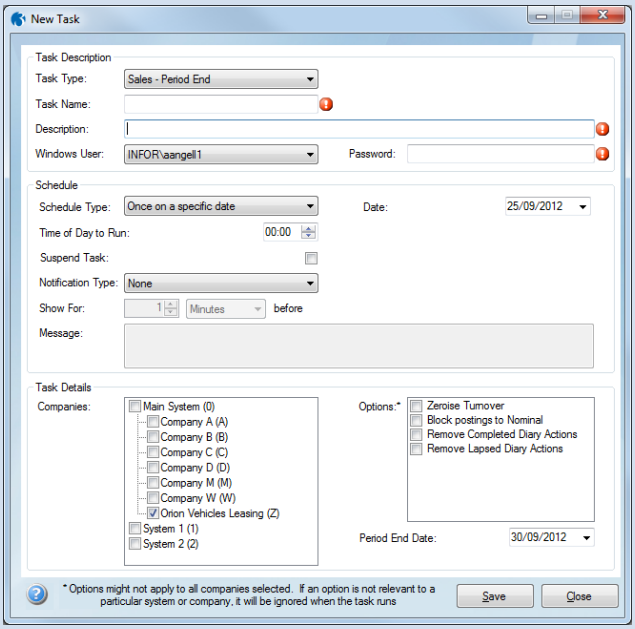
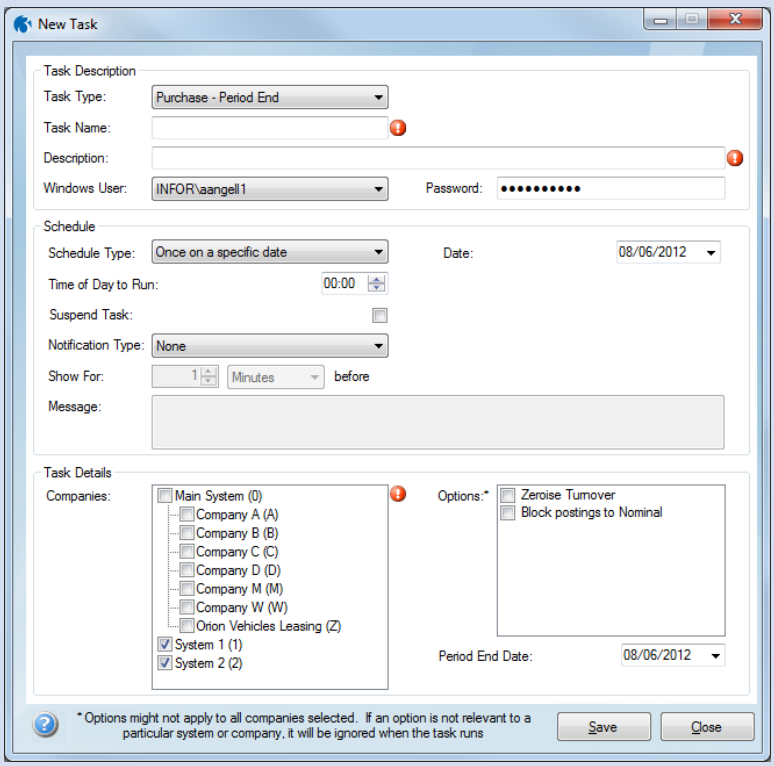


Purchase Ledger task

Period End	Zeroise Turnover	If you tick this box, the Turnover box on the each supplier's record on the Processing form will be zeroised.
	Block postings to Nominal	If you use the Open Period Accounting feature, you can set the status for the current period in the Nominal Ledger to 'Blocked' for Purchase Ledger, Purchase Invoice Register and POP postings. This prevents any further postings from these modules to the period in the Nominal Ledger. **NB:** Open Period Accounting is available in Opera 3 Enterprise and Opera 3 Enterprise SQL.



SOP / Invoicing Tasks

Repeat Invoicing	If invoice posting fails	If an invoice cannot be posted, you can select how the problem is dealt with. If an invoice cannot be posted, you can select how the problem is dealt with. Invoice postings can fail for a number of reasons, for example, if an account is over its credit limit or is on stop, or for technical reasons like the data could not be found. You can set it to either: continue to the next invoice to attempt to post it (continue processing) or stop any further invoices from being posted (stop processing). See Repeat Invoicing section for further information

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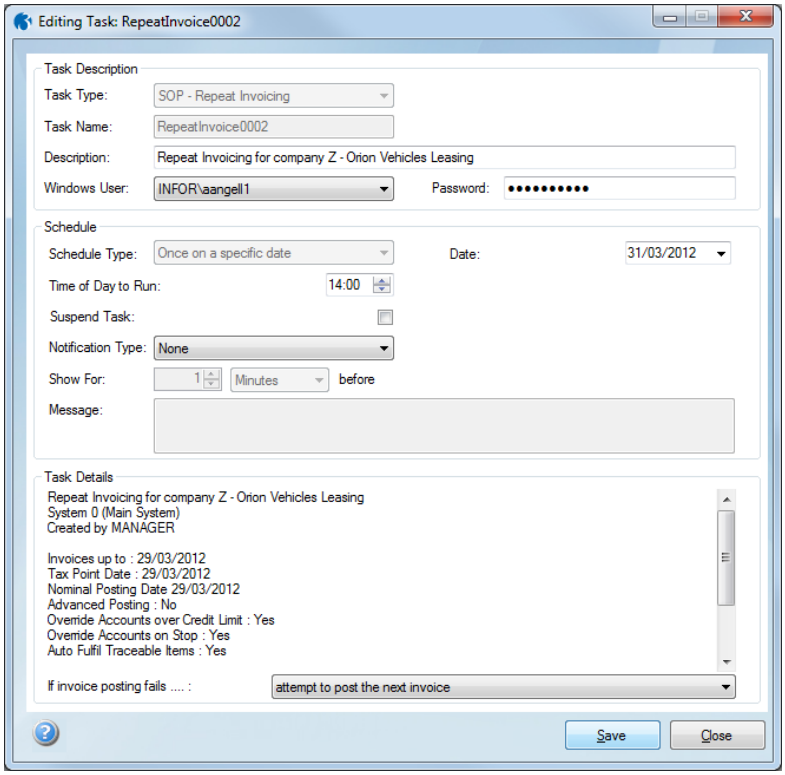

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Pegasus Web Xchange task **Using browser based technology, Pegasus WebXchange provides a set of services that are used to securely access and view Opera 3 data via a web browser. Users can log in using a range of devices using web browsers such as Internet Explorer, Google Chrome, Mozilla Firefox and Safari.**		
Web Xchange - Reorganise Files	Override days to retain	This task removes Pegasus Web Xchange audit records from the Opera 3 database. Tick the Override days to retain option to override the default period to retain the audit records (taken from the System Manager - PWX Centre - Set Options form in Opera 3). When data is imported into Opera 3 from the Pegasus Web Xchange website audit records are saved in various company audit tables. These records provide you with proof of changes made on the website. The number of audit records that are kept can build up over time so you may need to delete older records periodically. The audit tables include information about what was changed on the website and who made the changes. Audit records are also saved if changes are rejected by the Opera 3 administrator. The audit files are kept in the same location as the other company data tables. For example, if you want to keep audit records for about six months of changes on the website, enter '180' days. **Note**: This task only affects audit records; the actual changes on the website and in Opera 3 are not affected.

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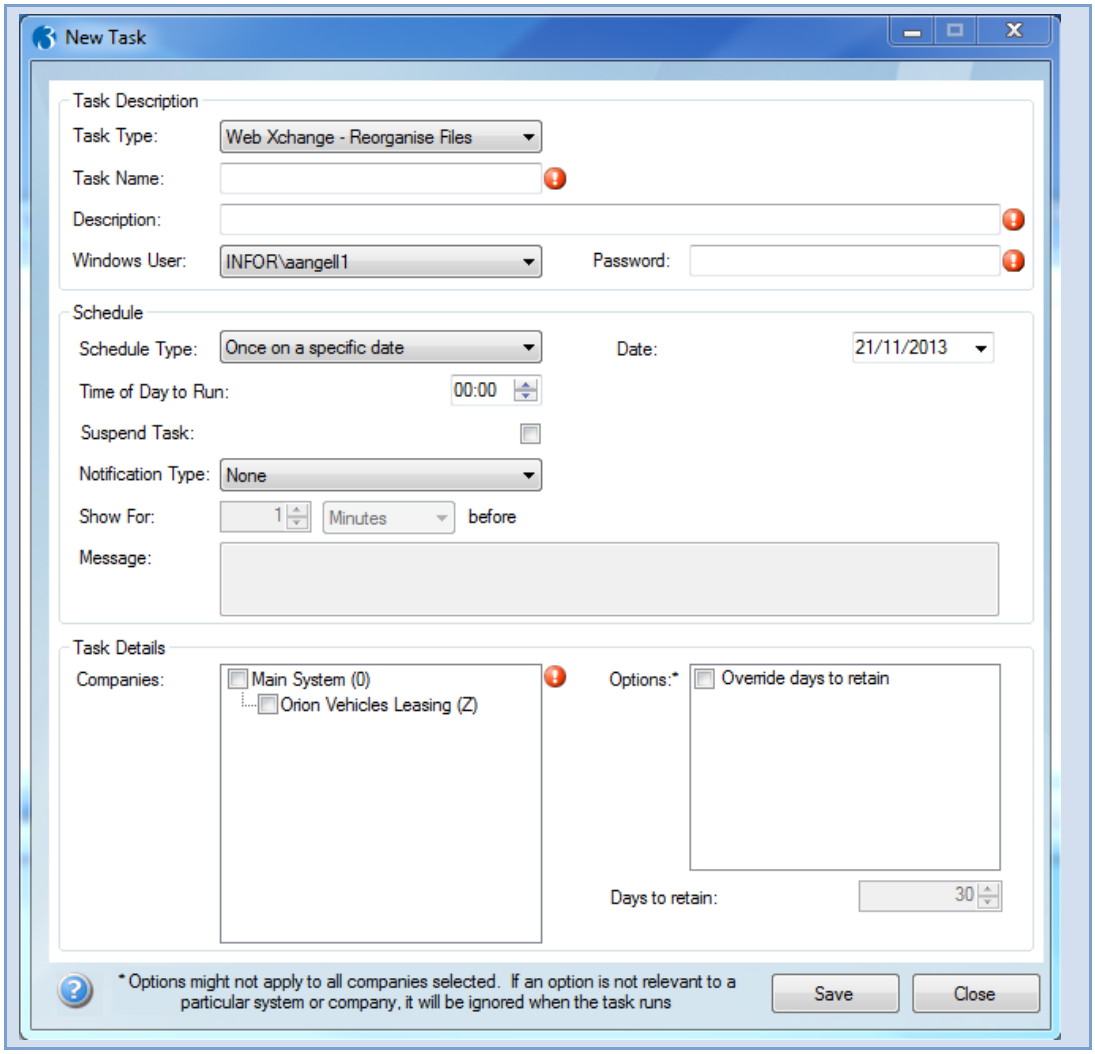

3.2.2 To Link Tasks in a Chain

Linking tasks together is a two-step process: first normal 'data-update' tasks need to be set up to allow them to be included in a chain; then a chain task needs to be set up to link the data-update tasks together.

Example:
*You want to link a number of essential tasks together and run them overnight on the last working day of the month. You set up a **Data Backup** task, an **Update Data Structures** task and a **Nominal Ledger Period End** task. You then set up a Chain task to link the tasks together and schedule it to run on the last day of each month.*

3.2.2.1 Step A: Setting Up Data Update Tasks

1. Open the System folder and click Scheduling or click the Administration tab on the Ribbon Bar and then click System - Scheduling.
2. Click Task Scheduler. The Task Schedule Editor form is displayed. Either click the New Task button or mouse-click to select New Task.
3. In the Task Type list, select the task to include in the chain. Enter a task name and description, *select the Windows user account and enter a password.*
4. In the Schedule Type list, select *Can be included in Chains.*

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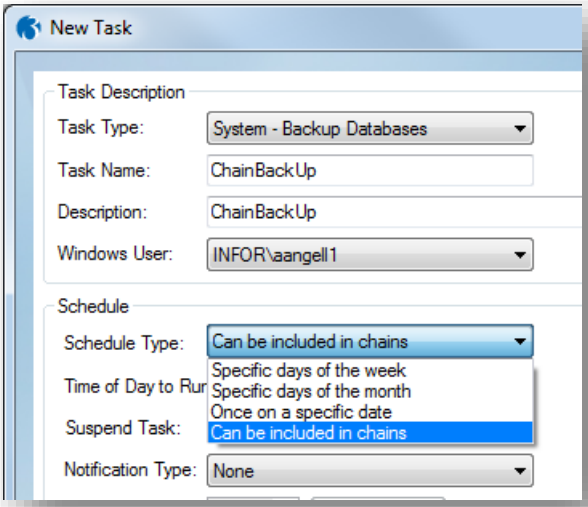
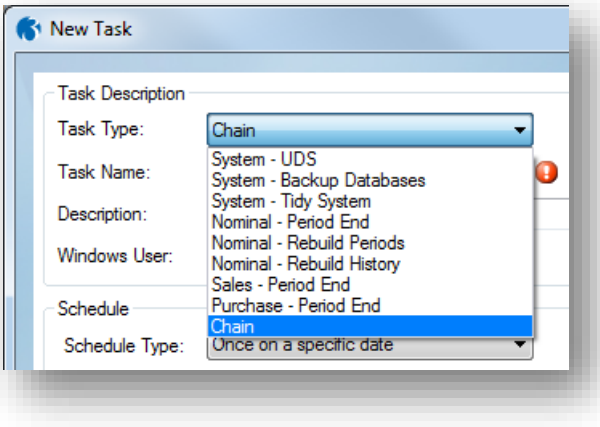


5. Under Task Details, select the companies to run the task on and choose the necessary options.
6. Click Save to save the task and close the form.

3.2.2.2 Step B: Linking tasks Together

1. From the Task Schedule Editor form, open the New Task form.
2. In the Task Type list, select Chain. Enter a task name and description, *select the Windows user account and enter a password*.



3. In the Schedule Type list, select specific days of the week, specific days of the month or once on a specific date. The enter the date and time of day to run.
4. In the Notification Type list, select Message only, Shutdown or Lockout only. If you select Shutdown to shut down Opera 3 before the task runs, you must also enter a number of hours or minutes in the Show for box plus a message. These details will be displayed for each Opera 3 user before the shutdown.
5. Under Task Details, click the Add button and select the first task to include in the chain. Repeat for each required task in the chain.

