Proficy* Scheduler

GETTING STARTED

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Getting Started with Proficy* Scheduler

Welcome to Proficy* Scheduler! Proficy Scheduler is a planning tool for finite capacity detailed scheduling. It consists of user clients that connect to a common Proficy* Scheduler Server.

Note: Installation of Scheduler clients is carried out with a different installer then Scheduler server. For demo installs with the purpose of testing Proficy Scheduler for a single user it is not necessary to install Scheduler Server, only a Scheduler Client needs to be installed.

Through different interfaces data can be imported from other applications like ERP and Proficy* Plant Applications. Interfaces are implemented towards a Scheduler Client and all Open Adapter interfaces are automatically installed as part of the Client installation.

Before you begin installing our product, please take some time to review the Getting Started guide. This guide includes information about the following:

- Installation Requirements (software, hardware, and the hardware key)
- Installing Proficy Scheduler Server
- Installing Proficy Scheduler Client
- Proficy Scheduler Key Concepts
- Contact Information

Installation Requirements

This chapter provides general information you need in order to install Proficy Scheduler, including:

- Hardware and software requirements
- Installing the hardware key and replacing defective keys

Hardware and Software Requirements

Proficy Scheduler Client (Planner or Viewer)

- Windows XP/Vista/7/8/2000/2003/2008/2008R2/2012/2012R2
- Min. 2 GB RAM 4 GB or better recommended
- Minimum 1024x768 monitor (1200x800 or better recommended).
- Free hard disk space approx. 200 MB.
- Java Runtime 6, 7 or 8 (automatically installed as part of the setup). Support
 is available for both 32-bit and 64-bit Java.

Proficy Scheduler Server

- Windows Server 2000/2003/2008/2008R2/2012/2012R2. Can also run on Windows XP/Vista/7/8 workstations.
- Min. 4 GB RAM 8 GB recommended.
- Free hard disk space approx. 500 MB.
- Standard TCP/IP LAN.
- Microsoft SQL Server (Standard or Express Editions of 2000/2005/2008/2012/2014). Both 32-bit and 64-bit SQL server is supported
- Java JDK 6, 7 or 8 64-bit Java JDK is recommended

The Hardware Key

The hardware key supports USB port configurations. The hardware key you use to run Proficy Scheduler:

- Controls and enables software options available to your installation.
- Uses a utility to electronically reprogram options you choose to upgrade or change (for HASP M4 keys only).

The license operates in an on/off mode, so if Proficy Scheduler does not detect a valid license at load time it is off.

Be sure to file your hardware key packing slip in a safe location. The codes on this slip are necessary for us to quickly duplicate the key in case it is damaged or misplaced. You can verify that your serial number matches the serial number on the hardware key packing slip by using the Proficy License Viewer utility to detect and display your hardware key settings. For more information, see the License and Key Checking section.

Determining client license model

Two different models of licensing Proficy Scheduler clients are available: server license or local license. The selected license model influences at what computer(s) to install the hardware key - the functionality of the client is not affected by the licensing model.

Server license

This license model is used by customers with license to Proficy Scheduler Server.

- The hardware key is installed on the computer running the Proficy Scheduler Server service
- The Proficy Scheduler Licensing Server is automatically started as part of the Proficy Scheduler Server service
- At first startup Proficy Scheduler **clients** are instructed to obtain license information from this central Licensing Server.



For "Server Licensing Model" you do <u>not</u> need to install Proficy Common Licensing application on the computers running the Proficy Scheduler client.

Local license

This license model is used by customers <u>not</u> purchasing the Proficy Scheduler Server.

- The hardware key is installed on the computer running the Proficy Scheduler client
- At first startup Proficy Scheduler **clients** are instructed to obtain license information from the local computer.

Hardware Key Installation

A hardware key is included with your Proficy Scheduler software. You must install your hardware key in order to access all the components of the Proficy Scheduler software you purchased.

Typically, you install your hardware key as you install the Proficy Scheduler product. Refer to the Installing Proficy Scheduler section for more details.

If you insert the key after you install Proficy Scheduler, it should be detected automatically when the software starts. It is recommended that you shut down your computer before plugging in a new hardware key.

IMPORTANT: Do not remove the hardware key from your node while Proficy Scheduler is running. If you do, Proficy Scheduler will shut down. You may also damage the hardware key if you remove it while the software is running.

