Galileo Desktop SSL
Installation Guide

Galileo by Travelport

Acknowledgement:

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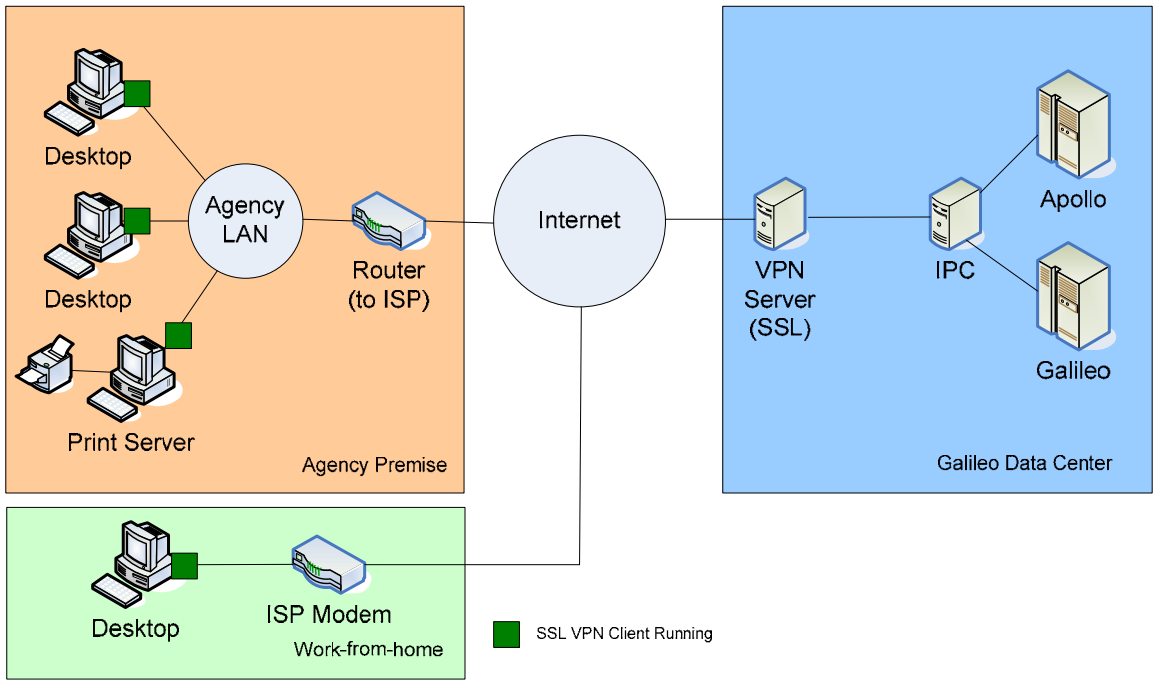
1. Introduction to Galileo Desktop SSL

1.1 How does it work?

This solution allows Galileo customers to access Galileo via a SSL (Secured Socket Layer) connection using their own Internet connection. Customers are responsible for procuring their own dedicated Internet connection, which can be DSL, cable, T1, etc.
By deploying this solution, Galileo allows an agency to use the Galileo Host via their chosen Internet Service Provider.

Definition of Secured Socket Layer connection
SSL, short for *Secure Sockets Layer*, is a protocol for transmitting private documents/information via the internet.
The Galileo SSL client will enable agents existing IP workstations and print servers to access Galileo over the public Internet via an encrypted, secured connection. The client install is transparent and does not require an agent to change any existing workstation configurations or agency workflow.
Once the SSL connection has been established, users will have direct access to the Galileo Host using the Galileo Desktop software.



After the installation, the Galileo SSL client will run as a Windows service and will set-up an SSL connection to gdssl.galileo.com or sslfpemea.galileo.com on port 443
The SSL connection is automatically started on system start-up and will provide Galileo access for all the Galileo used products.

1.2 Client Identifiers and GTIDs

Each Galileo Desktop Workstation will receive a unique combination of a **Client ID** (Client Identifier) and a GTID (Galileo Terminal Identifier).
This information will be provided by your Galileo representative in the form of a Galileo Desktop SSL configuration sheet.
A typical agency will have at least 1 DWS (Combined PrintServer and workstation) and an IWS (workstation) for each additional Galileo User.
The difference between a DWS and an IWS is the installation of the Galileo PrintManager software. Galileo PrintManager will provide host printing functionality to a travel agency.
During the installation of the Galileo software you will be requested to fill-in your ClientID details.
An example of a ClientID is: **G0XK800H**.
A **GTID** (Galileo Terminal Identifier) is a hexadecimal number which is used to start a session on the Galileo Host. Each workstation, printer or MIR has its own GTID. The total number of GTIDs is determined during the provisioning stage. An example of a GTID is GTID is **C2FF10**.

1.3 Software and Hardware Requirements

Note: Please install Galileo Desktop under the supervision of someone with a working knowledge of your office hardware.

Hardware Requirements

Requirement	Minimum	Recommended
Processor	266Mhz Pentium	1 GHz
RAM	128MB	512MB
Temp hard drive space	400MB	
Permanent disk space	200MB	Note: Additional space is required for Internet Explorer
Resolution	800x600	1024x768 (16bit colour or higher colour is recommended).

Software Requirements

- Windows® 2000 (Service Pack 4), or Windows® XP (Home or Professional Edition), Windows® Vista.
- Microsoft® Internet Explorer 6.0 and above.
- Net 2.0 or above needs to be installed, if not present, the install will automatically download the software from Microsoft.
- Microsoft Installer 3.1 v2 (KB893803) if Windows 2000 or XP is being used
- MSXML 6.0 or above needs to be installed, if not present, the Galileo Desktop install will automatically install it for you.

Note:

- Installer must have Administrative rights
- Please install Galileo Desktop SSL under the supervision of someone with a working knowledge of your office hardware.

Citrix® Options:
This installation is fully compatible with most Citrix® application servers currently supported by Citrix and is available for Microsoft® Terminal Service users.

- NT 2000 Terminal Server
- NT 2000 Microsoft® Terminal Server with Citrix® MetaFrame XP 1.0&XPe 1.0 both Windows® client and NFuse Portal Server.
- Citrix Presentation Server 4.0 on Windows Server 2003.

The installation determines the Windows® platform as well as the version of MS Internet Explorer you are using. You may need to know the CD-ROM drive letter designation if you intend to access the applications from a CD-ROM drive that is shared.

1.4 Galileo Desktop SSL Product suite.

De Galileo Desktop SSL product suite contains the following programs:

CLIENT APPLICATIONS

- GalileoSSLClient_v01.00.0003.
- Galileo Desktop 2.0, or higher.
- EMEA Viewpoint Scripts. (Customized booking processes in script form)

HOST PRINTING APPLICATIONS

- Galileo Print Manager 4.00.01 (Galileo Host prints like Itineraries Mir and e-ticket supports documents.

DOCUMENTATION

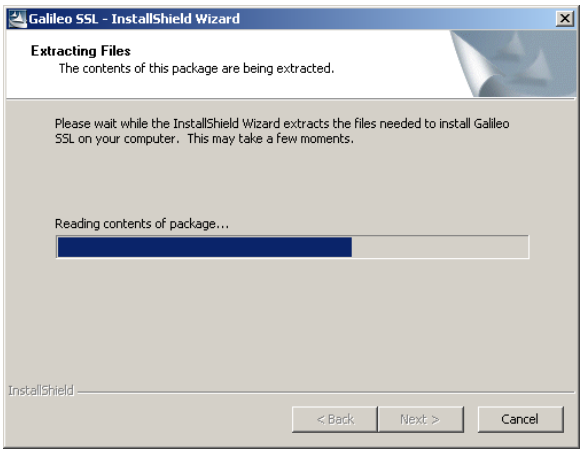
- Galileo Desktop SSL Installation guide.
- Galileo Desktop Userguide.

The software and documentation can be either downloaded from a Galileo service portal in your region or it will be send to you on CD together with your Galileo SSL configuration details.

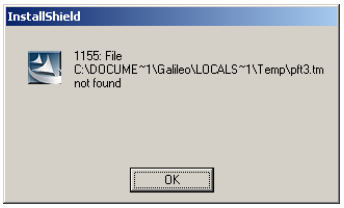
2. The Galileo SSL client installation

The Galileo SSL client will manage the SSL connection to the Galileo SSL server (sslfpemea.galileo.com).
After de installation the Galileo SSL client will run as a Windows service.
To start the installation, please run the GalileoSSLClient_v01.00.0003.exe.
Make sure you are logged on as a local administrator and you have met all the necessary hardware and software requirements.

Start the Galileo SSL client installation by running the **GalileoSSLClient_v01.00.0003.exe**

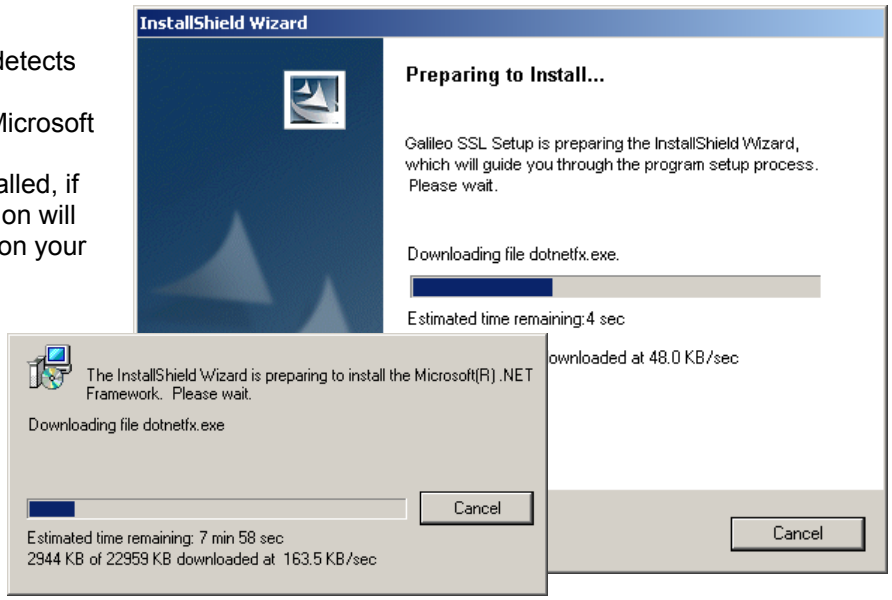


You will receive the following dialog box if you do not have the correct Windows installer version on your system.
Windows 2000 or Windows XP at least needs to have Windows installer 3.1 v2 active on your system.
Please download the installer from Microsoft via the link below and restart the Galileo SSL client installation.