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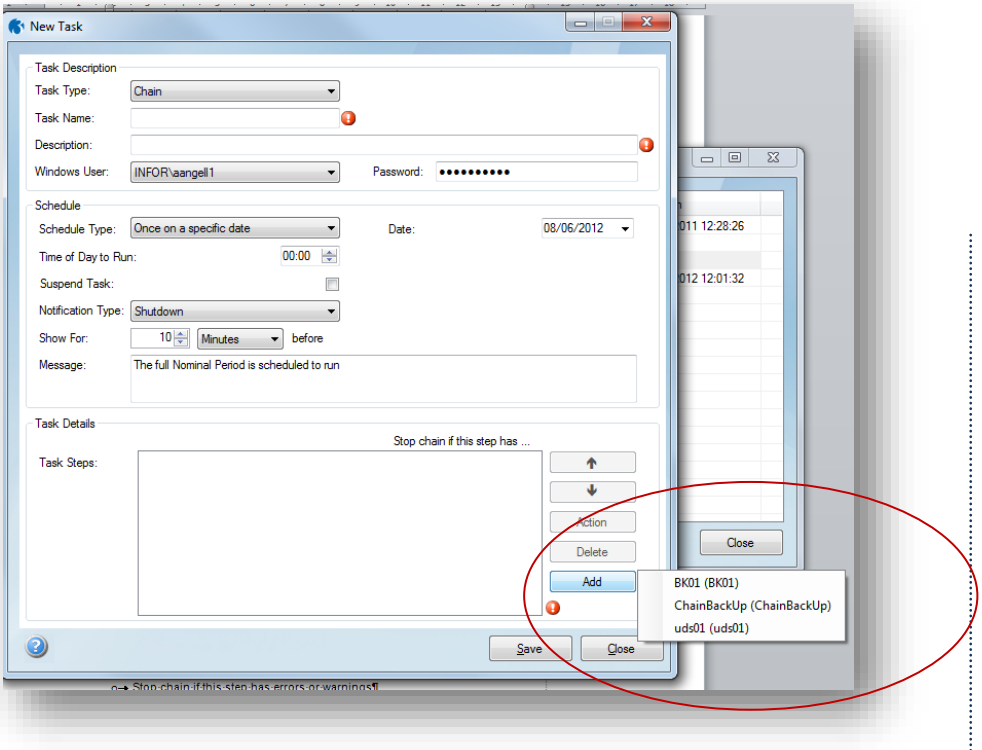
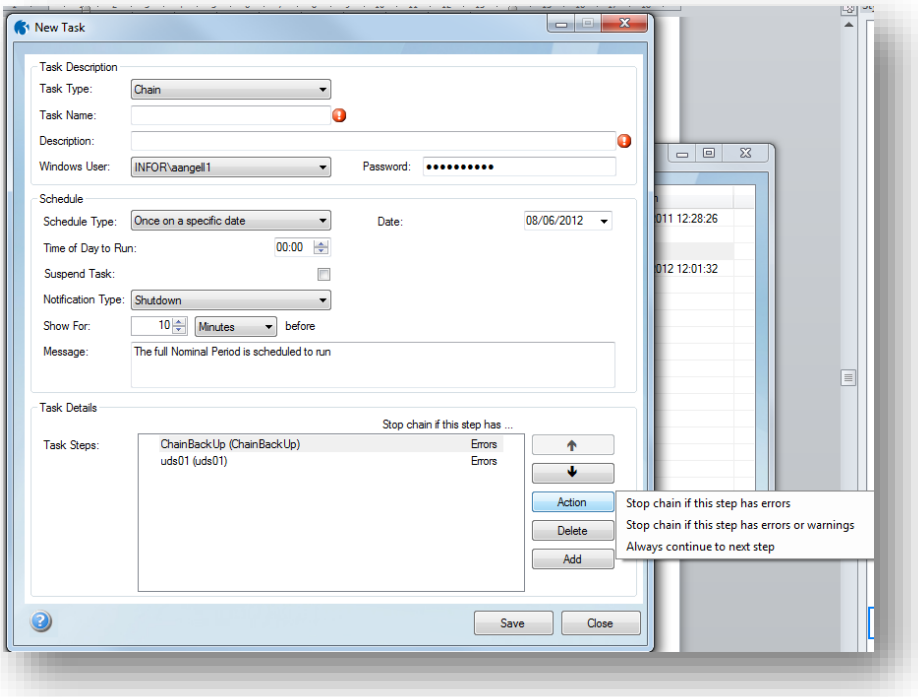


Is there a limit to the number of tasks for a chain?

No limit – tested up to 6 (training tested up to 3)

6. For each task in the chain, you can choose whether it will run if the previous task fails. By default the chain will stop if an error is found. Choose one of the following:

   - Stop chain if this step has errors
   - Stop chain if this step has errors or warnings
   - Always continue to next step.



7. Click Save to save the task and close the form.
8. Click Close to close the Task Schedule Editor form.

Tip: After choosing the tasks to include in the chain, use the arrow buttons if you need to change the sequence of the tasks in the chain.

Notes

3.2.3 Deleting a Task

1. Open the System folder and click Utilities or click the Administration tab on the Ribbon Bar and then click System - Utilities.
2. Click Scheduler. The Task Schedule Editor form is displayed.
3. Select the task you want to delete. Then either click the Delete Task button or right-click to select Delete Task.
4. Click Close to close the Task Schedule Editor form.

Important: If you delete a task you will not be able to un-delete it.

3.2.4 Creating a Repeat Invoicing Task

To Schedule a Repeat Invoice Task

The Repeat Invoice command in the Sales Order Processing or Invoicing applications includes a feature to defer the posting of contract documents until a date and time that is defined in Task Scheduler. A new task is automatically created in Task Scheduler but it can only be scheduled if the person who set up the repeat invoices also has Task Scheduler installed on their computer and they are trained to use it. They may ask an administrator to schedule it for them. These steps describe how an administrator can schedule these tasks.

1. Open the System folder and click Scheduling or click the Administration tab on the Ribbon Bar and then click System - Scheduling.
2. Click Task Scheduler. The Task Schedule Editor form is displayed.
3. Select the Repeat Invoice task you want to edit (these tasks have the icon next to the name). Then either click the Edit Task button or mouse-click to select Edit Task.
4. If your primary mouse button is the left button, click the right button to display the command menu. If your primary mouse button is the right button, click the left button to display the menu.
5. Select the date and time when the task will be processed.
6. From the If invoice posting fails ... box, if an invoice posting fails, choose either to continue processing (attempt to post the next invoice) or to stop any further processing. If an invoice cannot be posted, you can select how the problem is dealt with. Invoice postings can fail for a number of reasons, for example, if an account is over its credit limit or is on stop, or for technical reasons like the data could not be found. You can set it to either: continue to the next invoice to attempt to post it (continue processing) or stop any further invoices from being posted (stop processing).
7. Click Save to save the task and close the form.
8. Click Close to close the Task Schedule Editor form.

3.2.5 Repeat Invoice (Deferred)

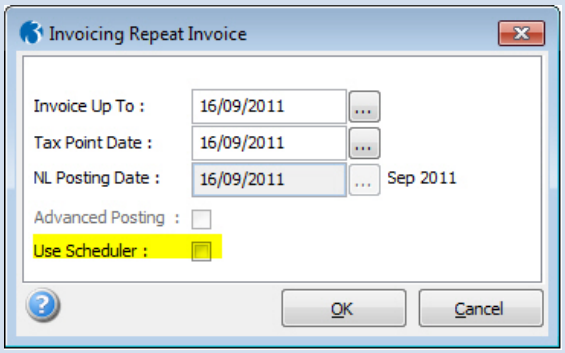
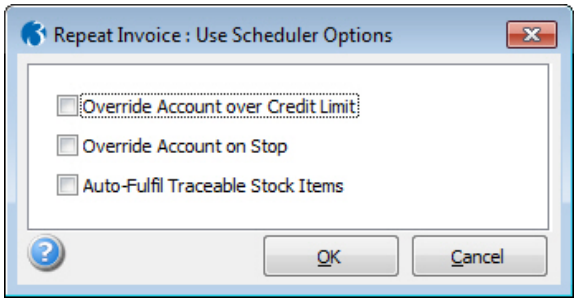
The Repeat Invoice command includes a feature to defer the posting of contract documents until a date and time you define. This feature works with the **Task Scheduler** application which is where the date and time for the actual posting are set up.

Notes

A task can be scheduled at the same time as setting up deferred repeat invoicing or a message can be sent to an administrator to schedule it for when it needs to be posted. This is useful for those users who do not have Task Scheduler installed on their computer or they have not been trained to use it.

The invoices that are posted are those that are ready for posting on the Invoice Up To date, not the date that you set up Repeat Invoicing for deferred postings. So, if on Monday you set up Repeat Invoicing to schedule invoice postings up to Friday that week, all the documents that are due to be posted up to Friday will be posted, not only those that were due to be posted up to Monday. For this reason you will not see the Suggested Repeat Invoices List form that is normally displayed when Repeat Invoicing is used for immediate postings.

This process involves working through a number of forms which are displayed in sequence:

Step	Form
1. The first form is the Repeat Invoicing criteria form that includes a box called Use Scheduler to allow the invoice postings to be deferred.	 The Schedule Later box is disabled if the Task Scheduler is not installed. Detailed steps to install Task Scheduler are included in the Opera 3 Installation Guide. See the User Guides Help topic for how to view the guide.
2. The Repeat Invoice Use Scheduler Options form is then displayed so you can decide the following: Whether accounts over their credit limit or on stop should be included in the invoice run. These options are enabled if the Override Credit Exceeded and A/C On Stop Status option is ticked on the Invoicing or Sales Order Processing - Utilities - Set Options form. Whether traceable numbers should be automatically picked for serial or batch traceable stock items. This is enabled if the Traceability option is ticked on the System - Maintenance - Company Profiles form. **Note**: If neither of these options are relevant, this form is not displayed.	

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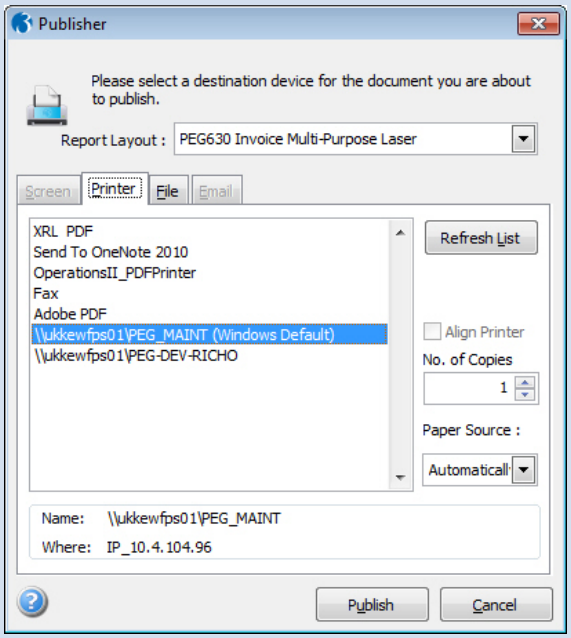
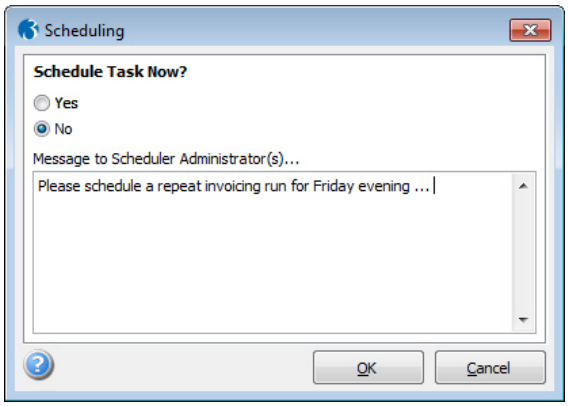
3. After selecting these options, the Publisher form is displayed so you can choose the printer and invoice design to use to print the invoices, or the name of the PDF or spool file name for the invoices.



4. The final form allows you to either send a message to your administrator to schedule the task in Task Scheduler, or to schedule the task yourself. To send a message to an administrator, you have to enter the Opera 3 login names of your administrators on the Set Options form in Task Scheduler beforehand. All the relevant information is displayed in Task Scheduler for the schedule task.



Notes

3.2.6 Technical Information

3.2.6.1 Prerequisites

These are the software prerequisites that must be installed before Deferred Repeat Invoicing can be used:

On the Opera 3 file server:

- Microsoft .NET Framework 4
- Opera 3 (1.30) server installation
- Opera 3 (1.30) client installation
- Pegasus Scheduler (1.30) server installation
- Pegasus Scheduler (1.30) client installation.

On the Opera 3 client computer:

- Microsoft .NET Framework 4
- Opera 3 (1.30) client installation
- Pegasus Scheduler (1.30) client installation (only if the computer will be used both to set up the deferred repeat invoice run and schedule the task in Task Scheduler).

3.2.6.2 Microsoft .NET Framework 4

The Opera 3 (1.30 and later) client installation includes a dynamic link library file (DLL) called **Pegasus.SchedulerInterface.dll** that is used by Deferred Repeat Invoicing. This DLL is installed on the client computer in the **C:\Program Files\Common Files\Pegasus Shared\Controls folder** (32-bit Windows products) or in the **C:\Program Files (x86)\Common Files\Pegasus Shared\Controls** folder (64-bit Windows products).

The file is also 'registered' automatically by the Opera 3 client installation if Microsoft .NET Framework 4 is installed on the client computer. If Microsoft .NET Framework 4 is not installed the file will not be registered and you will not be able to tick the Schedule Later box to defer the invoice postings. You must therefore make sure that Microsoft .NET Framework 4 is installed before installing the Opera 3 (1.30) client installation.

3.2.6.3 Scheduler Dynamic Share

The Pegasus Scheduler (1.30 and later) client installation creates a network share called **Scheduler Dynamic** on the client computer. This location includes an file called **Tasks.xml** which retains the details of all the tasks that have been set up. Administrators must give all users who set up tasks full read/write permissions in to this location in Microsoft Windows before Deferred Repeat Invoicing is used.

3.3 Editing an Existing Task

Notes

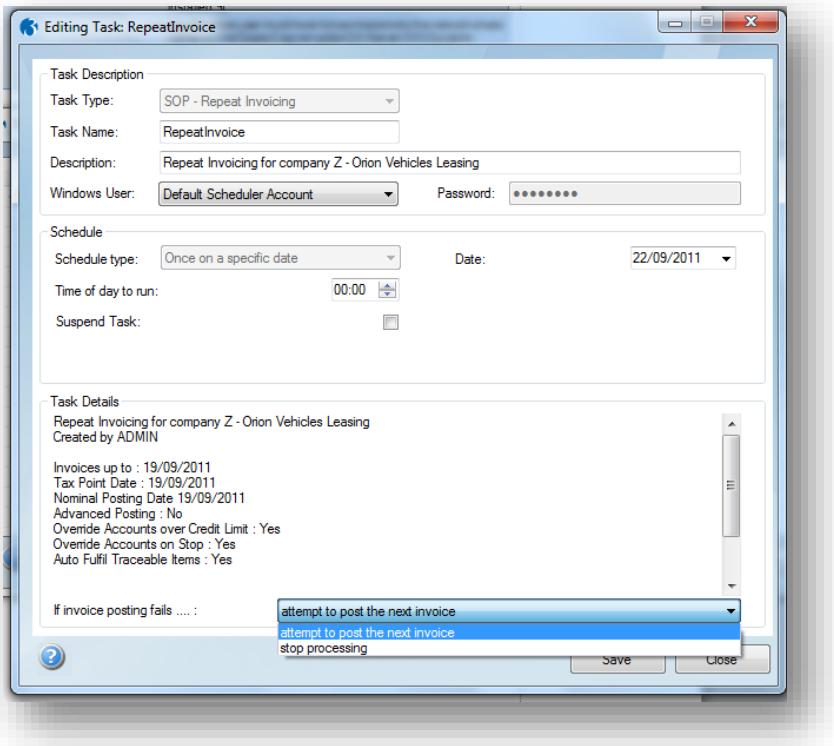
Use the Edit Task form to edit a task that was previously set up to run on your Opera 3 data.

If you edit a task the changes become effective the next time the task is run. Each relevant box on the form must be updated before the form can be saved.

An exclamation mark is displayed next to each box that must be updated.

1. Open the System folder and click Utilities or click the Administration tab on the Ribbon Bar and then click System - Utilities.
2. Click Scheduler. The Task Schedule Editor form is displayed.
3. Select the task you want to edit. Then either click the Edit Task button or right-click to select Edit Task.
4. Amend the boxes on the form as necessary.
5. Click Save to save the task and close the form.
6. Click Close to close the Task Schedule Editor form.

If you edit a task the changes become effective the next time the task is run. Each relevant box on the form must be updated before the form can be saved. An exclamation mark is displayed next to each box that must be updated.



Notes

You can edit most of the boxes on the form with the exception of these boxes:

Box	Description
Task Type	Once a task has been set up with a particular type, it cannot be changed.
Task Name	A unique reference to identify the task, which cannot include spaces or special characters (like '!' or '?').