We support the installation of the USB port hardware key for Proficy Scheduler, only on systems running Windows XP or Windows Server 2003. At this time, we do not support USB keys connected through an external USB hub.

On new installs on Windows XP SP1, we recommend that you insert your USB key after you run the Proficy Scheduler install.

License and Key Checking

To use Proficy Scheduler and other Proficy products, you must purchase the product with the desired options from GE Intelligent Platforms, Inc. Depending on the options you buy, you may need to replace your current key or run an update program on your existing key to enable the options.

If you want to determine the options that are enabled on the computer you are currently working on use the Proficy License Viewer to view the options enabled.

TIP: The Proficy License Viewer programs can be used to provide technical support personnel with information about your hardware key.

To use the Proficy License Viewer to determine the enabled options

- From the Start menu, point to Programs, Proficy Common, and then click License Viewer.
- 2. In the Proficy Products list, select the Proficy Scheduler product. The License and Key Diagnostics area should display the available options.

For information on upgrading your key to add other options, contact us. We will provide the steps for upgrading your Proficy license file when you purchase new options or products.

License Check

The license checking occurs at .dll load time for providers and activities. The license operates in an on/off mode, so if Proficy Scheduler does not detect a valid license at load time then Proficy Scheduler activities and workflows will not be available.

Performing a License Check

You can check the status of your licensing by following the procedure below.

To perform a license check

 On the Windows task bar, click Start, then select Proficy Common, and then click License Viewer. The M4 License Viewer appears. The right pane displays the following:

- License key details:
 - Customer name
 - Serial number
 - Key expiration
 - License creation
 - License key version
 - License type
- License product details:
 - License expiration
 - Number of licensed points
 - Number of nodes
 - Number of connections
 - Enabled options

The left pane displays icons for each of your licensed Proficy products.

- In the left pane of the M4 License Viewer, select the Proficy Scheduler icon.
 Licensing information for Proficy Scheduler is displayed in the right pane of the M4 License Viewer.
- 3. Click Save to save the license report as an HTML file.
- 4. Click Print to print a copy of the displayed license report.

Hardware Key Installation Troubleshooting

If the hardware key does not install properly, you may see a message displayed on the Client at startup.

First, check to see that your hardware key is firmly attached. Next, uninstall and reinstall the driver for the hardware key. If this driver has been incorrectly uninstalled, it may behave unpredictably.

Troubleshooting the Aladdin HASP Key

If the Aladdin HASP USB key does not appear to be working, you can reinstall the licensing to recover from the improper install. When the Aladdin HASP key is not communicating correctly, you will notice that the indicator light at the end of the key is off.

To reinstall the GE Proficy Licensing

- 1. Click the ProficyClientInstaller.exe file in the License folder on the Proficy Scheduler product installation CD to reinstall the license.
- 2. Click Finish when the licensing install completes.

Defective Hardware Key Replacement

A defective hardware key causes Proficy Scheduler to not function.

Be sure to check that the key is firmly attached to your USB or parallel port before assuming it is defective. Additionally, for USB keys, if the indicator light at the end of the key is off, then the key is not communicating correctly.

You can also use the License Viewer to determine if the hardware key is defective. If your hardware key is defective, the License Viewer does not display the proper enabled options. Or, an error message stating that a hardware key is required to view the enabled options may appear. For more information on using the License Viewer, refer to the License and Key Checking section.

We replace defective keys as quickly as possible. To obtain a replacement hardware key:

- Call your local technical support representative. The support representative will
 instruct you to FAX a completed copy of a Merchandise Return Authorization
 form. On receipt of the form, we can program a new hardware key and send it to
 you overnight.
- When you receive the hardware key, you must return the old one along with a
 copy of the form sent with the new hardware key. We reserve the right to
 invoice you for defective hardware keys that are not returned.

Common Questions about Hardware Keys

This section describes some frequently asked questions about Proficy hardware keys.

What does the light at the end of the USB key indicate?

For the Aladdin HASP USB key, the light indicates that the key and the software are communicating. If this light is off, it indicates a problem with the key.

If I move the USB key to another port, is it automatically detected?

Yes. The USB key is automatically detected when moved to another USB port. There are no additional screens requesting software to be installed for the Aladdin HASP USB key.

Installing Proficy Scheduler Server

The steps that follow outline how to install Proficy Scheduler Server. If both Proficy Scheduler Server and Client will be installed we recommend installing the server first.