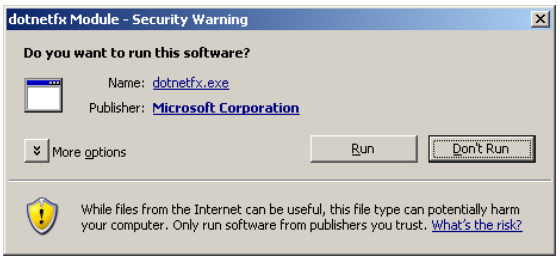


http://www.microsoft.com/downloads/details.aspx?FamilyID=889482FC-5F56-4A38-B838-DE776FD4138C&displaylang=en

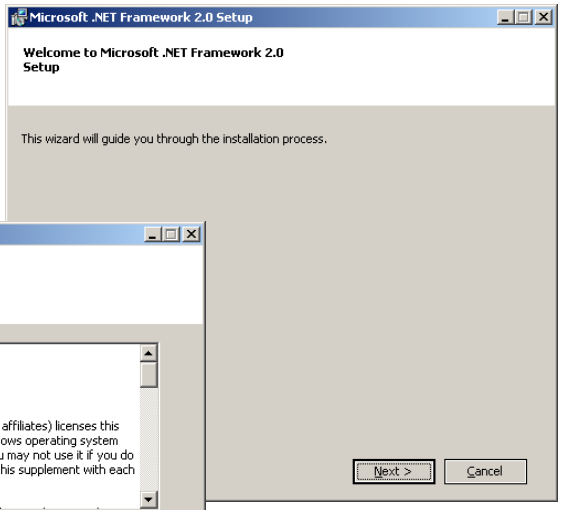
The installation will continue ones it detects the correct Windows installer.
Next the installation will check your Microsoft dotnet version.
Dotnet 2.0 or above needs to be installed, if not present, the Galileo SSL installation will automatically download and install it on your system.



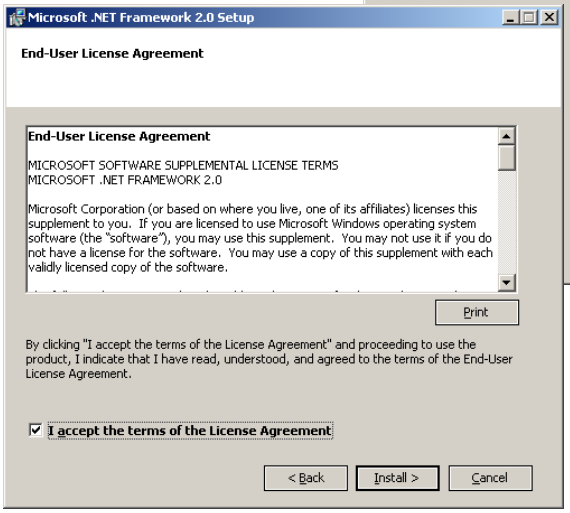
Please install the dotnetfx update by clicking on **Run**



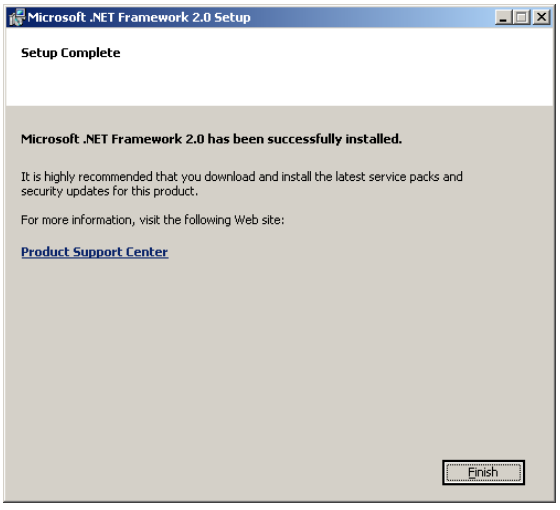
Please click **Next** in the Welcome to Microsoft.Net dialog box



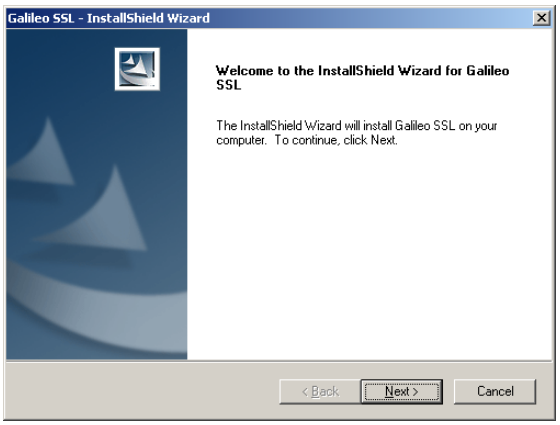
Accept the terms of the License agreement and click on **Install** to continue the dotnetfx installation update.



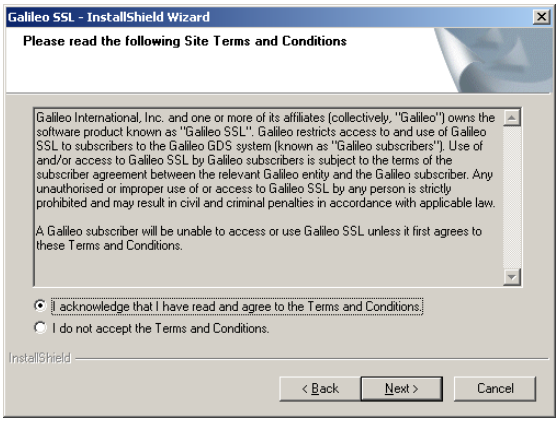
The dotnetfx update is successfully installed on your system. Click on **Finish** to continue with the Galileo SSL client installation



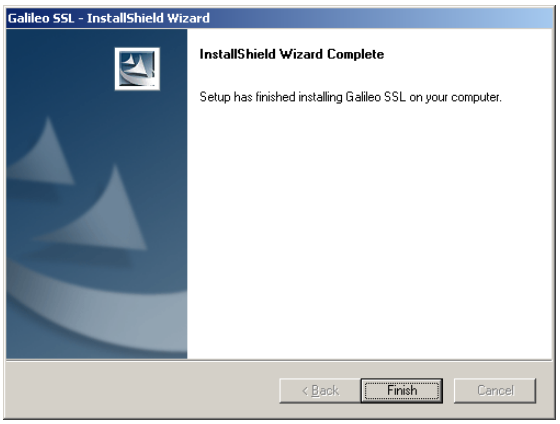
After the dotnetfx update the installer automatically continues with the installation of the Galileo SSL client.
Click **Next** to continue



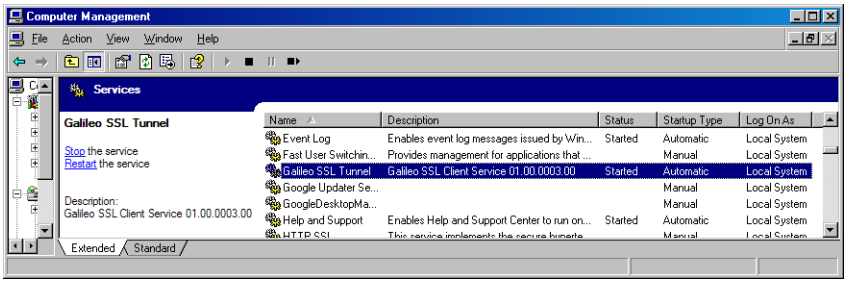
The Terms and Conditions window appears.
Please acknowledge the terms and Conditions and click **Next** to continue



The Galileo SSL client is successfully installed on your system.
Click Finish to end the



If you want to check if the Galileo SSL tunnel is active on your system, please go to Control panel (Classic View) and click on Administrative Tools and then on Services.
Check if the highlighted service below is started.



The SSL service will automatically start on system start-up, so it is not necessary to start is manually.
Please continue with the installation of Galileo Desktop.

3. The Galileo Desktop Installation.

If you already have an older version of Focalpoint or Galileo Desktop installed than please make sure You perform the following Primary checks

Please skip this section if you do not have an older version of Focalpoint or Galileo Desktop installed on your system. Go directly to section 3.2 Installing Galileo Desktop

3.1 Primary checks.

Before the installation begins, the following primary system checks are made. If your operating system fails to meet any one of these checks, the installation will abort.

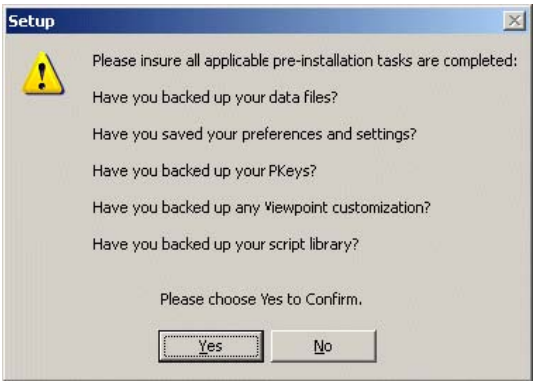
- Do you require/have administrative privileges?
- Is the resolution set to at least 1024x768?
- Is the colour depth at least 256 colours?
- Is there sufficient disk space?
- Is the operating system Windows® 2000 SP4 or higher?
- Microsoft® Internet Explorer 6.0 or higher present on your desktop? If not, you will be prompted to upgrade.

Before you begin

- If you are running Focalpoint® 3.2, or Focalpoint® 3.0.18A, remove the icon from your desktop (right-click the icon and select Delete).
- Make a note of your Client ID and IP configuration settings. Go to the Control Panel/Galileo TCP/IP settings for this information.
- Disable any anti-virus software you may have running. Antivirus software may prevent registries from being updated.

Pre-installation requirements
At the beginning of the installation, you will encounter the Setup dialog. You must click Yes before you can proceed with the installation. The following tables will help you find the files you want to backup. When the installation is complete, you are reminded to reinstate these files.

Note: If you are not familiar with how to back up files, please check with your manager/IT manager. File locations for each question are listed the following page.
Have you backed up your data files?



File Type	If you are installing over Focalpoint® 3.5	If you are installing over Galileo Desktop
Replay Files	\FP\REPLAY*.*	\FP\REPLAY*.*
Scriptwriter Plus Files	\FP\DATADIR\SWPLUS\SCRIPTS*.*	\FP\DATADIR\SWPLUS\SCRIPTS*.*
Browser Script Files	\FP\DATADIR\SCRIPTS*.*	\FP\DATADIR\SCRIPTS*.*

Have you saved your preferences and settings?

File Type	If you are installing over Focalpoint® 3.5	If you are installing over Galileo Desktop
Focalpoint Config File		\FP\DATADIR\WSTN\focalpoint.config.xml \FP\DATADIR\USER\users\focalpoint.config.xml
Scriptwriter run	\FP\DATADIR\WSTN\GRP*.SWR	

Have you backed up your Pkeys?