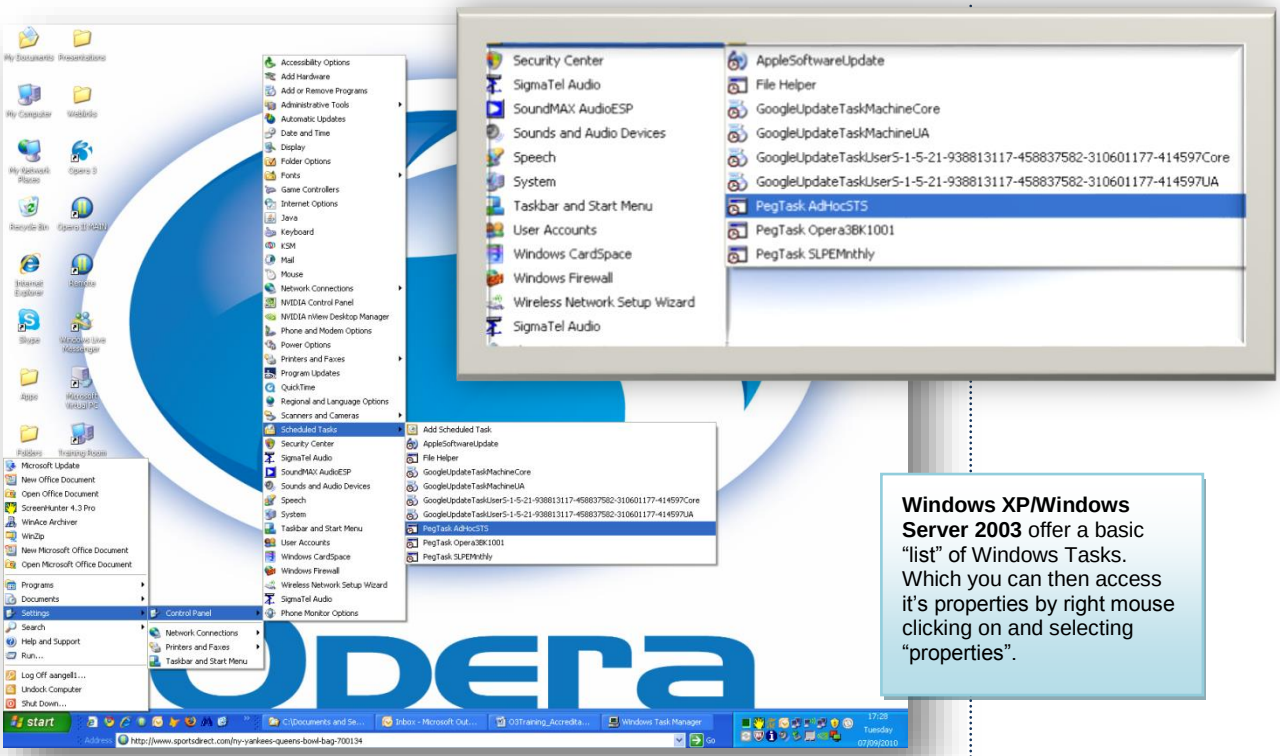
Windows User	*Scheduler uses a Windows user login name when new tasks are set up and when the tasks are run. The Windows User box on the Tasks form displays either the domain name and login name for the user who is creating the task or it displays Default Scheduler Account if a default Windows user is used for new tasks.*
	
	***Tip**: Before adding a new task, set up a default Windows user called 'SchedulerUser' or similar on your Windows server and update the Set Options form with the user's login name. Tick the New Tasks should be the Default Scheduler Account box; all new tasks will then use the default user. You then only need to set the necessary permissions for this user rather than each person who uses Scheduler.*
	
	The Windows user must have necessary permissions to the following locations:
	
	• *For a task to be created successfully:*
	  ○ *the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed.*
	• *For a task to be run successfully:*
	  ○ *the Windows user must be an administrator on the Opera 3 server*
	  ○ *the Windows user must have full permissions to the network share name on the Opera 3 server called Scheduler Dynamic. This share is created automatically on each workstation where Scheduler is installed.*
	  ○ *the Windows user must have full permissions to the network share name on the Opera 3 server called O3 Server XXX Dynamic (where XXX is either VFP or SQL). This share is created automatically on each workstation where Scheduler is installed.*
	  ○ *if a repeat invoicing task has been set up from the Repeat Invoice command in the Sales Order Processing or Invoicing applications and it has been set up to print to a specified printer, that printer must have been set up by the Windows user at the Opera 3 server.*
	
	***Important**: Permissions are not set up automatically; they need to be set up manually in Windows.*

Task Details	This displays the details of a repeat invoice task, including the chosen dates and options, and the printer that was selected in the Repeat Invoice command in the Sales Order Processing or Invoicing applications. If a message was sent to one or more administrators by the person who sent up the deferred repeat invoices, that is also displayed.
If invoice posting fails	If an invoice cannot be posted, you can select how the problem is dealt with. Invoice postings can fail for a number of reasons, for example, if an account is over its credit limit or is on stop, or for technical reasons like the data could not be found. You can set it to either: continue to the next invoice to attempt to post it (continue processing) or stop any further invoices from being posted (stop processing).

3.4 Windows Scheduler integrations

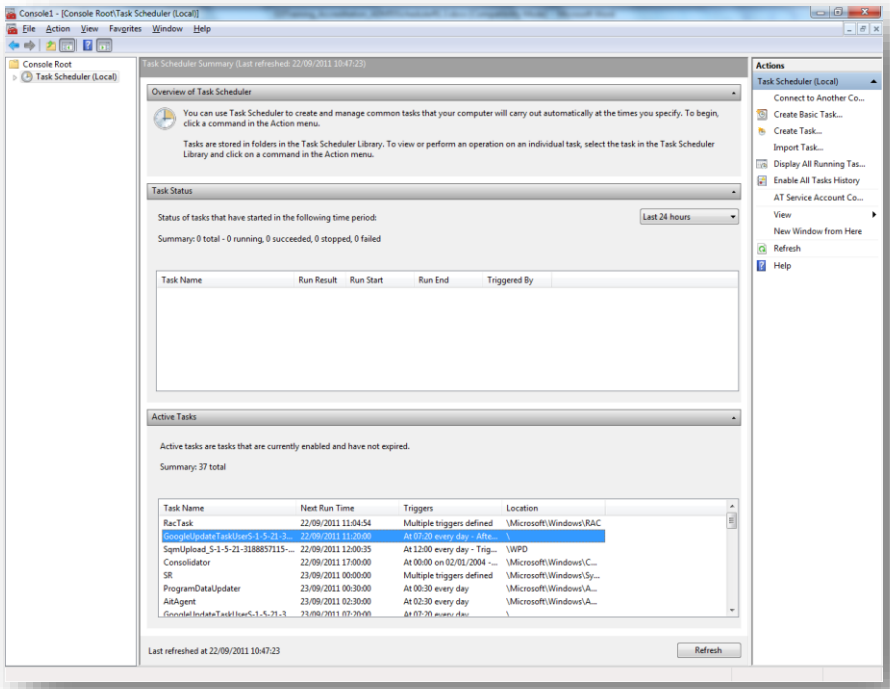
Notes

Opera 3 Scheduler integrates with the Microsoft Windows Scheduler. Information gathered from Microsoft Windows XP Operating System and Help.

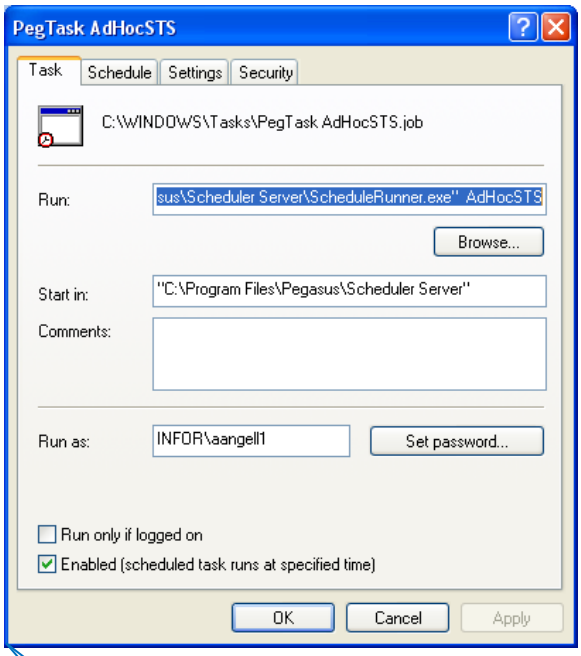


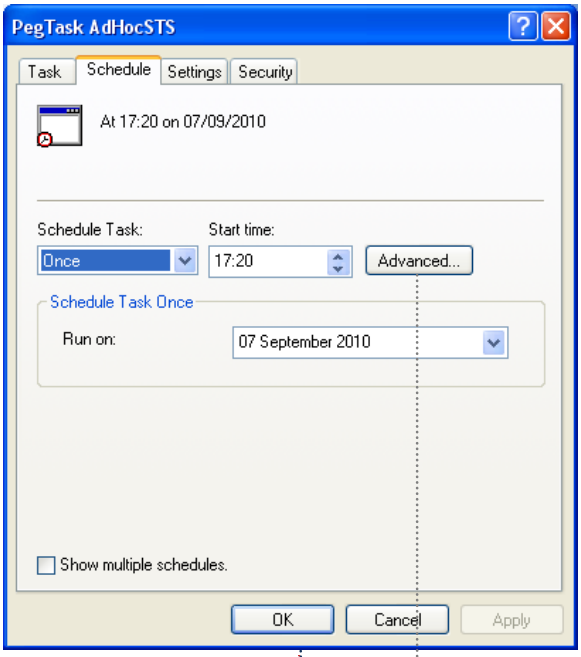
Windows XP/Windows Server 2003 offer a basic "list" of Windows Tasks. Which you can then access it's properties by right mouse clicking on and selecting "properties".

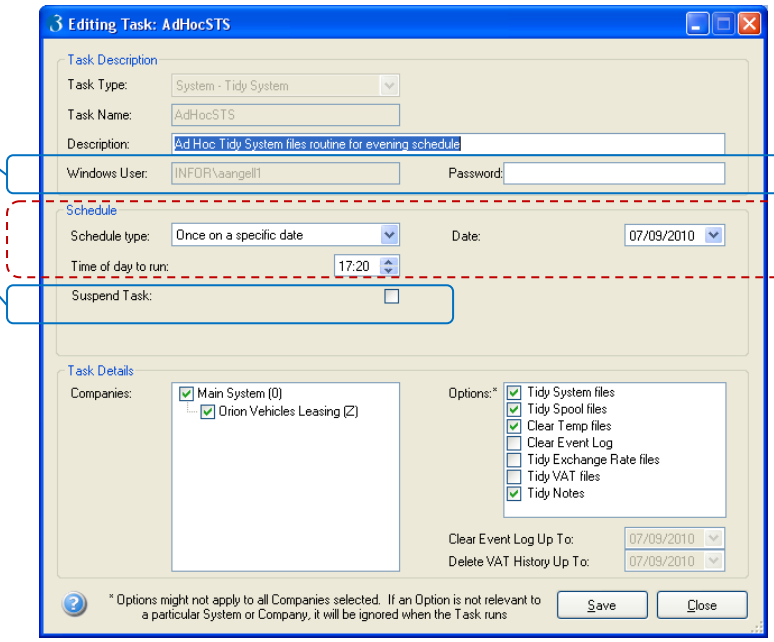
Windows Task Scheduler in Windows Vista or higher is very different from it's predecessor.

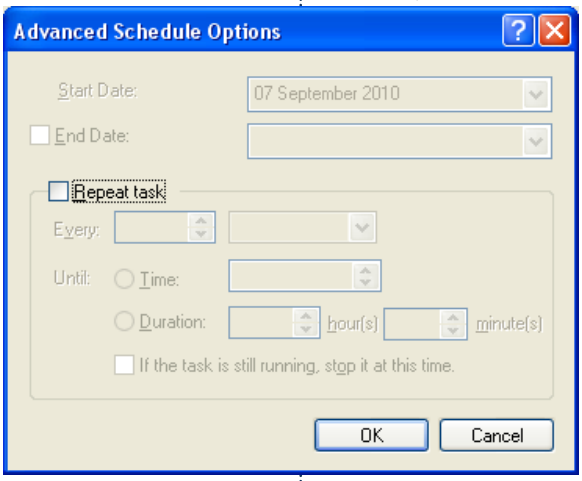


Windows 7 (basically Vista or higher) illustrated in the screenshot, offers integration with version 2 of the Scheduler which is far more advanced. Boosting a control console/library screen allowing easy manipulation and access to Tasks and its properties. The back-end data created and maintained by the Windows Scheduler is vastly different that of version 1.









How do I over-ride a password to be blank?

You can edit this via the Windows Scheduler in XP (this is a potential work-around). This is due to Scheduler requiring a password on the scheduled task created. Windows Vista or higher is far more difficult to over-ride and required potential policies to be set.

If the data has an issue, how does it handle the error?

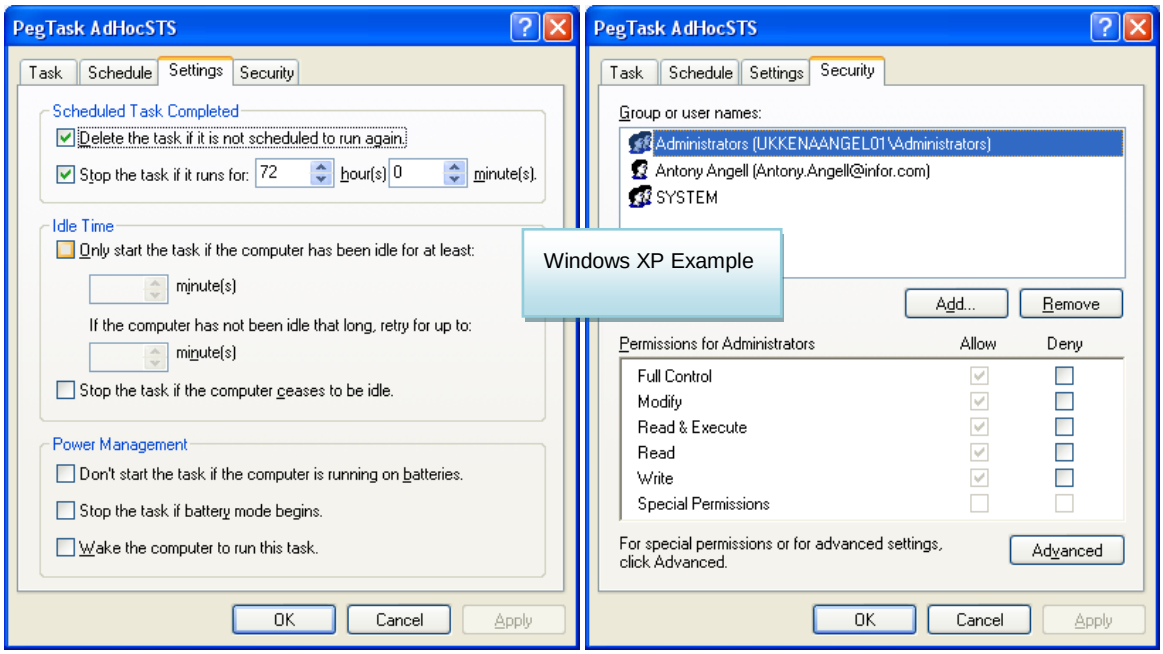
An error log is not currently created in the TEMP directory, however errors are seen in the Log from Scheduler. In most circumstances and depending on the data issue, the system could lock the files meaning no-one can log in. Or it may complete and errors can be seen in the log. Check on the server for any obvious form. Future phase is looking to group information in a more analytical manner.

What order do the Tasks run in if they are set to run at the same time?

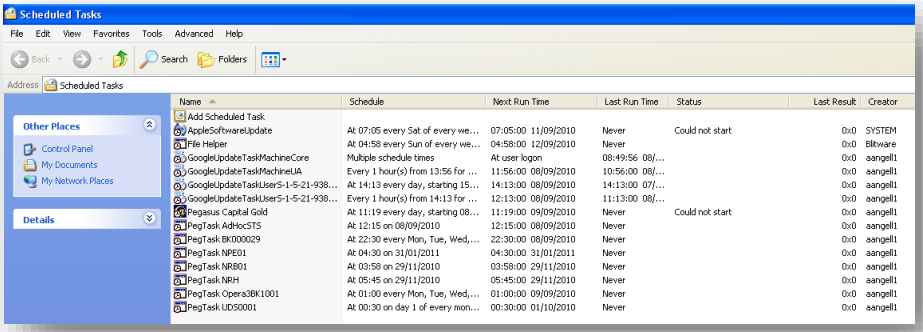
This is not a suggested set-up, though out of the two tasks one will win to start the other if conflicting will fail. The order it starts the tasks in this scenario is Alphanumeric based on the task name.