IMPORTANT:

Before you begin the Proficy Scheduler Server installation, make sure that you have installed the following:

- SQL Server 2000/2005 SP2/2008/2012/2014 (Express, Standard, Professional, or Enterprise Edition)
 - The SQL Server can be installed on a different computer than the one Proficy Scheduler is installed on, and must use SQL authentication to connect to the database (Mixed mode). Also the SQL Server must have the TCP/IP protocol enabled in "SQL Server Network Configuration".
 - The database is created as part of the installation process. The SQL Server user name used for SQL authentication must have administrator access to the database – you will need this user and password during installation.
- Java SE Development Kit (**JDK**) 1.6 or higher. A Java Runtime (JRE) is <u>not</u> enough to run the Scheduler Server.
 - A recent JDK is available on the install CD in the "server" directory or the latest JDK can be downloaded from http://www.oracle.com/technetwork/java/javase/downloads
 - The Java JDK must be installed on the PC where Proficy Scheduler Server is installed.

To install Proficy Scheduler Server

The following information guides you through the Proficy Scheduler Server installation process.

- Place the Proficy Scheduler installation CD in the CD/DVD drive. If you have Autoplay enabled, the installation launcher splash screen should appear. If it does not appear, run "SetupProficySchedulerServer.exe" from the server directory of the Proficy Scheduler CD.
 - The Proficy Scheduler installer installation launcher splash screen and the Proficy Scheduler Multiuser Server Installer page appears.
- 2. Select "Install New Instance" and acknowledge installation of instance 1
- 3. Acknowledge installation of the "Common Server" module. Select "I accept the terms of the License Agreement" and click Install
- 4. Select "Complete installation" and follow the remaining screens to finish the installation of "Proficy Scheduler Common Server".
- Continue with the installation of "Proficy Scheduler Server Instance 1". Select
 "I accept the terms of the License Agreement" and click Install.
 The Database Server login screen appears.
- 6. In the "Database server that you are installing to:" select the local database server to install to or select "Browse" to select an SQL Server on a remote PC. The server port (default 1433) is the port number used for the TCP/IP protocol as enabled in "SQL Server Network Configuration".
- 7. Enter login and password for user with administrator access to the database server, e.g. the 'sa' user. Use the default suggested database name GanttMultiuser and click Next.
- 8. Click Next to install the complete feature set .
 When the installation completes the InstallShield Wizard Completed dialog box appears.
- 9. Click Finish.
- 10. Leave the main "Multiuser Server Installer" screen by clicking Exit.

To uninstall Proficy Scheduler Server

NOTE: log-files and configuration files referenced since installation will not be uninstalled.

1. From Control Panel, double-click Add or Remove Programs. The Add or

- Remove Programs dialog box appears, displaying all of the programs installed on the computer.
- 2. Select Proficy Scheduler Server Instance 1, and then click Remove. The Add or Remove Programs confirmation dialog box appears.
- 3. Click OK. The Proficy Scheduler Server Instance uninstall progress dialog box closes. The Proficy Scheduler uninstall confirmation dialog box appears.
- 4. Select Proficy Scheduler Common Server, and then click Remove. The Add or Remove Programs confirmation dialog box appears.
- 5. Click OK. The Proficy Scheduler Common Server uninstall progress dialog box closes. The Proficy Scheduler uninstall confirmation dialog box appears.

To confirm installation of Proficy Scheduler Server

When installation is finished, you can confirm that it was completed:

In Windows services (Run->services.msc) a service "Proficy Scheduler Server Instance 1 Service" must exist and should be started. In case it is not running verify that the environment variable JAVA_HOME exists (My Computer->Properties->Advanced->Environment Variables) and points to the root of the Java JDK install directory.

Also the server administrative pages at http://localhost:8080/gantt should be available if opened in an internet browser. Note that pages need to be compiled on first visit causing a slight delay.

The Registry Editor will contain two modules in the path: HKEY_LOCAL_MACHINE\SOFTWARE\Proficy\Proficy Scheduler\ganttServer.

The two modules are as follows:

- CommonServer
- Instances

The two modules will contain additional entries like InstallDir and more.

If less than two modules are present, then installation is incomplete.

Proficy* Scheduler

- Click Start.
 The Administrator panel appears.
- 2. Click Run. The Run dialog appears.
- 3. In the Open field, enter regedit.
- 4. Click OK.
 The Registry Editor appears.