File Type	If you are installing over Focalpoint® 3.5	If you are installing over Galileo Desktop
Apollo® Keys	\FP\DATADIR\PKEYS*.ALC	
Galileo® Keys	\FP\DATADIR\PKEYS*.CPR	
Galileo Desktop		\FP\DATADIR\PKEYS*.PKEYS.XML

Have you backed up any Viewpoint Customization?

File Type	If you are installing over Focalpoint® 3.5	If you are installing over Galileo Desktop℠
		I have modified non Version Controlled files, what steps do I need to take? (ie I have added a right click menu into the pnr.html file which launches one of my files). Take a copy of the code that has been added to the file and after the installation, this code can be added back into the appropriate file within Galileo Desktop℠. The Galileo Desktop file structure has changed so it is important to ensure that the correct file is being edited.

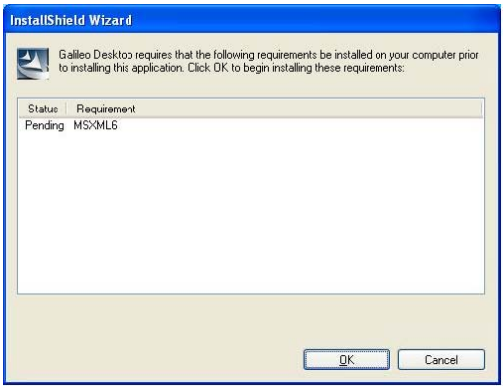
Have you backed up your script library?

File Type	If you are installing over Focalpoint® 3.5	If you are installing over Galileo Desktop
Galileo Java Script Library		\FP\SWDIR\CustomViewpointGalileo\CustomViewpointGalileo
Java Script Library Val Files		\FP\SWDIR\CustomViewpointGalileo\CustomViewpointGalileo\gdia_ValFiles

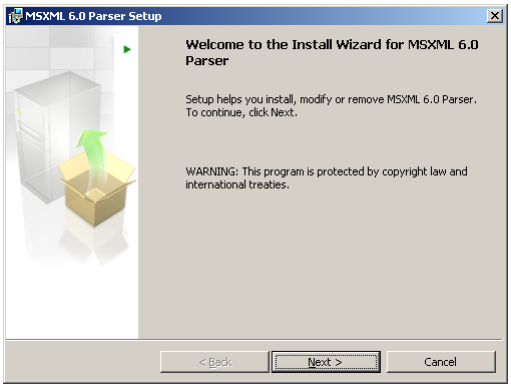
3.2 Installing Galileo Desktop.

Start the Galileo Desktop installation by running the **Galileo Desktop 2.1.exe**

The Setup dialog box appears.
Confirm that all of the applicable items are backed up; click **Yes** to uninstall your current version of Galileo Desktop.
For additional information on these pre-installation tasks, see the section titled: Pre-installation Requirements.
InstallShield prepares the install. A progress box may appear



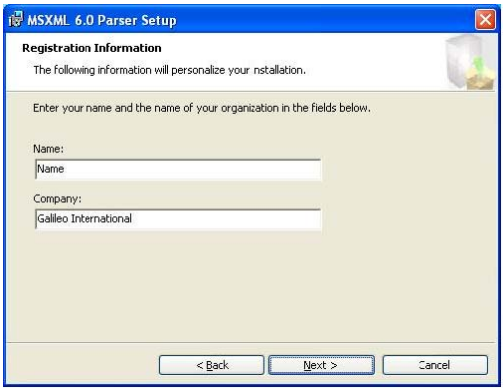
Galileo Desktop 2.1 requires MSXML 6.0 to operate correctly.
MSXML 6.0 Update (Required if not loaded)
The install will check to ensure it is installed. If it is not present on your workstation, the Galileo Desktop installation will begin to install MSXML 6.0 first.
The following screens appear.
Click **OK** to begin the installation.



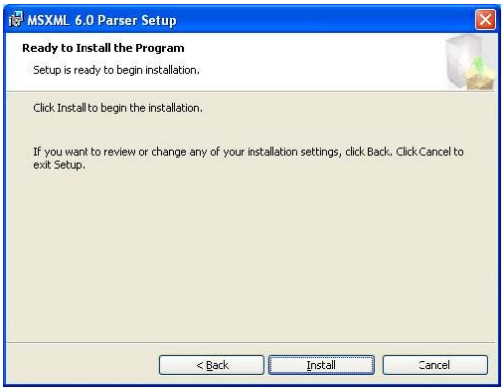
The MSXML 6.0 parser Setup dialog box appears
Click **Next** to start the installation.

Click I accept the terms in the license agreement button.
Click **Next** to continue

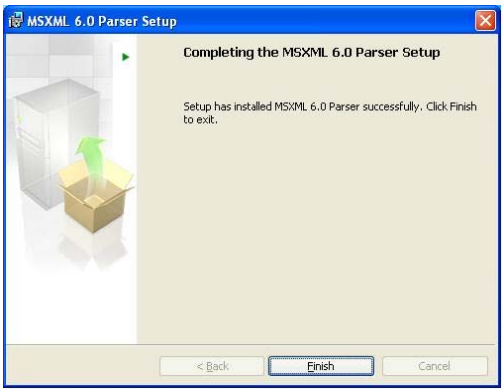
Enter your Name and Company Name and click **Next**.



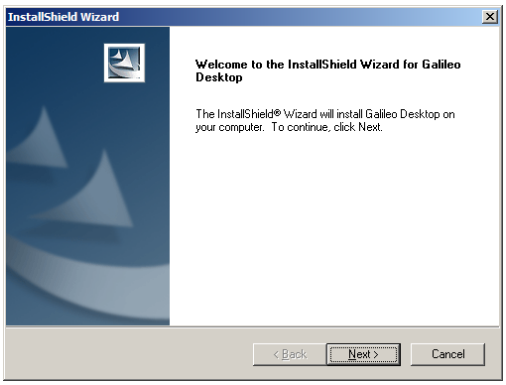
The Ready to install the program dialog box appears
Click **Install**. To continue



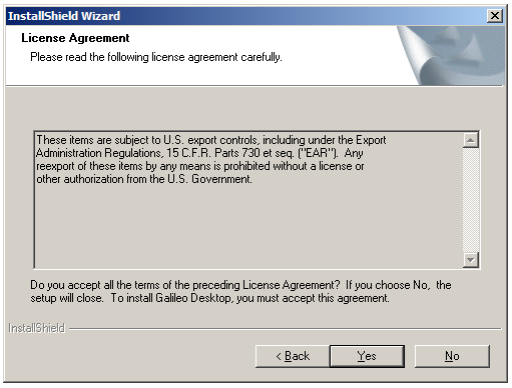
Click **Finish**. The MSXML update is now installed.
The Galileo Desktop installation will continue automatically.



The Welcome to the Install shield wizard for Galileo Desktop dialog box appears. Click **Next** to continue**.**

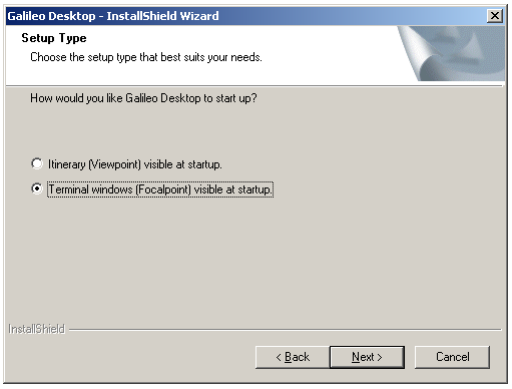


The License agreement dialog box appears
Click **Yes** to continue.

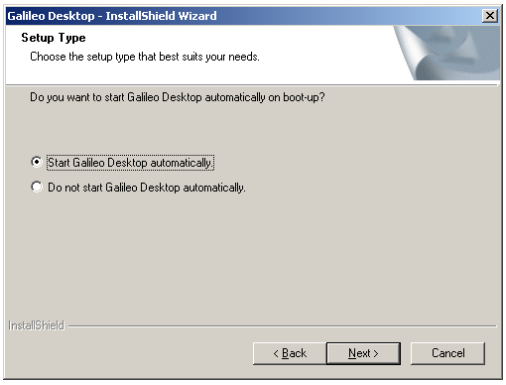


The Set-up type dialog box appears.

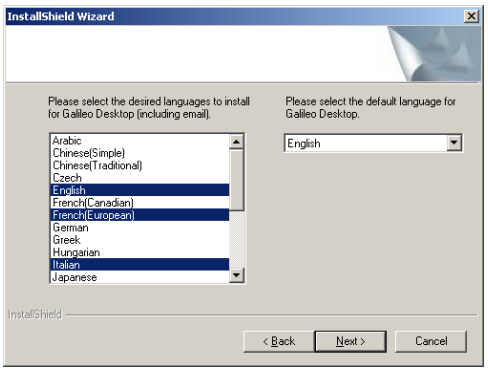
Choose which Galileo Desktop mode you want to start-up with and click **Next** to continue



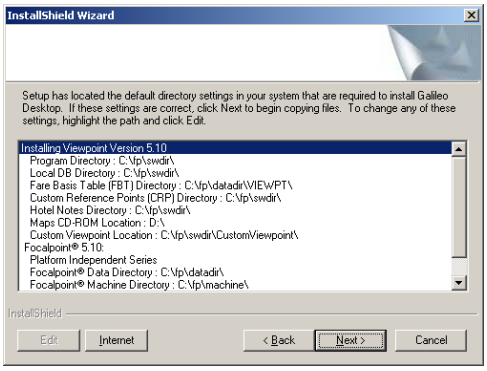
Choose if you want Galileo Desktop to start automatically on boot-up and click **Next** to continue.