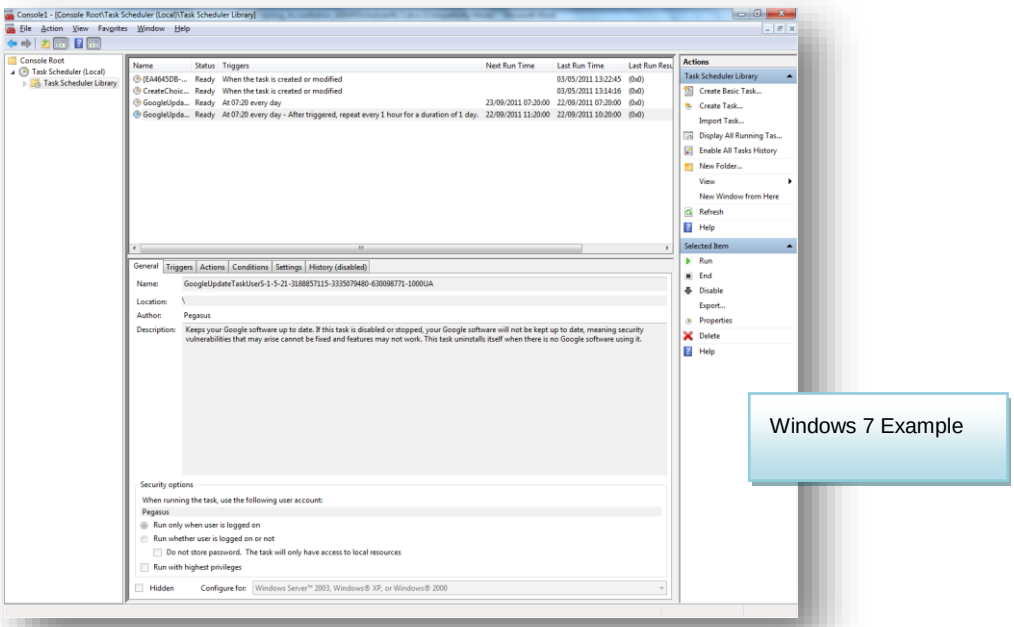
Generic settings are also applied on the task created.

Notes

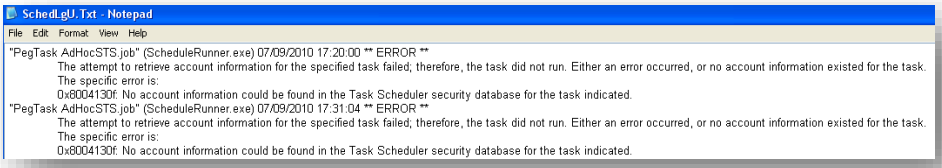


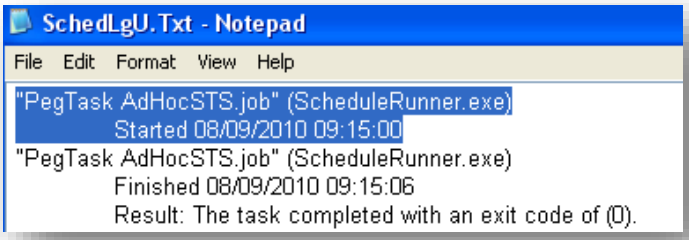
To open Scheduled Tasks, click **Start**, point to **Programs**, point to **Accessories**, point to **System Tools**, and then click **Scheduled Tasks**.





You can view the MS Windows log to double check any potential problems or success.





Example Log Analysis

*"PegTask fghfgh.job" (ScheduleRunner.exe) 07/09/2010 10:50:00 ** ERROR **

The attempt to retrieve account information for the specified task failed; therefore, the task did not run. Either an error occurred, or no account information existed for the task.*

The specific error is:

0x8004130f: No account information could be found in the Task Scheduler security database for the task indicated.

Example Error relates to missing or incorrect Password being used.

NB: The next time a task is **missed**, Windows wil display a popup menu with an option to run the missec task. This is different to ar error.

Windows 7 and Credentials with blank passwords

Training have investigated this a bit further and using a Windows 7 machine and cannot find a like for like setting compared to Windows XP. Numerous searches in the Help, Google and Windows Help has not found anything obvious or easy to allow this. It appears Microsoft like to ensure credentials have got passwords assigned and in use.

Searching found a few links that state “By default, Windows OS does not allow users to schedule task when a blank password is used to login into the system. This is done for security reasons and therefore, we strongly recommend you do not use a blank password if you want to run scheduled tasks.” However do mention a way round this by changing the local policies.

When a user goes to change the “user” in Windows 7 for a task to a user that I believe to have a blank password, we got an error stating it is either trying to use a user with a blank password or an incorrect one. After changing a setting in the local security, we found we did not get that prompt anymore…However to change local security policies like that could be quite risky and may be linked to other settings which happen to be set as required on the machine in question..

A link that I found (as a guide only) that mentions the setting:
http://web.synametrics.com/syncrifytaskwopwd.htm

We found another suggestion -a lot more postings stating you should have and that OS by default use accounts with passwords, so possibly use the work-around of;

1. Create an new account, e.g. "Schedule".
2. Give it a password.
3. Make it a member of the Administrators group.
4. Use it to run all your scheduled tasks.

This account will now be independent of anything you do to your everyday

Notes

Further information Task Scheduling version 2 as provided on Win 7…

http://msdn.microsoft.com/en-us/library/bb756979.aspx

It interestingly discusses the advancement of the User and Password assignment to the tasks. From reading the bit about security ;

"Credentials Management Using New Security Services

One of the major improvements in Windows Vista is security, and Task Scheduler is one of the tools that leverage the greater security. In Windows XP, credentials for tasks are stored on the local machine. Any update in domain or local passwords can invalidate tasks. When you change passwords regularly, you also have to update credentials on every task.

Task Scheduler in Windows Vista supports a new credential manager that forms part of the security isolation model. In this model, each set of tasks that runs in a specific security context starts in a separate session. Passwords are now stored in the Credentials Manager (CredMan) service. You can use encryption interfaces with CredMan to prevent malware from stealing stored passwords. You can also configure Service for Users (S4U), a security service that allows your task to run even if the password is changed. However, that task does not have access to password-protected resources, such as encrypted files and the credman password cache. This improves security and reduces maintenance related to password expirations in Task Scheduler."

It appears to hint that it is not an easily overridden.

3.4.1 Scheduled Tasks and the At command

In earlier versions of Windows, you used the at command to schedule a command, script, or program to run at a specified date and time. In Windows XP, the at command works with a graphical utility called Scheduled Tasks to provide additional functionality.

You can use the new capabilities of Scheduled Tasks through the Scheduled Tasks folder. When you schedule a task using the at command, the task is listed in the Scheduled Tasks folder, with a name such as the following:

At3478

You can then view or modify the task. However, if you modify it, it will be upgraded to a normal scheduled task. The task will no longer be visible to the at command, and the at account setting will no longer apply. You need to explicitly enter a user account and password for the task.

All tasks created through the at command must run in the same user account, as in earlier versions of Windows. However, each task created from the Scheduled Tasks folder can run in a different account.

In earlier versions of Windows, the account for tasks created by the at command was the same as the account for the Schedule service (which was also known as the "at service"). You could configure this account to be the local system account or any user account.

In Windows XP, the Schedule service must run in the local system account. However, you can set an account other than the local system account for tasks created by the at command to run in. Use the Advanced menu in the Scheduled Tasks folder.

Notes

You can use the Scheduled Tasks folder to view or modify the settings of a task that was created by using the at command. However, if you modify a task created by the at command through the scheduled tasks folder, it is upgraded to a normal scheduled task. The task will no longer be visible to the at command, and the account setting created by the at command will no longer apply to it. You need to explicitly enter a user account and password for the task.

3.4.2 Scheduled Tasks overview

With Scheduled Tasks, you can schedule any script, program, or document to run at a time that is most convenient for you. Scheduled Tasks starts each time you start Windows XP and runs in the background.

With Scheduled Tasks, you can also:

- Schedule a task to run daily, weekly, monthly, or at certain times (such as system startup).
- Change the schedule for a task.
- Stop a scheduled task.
- Customize how a task will run at a scheduled time.

Further information can be found @ http://en.wikipedia.org/wiki/Task_Scheduler or http://www.microsoft.com/en/us/default.aspx.

Practical Exercise 1

Notes

(Time Allowed 30 Minutes)

Objectives

At the end of this practical assignment you will be able to:

- *Set up a new Tasks*
- *Review the Task details*

Exercise Details

You are required to create a set of new tasks for the demonstrations company. Details of the Tasks are given below:-

1. Create a new task to run an ad hoc back-up the data (data only) to run in 10 minutes from the current time. Use any reference/name information you wish.

2. Create a new task to run an ad hoc Tidy System files in 20 minutes time from the current time. Use any reference/name information you wish. Enter a Password of any alphanumeric characters and save.

3. Create a new task to run a Sales Period End in 25 minutes time from the current time, set to run every month (though use today's date as the key day). Use any reference/name information you wish. Do not Zeroise turnover or Block Postings.

4. Check they have been set-up by re-entering Scheduler. Check in MS Windows that they have been set-up.

5. After 28 minutes – Check the statuses of the tasks created (Various locations)

Notes

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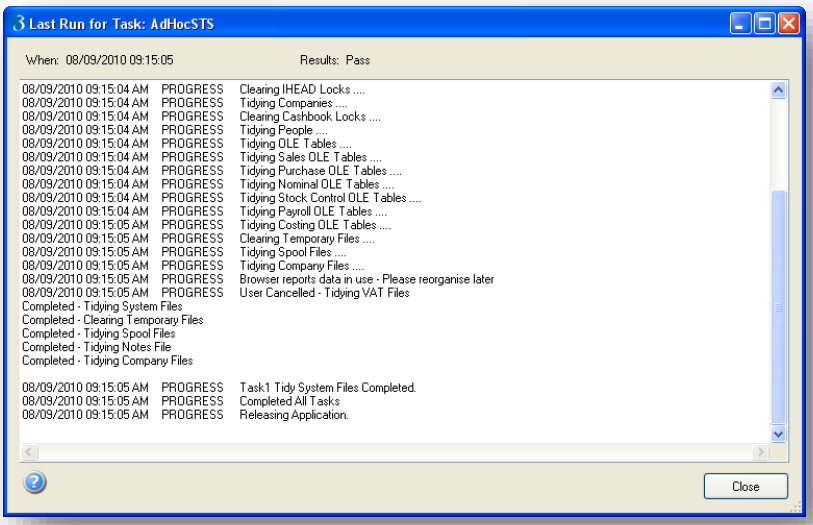
4 Reports

4.1 View Last Run Details

The **View Last Run Details** form displays a report for the last time that the task was run. This is a detailed, step-by-step audit trail of the processes completed for the task, the time it started and the time it finished. You can copy the audit trail to the Windows Clipboard to view it in another application or print it.

You can use the Right-Click menu to:

- Copy the details to the Windows Clipboard.

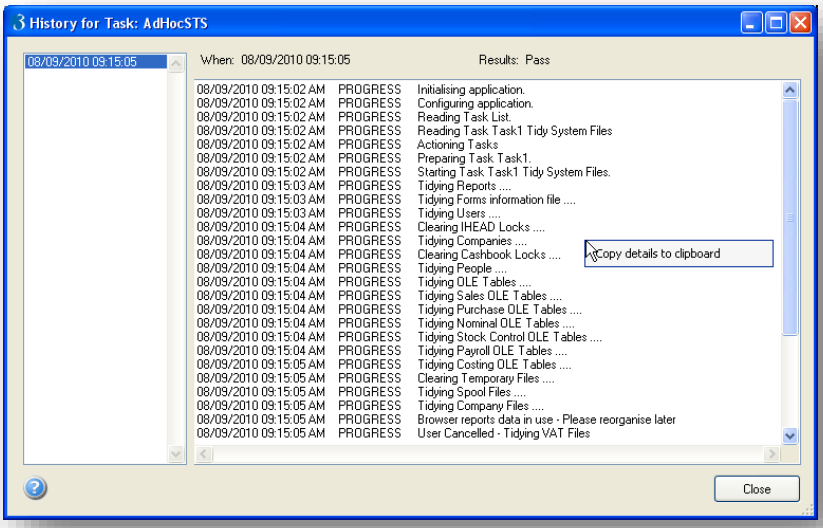


4.2 View History

The **View History** form displays a list of reports for when the task was run. These are detailed, step-by-step audit trails of the processes completed for the task, the time they started and the time they finished. You can copy the audit trails to the Windows Clipboard to view them in another application, or print them.

You can use the Right-Click menu to:

- Copy the details to the Windows Clipboard.



Reports

Notes

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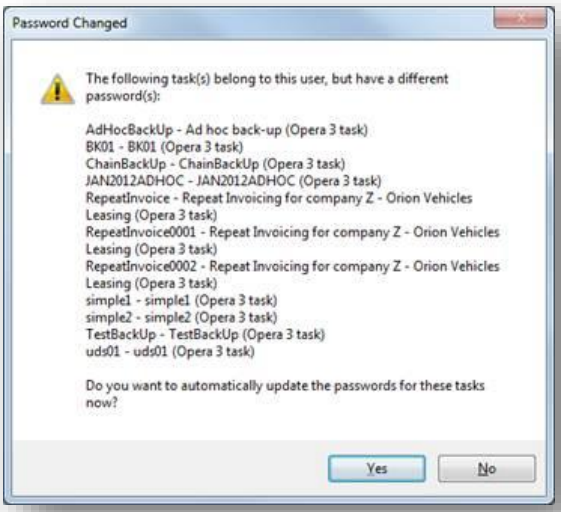
5 Utilities

There is no direct utilities menu, however scheduler does offer some extra functionality not from a menu base process.

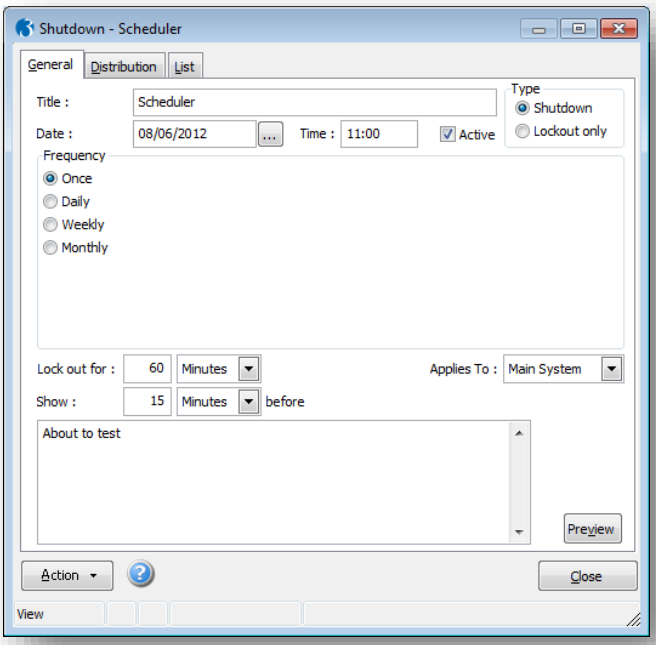
5.1 Scheduled Tasks Passwords

If the stored Password for tasks do not match the current record you are creating, the system will automatically check this and offer to change the other tasks stored passwords for you.



5.2 Notification Integration

When you select to use the notification elements on a Scheduled task, it will automatically create an appropriate record in the Notification Services.



If you have a task with Shutdown are there any default rules applied?

The Shutdown record it creates estimates the lockouts at 60 minutes for all tasks which is the generic default. When the task starts, the lockout changes to 8 hours. When task completes it will set it to the actual length it took (rounded) – it will also do this for repeated tasks and even if this is manually overridden it will reset it to the length it took regardless.

The task will not be allowed to run manually when you try and override it through windows (not recommended) if it is outside the "shutdown & Lockout" time set.

Shutdowns (only) through the task scheduler are based on local client clocks (existing feature). The task will stay idle and delay from running for a further 90 seconds to help ensure all respective clients are logged out. This is due to client machines not always being exactly in line with the server.

Utilities

Notes

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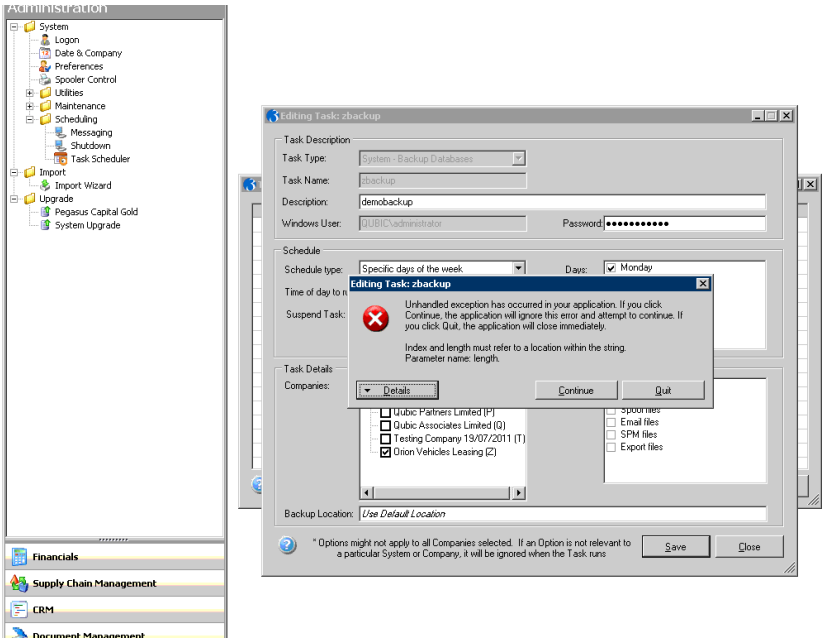
6 Troubleshooting

6.1 When running Tasks, the following Exception Error occurs



Error log created

See the end of this message for details on invoking
just-in-time (JIT) debugging instead of this dialog box.

