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# **Galaxie**<sup>™</sup> Chromatography Data System

## **Installation Guide**

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## **Table of Contents**

Galaxie Installation Flowcharts	. 1
Galaxie Core Installation	. 5
Overview	. 5
Pre-installation Requirements	. 6
Network Type	6
Operating System of the Server	. 6
Network Name Resolution	6
Galaxie Acquisition Server	. 7
Domain Controller	. 7
Network Connections	. 7
Memory Requirements	. 8
Graphic card compatibility for PDA	. 8
Hints and Tips	. 8
Installation	12
Installation of a Galaxie Server	14
Installation of a Galaxie Client/Acquisition Server	24
Installation of a Galaxie standalone	35
Modify and Repair	44
Uninstallation	46
Upgrading Galaxie CDS versions earlier than 1.8 version or Diamir	48
Upgrade the Galaxie Server	49
Upgrade the Galaxie Client and Acquisition Server	50
Upgrading Galaxie CDS Versions (since 1.8 Version)	52
Upgrading Galaxie WS Versions (earlier than 1.8 Version) to Galaxie	1.9
standalone	53
Upgrading Galaxie WS Versions (since 1.8 Version) to Galaxie 1.9 standalone	53
Station Configuration	54
DCOM Configuration Under Windows 2000 Server	59
DCOM Configuration Under Windows XP SP1	64
DCOM Configuration Under Windows 2003 Server	74

DCOM Configuration Under Windows XP SP2, Windows 2003 Server SI	P1 and
Windows Vista (Enterprise & Business)	86
Data Execution Prevention Configuration	101
FIFOS Configuration	102
Displaying	103
Permissions Configuration	103
On the Galaxie Main Server and on all the Galaxie Acquisition Servers: .	103
On the Data Directory:	104
On Printer:	105
Files Description	105
Windows Services	108
System Maintenance	110
Troubleshooting	110
DB integrity check tool	110
Networking	110
VMWare platform	111
Software Validation	113
Galaxie Drivers	
Principles	115
Files Location	116
Refresh Mechanism	116
Varian I C Driver Installation	118
Installing the Driver Software	118
Varian GC and Micro-GC Driver Installation	122
Installing the Driver Software	122
Varian 4x0 GC	126
Installing the Driver Software	126
Agilent I C 1050 Driver Installation	131
Installing the Driver Software	131
Agilent I C 1090 Driver Installation	136
Installing the Driver Software	136
Agilent I C 1100/1200 Driver Installation	141
Installing the Driver Software	141
Agilent GC 5890 – AS 7673 Driver Installation	146
Installing the Driver Software	146
Agilent GC 6890 Driver Installation	151
Installing the Driver Software	151
Agilent GC 7890 Driver Installation	156
Installing the Driver Software	156
PerkinFlmer™ GC Driver Installation	161
Installing the Driver Software	161
Thermo GC Driver Installation	165
Installing the Driver Software	165
Waters® I C Driver Installation	170
Installing the Driver Software	170
	170

National Instrument GPIB Board Installation	175
Installing the Driver Software	175
MIB Interface Install	179
MIB Interface Configuration	179
TCP/IP over Ethernet Communication with BOOTP (for Star 800 MIB only):.	181
TCP/IP over Ethernet Communication via Fixed IP Address	184
Interface Supervisor	188
Diagnostics	192
BOOTP Server Configuration	193
Communication Engine Configuration	198
Systems Configuration	205
Varian GC Systems	205
Example 1: Combi PAL Autosampler, CP-3800 directly connected to the	
Acquisition Server	205
Example 2: Combi PAL AutoSampler, CP-3800 connected to a HUB	217
Example 3: 8400 Autosampler, 3900 GC	223
Example 4: 8400 Autosampler, 430-GC	228
Example 5: 8400 Autosampler, 450-GC	233
Varian Micro-GC Systems	239
Example 1: Varian CP-4900	239
Example 2: Varian CP-2002-2003	245
Varian LC Systems	250
Example 1: ProStar 400-210-215-218-363-701-CIM	250
Example 2: ProStar 410-230-310-330	263
Example 3: ProStar 420-SD1-510-325-356	276
Example 4: ProStar 430-230-335	290
Example 5: ProStar 410 Prep-Manual Injection Valve-SD1-325	303
Example 6: ProStar 410-210- Polymer labs ELS-2100	314
MIB Interface with relays Systems	325
Agilent LC Systems	330
Example 1: Agilent 1100 G1312-G1313-G1321-G1365	331
Example 2: Agilent 1100 G1311-G1315-G1316-G1329	340
Example 3: Agilent 1100 G1310-G1321-G1365-G1367	350
Example 4: Agilent 1200 G1312-G1313-G1315-G1321	359
Example 5: Agilent 1050 79855-79854-79853-79852	367
Agilent GC Systems	375
Example 1: Agilent 5890 with 7673 Autosampler	375
Example 2: Agilent 6890 GC with 7673 Autosampler in Serial communication	n
mode	381
Example 3: Agilent 6890 GC with 7673 Autosampler in Ethernet communica	tion
mode	387
Example 4: Agilent 7890 GC with 7683 Autosampler in Ethernet communica	tion
mode	393
PerkinElmer GC Systems	399
Example 1: PerkinElmer Autosytem with Autosampler	399

Example 2: PerkinElmer Autosytem with HS40	405
Thermo GC Systems	411
Example 1: Thermo GC 800 with Autosampler AS800	411
Waters LC Systems	419
Example 1: Waters LC1 2690-2487-486	419
Appendix	426
Check list for Galaxie installation	426
Cabling guide	428
Varian HPLC	428
Varian GC	429
Agilent GC	430
Agilent/Waters LC	430
PerkinElmer GC	430
Thermo GC	431
Star 800 MIBs	431
Star 800 MIBs / 850-MIB options and accessories	432
850 MIBs	432





#### **Galaxie Flowchart 1**



#### **Galaxie Flowchart 2**



#### **Galaxie Flowchart 3**

## **Galaxie Core Installation**

## **Overview**

The GALAXIE Client/Server software is organized in three main components:

- The Main Server, which runs on the server computer. Only one computer can act as the main server.

This is the core of the GALAXIE client/server solution. It handles every client request in terms of connection, data path, security, and profiles. The GALAXIE server service is self-starting, the user does not need to start GALAXIE on the server. It runs alone without any required maintenance when the server is running.

- The Acquisition server(s), which can be installed on any computer This is the part responsible of the Acquisition/Control portion of the GALAXIE Client/Server solution. It handles every client request regarding instrument control, acquisition through any hardware interface, but mainly the MIB Interface. It can run on any live workstation, and in many configurations. It is also an automatically self-starting service that does not require user startup.
- The Client(s), which is (are) installed on any computer in the customer's configuration.

This is the main visible part of the system, which provides the user interface. It is installed on any computer (Windows XP or 2000) on the network. GALAXIE Client is constantly communicating with the Main Server, as well as the Acquisition Server, to handle instrument/acquisition control.

The GALAXIE Stand-alone system uses the same three main components. They are all installed on the same computer, but the global concept is identical.

## **Pre-installation Requirements**

This section describes the network and system requirements for Galaxie

#### **Network Type**

Galaxie needs TCP/IP network layers to work.

Windows WORKGROUP networks are NOT supported by Galaxie in Client/Server mode.

## **Operating System of the Server**

Galaxie is supported only under Windows 2000 Server and Windows 2003 Server.

### **Network Name Resolution**

The Galaxie software needs a correct network name resolution in order to run properly. If the network name is not properly resolved, the most visible issue would be a slow log into Galaxie from a client PC, but other less obvious problems may appear.

The system manager can use:

-The Microsoft DNS service (mandatory with Windows 2000 Server).

-The WINS service.

To test the network name resolution, do a ping "Name of the machine". If the IP address of the machine is not displayed instantaneously then the network name resolution is wrong.

### **Galaxie Acquisition Server**

The Galaxie Acquisition Server should be a machine dedicated to this purpose due to the limited amount of Windows services available.

Since each Galaxie system uses two windows services, some serious issues may occur if this machine is running software other than Galaxie (ORACLE, etc.).

Also, depending on the number of expected simultaneous acquisitions on this server, it may be worth using a bi- or quadriprocessor computer.

## **Domain Controller**

The best case is for the Galaxie Main server to be installed on the domain controller.

If not, the domain controller must be close to the Galaxie server and available in all time.

If Galaxie cannot quickly connect with the domain controller some speed problems can appear when starting an acquisition or loading chromatograms in a reprocessing list.

### **Network Connections**

Galaxie supports 10Mbits/sec and 100Mbits/sec network speed but if possible use 100Mbits/sec network speed between the Clients and the Server.

Switches or HUBs can be used with Galaxie but switches are more efficient.

It is also mandatory to use at least a 10Mbits/sec connection, between the Acquisition/Control Server and the instruments.

## **Memory Requirements**

Listed below are the memory requirements of Galaxie according to the OS. These requirements may change according to the software (other than Galaxie) running on the server and also if the server is an Acquisition/Control Server.

Operating System	Minimum RAM (Mo)	Recommended RAM (Mo)	Virtual Memory (Mo)
Windows 2000	512	1024	1024
Windows XP Pro	512	1024	1024
Windows 2000 Server	512	1024	1024
Windows 2003 Server	512	1024	1024
Windows Vista	2000	4000	4000

## Graphic card compatibility for PDA

List of known non compatible cards

- Intel815 Video Accelerator (4Mo).
- S3 Savage graphics adapter (laptop Toshiba and Asus) works only with 256 colours, which is not recommended for the rest of Software.
- ATI Radeon X1300 pci

## **Hints and Tips**

-Network Card Properties:

Under Windows 2000/2003 Server and Windows XP, the property "Allow the computer to turn off this device to save power" is checked by default. This can cause serious communication issues with Galaxie. This option must be disabled.

It is mandatory to have only one network card activated for installing Galaxie 1.9. If several are present, please just disable all the others.

#### -Network Connection Properties:

The "File and Printer sharing for Microsoft networks" component must be installed in the properties of the network connection for each computer using Galaxie (Main server, Acquisition server and Client PC).

#### -FAT Format:

It is mandatory for the server to work with the NTFS format but it is also strongly recommended to use the same format for all the Galaxie Clients.

FAT32 and FAT16 format are NOT supported by the server.

#### - DPI Setting:

It is recommended to set 96 DPI as display font size in order to use correctly Galaxie. To access this parameter with Windows XP or 2000, select into the Windows control panel Display\Settings\Advanced; it is then in the General tab.

#### -Screen Savers:

It is recommended to disable all the screen savers, especially on the servers.

#### -Power Management:

It is strongly recommended to disable all the power management properties (Standby/Hibernates).

#### -Backing up files:

With Galaxie, it is possible to backup the data files automatically with additional software. But it is recommended to avoid backing up recent files (< 5hours) and it is not possible to backup the Galaxie files contained in the \SERVER directory (including its subdirectories).

-Network configuration check:

The Windows Event Log on the Galaxie Server and the Galaxie Clients should be free of any network related errors.

#### -Firewall under Windows XP SP2:

With Galaxie in Client/Server mode, the Windows XP SP2 firewall must be disabled on the Client computer.

#### -Firewall under Windows:

With Galaxie in Client/Server mode, the three Windows Vista firewalls must be disabled on the Client computer. Select the Control panel/administrative tool / Windows firewall with advanced security, then deactivate the three firewall:

#### Domain Profile is Active



#### Private Profile



#### **Public Profile**

😵 🛛 Windows Firewall is off.

#### - Remove the confirmation messages under Windows Vista:

Under Vista if you don't want to be notified by a confirmation message when performing actions, select the Control Panel / Problem Reports and Solutions option, and turn it off.



It can also be usefull the Turn Off the User Account Control (control panel/User Accounts /Turn User Account Control ON or OFF).

-Anti-Virus Software:

The Antivirus software must not scan:

-the data directory of Galaxie

-the Galaxie\server directory and subdirectories on the main server

-the Galaxie\server directory and subdirectories on all the acquisition server

-DNS configuration example (for Windows 2000 server):

Below is an example of a working DNS configuration.

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Action View	× 🗗 🖸 🖧 😫				
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## Installation

We require that the Galaxie Chromatography Data System software, in server or stand-alone configuration, only be installed on Windows 2000 or later systems.

The following sections only describe the installation of the Galaxie Chromatography Data System on a system with no previous version of Galaxie installed. If an earlier version of the Galaxie Chromatography Data System or Diamir software is installed on the PC, refer to the section "Upgrading old Galaxie or Diamir." To install this software, the user must be logged in with administrator rights. When the Galaxie CD is inserted, the CD browser should automatically start. If not, click on <code>INSTALL.EXE</code> from <code>Windows<sup>TM</sup></code> Explorer.



Click on the Install Galaxie button, the InstallShield Wizard will start.

## Installation of a Galaxie Server



From the InstallShield Wizard Screen, click on the *Next* button in order to continue the installation.



#### Software license agreement



Read and accept the license agreement then press the Yes button.

X



In this screen, select the configuration of the Galaxie Chromatography Data System: "Client/Server" or "Stand-alone". If Stand-alone is chosen, the Galaxie Chromatography Data System will be run on only one single computer and no client computer can be connected to the Stand-alone computer. Click on *Next*.



If "Client/Server" is chosen, you can choose to install a client/acquisition server or a main server by selecting the corresponding options. Only one main server can be installed in any client/server system. It is advised to synchronize all the client computers to the server date and time to have coherent dates for all the Galaxie Chromatography Data System files generated. To synchronize the clients and the server to the domain server (thanks to the command NET TIME SET), select the option *Computer date synchronization*. Click on the *Next* button in order to continue the installation.

Enter customer information	
	Please enter your name, the name of your company and the product serial number.
	User Name: MARIAN Company Name: VARIAN Serial Number: Type the serial number.
InstallChield	< Back Next > Cancel

In this wizard, for the Server installation (in the case of client/server configuration), or for a computer in Stand-alone, enter the name of a user, name of the company and the main serial number of the Galaxie Chromatography Data System software provided on the Galaxie Chromatography Data System serial number cards. Click on *Next* once all the fields are filled in.

In the following wizard, enter the serial number for systems addons or stations add-ons if necessary. Do not enter any driver's serial numbers in this screen as drivers installations are not a part of the Galaxie Installation. If no add-ons have to be entered, click on *Next*.

Galaxie - InstallShield Wizard		×
Enter customer information		
	You can type an additional serial number, or "." to end this dialog.	
	User Name:	
	Company Name:	
	VARIAN Serial Number:	
	·	
InstallShield	< <u>B</u> ack <u>N</u> ext>	Cancel

On the following screen, select the directory in which the Galaxie Chromatography Data System files will be installed. By default C:\ Galaxie is displayed. Select the *Browse* button to select another directory.

Galaxie - InstallShield Wizard		×
Choose a destination folder o	n this computer	
	Setup will install Galaxie in the following folder. To install Galaxie in this folder, click Next. Otherwise, click Browse and select another folder.	
	–Destination Folder C:\Galaxie B <u>r</u> owse	
InstallShield	< Back Next> Cancel	

Once the installation folder is selected, click on Next.

The following screen appears.

Galaxie - InstallShield Wizard		×
Galaxie - InstallShield Wizard Review the installation setti	ngs If the settings are correct, click Next to begin copying files. Otherwise, click Back. Current Settings: Selected options:	×
	Client and Acquisition Server Main Server C:\GALAXIE Serial number(s): 2M00-00000-000000	
InstallShield	Eack Next>	Cancel

Click on Next.



The software is now being installed.



Click on the Finish button to complete your installation.

It is required that the computer be rebooted now.

**NOTE:** If you have some error messages during installation such as "Error extracting support files", "Error installing Ikernel .exe", "Access is denied", "Error loading type library/DLL" you need to edit the registry as follows:



Use caution when editing – edits to registry may severely damage your system.

1. Click on the *Windows Start* button and select RUN. Type REGEDIT and click *OK*. In REGEDIT find and remove the key {2565438A-1759-4F9D-A14A-DB5BD0A22EB4} in:Hkey\_local\_machine \ Software\Microsoft \ Windows\CurrentVersion\Uninstall

2. Then remove the folder {2565438A-1759-4F9D-A14A-DB5BD0A22EB4} located in: Program Files \ InstallShield\ Installation Information.

3. Then remove the contents of the folder where Diamir or an earlier version of Galaxie Chromatography Data System was installed, except for files with an extension: .DDB, .DDC and the generated files (DATA, .METH, .CALB.etc).

## Installation of a Galaxie Client/Acquisition Server

To install a GALAXIE Client and Acquisition Server, follow the next steps:







Click on the Next button to follow the installation.



Read and accept the License Agreement and click on the Yes button to follow the installation.



In this screen select Client/ Server and click on Next.



Select Client and Acquisition Server and click on the Next button.

In the following wizard, define the directory in which GALAXIE files will be installed. By default C:\GALAXIE is proposed.
Galaxie - InstallShield Wizard		×
Choose a destination folder or	n this computer	
	Setup will install Galaxie in the following folder. To install Galaxie in this folder, click Next. Otherwise, click Browse and select another folder.	
InstaliShield	Destination Folder      C:\Galaxie      Browse      C:\Galaxie      C:\Galaxie      Cancel      Cancel	]

Once the installation folder is defined, click on Next.

The following wizard appears.



Click on Next.

Some messages appear indicating the registration of GALAXIE services and a progress bar shows the installation progression.



Once the installation is completed, the following screen appears.



Select if you want to restart your computer now or later and then click on the *Finish* button to validate your installation.

The installation is not finished yet. It is mandatory to reboot the computer at this stage.

Once the computer is rebooted the installation is resumed and the following wizard is displayed.



Type in the Server field the name of the main server and click on *Next*.

Finally the last wizard is displayed.





### Installation of a Galaxie standalone

From the InstallShield Wizard Screen, click on the *Next* button in order to continue the installation.



#### Software license agreement



Read and accept the license agreement then press the Yes button.

X



In this screen, select "Standalone" as configuration of the Galaxie Chromatography Data System software. Galaxie will be run in this case on only one single computer and no client computer can be connected to the Standalone computer. Click on *Next*.

Enter customer information	
	Please enter your name, the name of your company and the product serial number.
	User Name: VARIAN Company Name: VARIAN Serial Number: Type the serial number.

In this wizard, enter the name of a user, name of the company and the main serial number of the Galaxie Chromatography Data System software provided on the Galaxie Chromatography Data System serial number cards. Click on *Next* once all the fields are filled in.

In the following wizard, enter the serial number for systems addons or stations add-ons if necessary. Do not enter any driver's serial numbers in this screen as drivers installations are not a part of the Galaxie Installation. If no add-ons have to be entered, click on *Next*.

Galaxie - InstallShield Wizard		×
Enter customer information		
	You can type an additional serial number, or "." to end this dialog.	
	User Name:	
	Company Name:	
	VARIAN Serial Number:	
	·	
InstallShield	< <u>B</u> ack <u>N</u> ext>	Cancel

On the following screen, select the directory in which the Galaxie Chromatography Data System files will be installed. By default C:\ Galaxie is displayed. Select the *Browse* button to select another directory.

Galaxie - InstallShield Wizard		×
Choose a destination folder o	in this computer	
	Setup will install Galaxie in the following folder. To install Galaxie in this folder, click Next. Otherwise, click Browse and select another folder.	
	Destination Folder C:\Galaxie B <u>r</u> owse	
InstallShield	< Back Next> Cancel	

Once the installation folder is selected, click on Next.

The following screen appears.

Galaxie - InstallShield Wizard		×
Galaxie - InstallShield Wizard Review the installation setti	ngs If the settings are correct, click Next to begin copying files. Otherwise, click Back. Current Settings: Selected options:	×
	Client and Acquisition Server Main Server C:\GALAXIE Serial number(s): 2M00-00000-000000	
InstallShield	▼ Back	Cancel

Click on Next.



#### The software is now being installed.



Click on the Finish button to complete your installation.

It is required that the computer is rebooted now.

**NOTE:** If you have some error messages during installation such as "Error extracting support files", "Error installing Ikernel .exe", "Access is denied", "Error loading type library/DLL" you need to edit the registry as follows:



Use caution when editing – edits to registry may severely damage your system.

1. Click on the *Windows Start* button and select RUN. Type REGEDIT and click *OK*. In REGEDIT find and remove the key {2565438A-1759-4F9D-A14A-DB5BD0A22EB4} in:Hkey\_local\_machine \ Software\Microsoft \ Windows\CurrentVersion\Uninstall

2. Then remove the folder {2565438A-1759-4F9D-A14A-DB5BD0A22EB4} located in: Program Files \ InstallShield\ Installation Information.

3. Then remove the contents of the folder where Diamir or an earlier version of Galaxie Chromatography Data System was installed, except for files with an extension: .DDB, .DDC and the generated files (DATA, .METH, .CALB.etc).

### **Modify and Repair**

This chapter will explain how to modify and repair options in the Galaxie Setup.

• Install the CD ROM and start the application Setup.exe. Wizards will guide you for the process:





Three options are available, only the repair and modify will be detailed here. See the Uninstallation section for details about the remove option.

Different pieces of code are needed for Galaxie to work.

In a Galaxie Client and Acquisition server, only the Galaxie client and acquisition piece is needed.

In a Galaxie Main server, two pieces are needed: the Galaxie base piece and the Galaxie client and acquisition one.

In a Galaxie Stand-alone, the pieces needed are the same as in a Galaxie Main server, the Galaxie base piece, and the Galaxie client and acquisition one. The only difference between a Galaxie main server and Galaxie stand-alone is a different configuration in the windows registry.

*Modify*: This option must be used only when you want to add or remove a piece of Galaxie.

*Repair*. This option must be used when you want to change the configuration of Galaxie piece(s).

The following table gives the use of modify and repair.

Previous Installation	Future Installation	Option to use	Reason/comments
Client/acquisition server of a main server A	Main server B	Modify	The Galaxie base piece is added.
Main server C	Client/acquisition server of main server A	Modify	The Galaxie base piece is removed.
Client/acquisition server of a main server A	Client/acquisition server of a main server B	Repair	The computer is still a client acquisition server but of another main server.
Main server A	Stand-alone	Repair	The computer is still a main server but only in a stand- alone mode.
Client/acquisition server of main server A	Stand-alone	1. Modify	1. This step is to change the client/acquisition server to a main server.
		2. Repair	2. This step is to change the main server to a stand- alone.
Stand-alone	Client/acquisition server of main server A	1. Repair	1. This step is to change the stand-alone to a main server.
		2. Modify	2. This step is to change the main server to a client/acquisition server.

### Uninstallation

During the uninstallation process, the following message asks you to confirm the deletion of the Galaxie software. Click on Yes to uninstall or *No* to stop the uninstall process.



After all of the files have been removed, the following dialog is displayed. Click on *Finish.* 



A dialog box then appears indicating that the computer needs to be rebooted:



Click on *Finish* to complete the software removal and reboot the computer. Once the computer is rebooted, restart the CD browser by running INSTALL.EXE from Windows Explorer. Click on the *Install* button then click on the *Galaxie Software* button in the CD browser to start the InstallShield wizard. Follow the instructions in the installation part of this section to install the Galaxie software.

# Upgrading Galaxie CDS versions earlier than 1.8 version or Diamir

This chapter will describe the steps to upgrade the different computers of the system. The steps are mandatory when the new version comes as a full installation package. For patches only a reboot of the computer after the operation is necessary. It is **MANDATORY** that the directory of the new Galaxie version is identical to the directory of the old Galaxie version, the ability to choose the Galaxie folder is then not provided when performing an upgrade.

If you are upgrading from Diamir to Galaxie Version 1.9, it is mandatory to rename the Saltoro\_CFG.act file (located in Diamir\server directory on the main server) into Diamir\_CFG.act.

#### Upgrade the Galaxie Server

- Backup the "GALAXIE\_BASED.DDB" file.
- Backup the "DRIVERLIST.DDC" file.
- Backup the "\GALAXIE\SERVER\CFG" directory.
- Backup the "\GALAXIE\SERVER\DATA\_SHARED" directory
- If using BOOTP on the server save the following file "\WINNT\System32\BOOTPSERVER.CFG" if using Windows 2000 or 2000 server or 2003 server "\WINDOWS\System32\BOOTPSERVER.CFG" if using Windows XP.
- Start the setup of Galaxie 1.9. The Galaxie setup will detect the "old" Galaxie version (see below).



- The setup will now uninstall the previous Galaxie version.
- Reboot the server.
- Start the setup of Galaxie 1.9 again and install the new GALAXIE version.
- Reboot the server.
- The old database will be migrated during the restarting of the install.
- Reinstall the "BOOTPSERVER.CFG" file.
- Check the DCOM settings.
- Reboot the server.

### Upgrade the Galaxie Client and Acquisition Server

- Backup the "DRIVERLIST.DDC" file.
- Backup the "\GALAXIE\SERVER\CFG" directory.

- If using BOOTP on the acquisition server save the following file "\WINNT\System32\BOOTPSERVER.CFG" if using Windows 2000 or 2000 server or 2003 server "\WINDOWS\System32\BOOTPSERVER.CFG" if using Windows XP.
- Start the setup of Galaxie 1.9. The Galaxie setup will detect the "old" Galaxie version (see below).

Galaxie - InstallShield Wizard		×
Galaxie - InstallShield Wizard	Welcome to the Galaxie Setup program         This program will install Galaxie (version X,X,X,X) on your computer updating your Galaxie (version 1.7,X,X) which was found in C:\Galaxie.         Setup program version X,X,X,X	×
InstallShield	< Back Next > Cancel	

- The setup will now uninstall the previous Galaxie version.
- Reboot the computer.
- Start the setup of Galaxie 1.9 again and install the new GALAXIE version.
- Reboot the computer.
- Reinstall the "BOOTPSERVER.CFG" file.
- Check the DCOM settings.

Reboot the computer.

# Upgrading Galaxie CDS Versions (since 1.8 Version)

This chapter will describe the steps to upgrade the different computers of the which Galaxie 1.8 versions is installed. It is **MANDATORY** that the directory of the new Galaxie version is identical to the directory of the old Galaxie version, the ability to choose the Galaxie folder is then not provided when performing an upgrade.

Insert the new Galaxie version CD to install into your computer, start the setup of Galaxie 1.9. The Galaxie setup will detect the "old" Galaxie version (see below).



- The setup will perform the upgrade of Galaxie.
- Reboot the computer when asked.
- The installed is automatically completed after the reboot.

### Upgrading Galaxie WS Versions (earlier than 1.8 Version) to Galaxie 1.9 standalone

This chapter will describe the steps to upgrade the different computers of the which Galaxie 1.7 WS version is installed. It is **MANDATORY** that the directory of the new Galaxie version is identical to the directory of the old Galaxie version, the ability to choose the Galaxie folder is then not provided when performing an upgrade.

Insert the new Galaxie version CD to install into your computer, start the setup of Galaxie 1.9. The Galaxie setup will detect the "old" Galaxie version.

- The setup will perform the upgrade of Galaxie.
- Reboot the computer when asked.
- The installed is automatically completed after the reboot.

## Upgrading Galaxie WS Versions (since 1.8 Version) to Galaxie 1.9 standalone

This chapter will describe the steps to upgrade the different computers of the which Galaxie 1.8 versions is installed.

It is **MANDATORY** that the directory of the new Galaxie version is identical to the directory of the old Galaxie version, the ability to choose the Galaxie folder is then not provided when performing an upgrade.

Stop the Nexus DB server service on the PC and backup all the \*.nx1 tables of the CMData directory.

Uninstall Galaxie WS 1.8: Start the Galaxie WS 1.8 setup and select the Remove all option. The setup will now uninstall the version and reboot the computer when it is asked.

Start the setup of Galaxie 1.9 and install the new GALAXIE Version 1.9 (select the 'Galaxie standalone' option and the folder where Galaxie was previously installed during the setup).

Reboot the computer.

Stop the Nexus DB server service

Copy all files previously saved: In the Galaxie/server/CMData directory: all \*.nx1 files **EXCEPT** the following ones: Products.nx1, Rights.nx1, AdminRights.nx1, RightsCategories.nx1, LancelotParameters.nx1 and AdminRightCategories.nx1

### **Station Configuration**

After the Galaxie installation, it is **necessary to set the DCOMs settings**.

A Diagnosis tool is provided to set them automatically. The setup of this tool is available on the Master CD, in the **Tools & Utilities\Galaxie Diagnosis\Setup\** folder. To install this tool, please refer to the Diagnosis tool documentation, available in **Tools & Utilities\Galaxie Diagnosis**\.

#### DCOM Configuration under Windows 2000

Connect under the Windows session as a local administrator, in the *START* menu, in the *RUN* part enter *DCOMCNFG*, and configure the following settings

A window is opened with four tabs.

Applications Default Properties Default Security Default Protocols

Select the **Default Security** tab. The following screen is displayed:

Distributed COM Configuration Properties		
Applications Default Properties Default Security Default Protocols		
Default Access Permissions		
You may edit who is allowed to access applications that do not provide their own settings		
Edit Default		
Default Launch Permissions		
You may edit who is allowed to launch applications that do not provide their own settings.		
Edit Default		
Default <u>C</u> onfiguration Permissions		
You may edit the list of users that are allowed to modify OLE class configuration information. This includes installing new OLE servers and adjusting the configuration of existing OLE servers.		
Edit Default		
OK Cancel Apply		

For each permission, click on the *Edit Default* button, to access the configuration windows. Click next on the *Add* and select the following rights.