Please select the desired language.
Use the ctrl key to select multiple languages
Click **Next** to continue

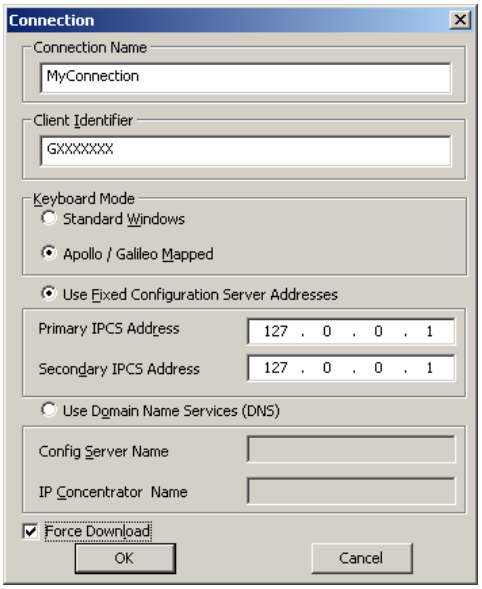


The Default directory overview
dialog box appears.
Click **Next** to continue

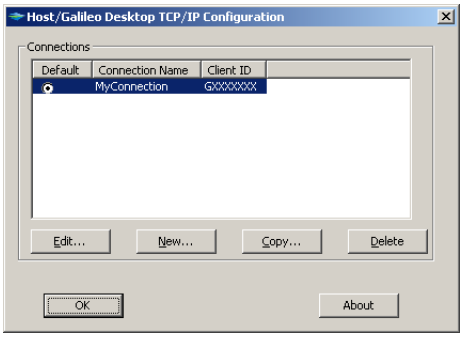


The connection dialog box appears.
Please fill in the following settings

- Galileo assigned **Client Identifier**
  you can find this information on your
  Galileo configuration sheet.
- Use **Apollo/Galileo Mapped** Keyboard mode.
- Use Fixed configuration server addresses
  Primary and secondary are both **127.0.0.1**
- Check the **force download** box



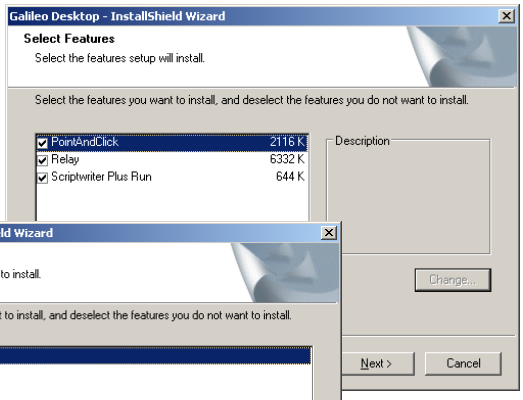
Click **Ok** and again OK to save these settings and continue



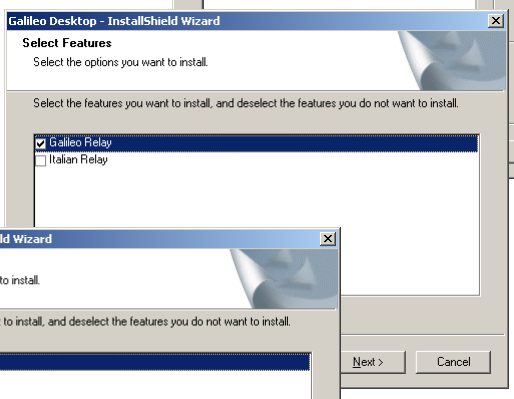
You have now created your Galileo connection profile.
Please click **Ok** to continue with the installation.

The Select Features dialog box appears
Click **Next** to continue

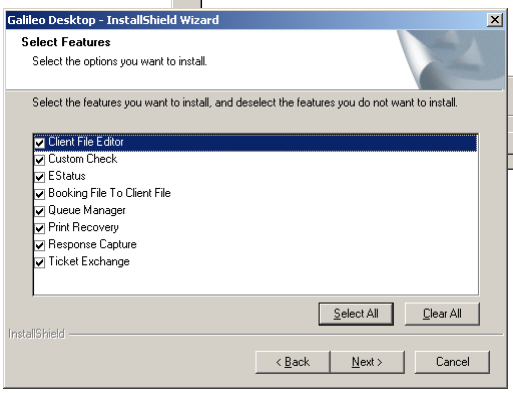
If you deselect any of these option than that option will not be available after the installation.
A re-install is necessary to add a deselected feature.



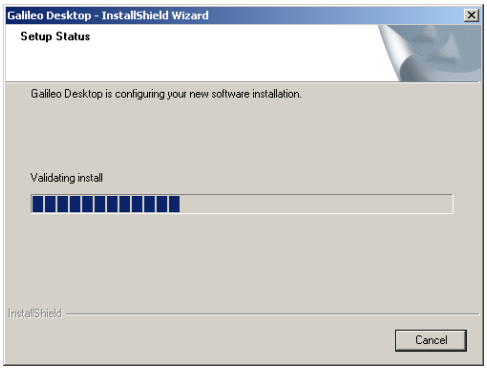
The next Select Features dialog box appears
Click **Next** to continue
Use Italian Relay only when your agency is based in Italy.



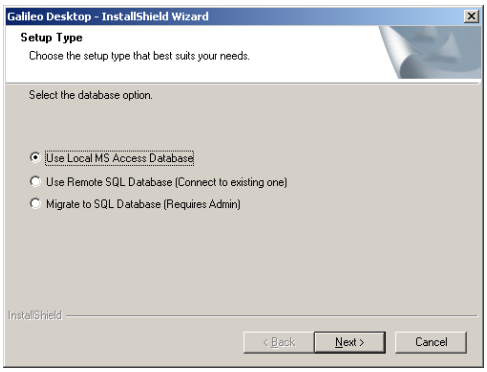
Select all the available relay features and click **Next** to continue

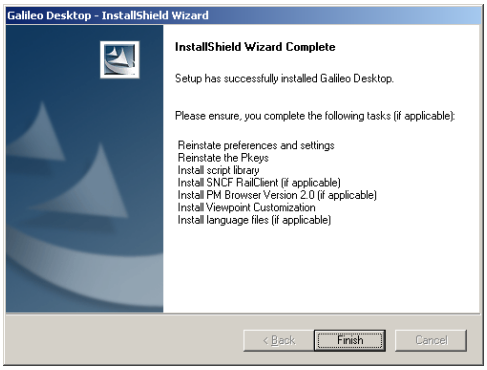


All available Galileo Desktop features have been selected.
The Galileo Desktop software is now being installed.



The **Setup type** dialog box appears. Choose **Use local MS Access database** and click **Next** to continue





The **InstallShield Wizard Complete** dialog box appears.
Click **Finish**, the Galileo Desktop software is now successfully installed on your system.

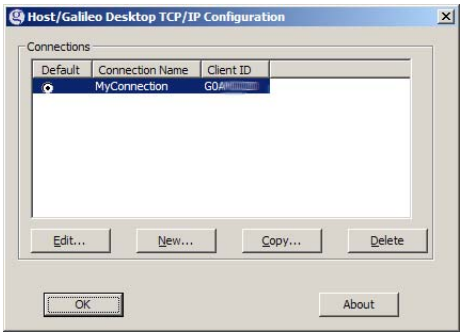
3.3 Starting Galileo Desktop for the first time.

Double click on the Galileo Desktop icon on your desktop to start Galileo Desktop.

The Galileo Desktop Logon screen appears; click on the **Start Galileo Desktop** button.
You can also start Galileo Desktop via
START→PROGRAMS→ Galileo Desktop → Galileo Desktop.

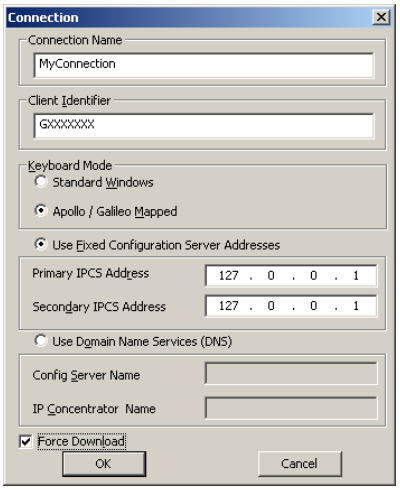
As this is the first time Galileo Desktop is started on this system, it will automatically downloads it's configuration from the Galileo Host.
Enter your Galileo Desktop **Sign On (son/zXXX)** in one of the four Galileo windows.
You will receive a **sign on complete** from the Galileo Host.
You are now connected and signed on to the Galileo host.

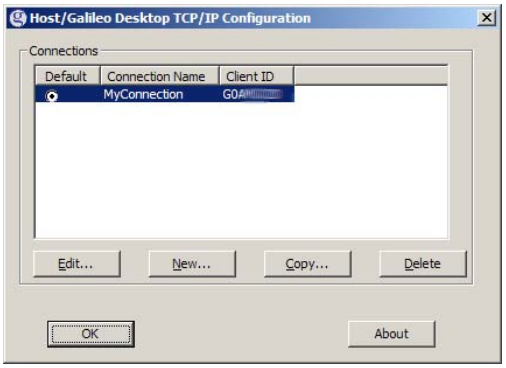
3.4 Reconfigure Galileo Desktop after the installation.



Use the following steps if you want to reconfigure Galileo Desktop on your system.

1. Close Galileo Desktop.
2. Go to **Start → Settings→ Control Panel**
3. Dubbel click the Galileo TCP/IP icon.
   The Host/Galileo Desktop TCP/IP configuration dialog box appears.
4. Highlight your current connection and click **Edit** to open the selected connection.
5. The connection Dialog box appears
   Change the ClientID, check the Force Download box and click **Ok** to save the new settings.

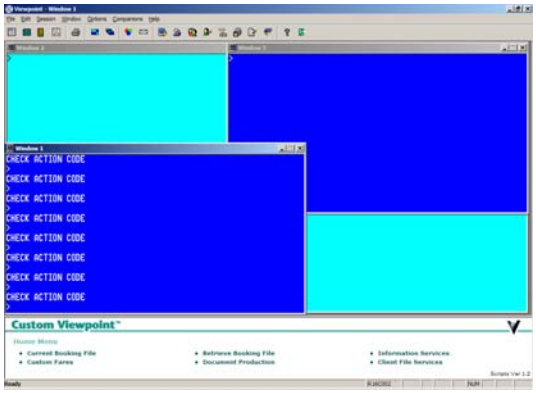




6. Click **Ok** to exit the he Host/Galileo Desktop TCP/IP configuration dialog box.

3.5 Custom Viewpoints Scripts

The Custom Viewpoint scripts installation will provide you with a number of ready to use scripts to automate a number of workflow functions within Galileo Desktop.

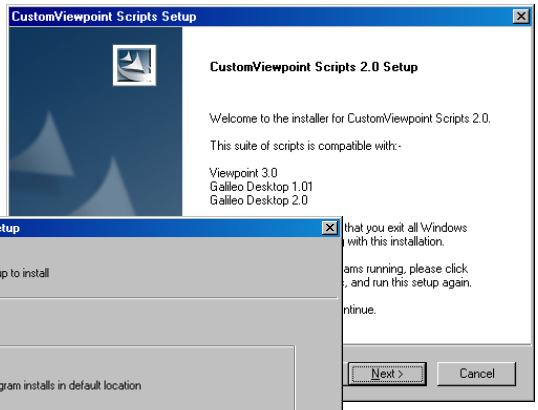


Once installed, the Custom Viewpoint scripts are accessed through Custom Viewpoint™. Make sure that in the terminal windows screen under **options** you have activated; **View Custom Viewpoint**

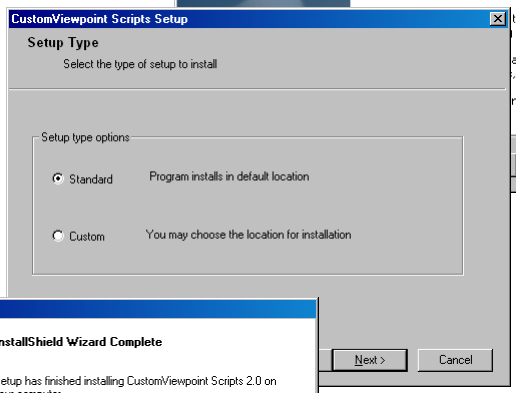
The Custom Viewpoint scripts are designed for customers who are using version Galileo Desktop versions 1.01, 2.0 and 2.1
You can run the Galileo Desktop Custom Viewpoint scripts and Scriptwriter
Plus™ scripts in conjunction with each other.