********** Exception Text **********
System.ArgumentOutOfRangeException: Index and length must refer to a location within the string.
Parameter name: length
at System.String.InternalSubStringWithChecks(Int32 startIndex, Int32 length, Boolean fAlwaysCopy)
at Pegasus.ScheduleEditor.SchTasksWrapper.GetLastErrorNice()
at Pegasus.ScheduleEditor.CTask.SaveTask()
at Pegasus.ScheduleEditor.DetailForm.FormActionOK(Object sender, EventArgs e)
at System.Windows.Forms.Control.OnClick(EventArgs e)
at System.Windows.Forms.Button.OnClick(EventArgs e)
at System.Windows.Forms.Button.OnMouseUp(MouseEventArgs mevent)
at System.Windows.Forms.Control.WmMouseUp(Message& m, MouseButtons button, Int32 clicks)
at System.Windows.Forms.Control.WndProc(Message& m)
at System.Windows.Forms.ButtonBase.WndProc(Message& m)
at System.Windows.Forms.Button.WndProc(Message& m)
at System.Windows.Forms.Control.ControlNativeWindow.OnMessage(Message& m)
at System.Windows.Forms.Control.ControlNativeWindow.WndProc(Message& m)
at System.Windows.Forms.NativeWindow.Callback(IntPtr hWnd, Int32 msg, IntPtr wparam, IntPtr lparam)

********** Loaded Assemblies **********
mscorlib
Assembly Version: 4.0.0.0
Win32 Version: 4.0.30319.1 (RTMRel.030319-0100)
CodeBase: file:///C:/WINDOWS/Microsoft.NET/Framework/v4.0.30319/mscorlib.dll
---
ScheduleEditor
Assembly Version: 1.20.0.0
Win32 Version: 1.20.00
CodeBase: file:///C:/Program%20Files/Pegasus/Scheduler/ScheduleEditor.exe
---
System
Assembly Version: 4.0.0.0
Win32 Version: 4.0.30319.1 built by: RTMRel
CodeBase: file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System/v4.0_4.0.0.0__b77a5c561934e089/System.dll
---
System.Windows.Forms
Assembly Version: 4.0.0.0
Win32 Version: 4.0.30319.1 built by: RTMRel
CodeBase:
file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System.Windows.Forms/v4.0_4.0.0.0__b77a5c561934e089/System.Windows.Forms.dll

Troubleshooting

Notes

```
----------------------------------------
System.Drawing
    Assembly Version: 4.0.0.0
    Win32 Version: 4.0.30319.1 built by: RTMRel
    CodeBase:
file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System.Drawing/v4.0_4.0.0.0__b03f5f7f11d50a3a/System.Drawing.dll
----------------------------------------
System.Xml
    Assembly Version: 4.0.0.0
    Win32 Version: 4.0.30319.1 built by: RTMRel
    CodeBase: file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System.Xml/v4.0_4.0.0.0__b77a5c561934e089/System.Xml.dll
----------------------------------------
System.Core
    Assembly Version: 4.0.0.0
    Win32 Version: 4.0.30319.1 built by: RTMRel
    CodeBase:
file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System.Core/v4.0_4.0.0.0__b77a5c561934e089/System.Core.dll
----------------------------------------
Microsoft.CSharp
    Assembly Version: 4.0.0.0
    Win32 Version: 4.0.30319.1
    CodeBase:
file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/Microsoft.CSharp/v4.0_4.0.0.0__b03f5f7f11d50a3a/Microsoft.CSharp.dll
----------------------------------------
System.Dynamic
    Assembly Version: 4.0.0.0
    Win32 Version: 4.0.30319.1
    CodeBase:
file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_MSIL/System.Dynamic/v4.0_4.0.0.0__b03f5f7f11d50a3a/System.Dynamic.dll
----------------------------------------
Anonymously Hosted DynamicMethods Assembly
    Assembly Version: 0.0.0.0
    Win32 Version: 4.0.30319.1 (RTMRel.030319-0100)
    CodeBase: file:///C:/WINDOWS/Microsoft.Net/assembly/GAC_32/mscorlib/v4.0_4.0.0.0__b77a5c561934e089/mscorlib.dll
----------------------------------------

************** JIT Debugging **************
To enable just-in-time (JIT) debugging, the .config file for this
application or computer (machine.config) must have the
jitDebugging value set in the system.windows.forms section.
The application must also be compiled with debugging
enabled.

For example:

<configuration>
    <system.windows.forms jitDebugging="true" />
</configuration>

When JIT debugging is enabled, any unhandled exception
will be sent to the JIT debugger registered on the computer
rather than be handled by this dialog box.
```

Potential Resolution

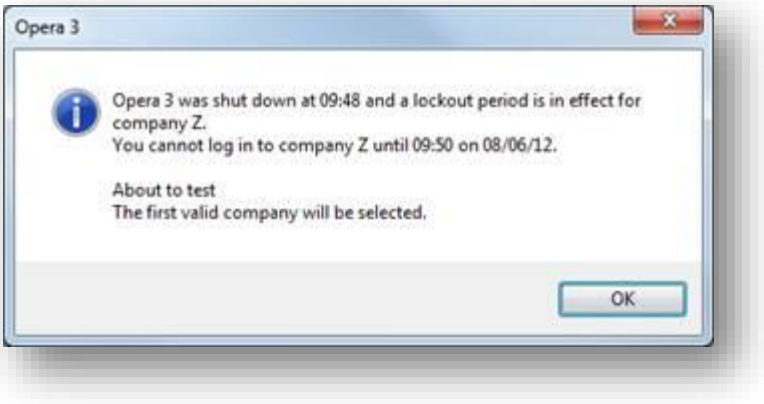
This is most likely due to the fact that the Windows User assigned to the task does not have Admin permissions on the server to run the task. Opera 3 Scheduler Tasks must be assigned a Windows User that has appropriate permissions (Admin) to run these tasks. Opera 3 Scheduler integrates with Microsoft Windows Scheduler and this is a requirement for Windows to run any tasks.

Ensure they have Admin Permissions or are part of the Admin group – this should resolve the issue.

6.2 Logging in and company Access

Notes

When logging into Opera 3 whilst a chain / lockout is running you may receive the following message is it is company/system specific.



Regardless if the lockout has finished, the message is displayed after you click Log on – this means because the last message is still active – this sets the parameter up for checking which company you can get into – this is due to the Logon already being pressed and the cursors creating only available companies. Log back in again and if you have access to other companies, they should be available again.

Note: Admin should be able to log in and has full access

6.3 Further FAQs

Notes

What should the system do when you set the task with shutdown up again (i.e. edit to run in 15 min after last time it errored)?

It should delete the notification it initially created and set up another. The task in terms of the scheduler itself will be just "edited" –in the task editor (xml files), however the windows task is recreated from scratch (like the notification).

If the task is for Company Z and I am logged into company A – should the shutdown still affect me if part of a Scheduled Task?

Depends on task type and company/system selection.

I know we cannot get it to shut down Excel/XRL – will it shut down Scheduler? And what are the current rules with Stocktake and Document Manager Desktop? – do these get shut down or interfere?

It does not close Scheduler or Stocktake or DMD – If any "create" or "edit" data – it could have a detrimental effect on the task/data/processing being performed though it can depend on type of task and what it is doing etc.

Ah I have just seen that it create a Shutdown record in notifications when I schedule a task with shutdown – it appears for all users and the one company I am logged in as– should it not default to all companies like it does when you create a new shutdown record in shutdown processing?

This can depend on task type and company/system selection.

Imagine the following;

Opera with multiple systems and companies.

System 0 – Company A

System 0 – Company Z

System 1 – Company A

System 1 – Company Z

- If you schedule a Period end with shutdown for s1 cA, then only company A from that system is locked/shutdown.
- If you schedule a UDS with shutdown for s1 cA, then the whole of system 1 is shutdown/locked due to UDS requiring system's SYSTEM.DBC exclusivity – i.e. seqco etc
- If you schedule a UDS with shutdown for s0 cZ, then all systems and all companies will be marked for shutdown and lockout. This is due to the fact that if it requires exclusive access to the main system, other sub-systems are affected.

Chained tasks are the biggest functions to watch out for as for example; if a system exclusive task for the main system is created (at any step), the whole system is affected if combining it with a lockout/shutdown.

Please note that more notifications could also be produced if creating tasks that affect companies from different systems. So for example a SL period end task for s0 cA and s1 cZ would create 2 notifications - 1 for each company/system respectively but still for all users.

Companies and User selected for the Shutdown will always depend on task type and system your in for companies but should always affect all users.

Accreditation Training Courseware

Appendix

Appendix A – VAT Information

Setting Up Reverse Charge Accounting (Goods)

1. Select the RC Sales List option in the System - Maintenance - Company Profiles command if you sell the items for values above the de minimis level.
2. Check the Reverse Charge De minimis level in the System - Utilities - System Preferences command. This is £5000 from 1 June 2007 and is automatically updated when Opera 3 is upgraded. If HMRC change the de minimis level, you can update it here.
3. Create Reverse Charge Sales and Reverse Charge Purchase VAT codes in the System - Maintenance - VAT Processing command using the standard rate of VAT.
   - A Reverse Charge Sales code updates only Box 6 (Value of Sales). Example from a Sales perspective...

   You send an invoice to your customer with a goods value of £8750 and a VAT value of £481.25. The invoice has two detail lines, one of which is subject to the Reverse Charge. It indicates clearly that part of the invoice is subject to the Reverse Charge. Click here to see the invoice.

Item	Goods Value (£)	VAT Value (£)	Subject to Reverse Charge
Mobile Phones	6000.00	1050.00 *	Yes
Phone Chargers	2750.00	481.25	No
Total	8750.00	1531.25	

   Your VAT Return is updated in the following way:

   - Box 1 (Output Tax) is updated only with the £481.25 VAT for the Phone Chargers
   - Box 6 (Value of Sales) is updated with Total Goods value of £8750.00

   Your customer must account for the Output Tax on the mobile phones of £1050. *

   - A Reverse Charge Purchase code updates Box 1 (Output Tax), Box 4 (Input Tax), and Box 7 (Value of Purchases). Example from a Purchase perspective..

   You receive an invoice from your supplier with a goods value of £8750 and a VAT value of £1531.25. The invoice has two detail lines, one of which is subject to the Reverse Charge. The invoice clearly indicates that the Reverse Charge applies to some of the invoice.

Item	Goods Value (£)	VAT Value (£)	Subject to Reverse Charge
Mobile Phones	6000.00	1050.00 *	Yes
Phone Chargers	2750.00	481.25	No
Total	**8750.00**	**1531.25**	

1. Your VAT Return is updated in the following way:
    - Box 1 (Output Tax) is updated with the Reverse Charge VAT value of £1050.00 *
    - Box 4 (Input Tax) is updated with total VAT value of £1531.25
    - Box 7 (Total value of Supplies) is updated with Total Goods value of £8750.00
2. Therefore Input Tax of £481.25 (Box 1 - Box 4) from the item that is not subjected to the Reverse Charge is reclaimed from HMRC.
3. Select the Reverse Charge option for each stock item or product record where the Reverse Charge accounting procedure applies. The option is displayed in the Stock - Processing command on the Options form and where the Stock module is not used, in the SOP/Invoicing - Maintenance - Products and P.Orders - Maintenance - Products commands.

   You can identify a Reverse Charge item by an icon that appears in the form's status bar:
4. Your sales invoice and credit note designs must be updated to indicate when the Reverse Charge accounting procedure has been used on a transaction. You can check the demonstration data's invoice design to see what needs to be done.
    - Each line on the document must indicate whether it is a reverse charge item.
    - The VAT Analysis section of the document must indicate whether VAT is subject to the Reverse Charge procedure.
    - The VAT value that is being reverse charged must be displayed after the final line of the document.
5. To process a transaction to a VAT registered customer above the HMRC de minimis level, use a Reverse Charge Sales VAT code. Use Reverse Charge Purchase VAT code when you receive an invoice or credit note that are subject to Reverse Charge accounting from a VAT registered supplier. You can use Reverse Charge codes on credit notes even if the goods value is below the de minimis level.

   Note: If HMRC change the de-minimis level you must update the Reverse Charge De-minimis level box on the System - Utilities - System Preferences form.
6. If you selected the RC Sales List option in the System - Maintenance - Company Profiles command, create the RCSL upload file in the System - Maintenance - VAT Processing command and submit the RCSL to HMRC for each VAT period, whether or not you actually make Reverse Charge supplies. You must then submit the RCSL for each VAT period until you permanently cease to make these supplies, when you must tell HMRC the date on which you ceased.

Setting Up Reverse Charge Accounting (Services)

To set up Reverse Charge accounting for services you need to create VAT codes in the System - Maintenance - VAT Processing command that are set up to update the VAT Return and EC Sales List.

- If you are the supplier of services that are subject to the Reverse Charge, you need to create a zero-rated Sales VAT code with the VAT Return Box 6 ticked and the EC Sales List Services box ticked. The code is then available in the Sales Ledger, Sales Order Processing, Invoicing and Importer modules.
- If you receive services that are subject to the Reverse Charge, you need to create a standard rate Purchase VAT code with the VAT Return Boxes 1, 4, 6 and 7 ticked. The code is then available in the Purchase Ledger, Purchase Order Processing and Importer modules.

Sales VAT codes

If you provide services that are subject to Reverse Charge accounting to different EC countries, you may need to create one VAT code for the countries you are registered in, and another VAT code for the countries you are not registered in. If your customers are in one country, you need to create one VAT code.

After the VAT codes have been created they are available in the Sales Ledger, Sales Order Processing, Invoicing and Importer modules. The VAT rate for these transactions must be set to zero percent.

1. Open the System folder, click Maintenance and then click VAT Processing. Then click New on the Record menu.
2. In the Country Type box, select 'R' if you are registered in the EC country, or 'U' if you are not registered in the EC country.
3. In the Trans. Type box, select 'S' for Sales.
4. In the VAT Code box, enter a number or letter to identify the code. This must be a code that is not already used. Then enter a description for the VAT code, for example 'RC Services'.

Important: Do not use 'Y' as the VAT code. These codes are used for apportioning delivery charges for transactions that are included on the Supplementary Declaration (SD) report.

5. Under EC Sales Listing (ESL), untick the Goods Value = Supplies box and tick the Services box. The box 6 - Total Value of Sales box under VAT Return Boxes remains ticked and the other VAT Return boxes are automatically unticked and disabled. The Goods Value = Supplies box under Supplementary Declaration (SD) is also automatically unticked.
6. On the Record menu, click Save.

Tip: HMRC does not require that invoices indicate that a transaction must be accounted for under the Reverse Charge mechanism. However, to help your customer, it may be worthwhile having an invoice design for these transactions only with a statement that highlights that the transaction needs to be accounted for under the mechanism. To add a new invoice design, use the System - Maintenance - Report Layouts command. You could use the following text, or similar: These services are outside the scope of UK VAT. You may be required to make a reverse charge VAT declaration under Article 196 of EU Council Directive 2006/112/EC.

Purchase VAT codes

If you receive services that are subject to Reverse Charge accounting from different EC countries, you may need to create one VAT code for the countries you are registered in, and another VAT code for the countries you are not registered in. If your suppliers are in one country, you need to create only one VAT code.

After the VAT codes have been created, they become available in the Purchase Ledger, Purchase Order Processing and Importer modules.

1. Open the System folder, click Maintenance and then click VAT Processing. Then click New on the Record menu.
2. In the Country Type box, select 'R' if you are registered in the EC country, or 'U' if you are not registered in the EC country.
3. In the Trans. Type box, select 'P' for Purchase.
4. In the VAT Code box, enter a number or letter to identify the code. This must be a code that is not already used. Then enter a description for the VAT code, for example 'RC Services'.