Default Access permissions:

INTERACTIVE	Allow Access
NETWORK	Allow Access
SYSTEM	Allow Access
EVERYONE	Allow Access

Registry Value Permissions	×
Registry Value: DefaultAccessPermission <u>O</u> wner: Administrator <u>N</u> ame:	
C Everyone INTERACTIVE NETWORK RETWORK SYSTEM	Allow Access Allow Access Allow Access Allow Access
Iype of Access:     Allow Access       OK     Cancel     Add	▼ <u>R</u> emove <u>H</u> elp

Default Launch Permissions:

F

INTERACTIVE	Allow Launch
NETWORK	Allow Launch
SYSTEM	Allow Launch
EVERYONE	Allow Launch

Registry Value Permissions	×
Registry Value: DefaultLaunchPermission <u>O</u> wner: Account Unknown <u>N</u> ame:	
Administrators  Everyone  INTERACTIVE  NETWORK  SYSTEM	Allow Launch Allow Launch Allow Launch Allow Launch Allow Launch
<u>Type of Access</u> : Allow Launch	▼ <u>R</u> emove

Once the rights are configured, select *Apply* in the **Default Security** tab to apply the modifications.

**NOTE:** Everyone is used as an example. It can be replaced by the standard Windows 2000 group of the standard users.

Select the *Default Protocols* tab:

Distributed COM Configuration Properties
Applications Default Properties Default Security Default Protocols
DCOM Protocols
Connection-oriented TCP/IP Datagram UDP/IP
译 Datagram IPX 第一 Connection-oriented SPX
Connection-oriented of A
Connection-oriented Netbios over IPX
Add <u>R</u> emove <u>Move Up</u> Move Down <u>Properties</u>
Description
The set of network protocols available to DCOM on this machine. The ordering of the protocols reflects the priority in which they will be used, with the top protocol having first priority.
OK Cancel Apply

Select Connection-oriented TCP/IP and define it in the first position thanks to the *Move up* button.

**NOTE:** The Datagram UDP/IP item is not present when Windows 2000/XP is used.

Select the Applications tab.

Distributed COM Configuration Properties	×
Applications Default Properties Default Security Default Protocols	
Applications:	
{000C101C-0000-0000-C000-00000000046} {6316D 324-2238-101B-9E66-00AA003BA905} Application Microsoft Excel Application Microsoft Graph 2000	
Chrom Com Service COM+ Event System Tier2 Diamir, IEEE488_Kernel Objet DiamirProgressBox Objet Document Microsoft Word Event Object Change HTML Application Internet Explorer(Ver 1.0) logagent Media Player Message joint Outlook Microsoft Agent Server 2.0 Microsoft Clip Gallery Microsoft Equation 3.0 MobSync	
Properties	
OK Cancel Apply	

For each following applications, configure the appropriate Permissions:

- Acquisition & Control Communication Service
- Acquisition & Control Manager
- AcqManDiamirSide Object
- External Sequence Manager
- Interface Service
- QuickStart Engine
- QuickStart Manager
- SequenceAuto Object

• W2AutomationEngine object (Important: this DCOM object has to be started as user INTERACTIVE in the tab *Identity* of its properties)

Select each application with a double click. In the opened window select the *Security* tab and select the *Default Permissions* for the three types of permissions.

Click on the Apply button to apply the modifications.

### **DCOM Configuration Under Windows 2000 Server**

Connect under the Windows session as a local administrator, in the **START** menu, in the **RUN** part enter **DCOMCNFG**, and configure the following settings

A window is opened with four tabs.

Applications Default Properties Default Security Default Protocols

Select the **Default Security** tab. The following screen is displayed:

Distributed COM Configuration Properties	? ×
Applications Default Properties Default Security Default Protocols	
Default Access Permissions	
You may edit who is allowed to access applications that do not provide their own settings	
Edit Default	
Default Launch Permissions	-
You may edit who is allowed to launch applications that do not provide their own settings.	
Edit Default	
Default Configuration Permissions	
You may edit the list of users that are allowed to modify OLE class configuration information. This includes installing new OLE servers and adjusting the configuration of existing OLE servers.	
Edit Default	
OK Cancel App	ly .

For each permission, click on the *Edit Default* button, to access the configuration windows. Click next on the *Add* and select the following rights.

Default Access permissions:

INTERACTIVE

Allow Access

NETWORK	Allow Access
SYSTEM	Allow Access
EVERYONE	Allow Access

Registry Value P	ermissions			×
Registry Value: <u>O</u> wner: Administr <u>N</u> ame:	DefaultAcce: rator	ssPermission		
😵 Everyone			Allow Access	
🔬 INTERACTI	IVE		Allow Access	
🛛 🖳 NETWORK			Allow Access	
<b>W</b> SYSTEM			Allow Access	
I	ype of Access:	Allow Access		•
ОК	Cancel	Add	<u>R</u> emove	<u>H</u> elp

Default Launch Permissions:

INTERACTIVE	Allow Launch
NETWORK	Allow Launch
SYSTEM	Allow Launch
EVERYONE	Allow Launch

Registry Value Permissions	×
Registry Value: DefaultLaunchPermission <u>O</u> wner: Account Unknown <u>N</u> ame:	
Administrators Everyone INTERACTIVE NETWORK SYSTEM	Allow Launch Allow Launch Allow Launch Allow Launch Allow Launch
Type of Access: Allow Launch	▼ <u>R</u> emove <u>H</u> elp

Once the rights are configured, select *Apply* in the **Default Security** tab to apply the modifications.

**NOTE:** Everyone is used as an example. It can be replaced by the standard Windows 2000 group of the standard users.

Select the *Default Protocols* tab:

Distributed COM Configuration Properties	? X
Applications Default Properties Default Security Default Protocols	
DCOM Protocols	
<ul> <li>Connection-oriented TCP/IP</li> <li>Datagram UDP/IP</li> <li>Datagram IPX</li> <li>Connection-oriented SPX</li> <li>Connection-oriented NetBEUI</li> <li>Connection-oriented Netbios over IPX</li> </ul>	
Add <u>R</u> emove Move Up Move Down <u>Properties</u>	
Description	
The set of network protocols available to DCOM on this machine. The ordering of the protocols reflects the priority in which they will be used with the top protocol having first priority.	,
OK Cancel <u>A</u> pp	ly

Select Connection-oriented TCP/IP and define it in the first position thanks to the *Move up* button.

**NOTE:** The Datagram UDP/IP item is not present when Windows 2000/XP is used.

Select the *Applications* tab.

Distributed COM Configuration Properties	×
Applications Default Properties Default Security Default Protocols	
k	
Applications:	
{000C101C-0000-0000-C000-00000000046} {6316D324-2238-101B-9E66-004A003BA905} Application Microsoft Excel Application Microsoft Graph 2000	
Chrom. Com. Service CDM+ Event System Tier2 Diamir IEEE 488 Kernel Objet Diamir ProgressBox Objet Document Microsoft Word Event Object Change HTML Application Internet Explorer(Ver 1.0) logagent Media Player Message joint Outlook Microsoft Agent Server 2.0 Microsoft Equation 3.0 MobSync	
Properties	
OK Cancel Apply	

For each following applications, configure the appropriate Permissions:

- Acquisition & Control Communication Service
- Acquisition & Control Manager
- AcqManDiamirSide Object
- External Sequence Manager
- Interface Service
- QuickStart Engine
- QuickStart Manager
- SequenceAuto Object

• W2AutomationEngine object (Important: this DCOM object has to be started as user INTERACTIVE in the tab *Identity* of its properties)

Select each application with a double click. In the opened window select the *Security* tab and select the *Default Permissions* for the three types of permissions.

Click on the Apply button to apply the modifications.

### **DCOM Configuration Under Windows XP SP1**

Connect under the Windows session as a local administrator in the *START* menu, in the *RUN* part enter *DCOMCNFG*.



The following window is opened:

Right click on My Computer and select Properties.

A window is opened with six tabs:
General Options Default Properties Default COM Security MSDTC Default Protocols

Select the **Default COM Security** tab. The following screen is displayed:

My Computer Properties	? 🛛
General Options Default Protocols MSDTC	Default Properties Default COM Security
Access Permissions You may edit who is allowed to access ap provide their own settings.	plications that do not
─ Launch Permissions You may edit who is allowed to launch app provide their own settings.	plications that do not Edit Default
ОК	Cancel Apply

For the Access permission,

1. Click on the *Edit Default* button, to access the configuration windows (see below).

Access Permission		? 🛛
Default Security		
Group or user names:		
<b>SYSTEM</b>		
	Add	Remove
Permissions for SYSTEM	Allow	Deny
Access Permission	<b>v</b>	
1		
		7

2. Click then on the *Add* button, the following window is displayed.

Select Users or Groups	? 🔀
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
AMAZONIE	Locations
Enter the object names to select ( <u>examples</u> ):	
	Check Names
Advanced	Cancel

3. Click then on Advanced, the following window will then be displayed.

Select Users or Groups	? 🔀
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
AMAZONIE	Locations
Common Queries	
Name: Starts with 👻	Columns
Description: Starts with 👻	Find Now
Disabled accounts	Stop
Non expiring password	
Davs since last logon:	26
	~
0	Cancel
Name (RDN) In Folder	

4. Click on the *Find Now* button to display the available permissions.

Select this object type Users, Groups, or Bu From this location: AMAZONIE Common Queries Name: Sta Description: Sta Disabled accot Non expiring pe Days since last log	in security principals	Object Types
Users, Groups, or Bu From this location: AMAZONIE Common Queries Name: Sta Description: Sta Disabled accoo Non expiring pr Days since last log	t-in security principals	Object Turner
From this location: AMAZONIE Common Queries Name: Sta Description: Sta Disabled accou Non expiring pr Days since last log		Object Types
AMAZONIE Common Queries Name: Sta Description: Sta Disabled accou Non expiring pr Days since last log		
Common Queries Name: Sta Description: Sta Disabled accou Non expiring pr Days since last log		Locations
Name: Sta Description: Sta Disabled accou Non expiring pa Days since last log		
Description: Sta Disabled accor Non expiring pa Days since last log	s with 😒	Columns
Disabled accou	s with 💌	Find Now
Days since last log	nte	Stop
Days since last log	ssword	
Days since last log		AL.
	on:	
		OK Cancel
Name (RDN)	n Folder	2
EC A	MAZONIE	
ZEE A	MAZUNIE	
3 FP A	MAZONIF	
FTD A	MAZONIE	
GHOST A	MAZONIE	
🖁 GO 🛛 🗚	MAZONIE	
🖁 GS 🛛 🗚	MAZONIE	
GUEST A	MAZONIE	
WINTERACTIVE		

5. Select INTERACTIVE and press OK.

Repeat the steps 3 to 5 to add NETWORK; SYSTEM; EVERYONE.

The following screen should then be displayed.

Select Users or Groups		? 🔀
Select this object type:		
Users, Groups, or Built-in security principals		Object Types
From this location:		
AMAZONIE		Locations
Enter the object names to select ( <u>examples</u> ):		
SYSTEM; INTERACTIVE; NETWORK; Everyone		Check Names
Advanced	OK	Cancel

Click on  $\ensuremath{\textit{OK}}\xspace$  and the Access Permissions should be configured as below.

Access Permission		? 🗙
Default Security		
Group or user names:		
Everyone     INTERACTIVE     NETWORK     SYSTEM		
Permissions for Everyone	Add	Remove
Access Permission	V	

Default Access permissions:

INTERACTIVE

SYSTEM

NETWORK

٠

- Allow Access Allow Access
- Allow Access

Everyone

Allow Access

For the Launch permission, do the same as for the Access Permission.

The Launch permission should be set as below.

Launch Permission		? 🔀
Default Security		
Group or user names:		
Administrators (ARETHUSEV	Administrators)	
SYSTEM		
	Add	Remove
Permissions for Everyone	Allow	Deny
Launch Permission	<ul><li>✓</li></ul>	
1		
	OK	Cancel

Default Launch Permissions:

- INTERACTIVE
- NETWORK
  - SYSTEM
- Everyone

•

Allow Launch Allow Launch Allow Launch Allow Launch

Select the *Default Protocols* tab:

My Computer Properties	? 🛛
General Options Default Protocols MSDTC	Default Properties Default COM Security
DCOM Protocols	
Add Remove Move Up	Move Down Properties
Description The set of network protocols available to ordering of the protocols reflects the prio with the top protocol having first priority.	DCOM on this machine. The rity in which they will be used,
ОК	Cancel Apply

Select Connection-oriented TCP/IP and define it in the first position using the *Move up* button.

Close the Computer Properties and select *DCOM config* as in the following window.

Scomponent Services			
🐼 File Action View Window Help		_	B×
← → 🗈 🖬 🗡 🚰 🙆 😫	*1   • • • # (    = _		
📄 Console Root	DCOM Config 94 object(s)		
🖻 🙆 Component Services	Name	Application ID	~
Computers	AccStore Class	{DE5DBCDC-104A-4cbc-A4D5-0C2104A142C5}	
🖃 💾 My Computer	Acquisition & Control Communication Service	{15E99A0F-FBAC-46FF-AA7C-C684C5D68B04}	
	Acquisition & Control Manager	{5514A9E0-6201-11D4-964F-00A0240B1C5B}	
Decom Coning     Distributed Transaction C	ASFAgent	{74C1A379-BBDC-4BC3-BCD0-E34BAADF4A8B}	
Bischbacca Hansaction C	Automatic Updates	{653C5148-4DCE-4905-9CFD-1B23662D3D9E}	
+ 🗊 Event Viewer (Local)	Background Intelligent Transfer Service	{69AD4AEE-51BE-439b-A92C-86AE490E8B30}	
E Services (Local)	Blocked Drivers	{783C030F-E948-487D-B35D-94FCF0F0C172}	
	BOOTPService	{21A92550-A6B7-47BE-9316-9F29665E16EA}	
	Chrom_Com_Service	{220949C1-03B0-11D3-B795-00805F47DE2B}	
	COM+ Event System	{4E14FBA2-2E22-11D1-9964-00C04FBBB345}	
	ComEvents.ComServiceEvents	{ECABB0C3-7F19-11D2-978E-0000F8757E2A}	
	ComEvents.ComSystemAppEventData	{ECABB0C6-7F19-11D2-978E-0000F8757E2A}	
	Ormand line Trigger Consumer	{797EF3B3-127B-4283-8096-1E8084BF67A6}	
	CustReg Class	{84D586C4-A423-11D2-B943-00C04F79D22F}	
	Defrag FAT engine	{80EE4902-33A8-11d1-A213-0080C88593A5}	
	Defrag NTFS engine	{80EE4901-33A8-11d1-A213-0080C88593A5}	
	DiagServices Class	{0EF91A8E-03D5-11D3-B995-00A0C9AD54B5}	
	Event Object Change	{D0565000-9DF4-11D1-A281-00C04FCA0AA7}	
	Event Object Change 2	{BB07BACD-CD56-4E63-A8FF-CBF0355FB9F4}	
	External Sequence Engine - 410 230 330 363	{10CD8280-CC2F-11D4-8DF7-0050044DDE07}	
<	External Sequence Manager	{5014DD65-CC25-11D4-8DF7-0050044DDE07}	~

For each following applications, configure the appropriate Permissions:

- Acquisition & Control Communication Service
- Acquisition & Control Manager
- External Sequence manager
- Interface Service
- QuickStart Engine
- QuickStart Manager
- Sequenceauto object or {38425FD5-F403-11D3-9246-0050044DDE07}
- W2AutomationEngine object or {F1F76A40-9B57-49DC-B7E2-92AF5039F4AC}
- AcqManDiamirSide object or {4CDCE86D-C1CC-11D2-BEBD-00A0247B21AC}

Select each application properties with a right click.

Somponent Services			
🐌 File Action View Window Help			_ <del>_</del> _ <del>_</del> _ ×
⇔ → 🗈 📧 🗡 🖀 🔮	1 4 7 # 🗐 🖷 🕄		
Console Root	DCOM Config 94 object(s)		
E Component Services	Name	Application ID	~
Computers	AccStore Class	{DE5DBCDC-104A-4cbc-A4D5-0C2104A142C5}	
My Computer	Acquisition & Contro Miana rvice	{15E99A0F-FBAC-46FF-AA7C-C684C5D68B04}	
	Acquisition & Contro	{5514A9E0-6201-11D4-964F-00A0240B1C5B}	
Distributed Transaction C	ASFAgent Proerties	{74C1A379-BBDC-4BC3-BCD0-E34BAADF4A8B}	
E Bunning Processes	Automatic Updates	{653C5148-4DCE-4905-9CFD-1B23662D3D9E}	_
🕀 🕅 Event Viewer (Local)	Background Intelligent Transfer Service	{69AD4AEE-51BE-439b-A92C-86AE490E8B30}	
🛨 🦏 Services (Local)	Blocked Drivers	{783C030F-E948-487D-B35D-94FCF0F0C172}	
and the second	BOOTPService	{21A92550-A6B7-47BE-9316-9F29665E16EA}	
	Chrom_Com_Service	{220949C1-03B0-11D3-B795-00805F47DE2B}	
	COM+ Event System	{4E14FBA2-2E22-11D1-9964-00C04FBBB345}	
	ComEvents.ComServiceEvents	{ECABB0C3-7F19-11D2-978E-0000F8757E2A}	
	ComEvents.ComSystemAppEventData	{ECABB0C6-7F19-11D2-978E-0000F8757E2A}	
	Command line Trigger Consumer	{797EF3B3-127B-4283-8096-1E8084BF67A6}	
	CustReg Class	{84D586C4-A423-11D2-B943-00C04F79D22F}	
	Defrag FAT engine	{80EE4902-33A8-11d1-A213-0080C88593A5}	
	Defrag NTFS engine	{80EE4901-33A8-11d1-A213-0080C88593A5}	
	DiagServices Class	{0EF91A8E-03D5-11D3-B995-00A0C9AD54B5}	
	Event Object Change	{D0565000-9DF4-11D1-A281-00C04FCA0AA7}	
	Event Object Change 2	{BB07BACD-CD56-4E63-A8FF-CBF0355FB9F4}	
	External Sequence Engine - 410_230_330_363	{10CD8280-CC2F-11D4-8DF7-0050044DDE07}	
< >	External Sequence Manager	{5014DD65-CC25-11D4-8DF7-0050044DDE07}	~

In the opened window select the **Security** tab and select the *Default Permissions* for the first two types of permissions (Access and Launch).

Acquisition & Control Communication Service Propert ?	×
General Location Security Endpoints Identity	
Launch Permissions	
Access Permissions	
Configuration Permissions C Use Default C Customize Edit	
OK Cancel Apply	

Click on the *Apply* button to apply the modifications for each application.

## **DCOM Configuration Under Windows 2003 Server**

Connect under the Windows session as a local administrator in the *START* menu, in the *RUN* part enter *DCOMCNFG*.

The following window is opened:

Component Services				_ 🗆 🗵
Eile Action View Window He	p			_8×
(← →   🖻 💽   🗡 😭 😭				
Console Root Component Services Computers Active Directory Users and Compu Event Viewer (Local) Services (Local)	COM+ Applications	Distributed Transact	Running Processes	
			1	

Right click on *My Computer* and select Properties.

A window is opened with six tabs:

General Options Default Properties Default COM Security MSDTC Default Protocols

Select the **Default Properties** tab. The following screen is displayed:

	MSDTC	Default COM Security
General	Options	Default Properties
Enable Distributed C	OM on this computer	
Enable COM Interne	t Services on this co	mputer
Default Distributed CO	M Communication Pr	operties
The Authentication Le	vel specifies security	at the packet leves
Default Authenticati	on Level:	
Derault Authenticati		
Connect	orr Level.	-
Connect	un Level	<b>•</b>
Connect The impersonation lev	el specifies whether applic	applications can determine
Connect The impersonation lev who is calling them, a using the client's iden	el specifies whether id whether the applic ity.	applications can determine ation can do operations
Connect Connect The impersonation lev who is calling them, a using the client's iden Default Impersonati	el specifies whether , nd whether the applic ity. nn Level:	applications can determine ation can do operations
Connect Connect The impersonation lev who is calling them, a using the client's iden Default Impersonatio Identify	el specifies whether nd whether the applic ty. m Level:	applications can determine ration can do operations
Connect Connect The impersonation lev who is calling them, a using the client's iden Default Impersonation Identify	el specifies whether nd whether the applic ity. n Level:	pplications can determine lation can do operations
Connect Connect The impersonation lev who is calling them, a using the client's ident Default Impersonation Identify Security for reference and that the default in	el specifies whether nd whether the applic ity. In Level: tracking can be prov personation level is r	pplications can determine ation can do operations     ided if authentication is user ided of anonymous.
Connect Connect The impersonation lev- who is calling them, a using the client's ident Default Impersonatii Identify Security for reference and that the default in V Provide addition	rel specifies whether nd whether the applic ity. In Level: tracking can be prov personation level is r al security for referen	splications can determine ation can do operations     v

Make sure that the check box *Provide additional security for reference tracking* is checked.

Select the **Default COM Security** tab. The following screen is displayed:

General	Options	Default Properties
Default Protocols	MSDTC	Default COM Security
Access Permissions You may edit who is provide their own se	allowed to access a ttings.	pplications that do not
aunch Permissions		
You may edit who is provide their own se	allowed to launch a ttings.	pplications that do not
You may edit who is provide their own se	allowed to launch a ttings.	pplications that do not
You may edit who is provide their own se	allowed to launch a ttings.	pplications that do not
You may edit who is provide their own se	allowed to launch a ttings	pplications that do not
You may edit who is provide their own se	allowed to launch a ttings	pplications that do not

For the Access permission,

6. Click on the *Edit Default* button, to access the configuration windows (see below).

fault Security				-
iroup or user names:				
SYSTEM				
		vi0 (46		
	Ad	įd	<u>R</u> emov	e
ermissions for SYSTEM		Allow	Deny	
Access Permission		V		
			1	

7. Click then on the *Add* button, the following window is displayed.

Users, Groups, or Built-in security principals	Object Types
From this location:	
fangorn.local	Locations
Enter the object names to select ( <u>examples</u> ):	
	Check Names

8. Click then on Advanced, the following window will then be displayed.

ielect Users, Con	nputers, or Groups			<u>?</u> ×
Select this object t	ype: K			
Users, Groups, or	Built-in security princip	pals		Object Types
From this location:				-
tangorn.local				Locations
Common Queries	-			
N <u>a</u> me:	Starts with 💌			<u>C</u> olumns
Description:	Starts with 🔽			Find Now
				Stop
Uisabled ac     Non expirin	counts a password			
- Harragenni				
Days since last	logon:			- I 🕺
				GK Cancel
Search res <u>u</u> lts:				
Name (HDN)	E-Mail Address	Description	In Folder	

9. Click on the *Find Now* button to display the available permissions.

101200000000000000000000000000000000000				
Select this object to Users, Groups, or	ype: Built-in security princ	cipals		Object Types
From this location:				
fangorn.local	·			Locations
Common Queries	1			
N <u>a</u> me:	Starts with 💌			<u>C</u> olumns
Description:	Starts with 💌 🗍			Find Now
Disabled ac	counts			Stop
Days since last	logon:	]		<b>S</b>
0				
Search res <u>u</u> lts:			OK	Cancel
Search res <u>u</u> lts: Name (RDN)	E-Mail Address	Description	OK In Folder	Cancel
Search results: Name (RDN) & Everyone & Group Policy & Guest INTERACTIVE & Kribgt	E-Mail Address	Description Members in this Built-in account f Key Distribution	In Folder fangorn.local/Us. fangorn.local/Us. fangorn.local/Us.	Cancel

10. Select INTERACTIVE and press OK.

Repeat the steps 3 to 5 to add NETWORK; SYSTEM; EVERYONE.

The following screen should then be displayed.

From this location: fangorn.local Location Enter the object names to select ( <u>examples</u> ): <u>SYSTEM; INTERACTIVE; NETWORK; Everyone</u> Check Na	urity princi	pals		Object Types
fangorn.local     Location       Enter the object names to select (examples):				
Enter the object names to select ( <u>examples</u> ): <u>SYSTEM</u> ; INTERACTIVE; NETWORK; Everyone <u>Check Na</u>			ī.	Locations
<u>SYSTEM; INTERACTIVE; NETWORK; Everyone</u>	ect (examp	ples):		
	ETWORK	<u>K; Everyone</u>		<u>C</u> heck Names
	ETWORK	<u>K; Evervone</u>		<u>C</u> heck Names

Click on  $\ensuremath{\textit{OK}}\xspace$  and the Access Permissions should be configured as below.

ccess Permission		?
Default Security		
Group or user names:		
ANONYMOUS LOGON		
Everyone		
MINTERACTIVE		
		-
	A <u>d</u> d	<u>R</u> emove
Permissions for ANONYMOUS LOGON	Allow	Deny
Access Permission		
		Lancel

Default Access permissions:

- INTERACTIVE Allow Access
   NETWORK Allow Access
  - SYSTEM
- Allow Access Allow Access
- Everyone

•

- Allow Access
- Anonymous LOGON Allow Access

For the Launch permission, do the same as for the Access Permission without the Anonymous Logon permission.

The Launch permission should be set as below.

2 Administrators (BEAR 2 Everyone	N\Adm	inistrators)	
VINTERACTIVE	43		
SYSTEM			
		Add	<u>R</u> emove
missions for SYSTEM		Allow	Deny
_aunch Permission		V	

Default Launch Permissions:

- INTERACTIVE
- NETWORK
- SYSTEM
- Everyone

Allow Launch Allow Launch Allow Launch Allow Launch

Select the *Default Protocols* tab:

Default Protocole MSDTC Default CDM Securit	Default Protocol     MSDTC     Default CDM Security       OM Protocols     Connection-oriented TCP/IP       Connection-oriented TCP/IP       Agd     Remove     Move Up       Move Down     Properties.	General	1	Options	Default	Properties
Connection-oriented TCP/IP	Agd <u>Remove</u> <u>Move Up</u> <u>Move Down</u> <u>Properties.</u>	Default Pro		MSDTC	Default C	OM Security
	Add <u>Remove</u> <u>Move Up Move Down</u> <u>Properties.</u>	— Connecti	on-oriented TI	CP/IP		
	Add <u>Remove</u> <u>Move Up</u> <u>Move Down</u> <u>Properties</u>					
	Add <u>Remove</u> <u>Move Up</u> <u>Move Down</u> <u>Properties</u> .					
	Add <u>R</u> emove Move Up Move Down Properties.					
	Add <u>Remove</u> <u>Move Up</u> <u>Move Down</u> <u>Properties</u> .					
Add Remove Move Up Move Down Properties	escription					
The set of network protocols available to DCUM on this machine. The ordering of the protocols reflects the priority in which they will be used with the top protocol baving first priority.		Add rescription The set of ordering of with the to	network proto	Move Up	Move Down	Properties. hachine. The will be used,
The set of network protocols available to DCUM on this machine. Th ordering of the protocols reflects the priority in which they will be used with the top protocol having first priority.	war are op protect reving inst prony.	Add )escription The set of ordering of with the top	network proto the protocols p protocol hav	Move Up	Move Down	Properties. achine. The will be used,

Select Connection-oriented TCP/IP and define it in the first position using the *Move up* button.

Close the Computer Properties and select *DCOM config* as in the following window.

Eile Action View Window He	lp	_121
⊨ →   🗈 💽   🗙 😭 🔯	"1   12 12 11 11 11 11 12 12 12 12 12 12 12	
Console Root	Name	Application ID
Component Services	AccStore Class	{DE5DBCDC-104A-4cbc-A4D5-0C2104A142C5}
	Acquisition & Control Communication Service	{15E99A0F-FBAC-46FF-AA7C-C684C5D68B04}
🖃 📇 My Computer	Kcquisition & Control Manager	{5514A9E0-6201-11D4-964F-00A0240B1C5B}
COM+ Applications	🖘 Automatic Updates	{653C5148-4DCE-4905-9CFD-1B23662D3D9E}
E Conrig	Background Intelligent Transfer Service	{69AD4AEE-51BE-439b-A92C-86AE490E8B30}
Distributed Transactio	BOOTPService	{21A92550-A6B7-47BE-9316-9F29665E16EA}
Active Directory Users and Comp	🔇 Cluster Configuration Server	{800A4EE1-1664-4BD5-ADF2-4DF2ECC09B40}
Event Viewer (Local)	Scluster Node Eviction Asynchronous Processor	{F45FBDD5-A533-4D9D-A06A-5AEDA9692BE4}
Services (Local)	Oluster Node Eviction Processor	{3FF0DA8E-E7B2-4C97-B470-056F8A4A53C0}
🙀 ser ness (cocar)	Scluster Service Node Evict Notifications	{8ECDF581-A4B0-4052-A8E1-BC6653B59555}
	Oluster Service Startup Notifications	{50503499-D11E-401A-82AE-33065AC0B9AE}
	OM+ Event System	{4E14FBA2-2E22-11D1-9964-00C04FBBB345}
	ComEvents.ComServiceEvents	{ECABB0C3-7F19-11D2-978E-0000F8757E2A}
	ComEvents.ComSystemAppEventData	{ECABB0C6-7F19-11D2-978E-0000F8757E2A}
	🔅 Command line Trigger Consumer	{797EF3B3-127B-4283-8096-1E8084BF67A6}
	CustReg Class	{84D586C4-A423-11D2-B943-00C04F79D22F}
	🔅 Defrag FAT engine	{80EE4902-33A8-11d1-A213-0080C88593A5}
	Defrag NTFS engine	{80EE4901-33A8-11d1-A213-0080C88593A5}
	🔅 dfrgifc	{89D5C4CB-8D86-4B8D-BB0F-FC3B91AC8FCA}
	Event Object Change	{D0565000-9DF4-11D1-A281-00C04FCA0AA7}
	Event Object Change 2	{BB07BACD-CD56-4E63-A8FF-CBF0355FB9F4}
	External Sequence Manager	{5014DD65-CC25-11D4-8DF7-0050044DDE07}
	Фнс	{FC7D9E01-3F9E-11D3-93C0-00C04F72DAF7}
	HTML Application	{3050f4d8-98B5-11CF-BB82-00AA00BDCE0B}

For each following applications, configure the appropriate Permissions:

- Acquisition & Control Communication Service
- Acquisition & Control Manager
- External Sequence manager
- Interface Service
- QuickStart Engine
- QuickStart Manager
- Sequenceauto object or {38425FD5-F403-11D3-9246-0050044DDE07}
- W2AutomationEngine object or {F1F76A40-9B57-49DC-B7E2-92AF5039F4AC}
- AcqManDiamirSide object or {4CDCE86D-C1CC-11D2-BEBD-00A0247B21AC}

Select each application properties with a right click.