If you want to use the Custom Viewpoint Scripts please install the EMEA_Script_2.0.exe software using the following installation procedure.

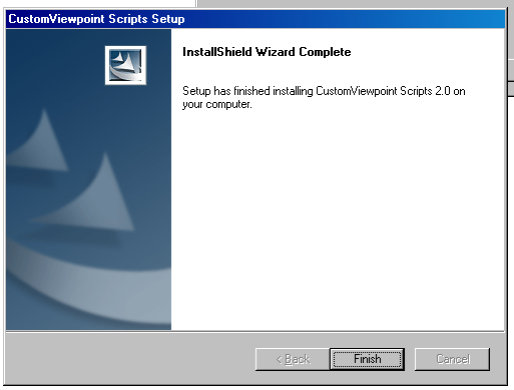
1. Close Galileo Desktop
2. Start the EMEA_Script_2.0.exe
3. The CustomViewpoint Scripts 2.0 Set-up dialog box appears, click **Next** to continue.



4. The Set-up type dialog box appears. Choose **custom** only if you have changed the default Galileo Desktop installation directories.
   Choose **standard** if you have made no changes to the default Galileo Desktop installation directories.
   Click **Next** to start the Custom Viewpoint Scripts installation.



5. The **InstallShield Wizard Complete** dialog box appears. Click **Finish**, to end the installation.



The Custom Viewpoints Scripts software is now successfully installed on your system

4. Galileo Print Manager Installation (GPM)

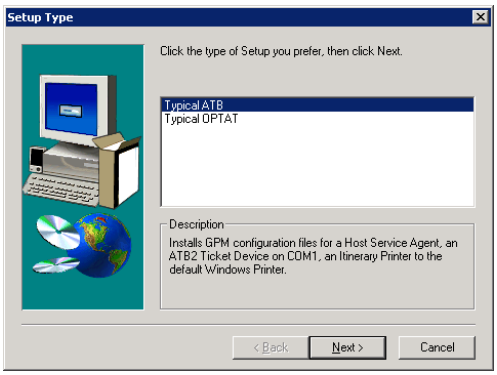
Galileo Print Manager (GPM) is used to print booking related content like Itineraries, agency coupons and back-office information (MIR).

If you only want to print Galileo related content, than you only need to install the GPM software.
If you want to print 3rd party rail document besides the Galileo related content, than you need to Contact your Galileo representative and ask for the Galileo Desktop SSL_Rail version which is compatible with 3rd party printing services.

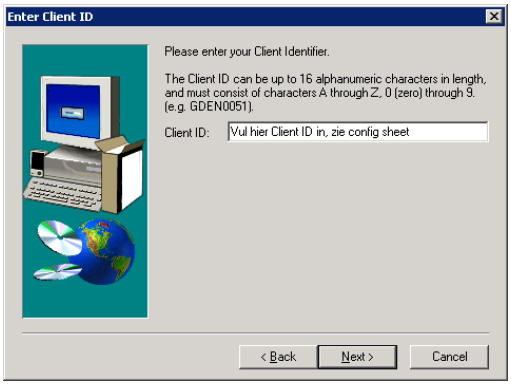
The GPM software receives print messages from the Galileo host and it will relay these messages to the locally configured printer ports, network printers or file shares. All hardcopy printers have to be configured in Windows first before GPM is able to use them.

1. Run the **GPM4.0.exe** to start the Galileo Print Manager installation. The GPM setup dialog box appears.
   Click **Next** to continue.

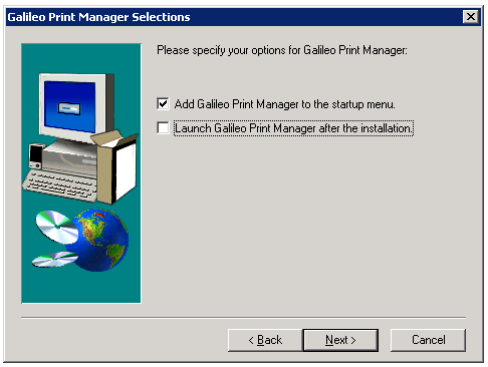
2. The Setup Type dialog box appears
   Choose typical ATB and click Next to continue



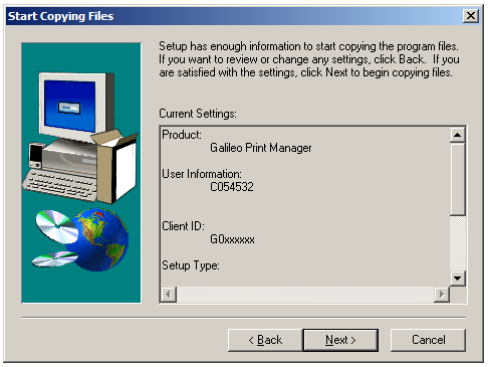
3. The Enter Client ID dialog box appears. Enter your GPM ClientID in capitals and Click Next to continue. The Client ID information can be found on your Configuration sheet provided by Galileo.



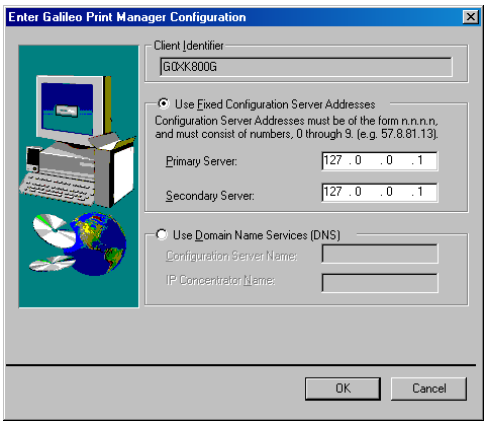
4. The GPM Selections dialog box appears. Check the Add GPM to the start-up menu option and click **Next** to continue.



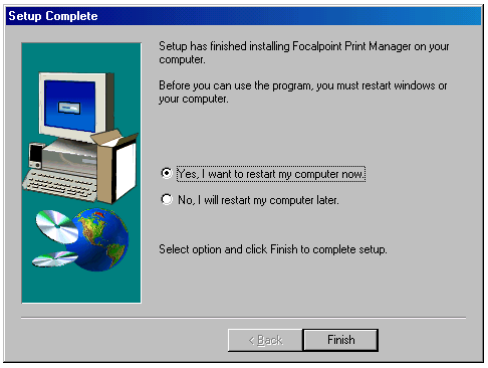
5. The Start Copying Files dialog box appears.
Click Next to continue. The Setup will now start installing all the necessary files. The Setup will install the GPM software in C:\PROGRAM FILES\FOCALPOINT\DPS\.
The GPM configuration information will be stored in C:\MY DOCUMENTS\FOCALPOINT PM\.



6. The Enter GPM configuration dialog box appears.
Mark **Use Fixed Configuration Server Addresses** and fill in the addresses below
Primary Server = **127.0.0.1**
Secondary Server = **127.0.0.1**
Click **OK** to continue



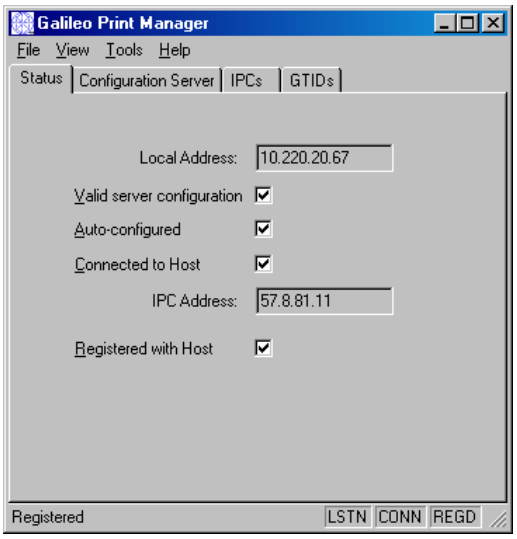
7. The Setup Complete dialog box appears
Choose **No I will restart my computer later** and click **Finish** to end the installation.



The GPM software is now successfully installed on your system. Please continue with the configuration of Galileo Print Manager

4.1 Galileo Print Manger configuration

The Galileo PrintManager (GPM) software is now installed and the GPM will start automatically on start-up. Because this is the first time GPM is started it needs to receive a configuration download from the host. Ones it has received its configuration download you can continuing with the configurations of printers in the GPM.
Go to **START→PROGRAMS→ Galileo Print Manager → Print Manager**
To start the Galileo Print Manager software
The Galileo Print Manager dialog box appears.



In the GPM dialog box go to:
Tools→Connect On Start-up.
This will make sure that GPM automatically connects to the Galileo host on system start-up

In the GPM dialog box go to:
Tools→Auto-configure.
Click on **Auto-configure** and GPM will request a configuration download from the Galileo Host.
If this configuration download is successful, a check will appear in the **Auto-configured** box.

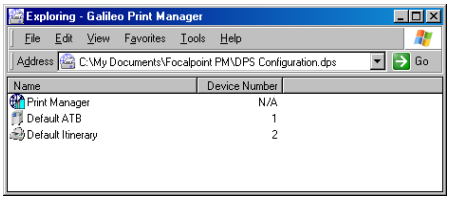
You can check if you have received a configuration download by clicking on the GTID tab.
When you received a configuration download from the Galileo Host you will find here a list of printer GTIDs which are assigned to you.

The GPM has received its configuration and it needs to be saved. The easiest way to save the new configuration is to close GPM. Click in the GPM dialog box on **File→Exit**
The GPM **Save changes to Host** dialog box appears.
Click **YES** and the GPM configuration will be saved.

The GPM is now installed and it has received a configuration download.
If you start your PC in the morning, GPM will automatically run at start-up.
You need GPM to be operational if you want to print Itineraries or Tickets.
Please continue with the local printer configuration for GPM.

4.1 Installation of printers under GPM

Make sure Galileo Print Manager is closed
Go to **START→PROGRAMS→ Galileo Print Manager → Configurations**



The exploring Galileo Print Manager dialog box appears. In the dialog box you will find a number of icons. The second icon is the default ATB device and the third icon is your default Itinerary printer.
Go to: **View → Toolbar, View → details** to see the device numbers

Each printer has a device number, which corresponds with the device number found in the Galileo Print Manager GTIDs dialog box. This way it is easy to distinguish which device number belongs to what printer type.
In the next several pages we will show you how to configure your printers.
After the installation of the printers it is recommended to restart your PC.