Important: Do not use 'Y' as the VAT code. These codes are used for apportioning delivery charges for transactions that are included on the Supplementary Declaration (SD) report.

5. In the Rate 1 % box, enter the standard rate of VAT, and enter the date from which the VAT code will be used in the Date 1 box. This date must not be before 1 January 2010.
6. In the Nominal Code box, enter the Nominal Account to which the VAT will be posted in the Nominal Ledger.
7. Under VAT Return Boxes, tick box 1 - Tax Value on Sales. Box 4 - Tax Reclaimed on Purchases, box 6 - Total Value of Sales and box 7 - Total Value of Purchases are ticked automatically and the other boxes are unticked. The Goods Value = Supplies box under Supplementary Declaration (SD) is also automatically unticked.
8. On the Record menu, click Save.

Appendix B Visual FoxPro and Technical Information

Why the Visual FoxPro development environment?

In 1993 Pegasus Software Ltd. launched Pegasus Opera, which was developed under the FoxPro Relational Database Management System (RDMS). This offered several advantages over standard programming languages such as Quick Basic.

These advantages included:

- The fact that it is an RDMS means that programs, screens, menus and tables are all generated by one application meaning no compatibility issues will arise
- Simple, easy to use interface
- Easy to generate data tables
- Easy to generate and use indexes
- Rushmore record searching for greater speed with locating information
- Data Integrity Improvements
- Fast access of the data

Development tools such as Visual Basic and SQL Server are together a very powerful environment. Visual FoxPro however offers similar flexibility and technical specifications as these two products combined allowing the developer to make use of Stored Procedures, Triggers and Views all stored with the database rather than having to be written into the program.

The Data Dictionary

The data dictionary is held in a folder called datadict. The database container for the dictionary is called Datadict.dbc. Default location being C:\Documents and Settings\All Users\Application Data\Pegasus\Server VFP\DataDictCore.

The tables with in the container can be used in a reporting product such as Crystal Reports to create a document detailing what the tables are, what the fields are within the table, rules that are applied to a field, and the fields proper name and description. Basically creating a Database Schema.

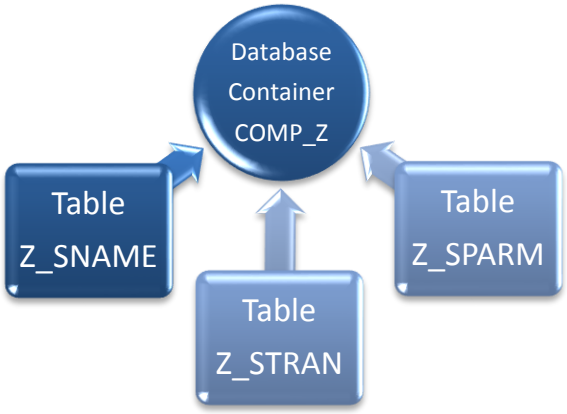
table.dbc and field.dbc

Data Container

Pegasus Opera 3 now uses a Visual FoxPro Database Container. This is a file located within the data directory. This is a key difference between Opera 16 and Opera 3, where O16 had free standing tables, OII uses a DBC.

There are three files named:

Database Container:	COMP_Z.DBC
Data Dictionary	COMP_Z.DCT
Database Index	COMP_Z.DCX



The purpose of the database container is to hold information about all the tables,

- the number of records in each table
- when it was last updated,
- who updated it.

It is for this reason that you can not just replace a table without some extensive work. The container will assume that the data is corrupt if it does not match its criteria. (See Free Tables)

Links and Relationships

There are no table relationships maintained by Opera 3. There are several reasons why this is but the major reason is that Companies do not always purchase all the modules and not all tables are required. Thus links do not always have to exist.

This makes Opera 3 more flexible in hooking in Third Party Applications. (No links to deal with.)

Free Tables

There are some rare circumstances where free tables must be used. Freeing a table will allow the table to be altered without the container having to know. This is not a recommended procedure and cannot be supported by Pegasus.

Data Types

There are five data types within the Opera 3 tables:-

- Date
- Time
- String
- Numeric
- Logical
- Memo

There are no currency fields.

Update Data Structures

What does it do?

The standard Update Data Structures or UDS basically carries out the following functions:

- Checks the Structure of the Tables within each Database Container based upon a standard Database.
- Checks the indexes within the tables
- If any problems with invalid fields or indexes are discovered then these will be corrected, and set according to the Standard databases.

It is normally used when updating from one version of Opera 3 to another. Any tables or fields that do not exist are created or altered according to our data structures.

The Data Validation Tool (DVT)

When you are logged into Opera 3 as ADMIN, and only ADMIN a function called the Data Validation Tool will automatically run when UDS is selected. This will verify the contents of each field within each table of the Database container. This does take longer than a simple Update Data Structures (UDS) due to the more intense work involved.

- Should the DVT find what it suspects to be corruption, it will stop the UDS process and prompt the user to correct the contents of the suspected field. Once this has been altered and the User clicks ok the UDS will continue.
    - If this is run unattended then an exceptions report is created
- The DVT is NOT a replacement for the File Checker in Opera.
    - For Example whilst checking SNAME, it will check sn_current the field that holds the balance.
      This is a numeric field therefore if it contains a numeric - the DVT would assume this is correct. Of course it might actually be holding 10.34e20 which Opera 3 may see as corruption.
- It will reference the Data Dictionary to ensure all the database rules are adhered to i.e. mandatory.

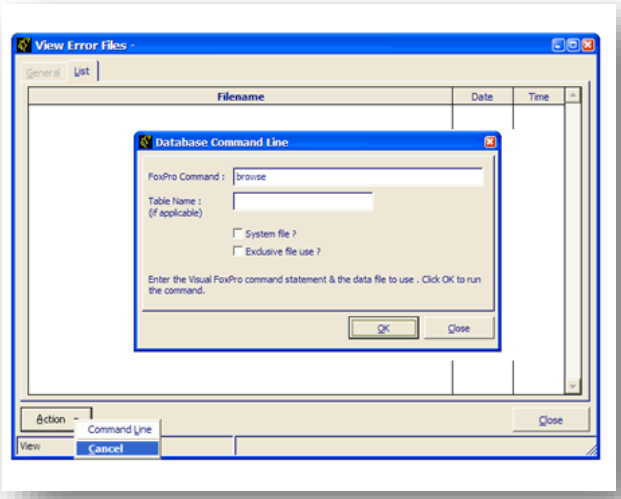
Database Command Line

CAUTION:- Commands that flout the database rules will cause Opera 3 to crash and an error log written. It is possible to cause serious problems with data.

It is therefore with the utmost caution that this option is used and should not be used by any one who is unsure of what they are doing. It should also be the final solution when all other options have been exhausted.

In Opera 3 2.25 and above there is a Database Command Line Tool. This is a function that allows users to enter Visual FoxPro commands to interrogate the Opera 3 data from within Opera 3.

- To use the function you must be logged onto Opera 3 as ADMIN.
- Open the System Module and open Utilities Menu then select View Error Files.
- On the Action button there is a function Database Command Line.



Enter a Visual FoxPro command –

i.e. Browse

This will allow you to select the table required. If you select OK with out selecting a table then a table selector will appear. Users can select any table.

If you want to view another database then a dropdown box will list all containers available for every company added to Opera 3. The system database container will also be available to select.

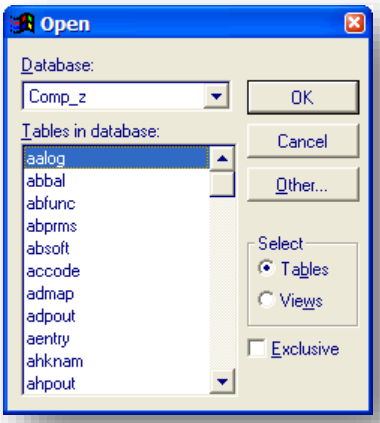
Tick the box marked Exclusive if the file you wish to interrogate requires exclusivity.

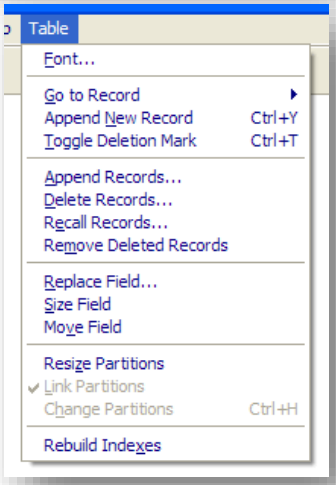
Click OK to run your command

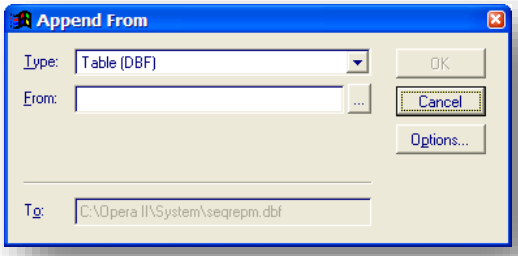
When the command is executed users can move around the table and examine the data.

Depending on the rules of the table then the Table menu will have different options available.

If selecting options append then dialog box appears







Other tables can be selected.

Examples

These functions will be used through out Opera 3.

Command	Result
Browse	This will allow editing and browsing of data
Append	Adding a cursor to allow you to enter a new record – only the mandatory fields will need entering
Append Blank	This function will not work if the table that the append is using is a key table. If there is a mandatory field on a table and append blank is used the instruction will fail. Use append to rectify this
Use	'Use' will close any open tables. This would be ideal to type in first before using any other commands.
Select * from tablename where 1 = 1	This will give table with proper table field names
Exclusive	Using the Exclusive command will allow certain functions on the table menu to be used.
Do	this allows FoxPro functions to be called from the Opera 3 root directory

Visual FoxPro commands

All the above can be used in VFP. In addition the following can be used:-

SQOPEN("S","TABLENAME")
This should be used in conjunction with USE. This allows tables to be opened and then sql select statement used.

The Data

Table Structures

Pegasus Opera 3 data tables have the same naming convention as Pegasus Opera data tables. Each table is prefixed by a Company Letter i.e. Z_SNAME.DBF. Each table may have three extensions – DBF, CDX, FPT

- DBF – Database
- CDX – Index
- FPT – Memo (Only if a memo exists in the table)

The tables' name relate to specific modules. Some of the tables may not be in use yet.

Code	Module
A	Cashbook
B	BACS
C	Stock, Traceability & Bill of Materials
D	Purchase Order Processing
E	
F	Fixed Assets
G	
H	History, Personnel
I	Invoicing SOP
J	Job Costing
K	
L	EDI - Redundant
M	
N	Nominal Ledger
O	
P	Purchase Ledger
Q	
R	
S	Sales Ledger
T	
U	
V	VAT
W	Payroll
X	
Y	
Z	System, Currency, Notes, Spooler
SEQ	System
DM	SPM & Service Management Inc Helpdesk

Temporary Tables (Cursors)

A temporary table is created as you open a form with data in it Opera 3.

- A record set is created (copied from the data tables) and held in a temporary table each time a form with data in it is opened.
- The temporary table remains until the form is closed.
- The temporary table is saved to various locations.
    - VFP
      Beneath the windows directory
    - Opera 3
      Saved in the location specified in the opera.ini file. (Usually Opera 3\temp)
    - Reports
      Beneath the Opera 3 root directory.
- It is given a random name then deleted as the table is closed.
- Users can change the data but this is not committed to the table until the save button is clicked.
- When the save button is clicked the Temporary table is flushed then deleted.

TITRAN – IHEADQ

TITRAN and IHEADQ are two temporary tables that are created when posting documents in SOP. These tables only exist at the time of posting – they are cleared when the routine ends.

NEXTID

The NEXTID table is used all over Opera 3 and gives the next unique number available to a record.

Appendix C – Components and Notes

VFPOLEDBSetup.msi & VFPOLEDB.dll

Required for the Dashboards and other components including Opera II and Opera 3 Client to work correctly and render as required. The component should already be installed and working as part of the Opera II / Opera 3 Client installation, however re-installing this may cure any issues encountered with Dashboards or clients themselves.

http://www.microsoft.com/downloads/details.aspx?FamilyID=E1A87D8F-2D58-491F-A0FA-95A3289C5FD4&displaylang=en

The Visual FoxPro OLE DB Provider (VfpOleDB.dll) exposes OLE DB interfaces that you can use to access Visual FoxPro databases and tables from other programming languages and applications.

The MSI installs appropriate files/folders as required.

If there is no internet connection there is a potential workaround which could be attempted. The user would have to re-register the VFPOLEDB.dll file.

1. Browse to C:\Program Files\Common Files\System\Ole DB
2. Start-Run
3. Type in “regsvr32 C:\Program Files\Common Files\System\Ole DB\vfpoledb.dll” *(or type in regsvr32 and drag the file into the run box)*
4. Click OK
5. Ensure the dll registers successfully and try running Dashboards again.

.Net Framework

.Net Framework (v2)

This MS component is provided on the DVD ROM but alternatively may be downloaded from the MS Download centre Website. Recommend to search or try the following link as a guide - http://www.microsoft.com/downloads/details.aspx?FamilyID=0856eacb-4362-4b0d-8edd-aab15c5e04f5&DisplayLang=en

.Net Framework (v3.5 sp1)

This MS component is not provided on the DVD ROM but alternatively may be downloaded from the MS Download centre Website. 3.5 is required for Dashboard version 2.6+. Recommend to search or try the following link as a guide - http://www.microsoft.com/net/Download.aspx

.Net Framework (v4.0)

This MS component is not provided on the DVD ROM but alternatively may be downloaded from the MS Download centre Website. 4.0 is required for Scheduler. Recommend to search or try the following link as a guide - http://www.microsoft.com/net/Download.aspx

Loopback Adapter

On standalone systems which run Windows XP or lower, a MS Loopback Adapter may be required. This allows UNC paths to be resolved (pretend it is on a Network). The current Loopback Adapter provided by MS runs at 10Mbs. Windows Vista has this pre-installed but be aware this can be turned off.

There are several articles on the MS website to install the Loopback Adapter – suggest a Google search is done to find the appropriate steps (www.google.co.uk).

As an example the XP steps are found here - http://support.microsoft.com/kb/839013

1. Click Start, and then click Control Panel.
2. If you are in Classic view, click Switch to Category View under Control Panel in the left pane.
3. Double-click Printers and Other Hardware, and then click Next.
4. Under See Also in the left pane, click Add Hardware, and then click Next.
5. Click Yes, I have already connected the hardware, and then click Next.
6. At the bottom of the list, click Add a new hardware device, and then click Next.
7. Click Install the hardware that I manually select from a list, and then click Next.
8. Click Network adapters, and then click Next.
9. In the Manufacturer box, click Microsoft.
10. In the Network Adapter box, click Microsoft Loopback Adapter, and then click Next.
11. Click Finish.

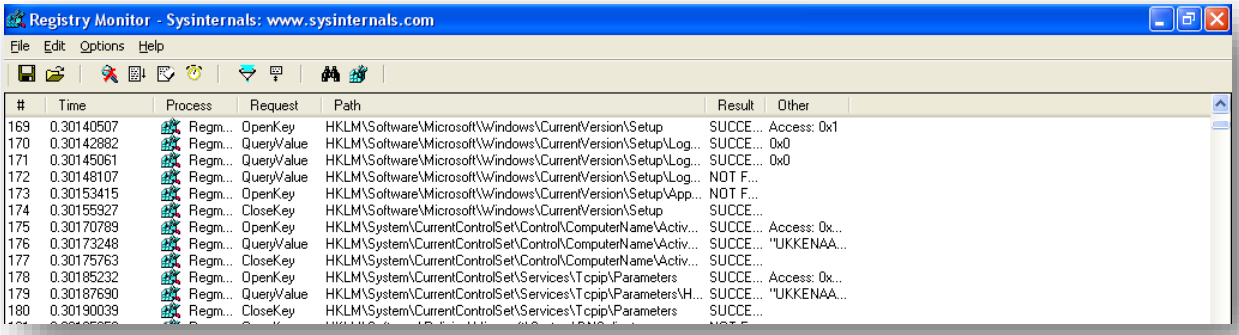
SYSINTERNALS Utility Suite

The Sysinternals Troubleshooting Utilities have been rolled up into a single Suite of tools. This file contains the individual troubleshooting tools and help files. It does not contain non-troubleshooting tools like the BSOD Screen Saver or NotMyFault.