Component Services			- 0 >
Eile Action View Window Help			_ 181 ×
⊨ →   🖻 📧   X 📽 🕅   🔮   3	11 🕨 12 📾 🔳		
Console Root N	lame	Application ID	
Component Services Computers Computer COM+ Applications COM Config COM Config COM Config COM Config Component Services (Local) Services (Local)	AccStore Class Acquisition & Control Communication Service Acquisition & Control Manager Acquisition & Control Manager Background Intelligent Transfer Service Cluster Configuration Server Cluster Node Eviction Asynchronous Processor Cluster Node Eviction Processor Cluster Node Eviction Processor Cluster Service Node Evict Notifications Cluster Service Note Startup Notifications COM4 Event System ComEvents.ComSystemAppEventData Communes.ComSystemAppEventData Com	{DESDBCDC-104A-4dbc-A4D5-0C2104A142C5}           View         FF-AA7C-C684C50C88043           Properties         De-964F-00A024081C58}           De-964F-00A024081C58}         De-964F-00A024081C58}           965-9CFD-1823662D30FE         {6/A0246E-518E-439b-A92C-86AE490E830}           {6/A0246E1-1664-48D5-ADF2-40F2EC009840}         {F45FBDD5-A533-409D-A06A-5AEDA9692BE4}           {745FBDD5-A533-409D-A06A-5AEDA9692BE4}         {3FF0DA8E-6782-4(97-8470-056F8A4A53C0)           {8ECDF581-A480-4052-A8E1-BC6653859555}         {5050349-D11E-401A-62AE-33065AC089AE}           {4E14FBA2-2E22-11D1-9964-00C04F68B345}         {ECA8B0C5-7F19-11D2-978E-0000F8757E2A}           {797EF3B3-127B-4283-8096-1E8084BF67A6}         {80E54002-33A8-11d1-A213-0080C085793A5}           {80EE4901-33A8-11d1-A213-0080C8593A5}         {809554C8-84B6-488D-B0FF-C580935F894}           {805500-9DF4-11D1-A8E1-00C04FCA0A77         {B8078AC0-CD56-4E53-A8FF-CB70355F89F4}           {5014D65-C25-11D4-8DF7-0050044D0E075         {F23944D721578-428}	

In the opened window select the *Security* tab and select the *Default Permissions* for the first two types of permissions (Access and Launch).

uisition & Control Communicatio	n Service Properties	?
eneral   Location   Security   Endpoin	its   Identity	
Launch Permissions		
C Cu <u>s</u> tomize	<u>E</u> dit	
		- 10
Use Default		
C Custo <u>m</u> ize	Edit	
Configuration Permissions		
C Use Defa <u>u</u> lt		
Customize	Edit	
04		-7.
OK	Cancel 🔬	pply

Click on the *Apply* button to apply the modifications for each application.

## DCOM Configuration Under Windows XP SP2, Windows 2003 Server SP1 and Windows Vista (Enterprise & Business)

Please find below the procedure to configure DCOM under Windows XP SP2, Windows 2003 Server SP1 and Windows Vista. Screenshots are made under Windows XP SP2 but they are the same under 2003 server SP1.

Connect under the Windows session as a local administrator in the *START* menu, in the *RUN* part enter *DCOMCNFG*.

The following window is opened:

Scomponent Services					
🚱 File Action View Window Help					X
← → 🗈 🖬 🗡 🖀 🔮 😫		## 🗇 🗄	]		
Console Root	My Computer	4 object(s)			
Component Services					
Event Viewer (Local)     Services (Local)	COM+ Applications	DCOM Config	Distributed Transacti	Running Processes	

Right click on My Computer and select Properties.

A window is opened with 6 tabs:

General Options Default Properties Default COM Security MSDTC Default Protocols

Select the **Default Properties** tab. The following screen is displayed:

My Computer Properties 🛛 🕐 🗙				
Default Protocols MSDTC COM Security				
General Options Default Properties				
<ul> <li>Enable Distributed COM on this computer</li> <li>Enable COM Internet Services on this computer</li> </ul>				
Default Distributed COM Communication Properties				
The Authentication Level specifies security at the packet level.				
Default Authentication Level:				
Connect				
The impersonation level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity. Default Impersonation Level:				
Identify 💌				
Security for reference tracking can be provided if authentication is used and that the default impersonation level is not anonymous. Provide additional security for reference tracking				
OK Cancel Apply				

Verify that *Enable Distributed COM on this computer* and *Provide additional security for reference tracking* boxes are checked.

Select the **Default COM Security** tab. The following screen is displayed:

General       Options       Default Properties         Default Protocols       MSDTC       COM Security         Access Permissions       You may edit who is allowed default access to applications. You may also set limits on applications that determine their own permissions.         Edit Limits       Edit Default	
Default Protocols         MSDTC         COM Security           Access Permissions	
Access Permissions You may edit who is allowed default access to applications. You may also set limits on applications that determine their own permissions. Edit Limits Edit Default	
You may edit who is allowed default access to applications. You may also set limits on applications that determine their own permissions. Edit Limits Edit Default	
Edit Limits Edit Default	
- Launch and Activation Permissions	
activate objects. You may also set limits on applications that determine their own permissions. Edit Limits Edit Default	

For the Default Access permission,

- 1. Click on the *Edit Default* button, to access the configuration windows.
- 2. Click then on the *Add* button, the following window is displayed.

Select Users or Groups	? 🔀
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
AMAZONIE	Locations
Enter the object names to select ( <u>examples</u> ):	Check Names
Advanced	Cancel

lsers, Groups, or Built-in security principals	Object Types
om this location:	
MAZUNIE	Locations
Name: Starts with  Description: Starts with  Disabled accounts Non expiring password Days since last logon:	Columns Find Now Stop
ame (RDN) In Folder	OK Cancel

3. Click on *Advanced*, the following window will be displayed.

4. Click on the *Find Now* button to display the available permissions.

elect Users o	r Groups	? 🛛
Select this object	t type:	
Users, Groups,	or Built-in security principals	Object Types
From this locatio	n:	
AMAZONIE		Locations
Common Queri	es	
Name:	Starts with 🐱	Columns
Description:	Starts with 💌	Find Now
Disabled	accounts	Stop
Non expir	ing password	
Days since la	st logon:	<b>S</b>
		OK Cancel
Name (RDN)	In Folder	
🔮 EC	AMAZONIE	
EE Evenione	AMAZONIE	
FP	AMAZONIE	
🛿 FTD	AMAZONIE	
🛿 GHOST	AMAZONIE	
🧟 GO	AMAZONIE	
GS GS	AMAZONIE	
GUEST WINTEDACTIN	AMAZUNIE E	
CONTRACTIV	LAMAZONIE	~

5. Select INTERACTIVE and press OK.

Repeat the steps 3 to 5 to add *NETWORK; SYSTEM; EVERYONE, ANONYMOUS LOGON.* 

The following screen should then be displayed.

Select Users, Computers, or Groups	? 🔀
Select this object type:	
Users, Groups, or Built-in security principals	Object Types
From this location:	
broceliande	Locations
Enter the object names to select ( <u>examples</u> ):	
ANONYMOUS LOGON; Everyone; INTERACTIVE; NETWORK; SYSTEM	Check Names
Advanced OK	Cancel

Click on *OK* and the Access Permissions should be configured as below.

Access Permission		? 🗙
Default Security		
Group or user names:		
ANONYMOUS LOGON		
SYSTEM		
	Add	Remove
Permissions for SYSTEM	Allow	Deny
Local Access		
Remote Access		
	ОК	Cancel

Default Access permissions:

- ANONYMOUS LOGON
- INTERACTIVE
- NETWORK
- SYSTEM
- Everyone

Allow Local Access Allow Remote Access Allow Local Access Allow Remote Access Allow Local Access Allow Remote Access Allow Remote Access Allow Local Access Allow Local Access Allow Local Access Allow Remote Access

For the Limits Access permission, do the same as for the Default Access Permission.

The Limits Access permission should be set as below.

Access Permission		? 🗙
Security Limits		
Group or user names:		
MANONYMOUS LOGON		
Everyone     INTERACTIVE		
SYSTEM		
	Add	Remove
Permissions for ANONYMOUS LOGON	Allow	Deny
Local Access	✓	
Remote Access	$\checkmark$	
	ОК	Cancel

Limit Access permissions:

- ANONYMOUS LOGON
- INTERACTIVE
- NETWORK
- SYSTEM
- Everyone

Allow Local Access Allow Remote Access Allow Local Access Allow Remote Access Allow Local Access Allow Local Access Allow Remote Access Allow Remote Access Allow Local Access Allow Local Access Allow Remote Access

For the Default Launch permission, do the same as for the Default Access Permission.

Launch Permission		? 🗙
Default Security		
Group or user names:		
ANONYMOUS LOGON		
SYSTEM		
	Add	Remove
Permissions for SYSTEM	Allow	Deny
Local Launch		
Remote Launch		
Remote Activation		
	OK	Cancel

The Default Launch permission should be set as below.

Default Launch Permissions:

•	ANONYMOUS LOGON	Allow Local Launch
		Allow Remote Launch
•	INTERACTIVE	Allow Local Launch
		Allow Remote Launch
		Allow Local Activation
		Allow Remote Activation
•	NETWORK	Allow Launch
		Allow Remote Launch
		Allow Local Activation
		Allow Remote Activation
•	SYSTEM	Allow Launch
		Allow Remote Launch
		Allow Local Activation
		Allow Remote Activation
•	Everyone	Allow Launch
		Allow Remote Launch
		Allow Local Activation
		Allow Remote Activation

For the Limit Launch permission, do the same as for the Default Launch Permission.

The Limit Launch permission should be set as below.

Launch Permission		? 🗙
Security Limits		
Group or user names:		
👧 ANONYMOUS LOGON		
Everyone     Everyone     INTERACTIVE     NETWORK     SYSTEM		
	Add	Remove
Permissions for ANONYMOUS	Allow	Deny
Local Launch	✓	
Remote Launch		
Local Activation		
	0K	Cancel

## Default Launch Permissions:

•	ANONYMOUS LOGON	Allow Local Launch Allow Remote Launch Allow Local Activation Allow Remote Activation
•	INTERACTIVE	Allow Local Launch Allow Remote Launch Allow Local Activation
•	NETWORK	Allow Remote Activation Allow Launch Allow Remote Launch Allow Local Activation
•	SYSTEM	Allow Remote Activation Allow Launch Allow Remote Launch Allow Local Activation
•	Everyone	Allow Remote Activation Allow Launch Allow Remote Launch Allow Local Activation Allow Remote Activation

Select the *Default Protocols* tab:

My Computer Properties				
General Options Default Properties Default Protocols MSDTC Default COM Security				
DCOM Protocols				
Connection-oriented SPX				
Add Remove Move Up Move Down Properties				
Description The set of network protocols available to DCOM on this machine. The ordering of the protocols reflects the priority in which they will be used, with the top protocol having first priority.				
OK Cancel Apply				

Select Connection-oriented TCP/IP and define it in the first position using the *Move up* button.

Close the Computer Properties and select DCOM config as in the following window.

Scomponent Services			
🐌 File Action View Window Help		-	. a ×
⇐ → 🗈 📧 🗙 🗳 🔮	10 🗠 15 🕮 🎟 🕮		
Console Root	DCOM Config 94 object(s)		
🖻 🙆 Component Services	Name	Application ID	~
Computers	AccStore Class	{DE5DBCDC-104A-4cbc-A4D5-0C2104A142C5}	
E B Computer	Acquisition & Control Communication Service	{15E99A0F-FBAC-46FF-AA7C-C684C5D68B04}	
	Acquisition & Control Manager	{5514A9E0-6201-11D4-964F-00A0240B1C5B}	
Deciri coning     Distributed Transaction C	SFAgent SFAgent	{74C1A379-BBDC-4BC3-BCD0-E34BAADF4A8B}	
E Bunning Processes	🔇 Automatic Updates	{653C5148-4DCE-4905-9CFD-1B23662D3D9E}	
+ 🗊 Event Viewer (Local)	A Background Intelligent Transfer Service	{69AD4AEE-51BE-439b-A92C-86AE490E8B30}	
F Services (Local)	Blocked Drivers	{783C030F-E948-487D-B35D-94FCF0F0C172}	
- •••	BOOTPService	{21A92550-A6B7-47BE-9316-9F29665E16EA}	
	Chrom_Com_Service	{220949C1-03B0-11D3-B795-00805F47DE2B}	
	COM+ Event System	{4E14FBA2-2E22-11D1-9964-00C04FBBB345}	
	ComEvents.ComServiceEvents	{ECABB0C3-7F19-11D2-978E-0000F8757E2A}	
	ComEvents.ComSystemAppEventData	{ECABB0C6-7F19-11D2-978E-0000F8757E2A}	
	Command line Trigger Consumer	{797EF3B3-127B-4283-8096-1E8084BF67A6}	
	CustReg Class	{84D586C4-A423-11D2-B943-00C04F79D22F}	
	Defrag FAT engine	{80EE4902-33A8-11d1-A213-0080C88593A5}	
	Defrag NTFS engine	{80EE4901-33A8-11d1-A213-0080C88593A5}	
	DiagServices Class	{0EF91A8E-03D5-11D3-B995-00A0C9AD54B5}	
	Event Object Change	{D0565000-9DF4-11D1-A281-00C04FCA0AA7}	
	Event Object Change 2	{BB07BACD-CD56-4E63-A8FF-CBF0355FB9F4}	
	External Sequence Engine - 410 230 330 363	{10CD8280-CC2F-11D4-8DF7-0050044DDE07}	
< >>	External Sequence Manager	{5014DD65-CC25-11D4-8DF7-0050044DDE07}	~

For each following applications, configure the appropriate Permissions:

- Acquisition & Control Communication Service
- Acquisition & Control Manager
- External Sequence manager
- Interface Service
- QuickStart Engine
- QuickStart Manager
- Sequenceauto object or {38425FD5-F403-11D3-9246-0050044DDE07}
- W2AutomationEngine object or {F1F76A40-9B57-49DC-B7E2-92AF5039F4AC}
- AcqManDiamirSide object or {4CDCE86D-C1CC-11D2-BEBD-00A0247B21AC}
- External Sequence Engine object (when available) or {10CD8280-CC2F-11D4-0050044DDE07}

Select each application properties with a right click.

Discomponent Services			
🐌 File Action View Window Help			_8×
⇔ → 🗈 📧 🗡 🖀 🔮	1 4 7 # 🗐 🖷 😐		
Console Root	DCOM Config 94 object(s)		
E 🚱 Component Services	Name	Application ID	~
Computers	AccStore Class	{DE5DBCDC-104A-4cbc-A4D5-0C2104A142C5}	
E B Computer	Acquisition & Contro	{15E99A0F-FBAC-46FF-AA7C-C684C5D68B04}	
	Acquisition & Contro	{5514A9E0-6201-11D4-964F-00A0240B1C5B}	
DECM Coning     Distributed Transaction C	ASFAgent Piperties	{74C1A379-BBDC-4BC3-BCD0-E34BAADF4A8B}	
Bunning Processes	Automatic Updates	{653C5148-4DCE-4905-9CFD-1B23662D3D9E}	_
Im Event Viewer (Local)	Background Intelligent Transfer Service	{69AD4AEE-51BE-439b-A92C-86AE490E8B30}	
+ 🐝 Services (Local)	Blocked Drivers	{783C030F-E948-487D-B35D-94FCF0F0C172}	
and a state of the	BOOTPService	{21A92550-A6B7-47BE-9316-9F29665E16EA}	
	Chrom_Com_Service	{220949C1-03B0-11D3-B795-00805F47DE2B}	
	COM+ Event System	{4E14FBA2-2E22-11D1-9964-00C04FBBB345}	
	ComEvents.ComServiceEvents	{ECABB0C3-7F19-11D2-978E-0000F8757E2A}	
	ComEvents.ComSystemAppEventData	{ECABB0C6-7F19-11D2-978E-0000F8757E2A}	
	Command line Trigger Consumer	{797EF3B3-127B-4283-8096-1E8084BF67A6}	
	CustReg Class	{84D586C4-A423-11D2-B943-00C04F79D22F}	
	Defrag FAT engine	{80EE4902-33A8-11d1-A213-0080C88593A5}	
	Operag NTFS engine	{80EE4901-33A8-11d1-A213-0080C88593A5}	
	DiagServices Class	{0EF91A8E-03D5-11D3-B995-00A0C9AD54B5}	
	Event Object Change	{D0565000-9DF4-11D1-A281-00C04FCA0AA7}	
	Event Object Change 2	{BB07BACD-CD56-4E63-A8FF-CBF0355FB9F4}	
	External Sequence Engine - 410_230_330_363	{10CD8280-CC2F-11D4-8DF7-0050044DDE07}	
< >	External Sequence Manager	{5014DD65-CC25-11D4-8DF7-0050044DDE07}	~

In the opened window select the **Security** tab and select the *Default permissions* for the first two types of permissions (Access and Launch).
Acquisiti	ion & Cor	ntrol Con	nmunicat	ion Serv	ice Pro	opert	? 🗙
General	Location	Security	Endpoints	Identity			
Lau	inch Permis	sions —					
c	Customize	410				Edit	
Acc	cess Permis	sions					
c	Use Defau Customize	llt				Edit	
Cor	nfiguration F	Permissions	2				
C	Use Defau	ılt					
¢	Customize					Edit	
		(	ОК	<b>_</b>	ancel	) 🔼	pply

Click on the *Apply* button to apply the modifications for each application.

### **Data Execution Prevention Configuration**

This setting must be deactivated on Windows 2003 Server and it is recommended to deactivate it as well for Windows XP SP2.

To deactivate the DEP, select: System Properties\ Advanced\ Performance Settings\ DataExecution Prevention tab\ Check Turn On DEP for essential Windows Programs and Services only.

Visual Effects       Advanced       Data Execution Prevention         Visual Effects       Data Execution Prevention (DEP) helps protect against damage from viruses and other security threats. How does it work?         Image: Turn on DEP for essential Windows programs and services only         Turn on DEP for all programs and services except those I select:
<ul> <li>Data Execution Prevention (DEP) helps protect against damage from viruses and other security threats. How does it work?</li> <li>Turn on DEP for essential Windows programs and services only</li> <li>Turn on DEP for all programs and services except those I select:</li> </ul>
<ul> <li>Data Execution Prevention (DEP) helps protect against damage from viruses and other security threats. How does it work?</li> <li>Turn on DEP for essential Windows programs and services only</li> <li>Turn on DEP for all programs and services except those I select:</li> </ul>
<ul> <li><u>T</u>urn on DEP for essential Windows programs and services only</li> <li><u>T</u>urn on DEP for all programs and services except those I select:</li> </ul>
Turn on DEP for all programs and services except those I select:
Add Remove

### **FIFOS Configuration**

These parameters have to be checked only if encountering connection problems with MIB serial Interfaces.

#### Windows 2000 & XP Pro

Check in the Services window that the Interface\_Service is stopped, otherwise stop it.

From the Windows Start Menu, select Settings\Control Panel.

Select: System\ Hardware\Devices Manager\Ports (COM & LPT)\ Communication Port\Port Settings, Advanced\Select Use FIFO Transmit Buffer (1)

### Displaying

The Galaxie Chromatography Data System requires that the display has to be set to at least 1024 x 768 pixels and 16-bit color. To change these settings: right-click on the Windows Desktop and select Properties. Click on the Settings Tab to adjust screen resolution and color depth.

### **Permissions Configuration**

This section gives details about the permissions to associate to the following applications and directories:

Select the directory in the Windows explorer, in the popup menu select Properties, then in the security tab, select the Permissions option.

# On the Galaxie Main Server and on all the Galaxie Acquisition Servers:

All the permissions can be RX on the server except for the system TEMP directory (i.e. <Galaxie>\Server\TEMP) that should have the RWXD permissions for the users/groups **INTERACTIVE**, **NETWORK SYSTEM**, **DOMAIN USERS**.

More precisely for the **\GALAXIE\SERVER** folder, the permissions settings are:

Directories or	INTERACTIVE	SYSTEM	DOMAIN
files			USERS

*.EXE; *.DLL;	RX	RX	RX
*.CHM			
All other files	RWX	RWX	RWX
\TEMP;	Modify	Modify	Modify
\DEVICES;			
\LOGS;			
\DATA_SHARED			
\CFG	RW	RW	RW

The configuration of the permissions is the same on a GALAXIE CHROMATOGRAPHY DATA SYSTEM server under METAFRAME/TERMINAL SERVER and on the acquisition servers.

For users who access this folder over network, permissions must be set in the folder share. Select the **\GALAXIE\SERVER** folder, in context menu select PROPERTIES, then the Sharing tab. Click on the Permissions button and add Everyone in Full control in the list.

#### On the Data Directory:

The data directories can have the following permission settings if you don't need to overwrite DATA files:

-	Administrators:	Full control
-	DOMAIN USERS:	RWL
-	SYSTEM:	RWL
-	INTERACTIVE:	RWL

The data directories can have the following permission settings if you need to overwrite DATA files:

DO SYS	MAIN USEF STEM: 'ERACTIVE:	<b>{S</b> :	RWLD RWLD RWLD
with	ו		
R=  D=	Read Delete	<b>₩</b> =Write <b>X</b> =Execute	L=List Folder Contents

For users who access the DATA folder over network, permissions must be set in the folder share. Select the DATA folder, in context menu select PROPERTIES, then the Sharing tab. Click on the Permissions button and add Everyone in Full control in the list.

**NOTE:** 'File and Printer sharing for Microsoft Networks' service must be installed on each PC that runs the Galaxie client or server software. This service must be installed for each network device in the computer that may be used to connect to the Galaxie server or Galaxie clients. When Galaxie is installed on a Windows Workgroup network configuration, each user must have the same Windows logon ID and password on the PC used for the Galaxie server as they do on the PC(s) used for Galaxie clients. Failure to do so may cause Access Violation errors.

#### On Printer:

If report printing is done while running remote sequences please check that the following security permissions are present in the default printer properties.

#### DOMAIN USERS: Print + Manage Printers + Manage Documents

SYSTEM: **Print + Manage Printers + Manage Documents** INTERACTIVE: **Print + Manage Printers + Manage Documents** 

### **Files Description**

This part describes the content of the GALAXIE directory on the Main server created during the software installation, and gives some information about the main files.

The **GALAXIE** directory content is accessible from the Windows explorer:

🎥 C:\Galaxie			_ 🗆 🗙
File Edit View Favorites Tools Help			<b></b>
📀 Back 🔹 🕥 🖌 🏂 🔎 Search 📂 Folders	·		
Address 🛅 C:\Galaxie			💌 🛃 Go
Folders ×	Name 🔺	Size Type	Date Modified
	Add-Ons Client Client Data Data InstallTraces Manuals Server TEMP	File Folder File Folder File Folder File Folder File Folder File Folder File Folder	09/11/2004 11:15 17/11/2004 15:34 30/11/2004 09:58 09/11/2004 11:17 09/11/2004 11:15 09/11/2004 11:17 09/11/2004 11:17 09/11/2004 14:16 09/11/2004 13:45

The Add-Ons directory contains the Plug Ins installations.

The **Installtraces** directory contains the logs generated during the Galaxie installation. However if the install ends abruptly due to a problem on the computer the logs will be located in the following directory:

"C:\DocumentsandSettings\Admin\LocalSettings\Temp\< sessionGUID>\<applicationGUID>" where:

<sessionGUID> differs every time an InstallShield
session is launched, even if it is dealing with the same
setup: for example {7A9045C0-59AE-4B1D-AE8DB4887E3AAA9B}

<applicationGUID> is constant for a product to install: For Galaxie : {490A76B0-59E3-11D7-9152-0050042084E2}

The **Client** directory contains mainly:

- GALAXIE.exe, the GALAXIE executable file.
- **GALAXIE report editor.exe,** the GALAXIE report manager executive file.
- W2AutoEngine.exe program used to print the reports of the sequences launched by the Remote Sequence Manager.
- The Remote sequence exe files: SeqClient.exe (the client), SequenceManager\_Service.exe and SequenceEngine\_Service.exe (the services exe files).

All the DLLs related to the above programs.

The **Data** directory contains chromatogram examples and some predefined report styles:

- **\*.METH**: the method files.
- \*.DATA: the chromatogram files.
- \*.SEQU: the sequence files.
- **\*.REPL**: the reprocessing list files.
- \*.SUMR: the summary files.
- \*.STYL: the report style files.
- Other type of files:
  - ~\$"Name of the file".\*: lock files used to prevent the use of the same file by different users simultaneously.
  - **CACHE\_\*.TXT**: Caches used to speed up the display of the file lists in the open dialog of GALAXIE.
  - \*.tmw: temporary files used when an acquisition is started.

The **Manuals** directory contains the user's guides of GALAXIE in PDF format.

The Interface directory contains:

- Interface\_Service.exe, HSerial2.dll and HTCPIP2.dll, which are the MIB Interface service exe files.
- HapTreeView.exe: which is the supervisor displaying the state of the Hercule boxes
- Hconfiguration.exe, this is the Hercule configuration part (Hercule boxes name's, communication mode (RS232, TCPIP), IP addresses, etc.).

The **Server** directory contains:

- configurationmanager.exe, the GALAXIE configuration and maintenance manager executable file.
- The Cfg directory contains the configuration of all configured systems (Only for the acquisitions servers).
- The CM DATA directory contains all the parameters contained in the Galaxie configuration Manager.
- The Data shared directory, this file contains
  - The **FormatLib.dat**: is the file containing all the peak, group and chromatogram formats defined in GALAXIE.
  - The **REPO** files represent the repositories created in GALAXIE (variables creation).
  - All the **REGC** files which stores the users preferences
  - Some INI files which store the last Suffix ID used for each Group/Project/System set.

- The Devices directory, this directory contains the drivers of all the configured systems.
- The Logs directory contains logs concerning the GALAXIE process (errors occur, list of the injections realized, etc.) (Only for the acquisitions servers).
- The Temp directory, contain a sub-directory for each acquisition system, and each directory stores some temporary files used for the acquisition (\*.HTM files: store a HTML representation of the control method, this HTML file will be part of the DATA file at the end of the run (on GALAXIE server) and \*.tmp: temporary files used when an acquisition is started (on acquisition server).

### **Windows Services**

This section will describe the different services that GALAXIE uses (note that all the services are declared on all GALAXIE machines except the nexusDB server service):

Acquisition & Control Manager (Exe path is \GALAXIE\Server\AcqManSvr.exe):

- This service runs only on the acquisition servers.
- It is the "control tower" of the GALAXIE system.
- Stopping this service stops also all the running systems of the acquisition server.

Acquisition & Control System – "Name of the system" (Exe path is \GALAXIE\Server\ AcqSystSvr.exe):

- This service runs only on the acquisition servers.
- One service is declared for each GALAXIE systems.
- Stopping one of these services stops all activity on the system.

Acquisition & Control Communication Service (Exe path is \GALAXIE\Server\ AcqCommSvr.exe):

- This service runs only on the acquisition servers.
- It is dedicated to manage the IEEE488 devices (Boards, MIB GPIB interface) that are used by GALAXIE systems.
- Stopping this system will stop the activity on the GALAXIE systems using GPIB resources.

**BOOTP Service** (Exe path is \GALAXIE\Server\bootpsvr.exe):

- This service runs only on the acquisition servers.
- It is the main service which handles the BOOTP devices (MIB Interface, GCs).

**NexusDB\_Server** (Exe path is \GALAXIE\Server\CM DATA\nxserver.exe):

- This service runs only on the GALAXIE main server.
- It is MANDATORY to leave that service running in all times.
- It is the main service which handles the connections, the access rights for the users, the status of the GALAXIE systems.