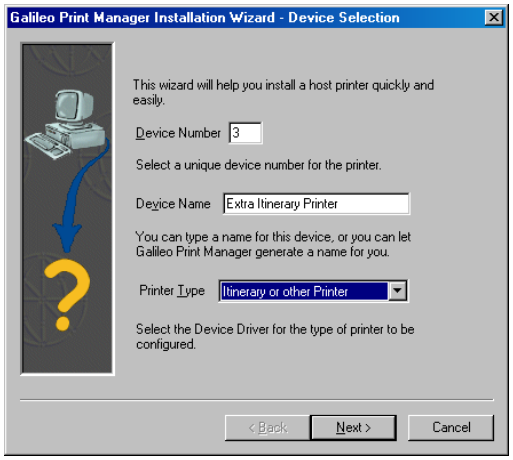
4.1.1 The installation of the first Itinerary printer

It is necessary to have your agency printers configured on your Windows system, if you want to be able to send a Galileo host print to one of your local printers.

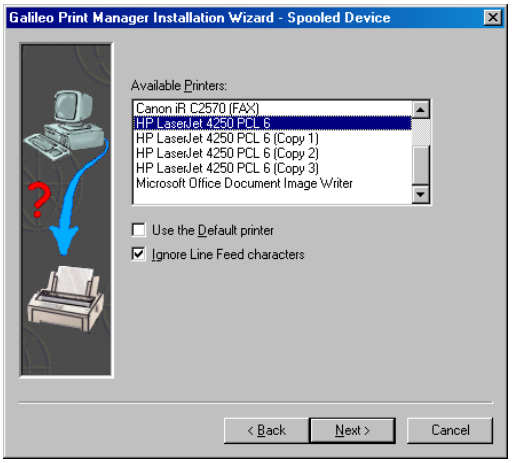
Make sure that Galileo Print Manager is not active at this moment. Go to: **Start → Programs → Focalpoint GPM → Configurations**.
The installation of GPM has automatically generated a '**Default ATB**' and a '**Default Itinerary**' device.
Please delete both devices.

If you want to install an Itinerary printer,
Go to: **File → New → Device**
This will start a printer installation wizard.

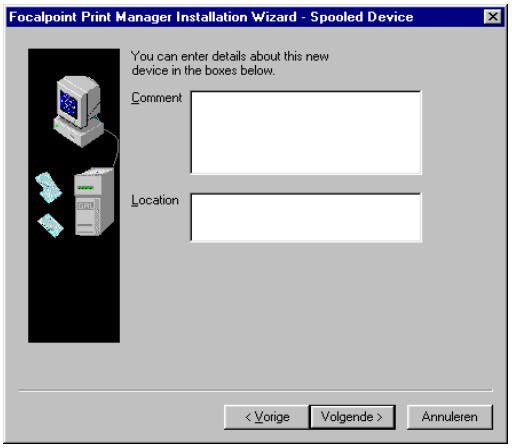
Choose a device number that is available but not in use. Fill in a device name of your choice. This name will be visible later in the configuration dialog box.
Choose the correct **Printer Type** and click **Next**.



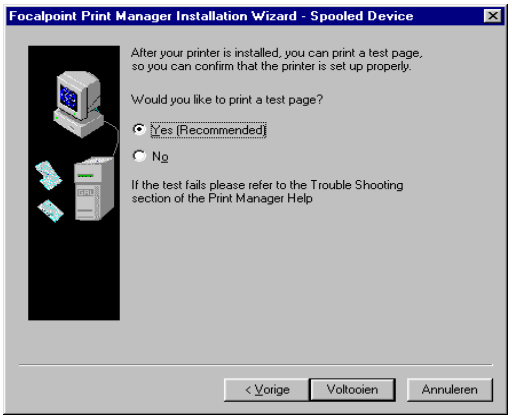
The available Printers dialog box appears. You will find all the printers configured under Windows listed here. Make a choice which printer you want to use as an Itinerary printer by highlighting this printer.
Remove the check from the use the default printer box and click on **Next** to continue.



In this dialog box you may enter additional information concerning this printer.
This is not necessary; you may leave this blank if you wish.
Click **Next** to continue.



In this dialog box you are asked if you would like to print a test print.
This is only a local test print and it indicates that the workstation is able to print to the specified printer.
Make your choice and click **Finish** to end the printer installation wizard.



Continue the above mentioned steps for every additional Itinerary you would like to configure

4.1.2 The installation of a MIR device

A Machineable Interface Record (MIR) contains booking information, which can be used in Back-office systems.

A MIR can be received in two different ways:

- **To a directory on the hard disk or network share.** The MIR is configured on the GPM as **Mir to disk**.
- **To a serial port**. The MIR is configured on the GPM as **MIR to port**.

Each MIR receives a unique filename and this makes it possible for the back-office system to read the information in this file and keep track of which file is already processed by the back-office system.

Mir to disk
Follow the same steps as if you would install a printer.
Choose a directory where you would like the Mir files to be sent to. Click **Next** and add some comments if necessary to clearly outline the purpose of this device.
Click **Next** to end the installation of **Mir to disk**
The **MIR to disk** device is now added to the Focalpoint Print Manager Configuration file. Start GPM (**Start → Programs → Galileo Print Manager → Print Manager**).

Mir to port
Follow the same steps as if you would install a printer.
Click on the **'Port' tab** and choose the serial port where the back-office system is connected.
Click on **Configure Port** and set the port settings to reflect settings given by your back-office system supplier. If you do not know the port settings for your back-office system, use the standard setting given below.

Bits per second:	1200
Data bits:	8
Parity:	None
Stop bits:	1
Flow control	None

Click on the **Advanced button** (Settings button when using Windows NT).
Set FIFO buffers off (remove check) and click OK.
Again click on **OK → OK** to close installation screen.
The new port settings are active immediately. The **MIR to port** device is now added to the Galileo Print Manager Configuration file.
Start GPM (**Start → Programs → Galileo Print Manager → Print Manager**).

4.1.3 MIR file Example

If you print a MIR it looks like this:

```
T51G773392007240095409JAN981159   000                    15MAR98E56A21E56A3F
 XF6 XF688888881 3VP7MP         N99999NXTAG09JAN9800009JAN98011
  000000000000 NLG00000000  00000000  00000000  00000000  00000000  00000000
N NNN0N NAYA NNNX   NL
00000000100000200000000000000001000000000000000
A02TESTIGNORE/XMR                        8         00
A0401KL074KLM ROYAL DU 119J AK15MAR1140 1205 2AMSAMSTERDAM    LHRLONDON/HEATHRIN    O0   737         F AC:KLM CITYHOPPTK:NJT:01.25
A0402KL074KLM ROYAL DU 120J AK27MAR1300 1510 2LHRLONDON/HEATHRAMSAMSTERDAM    INO   O0   735         F AC:KLM CITYHOPPTK:NJT:01.10
A12AMST *GALILEO TEST 020-6487511
```

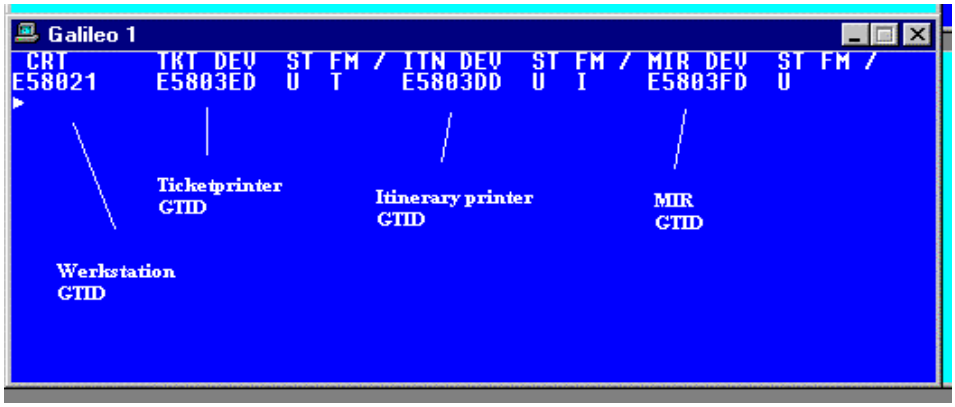
In hexadecimal form a MIR looks like this:

```
00000000:  54 35 31 47 37 37 33 33 - 39 32 30 30 37 32 34 30 T51G773392007240
00000010:  30 39 35 34 30 39 4A 41 - 4E 39 38 31 31 35 39 20 095409JAN981159
00000020:  20 20 30 30 30 20 20 20 - 20 20 20 20 20 20 20 20    000
00000030:  20 20 20 20 20 20 20 20 - 20 20 20 20 31 35 4D              15M
00000040:  41 52 39 38 45 35 36 41 - 32 31 45 35 36 41 33 46 AR98E56A21E56A3F
00000050:  0D 20 58 46 36 20 58 46 - 36 38 38 38 38 38 38 38   XF6 XF68888888
00000060:  31 20 33 56 50 37 4D 50 - 20 20 20 20 20 20 20 20 1 3VP7MP
00000070:  20 4E 39 39 39 39 39 4E - 58 54 41 47 30 39 4A 41  N99999NXTAG09JA
00000080:  4E 39 38 30 30 30 30 39 - 4A 41 4E 39 38 30 31 31 N9800009JAN98011
00000090:  0D 20 20 20 30 30 30 30 - 30 30 30 30 30 30 30 30     000000000000
000000A0:  20 4E 4C 47 30 30 30 30 - 30 30 30 30 20 20 30 30  NLG00000000  00
000000B0:  30 30 30 30 30 30 20 20 - 30 30 30 30 30 30 30 30 000000  00000000
000000C0:  20 20 30 30 30 30 30 30 - 30 30 20 20 30 30 30 30   00000000  0000
000000D0:  30 30 30 30 20 20 30 30 - 30 30 30 30 30 30 20 20 0000  00000000
000000E0:  20 20 20 20 20 20 20 20 - 20 20 20 20 20 20 20 20
000000F0:  20 0D 4E 20 4E 4E 4E 30 - 4E 20 4E 41 59 41 20 4E   N NNN0N NAYA N
00000100:  4E 4E 58 20 20 20 4E 4C - 20 20 20 20 20 20 20 20 NNX   NL
00000110:  20 20 20 20 20 20 20 20 - 20 20 20 20 20 20 20 20
00000120:  20 20 20 20 20 0D 30 30 - 30 30 30 30 30 30 31 30       0000000010
00000130:  30 30 30 30 32 30 30 30 - 30 30 30 30 30 30 30 30 0000200000000000
00000140:  30 30 30 30 30 30 31 30 - 30 30 30 30 30 30 30 30 0000001000000000
00000150:  30 30 30 30 30 30 0D 0D - 41 30 32 54 45 53 54 49 000000  A02TESTI
00000160:  47 4E 4F 52 45 2F 58 4D - 52 20 20 20 20 20 20 20 GNORE/XMR
00000170:  20 20 20 20 20 20 20 20 - 20 20 20 20 20 20 20 20
00000180:  20 20 20 20 20 20 20 38 - 20 20 20 20 20 20 20 20        8
00000190:  20 20 30 30 20 20 20 20 - 20 20 20 20 20 20 20 20   00
000001A0:  20 20 20 20 20 20 20 0D - 0D 41 30 34 30 31 4B 4C          A0401KL
000001B0:  30 37 34 4B 4C 4D 20 52 - 4F 59 41 4C 20 44 55 20 074KLM ROYAL DU
000001C0:  31 31 39 4A 20 41 4B 31 - 35 4D 41 52 31 31 34 30 119J AK15MAR1140
000001D0:  20 31 32 30 35 20 32 41 - 4D 53 41 4D 53 54 45 52  1205 2AMSAMSTER
000001E0:  44 41 4D 20 20 20 20 4C - 48 52 4C 4F 4E 44 4F 4E DAM    LHRLONDON
000001F0:  2F 48 45 41 54 48 52 49 - 4E 20 20 20 20 4F 30 20 /HEATHRIN    O0
00000200:  20 20 37 33 37 20 20 20 - 20 20 20 20 20 20 46 20   737         F
00000210:  41 43 3A 4B 4C 4D 20 43 - 49 54 59 48 4F 50 50 54 AC:KLM CITYHOPPT
00000220:  4B 3A 4E 4A 54 3A 30 31 - 2E 32 35 0D 41 30 34 30 K:NJT:01.25 A040
00000230:  32 4B 4C 30 37 34 4B 4C - 4D 20 52 4F 59 41 4C 20 2KL074KLM ROYAL
00000240:  44 55 20 31 32 30 4A 20 - 41 4B 32 37 4D 41 52 31 DU 120J AK27MAR1
00000250:  33 30 30 20 31 35 31 30 - 20 32 4C 48 52 4C 4F 4E 300 1510 2LHRLON
00000260:  44 4F 4E 2F 48 45 41 54 - 48 52 41 4D 53 41 4D 53 DON/HEATHRAMSAMS
00000270:  54 45 52 44 41 4D 20 20 - 20 20 49 4E 4F 20 20 20 TERDAM    INO
00000280:  4F 30 20 20 20 37 33 35 - 20 20 20 20 20 20 20 20 O0   735
00000290:  20 46 20 41 43 3A 4B 4C - 4D 20 43 49 54 59 48 4F  F AC:KLM CITYHO
000002A0:  50 50 54 4B 3A 4E 4A 54 - 3A 30 31 2E 31 30 0D 0D PPTK:NJT:01.10
000002B0:  41 31 32 41 4D 53 54 20 - 2A 47 41 4C 49 4C 45 4F A12AMST *GALILEO
000002C0:  20 54 45 53 54 20 30 32 - 30 2D 36 34 38 37 35 31  TEST 020-648751
000002D0:  31 0D 0D 0C            -                    1
```