In the left pane, open the HKEY_LOCAL_MACHINE folder, then SOFTWARE, then Proficy, then Proficy Scheduler and then ganttServer.

The installed modules appear in the left side pane as sub-modules to ganttServer.

Installing Proficy Scheduler Client

The steps that follow outline how to install Proficy Scheduler Clients. If you plan to install both Proficy Scheduler Server and Client we recommend first installing the server.

Where to install client program code

A Proficy Scheduler client (either planner or viewer version) is launched by running a shortcut to the executable file "Proficy Scheduler.exe" or "Proficy Scheduler Viewer.exe". A Proficy Scheduler client do <u>not</u> use any windows registry information, so any PC can in a few minutes be configured to run Proficy Scheduler client.

Viewer clients share the same installer program as the planner, but do <u>not</u> share the same execution code. This means that to install both the planner and the viewer client the installation program must be run twice.

Preferably a single instance of both the planner and viewer software should be installed centrally on a shared file server, e.g. on a network drive like f:\proficy scheduler\planner and f:\proficy scheduler\viewer. A central installation will make managing and upgrading much easier.

A local installation into e.g. c:\program files\proficy scheduler\planner is also possible and could be the preferred installation location in the following situations

- Proficy Scheduler demo installations or
- laptop installation where Proficy Scheduler must be launched without network access (users working in "the field")

Note that licenses are independent of the target installation directory. This means that a client can still obtain license information from a central licensing server even though program code is installed on the users local hard drive. However for easy maintenance it is highly recommended that all users

launch Proficy Scheduler from the same shared network drive.

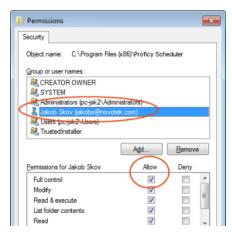
Important note concerning UAC on Windows 7/8 and Vista

The Windows Vista operating system (and hence Windows 7/8) introduced a new security model called User Account Control (UAC). Basically this means that every user normally runs with reduced privileges. Even though a user is a local administrator, the user will **not** run with administrative privileges. For certain operations Windows will prompt the user whenever administrative privileges are required.

Writing to the folder "c:\program files" requires administrative privileges. Since the default installation folder for Proficy Scheduler is "c:\program files\Proficy\Proficy Scheduler" this impacts the following situation

 A Scheduler client running the Shopfloor web-server, since Shopfloor user configurations are stored within the Scheduler client installation directory

To cope with Windows UAC in the above situation, you will need to assign full read/write privileges to the user on the directory "c:\program files\GE\Proficy Scheduler". Right click on folder "c:\program files\Proficy Scheduler" and select "Properties" and the tab "Security" and assign full control to the user running the Scheduler client.



To install Proficy Scheduler Client

The following information guides you through the Proficy Scheduler Client installation process.

- 1. Place the Proficy Scheduler installation CD in the CD/DVD drive. If you have Autoplay enabled, the installation launcher splash screen should appear. If it does not appear, run "SetupSchedulerClient420.exe" from the client directory of the Proficy Scheduler CD.
 - The setup program is used for installation of both Proficy Scheduler Planner client and Proficy Scheduler Viewer client.
- 2. In the first window select "New installation" and Click "Next". Select the "Planner" product and the desired runtime language. Click "Next" and click "Yes" to accept the End User License Agreement.
- Choose the directory to install the Proficy Scheduler installation using the "Browse" button and click "Next".
 - For users going to have more than a single Proficy Scheduler user we strongly suggest installation of the program on a file server (e.g. f:\proficy scheduler\planner or f:\proficy scheduler\viewer)
- 4. Select "Typical" installation to install without Proficy Scheduler Shopfloor. Select "Custom" installation to install with Proficy Scheduler Shopfloor.
 - Proficy Scheduler Shopfloor enables you to start up a web-server allowing users in e.g. production to view production plans in a web-browser. If you at some point plan to use Proficy Scheduler Shopfloor be sure to select "Custom" installation.
- 5. During installation you may be asked to install a Java Runtime Environment if it is not already present on your PC. Click "Yes" and follow the default Java Runtime installation procedure.
- 6. To install Proficy Scheduler Viewer steps 1-5 are repeated remembering to select "Viewer" as product in step 1 and remembering to select a different installation directory in step 2.