**External Sequence Manager (**Exe path is \GALAXIE\Client\ SequenceManager\_Service.exe):

- This service can run on the acquisition servers or on the GALAXIE server (depending of the configuration).
- It is the control tower of all sequence engine services running on the server.

**External Sequence Engine** – "Name of the system" (Exe path is \GALAXIE\Client\ SequenceEngine\_Service.exe):

- One of these services is declared for each GALAXIE systems.
- It handles the remote sequence launched from the remote sequence client.

Interface\_Service (Exe path is \GALAXIE\Interface\Interface\_Service.exe):

- This service is used to communicate with the MIB Interfaces.
- It runs only on the acquisition servers.

## **System Maintenance**

The recommended maintenance is:

As the files generated are quite small and numerous, use a disk defragmentation tool.

Once a month, delete all (except the one of the current day):

- \*.tmw in the data directories.
- Delete all files in the \GALAXIE\SERVER\TEMP directory of the acquisition server.
- Delete all files in the \TEMP directories of all servers.

### Troubleshooting

This section describes some known errors after having installed Galaxie and the way to avoid it.

#### **DB** integrity check tool

If it is impossible to log-in the Galaxie configuration manager with the error "server connection failed", run the DBintegrity check tool located in the Galaxie\server directory on the main server. For more information about on the DB integrity check tool, please read its manual.

#### Networking

Network spanning trees can affect in really rare cases Galaxie operation (remote sequence hangs). If it is the case simply disable this network feature.

Galaxie installation fails if more than one network card is activated (error "Lhotse failed to initialize, code -13" during the installation). Only one card must be enabled in order to install Galaxie correctly.

# VMWare platform

A Galaxie installation can be virtualized with WMWare Server. The following picture represents a configuration of the Galaxie installation running on a virtual platform.



WMWare Virtual Machines

We have fully validated the usage of virtual servers using the VMWare ESX server 3.5 application.

The validated platform was as follows:

- VMWare server ESX 3.5 installed on a physical server with the following properties:
  - 2 Processors
  - Processors speed: 3.2 GHz
  - Memory: total: 2GB
  - A Windows 2003 Server **Domain Controller** running on a Virtual Machine (Allocated memory 758 MB)
  - A Windows 2003 Server Galaxie Main Server running on a Virtual Machine (Allocated memory 1024 MB)
  - Galaxie acquisition & control services running on the Galaxie Main Server Virtual machine
  - A Galaxie client computer was installed on a physical computer.

All default settings of VMWare server were kept and the Galaxie installation does not need any particular attention compare to an installation on physical machines.

## **Software Validation**

It is possible to validate the installation of Galaxie Core or any driver setup. The validation program is installed automatically during Galaxie installation.

After Galaxie installation, a new section named "Validation Reports" is added in the Galaxie Windows Start Menu:



Select the software installation you want to validate (galaxie Core or any driver).

Then, the validation program is launched. Wait until the following screen disappears.



The read-only validation report is then displayed on the screen.

🖉 Validation Report							
File Help							
23 0							
VALIDATION REPORT Galaxie CDS Core Files Version 1.9							
Date of report creation: 3/7/2008 1:58:22 PM For Windows Login: Valid-PC5 On Computer Named: VALID-PC5 In Windows Domain: VALID-PC5							
VALIDATION PASSED							
The following files have been tested and passed validation:							
C:\GALAXIE\CLIENT\							
AcqClient_Lib.dll	3/7/2008 9:29:48 AM	1.9.302.357	F99B2D47D1E91C1AE60B7238E386050A				
K2X.ocx	3/7/2008 9:28:50 AM	1.9 <mark>.</mark> 302.357	01555B1A79DFE7878E6027477BFB89A0				
PDFPRINTER_INSTALL.exe	3/7/2008 9:28:20 AM		ACCF801A924317F5B14E05D82BB73EA7				
QuickStartEngine_Service.exe	3/7/2008 9:28:50 AM	1.9.302.357	228D382467310BC134D3D012605ED5BD				
QuickStartManager_Service.exe	3/7/2008 9:28:52 AM	1.9.302.357	0C6F0378E05E98A364BACA51798C5A1D				
SKRCHROM.dll	3/7/2008 9:28:16 AM	1.2.0.4	4235D33373EF0370DE830F1A454A94F9				
SequenceEngine_Service.exe	3/7/2008 9:28:34 AM 3/7/2008 9:28:34	1.9.302.357	98094BCC15BDC9F53499143573430D98				

It can be printed and is automatically saved in <Galaxie>\Server\IQOQ\.

# **Galaxie Drivers**

This chapter describes the principles and operations of the GALAXIE drivers (Analog and instrument control).

### **Principles**

Each GALAXIE system is composed of several modules, for instance an analog system:

- One manual injector
- Star 800 MIB Acquisition Control

A system controlling a VARIAN 3900 GC with an 84xx autosampler will be composed of:

VARIAN 3900 GC only

Each module is in two parts:

- The \*\_IMM.dll file which contains all the code to control the device.
- The \*\_IHM.dll file which contains all the screens necessary to configure, build methods, and display the status of the device.

When a system starts on the acquisition server; the corresponding service loads the \*\_IMM.dll files for all the modules installed on the system from the Main server to the Galaxie\server\devices directory on the Acquisition Server.

### **Files Location**

In GALAXIE Configuration Manager (menu "Option | Devices..."), the screen displays all the available modules for the system:

List of available devices			2
Device Name	IHM Version	IMM Version	
🗢 Agilent Technologies 1050 Autosampler (79855)	1.7.1.0	1.7.1.0	1.000
Agilent Technologies 1050 Diode Array Detector (	1.7.1.0	1.7.1.0	
Agilent Technologies 1050 Isocratic Pump (79851)	1.7.5.0	1.7.5.0	
Agilent Technologies 1050 Multiple Wavelength D	1.7.2.0	1.7.2.0	
Agilent Technologies 1050 Quaternary Pump (798	1.7.5.1	1.7.5.1	
Agilent Technologies 1050 Variable Wavelength Detail	ector (79853)	1.7.1.0	
Agilent Technologies 1100 Autosampler (G1313)	1.7.7.1	1.7.7.1	
Agilent Technologies 1100 Binary Pump (G1312)	1.7.7.1	1.7.7.1	-

This list is stored in the \GALAXIE\SERVER\CMdata directory.

**NOTE:** The installation of drivers must be done on the main server. In addition some drivers must also be installed on each acquisition server of the Galaxie system. Those drivers are the Varian LC drivers, the Varian Micro-GC drivers and the Agilent LC drivers.

The drivers DLLs are stored in the \GALAXIE\SERVER\DEVICES directory. The acquisition servers need to have the \*\_IMM.dll files in this directory, the clients needs to have the \*\_IHM.dll files in this directory.

### **Refresh Mechanism**

When a GALAXIE client wants to display (to build a method or for status view), the corresponding file \*\_IHM.dll is searched in the \GALAXIE\SERVER\DEVICES directory of the client. If the file is

not present or too old, it is automatically copied from the acquisition server which hosts the system.

# Varian LC Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The Varian drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the Install Varian Drivers button.
- 3. Then click on the Install Varian LC button.



4. Click on the *Next* button, read and accept the *License Agreement* and enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

Note that the serial number is case sensitive.

InstallShield Wizard			×
Customer Information Please enter your information.			
Please enter your name, the name of the comp. serial number.	any for whom yo	ou work and the p	product
User Name:			
VARIAN JMBS			
Company Name:			
VARIAN JMBS			
Serial Number:			
InstallShield			
	< Back	Next>	Cancel

Then press the *Next* button and click on *Finish* at the end of the installation.

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.

The following screen will appear:



Then press Next and the drivers will be automatically

reinstalled or upgraded. Click on Finish at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select Options from the Galaxie Configuration Manager main menu and select Devices. The following screen containing the installed devices appears:

evice Name         IHM Version         IMM Version           *Varian 9001,9002,9010,9012,9012-Q Pumps         1.7.2.1         1.7.2.1           *Varian 9050 Detector         1.80.0         1.80.0           *Varian 0CP-2002/2003 Gas Chromatograph         1.7.3.1         1.7.3.1           *Varian CP-3800 Gas Chromatograph         1.81.1         1.81.1           *Varian CP-3900 Gas Chromatograph         1.80.1         1.80.1           *Varian CP-3900 Gas Chromatograph         1.8.3.1         1.8.3.1           *Varian CP-3900 Gas Chromatograph         1.8.1.1         1.8.1.1           *Varian CP-3900 Gas Chromatograph         1.8.3.1         1.8.3.1	List of available devices		<	2
*Varian 9001,9002,9010,9012,9012-Q Pumps         1.7.2.1         1.7.2.1           *Varian 9050 Detector         1.8.0.0         1.8.0.0           *Varian CP-2002/2003 Gas Chromatograph         1.7.3.1         1.7.3.1           *Varian CP-3800 Gas Chromatograph         1.8.1.1         1.8.1.1           *Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           *Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           *Varian CP-3900 Gas Chromatograph         1.8.1         1.8.1.1           *Varian CP-3900 Gas Chromatograph         1.8.1         1.8.1.1	Device Name	IHM Version	IMM Version	
*Varian 9050 Detector         1.8.0.0         1.8.0.0           *Varian CP-2002/2003 Gas Chromatograph         1.7.3.1         1.7.3.1           *Varian CP-3800 Gas Chromatograph         1.8.1.1         1.8.1.1           *Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           *Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           *Varian CP-4900 Gas Chromatograph         1.8.3.1         1.8.3.1           *Varian CP-4900 Gas Chromatograph         1.8.1         1.8.3.1	Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
*Varian CP-2002/2003 Gas Chromatograph         1.7.3.1         1.7.3.1           *Varian CP-3800 Gas Chromatograph         1.8.1.1         1.8.1.1           *Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           *Varian CP-4900 Gas Chromatograph         1.8.3.1         1.8.3.1           *Varian CP-4900 Gas Chromatograph         1.8.3.1         1.8.3.1           *Varian CP-4900 Gas Chromatograph         1.8.1.1         1.8.3.1	🖙 Varian 9050 Detector	1.8.0.0	1.8.0.0	
Varian CP-3800 Gas Chromatograph         1.8.1.1         1.8.1.1           Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           Varian CP-4900 Gas Chromatograph         1.8.3.1         1.8.3.1           Warian CP-3900 Gas Chromatograph         1.8.3.1         1.8.3.1           Warian CP-4900 Gas Chromatograph         1.8.1.1         1.8.3.1	🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3900 Gas Chromatograph         1.8.0.1         1.8.0.1           Varian CP-4900 Gas Chromatograph         1.8.3.1         1.8.3.1           Warian ProStar 210 215 218 SD1 Pumps         1.8.1.1         1.8.1.1	🖙 Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
Varian CP-4900 Gas Chromatograph 1.8.3.1 1.8.3.1 Warian ProStar 210 215 218 SD1 Purpos 1.8.1.1 1.8.1.1	🖙 Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
Varian ProStar 210 215 218 SD1 Pumps 1 8 1 1 1 8 1 1	🗇 Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Valian 100 tar 210,210,210,2011 tamps 1.0.1.1 1.0.1.1	🗢 Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps 1.7.2.1 1.7.2.1	🖙 Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	•

Add device from disk

button can be used for installing beta or The pre-release drivers. Use this button only when directed by a technical support representative.

# Varian GC and Micro-GC Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The Varian drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the Install Varian Drivers button.
- 3. Then click on the Install Varian GC button



4. Click on the *Next* button, read and accept the *License Agreement* and enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

Note that the serial number is case sensitive.

InstallShield Wizard	×
Customer Information Please enter your information.	
Please enter your name, the name of the company for whom you work ar serial number.	id the product
User Name:	
VARIAN JMBS	
Company Name:	
VARIAN JMBS	
Serial Number:	
InstallShield	
< Back Next	> Cancel

Then press the *Next* button and click on *Finish* at the end of the installation.

5. If you want to reinstall or upgrade your drivers, you need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices		~	2
Device Name	IHM Version	IMM Version	
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	-

The <u>Add device from disk</u> button can be used for installing beta or pre-release driver. Use this button **only** when directed by a technical support representative.

# Varian 4x0 GC

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The Varian drivers must be installed on both the main server and the acquisition server in the case you want to configure a 450-GC and only on the main server for 430-GC.

1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.

Varian 4x0-GC driver Setup		×
	Welcome to the InstallShield Wizard for Varian 4x0-GC driver The InstallShield® Wizard will install Varian 4x0-GC driver on your computer. To continue, click Next.	
	< Back Next > Cancel	

2. Click on the *Next* button, read and accept the *License Agreement* and enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

Note that the serial number is case sensitive.

/arian 4x0-GC driver Setup	×
Customer Information Please enter your information.	
Please enter your name, the name of the company for which you work and the product serial number.	
User Name:	
Analyst	
Company Name:	
Varian Data Systems	
Serial Number:	
ıstallShield	
< Back Next > Cancel	)

Then press the *Next* button and click on *Finish* at the end of the installation.

5. If you want to reinstall or upgrade your drivers, you need to run the setup again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

Devices				
List of available devices		í de la compañía de la		
Device Name	IHM Version	IMM Version	~	X Cancel
Service Varian 3400/3600 Gas Chromatograph	1.10.1.1	1.10.1.1		
Servarian 430-GC	1.0.1.116	1.0.1.116		<u>()</u> <u>H</u> elp
Searan 450-GC	1.1.4.155	1.1.4.155		
✓ Varian 8200 AutoSampler	1.9.1.1	1.9.1.1		
❤Varian 8200/SPME Autosampler	1.9.1.1	1.9.1.1		
			~	
	<u>A</u> dd	device from di	sk	

The <u>Add device from disk</u> button can be used for installing beta or pre-release driver. Use this button **only** when directed by a technical support representative.

# Agilent LC 1050 Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party LC Drivers* button.
- 3. Then click on the Install Agilent 1050 button.



4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

Note that the serial number is case sensitive.

InstallShield Wizard			×
Customer Information Please enter your information.			
Please enter your name, the name of the com serial number.	ipany for whom yo	u work and the p	roduct
User Name:			
VARIAN JMBS			
Company Name:			
VARIAN JMBS			
Serial Number:			
InstallShield			
	< Back	Next>	Cancel

Then press the *Next* button and click on *Finish* at the end of the installation.

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

vices			
List of available devices 💎			
Device Name	IHM Version	IMM Version	🔺 🔀 Cance
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	( <u>H</u> elp
Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	_
Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	<b>-</b> 1

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

# Agilent LC 1090 Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party LC Drivers* button.
- 3. Then click on the *Install Agilent 1090* button.


4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

InstallShield Wizard	
Customer Information Please enter your information.	
Please enter your name, the name of the comp serial number.	any for whom you work and the product
User Name:	
VARIAN JMBS	-
Company Name:	
VARIAN JMBS	
Serial Number:	
InstallShield	KBack Next> Cancel

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

list of available dovices	_		
Device Name	IHM Version	IMM Version	- <u>X</u> Can
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	<u> </u>
🗢 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
✓Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
🖙 Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
✓ Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	<b>T</b>

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

# Agilent LC 1100/1200 Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party LC Drivers* button.
- 3. Click on the Install Agilent 1100 button.



4. Click on the *Next* button, read and accept the **License Agreement** then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

InstallShield Wizard	×
Customer Information Please enter your information.	R
Please enter your name, the name of the company for whom you work and the product serial number.	
User Name:	
VARIAN JMBS	
Company Name:	
VARIAN JMBS	
Serial Number:	
InstallShield	
Cancer	

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices			
Device Name	IHM Version	IMM Version	
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	<u>₩</u>
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
☞ Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
✓ Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
✓Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
✓Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	-

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

# Agilent GC 5890 – AS 7673 Driver Installation

#### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party GC Drivers* button.
- 3. Then click on the Install Agilent 4890/5890 button.



4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

ustomer Information	
Flease enter your information.	
Please enter your name, the name o serial number.	of the company for whom you work and the product
User Name:	
VARIAN JMBS	
Company Name:	
VARIAN JMBS	
Serial Number:	
JIC Liste	
aliphicia	······································
	A Database Marchael Convert

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices		4	
Device Name	IHM Version	IMM Version	🔺 🔀 Canc
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	Helt
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	_
🖙 Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
🖙 Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	-

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

# Agilent GC 6890 Driver Installation

#### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party GC Drivers* button.
- 3. Then click on the Install Agilent 6890/6850 button.



4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

you work and the product	
you work and the product	
11	4
	Next> Cance

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices		×	
Device Name	IHM Version	IMM Version	
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
🖙 Varian 9050 Detector	1.8.0.0	1.8.0.0	<u>H</u> el
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	_
🗢 Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
🖙 Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
🖙 Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	-

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

# Agilent GC 7890 Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party GC Drivers* button.
- 3. Then click on the Install Agilent 6890/6850 button.

Agilent Technologies 7890 GC Drivers Setup			
	Welcome to the InstallShield Wizard for Agilent Technologies 7890 GC Drivers The InstallShield® Wizard will install Agilent Technologies 7890 GC Drivers on your computer. To continue, click Next.		
	< Back Next > Cancel		

4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

Agilent Technologies 7890 GC Drivers Setup	×
Customer Information Please enter your information.	
Please enter your name, the name of the company for which you work and the product serial number.	
User Name:	
Varian	
Company Name:	
Varian Data Systems	
Serial Number:	
InstallShield	
<pre></pre>	כ

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next* and the drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

I	levices			
	List of available devices		<b></b>	
	Device Name	IHM Version	IMM Version 🔥	$\times$ <u>C</u> ancel
	Varian ProStar 310 Detector	1.8.0.0	1.8.0.0	
	Varian ProStar 325 Detector	1.10.2.3	1.10.2.3	<u>    () H</u> elp
	Varian ProStar 330 Diode array detector	1.7.1.0	1.7.1.0	
	🖙 Varian Prostar 335	1.4.1.5	1.4.1.5	
	Server Varian ProStar 335 Detector	1.4.1.5	1.4.1.5	
	Serverian ProStar 363 Detector	1.13.1.1	1.13.1.1	
	Server Varian ProStar 400 Autosampler	1.13.1.1	1.13.1.1	
	Server Varian ProStar 410 Autosampler	1.14.1.1	1.14.1.1 🛛 🗸	
	,	Add	device from disk	

Add device from disk

The button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

## PerkinElmer<sup>™</sup> GC Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party GC Drivers* button.
- 3. Then click on the Install PE Autosystem button.



4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

InstallShield Wizard	×
Customer Information Please enter your information.	
Please enter your name, the name of the company for whom you work and t serial number.	he product
User Name:	
VARIAN JMBS	
Company Name:	
VARIAN JMBS	
Serial Number:	
InstallShield < Back Next >	Cancel

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press Next. The drivers will be automatically reinstalled or upgraded. Click on Finish at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select Options from the Galaxie Configuration Manager main menu and select Devices. The following screen containing the installed devices appears:

D	Devices 🔀					
10 NOV	List of available devices		<			
	Device Name	IHM Version	IMM Version	▲ X Cancel		
	Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1			
	✓ Varian 9050 Detector	1.8.0.0	1.8.0.0	<u>()</u> <u>H</u> elp		
	Serverian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1			
	☞ Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	-		
	Server Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1			
	Serverian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1			
	Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1			
	Serverian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	<b>-</b>		
0.9		Add	device from di	sk		

Add device from disk

button can be used for installing beta or The pre-release drivers. Use this button only when directed by a technical support representative.

## Thermo GC Driver Installation

#### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party GC Drivers* button.
- 3. Then click on the Install Thermo GC 8000 button.



4. Click on the *Next* button, read and accept the *License Agreement* then enter your driver *Serial Number* in the corresponding field. The serial number is provided on your driver serial number card and is different from the Galaxie serial number.

InstallShield Wizard	×
Customer Information	
Please enter your information.	
Please enter your name, the name of the compa serial number.	any for whom you work and the product
User Name:	
VARIAN JMBS	
Company Name:	
VARIAN JMBS	
Serial Number:	
InstallShield	
	< Back Next> Cancel

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (steps 1, 2 and 3) again.



Then press *Next*. The drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices			
Device Name	IHM Version	IMM Version	
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
🖙 Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
🖙 Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	-

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button only when directed by a technical support representative.

## Waters® LC Driver Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver. The Waters drivers must be installed only on the server.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install 3rd Party LC Drivers* button.
- 3. Then click on the Install Agilent 1100 button.



4. Click on the Next button, read and accept the *License Agreement* then enter the driver *Serial Number* in the corresponding field. The serial number is provided on the driver serial number card and is different from the Galaxie serial number.

stallShield Wizard	
Customer Information Please enter your information.	
Please enter your name, the name of the serial number.	e company for whom you work and the product
User Name:	
Varian Inc.	
Company Name:	
Varian Inc.	
Serial Number:	
FIIGHINH	

5. If you want to reinstall or upgrade your drivers, you will need to run the setup (1, 2 and 3) again.


Then press *Next*. The drivers will be automatically reinstalled or upgraded. Click on *Finish* at the end of the installation to exit the maintenance mode.

6. To see which drivers are installed, select *Options* from the Galaxie Configuration Manager main menu and select *Devices*. The following screen containing the installed devices appears:

List of available devices		×	2
Device Name	IHM Version	IMM Version	
Varian 9001,9002,9010,9012,9012-Q Pumps	1.7.2.1	1.7.2.1	
Varian 9050 Detector	1.8.0.0	1.8.0.0	
🖙 Varian CP-2002/2003 Gas Chromatograph	1.7.3.1	1.7.3.1	
Varian CP-3800 Gas Chromatograph	1.8.1.1	1.8.1.1	
Varian CP-3900 Gas Chromatograph	1.8.0.1	1.8.0.1	
Varian CP-4900 Gas Chromatograph	1.8.3.1	1.8.3.1	
Varian ProStar 210,215,218,SD1 Pumps	1.8.1.1	1.8.1.1	
Varian ProStar 220,230,240 Pumps	1.7.2.1	1.7.2.1	<b>-</b> 1

The <u>Add device from disk</u> button can be used for installing beta or pre-release drivers. Use this button **only** when directed by a technical support representative.

## National Instrument GPIB Board Installation

### Installing the Driver Software

The Galaxie software must already be installed before installing the driver software.

You must have administrator rights to install the driver.

Do not install the NI GPIB board before installing the drivers.

**NOTE:** for the NI-GPIB driver version 2.5, the NI GPIB board must not be installed prior to the driver installationif the Operating System is Windows 2000. If the OS is Windows XP or Vista, the board can be or not installed prir to the NI GPIB driver installation.

If you have installed more than one GPIB board in your PC, note their serial numbers and positions to be sure to associate the right card together with the right system module.

- 1. When you insert the Galaxie CD into your CD drive, the CD browser will start automatically. If it does not, you can launch the browser by running **Install.exe** from the root directory of the CD.
- 2. From the CD browser click on the *Install Varian LC Drivers* button or the *Install 3rd Party LC Drivers* button and then click on the *NI PCI board GPIB Drivers* button.

The following screen will appear:

PIB Driver Installation	X
This will install the GPIB driver vers	ion v2.5 on WinVista. Press Yes to continue
	Yes <u>N</u> o

3. Click on Yes and the installation will start.



When the installation is finished the prvious screen is closed.

Then turn off the computer. When the computer is stopped, install the NI GPIB board in an empty PCI slot and start the computer.

It is now possible to check the configuration of the NI GPIB board in the computer with the **NI GPIB configuration** program. A shortcut is created during the installation in the programs directory (see below). If this link is not present the program can be found in the winnt/system32 directory.



When installing GPIB board in a computer each board is associated to a GPIB number (0, 1, 2 or 3). In the **NI GPIB** configuration software you may associate a number to a GPIB board.

GPIB 0	0110f38f	Apply
GPIB 1	<none></none>	•
GPIB 2	<none></none>	Click     Apply     to save
GPIB 3	<none></none>	
ttach the cards by	serial number to the n click apply.	
csitet include, un		

To associate a GPIB board to a GPIB number, select the appropriate board according to their serial number in the dropdown list. One GPIB board can only be associated to one number. Once the configuration is changed it is mandatory to reboot the computer.

If the ProStar 330 is part of your system, the GPIB0 must be the GPIB board connected to the ProStar 330.

### **MIB Interface Install**

This part describes the software configuration of the MIB Interfaces.

MIB Interface drivers installation is automatically performed during Galaxie installation (do not forget to reboot the computer after Galaxie installation). One acquisition server can manage several MIB Interfaces.

#### **MIB Interface Configuration**

The MIB Interface can be configured to communicate with the Galaxie Station over a 10BaseT Ethernet configuration using TCP/IP protocol.

To configure the MIB Interface on the Galaxie Station, select the



icon Interface configuration in the *Tools* tab of the browser in the *Galaxie Configuration Manager Software*, or select the menu *Option* and click on *Interface Configuration*.

4	Name	Description	MB	Communication	COM Port	BOOTP	IP address	Network interface	
▶ 1	Star 800 MIB N'1		800	TOPIP			10.190.200.81	255.255.255.0 / 010.190.200.1	
2	Star 800 MIB N*2		800	TOPIP			10.190.200.82	255.255.255.0 / 010.190.200.1	New
3	Star 800 MIB N'3		800	TOPIP		Г	10.190.200.83	255.255.255.0 / 010.190.200.1	Tren to
4	Star 800 MIB N*4		850	TOPIP		Г	10.190.200.84	255.255.255.0 / 010.190.200.1	
5	Stor 800 MIB N'S		850	TOPIP		<b></b>	10.190.200.85	255.255.255.0 / 010.190.200.1	
δ	Star 800 MIB N'6		850	TOPIP			10.190.200.86	255.255.255.0 / 010.190.200.1	Modify
7	Star 800 MIB N°7		800	TOPIP			10.190.200.87	255,255,255.0 / 010,190,200,1	
									Bemove <u> </u> <u> </u> <u> </u> Undo
									Apply

The settings for a previously configured MIB Interface can be changed by clicking on *Modify* and changing the parameters as necessary in the dialog box.

If a MIB Interface will no longer be used with this Galaxie acquisition server, it can be deleted from the table by selecting the line and clicking on *Remove*.

To add a MIB Interface to the list, click on *New*. The following dialog box will be displayed:

8x0 MIB parameters		
Name		
Description ——		
]		
- 8×0 MIB		
• 800 MIB	C 850 MIB	
Communication		
• RS232		
RS232 Parameters		
сом 1	•	
<b>√</b> <u>0</u> k	X <u>C</u> ancel	1

Follow the directions below to configure the Galaxie acquisition server to communicate with the MIB Interface.

First of all select the Interface type you use: 800 MIB or 850 MIB

- If *800 MIB* is selected, two possible configuration setups are available:
  - TCP/IP over Ethernet using BOOTP,
  - TCP/IP over Ethernet using a static IP address (which requires the purchase of a serial cable, Varian part number 03-907938-42, to download the configuration and IP address to the MIB Interface),

(Direct RS-232 serial communication is no more supported).

• If 850 MIB is selected, only TCPIPconfiguration is available.

### TCP/IP over Ethernet Communication with BOOTP (for Star 800 MIB only):

TCP/IP over Ethernet using BOOTP is the default configuration of the Star 800 MIB. Enter the *Name* that you want Galaxie to use to identify this Star 800 MIB. This field must be filled in with a unique name for the Star 800 MIB. The *Description* field may be entered to provide additional information about the Star 800 MIB. For example, this field may contain the physical location of the Star 800 MIB.

Next, select *TCPIP* mode in the *Communication* section of the **8x0 MIB parameters** dialog box. The dialog box will change to show the *Ethernet parameters* section. Check the *Use BOOTP* option.

8x0 MIB parameters	
Name Interface 1	
Description	_
laboratory	
- 8x0 MIB	
Communication	
ETHERNET Parameters	
IP address 10 .190.200.189	
Interface 🕹 CARD1 💌	
Ethemet 🔎 00:50:C2:00:11:9C	
√ <u>O</u> k X <u>C</u> ancel	3

Three parameters have to be set in the Ethernet parameters section: the *IP address*, the network *Interface*, and the *Ethernet* address.

1. Enter the IP address that will be used by the Star 800 MIB when it is connected to the network. For Star 800 MIBs connected to company networks, this IP address must be provided by the network administrator.

The subnet mask and gateway for the Star 800 MIB must be set. These parameters should be the same as the settings for the network card that will be used in the Galaxie computer to communicate with the Star 800 MIB.

2. Click on the <sup>4</sup> button to display the following screen:

Name	Subnet mask	Gateway	
CARD1	255.255.255.0	10.190.200.1	- 8
			F
			1000

- 3. Select the Name of the card, and then enter the Subnet mask and Gateway IP settings that correspond to those of the Network Interface card in the Galaxie acquisition server that will be used to communicate with the Star 800 MIB. If you are not sure of the settings to use, please contact your network administrator.
- 4. If you know the Ethernet address of the Star 800 MIB that you want to configure, you can enter it manually in the corresponding field. If you do not know it, you can click the putton and then reboot (unplug and plug the interface) the Star 800 MIB. The Ethernet addresses of Star 800 MIBs which use BOOTP to connect and have not received an IP address are



Select the Ethernet address corresponding to Star 800 MIB that you are configuring and click on *Validate*. The selected Ethernet address is automatically transferred to the **8x0 MIB parameters** window.

5. Click on *OK* to add the configuration to the Interface configuration manager (the BOOTP server, listing all the devices working in BOOTP mode, will be automatically updated with this information).