4.2 The Configuration of Printers on the Galileo Host

The Galileo system offers you the possibility to determine per workstation which type of printer you want to be linked to. This can be a Ticket printer, an Itinerary printer or a Mir Device. This section explains how a workstation is linked to the different types of printers.

With the **HMLD** (How is My Line Doing) entry you can check which workstation is linked to what printer. If no printer is linked to this workstation, you will only see the workstation GTID and no Printer GTIDs.



The first line shows what type of device it is.
The second line shows which GTID this device has.

'**ST**' determents the status of this printer:
This can be **UP (U), BUSY (B) or DOWN (D)**.

'FM' determents the paper format of this printer:
This can be **itinerary (I), ticket (T) or blank (B)**.

When a printer is not linked to a workstation and you want to link your workstation to this printer, type the following entry:

Commando:		**HMLM** (Help **Me Link Machine)**
Usage:		**HMLMgtidD***
Explanation:	* =	**I = Itinerary**
		A = MIR
		X = Blank

Example:	**HMLMC5803EDI (Linkage of a Itinerary printer)**			
Response:	**CRT**	**ITN DEV**	**ST**	**FM/**
	C58021	**C5803DD**	**D**	
	(Terminal)	**(GTID printer)**	**(Status)**	

The paper format (FM) has to be assigned to the printer.
For a Mir device this option is not necessary.

Commando: **HMOM (Help Me Operate Machine)**
Usage: **HMOMgtid-*****
Explanation: ***= **ITN = Itinerary**
BLK = Blank (for "printability" printers)

Example: **HMOMC5803D-ITN**
Response:

CRT	**ITN**	**DEV**	**ST**	**FM/**
C58021	**C5803D**	**D**	**I**	
(Terminal)	**(GTID printer)**		**(Status)**	**(Paper format)**

It could be necessary to change the printer status, type the following entry:

Commando: **HMOM (Help Me Operate Machine)**
Usage: **HMOMGTID-***
Explanation: *= **U = Up**
D = Down

Example: **HMOMC5803D-U**
Response:

CRT	**ITN**	**DEV**	**ST**	**FM/**
C58021	**C5803D**	**D**	**U**	**I**
(Terminal)	**(GTID printer)**		**(Status)**	**(Paper format)**

If you want to delink a printer, type the following entry:

Delink: **HMLM/DELINK/***
Usage: **HMLM/DELINK/* or HMLM/DELINK**
Explanation: *= **I = Itinerary printer**
A = Mir Device
HMLM/DELINK all printers are delinked

5. Troubleshooting

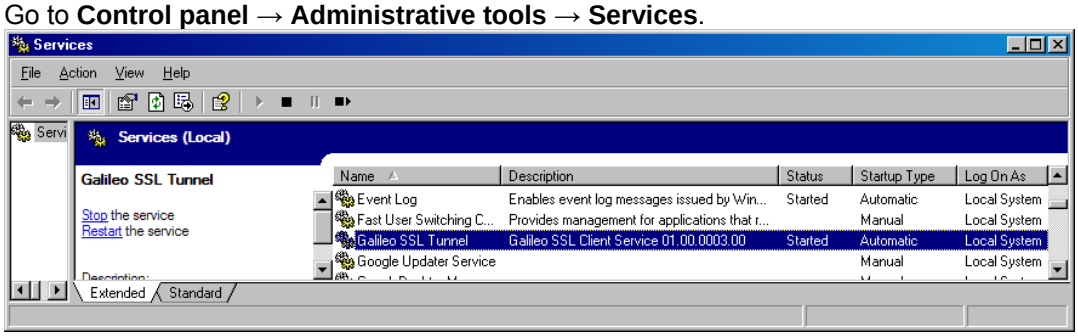
5.1 Password (Thumbprint) Resets

If a Galileo Desktop SSL CLIENT ID is to be moved to a different machine, then a password (Thumbprint) reset is normally required. Please contact your local Galileo representative and request a reset of that particular ClientID

5.2 Galileo Desktop SSL Connection problems

If you receive no response from the Galileo host than there could be a problem with the SSL connection to the Galileo SSL endpoints called:
gdssl.galileo.com (12.17.227.30) or **sslfpemea.galileo.com** (194.24.254.186)

1. Check if the Galileo SSL service is started.
   Go to **Control panel** → **Administrative tools** → **Services**.



   Check "Galileo SSL Tunnel" is running, If it is not, start it and try the connection again.
   IF it is running STOP it and restart the SSL connection.
   NOTE: if you go to properties you check the installed version. Make sure it is "Galileo SSL Client Service 01.00.0003.00" or higher

2. Test your own internet connection, DNS servers by pinging gdssl.galileo.com.
   Go to **start** – **Run**, type CMD and click on OK. Type **C:\ping gdssl.galileo.com** check first that it resolves the name and returns an IP address (12.17.227.30) if not your issue is with DNS. Does the ping reach its destination? If not it's a routing or firewall issue ASSUMING ICMP is open. Try pinging google.com.

3. Test your firewall by Checking if port 443 (SSL) is available in your network
   Go to **start** – **Run**, type CMD and click on OK
   Type **C:\telnet gdssl.galileo.com 443** and press enter.
   If you receive a blank screen and the cursor is flashing at the top left of screen, hit Ctrl-C on your keyboard a few dozen times to break the connection
   This means Port 443 is open and SSL is possible in your network

4. If you use a firewall please allow TCP traffic on port 443 to the following destination addresses

Location	DNS	VIP
Denver	gdssl.galileo.com	12.17.227.30 194.24.254.201 216.113.159.225
Langley	sslfpemea.galileo.com	12.17.227.146 194.24.254.204 216.113.159.227
Atlanta	gdssl-atl.galileo.com	12.17.227.145 194.24.254.193 216.113.159.226
	gdsslpp-atl.galileo.com	216.113.131.33

5. Next turn on the Logging in the SSL client.
Go to C:\Program Files\Galileo\SSL and open SSLClientService.exe.config in notepad.
Go to </switches> and Change value = "**Warning**" to value ="**ALL**" for
<add name="sourceSwitch" value="warning"/>

Also go to <appsettings> and change value = "**Warning**" to value ="**ALL**" for
<add key="Trace Level Override" value="Warning" />

Save the file Delete the existing Log (c:\ SSLClientService.log) and Restart the SSL service.

Check the log file. You will see the service start and all the ports that are listening e.g.
SSLClient Information: 114 : Galileo SSL Tunnel Client Service is starting
ProcessId=760 DateTime=2008-05-15T09:39:23.5564450Z

SSLClient Information: 115 : Starting IPC traffic handler on port 2748
ProcessId=760 DateTime=2008-05-15T09:39:23.5691395Z

You will also see connection errors , such as:
SSLClient Error: 304 : ServerConnection.Connect() - SocketException thrown:
A connection attempt failed because the connected party did not properly respond after a period of time, or established connection failed because connected host has failed to respond 12.17.227.30:443
ProcessId=760 DateTime=2008-05-15T09:40:07.7127985Z

Make sure you undo these changes after you finish troubleshooting the SSL connection.