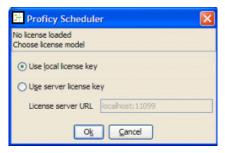
To uninstall Proficy Scheduler Client

NOTE: log-files and configuration files referenced since installation will not be uninstalled.

- 1. From Control Panel, double-click Add or Remove Programs. The Add or Remove Programs dialog box appears, displaying all of the programs installed on the computer.
- 2. Select Proficy Scheduler Planner or Proficy Scheduler Viewer, and then click Remove. The Add or Remove Programs confirmation dialog box appears.
- 3. In the Add or Remove Programs confirmation dialog box, click Yes.
- 4. Click OK. The Proficy Scheduler uninstall progress dialog box closes. The Proficy Scheduler uninstall confirmation dialog box appears.
- 5. Click Finish.

Licensing the client

<u>First time</u> you start Proficy Scheduler you will be asked to select the licensing model (also see Determining client license model on page 3).



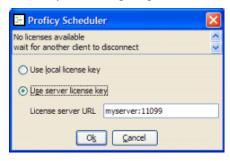
To use the "**Local licensing**" model (requires that the hardware key is installed on local computer) select "Use local license key" and press Ok.

To use "Server licensing" model select "Use server license key" and enter the hostname (i.e. replace "localhost" with the hostname of the PC running the Proficy Scheduler Server - do <u>not</u> remove ":11099").



Note that the port number 11099 is the standard port number; it could be different for your local installation.

If no free licenses are available you will be prompted with the message



- The license model selected on first startup of a client is saved to the file:
 - <userarea>\proficy scheduler\licenseConfig.xml
 - <user>" on Windows XP and "c:\users\<user>" on Windows XP and "c:\users\<user>" on Windows Vista.
 - If you later want to change the selected license model edit this file with e.g. Notepad and afterwards restart the Scheduler client. Also see tip below.
- To force all clients to use the same license model without asking the user, simply copy the file <userarea>\proficy scheduler\licenseConfig.xml to the <schedulerdir>\custom directory. The file must have this content

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To use local license mode replace "false" with "true" in tag "license.useLocalLicense".

The licenseConfig.xml placed in directory "custom" has priority above a possibly version in <userarea>

You can always monitor the current Proficy Scheduler **Licensing Server** status on the address:

http://localhost:8080/jmx-console/HtmlAdaptor?action=inspectMBean&name=init.gelicense%3Aservice%3DGELicenseServer

Replace <localhost> in above address with the hostname of the PC running the Proficy Scheduler Server, e.g. "myserver".

Key Concepts

Proficy Scheduler is a product that allows you to model resources (equipment and personnel) and plan and schedule projects, orders and activities in accordance with the limited capacity of the resources as well as other constraints like material, customer delivery dates and routing sequences.

To learn more about basic features of the product and learn how to setup and configure the product see the pdf-file available from Program Group:

All Programs Proficy Scheduler and then double-click on the pdf-file Proficy Scheduler Client Getting Started.

See the Help guide for more information on all components of Proficy Scheduler.

Help

Use the following ways to access the Proficy Scheduler help:

- Program Group: From the Start menu, point to All Programs, then Proficy, then
 Proficy Scheduler and then double-click Proficy Scheduler Client Users Manual.
 This will open up the pdf version of the user's manual. The pdf-version is useful
 if portions of the manual needs to be printed.
- From within the Scheduler Client open the on-line manual. Either select the Help->Users manual menu or press the F1 key from any open window to access the context sensitive help for that particular topic.

There are several ways to use the on-line help:

- Table of Contents: The table of contents is organized into books and pages. Click a book or page to display its contents. Double-click a book to expand it and display the books and pages nested below it.
- Full-text Search: To access the online help full-text search, click the Search tab.

Contact Us

If you purchased this product through an Authorized Channel Partner, please contact the seller directly.

General Contact Information

Online technical support & GlobalCare: http://www.ge-ip.com/support

Comments about our manuals and online Help: doc@ge.com

Additional information: http://www.ge-ip.com

Technical Support

If you have technical problems that cannot be resolved with the information in this guide, please contact us by telephone or e-mail, or on the web at www.ge-ip.com/support.

General Contact Information

Online technical support & GlobalCare: www.ge-ip.com/support

Comments about our manuals and online Help: doc@ge.com

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Europe, Middle East, and Africa

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Primary language(s) of support: English, French, German, Italian, Czech, Spanish

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