**NOTE:** In this configuration, when the Star 800 MIB is first powered up, the bottom left green LED (1) lights to indicate that the Star 800 MIB is receiving power. The middle right yellow LED (5) lights to indicate that an Ethernet cable is attached. The middle left yellow

LED (2) and the top right red LED (3) will alternately flash to indicate that the Star 800 MIB is waiting for an IP address. If these two LEDs (2, 3) do NOT alternately flash, verify that the small switch next to the Ethernet port on the Star 800 MIB is set all the way towards the Ethernet cable. If these two LEDs (2, 3) still do not flash back and forth, then the Star 800 MIB may not be correctly configured for BOOTP.

When the Star 800 MIB transmits its BOOTP request, the bottom right green LED (4) will flash briefly showing that an Ethernet transmission has occurred. When an IP address has been successfully received, the flashing yellow and flashing red LEDs (2, 3) will stop flashing.



The BOOTP option works with a dedicated server: **BOOTP server**. It allows the user to modify the IP address of a Star 800 MIB from the station instead of loading it manually using a separately purchased serial cable.

**BOOTP mode of operation**: when starting a device (Star 800 MIB, some GCs, etc.) using the BOOTP, it sends request in the subnet it belongs to, to be assigned an IP address. If no IP address is assigned, the device keeps asking periodically until it gets one. The BOOTP server receives the request and lists it to allow user to associate an IP address (identified by its Ethernet address) with it, then the BOOTP server broadcasts this information across the subnet to allow the device to find it.

**NOTE:** Devices using BOOTP transmit BOOTP requests only when first switched on. Once getting their IP address they are operational and no longer transmit BOOTP requests.

**BOOTP server install:** the BOOTP server installation is automatically done during the Galaxie installation.

#### **TCP/IP over Ethernet Communication via Fixed IP Address**

If you decide to configure your Star 800 MIB Interface to use a fixed IP address, you will need to purchase a Star 800 MIB serial configuration cable (to change from BOOTP to fixed IP for example). Note that this cable is a separately purchased item and is NOT included with the Star 800 MIB. The 850 MIB Interface is already configured in TCPIP, you don't need to send the configuration thanks to a cable into the interface.

Enter the *Name* that you want Galaxie to use to identify MIB Interface. This field must be filled in with a unique name. The *Description* field may be entered to provide additional information about the MIB Interface. For example, this field may contain the physical location of the MIB Interface.

Next, select the *TCPIP* mode in the *Communication* section of the **8x0 MIB parameters** dialog box. The dialog box will change to show the *Ethernet parameters* section. Uncheck the *Use BOOTP* option in the case of Star 800 MIB.

8x0 MIB parame	eters		8x0 MIB parameters
Name Interface	e 2		Name Interface 3
Description —		]	Description
- 8×0 MIB	C 850 MIB		8x0 MIB © 800 MIB © 850 MIB
Communicatio	n 💿 TCPIP		Communication © TCPIP
	arameters		ETHERNET Parameters
	□ Use <u>B</u> OOTP		
IP address	10 .190.200.189		IP address 10 .190.200.189
Subnetmask	255.255.255.0		Subnet mask 255.255.255.0
Gateway	10 .190.200.1		Gateway 10 .190.200.1
Ethernet	00:50:C2:00:11:9C		Ethernet 🔎 NL001004 [00:60:93:01:9b:32] 💌
√ <u>(</u>	$\underline{O}$ k $\mathbf{X}$ Cancel	1	√ <u>O</u> k X <u>C</u> ancel 53

Three parameters have to be set in the Ethernet parameters section: the *IP address*, the *Subnet mask*, and the *Gateway*.

1. Enter the IP address that will be downloaded to the MIB Interface. For MIB Interface connected to company networks, this IP address must be provided by the network administrator.

2. The Subnet mask and Gateway for the MIB Interface must also be entered. These parameters should be the same as the settings for the network card that will be used in the Galaxie acquisition server to communicate with the MIB Interface. If you are not sure of the settings to use, contact your network administrator.

In the case of a 850 MIB Interface, the user must select the

MIB in the	Ethernet	P NL001004 [00:60:93:01:9b:32]
scrolling list.	The scrollin	g list lists all the 850 MIB interfaces
connected. C	lick on the	button to refresh the list.

These parameters now need to be downloaded to the MIB Interface. To download these parameters:

In the case of a Star 800 MIB Interface:

- 1. Connect the separately purchased serial cable from the 9-pin "D"-shell connector on the Star 800 MIB to a serial port on the computer.
- 2. Then click on the <u>button</u>. The following message is displayed:

select com port	
Connect your interface ( appropriate COM port :	star 800 MIB) to the
۵	*
<b>√</b> <u>о</u> к	X Cancel

3. The user then has to enter the number of the COM Port of the computer that is connected to the Star 800 MIB via the serial cable and click on *OK*.



4. Unplug and plug again the power supply of the MIB. The configuration including the fixed IP address will be downloaded to the Star 800 MIB, then the following message is displayed to indicate that the download was completed successfully:



- 5. Unplug the Star 800 MIB interface and remove the serial cable connected to the computer.
- 6. Plug the Star 800 MIB back in.

#### In the case of a 850 MIB Interface:



Click on Yes, a successful message is displayed:



NOTE: It is advised to use fix IP address for the STAR 800 MIB

**NOTE:** In this configuration, when the Star 800 MIB is first powered up, the bottom left green LED (1) lights to indicate that the Star 800 MIB is receiving power. The middle right yellow LED (5) lights to indicate that an Ethernet cable is attached. The middle left yellow LED (2) and the top right red LED (3) will flash briefly while diagnostics are run and then go out. If these two LEDs (2, 3) alternately flash, the download of the fixed IP address was not successful and this process needs to be repeated.

	(3)	٠	- 🔴 (4
(2)	0		<b>Ο</b> φ)
1) 🖸		0	(*)

#### Interface Supervisor

The MIB Interfaces are used either to control instruments or to acquire signal of one or several detectors (analog or digital). During the chromatographic systems configuration in Galaxie Configuration Manager, the used MIB Interfaces are named and the analog channels or COM Ports are identified. The Interface supervisor allows you to check the MIB Interfaces state in real time. To start this tool in the Galaxie Configuration



Manager click on the icon Interface supervisor or select the menu Options and click on Interface Supervisor.

R 🙀 Star 800 MIB N*1 - TCPIP	1
白一人、ANALOG (0/4)	
Channel 4	
e⊢_ann RS232 (0/4)	
- V Channel 2	
- 🐓 Channel 4	
= 32 RELAYS (0/4)	
	-
V Channel 3	
Channel 4	
B- Co Star 800 MIB N <sup>2</sup> 2 - I CPIP	
B-A ANALDA (U/4)	
w Channel 1	
with Channel 2	
Channel 4	
BC22 (0/4)	
e an nozoz (u/a)	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
S Channel 7	
- V Channel 8	
=-32 RELAYS (0/4)	
₩ Channel 1	
- V Channel 2	
V Channel 4	
😑 😋 Star 800 MIB N*3 - TCPIP	
自一人 ANALOG (0/4)	-
- V Channel 1	1
A	

Each MIB Interface is represented by an interface symbol followed by its name. For each MIB Interface the resources list (analog channels (ANALOG)), relays (RELAYS), RS-232 serial ports (RS-232 or GPIB) are also displayed, as its channels state: allocated channels displayed in orange and not allocated ones in green. If the station does not communicate with the interface (problem of physical connection to the network or to the RS-232 connector, power supply not connected, etc.), no channel will appear for this interface and its name will be preceded by a red cross.

For each Star 800 MIB Interface, it is also possible to display the following information by putting the mouse cursor onto the Star 800 MIB interface name (display a hint): Interface Type: Varian 800

MIB, description (if defined when sending the configuration into the Star 800 MIB Interface), the Mac address, the firmware version, the IP address.

For each 850 MIB Interface, it is also possible to display the following information by putting the mouse cursor onto the 850 MIB interface name: Interface Type: Varian850 MIB, the Mac address and the serial number, the IP address

Click on the icon to display the MIB Interface list with details about connections (analog, relay, GPIB).

Click on the <sup>leef</sup> icon to display the MIB Interface list in medium or reduced size, that is to say the MIB Interface list and the channel number (e.g., analog (1/2) means that 2 analog channels are declared and that one is allocated) or only the MIB Interface names.





### **Diagnostics**

If a MIB interface is preceded by a red cross in the supervisor:

- Verify that the interface is switched ON.
- In the case of a Star 800 MIB Interface, verify that the toggle switch located on the back panel of the interface is on the *Ethernet* position (if not, place the switch in the Ethernet position, then plug the interface back in).
- Verify that the IP address captured in *Interface configuration* is correctly entered, and that it corresponds to the IP address of the interface.
- Verify that a valid Ethernet cable connection exists between the interface and the hub (or wall plug).
- If the interface is still not detected, reprogram the network parameters of the interface (Refer to the section on *MIB Interface Configuration*).

If the above steps do not solve the communication problem, please contact your technical support.

# **BOOTP Server Configuration**

A BOOTP Server is used to send IP addresses to TCP/IP devices.

The BOOTP Server lists Ethernet addresses along with the IP addresses that are to be assigned to the corresponding devices.

7. Start the BOOTP Server Configuration tool in the Galaxie Configuration Manager by clicking on the icon



BootP configuration or in the menu Options click on BOOTP configuration. The following screen appears:

<u> N</u> etwork ir	nterfaces 🔣 Discovi	er	🏞 Show log			
Enabled	Ethernet address	IP address	Host name or description	STAR 800 MIB	Network interface	_
	0030.3370280.10	10.130.200.207	_U-3000		LANDI	₽
						×
			<b>3</b> 1	Network interfac	es	

8. First press the parameters of the network where the instruments and the BOOTP server are located.

The following screen appears:

Network	interfaces		
Name // CARD1	Subnet mask 255.255.255.0	Gateway 10.190.200.1	
			×
		🖌 Ok	× Cancel

Enter a *Name* for the network card, the *Subnet mask* and *IP Gateway* addresses.

More than one network card may be declared by clicking on . Delete the selected line by clicking on . Delete all the lines by clicking on . 9. Click on the server will automatically find the instruments which are requesting an IP address and will list their Ethernet addresses.

10. The following screen appears:



If you power on the needed instruments, their Ethernet addresses will appear a few seconds later.

Select the needed instruments and click on



The corresponding instruments are then listed in the main screen:

🕺 Network in	nterfaces 🔣 Disc	over	P Show log			Apply Apply
	Ethernet address 00:60:93:00:80:1C	IP address 10.190.200.207	Host name or description CP-3800	STAR 800 MIB	Network interface CARD1	•
						×

- 11. Complete the mandatory fields by entering the IP address assigned to the selected instrument, its Name or Description and the Network interface previously declared and assigned to the instrument.
- **NOTE:** Do not check the *STAR 800 MIB* box when configuring an instrument different than a Star 800 MIB box.

To setup Star 800 MIB BOOTP, use the Interface Configuration tool.



12. By clicking on the button, an instrument can be declared manually.

In this case, enter the Ethernet address which allows the computer to locate the instrument and to upgrade the IP address without reloading it every time it changes.

Complete the other fields (IP address, Name, etc.) as described above.

Delete the selected line by clicking on all lines in the table.

13. Click on the



button to see details about the requests sent by the instruments, the answers of the

or

to clear

14. When all the instruments have been correctly declared, click on OK, or Apply to validate.

The BOOTP server provided by Galaxie is installed during the installation of the NOTE: Galaxie software.

BOOTP server, or the errors.

## **Communication Engine Configuration**

Depending on the instrument modules that compose the system, different hardware resources can be used by the drivers to communicate with the chromatographic system GPIB\_Interface, NI 488, RS232\_3800, RS232\_Interface or RS232\_PC. These hardware resources have to be configured.



Communication engine

Click on the icon <sup>configuration</sup> in the Tools tab of the browser, or select in the Option menu the Communication Engine Configuration in the **Galaxie Configuration Manager Software**.

The following screen appears:

Configuration Name	Software Protocol	<u>~</u> _
PIB NI 2	NI488	
PIB star 4 P1	GPIB_INTERFACE	New
PIB Star 4 P2	GPIB_INTERFACE	
PIBNI1	NI488	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
ib6-p1	RS232_INTERFACE	
\$232	RS232_PC	Madifu
tar3 P1	GPIB_INTERFACE	
tar5P1	RS232_INTERFACE	
tar5P2	RS232_INTERFACE	
		<u>R</u> emove

By default the *Hardware Configuration* tab is selected. This screen lists the configured types of hardware used by the instrument for communication and precise the software protocol used.

-

To configure a new type of hardware, click on the ▶ew... button, the following screen is displayed:

Hardware type :				
	ardware type :			E
22		1	2	

Select in the scrolling list, the *Hardware type* required by the chromatographic instrument, a new screen appears, depending on the choice.

Listed here are the available choices:

CEC488	(communication by GPIB ISA Card, no longer supported)
GPIB_INTERFACE	(communication by a GPIB port on the MIB Interface)
NI488	(communication by GPIB PCI card installed in the computer)
RS232_3800	(communication by RS232 ports in the Varian 3800 GC)
RS232_INTERFACE	(communication by RS232 ports on a MIB Interface)
RS232_PC	(communication by RS232 ports installed in the computer)
SICL_488	(communication by GPIB, no longer supported)

• If GPIB\_INTERFACE is selected in the Hardware type list, the following screen appears :

Bus configuration	×
Hardware type :	GPIB_INTERFACE
Configuration Name :	New Configuration 1
MIB Interface Name	. 850-246
Channel :	Channel 1
Controller address :	21 🜲
TX Buffer :	1024
RX Buffer :	1024
	🗸 OK 🛛 🗶 Cancel

Change the type of the hardware by selecting in the list the new type of hardware required by the instrument. In case of change, refer to the sub-section corresponding to the new selected type of hardware to see details about its configuration.

Give a logical name to the Communication Bus in the field *Configuration Name.* 

Select in the list the name of the MIB Interface configured prior to accessing this screen.

Select the position of the GPIB card in the MIB Interface (channel 1= bottom card, channel 2= upper card).

Enter a GPIB address for the card in the field *Controller address*.

**NOTE:** *21* is the default value. Be sure that this address won't be used by any module connected to the GPIB board.

Let the default values (1024) for the transmission and reception buffers parameters. These parameters are communication parameters.

• If NI488 is selected in the Hardware type list, the following screen appears:

Bus configuration	×
Hardware type : NI4	188
Configuration Name : New	w Configuration 2
Controller addr	ess : 21
NI488 Interfac	e GPIB1 💌
Board Timing :	Normal timing (500 ns)
	V OK X Cancel

Change the type of the hardware by selecting in the list the new type of hardware required by the instrument. In case of change, refer to the sub-section corresponding to the new selected type of hardware to see details about its configuration.

Give a logical name to the Communication Bus in the field *Configuration Name.* 

Enter a GPIB address to the card in the field Controller address.

In the field *NI 488 Interface, select* on which GPIB card the communication bus will be created.

In the *Board timing* field, let the default value (*Normal timing (500 ns*)), except for using Hitachi instruments where it is necessary to select *Slow timing (2 \mus)*.

### **NOTE:** *21* is the default value. Be sure that this address won't be used by any module connected to the GPIB board.

### **NOTE:** The NI PCI GPIB board used to connect to the ProStar 330 PDA should NOT be configured in this application.

• If RS232\_3800 is selected in the Hardware type list, the following screen appears:

Hardware type :	RS232_CP3800		12
Configuration Name :	New Configuration 1		_
GC address	[		
	♥ Use SID 1 ♥ Use SID 2	-	

This communication bus is used only if a Varian 8200 AutoSampler is connected to a Varian 3800 GC.

Give a logical name to the card in the field Configuration Name.

Enter the IP address of the GC in the corresponding field.

(Refer to the instrument driver manual for more details on how to use SID options)

• If RS232\_Interface or RS232\_PC is selected in the Hardware type list, the following screen appears:

Bus configuration			×
Hardware type :	RS232_INTERFA	.CE	•
Configuration Name :	New Configuration	15	
MIB Interface na	me: MIB 52		•
Serial Port # :	Com 1 💌	Stops :	1 Stop 💌
Baud:	19200 💌	Parity :	EVEN 💌
Bits :	8 Bits 💌	Flow Control :	NONE 💌
Buffer Tx :	4096 🔶	Buffer Rx :	4096 🜩
Autoread :	Default : Best for r	most serial devices	•
	Size : 100	<b>♦</b> Timeout	200
		<ul> <li>✓</li> </ul>	OK X Cancel

Or

Hardware type :	RS232_PC		
Configuration Name :	New Configuration	11	
Serial Port # :	Com 1 💌	Stops :	1 Stop 💌
Baud :	19200 💌	Parity :	EVEN 💌
Bits :	8 Bits 💌	Flow Control :	NONE
Buffer Tx :	4096	Buffer Rx :	4096 🚖

Give a logical name to the communication bus in the field *Configuration Name.* 

Define the serial port (of the MIB Interface for the RS232\_Interface and of the computer for the RS232\_PC). For almost all the instruments the default values are used for the other parameters (Baud, Bits, etc.). Refer to the instrument User's Guide for special values.

For the RS232\_INTERFACE, let default for most of serial devices, or Short frames for a bus connecting a ESL2100 or 356-LC RI Detectors.

**NOTE:** The serial ports used to connect to the Agilent 5890 or 6890 series of GCs and their autosamplers should NOT be configured in this application.

The new hardware is now displayed in the main *Hardware Configuration* screen.

The following options are available from the *Hardware Configuration* screen:



modify the configuration of the selected hardware.



Bemove delete the selected hardware.



show the details of the configuration of the selected hardware.

Select the *Diagnosis information* tab, the following screen appears:

₩9 н.	Hardware Configuration Figure Diagnosis information						
T	уре	ID.	Name	Description			
	88	1	RS232_PC	Hardware Layer, PC RS232			
	<b>B</b> 2	2	RS232_INTERFACE	Hardware Layer, Interface RS232			
	82	3	RS232_CP3800	Hardware Layer, CP3800 SID			
	89) 89)	10	CEC488	Hardware Layer GPIB, for CEC488 Board			
1	田均	11	NI488	Hardware Layer GPIB, for NI488 Board			
1	<b>B</b> 2	12	GPIB_INTERFACE	Hardware Layer, GPIB for INTERFACE			
	<b>B</b> 2	13	SICL488	Hardware Layer GPIB, for SICL488 Board (HP82341)			
	8	100	SIOC	Protocol Layer SIOC			
	8	101	SPARKLINK	Protocol Layer SparkLink			

In this form, all the available hardware resources and software protocols are listed.

Remarks:

If working with an instrument module using a GPIB communication protocol, two steps have to be done:

- Configuration of the GPIB card.
- Configuration of the instrument module.

# **Systems Configuration**

Varian GC Systems

Example 1: Combi PAL Autosampler, CP-3800 directly connected to the Acquisition Server



This example describes how to configure the system shown above. In this configuration the acquisition server of the system must be the computer with the 10Base2 Ethernet card where the CP-3800 is connected to. Please also note that all the following steps must be done on the acquisition server.

To configure the system shown above, please do the following steps:

1. Configure the two network cards in the computer.

-The IP address of company network card can be left with its current IP setting (fixed, DHCP etc...)

-Define a fixed IP address for the 10Base2 Network card as following.

Local Area Connection 2 Properties
General Authentication Advanced
Connect using:
Realtek RTL8029(AS)-based Etherne
This connection uses the following items:
<ul> <li>Client for Microsoft Networks</li> <li>Client for Microsoft Networks</li> <li>QoS Packet Scheduler</li> <li>Internet Protocol (TCP/IP)</li> </ul>
Install Uninstall Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected Notify me when this connection has limited or no connectivity
OK Cancel

ou can get IP settings assigned a is capability. Otherwise, you nee ie appropriate IP settings.	automatically if your network supports d to ask your network administrator for
O <u>O</u> btain an IP address automa	itically
Use the following IP address:	
IP address:	192.168.17.1
S <u>u</u> bnet mask:	255 . 255 . 255 . 0
Default gateway:	2 2 2
O Abtain DNS server address a	automatically
Use the following DNS serve	r addresses:
Preferred DNS server:	
Alternate DNS server:	

Please note that the IP range used for the 10base2 Ethernet card must be different to the IP range used for the company network card.

- 2. Configure the MIB Interface (refer to section *MIB Interface Configuration* of this manual).
- 3. Setup the BOOTP server if the CP-3800 does not have a fix IP address (refer to section *BOOTP Configuration* of this manual). To do so please follow the steps below.

1- Configure a network interface in the BOOTP configuration tool as following.
Network	interfaces		
Name CARD1	Subnet mask 255.255.255.0	Gateway 0.0.0.0	
N			₽
4			₽
		🖌 Ok	🗙 Cancel

2- Turn ON the GC and press the



3- Select in the screen the Mac address of the CP-3800 and press Validate.

💻 BOOTP Clients Di 💶 🔲 🔀
🗹 00:60:93:00:8D:1C. Varian Device
1000
S.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Validate

4- Type the IP address of the GC and also a host name.



4. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)	_	
	Name	Combi PAL 3800		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	ARETHUSE	Sequence server	ARETHUSE
	T System locked			
<u>Help</u>			≪⊃ <u>P</u> revious	<u>4≫ N</u> ext

Enter the *Name* of the system, select in the *Acquisition* server and *Sequence* server the name of the acquisition server. The acquisition server of the system must be the computer with the 10Base2 Ethernet card. Then click on *Next*.

5. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		×
	System Name:	
	Combi PAL 3800	
	Group: Test ordre	<b>_</b>
	Projects associated to Test ordre :	
		Select all
		X Unselect all
		More ▼
<u>H</u> elp <u>C</u> ance	el ≮	<u>▶ N</u> ext <u>√ 0</u> K

6. To configure that system, it is mandatory to install two devices: the Combi PAL and the CP-3800. Click on the *Add* button, select in the *Device Type* list CTC Analytics Combi PAL and press *OK*. Repeat the same operation but this time select in the *Device Type* list Varian CP-3800 Gas Chromatograph. When the two devices have been added, the screen should be as below.

Edit System			×
	System Name: Combi PAL 3800		
	Instrument device(s) installed		$\sim$
	Default Device Name CTC Analytics Combi-PAL Varian CP-3800 Gas Chromatograph	Device Name CTC Analytics Combi-PAL #1 Varian CP-3800 Gas Chromatogra	Add Remove
Image: Help     Cance		<b>≪⊅ <u>P</u>revious</b> 5≫ <u>N</u> ext	

7. Click on the *OK* button and answer Yes to the question "Do you want to configure your system now?"



8. In the next screen, press the Combi PAL icon and click on the *Communication* tab. Select *Star 800 MIB interface serial port* and in the dropdown list select the Star 800 MIB interface previously configured. Enter in the *Port Number* field, the port number of the MIB Interface where the Combi PAL is connected to and press the *Activate Communication* button.



If the communication is successful, the following progress bar should appear on the screen.



9. Press the CP-3800 icon and click on the *Communication* tab. Type the GC IP address in the *GC name or address* field or click on the magnifying glass to search the CP-3800 connected to the network card.

Paddress Typ			
	e Name	Controller	Available
192.168.17.2 3	(800) 380(	0	YES

Select the correct GC and click on OK. Then press the *Activate communication* button. If the communication is successful a message should appear at the bottom of the configuration screen "Setup received from the instrument" (see below).

🚰 Co	nfigure system			
	Communication Autosampler Injectors Columns Detectors Valves Temp zones Miscellaneous	Varian CP 3800 - Configuration	192.168.17.2 D	□ UK ✓ <u>D</u> K ✓ <u>C</u> ancel
A				
3800	Varian (	CP-3800 Gas Chromato <u>c</u> Idle	Free	

#### NOTE: It is advised to use fix IP address to communicate with instrument

- 10. Click on the *OK* button to finish the configuration of the system.
- 11. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



Example 2: Combi PAL AutoSampler, CP-3800 connected to a HUB



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual- configure 850-MIB).
- 2. Setup the BOOTP server if the CP-3800 does not have a fixed IP address (refer to section *BOOTP Configuration* of this manual).
- 3. In the *Galaxie Configuration Manager,* create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)	_	
	Name	Combi PAL 3800		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	ARETHUSE	Sequence server	ARETHUSE
	System locked			
Help	4		Previous	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen, associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System	<u>×</u>
	System Name: Combi PAL 3800 Select which groups/projects control this system: Group: Test ordre Projects associated to Test ordre : Ordre Select all More •
Help	

5. To configure that system, it is mandatory to install two devices; the Combi PAL and the 3800. Click on the *Add* button, select in the *Device Type* list CTC Analytics Combi-PAL and press *OK*. Repeat the same operation but this time select in the *Device Type* list Varian CP-3800 Gas Chromatograph. When the two devices have been added, the screen should be as below.

Edit System			×
	System Name: Combi PAL 3800	_	
	Default Device Name         Device Name           CTC Analytics Combi-PAL         CTC Analytics Combi-PAL #1           Varian CP-3800 Gas Chromatograph         Varian CP-3800 Gas Chromatogra		Add Remove
	4	<b>≪⊃ <u>P</u>revious</b> ⊂\$ <u>N</u> ext	_ <u>√ Ω</u> K

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



7. In the next screen, press the Combi PAL icon and click on the *Communication* tab. Select *Star 800 MIB interface serial port* and in the dropdown list select the MIB Interface previously configured. Enter in the *Port Number* field, the port number of the MIB Interface where the Combi PAL is connected to and press the *Activate Communication* button.

🖉 🔒 Con	lfigure system		
Over		CombiPal - Configuration	
View	Communication	Computer Hardware	
		Local serial port (FALSE)	X Cancel
e.1		✓ Star 800 MIB interface serial port (TRUE) Star 800 MIB N°1 💌	
		Communication Setup	
	$\bowtie \sphericalangle \checkmark \triangleright \bowtie$	Port Number: 1	
		JJ	
		Activate Communication	
A	Communication Est		
	Communication Est	adiished	
Comb	IPAL 3800 CT	C Analytics Combi-PAL #1  Idle  Free	

If the communication is successful, the following progress bar should appear on the screen.

Getting	configuration from Pal
12 (%)	

8. Press the CP-3800 icon and click on the *Communication* tab. Type the GC IP address in the *GC name or address* field or click on the magnifying glass to search all the 3800 connected to the network.

CP-380	0 Discovery				_ 🗆 ×
	IP address	Туре	Name	Controller	Available
1	10.190.200.207	3800	CP-3800	ARETHUSE	NO
,					
	~	/ ОК	🔰 🗶 Ca	ncel	

Select the correct GC and click on *OK*. Then press the *Activate communication* button. If the communication is successful a message should appear at the bottom of the configuration screen "Setup received from the instrument" (see below).

🖉 🔒 Cor	nfigure system			
Over		Varian CP 3800 - Configuration		( OK
	Communication	GC name or address 10.190.20	00.207 Discation	
4	VARIAN_GC3800_IHM.DL	m the instrument 1.8.1.1		
Comb	iPAL 3800	/arian CP-3800 Gas Chromatog Idle	Free	

#### NOTE: It is advised to use fix IP address to communicate with instrument

- 9. Click on the OK button to finish the configuration of the system.
- 10. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



## Example 3: 8400 Autosampler, 3900 GC



To configure the system shown above, please do the following steps:

- 1. Setup the BOOTP server to give the 3900 GC an IP address (refer to section *BOOTP Configuration* of this manual).
- 2. In the Galaxie Configuration Manager, create a new system.

Edit System					×
	System (Creatin	ng a new item)	_	_	
	Name	CP-3900			
	Description				
	Laboratory Description		•	Laboratories	
	Acquisition server	ARETHUSE	Sequence server	ARETHUSE	•
Image: Help     Image: Cancel			≪> <u>P</u> revious	<b>⊈≫ <u>N</u>ext  √ <u>O</u>K</b>	

The following screen will be displayed.

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		×
Edit System	System Name: CP-3900 Select which groups/projects control this system: Group: sdu Projects associated to sdu : 325 486 715 715 715 715	
	715 7673 hercule	☑     Select all       ➤     Unselect all       ☑     More ▼
Image: Help         X Cance	I €Previous	<b>⊄≫</b> <u>N</u> ext

4. To configure that system, it is mandatory to install one device; the 3900 GC. Click on the *Add* button, select in the *Device Type* list Varian 3900 Gas Chromatograph and press *OK*. When the device has been added, the screen should be as below.

Edit System			×		
	System Name: CP-3900 Instrument device(s) installed				
	Default Device Name Varian CP-3900 Gas Chromatograph	Device Name Varian CP-3900 Gas Chromatogra	Add Remove		
Image: With the second seco	9	<b>≪&gt; <u>P</u>revious</b> K≫ Mext	<u>√ Ω</u> K		

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. In the next screen, press the 3900 GC icon and click on the *Communication* tab. To search on the subnet all the connected 3900 GC instruments, press the magnifying glass icon. If you know the IP address, enter it directly in the IP address field. If the search icon was pressed, a window will pop up listing all the 3900 GCs on the subnet.

CP-39	000 Discovery				_ 🗆 ×
	IP address	Туре	Name	Controller	Available
1	10.190.200.206	39XL	CP3900		YES
1					
		<sup>2</sup> OK	🗙 Cance	el	

Select one instrument and press *OK*. Then press the *Activate communication* button. If the communication is successful a message "Setup received from instrument" will be displayed at the bottom of the configuration screen (see below).