Please check next Pages to see all listed Trace codes available

Level	ID	Textual info	Meaning	Adverse effects	resolution
info	100	GalileoSSLTunnel.ServerResponse_Handler() - Redirect packet received to *redirect_url*	The next time the SSL Client is run it will use the new gdssl server.		N/A
info	101	RawTCPProtocolHandler - SERVER DISCONNECTED.	The server disconnected a non-FP/GD connection.		N/A
info	102	ServerConnection.Connect() - Local adapter address is : *ip_address*	The local IP address		N/A
info	103	ServerConnection.Connect() - Constructing tunnel via HTTP Proxy *proxy_address*:*proxy_port*	Indicates what web proxy is in use.		N/A
info	104	ServerConnection.Connect() - HTTP Proxy Response: *proxy_response*	The web proxy HTTP response for a connect.		N/A
info	105	Certificate Validated OK.	Server SSL Certificate OK		N/A
info	106	ServerConnection.ReceivedServerData_Handler() - server sent 0 bytes.	Usually indicates the server closed the connection.		N/A
info	107	ServerConnection.ReceivedServerData_Handler() - sslStream was disposed before a read.	Normal processing. The connection was closed.		N/A
info	108	TCPHandler.Listen() - Listening on port *port*	Now accepting connections on this IP port.		N/A
info	109	TCPHandler.AcceptConnection_Handler() - TCP Connection accepted. *Local_connection_ip*	A new client application is now being served.		N/A
info	110	TCPHandler.AcceptConnection_Handler() - Listening socket was closed.	No longer accepting connections.		If the SSL Client was not being stopped, this needs to be flagged to development
info	111	TCPSession.Run() - Exception thrown: exception			
info	112	TCPSession.SendDataToServer() - Constructing TCP tunnel with Endpoint *ip_address:port*	Endpoint is the actual server (eg IPCS or IPC) that is being targetted.		N/A
info	113	UDPHandler.ReceivedClientData_Handler() - Got Data.			N/A
info	114	Galileo SSL Tunnel Client Service is starting…			N/A
info	116	Starting IPCS traffic handler on port *port*			N/A
info	117	Starting MQ Print traffic handler on port *port*			N/A
info	118	Starting GIDS traffic handler on port *port*			N/A
info	119	Starting TN3270 traffic handler on port *port*			N/A

info	119	Starting PM Browser traffic handler on port *port*			N/A
info	120	Galileo SSL Tunnel Client started OK.			N/A
info	121	Galileo SSL Tunnel Client is stopping…			N/A
info	122	Galileo SSL Tunnel Client is stopped OK.			N/A
info	123	UDPHandler.Listen() - Running in SERVER mode.	Clustered mode enabled. Only connections from remote machines are accepted.		N/A
info	124	UDPHandler.Listen() - Running in LOCAL mode.	Local mode enabled. Only connections from the local machine are accepted.		N/A
info	125	TCPHandler.Listen() - Running in SERVER mode.	Clustered mode enabled. Only connections from remote machines are accepted.		N/A
info	126	TCPHandler.Listen() - Running in LOCAL mode.	Local mode enabled. Only connections from the local machine are accepted.		N/A
info	130	GPM Wakeup sent.	Local GPM wakeup initiated.		N/A
info	200	GalileoSSLTunnel.ServerResponse_Handler() - Server Disconnected!			
Warning	201	IPCProtocolHandler.ClientDataReceived() - Client reconfiguration requested.	The IPC has requested that the client (FP/GD) initiates a IPCS reconfig		N/A
Warning	202	TCPHandler.AcceptConnection_Handler() - SocketException thrown: *exception*	A client connection attempt failed.The client is denied a connection so will reflect this.		Stop and restart the SSL Client.
Warning	203	TCPSession.ReceivedClientData_Handler() - Exception thrown: *exception*	The client sent us data which could not be obtained. This may be due to a client disconnecting.		
Warning	204	TCPSession.OpenTunnel() - Exception handled: *exception*	A connection to the SSL server could not be established.	Most likely, all clients will fail.	Ensure connectivity to the gd-ssl.galileo.com server, eg. ping.
Warning	220	Exception during Service START: *exception*	All or part of the SSL Client failed to start	Hopefully this would be accompanied by a more descriptive error message.	
Error	300	BOOTPProtocolHandler.ModifyUDPResponse() - Exception thrown: *exception*	There was a problem storing IPCS config info to the .config file	hHost connectivity will fail for FP/GD/GPM	Check permissions to the .config file.

Error	301	BOOTPProtocolHandler.ModifyUDPResponse() - Exception thrown: *exception*	Most likely, the BOOTP config response from the IPCS is invalid	Host connectivity will fail for FP/GD/GPM	Increase logging to capture data dumps (Verbose) and send to development.
Error	302	GalileoSSLTunnel.ServerResponse_Handler() - Exception thrown: *exception*	Should be accompanied by more meaningful log error		
Error	303	ServerConnection.Connect() - AuthenticationException thrown: *exception*			
Error	304	ServerConnection.Connect() - SocketException thrown: *exception*			
Error	305	ServerConnection.Connect() - IOException thrown: *exception*			
Error	306	ServerConnection.Close() - Exception thrown: *exception*			
Error	307	ServerConnection.Send() - Exception thrown: *exception*			
Error	308	ServerConnection.Send() - Exception thrown: *exception*			
Error	308	ServerConnection.Send() - Exception thrown: *exception*			
Error	310	ServerConnection.ReceivedServerData_Handler() - Exception thrown: *exception*			
Error	311	UDPHandler.Listen() - Exception thrown: *exception*			
Error	312	UDPHandler.ServerResponse_Handler() - Exception thrown: *exception*			
Error	313	UDPHandler.ReceivedClientData_Handler() - Exception thrown: *exception*			
Error	314	IPCProtocolHandler.ClientDataReceived() - Exception thrown: *exception*			
Error	315	TCPSession.ReceivedClientData_Handler() - client socket was null!			
Error	316	BOOTPProtocolHandler.ModifyUDPResponse() - Could not get machine IP in SERVER mode.	Unable to get the local machine IP	The SSl Client will be unable to accept any incoming client connections.	check for valid IP address using ipconfig.exe
Critical	400	Certificate error: *policy error*	Server SSL Certificate Invalid	No connections to the SSL server will be made. All connectivity through the Retor Client will fail.	Server certificate should be checked by Travelport for validity.

Critical	401	TCPHandler.TCPHandler() - Exception thrown: *exception*	A problem occurred while attempting to create a local TCP socket for listening.	It is likely that the Retro Client will not accept any connections from the local application that uses this port. Hence no host connectivity.	
Critical	402	TCPHandler.Listen() - SocketException thrown: *exception*	A problem occurred while attempting to start listening and accepting connections on a local TCP socket.	It is likely that the Retro Client will not accept any connections from the local application that uses this port. Hence no host connectivity.	
Critical	403	TCPHandler.Initialize() - SocketException thrown: *exception*	A problem occurred during the initialization of the local listening TCP socket.	The Retro Client will not accept any connections from the local application that uses this port. Hence no host connectivity.	
Critical	405	TCPSession.Run() - Exception thrown: *exception*	General failure, this will be accompanied by more detailed diagnostic errors.		
Critical	406	UDPHandler.UDPHandler() - Exception thrown: *exception*	Failure while starting to listen for UDP (IPCS) requests	FP/GD will most likely fail to configure.	
Critical	407	TCPHandler.TCPHandler() - Exception thrown: *exception*	Failure while starting to listen for TCP (all but IPCS) requests	Accompanying errors should determine the actual problem.	
Critical	408	TCPSession.SendDataToClient() - Less than 3 bytes sent	No longer an error. Used to identify bad LCN data, however other connections may reasonably send very small packets.		
Verbose	900	BOOTPProtocolHandler: Received UDP Data from Server:- *data_dump*	infoal data dump of UDP server->client data		
Verbose	901	Sending TCP data via SSL tunnel to server:- *data_dump*	infoal data dump of client->server data		
Verbose	901	Sending TCP data via SSL tunnel to server:- <Hidden data packet>	infoal message of server->client data (authentication packet)		
Verbose	902	TCPSession.SendDataToClient() - Sent *length* bytes to client: *data_dump*	infoal data dump of TCP server->client data		
Verbose	903	UDPHandler.SendDataToClient() - Sending data to client: *data_dump*	infoal data dump of UDP server->client data		
Critical	4000	Trace Level changed to *tracelevel*.	Logging level was changed	Log more/less info	N/A

5.3 SSL FAQ's

What happens to a customer's printer linkage?
There will be no noticeable difference in the agent experience. Printer linkage from a converted or non-converted terminal will continue to connect to a converted or non-converted printer server with no action required on the part of the converted agent

Can a customer use a client ID from their agency PC at home?
If they are using more then one workstation, they may need more than one client id per workstation depending on whether it's a laptop with docking station or standard PC.

Can customers have multiple ClientID on a workstation?
Yes.

What happens when the customer's internet connection is disrupted / broken?
The desktop will behave in the same manor as it does with a connection break today. In FP 3.5, the status line will show a connection break, and the workstation will reconnect on the next agent entry. GD will reconnect automatically. GPM will try to reconnect whenever a connection break is detected.
What if the customer's ISP connection becomes unstable?
Customers will need to work with their ISP to get a more stable connection.

Will the customer's connection be faster or slower than it is today?
If they have better available bandwidth to their ISP than they do to the Galileo network, they should see an improvement in performance. If they have less available bandwidth to their ISP than they have the Galileo network their performance will get worse. Customers need to keep in mind that their performance will now be entirely related to their ISP bandwidth.

How does your SSL solution protect my customer privacy information?
The retro-client uses the highest available SSL cipher level available in your country, and encryption is established on your workstation, meaning your host connectivity is now encrypted on your agency LAN as well as the internet. The SSL retro-client has the same level of privacy information security as our current leased line or router-based VPN solutions

What if my desktop PC has Focalpoint/Galileo Desktop as well as Galileo Print Manager?
The Galileo SSL retro-client will work with GPM on a shared workstation OR on a stand-alone workstation

Does it work with Citrix?
Yes, but not in a clustered environment. We are looking to support clustered Citrix in Galileo Desktop 2.1. Citrix requires special customization to work with SSL. We are currently testing this solution, and are seeking customers willing to help us test. A single workstation on a Citrix server can be converted to SSL without converting the rest of the Citrix workstations

What about my 3rd party applications?
If they connect via the Galileo Desktop (or Focalpoint) APIs, they will continue to function per normal

5.4 Useful Galileo entries:

+J : Check the GTID used in the Galileo Software.
SON/Zxx : Log in to the Galileo-system (xx = initials of the Galileo user)
SOF : Log off
HMLD : Check the status of the Galileo printers and Print buffers.
HQSgtid : Restart of a Print Job (gtid = GTID of the printer)
HQC : Show today's print statistics
HQCgtid : Show the total number of queued print messages
: (gtid = GTID van printer)

HMLMgtidDI : Link a Workstation to a Itinerary printer
HMOMgtid-ITN : To configure a Gtid to be used as an Itinerary printer.
HMOMgtid-U : Change the printer queue status to Up (D=down).

HMLMgtidDA : Link a Workstation to a MIR (back office feed)
HMOMgtid –U : Change the printer queue status to Up (D=down)
TKPDID : print an itinerary (after retrieving a booking file)
TKPDAD : creating a MIR (after retrieving a booking file)