It contains FileMon and RegMon with respective help files on how to use them. These two utilities are invaluable when checking permissions and access rights to files, folders and registry keys.

http://technet.microsoft.com/en-us/sysinternals/0e18b180-9b7a-4c49-8120-c47c5a693683.aspx is the latest link and was updated in March 2009. This is the complete Sysinternals suite that has several useful utilities. To ensure you have the most up-to-date suite, please ensure you search the Microsoft Technet site thoroughly, however we endeavour to keep the most updated link in the courseware.

A sample screenshot of the Registry Monitor is illustrated below;



Dll Files

Opera 3 and Opera 3 SQL Client installations have been changed (Version 1.3x.xx) to install the DLL (Pegasus.SchedulerInterface.dll) into the Program Files\Common Files\Pegasus Shared\Controls folder. If the .NET Framework 4.0 is installed, the DLL will also be registered.

The Opera 3 Client installations also create a registry key that allows the DLL to use the Scheduler Server data folder (so it can update the Tasks.xml file). This key will already exist if the full Scheduler (Client) is installed.

This dll file is instrumental in running some tasks and without it, scheduler will not function correctly.

Appendix D – Data Structures & Technical Information

The following pages contain the Database Structures & Technical Information of the System Module. This is just for reference only. Scheduler data is held external to system files and folders.

Table Break-down

Table	Process
SEQAORT	Attachment Order rates and details used by the Payroll module. These are set and governed by the HMCS.
SEQCO	Company Profile information is held in these tables.
SEQEFLD	List of report e-mail fields
SEQEGRP	Report e-mail groups
SEQERPT	Report e-mail details
SEQFAVES	User favourite functions and processes
SEQFORMS	If remember form size and positions is switched on, each form altered is saved in this table as the user has left it.
SEQLOCK	The user lock table. This is the table that will contain records if a user is illegally locked in the system.
SEQNAVGRPS	Navigational Groups
SEQPEOPLE	List of the People profiles as set up in the system module
SEQREPM	Reporter reports created in the system
SEQRPLAY	List of all report layout records with respective setting and property information.
SEQSYS	System preferences
SEQUSER	User preferences

Joins Information

TABLE	JOIN
seqpeopl	LEFT JOIN seqpeopl ON dname.dn_ref =seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jsctr.ju_subcnt=seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jchead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jcntr.jc_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jehead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jehead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jchead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jchead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jchead.jh_leader = seqpeopl.pe_ref
seqpeopl	LEFT JOIN seqpeopl ON jscon.js_subcnt = seqpeopl.pe_ref

Database Structures

Pegasus Opera 3 Enterprise VFP Database Structures – Listed SEQ Tables

Table : **SEQAORT** Table Description : **Payroll AO Rates**

Field Name	Description	Type	Length	DPs	Further information
WAR_TYPE	Attach. Order Type	N	2	0	Attachment Order Type
WAR_FROMDT	Date From Which Rate Applies	D	8	0	Date From Which the Rate Applies
WAR_TODT	Date To Which Rate Applies	D	8	0	Date Up To Which the Rate Applies
WAR_PAYFRQ	Pay Frequency	C	1	0	Pay Frequency applicable for this bandwidth and rate
WAR_BAND	Upper Bandwidth Amount	N	10	2	Upper Bandwidth Amount
WAR_RATE	Rate	N	10	2	Rate
WAR_RTPERC	Rate Percent Ind	L	1	0	Is rate figure a percent or value (indicator)
WAR_RMDR	Remainder for Bandwidth	N	10	2	Percentage Remainder for bandwidth (set against last bandwidth)
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())
WAR_USEBND	Use Bandwidth Earn	L	1	0	False = use "all of the arrestable earnings", True = use "portion of the arrestable earnings that exceed the bandwidth" This field will only affect the behaviour of order types whose deduction is to be calculated as a percentage.
WAR_MIN	Min. Deduction Amount	N	10	2	Empty/zero = No. minimum deduction amount applies. Non-zero = Min. deduction amount.

Table : **SEQCO** Table Description : **Company Controls**

Field Name	Description	Type	Length	DPs	Further information
CO_CODE	Company Id	C	1	0	Id code of the company. Company database names areprefixed with this code.
				Rule :	"Company ID cannot be blank"
			Rule Expression :		.NOT.EMPTY(co_code)
CO_NAME	Company Name	C	40	0	Company title - used as heading on reports etc..
				Rule :	"Company Name cannot be blank"
			Rule Expression :		.NOT.EMPTY(co_name)
CO_ADDR1	Address Line 1	C	30	0	First line of company address.
CO_ADDR2	Address Line 2	C	30	0	Second line of company address.
CO_ADDR3	Address Line 3	C	30	0	Third line of company address.
CO_ADDR4	Address Line 4	C	30	0	Fourth line of company address.
CO_POST	Post Code	C	8	0	Company post code.
CO_TEL	Telephone Number	C	20	0	Company telephone number.
CO_FAX	Fax Number	C	20	0	Company's facsimile number.
CO_CONTACT	Contact	C	20	0	Contact name within company (useful for bureauservices).
CO_VAT	Sales VAT Reg.Number	C	20	0	Company's sales tax (VAT in EEC) registrationnumber.
CO_SUBDIR	Data Path	C	254	0	Pathname for the company's data files. This may beanywhere on the system.
CO_SL2NL	Sales Linked NL	L	1	0	Is Sales ledger linked to Nominal?. Only allowedto be set if Nominal is available.
CO_PL2NL	Purchase Linked NL	L	1	0	Is Purchase ledger linked to Nominal?. Onlyallowed to be set if Nominal is available.
CO_CURRNCY	Multi Currency	C	20	0	Operate company with multi-currency? Y or N.

CO_COSTON	Cost Centres	L	1	0	Cost Centres Used ?, Y or N.
CO_TAX	Tax Description	C	3	0	Tax description. e.g. VAT or GST or TVA.
				Rule :	"Tax description cannot be blank"
			Rule Expression :		.NOT.EMPTY(co_tax)
			Default Value :		"VAT"
CO_DEBTORS	Debtors Balance	N	13	2	Company's debtors balance.
CO_CRDTORS	Creditors Balance	N	13	2	Company's creditors balance.
CO_STOCKV	Stock Valuation	N	13	2	Company's stock valuation.
CO_ORDRBAL	Sales Order Book	N	13	2	Company's order book value (sales).
CO_WG2NL	Payroll Linked NL	L	1	0	Is Payroll linked to Nominal?,. Only allowed to beset if Nominal is available.
CO_DESPSSD	EC Despatch SD's	L	1	0	EC Despatch SD's required?
CO_ARRVSSD	EC Arrivals SD's	L	1	0	EC Arrivals SD's required ?
CO_SALELST	EC Sales Lists	L	1	0	EC Sales Lists required ?
CO_LASTVRN	Last VAT Return Date	D	8	0	Last 'to date' used on a committed VAT ReturnReport
CO_LASTESL	Last ESL Date	D	8	0	Last 'to date' used on a committed ESL Report
CO_LASTSSD	Last SD Date	D	8	0	Last 'to date' used on a committed SD Report
CO_ESLNAME	ESL Signatory	C	40	0	ESL Signatory
CO_ESLCONT	ESL Contact	C	30	0	ESL Contact name
CO_ESLTEL	ESL Telephone No.	C	20	0	ESL Telephone No
CO_ESLBRAN	ESL Branch Id	C	3	0	ESL Branch Id
CO_ESLFAX	ESL Fax No.	C	20	0	ESL Fax No.
CO_SSDPLAC	SD Place of Signing	C	30	0	SD Place of Signing
CO_ST2NL	Link Stock - Nominal	L	1	0	
CO_JC2WG	Costing/Payroll	L	1	0	Set to true if integrated to payroll.References to Labour Items and Timesheets will berequired to be part of the Payroll module.
CO_PIR2JC	PIR/Costing	L	1	0	Set to true if PIR integrated to Costing.PIR will be able to post Job Details to theCosting Module.
CO_SL2JC	S/L to Costing	L	1	0	If true, S/L is Linked to Costing
CO_ST2JC	Stock/Costing	L	1	0	If true, Stock is linked to Costing
CO_PO2JC	POP/Costing	L	1	0	If true, POP is linked to Costing
CO_ANA	Company ANA/EDI Ref.	C	20	0	Companies ANA or EDI Reference Number.
CO_EAN1	EDI Enabling Prod. 1	C	15	0	Name of EDI Enabling Product 1 in use.
CO_EAN2	EDI Enabling Prod. 2	C	15	0	Name of EDI Enabling Product 2 in use.
CO_EAN3	EDI Enabling Prod. 3	C	15	0	Name of EDI Enabling Product 3 in use.
CO_EAN4	EDI Enabling Prod. 4	C	15	0	Name of EDI Enabling Product 4 in use.
CO_E1P	Enabler 1 Command	C	60	0	Command use to invoke EDI Enabling product 1.
CO_E2P	Enabler 2 Command	C	60	0	Command use to invoke EDI Enabling product 2.
CO_E3P	Enabler 3 Command	C	60	0	Command use to invoke EDI Enabling product 3.
CO_E4P	Enabler 4 Command	C	60	0	Command use to invoke EDI Enabling product 4.
CO_BARC	Bar Code Validation	C	1	0	Barcode validation method. N - NoneE - EAN13
CO_MRN	Manufacturers Ref.No	C	7	0	Manufacturers Reference No. as allocated by body(Usually ANA) for Bar Codes designated by thiscompany.
CO_BANKBAL	Bank Balance	N	13	2	Company's Overall Bank balance.
			Default Value :		0.00
CO_CASHB	Enable Cashbook	L	1	0	Is Cashbook Being Used?,. Only allowed to be setif Cashbook is available.
CO_WG2CB	Payroll To Cashbook	L	1	0	Is Payroll linked to Cashbook?,. Only allowed tobe set if Payroll is available.
CO_SNRF	Transmission Ref	C	6	0	Last Transmission Reference
CO_OPERTN	Operations Path	C	60	0	Path to Pegasus Operations for Edition forOperations
CO_SLNLCO	Sales - Nominal Link	C	1	0	Nominal Analysis Company Identifier
CO_PLNLCO	Purch - Nominal Link	C	1	0	Nominal Analysis Company Identifier
CO_FA2NL	FA Linked NL	L	1	0	Is Fixed Assets linked to Nominal? Only allowed tobe set if Nominal is available.
CO_FANLCO	FA - NL Company	C	1	0	Nominal Analysis Company Identifier
CO_BM2JC	BOM to Costing	L	1	0	If true, BOM is Linked to Costing
CO_BM2SOP	BOM to SOP	L	1	0	If true, BOM is Linked to SOP
CO_WWWPAGE	Company web Site	C	40	0	Company web Site
CO_EMAIL	Company E-Mail Address	C	40	0	Company E-Mail Address

CO_SDDESPDEL	SD Desp Include Delivery Terms	L	1	0	SD Despatches Include Delivery Terms
CO_SDARRDEL	SD Arr Include Delivery Terms	L	1	0	SD Arrival Include Delivery Terms
CO_USEPIR	Use PIR	L	1	0	
CO_KEEPNTS	Notes Months to Keep	N	3	0	
CO_TRACE	Stock Traceability	L	1	0	Stock Traceablity
			Default Value :		.T.
CO_WHSE	Stock Warehouses	L	1	0	
			Default Value :		.T.
co_ecgate	Gateway	L	1	0	
			Default Value :		.F.
CO_ADVPROJ	Advance Nominal Project	L	1	0	
			Default Value :		.F.
CO_ADVJOB	Advance Nominal Job	L	1	0	
			Default Value :		.F.
CO_BACKDROP	Desktop Image	C	254	0	This Field is used in Company Profiles. Allows the user to specify a background image for the desktop.
CO_BACKDROPS	Desktop Style	N	1	0	This Field is used in Company Profiles. Allows the user to specify a background image style for the desktop. 0 = Centred. 1 = Tiled. 2 = Streched.
			Default Value :		0
CO_RTUPDNL	Real Time Update of Nominal	L	1	0	Real Time Update of Nominal.
			Default Value :		.F.
CO_STNLCO	Stock - Nominal Link	C	1	0	Nominal Analysis Company Identifier
CO_LCALC	Last Calculate Company Balance	D	8	0	Last Calculation of Company Balances
CO_P11D	P11D Required	L	1	0	P11D Required
CO_SERVERNAM	Server Name	C	128	0	
CO_DATABASEN	Database Name	C	128	0	
CO_OPST2NL	Operations II Stock to Nominal	L	1	0	
			Default Value :		.F.
CO_APOP	Advanced POP Flag	L	1	0	Field to indicate whether advanced POP is switched ON or OFF
			Default Value :		.F.
CO_REVCHRG	Reverse Charge Indicator	L	1	0	
			Default Value :		.F.
CO_SPM2CST	SPM/Service to Job Costing	L	1	0	SPM/Service linked to Job Costing
CO_SRV2STK	Service Management to Stock	L	1	0	Service Management to Stock Module
CO_SRV2SOP	Service Management to SOP	L	1	0	Service management to SOP module
CO_OPANL	Open Period Accounting	L	1	0	Indicator of whether Open Period Accounting is switched on
CO_PL2FA	Purchase Ledger To FA	L	1	0	Purchase Ledger To Fixed Assets Link.
CO_POP2FA	POP To FA	L	1	0	POP to FA link.
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())
CO_LSTESL2	Submit date for Services ESL	D	8	0	The last submit date for Services ESL
CO_STKTAKE	Use Stocktake	L	1	0	Allow stocktake behaviour in this company.
CO_USELC	Use Landed Costs	L	1	0	Use Landed Costs (True=Landed Costs used with this company)

Table : **SEQEFLD** Table Description : **Report email fields**

Field Name	Description	Type	Length	DPs	Further information
EF_GROUP	Field group	C	40	0	Email field group
EF_FLDNAME	Field name	C	20	0	Email field name
EF_FLDTEXT	Field caption	C	40	0	Email field caption
EF_DEFEXPR	Field default expression	M	10	0	Email field default expression
EF_FLDNO	Group field number	N	3	0	Field sort order number within the group
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQEGRP** Table Description : **Report email groups**

Field Name	Description	Type	Length	DPs	Further information
EG_REPTID	Report	C	30	0	Report Identifier
EG_GROUP	Field group	C	40	0	Email field group
EG_GRPTEXT	Group text	C	40	0	Email field group text
EG_ORDER	Group Order	N	3	0	Email field group order
EG_MODULES	Modules	C	5	0	Modules in activation
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQERPT** Table Description : **Report email details**

Field Name	Description	Type	Length	DPs	Further information
ER_REPTID	Report	C	30	0	Report Identifier
ER_MODULES	Modules	C	5	0	Modules, one of which needs to be active, to activate the email report details
ER_RECPNT	Recipient	C	254	0	Email recipient
ER_SUBJECT	Subject	C	254	0	Email subject
ER_BODY	Body	M	10	0	Email body
ER_ATTNAME	Attachment Filename	C	254	0	Email attachment filename
ER_VERDGTS	Attachment file version digits	N	1	0	Number of digits to append to the end of the attachment filename in case of duplication
			Default Value :		0
ER_REPTNAM	Report name	C	50	0	Report name
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQFAVES** Table Description : **User favourites**

Field Name	Description	Type	Length	DPs	Further information
FAV_USER	User ID	C	8	0	
FAV_GROUP	Favourites group ID	C	30	0	
FAV_COMMAND	Command ID / EXE	C	240	0	
FAV_CAPTION	Caption to use in favourites	C	60	0	
FAV_IMAGE	Path to image file	M	4	0	
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())
FAV_GORD	Group Order	N	3	0	
FAV_IORD	Item Order	N	3	0	

Table : **SEQFORMS** Table Description : **Persistence info**

Field Name	Description	Type	Length	DPs	Further information
PER_USER	User ID	C	8	0	
PER_RESOURCEID	Resource ID	C	60	0	
PER_TOP	Item Y pos	N	5	0	
PER_LEFT	Item X pos	N	5	0	
PER_HEIGHT	Item height	N	5	0	
PER_WIDTH	Item width	N	5	0	
PER_DOCKPOS	Dock position (for toolbars)	N	5	0	
PER_CARGO	Misc information	M	4	0	
LASTUSED	Datetime resource last used	T	8	0	
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQGRP** Table Description : **Notification Group**

Field Name	Description	Type	Length	DPs	Further information
GP_GRPID	Group Code	C	8	0	Group Code
GP_GRPDESC	Group Name	C	40	0	Group Name
GP_SYSID	Group System	C	2	0	Group System
CRUISE	CRUISE	L	1	0	
COS	COS	C	36	0	
MANAGER	MANAGER	L	1	0	