🚰 Cor	nfigure system			
Over		Varian CP 3900 - Configura	tion	
View	Communication Autosampler Injector Column Detector ? Miscellaneous	GC Name or Address 🖉 Activa	10.190.200.206 🔎	
	k < > × ∰≪ <b>Q</b> ∰≫Q			
	Setup received from the	instrument	VARIAN_GC3900_IHM.DLL 1.8.0.1	
CP-39		CP-3900 Gas Chromatoc Idle	Free	-

- 7. Click on the OK button to finish the configuration of the system.
- 8. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



### Example 4: 8400 Autosampler, 430-GC



To configure the system shown above, please do the following steps:

- 1. Setup the BOOTP server to give the 430-GC an IP address (refer to section *BOOTP Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system.

Edit System				X
	System (Proper	ties edition)		
	Name	430-GC		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	FRFONW000011	Sequence server	FRF0NW000011
	☐ System locked			
Help			≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext

The following screen will be displayed.

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next.* 

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



4. To configure that system, it is mandatory to install one device; the 430-GC. Click on the *Add* button, select in the *Device Type* list Varian 3900 Gas Chromatograph and press *OK*. When the device has been added, the screen should be as below.

Edit System			X
	System Name: GC-430		
	Instrument device(s) insta	lled	$\sim$
	Default Device Name	Device Name	Add
	Varian 430-GC	Varian 430-GC #1	
<u> Help</u> <u>Cancel</u>		♣ Previous	<u>М</u> ежт <b>У ОК</b>

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. In the next screen, press the 430-GC icon and click on the *Communication* tab. To search on the subnet all the connected 430-GC instruments, press the magnifying glass icon. If you know the IP address, enter it directly in the IP address field. If the search icon was pressed, a window will pop up listing all the 430-GCs on the subnet.

le
YES

Select one instrument and press *OK*. Then press the *Activate communication* button. If the communication is successful a message "Setup received from instrument" will be displayed at the bottom of the configuration screen (see below).

Co	nfigure system				
Over		Varian 430-GC - Co	onfiguration		
View	Communication JJJ Autosampler Injector Column Detector Miscellaneous	GC Name or Address	10.19 🖋 Activate Comr	0.200.236 🔎 nunication	
	K < > X				
A	Setup received from the	instrument	VARIAN	GC430_IHM.DLL 1.0.1.116	
GC-430	Varian 4	30-GC #1	Idle	Free	

- 7. Click on the OK button to finish the configuration of the system.
- 8. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



## Example 5: 8400 Autosampler, 450-GC



This example describes how to configure the system shown above. Note that the 4x0 setup must be launched on both main server and acquisition server in the case of client/server configuration.

1. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System						X
	System (Prope	ties edition)				
	Name	450-GC				
	Description					
	Laboratory			•	Laboratories	
	Description					
	Acquisition server	FRFONW000011	▼ s	equence server	FRFONW000011	•
	System locked					
🕐 <u>H</u> elp 🛛 🗙 <u>C</u> ance	1		4	Þ <u>P</u> revious	¢ <u>N</u> ext √ <u>0</u> 1	

Enter the *Name* of the system, select in the *Acquisition* server and *Sequence* server the name of the acquisition server. Then click on *Next*.

2. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		
	System Name: 450-GC Select which groups/projects control this system: Group: Control Projects associated to Control : GC	Select all   Yunselect all     More ▼
<u>H</u> elp <u>C</u> ance	el 🚯 🕹 Erevious	<b>⊄≫</b> <u>N</u> ext

3. To configure that system, it is mandatory to install one device: the 450-GC. Click on the *Add* button, select it in the *Device Type* list and press *OK*.

Edit System			
	System Name: 450-GC Instrument device(s) installed Default Device Name Varian 450-GC	Device Name Varian 450-GC #1	Add Remove
Help     Cancel	]	<b>≪⊅ <u>P</u>revious</b> 5≫ <u>N</u> ext	<u>√ 0</u> K

4. Click on the *OK* button and answer Yes to the question "Do you want to configure your system now?"



5. In the next screen, press the 450-GC icon and click on the *Communication* tab. Type the GC IP address in the *address* field or click on the magnifying glass to search the 450-GC connected to the network card.

In the 450-GC Discovery screen, select the correct GC and click on OK. Then press the Activate communication button. If the communication is successful a message should appear at the bottom of the configuration screen "Setup received from the instrument" (see below).



6. Click on the *OK* button to finish the configuration of the system.

7. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



# Varian Micro-GC Systems

# Example 1: Varian CP-4900



To configure the system shown above, please do the following steps

- 1. Setup the BOOTP server to give the CP-4900 micro GC an IP address (refer to section *BOOTP Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system.

Edit System						×
	System (Proper	ties edition)				
	Name	VARIAN 4900				
	Description					
	Laboratory Description			<b>_</b>	Laboratories	
	Acquisition server	NYMPHEA	•	Sequence server	NYMPHEA	•
	System locked					
<u> Help</u>	1			≪> <u>P</u> revious	<b>⊄≫</b> <u>N</u> ext  √ <u>0</u> ł	(

The following screen will be displayed.

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		
	System Name:         VARIAN 4900         Select which groups/projects control this system:         Group:       GALAXIE         Projects associated to GALAXIE :         Image: GC         LC	Select all Select all More •
<u> </u>	el 🚯 Previous	<b>⊄≫</b> <u>N</u> ext <u>√</u> <u>0</u> K

4. To configure that system, it is mandatory to install two devices; the manual injector and the 4900 GC. Click on the *Add* button, select in the *Device Type* list Manual Injector Control and Varian CP 4900 Micro-GC and press *OK*. When the devices have been added, the screen should be as below.



5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. In the next screen, press the 4900 GC icon and click on the *Communication* tab. To search on the subnet all the connected 4900 GC instruments, press the magnifying glass icon. If you know the IP address, enter it directly in the IP address field. If

the search icon was pressed, a window will pop up listing all the 4900 GCs on the subnet.

	🖬 CP-4900 Discovery					
	1	IP address 10.190.200.205	Туре 4900	Name GC 4900	Controller 10.190.200.113	Available NO
1			🖉 ОК	<b>X</b> (	Cancel	

Select one instrument and press *OK*. Then press the *Activate communication* button. If the communication is successful a message will be displayed at the bottom of the configuration screen (see below).

<b>6 1</b> Co	nfigure system		
Over View	Communication Hardware Automation User Settings	CP-4900 - Configuration Communication Communication Type: Ethernet Micro-GC Address: 10.190.200.205	<u>√ 0</u> K <u>X</u> <u>C</u> ancel
A	Communication Establishe	Activate Communication	1
VARIA	N 4900 Varian C	P-4900 Micro-GC #1 Idle Free	

NOTE: It is advised to use fix IP address for the instrument.

- 7. Click on the OK button to finish the configuration of the system.
- 8. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.

🕀 📲 🖬 🖬 🖽 🕀 🕀	0	
	Start	Ctrl+R
	Stop	Ctrl+T
## Example 2: Varian CP-2002-2003



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. In the Galaxie Configuration Manager, create a new system.

The following screen will be displayed.

Edit System						
	System (Proper	ties edition)				
	Name	VARIAN 2002-2003				
	Description					
	Laboratory			•	Laboratories	
	Description					
A A A A A A A A A A A A A A A A A A A	Acquisition server	NYMPHEA	•	Sequence server	NYMPHEA	-
	System locked					
Help     Cancel				≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext	ĸ

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next.* 

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



4. To configure that system, it is mandatory to install two devices; the manual injector and the 2002-2003 GC. Click on the *Add* button, select in the *Device Type* list Manual Injector Control and Varian CP 2002/2003 Gas chromatograph and press *OK*. When the devices have been added, the screen should be as below.



5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. In the next screen, press the 2002/2003 GC icon and click on the *Configuration* tab.

Co	nfigure system		
Over	Vari	an CP-2002 / CP-2003 / CP-2003Q µGC - Configuration	
View View	🤀 Configuration	Micro-GC         Micro-GC Type :       Unknown       Quad Master :          External start :       No       Continuous Flow :          Pressure Unit :       kPa       Firmware :	<u>Cancel</u>
		Communication Setup C Local Serial Port STAR 800 MIB Interface Serial Port Port:Number:COM	
		Channel A     Channel B       Injector Heater        Inlet Capillary Heater        Backflush	
A	  K < > > VARIAN_2002_IHM.DLL 1.10.	User Settings	
VARIA	N 2002-2003 Vari	an CP-2002/2003 Gas Chromatograph Itile	

In the *Communication Setup* section, select the *STAR 800 MIB Interface Serial port* option, and select the name of the interface where the gas chromatograph is linked to, in the scrolling list.

- 7. Click on the OK button to finish the configuration of the system.
- 8. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start. It is now possible to configure the Overview by going back in the configuration of the system.



## Varian LC Systems

## Example 1: ProStar 400-210-215-218-363-701-CIM



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- Create three RS232\_Interface communication buses on the acquisition server (refer to section *Communication engine configuration* of this manual). Those three communication buses are mandatory to control the ProStar modules. The RS232\_Interface bus 1 will control the pumps and the CIM, the RS232\_Interface bus 2 will control the FC-701 and the RS232\_Interface bus 3 will control the ProStar 400 and the ProStar 363 modules.

is configuration			2
Hardware type :	RS232_INTERFA	CE	<b>•</b>
Configuration Name	RS232_Interface E	Bus 2	
MIB Interface na	ame: MIB 52		•
Serial Port # :	Com 2 💌	Stops :	1 Stop 💌
Baud :	19200 💌	Parity :	EVEN 💌
Bits :	8 Bits 💌	Flow Control :	NONE 💌
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖
Autoread :	Default : Best for n	nost serial devices	•
	Size : 100	Timeout	200
			OK X Cancel



3. In the *Galaxie Configuration Manager* create a new system. The following screen will be displayed.

Edit System				2
	System (Creatin	ng a new item)	_	_
	Name	Varian HPLC1		
	Description			
	Laboratory		•	Laboratories
	Description			
MARCHY A 3	Acquisition server	ARETHUSE	Sequence server	ARETHUSE
	C System locked			
<u>Help</u>	ł		≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next.* 

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 5. To configure that system, it is mandatory to install five devices:
  - 1. Varian ProStar 400
  - 2. Varian ProStar 210/215/218/SD-1
  - 3. Varian ProStar 363
  - 4. Varian ProStar CIM
  - 5. Varian ProStar 701

Click on the *Add* button, select in the *Device Type* list Varian ProStar 400 and press *OK*. Repeat the same operation for the rest of the required devices. When the five devices have been added the screen should be as below.

Edit System			×	
	System Name: Varian HPLC1 Instrument device(s) installed		~	
	Default Device Name         Device Name           Varian ProStar 210,215,218,SD1 Pumps         Varian ProStar 210,215,218,SD1           Varian ProStar 363 Detector         Varian ProStar 363 Detector #1           Varian ProStar 400 Autosampler         Varian ProStar 400 Autosampler #1           Varian ProStar 701 Fraction Collector         Varian ProStar 701 Fraction Collector           Varian ProStar CIM Module         Varian ProStar CIM Module #1		Add Remove	
		<b>≪⊃ <u>P</u>revious</b> 500 <u>N</u> ext		

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 7. In the next screen, click on the *Overview* button and arrange the modules as required.
- 8. Press the 210-218 icon and click on the *Communication* tab. Select in the *RS422 bus field* the name of the RS232\_Interface Bus previously configured on which the pumps are connected

Configure system						
Configu Over View IIII 200216 CH	June system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	_□× √ <u>0</u> K <u>≻</u> <u>C</u> ancel			
Varian HF	IAN <u>PROSTAR210_IHM.</u> PLC1 Va	rian ProStar 210,215,218,SD1 Idle Free				

(RS232\_Interface Bus 1). Then click on the *Hardware* tab, select ternary as three pumps are present in this system.

For each pump A, B and C configure the *RS-422 unit ID* number of the pump and the *Model* of the pump (210, 215, 218 or SD-1).

The RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the pumps (refer to the Pump manual to configure the RS-422 unit ID number).

Cor 🖻	nfigure system		
Over		VARIAN ProStar 210, 215, 218, SD-1 Pumps	
210-218 CIM	Communications		
		Ternary Pumps	]
363		Pump A Pump B Pump C RS-422 unit ID 2 Model ProStar 215	
A	VARIAN_PROSTAR210_IHW.DL	L 1.8.1.1	
Variar	n HPLC1 Varia	an ProStar 210,215,218,SD1 Idle Free	
Con 📄	figure system		
Over Viewv 210-218 CIM	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	_□× √ 0K ∑ Cancel
Over View 210-216	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	_□× √ 0K × Cancel
	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	×  _
Con Over View 210-216 CIH	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	
Correr View View CRI 353	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	
Connerview View View CE CE View SS	figure system	VARIAN ProStar 210, 215, 218, SD-1 Pumps	

9. Press the CIM icon and click on the *Communication* tab. Select in the *RS422 bus* field the name of the RS232\_Interface Bus previously configured on which the CIM is connected

(RS232\_Interface Bus 1). Configure the *RS-422 unit ID* number of the CIM module. The RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the CIM manual to configure the RS-422 unit ID number).

🚰 Configure system	n	
Over	VARIAN ProStar CIM Module	
View Commu	Inication	
210-218	are	X Cancel
3		
45		
	RS-422 Bus KS232_Interface Bus 1	
363	RS-422 Unit ID 5	
Varian HPLC1	Varian ProStar CIM Module #1 Idle Free	

Click on the *Hardware* tab. Select in the dropdown list the *Model* of the CIM and the *Output* type.

Con 🖻	figure system		_ 🗆 🗙
Over		VARIAN ProStar CIM Module	
View 210-218	Communication		
CIM			
3			
		Model ProStar 210 Build In	
363		Output Standard 0-10 Volts output	
		Synchronize with other modules	
	VARIAN_PROSTARCIM_IHM.DL	L 1.9.1.1	
Varian	HPLC1 Varia	n ProStar CIM Module #1 Tidle Free	

10. Press the 400 autosampler icon and click on the Communication tab. Select in the Name field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (RS232\_Interface Bus 3). Configure the Autosampler device identifier number of the 400 module. This RS-422 unit ID must be unique to each module connected to the RS232 Interface bus and must match the one configured in the module (refer to the 400 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie. To do so press F then 4 on the autosampler when it is ready.



Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

Con 🔓	nfigure system		_ 🗆 ×
Over		VARIAN ProStar 400 Autosampler	
View	Communication		
	Hardware		$\times$ <u>C</u> ancel
210-218			
CIM		Ontions	
2			
		Sample tray cooling	
363		- Havely serve	
		Tarutura (Maltura dolare vida	
		Tray type / viai type   40 large viais	
		Loop volume (µl)	
A			
	VARIAN_PROSTAR400_IHM.DLL	1.7.1.0	
Varian	HPLC1 Varia	n ProStar 400 Autosampler Idle Free	

11. Press the 701 icon and click on the Communication tab. Select in the Hardware interface field the name of the RS232 Interface Bus previously configured to which the 701 is connected (RS232\_Interface Bus 2). Configure the number of fraction collectors present and the Fraction Collector ID number of the 701 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the 701 manual to configure the RS-422 unit ID number).

Finally press the *Activate Communication* button. If the communication is successful, the *Fraction Collector* should be displayed as present.

🚰 Cor	nfigure system		
Over		Varian ProStar 701 - Configuration	. ( OK
View	Communication	Hardware Interface RS232_Interface Bus 2 💌	
		Number of Instruments 1	
9		Fraction Collector 1 ID 9 🕺 NOT PRESENT	
		💋 Activate Communication	
363			
	Communication Not E	stablished   VARIAN_PROSTAR701_IHM.DLL 1.8.1.1	
∣Variar	HPLC1 Va	rian ProStar 701 Fraction Coll Idle Free	

12. Press the 363 icon and click on the *Communication* tab. Select in the *RS422 Bus* field the name of the RS232\_Interface Bus previously configured to which the 363 is connected (RS232\_Interface Bus 3).

Con 🔓	nfigure system				
Over		VARIAN ProStar	363 Detector		
View	Communication				
240-248	Hardware				<u>X</u> <u>C</u> ancel
3					
E					
		RS422 Bus	RS232 Interface Bus 3	<b>_</b>	
		1	-		
005					
	VARIAN_PROSTAR363_IHM.DL	L L 1.13.1.1			
Varian H	HPLC1 Varian	n Pro Star 363 Detector #1	Idle	Free	

Click on the *Hardware* tab and configure the *Detector ID* number of the ProStar 363 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the ProStar 363 manual to configure the RS-422 unit ID number).

Con 🔓	figure system			
Over		VARIAN ProStar 363 Detector		
View	Communicati	on		
240-248	🔲 🐺 Hardware			X Cancel
3				
N				
		Detector ID: 91		
363				
		N		
	VARIAN_PROSTAR363_I	HW.DLL 1.7.1.0		
Varian	HPLC1	Varian ProStar 363 Detector #1 Idle F	Free	

- 13. Click on the OK button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





## Example 2: ProStar 410-230-310-330

To configure the system shown above, please do the following steps:

1. Install the two National Instrument GPIB boards in the acquisition server (refer to section *National Instrument GPIB Board Installation* of this manual). Once the two boards are installed, configure them so that one is the GPIB0 and the second is GPIB1.

NI GPIB Configuration	
I Interface Name	PCI GPIB Board <u>Serial Number</u>
GPIB0	008F488E
GPIB1	00BF5299 💌
GPIB2	None
GPIB3	None
OK Cancel	Help

2. Create one **RS232\_PC** communication bus on the acquisition server (refer to section Communication engine configuration of this manual). This communication bus is mandatory to control the ProStar 410 AutoSampler module. It will be called RS232\_PC bus 1.

Bus configuration			×
Hardware type :	RS232_PC		•
Configuration Name :	RS232_PC bus 1		
Serial Port # :	Com 1 💌	Stops :	1 Stop 💌
Baud :	19200 💌	Parity :	EVEN 💌
Bits :	8 Bits 💌	Flow Control :	NONE 💌
Buffer Tx :	4096	Buffer Rx :	4096
			OK X Cancel

3. Create one **NI488** communication bus on the acquisition server (refer to section *Communication Engine Configuration* of this manual). This communication bus is mandatory to control the 230 and 310 modules. It will be called GPIB1 bus. Do not create a NI488 bus on GPIB0.

Bus configuration		
Hardware type : NI48	38	-
Configuration Name : GPIB	31 bus	
Controller addres	ss : 21	•
NI488 Interface	GPIB1	-
Board Timing:	Normal timing (500 ns)	•
	🗸 ОК 🛛 🔀 С	ancel



4. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				X
	System (Creatin	ng a new item)	_	
	Name	Varian HPLC2		
	Description			
	Laboratory		•	Laboratories
	Description			
A HANNEL	Acquisition server	SANTAMARIA	Sequence server	
	☐ System locked			
Image: Help     X Cance	ı		양 <u>P</u> revious	\$> <u>N</u> ext  √ <u>□</u> K

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

5. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		X
	System Name:	
	Varian HPLC2	
	Group: sdu	
	Projects associated to sdu :	
	- 400 715 - 7673 - hercule	Select all
		X Unselect all
		More ▼
<u>     Help</u> <u>     Cance</u>	I Previous	\$ <u>N</u> ext <u>√</u> 0K

- 6. To configure that system, it is mandatory to install four devices:
  - 1. Varian ProStar 410
  - 2. Varian ProStar 220/230/240
  - 3. Varian ProStar 310
  - 4. Varian ProStar 330

Click on the *Add* button, select in the *Device Type* list Varian ProStar 410 and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added, the screen should be as below.

Edit System			×
	System Name: Varian HPLC2		
	Instrument device(s) installed		$\sim$
	Default Device Name Varian ProStar 220,230,240 Pumps Varian ProStar 310 Detector Varian ProStar 330 Diode array detector Varian ProStar 410 Autosampler	Device Name Varian ProStar 220,230,240 Pum Varian ProStar 310 Detector #1 Varian ProStar 330 Diode array d Varian ProStar 410 Autosampler #1	Add Remove
	-1		
() <u>H</u> elp <u>X</u> Cancel		<b>≪⊃</b> <u>P</u> revious	<u>√ 0</u> K

7. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 8. In the next screen, click on the *Overview* button and arrange the modules as required.
- 9. Press the ProStar 220-240 icon and click on the *Communications* tab. Select in the *IEEE 488 bus* field the name of the NI488 Bus previously configured on which the pump is connected (GPIB1 bus). Configure the *IEEE488*

address number of the 230 module. This GPIB unit ID must be unique to each module connected to the NI488 bus and must match the one configured in the module (refer to the 220-230-240 manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID of the GPIB communication bus.

🚰 Con	figure system		
Over		Varian ProStar 220,230,240 Pumps #1	ΟΚ
View	Communications		
220-240	→ Pressures		X Cancel
<b>310</b>			
یا الح	<i>k</i>		
	Ů		
330		IEEE488 Bus GPIB1 bus	
		IEEE488 Address	
A	$\mathbb{X} \triangleleft \mathbb{Y}$		
	VARIAN_PROSTAR220_IHM.DLI	. 1.7.2.1	
∥Varian	HPLC2 Varia	in ProStar 220,230,240 Pun Idle  Free	

Click on the *Hardware* tab. Select in the dropdown list the *Model* of the pump.

🐾 Configure system					
Over		Varian ProStar 220,230,240 Pumps #1			
View	Communications				
220-240	Hardware Pressures		<u>X</u> <u>C</u> ancel		
<b>310</b>					
یک					
<b>.</b>					
		Model ProStar 230 Ternary (9010 / 9012)			
		Synchronize with other modules			
A	VARIAN_PROSTAR220_IHM.DLL	1.7.2.1			
Varian	HPLC2 Varia	n ProStar 220,230,240 Pun Idle Free			

10. Press the 310 icon and click on the *Communications* tab. Select in the *IEEE 488 bus* field the name of the NI488 Bus previously configured to which the detector is connected (GPIB1 bus). Configure the *IEEE488 address* number of the 310 module. This GPIB unit ID must be unique to each module connected to the NI488 bus and must match the one configured in the module (refer to the 310 manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller.

🚰 Configure system						
Over		VARIAN ProStar 310 Detector				
Over View 200-200	Communicatio	VARIAN ProStar 310 Detector	<u>√ QK</u> <u>≻</u> <u>C</u> ancel			
	VARIAN_PROSTAR310_H	HM.DLL 1.8.0.0				
Varian	HPLC2	Varian ProStar 310 Detector #1 Idle Free				

11. Press the ProStar 410 autosampler icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (RS232\_Interface Bus 1). Configure the *Autosampler Device Identifier* number of the ProStar 410 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the ProStar 410 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie (in the ready menu of the autosampler select serial).



Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

Configure system					
Con Over View 220-240	figure system	VARIAN ProStar 410 Autosampler	_ □ × √ <u>0</u> K × <u>C</u> ancel		
Varian	VARIAN_PROSTAR410_IHM 1 HPLC2	Tubing volume (Needle to valve) (µ)			

12. Press the ProStar 330 icon and click on the *Parameters* tab. Nothing has to be done in this screen. Please note that no GPIB bus needs to be configured on the GPIB0 for the 330 to work.

Configure system				
Over		ProStar 330 Diode Array Detector - Configuration	🖌 ОК	
View	Parameters			
220-240			X Cancel	
<u>910</u>		Synchronize software on this module		
330				
		14		
		1		
	VARIAN_PROSTAR330_IH	M.DLL 1.7.1.0		
Varian	HPLC2	/arian ProStar 330 Diode array ( Idle Free		

- 13. Click on the OK button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Setup the BOOTP server if the ProStar 325 does not have a fixed IP address (refer to section *BOOTP Configuration* of this manual).
- Create two RS232\_Interface communication buses on the acquisition server (refer to section *Communication engine configuration* of this manual). Those two communication buses are mandatory to control the ProStar modules and the RI detector. The RS232\_Interface bus 1 will control the pumps

and the autosampler, the RS232\_Interface bus 2 will control the detector 356 RI:

Bus configuration			×				
Hardware type :	RS232_INTERFACE						
Configuration Name :	RS232_Interface Bus 1						
MIB Interface name: MIB 52							
Serial Port # :	Com 2 💌	Stops :	1 Stop 💌				
Baud :	19200 💌	Parity :	EVEN 💌				
Bits :	8 Bits 💌	Flow Control :	NONE				
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖				
Autoread :	Default : Best for i	most serial devices	<b>_</b>				
	Size : 100	Timeout :	200 🚖				
V OK							

For the detector 356 RI, set No Parity, and set the Autoread to Short Frames:

Bus configuration			X					
Hardware type :	RS232_INTERFACE							
Configuration Name :	RS232_Interface Bus 2							
MIB Interface name: MIB 52								
Serial Port # :	Com 1 💌	Stops :	1 Stop 🔻					
Baud :	19200 💌	Parity :	NONE -					
Bits :	8 Bits 💌	Flow Control :	NONE -					
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖					
Autoread :	Short frames : Best for ELSD or RID detectors							
	Size : 100	Timeout :	200 🚖					
			OK X Cancel					



4. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				
	System (Creatin	ng a new item) Varian HPLC3		
	Description			
	Laboratory Description			Laboratories
	Acquisition server	FRF0NW000024	Sequence server	FRF0NW000024
Image: Concentration			≪⊅ <u>P</u> revious	<b>≮≫</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next.* 

5. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 6. To configure that system, it is mandatory to install five devices:
  - 1. Varian ProStar 420
  - 2. Varian ProStar 210/215/218/SD-1
  - 3. Varian ProStar 325
  - 4. Varian ProStar 510
  - 5. Polymer Labs Refractive Index Detector

Click on the *Add* button, select in the *Device Type* list Varian ProStar 420 and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added, the screen should be as below.


7. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 8. In the next screen, click on the *Overview* button and arrange the modules as required.
- Press the ProStar 210-218 icon and click on the Communications tab. Select in the RS422 bus field the name of the RS232\_Interface Bus previously configured to which the pumps are connected (RS232\_Interface Bus 1). Then click on

Co	nfigure system				
Over View 210-218	Communications Hardware	VARIAN ProStar 210, 2	15, 218, SD-1 Pump	s 	
<b>1</b>	VARIAN_PROSTAR210_IHW.CLL	1.15.1.1			
Varian H	HPLC3 Varian	Pro Star 210,215,218,SD1 Pumps a	Idle	Free	

the *Hardware* tab, select binary as two pumps are present in this system.

For each pumps A and B configure the *RS-422 unit ID* number of the pump and the *Model* of the pump (210, 215, 218 or SD-1).

The RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the pumps (refer to the pump manual to configure the RS-422 unit ID number).

Co	nfigure system			
Over View 1200-218 10	Communications Hardware Pressures	VARIAN ProStar 210, 215, 218, SD-1 Pumps         Elinary Pumps         Pump A       Pump B         RS-422 unit ID       1         Model       PrepStar SD-1		<u>√ ΩK</u> <u>X</u> <u>C</u> ancel
A	VARIAN_PROSTAR210_IHM.DLI	1.15.1.1		
Varian	HPLC3 Varian	ProStar 210,215,218,SD1 Pumps I Idle Free	e	

10. Press the 420 autosampler icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (RS232\_Interface Bus 1). Configure the *Autosampler Device Identifier* number of the ProStar 420 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the ProStar 420 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie (in the ready menu of the autosampler select serial).



Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

🚰 Cor	nfigure system				
Verw View View View View View View View Vie	Communication	ProStar 420 Aun Options Hardware Loop volume (µl) Syringe volume ( Tubing volume (N Tubing volume (N	tosampler	y cooling ector valve stream switching A stream switching B ter	<u>√ ΩK</u> <u>≻ C</u> ancel
Vandir I		o r www.avinp/01111	Juno	J. 100	

11. Press the 510 column oven icon and click on the *Communications* tab. In the *Com Port Type* group parameter select *Star 800 MIB*. Then in the *Configuration* group parameter select the name of the MIB Interface and Com port to which the 510 is connected. Finally, enter the RS232\_C unit ID of the column oven. This unit ID must match the one in the column oven (refer to the ProStar 510 Column Oven manual to configure that number).

10 C	VARIAN ProStar 510 Column oven	
Communications	COM port type	<u>√0</u> <u>X</u> ⊑an
	Configuration Communication port number: Port 1 v 800 MIB name: 850 MIB v	
	Column oven ID RS-232C unit ID: 50	

12. Press the ProStar 325 icon and click on the *Communication* tab. To search on the subnet all the connected ProStar 325 instruments press the magnifying glass icon, or if you know the IP address, enter it directly in the IP address field. If the search icon is pressed, a window will pop up listing all the 325s on the subnet.

Disc	overy			- 🗆 ×
	IP Address	Туре	Name	Available
1	10.190.200.210	325	325 labo	Yes
,				1

Select one instrument and press OK. Then press the Activate Communication button.



**NOTE:** It is advised to use fix IP address to communicate with instrument

Click on the *Option* tab and select which flow cell is present in the detector.

Very View       Communication         Image: Communication       Image: Communication         Image: Communication	
Two Wavelength Option Configure Detector Cell Type	<u>√ Ω</u> K <u>C</u> ancel
Ceil Type	
Cell Ratio 0,000	

13. Press the Varian 356-LC RI Detector icon and click on the Communication tab. Select in the Name field the name of the RS232\_Interface Bus previously configured to which the detector is connected (RS232\_Interface Bus 2). Configure the Communication port number of the 356-RI module (the Interface port on which the detector is connected). Configure the Varian RI Detector Identifier number which must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module.

Co 🖻	nfigure system		
Over		VARIAN 356-LC RI DETECTOR	
View	Communication		X QA
		Communication Settings	
		Internal RS232 Point-to-point	
325		G Hercule RS232 Point-to-point	
356		Name RS232_Interface bus 2	
		Communication port number	
		Varian RI Detector Identifier 01	
A	VARIAN_PL_RI_IHM.DLL 1.2.	1.1	
Varian I	HPLC3 Pol	ymer Labs Refractive Index Detector 🕇 Idle 🛛 Free	

- 14. Click on the OK button to finish the configuration of the system.
- 15. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Setup the **BOOTP** server if the ProStar 335 does not have a fixed IP address (refer to section *BOOTP Configuration* of this manual).
- 3. Create one **RS232\_Interface** communication bus on the acquisition server (refer to section *Communication Engine Configuration* of this manual). This communication bus is mandatory to control the ProStar 430 module. It will be called RS232\_Interface bus 1.

Bus configuration			×				
Hardware type :	RS232_INTERFA	CE	•				
Configuration Name :	Configuration Name : RS232_Interface Bus 1						
MIB Interface na	me: MIB 52		•				
Serial Port # :	Com 2 💌	Stops :	1 Stop 💌				
Baud :	19200 💌	Parity :	EVEN 💌				
Bits :	8 Bits 💌	Flow Control :	NONE -				
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖				
Autoread :	Default : Best for r	most serial devices	-				
	Size : 100	Timeout :	200				
		<ul> <li>✓</li> </ul>	OK X Cancel				

4. Create one **GPIB\_Interface** communication bus on the acquisition server (refer to section *Communication Engine Configuration* of this manual). This communication bus is mandatory to control the ProStar 230 pumps. It will be called GPIB\_Interface bus 1.

Bus configuration		×
Hardware type :	GPIB_INTERFACE	•
Configuration Name :	GPIB_Interface bus 1	
STAR 800 MIB Name	: 800 MIB	•
Channel :	Channel 1	
	C Channel 2	
Controller address :	21	
TX Buffer :	1024	
RX Buffer :	1024	
	🗸 ок	🗙 Cancel

📲 Galaxie Configuration Mar	nager			_ <del>-</del>
File Configuration Audit trail	Options View ?			
🖷   🌐 🕗 👪   🛥 🖼	ø 💭			
	👯 Hardware Configuration 📃 🗾 Diagnosis i	information		
Users	Configuration Nan	ne	Software Protocol	
<b>a</b> .	GPIB_Interface bus 1		GPIB_INTERFACE	
	h5252_menace bus f		h5232_INTERFACE	<u>N</u> ew
User profiles				~
				Modify
Admin profiles				_ >
				Bemove
Systems				
<u> </u>				View
Stations				
Associations				
Associations				
🧏 Connections 🐟				
2				
Connections				
0.8 10018 ×				
er 🖉				
Communication engine				
in the second se				
BootP configuration				
66		6		
Interface supervisor	Acquisition & Control - Communication Setup	Version: 1.8.501.1	(c) 2000-2004 Varian, Inc. All rights reserved	
Please retresh the base (press F5)	Administrator on SANTAMARIA			

5. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
Edit System	System (Creatin Name Description Laboratory Description Acquisition server System locked	ng a new item) Varian HPLC4 SANTAMARIA	Sequence server	Laboratories
			≪⊐ Erevious 🗘 🛠	lext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the sequence server. Then click on *Next*.

6. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		X
	System Name:	
	Varian HPLC4 Select which groups/projects control this system:	<b>e</b>
	Group:	
	Projects associated to sdu :	Select all         ★ Unselect all         ■ More ▼
<u>Help</u> <u>Cance</u>	ا ۲evious	<b>≮≫</b> <u>N</u> ext <u>√ </u> <u>D</u> K

- 7. To configure that system, it is mandatory to install three devices:
  - 1. Varian ProStar 430
  - 2. Varian ProStar 220,230,240
  - 3. Varian ProStar 335

Click on the *Add* button, select in the *Device Type* list Varian ProStar 430 and press *OK*. Repeat the same operation for the rest of the required devices. When the three devices have been added the screen should be as below.

Edit System			x
	System Name: Varian HPLC4		
	Default Device Name Varian ProStar 220,230,240 Pumps Varian ProStar 335 Diode Array Detector Varian ProStar 430 Autosampler	Device Name Varian ProStar 220,230,240 Pum Varian ProStar 335 Diode Array D Varian ProStar 430 Autosampler #1	Add Remove
Image: With the second seco		<b>≪⊃ <u>P</u>revious</b>	<u>Чо</u> к

8. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 9. In the next screen, click on the *Overview* button and arrange the modules as required.
- 10. Press the 220-240 icon and click on the *Communications* tab. Select in the *IEEE 488 bus* field the name of the GPIB Bus previously configured to which the pump is connected (GPIB\_Interface bus 1). Configure the *IEEE488 address* number of the ProStar 230 module. This GPIB unit ID must be

unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the 220-230-240 manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller.

Con 🚡	figure system		
Over		Varian ProStar 220,230,240 Pumps #1	
View	Communications		
	Hardware		X <u>C</u> ancel
220-240			
335			
		IEEE488 Bus GPIB_Interface bus 1	
		IEEE488 Address	
	VARIAN_PROSTAR220_IHM.DLL	1.7.2.1	
Varian	HPLC4 Varia	n ProStar 220,230,240 Pun Idle Free	

Click on the *Hardware* tab. Select in the dropdown list the *Model* of the pump.

Con 🚡	figure system		
Over		Varian ProStar 220,230,240 Pumps #1	
View	Communications		<u>X</u> <u>C</u> ancel
		Model ProStar 230 Ternary (9010 / 9012)	
A	VARIAN_PROSTAR220_IHW.DLL	1.7.2.1	
Varian	HPLC4 Varia	n ProStar 220,230,240 Pun Idle Free	

11. Press the ProStar 430 AutoSampler icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (RS232\_Interface Bus 1). Configure the *Autosampler Device Identifier* number of the 430 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the 430 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie (in the ready menu of the autosampler select serial).

🖉 Con	figure system		
Over		ProStar 430 Autosampler	
View	Communication		
	<b>⊞</b> i Hardware		X <u>C</u> ancel
220-240			
		Communication Settings	
335		Internal RS422 Bus	
		Name RS232_Interface bus 1	
		Autosampler Device Identifier 21	
	VARIAN_PROSTAR430_IHM.DLL	1.7.2.0	
Varian	HPLC4 Varia	n ProStar 430 Autosampler Idle Free	

Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

Con 🖥	figure system		
Over View 220-240	Communication	ProStar 430 Autosampler Options Plate cooling Plate feeder Solvent selector valve Integrated stream switching Alarm buzzer Key click Error beep	Cancel
		Hardware Tray type / Vial type 96 low wells ▼ Loop volume (µl) 100 ♀ Syringe volume (µl) 250 ▼ Tubing volume (Needle to valve) (µl) 15 ♀ Use transport vials First transport vial 1 ♀ Last transport vial 4 ♀	
Varian	HPLC4 Varia	n ProStar 430 Autosampler Idle Free	

12. Press the ProStar 335 icon and click on the *Communication* tab. To search on the subnet all the connected ProStar 335 instruments press the magnifying glass icon or if you know the IP address enter it directly in the IP address field. If the search icon is pressed, a window will pop up listing all the 335s on the subnet.

🔲 Disc	overy				l ×
	IP Address	Туре	Name	Available	Ĩ
1	10.190.200.213	335	335 Labo	No	
			OK Cance		

Select one instrument and press OK. Then press the activate communication button.

🚰 Con	figure system		
Over		Varian ProStar 335 LC Detector 335 Labo	
View	Communication		
			X <u>C</u> ancel
220-240			
395		10 100 200 212	
		IP Address	
		Identification 335 Labo	
		Activate Communication	
		Synchronise with other modules	
	•		
ð	VARIAN_PROSTAR335_IHM.DLL	1.1.3.1	
Varian	HPLC4 Varia	n ProStar 335 Diode Array [ Idle Free	

**NOTE:** It is advised to use fix IP address to communicate with instrument

Click on the *Option* tab and select which flow cell is present in the detector.

Configure system	
Varian ProStar 335 LC Detector 335 Labo         View         Communication         Network Parameter         Stress         Option         Network Parameter         Option         Network Parameter         Option         Network Parameter         Cell Type         9x1         4x0         4x0.15         Cell Ratio         0.000	_□× √ <u>0</u> K ★ <u>C</u> ancel
Varian HPLC4 Varian ProStar 335 Diode Array [ Idle Free	-

In the Network Parameter tab, it is possible to give the instrument a fixed IP address. To do so, fill the three fields *IP address, Subnet Mask* and *Default Gateway* and press the download button.

Con 🚽	figure system		
Over		Varian ProStar 335 LC Detector 335 Labo	
View	Communication		
220-260	> Option > Network Parameter		<u>X</u> <u>C</u> ancel
395		10 100 200 212	
		IP Address	
		Subnet Mask 255.255.255.0	
		Defent Octours 10,190,200,1	
		Detault Gateway	
		🗔 🐗 🖳 Download Ethernet Parameters	
8	VARIANI PROSTAR335 JHM DU	1131	
Varian	HPLC4 Varia	n ProStar 335 Diode Array I Idle Free	

- 13. Click on the OK button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





## Example 5: ProStar 410 Prep-Manual Injection Valve-SD1-325

To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- Create one RS232\_Interface communication buses on the acquisition server (refer to section *Communication engine configuration* of this manual). This communication bus is mandatory to control the ProStar modules. It will be called RS232\_Interface bus 1 and will control the pumps and the autosampler.

	Bus configuration			
	Hardware type :	RS232_INTERFACE	•	
	Configuration Name	RS232_Interface Bus 1		
	MIB Interface na	ame: MIB 52	-	
	Serial Port # :	Com 2 💌 Stops :	1 Stop 💌	
	Baud :	19200 <b>•</b> Parity :	EVEN 💌	
	Bits:	8 Bits  Flow Control	I: NONE 💌	
	Buffer Tx :	4096 🚖 Buffer Rx :	4096 🚖	
	Autoread :	Default : Best for most serial devic	es 🔽	
		Size : 100 🗲 Time	eout : 200 🗲	
	. <u> </u>			
			V OK X Cancel	
Galaxie Configuration Mar	ager			<u>_ 8 ×</u>
File View Configuration Audi	trail Options Help			
	19 Hardware Configuration	agnosis information		
Admin profiles	Configurati	on Name	Software Protocol	
	RS232 Interface Bus 1		RS232_INTERFACE	<u>N</u> ew
Systems				~>
Stations				Modify
Stations				
Associations				<u>H</u> emove
Associations				<u>H</u> emove
Associations				Bemove D View
Associations				Eemove Demove
Associations				Eemove Demove View
Associations				Eemove Dev
Associations Connections * Connections Tools *				Eenove Dev
Associations Associations Connections Connections Connections Connections Connections Connections Connections				Eenove Dev View
Associations				Eenove Dev
Associations Associations Connections Connections Connections Chromatography file protection Protection				Eenove Dew
Associations				Eemove Dew View
Associations				Eenove Devy

Version: 1.8.502.1

- Acquisition & Control - Communication Setup

Administrator on HAVORN

In the *Galaxie Configuration Manager* create a new system. The following screen will be displayed. 3.

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60 Interface supervisor 7

Interface configuration

Edit System				X
	System (Creatin	ng a new item)	_	
	Name	Varian HPLC 5		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	HAVORN	Sequence server	HAVORN
	C System locked			
Image: Help     X Cance	el		≪> <u>P</u> revious	\$> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next.* 

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 5. To configure that system, it is mandatory to install three devices:
  - 1. Varian ProStar 410
  - 2. Varian ProStar 210/215/218/SD-1
  - 3. Varian ProStar 325

Click on the *Add* button, select in the *Device Type* list Varian ProStar 410 and press *OK*. Repeat the same operation for the rest of the required devices.

Do **NOT** add a manual injector device. This device should be used only when no autosampler is controlled in the system which is not the case here.

When the three devices have been added the screen should be as below.

Edit System			×
	System Name: Varian HPLC 5		
	Instrument device(s) installed           Default Device Name           Varian ProStar 210,215,218,SD1 Pumps           Varian ProStar 325 Detector           Varian ProStar 410 Autosampler	Device Name Varian ProStar 210,215,218,SD1 Varian ProStar 325 Detector #1 Varian ProStar 410 Autosampler #1	Add Remove
Help     Lelp     Cancel	2	<b>≪⊃ <u>P</u>revious</b>	<u>√ ⊡</u> K

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 7. In the next screen, click on the *Overview* button and arrange the modules as required.
- 8. Press the 210-218 icon and click on the *Communication* tab. Select in the *RS422 bus field* the name of the RS232\_Interface Bus previously configured on which the pumps are connected

Configure system						
View 210-245	Communication Hardware Pressures	VARIAN ProStar 210, 215, 218, SD-1 Pumps Dins Binary Pumps Pump A Pump B RS-422 unit ID Model PrepStar SD-1				
A	VARIAN_PROSTAR210_II	WI.DLL 1.9.1.1				
Varian	HPLC 5	Varian ProStar 210,215,218,SD1 Idle Free				

(RS232\_Interface Bus 1). Then click on the *Hardware* tab, select binary as two pumps are present in this system.

For each pump A and B configure the *RS-422 unit ID* number of the pump and the *Model* of the pump (SD-1).

The RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the pumps (refer to the Pump manual to configure the RS-422 unit ID number).

Configure system						
Over       VARIAN ProStar 210, 215, 218, SD-1 Pumps         Image: Star 200, 215, 218, SD-1         Image: Star 200, 215, 218, 210, 215, 218, 210, 215, 218, 216, 215, 218, 216, 215, 218, 216, 218, 218, 218, 218, 218, 218, 218, 218						
Varian HPLC 5 Varian ProStar 210,215,218,SD1 Idle	Free					

9. Press the ProStar 325 icon and click on the *Communication* tab. To search on the subnet all the connected ProStar 325 instruments press the magnifying glass icon or if you know the IP address enter it directly in the IP address field. If the search icon is pressed, a window will pop up listing all the 325s on the subnet.

	Discovery					
		IP Address	Туре	Name	Available	
	1	10.190.200.210	325	325 labo	Yes	
					I	
C	ģ					:
				OK Ca	incel	

Select one instrument and press OK. Then press the Activate Communication button.

It is also mandatory to check the box Synchronize with other module to be able to inject from the autosampler and from the manual injection valve.

Con	figure system		
Over View 240-218	Communication	Varian ProStar 325 LC Detector 325 labo	<u>√ 0</u> K <u>≻</u> <u>C</u> ancel
		IP Address 10.190.200.210 Identification 325 labo Activate Communication ✓ Synchronise with other modules ← Enable Ready In	
P Varian	VARIAN_PROSTAR325_HM.DLL HPLC 5 Varia	1.7.4.1 n ProStar 325 Detector #1 Idle Free	

**NOTE:** It is advised to use fix IP address to communicate with instrument

Click on the *Option* tab and select which flow cell is present in the detector.

Configure system						
Over View	Communication	Varian ProStar 325 LC	Detector 325 labo		<u>√ 0</u> K <u>≻</u> <u>C</u> ancel	
325			Two Wavelength Option Configure Detector Cell Type 9x0 9x1 4x0 4x0.5			
Varian	VARIAN PROSTAR325_HM.DU HPLC 5 Varia	. 1.7.4.1 n ProStar 325 Detector #1	Il Ratio 25,667	Free		

10. Press the 410 autosampler icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (RS232\_Interface Bus 1). Configure the *Autosampler Device Identifier* number of the ProStar 410 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the ProStar 410 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie.



Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

Configure system						
Over View 200218 325	Communication Hardware	Options       Sample tray cooling         Column oven       Options         ✓ Alarm buzzer       Preparative         Hardware       Preparative         Loop volume (µl)       100         Syringe volume (µl)       250         Tubing volume (Needle to valve) (µl)       15	<u>√ 0</u> K <u>≻</u> <u>C</u> ancel			
Varian	HPLC 5 Varia	an ProStar 410 Autosampler Idle				

- 11. Click on the OK button to finish the configuration of the system.
- 12. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



## Example 6: ProStar 410-210- Polymer labs ELS-2100



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Create two **RS232\_Interface** communication buses on the acquisition server (refer to section *Communication engine configuration* of this manual): one for the ProStar 210 pump and the ProStar 410 Autosampler and a second for the Polymer Labs 2100 ELS detector. Those communication buses are mandatory to control the modules.



New configuration1 is the bus fro both 210 and 410 prostar modules:

Bus configuration			×				
Hardware type :	Hardware type : RS232_INTERFACE						
Configuration Name :	Configuration Name : RS232_Interface Bus 1						
MIB Interface na	me: MIB 52		•				
Serial Port # :	Com 2 💌	Stops :	1 Stop 💌				
Baud :	19200 💌	Parity :	EVEN 💌				
Bits :	8 Bits 💌	Flow Control :	NONE 💌				
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖				
Autoread :	Default : Best for i	most serial devices	-				
	Size : 100	Timeout :	200				
🗸 OK 🕺 🗶 Cancel							

New configuration2 is the bus for the Polymer labs 2100 ELS detector. For the 2100 ELS Detector, set No Parity, and set the Autoread to Short Frames

Bus configuration 🛛 🔀						
Hardware type : RS232_INTERFACE						
Configuration Name : RS232_Interface Bus 2						
MIB Interface na	me: MIB 52		•			
Serial Port # :	Com 1 💌	Stops :	1 Stop 💌			
Baud :	19200 💌	Parity :	NONE -			
Bits :	8 Bits 💌	Flow Control :	NONE 💌			
Buffer Tx :	4096 🚖	Buffer Rx :	4096 🚖			
Autoread :	Short frames : Be	st for ELSD or RID de	tectors 💌			
	Size : 100	Timeout :	200			
			OK 🗙 Cancel			

3. In the *Galaxie Configuration Manager* create a new system. The following screen will be displayed.
| Edit System    |                    |                 |                     | ×                     |
|----------------|--------------------|-----------------|---------------------|-----------------------|
|                | System (Proper     | ties edition)   |                     |                       |
|                | Name               | VARIAN ELS-2100 |                     |                       |
|                | Description        |                 |                     |                       |
|                | Laboratory         |                 | •                   | Laboratories          |
|                | Description        |                 |                     |                       |
|                | Acquisition server | NYMPHEA 💌       | Sequence server     |                       |
|                | ☐ System locked    |                 |                     |                       |
| Help     Cance |                    |                 | ≪⊐ <u>P</u> revious | <b>☆</b> <u>N</u> ext |

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System	
	System Name: VARIAN EL S-2100 Select which groups/projects control this system: Group: GALAXIE Projects associated to GALAXIE : GC V LC Select all More *
<u>Help</u> <u>Cancel</u>	K Previous Sext K

- 5. To configure that system, it is mandatory to install three devices:
  - 1. Varian ProStar 410 Autosampler
  - 2. Varian ProStar 210/215/218/SD-1 Pump
  - 3. Polymer Labs ELS2100 Detector

Click on the *Add* button, select in the *Device Type* list Varian ProStar 410 Autosampler and press *OK*. Repeat the same operation for the rest of the required devices. When the three devices have been added the screen should be as below.



6. Click on the *OK* button and answer *Yes* to the question: "Do you want to configure your system now?"



7. In the next screen, click on the *Overview* button and arrange the modules as required.

8. Press the 210-218 icon and click on the *Communication* tab. Select in the *RS422 bus field* the name of the RS232\_Interface Bus previously configured on which the pumps are connected (New Configuration1).

<sup>ଙ୍କ</sup> ିଲ Co	nfigure system		
Over View 210-218	Communications Hardware	/ARIAN ProStar 210, 215, 218, SD-1 Pumps	Cancel
		RS422 Bus New Configuration 1	
VARIA	VARIAN <u></u> PROSTAR210_HWM.DLL VARIAN_PROSTAR210_HWM.DLL	1.13.2.1 Pro Star 210,215,218,SD1 Pumps 1 Idle Free	

Then click on the *Hardware* tab, select the pump type.

Co 🖻	nfigure system		
Over	I	ARIAN ProStar 210, 215, 218, SD-1 Pumps	
View	Communications		
		Isocratic Pump	
		Pump A	
		RS-422 unit ID 1	
4	VARIAN_PROSTAR210_IHM.DLL	1.13.2.1	
VARIA	N ELS-2100 Varian	ProStar 210,215,218,SD1 Pumps 1 Idle Free	

Configure the *RS-422 unit ID* number of the pump and the *Model* of the pump (210, 215, 218 or SD-1).

The RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the pumps (refer to the Pump manual to configure the RS-422 unit ID number).

9. Press the 410 autosampler icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the autosampler is connected (new Configuration 1). Configure the *Autosampler device identifier* number of the 400 module. This RS-422 unit ID must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module (refer to the 410 manual to configure the RS-422 unit ID number). The autosampler must also be in serial mode to communicate with Galaxie. To do so press F then 4 on the autosampler when it is ready.



Click on the *Hardware* tab and configure the driver according to the options present in the autosampler.

Co 🖻	nfigure system		
Cover View 210-218	Comnunication	VARIAN ProStar 410 Autosampler         Options       Sample tray cooling         Column oven       Column oven         Alarm buzzer       Preparative         Hardware       Preparative         Tray type / Vial type       84 standard vials         Loop volume (µl)       100         Syringe volume (µl)       250         Tubing volume (Needle to valve) (µl)       15	
VARIA	VARIAN_PROSTAR410_IHW.DLL 1. N ELS-2100 Varian Pr	14.1.1 o Star 410 Autosampler #1 Idle Free	

10. Press the *Polymer Labs ELS 2100 Detector* icon and click on the *Communication* tab. Select in the *Name* field the name of the RS232\_Interface Bus previously configured to which the detector is connected (New Configuration 2). Configure the *Communication port number* of the ESLD (the Interface port on which the detector is connected). Configure the *ELSD Detector Device Identifier* number which must be unique to each module connected to the RS232\_Interface bus and must match the one configured in the module.

Co	nfigure system		
Over		Varian PL-ELS 2100 Detector	
View	Communication		
240-248			<u>X</u> <u>C</u> ancel
		Communication Settings	
		internal RS232 Point-to-point	
		C Hercule RS232 Point-to-point	
		Name New Configuration 2	
		Communication port number COM2 -	
		ELSD Detector Device Identifier	
A			
	VARIANU_PE_ELSZ700_1HW.D		
VARIAN	N ELS-2100 Poly	ymer Labs ELS2100 Detector #1 Idle Free	

- 11. Click on the *OK* button to finish the configuration of the system.
- 12. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# **MIB Interface with relays Systems**

The MIB Interface offers the possibility to use Relays (from 1 to 4), to control action on instruments.

To configure the system using both analog channels and relay on a MIB Interfgace, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System						×
	System (Proper	ties edition)				
	Name	System A				
	Description					
	Laboratory			•	Laboratories	
	Description					
	Acquisition server	FRFONW000011	•	Sequence server	FRFONW000011	•
	🦳 System locked					
Help     Cance	1			≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext	]

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the sequence server. Then click on *Next.* 

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 4. To configure that system, it is mandatory to install three devices:
  - 1. Manual Injector Control
  - 2. Star 800 MIB Analog Input Signal
  - 3. Star 800 MIB Relay Control
  - 4. Click on the *Add* button, select in the *Device Type* list Manual Injector Control and press *OK*. Repeat the same operation for the rest of the required devices. When the three devices have been added, the screen should be as below.



5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 6. In the next screen, click on the *Overview* button and arrange the modules as required.
- 7. Press the MIB Interface icon.

🕆 Configure system	
ChROMATOGRAPHY INTERFACE Acquisition - Main St View MIB INTERFACE name Channels Channel 1 Channel 2 Channel 3 Channel 3 Channel 3	etup
Channel 4	
System A Star 800 MIB Analog Input Signal #1 Idle Fr	ee

Select the MIB Interface to use in the scrolling list, and the analog channel(s).

Correspondence between channel number and connector on the MIB Interface:

# 800 MIB Interface: 850 MIB Interface: Channel 4 Image: Channel 3 Channel 2 Image: Channel 1 Channel 3 Image: Channel 1

8. Press the MIB Relays icon.

#### 03-914948-02:14

ି m Configure system		
Over View       MIB INTERFACE Relays - Main Setup         MIB INTERFACE name       MIB interface         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison of the setup         Image: Comparison of the setup       Image: Comparison		<u>√ ΩK</u> <u>≻ C</u> ancel
System A Star 800 MIB Relay Control #1 Idle	Free	

Check the Allow remote control options to allow the user to activate the relays from the Status in Galaxie Chromatography Data System application.

Check the relay(s) to use.

#### NOTE:

In the case of STAR 800 MIB Interface, the relays are two points, in the case of a 850 MIB Interface, thr relays are three points:







# Agilent LC Systems

The Galaxie Chromatography Data System uses GPIB to communicate with the Agilent 1100/1200 modules.

For each Agilent 1100/1200 module controlled by Galaxie, a switch located on the rear panel of the instrument must be configured appropriately. For all the modules, the first three switches from left must be turned off (Down Position) for control with Galaxie as for control with HP-CHEMSTATION. Changing the position of these switches must be done with module switched-off.



The module where the GPIB cable is connected should be the detector of the HPLC chain (as recommended by Agilent). This module is called the Master module. The rest of the modules of the HPLC chain communicate through the Master module via CAN cables. Please find below some examples of connection between Galaxie and Agilent 1100/1200 modules.



## Example 1: Agilent 1100 G1312-G1313-G1321-G1365

To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Create one **GPIB\_Interface** communication bus on the acquisition server (refer to section *Communication engine configuration* of this manual). This communication bus is mandatory to control the 1100/1200 modules. It will be called GPIB\_Interface bus 1.

Bus configuration	
Hardware type :	GPIB_INTERFACE
Configuration Name :	GPIB_Interface bus 1
STAR 800 MIB Name	: 800 MIB n°4
Channel :	Channel 1
	C Channel 2
Controller address :	21 🚖
TX Buffer :	1024
RX Buffer :	5120
	V OK X Cancel

3. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System					×
	System (Creatin	ıg a new item)			
	Name	Agilent LC1			
	Description				
	Laboratory		•	Laboratories	
	Description				
	Acquisition server	FRF0NW000024	Sequence server	FRFONW000024	•
	F System locked				
🕐 <u>H</u> elp 🛛 🗙 Cance	ı		≪> <u>P</u> revious	<b>式≫ <u>N</u>ext</b>	]

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



5. To configure that system, it is mandatory to install four devices:

Agilent Technologies 1100/1200 Binary Pump G1312

Agilent Technologies 1100/1200 Autosampler G1313

Agilent Technologies 1100/1200 Fluorescence Detector G1321

Agilent Technologies 1100/1200 Diode Array Detector G1315

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 1100/1200 Binary Pump G1312 and press *OK*. Repeat the same operation for the rest of the required devices. Please note that the device used to control the Multiple Wavelength Detector G1365 is the device for Diode Array Detector G1315. When the four devices have been added, the screen should be as below.

Edit System	×
	System Name: Agilent LC1
	Default Device Name       Device Nan         Agilent Technologies 1100/1200 Autosampler (G1313)       Agilent Tech         Agilent Technologies 1100/1200 Binary Pump (G1312)       Agilent Tech         Agilent Technologies 1100/1200 Diode Array Detector (G1315)       Agilent Tech         Agilent Technologies 1100/1200 Fluorescence Detector (G1321)       Agilent Tech
	<b>≪&gt;</b> <u>P</u> revious

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 7. In the next screen, click on the *Overview* button and arrange the modules as required.
- 8. Press the Binary Pump icon. Select in the *HPIB Hardware* field the name of the GPIB Bus previously configured to which the Master module is connected (GPIB\_Interface bus 1). Configure the *Master module HPIB address* number of the Master

module (in this example the master module is the G1321 module). This Master GPIB unit must match the one configured on the master module (refer to the Agilent Technologies 1100/1200 driver manual to configure the GPIB unit ID number). The Master GPIB unit must also be different from the GPIB unit ID controller. Once the communication is set, it is applicable for all modules.

9. Then, configure the *Model Serie* of the LC chain. Here it is an Agilent technologies 1100LC. In the Miscellaneous part, you have to choose some options available or not on your Binary pump. Choose if *Galaxie run is started by this module* or not. Select if the *Solvent Selector Valve* is installed or not, and finally, choose if the *Active Seal Wash* is installed or not. Galaxie will detect automatically the model of the Binary pump (G1312A or G1312B)

Configure s	system		
Over View	Agilent Technologies 1100 - Configuration G1312 Binary Pump		<u>√ 0</u> K
Bin ALS DAD FLD	Communications Master module HPIB address HPIB hardware GPIB_Interface bus 1 Master module IP address Model Serie Agilent Technologies 1100 LC Agilent Technologies 1100 LC Agilent Technologies 1200 LC Miscellaneous Galaxie run started by this module (No controlled autosampler) Solvent selector valve Not installed Active Seal Wash		<u>Cancel</u>
HP_1100_G	1312_IHW.DLL 2.2.2.1		
Agilent LC1	Agilent Technologies 1100 Binary Pump (* Idle	Free	

10.Press the Autosampler icon (ALS). Configure the *Model Serie* of the LC chain. Here it is an Agilent technologies 1100 LC. Finally configure the *Syringe* and *Seat* of the autosampler.