PRIVACC	PRICAVV	L	1	0	
SPMACCESS	SPM Access Rights	N	2	0	SPM Access Rights
				Input guide :	99
PDMUSER	PDM Access Rights	L	1	0	Should user have access to PDM ?
CRUISEPDM	PDM While Posting Continuously	L	1	0	Calls PDM Capture during continuous posting.
ACCESS	ACCESS	M	4	0	
COUNT1	COUNT1	N	5	0	
COUNT2	COUNT2	N	5	0	

Table : **SEQLOCK** Table Description : **User locks**

Field Name	Description	Type	Length	DPs	Further information
LK_USERID	User Id	C	8	0	User Id Code
LK_CODE	Lock Code	C	30	0	
LK_PROCESS	Lock Process	C	30	0	
LK_CO	Lock Company	C	30	0	
LK_CRASH	System Crash User Id	L	1	0	
LK_TIDY	System Tidy Ref	C	1	0	
LK_SESSIONID	LK_SESSIONID	C	10	0	

Table : **SEQMSGDIST** Table Description : **Notification Details**

Field Name	Description	Type	Length	DPs	Further information
MD_USRGRP	User Group Code	C	8	0	User Group Code
MD_MSGID	Message ID	C	10	0	Message ID
MD_RECTYPE	Record Type	C	1	0	Record Type

Table : **SEQNAVGRPS** Table Description :

Field Name	Description	Type	Length	DPs	Further information
COMMANDID	COMMANDID	C	60	0	
ORDER	ORDER	N	10	0	
USER	User	C	8	0	
ID	Unique ID	N	10	0	
				Default Value :	NEWID(ALIAS())

Table : **SEQNOTIF** Table Description : **Notification**

Field Name	Description	Type	Length	DPs	Further information
MH_ID	Unique ID	C	10	0	Unique ID
MH_SYSID	System ID	C	2	0	System ID Populated with leading space
MH_COID	Company IDs	C	36	0	Company IDs
MH_ACTIVE	Active	L	1	0	Active
MH_STDATE	Start Date	D	8	0	Start Date
MH_STTIME	Start Time	C	5	0	Start Time
MH_TITLE	Title	C	50	0	Title
MH_MESS	Mesage Text	M	4	0	Mesage Text
MH_SHUTD	Shutdown Message	L	1	0	Shutdown Message
MH_REPEAT	Repeat Type	N	1	0	Repeat Type
MH_RECUR	Recur Period	N	3	0	Recur Period
MH_LOCKOUT	Lock Out Time	N	4	0	Lock Out Time
MH_DAYS	Recur Days	C	80	0	Recur Days
MH_SHUNIT	Show for Units	C	1	0	Show for Units
MH_SHTIME	Show for Duration	N	3	0	Show for Duration
MH_LUPDATE	Last Update date	D	8	0	Last Update date
MH_LUPTIME	Last Update Time	C	8	0	Last Update Time
MH_CREATOR	Process Created	C	12	0	Process Created
MH_LCKUNIT	Lockout Duration Units	C	1	0	Units selected for Lockout Duration, D + Days, H = Hours, etc.
				Default Value :	"M"
MH_KILL	Terminate Opera	L	1	0	Flag to indicate whether Shutdown messages cause opera to terminate
				Default Value :	.T.

Table : **SEQPEOPL** Table Description : **People Table**

Field Name	Description	Type	Length	DPs	Further information
PE_REF	Reference	C	10	0	
PE_TITLE	Title	C	5	0	
PE_SURNAM	Surname	C	25	0	
PE_FSTNAM	Forename(s)	C	30	0	
PE_ADDR1	Address Line 1	C	30	0	
PE_ADDR2	Address Line 2	C	30	0	
PE_ADDR3	Address Line 3	C	30	0	
PE_ADDR4	Address Line 4	C	30	0	
PE_PSTCDE	Post Code	C	8	0	
SQ_MEMO	Comments	M	10	0	
PE_PHONE	Telephone	C	20	0	
PE_FAX	Fax	C	20	0	
PE_MOBILE	Mobile	C	20	0	
PE_EMAIL	E-Mail	C	40	0	
PE_EMP	Employee	L	1	0	
PE_SUBC	Sub-Contracter	L	1	0	
PE_PROJL	Project Leader	L	1	0	
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQREPM** Table Description : **Report Manager**

Field Name	Description	Type	Length	DPs	Further information
RP_FILE	Report Name	C	8	0	Report File Name
RP_DESC	Report Description	C	30	0	Description / Title of Report
RP_MODULE	Module	C	1	0	Module Identifier
RP_BASETAB	Main Database	C	6	0	Main Controlling Database.
RP_FIELDS	Field Descriptors	M	10	0	Descriptors for the fields to be reported on.Contains type, length etc.
RP_TEMPLT	Report Template	C	8	0	Which report template being used .
RP_TYPE	Report Type	N	1	0	Style of report 1 = list, 2 = summary.
RP_CONTROL	Sequence Control	M	10	0	Control descriptors of sequence and controlbreaks.
RP_FILTER	Filter Control	M	10	0	
RP_OUTPUT	Output Control	M	10	0	
RP_DELETE	Show Deleted Records	L	1	0	Show Deleted Records On Report Indicator
RP_ORIENT	Orientation	N	1	0	Orientation
			Default Value :		0
RP_HOTKEY	Hot Key	C	1	0	Hot Key
RP_SQL	SQL	M	10	0	SQL
RP_BASENAM	Main Table Name	C	100	0	
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())
RP_XLSOPT	Excel Report Option	N	1	0	
			Default Value :		0
RP_USER	Report Behaviour	M	10	0	Used in Opera 3 to force ReportBehavior when publishing the report

Table : **SEQRPLAY** Table Description : **Report Printer Table**

Field Name	Description	Type	Length	DPs	Further information
DO_REPTID	Report	C	30	0	Report Identifier
DO_DOCID	Document	C	150	0	Document Name
DO_REPDESC	Description	C	50	0	Report Description
DO_MARGIN	Left Margin	N	10	0	Orerride setting for the left margin of the report
			Default Value :		0
DO_PRINTERNAM	Printer Name	C	120	0	
			Default Value :		"<NONE>"
DO_DEFAULT	Default Report	L	1	0	Logical Value Indicating If This IS The Default Printer For This Report...
			Default Value :		.F.
DO_REPFUNC	Report Functions	M	10	0	Holds Foxpro code for impact printer reports
DO_PSIZE	Paper Size Code	I	4	0	

DO_PWIDTH	Paper Width (.1 millimetre)	I	4	0	
DO_PLENGTH	Paper Length	I	4	0	
DO_YRES	YResolution	I	4	0	
			Default Value :		600
DO_MAILDEF	Default E-Mail Report	L	1	0	Logical value indicating If this is the default report when emailing.
			Default Value :		.F.
SQ_DATE	Date	D	8	0	
SQ_TIME	Time	T	8	0	
DO_NCOPIES	No of Copies	N	4	0	
			Default Value :		1
DO_CHAIN	Chained Report	C	150	0	
DO_SOURCE	Paper Source	N	3	0	
DO_QUALITY	Print Quality	N	4	0	
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())

Table : **SEQSYS** Table Description : **System Preferences**

Field Name	Description	Type	Length	DPs	Further information
SY_IN_USE	System In Use	L	1	0	
SY_LOGUSER	Log User	L	1	0	
SY_JCCNT	Contract Description	C	15	0	
			Default Value :		"Contract"
SY_JCJOB	Job Description	C	15	0	
			Default Value :		"Job"
SY_JCPHS	Phase Description	C	15	0	
			Default Value :		"Phase"
SY_TXTREP	Text Report Images	L	1	0	
			Default Value :		.F.
SY_FUNDEC	Foreign Unit Decimal	L	1	0	True or False, Operating Foreign Unit Number ofDecimals
			Default Value :		.F.
SY_WWWDEF	Web site default	C	40	0	
			Default Value :		"www.pegasus.co.uk"
SY_RESULTS	Maximum Search Results	N	10	0	
			Default Value :		100
SY_JCDEPT	Department Description	C	15	0	Label For Deprtment Description.
			Default Value :		"Department"
SY_USELOGS	Use User & Event Logs	L	1	0	
SY_PDFDRV	PDF Printer Flag	L	1	0	PDF Printer Persistance Flag.
SY_NLPROJ	AdvNL Project Description	C	15	0	
			Default Value :		"Project"
SY_NLJOB	AdvNL Dept Description	C	15	0	
			Default Value :		"Department"
SY_UPDBALS	Update Balances	L	1	0	
			Default Value :		.T.
SY_PDFFONT	PDF Font Full Embedding	L	1	0	
			Default Value :		.T.
SY_PDFFVAL	PDF Printer-Set File Name Opt.	N	12	0	
			Default Value :		512
SY_RCLIMIT	De-minimis level	N	10	0	States the de-minimis level for items subject to reverse charge
			Default Value :		5000
SY_RCDATE	Reverse Charge Applicable	D	8	0	States the date that Reverse Charge becomes applicable.
			Default Value :		{^2007-06-01}
SY_PWDAYS	Password Expiry Days	N	3	0	Number of days after which a password expires. 0 implies non-expiring passwords.
			Default Value :		0
ID	Unique ID	N	10	0	
			Default Value :		NEWID(ALIAS())
SY_NSWARN1	Notification First Warning	N	3	0	Notification First Warning in Minutes
			Default Value :		10
SY_NSWARN2	Notification Second Warning	N	3	0	Notification Second Warning in Minutes

				Default Value :	5
SY_GRPERM	Use Group Permissions	L	1	0	

Table : **SEQUSER** Table Description : **User Controls**

Field Name	Description	Type	Length	DPs	Further information
USER	User ID	C	8	0	User ID
				Rule :	"The user names 'MANAGER' and 'ADMIN' cannot be changed"
				Rule Expression :	PreventUsernameChange()
COUNT1	COUNT1	N	5	0	
BELLSET	BELLSET	L	1	0	
CONFIRMSET	CONFIRMSET	L	1	0	
AUTOCLEAR	AUTOCLEAR	L	1	0	
CRUISE	CRUISE	L	1	0	
COS	COS	C	36	0	
COUNT2	COUNT2	N	5	0	
ACCESS	ACCESS	M	4	0	
MENUTYPE	MENUTYPE	C	1	0	
MANAGER	MANAGER	L	1	0	
PREFCOMP	PREFCOMP	C	1	0	
PRIVACC	PRIVACC	L	1	0	
USERNAME	User Name	C	40	0	User Name
O16MENUS	O16MENUS	L	1	0	
SOPSTATUS	SOP Status	C	1	0	SOP Status
HOTKEYS	Hotkey window	L	1	0	
PERSISTENCE	Desktop persistence	L	1	0	
HIDEBAR	Hide favourites in Navigator	L	1	0	
HIDETREE	Hide folders in Navigator	L	1	0	
AUTOHIDE	Auto hide Navigator	L	1	0	
DEFGRID	Default Grid	L	1	0	This Field is used in system Preference. Wether to use default grid or Grey and White grid.
				Default Value :	.F.
ANYWORD	Match Any Word	L	1	0	This Field is used in system Preference. To display Match any Word check box in search form with the user's preference
				Default Value :	.F.
IGNCASE	Ignore Case	L	1	0	This Field is used in system Preference. To display Ignore Case check box in search form with the user's preference
				Default Value :	.T.
INCDELETED	Include Deleted	L	1	0	This Field is used in system Preference. To display Include Deleted check box in search form with the user's preference
				Default Value :	.F.
BACKDROP	Desktop Image	C	254	0	This Field is used in system Preference. Allows the user to specify a background image for the desktop.
BACKDROPS	Desktop Image Style	N	1	0	This Field is used in system Preference. Allows the user to specify a background image style for the desktop. 0 = Centred. 1 = Tiled. 2 = Streched.
				Default Value :	0
BACKDROPV	Desktop Image Default	N	1	0	This Field is used in system Preference. Allows the user to specify the default behaviour for the background image. 0 = Default. 1 = Enabled. 2 = Disabled.
				Default Value :	0
DSKSCREENS	Desktop Images	M	4	0	This Field is used in system Preference. Allows the user to specify the background image for Difference Company.

ADVSEARCH	Use Advanced Searching	L	1	0	Use Fuzzy Searching Flag
NAVSTYLE	Navigator Style	C	1	0	
				Input guide :	X
				Format :	!
				Default Value :	'R'
NAVEXPANDED	Nav Num. of Expanded Bars	N	2	0	
				Input guide :	99
				Default Value :	8
TOOLBARSIZE		N	1	0	Field implemented as part of the UI Enhancements for the Toolbar. This field contains the toolbar size the user wants to use: 1 = Small, by default 2 = Large
				Default Value :	1
VERCHECK	Version Checking	N	1	0	Version checking regularity
				Default Value :	3
LASTVERCH	Last Version check	D	8	0	Last version check date
SPMACCESS	SPM Access Rights	N	2	0	SPM Access Rights
				Input guide :	99
				Default Value :	1
PDMUSER	PDM Access Rights	L	1	0	Should user have access to PDM ?
				Default Value :	.T.
OUTNLPERD	Post Outside Current NL Prd	L	1	0	Indicator of whether user is allowed to post outside the current nominal period
PWEXPDATE	Password Expiry Date	D	8	0	Date on which current password expires, {^2099-12-31} implies non-expring password
				Default Value :	{^2099-12-31}
ID	Unique ID	N	10	0	
				Default Value :	NEWID(ALIAS())
BASEURL	URL For Web Form	M	4	0	Login() calls a web form. This is the URL to which that form navigates.
CRUISEPDM	PDM While Posting Continuously	L	1	0	Calls PDM Capture during continuous posting.
				Default Value :	.T.
NSPREFS	Notification Preferences	M	4	0	Notification Preferences
OPERAPDF	Use the Opera PDF driver	L	1	0	True = Use Opera PDF driver False = Use XFRX PDF driver
				Default Value :	.F.
HIGHDEFPRN	High definition printing	L	1	0	True = Allow high defintion printing (REPORTBEHAVIOR 90) False = Standard definition printing (REPORTBEHAVIOR 80)
				Default Value :	.T.

Table : **SEQUSRGRP** Table Description : **Notification User**

Field Name	Description	Type	Length	DPs	Further information
UG_GRPID	Group Code	C	8	0	Group Code
UG_USER	User Code	C	8	0	User Code
UG_SYSID	Group System	C	2	0	Group System

Accreditation Training Courseware

Other Guides and Help

The following user documents are also provided with the respective software. Guides are available from various sources including Answerlink, the Opera 3 CD and from the Opera 3 Client installation's main folder, normally *C:\Program Files\Pegasus\O3 Client XXX\User documents (where XXX is either VFP or SQL)*. Some guides are also available from the Opera 3 Help menu or respective software Help menu.

Readme File

The Readme file is an HTML document. It contains late breaking news and any other release specific important information.

Note: This file can also be accessed from the Opera 3 CD Installation Menu with regards to Opera 3.

Release Guide

When new versions are released such as Opera 3, they are normally accompanied by a Release Guide that contains information such as What's New in this Release, Release History, and Functional Differences between versions.

Note: This guide can also be accessed from the Opera 3 CD Installation Menu with regards to Opera 3.

Installation Guide

The Installation Guide is provided to help you install the application in your chosen Windows environment. It contains technical information and advice to ensure the installation process is successful.

Demonstration Data Guide

This guide is provided to assist the use of the demonstration data and contains pertinent information that is not contained elsewhere in the product documentation. It is recommended that the Help be used at the same time.

Implementation Guide

The Implementation Guide provides a high-level view of an application such as Opera 3 and how to approach an implementation. It details how the modules are integrated, and recommends the order in which elements should be set up.

System Requirements Guide

The System Requirements Guide details the minimum and recommended computer hardware and software requirements that are required to install and use software such as Opera 3 Enterprise and Opera 3 Enterprise SQL.

It also includes guidance on using Opera 3 Enterprise and Opera 3 Enterprise SQL in a Terminal Services environment run in Windows Server 2003 and Windows Server 2008 (32-bit & 64-bit).

Help

F1 Help provides details of all the functions available in the application.

Document Management & Executive Dashboards Guides

Installation Guides are available for both Document Management and Executive Dashboards. A user guide is also available for Executive Dashboards. Help for Document Management is in the Opera 3 Help.

Note: The guides are in the respective folders on the Opera 3 CD and can be accessed from the Opera 3 CD Installation Menu.