Co	nfigure system		
Over View		Agilent Technologies 1100 - Configuration G1313 Autosampler	<u>√ о</u> к
Bin •		Communications     Master module HPIB address	<u>X</u> <u>C</u> ancel
		C Master module IP address	
FLD		Model	
		Agilent Technologies 1100 LC Agilent Technologies 1100 LC Agilent Technologies 1200 LLC	
		Surings 100 vid surings with 200 vid loss estrillary	
		Seat 2.3 uL standard seat capillary	
4	HP_1100_G1313_IHM.D	XL 2.1.1.1	
Agilent	LC1	Agilent Technologies 1100 Autosampler (E Idle Free	

11.Press the DAD icon. First, select in the *Model* field Multiple Wavelength Detector (G1365A/B). Then, configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100LC. Finally, choose if Galaxie run is started by this module.

Co	nfigure system	
Over View	Agilent Technologies 1100 - Configuration Fast Diode Array Detector (G1315C)	<u>√ o</u> k
Bin	Communications	<u>X</u> <u>C</u> ancel
	Master module HPIB address     126      ↓     HPIB hardware GPIB_Interface bus 1	
FLD	C Master module IP address	
	Model Serie Agilent Technologies 1100 LC	
	Part number G1315C · Fast Diode Array Detector	
	G1365A/B- Multiple Wavelength Detector G1315C - Fast Diode Array Detector G1355C - Fast Multiple Wavelength Detector G1355C - Fast Multiple Wavelength Detector	
	HP_1100_G1315_IHM.DLL 2.3.1.133	
Agilent	LC1 Agilent Technologies 1100 Diode Array De Idle Free	

12. Press the FLD icon. Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100LC.

🚰 Co	nfigure system			
Over View		Agilent Technologies 1100 - Configuration G1321 Fluorescence Detector		<u>√ о</u> к
Bin				X Cancel
ALS		Communications   Master module HPIB address  23	ŧ	
		HPIB hardware GPIB_Interface bus 1	•	
FLD		C Master module IP address		
		Model		
		Serie Agilent Technologies 1100 LC Agilent Technologies 1100 LC		
		Agilent Technologies 1200 LC 人		
		Galaxie run started by this module (No controlled autosamp	oler)	
A	HP_1100_G1321_IHM.	DLL 2.1.1.1		
Agilent	LC1	Agilent Technologies 1100 Fluorescence C Idle	Free	

- 13. Click on the *OK* button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





## Example 2: Agilent 1100 G1311-G1315-G1316-G1329

To configure the system shown above, please do the following steps:

1. Install the National Instrument GPIB board in the acquisition server (refer to section *National Instrument GPIB Board Installation* of this manual). Once the board is installed, configure it so that it is the GPIB0.

NI GPIB Configuration	****	
Interface Name	PCI GPIB Board <u>Serial Number</u>	
GPIB0	008F489E	
GPIB1	None	
GPIB2	None	
GPIB3	None	
OK Cano	el Help	

2. Create one **NI488** communication bus on the acquisition server (refer to section Communication engine configuration of this manual). This communication bus is mandatory to control the 1100/1200 modules. It will be called GPIB0 bus.

Bus configuration	
Hardware type : NI488 Configuration Name : GPIB0	bus
,	
Controller address	: 21 🗲
NI488 Interface	GPIB0 💌
Board Timing :	Normal timing (500 ns)
P	V OK



3. In the *Galaxie Configuration Manager,* create a new system. The following screen will be displayed.

Edit System				$\mathbf{X}$
	System (Creatin	ıg a new item)		
	Name	Agilent LC2		
	Description			
	Laboratory Description		•	Laboratories
	Acquisition server	FRF0NW000024	Sequence server	FRF0NW000024
	F System locked			
🕐 <u>H</u> elp 🛛 🔀 Cance			≪⊃ <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 5. To configure that system, it is mandatory to install four devices:
  - 1. Agilent Technologies 1100/1200 Quaternary Pump G1311
  - Agilent Technologies 1100/1200 Diode Array Detector G1315
  - 3. Agilent Technologies 1100/1200 Column Compartment G1316
  - 4. Agilent Technologies 1100/1200 Thermostated Autosampler G1329

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 1100/1200 Quaternary Pump G1311 and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added, the screen should be as below.

Edit System		
	System Name: Agilent LC2 Instrument device(s) installed	()
	Default Device Name         Device Name           Agilent Technologies 1100/1200 Colum         Agilent Technologies 1100/1200           Agilent Technologies 1100/1200 Diode         Agilent Technologies 1100/1200           Agilent Technologies 1100/1200 Quater         Agilent Technologies 1100/1200           Agilent Technologies 1100/1200 Quater         Agilent Technologies 1100/1200           Agilent Technologies 1100/1200 Quater         Agilent Technologies 1100/1200           Agilent Technologies 1100/1200 Therm         Agilent Technologies 1100/1200	Add Remove
Help	<b>≪&gt;</b> <u>P</u> revious	<u>√ </u> <u>Ω</u> K

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



7. In the next screen, click on the *Overview* button and arrange the modules as required.

- 8. Press the Quaternary Pump icon. Select in the HPIB Hardware field the name of the GPIB Bus previously configured to which the Master module is connected (GPIB\_Interface bus 1). Configure the Master module HPIB address number of the Master module (in this example the master module is the G1321 module). This Master GPIB unit must match the one configured on the master module (refer to the Agilent Technologies 1100/1200 driver manual to configure the GPIB unit ID number). The Master GPIB unit must also be different from the GPIB unit ID controller. Once the communication is set, it is applicable for all modules.
- 9. Then, configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. In the Miscellaneous part, choose if *Galaxie run is started by this module* or not. Finally, choose if the *Active Seal Wash* is installed or not.

Co	nfigure system	
Over View	Agilent Technologies 1100 - Configuration G1311 Quaternary Pump	<u>√ 0</u> K
Quat Col	Communications  Master module HPIB address	<u>Cancel</u>
	Master module IP address	
	Serie Agilent Technologies 1100 LC Agilent Technologies 1100 LC Agilent Technologies 1200 LC Agilent Technologies 1200 LC Galaxie run started by this module (No controlled autosampler)	
	Options C Active Seal Wash	
Agilent	HP_1100_61311_IHM.DLL 2.1.1.1 LC2 Agilent Technologies 1100 Quatemary Put Idle Free	

10. Press the Autosampler icon (ALS). Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. Finally configure the *Syringe* and *Seat* of the autosampler.

🚰 Confi	igure system	
Over View	Agilent Technologies 1100 - Configuration G1329A Thermostated Autosampler	<u>√ 0</u> K
Quat		X Cancel
ALS	Communications ⓒ Master module HPIB address 22 €	
DAD	HPIB hardware GPIB0 bus	
	C Master module IP address	
	Model	
	Serie Agilent Technologies 1100 LC	
	Agilent Technologies 1100 LC Agilent Technologies 1200 LC	
	Syringe 100 uL syringe with 200 uL loop capillary	
	Seat 2.3 uL standard seat capillary	
<u> </u>	1100_G1329_IHW.DLL 2.1.1.1	
Agilent LC2	Agilent Technologies 1100/1200 Thermoste Idle	

 Press the DAD icon. First, select in the *Model* field Multiple Wavelength Detector (G1315A/B). Then, configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. Choose the model of the detector, and finally, choose if Galaxie run is started by this module.

Co	nfigure system	
Over View	Agilent Technologies 1100 - Configuration Diode Array Detector (G1315A/B)	<u>√ 0</u> K
Quat Col ALS DAD	Communications  Master module HPIB address  HPIB hardware GPIB0 bus  Model  Serie Agilent Technologies 1100 LC  Part number G1315A/B • Diode Array Detector  G1365A/B • Multiple Wavelength Detector  G1365A/B • Multiple Wavelength Detector  G1365C · Fast Diode Array Detector  G1365C	<u>C</u> ancel
A	HP_1100_G1315_IHM.DLL 2.3.1.133	
Agilent	LC2 Agilent Technologies 1100/1200 Diode Arr Idle Free	

12. Press the Col icon. Check *Switch valve option installed* if this option is present in the instrument. Then choose if Galaxie run is started by this module or not;

🕞 Configure system	
Over Agilent Technologies 1100 - Configuration View G1316 Column Compartment	<u>√ Ω</u> K
Quart       Communications       22 Image: Communications         Image: Communications       Image: Master module HPIB address       22 Image: Communications         Image: HPIB hardware       GPIB0 bus       Image: Communications         Image: HPIB hardware       GPIB0 bus       Image: Communications         Image: Communications       Image: Communications       Image: Communications<	
Agilent LC2 Agilent Technologies 1100 Column Compa Idle Free	

- 13. Click on the OK button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





### Example 3: Agilent 1100 G1310-G1321-G1365-G1367

To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Create one **GPIB\_Interface** communication bus on the acquisition server (refer to section Communication engine configuration of this manual). This communication bus is mandatory to control the 1100/1200 modules. It will be called GPIB\_Interface bus 1.

Bus configuration	×				
Hardware type :	GPIB_INTERFACE				
Configuration Name : GPIB_Interface bus 1					
STAR 800 MIB Name : 800 MIB n*4					
Channel :	Channel 1				
	C Channel 2				
Controller address :	21 🚖				
TX Buffer :	1024				
RX Buffer :	5120				
	🗸 OK 🕺 Cancel				

3. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				$\mathbf{X}$
	System (Creating a new item)			
	Name	Agilent LC3		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	FRF0NW000024	Sequence server	FRFONW000024
	☐ System locked			
🕐 <u>H</u> elp			≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.
| Edit System      |  |
|------------------|--|
|                  | System Name:<br>Agilent LC3<br>Select which groups/projects control this system:<br>Group: New group<br>Projects associated to New group :<br>New project<br>Select all<br>More* |
| Help     X Cance | ♦ Previous   |

- 5. To configure that system, it is mandatory to install four devices:
  - 1. Agilent Technologies 1100/1200 Isocratic Pump G1310
  - 2. Agilent Technologies 1100/1200 Well Plate Autosampler G1367
  - 3. Agilent Technologies 1100/1200 Variable Wavelength Detector G1314
  - 4. Agilent Technologies 1100/1200 Refractive Index Detector G1362

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 1100/1200 Isocratic Pump G1310 and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added the screen should be as below.

Edit System		X
	System Name:         Agilent LC3         Instrument device(s) installed         Default Device Name         Agilent Technologies 1100/1200 Diod         Agilent Technologies 1100/1200 Fluor         Agilent Technologies 1100/1200 Well         Agilent Technologies 1100/1200 Well         Agilent Technologies 1100/1200 Well         Agilent Technologies 1100/1200 Well	
<u> Help</u>	♣> Previous     ↓> Next	

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 7. In the next screen, click on the *Overview* button and arrange the modules as required.
- 8. Press the Isocratic Pump icon. Select in the *HPIB Hardware* field the name of the GPIB Bus previously configured to which the Master module is connected (GPIB\_Interface bus 1). Configure the *Master module HPIB address* number of the

Master module (in this example the master module is the G1362 module). This Master GPIB unit must match the one configured on the master module (refer to the Agilent Technologies 1100/1200 driver manual to configure the GPIB unit ID number). The Master GPIB unit must also be different from the GPIB unit ID controller. Once the communication is set, it is applicable for all modules.

9. Then, configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. Finally, in the Miscellaneous part, choose if *Galaxie run is started by this module* or not.

🚡 Configure system 📃 🗖 🗙			
Over Agilent Technologies 1100 - Configuration View G1310 Isocratic Pump	<u>√ 0</u> K		
Iso       Communications         Image: Communications       Image: Communications			
Agilent LC3 Agilent Technologies 1100 Isocratic Pump Idle Free			

10. Press the VWD icon. Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. Finally, in the Miscellaneous part, choose if *Galaxie run is started by this module* or not.

Configure system			
Over Agilent Technologies 1100 - Configuration G1314 Variable Wavelength Detector	<u>√ 0</u> K		
View       G1314 Variable Wavelength Detector         Image: Solution of the			
HP_1100_61314_HHM.DLL 2.1.1.1 Avilant I C3 Avilant I C3 Even			

11. Press the RI icon. Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC. Finally, in the Miscellaneous part, choose if *Galaxie run is started by this module* or not.

<sup>ଜ</sup> ୁଲ Co	nfigure system	
Over View	Agilent Technologies 1100 - Configuration G1362 Refractive Index Detector	<u>√ о</u> к
		X Cancel
	Communications  Master module HPIB address  22	
	C Master module IP address	
	Model	
	Serie Agilent Technologies 1100 LC	
	Miscellaneous	
	HP_1100_G1362_IHM.DLL 2.1.1.1	
Agilent	LC3 Agilent Technologies 1100/1200 Refractiv Idle Free	

12. Press the autosampler icon (ALS). Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1100 LC.Check *Thermostat option installed* if this option is present in the instrument. Configure the *Syringe size, Seat capillary* and *Loop capillary* of the autosampler. Finally, configure the type of *trays* and/or *well-plates* present in the autosampler.

Configure :	🚡 Configure system 📃 🗖 🗙			
Over View	Agilent Technologies 1100 - Configuration G1367 Well Plate Autosampler	<b>√</b> <u>0</u> K		
View Liso	G1367 Well Plate Autosampler			
	Plate 2 None			
₽ ₩_1100_G	HP_1100_G1367_IHW.DLL 2.1.1.1			
Agilent LC3 Agilent Technologies 1100 WellPlate Same Idle Free				

- 13. Click on the OK button to finish the configuration of the system.
- 14. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



#### Example 4: Agilent 1200 G1312-G1313-G1315-G1321



To configure the system shown above, please do the following steps:

1. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				
	System (Creatin	ıg a new item)		
	Name	Agilent 1200		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	FRFONW000024	Sequence server	FRFONW000024
	☐ System locked			
🕐 <u>H</u> elp 🛛 🗙 Cance			《누 <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

2. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 3. To configure that system, it is mandatory to install four devices:
  - 1. Agilent Technologies 1100/1200 Binary Pump G1312
  - 2. Agilent Technologies 1100/1200 Autosampler G1313
  - Agilent Technologies 1100/1200 Diode Array Detector G1315
  - 4. Agilent Technologies 1100/1200 Fluorescence detector G1321

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 1100/1200 Binary Pump G1312 and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added, the screen should be as below.



4. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



5. In the next screen, click on the *Overview* button and arrange the modules as required.

- 6. Press the Binary Pump icon. Select in the *Master module IP address* field the IP address. Once the communication is set, it is applicable for all modules. It is possible to set the IP address from any module.
- 7. Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1200 LC. Then, in the Miscellaneous part, choose if *Galaxie run is started by this module* or not. Select if the *Solvent Selector Valve* is installed or not, and finally, choose if the *Active Seal Wash* is installed or not. Galaxie will detect automatically the model of the Binary pump (G1312A or G1312B)

🚰 Co	🚡 Configure system 📃 🗖 🔀			
Over View	Agilent Technologies 1100 - Configuration G1312 Binary Pump	<u>√ о</u> к		
Bin ALS DAD E FLD I	Communications C Master module HPIB address HPIB hardware GPIB0 bus  Master module IP address 10.190.200.153  Model	<u>Cancel</u>		
	Serie Agilent Technologies 1100 LC Agilent Technologies 1100 LC Agilent Technologies 1200 LC Agilent Technologies 1200 LC Galaxie run started by this module (No controlled autosampler) Solvent selector valve Not installed CActive Seal Wash			
l	HP_1100_G1312_IHW.DLL 2.2.2.1			
Agilent	1200 Agilent Technologies 1100 Binary Pump (r Idle Free			

8. Press the Autosampler icon (ALS). Configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1200 LC. Finally configure the *Syringe* and *Seat* of the autosampler.

Configure system			
Over View		Agilent Technologies 1200 - Configuration G1313 Autosampler	<b>√</b> <u>о</u> к
Bin ALS DAD FLD		Communications         Master module HPIB address         HPIB hardware         GPIB0 bus         Master module IP address         10.190.200.153         Model         Serie       Agilent Technologies 1200 LC	<u>C</u> ancel
Agilent	HF_1100_G1313_IHW 1200	Syringe       100 uL syringe with 200 uL loop capillary         Seat       2.3 uL standard seat capillary         t.DLL 2.1.1.1         Agilent Technologies 1100 Autosampler (C	

9. Press the DAD icon. First, select in the Model field Multiple Wavelength Detector (G1315C-Fast Diode Array Detector). Then, configure the *Model Serie* of the LC chain. Here it is an Agilent Technologies 1200 LC. Choose the model of the detector, and finally, choose if Galaxie run is started by this module.

na Configure system			
Over View	Agilent Technologies 1200 - Configuration Fast Dinde Array Detector (G1315C)		<u>√ 0</u> K
View Same	Fast Diode Array Detector (G1315C)         Communications         Master module HPIB address         HPIB hardware         GPIB0 bus         Master module IP address         10.190.200.153         Model         Serie       Agilent Technologies 1200 LC         Part number       G1315C - Fast Diode Array Detector         G1315A/B - Diode Array Detector         G1315C - Fast Diode Array Detector         G1365C - Fast Multiple Wavelength Detector         G1365C - Fast Multiple Wavelength Detector         G1365C - Fast Multiple Wavelength Detector		
HP_1100_G1315_IHW Agilent 1200	Acilent Technologies 1100 Diode Array De Idle	Free	

10. Press the FLD icon. Check if Galaxie run is started by this module or not.

Co	nfigure system	
Over View	Agilent Technologies 1200 - Configuration G1321 Fluorescence Detector	<u>√ о</u> к
Bin		X Cancel
ALS	Communications	
DAD	C Master module HPIB address 22 € HPIB hardware GPIB0 bus	
FLD	Master module IP address 10.190.200.153	
	Model	
	Serie Agilent Technologies 1200 LC	
	Miscellaneous	
	Galaxie run started by this module (No controlled autosampler)	
A	HP_1100_G1321_IHW.DLL 2.1.1.1	
Agilent	1200 Agilent Technologies 1100 Fluorescence C Idle Free	

- 11. Click on the OK button to finish the configuration of the system.
- 12. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.





#### Example 5: Agilent 1050 79855-79854-79853-79852

To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. Create one **GPIB\_Interface** communication bus on the acquisition server (refer to section Communication Engine Configuration of this manual). This communication bus is mandatory to control the 1100/1200 modules. It will be called GPIB\_Interface bus 1.

Bus configuration	×
Hardware type :	GPIB_INTERFACE
Configuration Name :	GPIB_Interface bus 1
STAR 800 MIB Name :	800 MIB
Channel :	Channel 1
	C Channel 2
Controller address :	21
TX Buffer :	1024
RX Buffer :	1024
	V OK X Cancel

3. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)	_	
	Name	Agilent LC4		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	NYMPHEA	Sequence server	NYMPHEA 💽
	System locked			
Image: Help     Image: Cance	1		<p previous<="" th=""><th>☆ Next √ <u>0</u>K</th></p>	☆ Next √ <u>0</u> K

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System	×
	System Name:
	Agilent LC4
	Select which groups/projects control this system:
Spr. P. I.	Projects associated to Etalonnage :
	Mode inverse
	Select all
1 BAR	Der 🕶
<u>() H</u> elp	I

- 5. To configure that system, it is mandatory to install four devices:
  - 1. Agilent Technologies 1050 Autosampler
  - 2. Agilent Technologies 1050 Multiple Wavelength Detector
  - 3. Agilent Technologies 1050 Variable Wavelength Detector
  - 4. Agilent Technologies 1050 Quaternary Pump

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 1050 Autosampler and press *OK*. Repeat the same operation for the rest of the required devices. When the four devices have been added the screen should be as below.

Edit System	×
	System Name: Agilent LC4
	Instrument device(s) installed 🔷 🔷
	Default Device Name         Device Name           Agilent Technologies 1050 Autosample         Agilent Technologies 1050 Autos           Agilent Technologies 1050 Multiple Wa         Agilent Technologies 1050 Multiple           Agilent Technologies 1050 Quaternary         Agilent Technologies 1050 Quaternary           Agilent Technologies 1050 Quaternary         Agilent Technologies 1050 Quaternary           Agilent Technologies 1050 Quaternary         Agilent Technologies 1050 Quaternary           Agilent Technologies 1050 Variable W         Agilent Technologies 1050 Variab
Image: With the second secon	al <u>Next</u> K

6. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



- 7. In the next screen, click on the *Overview* button and arrange the modules as required.
- 8. Press the Quaternary Pump icon. Select in the *Hardware* field the name of the GPIB Bus previously configured to which the pump is connected (GPIB\_Interface bus 1). Configure the *Instrument address* number of the 1050 module This GPIB unit

ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Agilent Technologies 1050 driver manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally in *Module Start*, select Internal: Module is started by GALAXIE software.

Configure s	ystem	-OX
Over View	Agilent Technologies 1050 HPLC - Configuration HP79852 Quatemary Pump	<u>√ </u> ΩК
		X Cancel
DAD		
ALS	Hardware GPIB_Interface Bus 1	
	Instrument Address 16 🚔	
	Module Start	
	Internal : Module started by GALAXIE software	
	🔽 Synchronize Software On This Module	
HP_1050_	79852_HHM.OLL 1.7.1.0	
Agilent LC4	Agilent Technologies 1050 Quatemary Pur Idle Free	

9. Press the VWD icon. Select in the *Hardware* field the name of the GPIB Bus previously configured to which the detector is connected (GPIB\_Interface bus 1). Configure the *Instrument HPIB address* number of the 1050 module This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Agilent Technologies 1050 driver manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally in *Module Start*, select Internal: Module is started by GALAXIE software.

Configure system			
Over View	Agilent Technologies 1050 HPLC - Config HP79853 Variable Wavelength Detect	u <b>ration</b> or	<u>√ 0</u> K
			<u>X</u> <u>C</u> ancel
DAD	HPIB Interface		
	Hardware GPIB_Interface Bus 1		
	Instrument Address 10 🚖		
	Module Start		
	Internal : Module started by GALAXIE software	-	
HP_1050_79853_IH	N.DLL 1.7.1.0		
Aqilent LC4	Agilent Technologies 1050 Variable Wavel Idle	Free	

10. Press the DAD icon. Select in the Hardware field the name of the GPIB Bus previously configured to which the detector is connected (GPIB\_Interface bus 1). Configure the Instrument address number of the 1050 module This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Agilent Technologies 1050 driver manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally in Module Start, select Internal: Module is started by GALAXIE software.

Configure system			
Over View	Agilent Technologies 1050 HPLC - Config HP79854 Mutli Wavelength Detecto	guration	<u>√ </u> <u>0</u> K
			<u>X</u> <u>C</u> ancel
	HPIB Interface		
	Hardware GPIB_Interface Bus 1	<u> </u>	
	Instrument Address  14		
	Module Start		
	Internal : Module started by GALAXIE software	<b>_</b>	
HP_1050_79854_1HM	.DLL 1.7.1.0		
Aqilent LC4	Agilent Technologies 1050 Multiple Wavel Idle	Free	

11. Press the ALS icon. Select in the *Hardware* field the name of the GPIB Bus previously configured to which the detector is connected (GPIB\_Interface bus 1). Configure the *Instrument address* number of the 1050 module This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Agilent Technologies 1050 driver manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller.

Configure system		
Configure system	Agilent Technologies 1050 HPLC - Configuration HP79855 Autosampler	_ □ × √ <u>DK</u> ★ <u>Cancel</u>
HP_1050_79855_1H18.0 Agilent LC4	DL 1.7.1.0 Axilent Technologies 1050 Autosampler (7 Idle	

- 12. Click on the OK button to finish the configuration of the system.
- 13. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



### **Agilent GC Systems**

### Example 1: Agilent 5890 with 7673 Autosampler



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interface on the acquisition server (refer to section MIB Interface Configuration of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)	_	
	Name	5890-7673		
	Description			
	Laboratory		•	Laboratories
	Description			
A HANNES	Acquisition server	SANTAMARIA	Sequence server	SANTAMARIA
	🔲 System locked			
@ Help	1		《누 <u>P</u> revious	☆ NextDK

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		×
	System Name:	
	5890-7673         Select which groups/projects control this system:         Group:       Group 1         Projects associated to Group 1 :         Denzene	
		Select all ★ Unselect all
		Dore ▼
Image: Help     X Cance	I Servious	<u> </u>

- 4. To configure that system, it is mandatory to install two devices:
  - 1. Agilent Technologies 5890 Gas Chromatograph
  - 2. Agilent Technologies 7673 Autosampler

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 5890 Gas Chromatograph and press *OK*. Repeat the same operation for the rest of the required devices. When the two devices have been added the screen should be as below.

Edit System	×
	System Name: 5890-7673
	Instrument device(s) installed         Default Device Name         Agilent Technologies 5890 Gas Chrom         Agilent Technologies 7673 Autosampler         Agilent Technologies 7673 Autosampler         Agilent Technologies 7673 Autosampler
Image: Cancel	

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. Press the 5890 icon, the following screen will be displayed.

Over Contract	Agilent Tech	nologies 5890 Serie	II - Configuration	√ QK
76736	Hatdware Chromatograph Model Communication Board	Agilent Technologies ! HPIB & RS232 Comm	i890 Serie II 🔹	X Cancel
العر	Detector Type Inlet Type	None	▼ None ▼	
	Update From GC	EPCA Installed     Cyo Installed     Aux C    Aux C	EPC B Installed     Aux/Terry Temperature     Aux E    Aux F	
	Communications C Local Serial Port STAR 800 MIB Serial Bauds Rate 9500 Bo	el Port 850 MIB	Pott Number : COM 1 🕏	
	Miscelaneous	en GALAXIE run is stopp	ved	
5890-7673	Agilent Technol	ogies 5890 Gas Idle	Free	

Select in the *Chromatograph Model* list the type the 5890. In the *Communication board* field, it is mandatory to select HPIB&RS232 Communication Board. Select also which type of inlets and detectors are present in the GC.

Finally in the *Communications* group parameters, select the *Star 800 MIB serial port,* and in the dropdown list select the MIB Interface previously configured. Set the communication *Baud Rate* and enter in the *Port Number* field, the port number of the where the 5890 is connected to.

7. Press the 7673 autosampler icon, the following screen should appear.

Configure s	ystem	Statement Street of Street Street			_ 🗆 ×
Over View 5890	Agilent Te	achnologies 7673 Autos	ampler - Configur	ation	√ QK × Cancel
7473) 24	Hardware	Front	Back		
	100 Vials Tray	Present	3 viais i unei	-	
	Computer Hardward C Local Serial P C STAR 800 MI	r lait B Serial Port 850 N	ПВ		
	Communication Set Bauds Rate	lup 600 Bds	Port Number : COM	2 🛫	
A 107_7673	HAN DLL 1 7.0.0				
5890-7673	Agilent T	echnologies 7873 Auto: Id	le	Free	

In the Hardware parameter group, select if the autosampler is installed on the front or/and back *inlet* and if the *100 vial Tray* option is present.

Finally in the *Computer Hardware* and *Communication Setup* group parameters, select the *Star 800 MIB serial port* and in the dropdown list select the MIB Interface previously configured. Set the communication *Bauds Rate* and enter the port number of the (where the 7673 is connected to) in the *Port Number* field.

- 8. Click on the OK button to finish the configuration of the system.
- 9. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



## Example 2: Agilent 6890 GC with 7673 Autosampler in Serial communication mode



To configure the system shown above please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creating a new item)			
	Name	6890-7673		
	Description			
	Laboratory	[	•	Laboratories
	Description			
Carlot Ma	Acquisition server	SANTAMARIA	Sequence server	SANTAMARIA
	System locked			
Image: Weight of the second	1		≪> <u>P</u> revious	<b>⊄≫</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		X		
	System Name:			
	Group: Group 1  Projects associated to Group 1 :  Denzene toluene	✓ Select all         ✓ Unselect all         ✓ Unselect all		
🕐 <u>H</u> elp 🛛 🔀 Cance	d Previous	<u>∢ N</u> ext		

- 4. To configure that system, it is mandatory to install one device:
  - 1. Agilent Technologies 6890 Gas Chromatograph

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 6890 Gas Chromatograph and press *OK*. When the device has been added the screen should be as below.

Edit System	×			
	System Name: 6890-7673			
	Default Device Name       Add         Agilent Technologies 6890 Gas Chrom       Agilent Technologies 6890 Gas C         Remove			
Image: Base of the second	d <b>≪⊃ <u>P</u>revious</b> ⊂≫ <u>N</u> ext <u>√</u> <u>D</u> K			

Please note that even if the GC is equipped with a 7673 autosampler, only the 6890 device must be added as the 6890 gas chromatograph controls the autosampler.

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. Press the 68x0 icon and click on the *Communication* tab, the following screen will be displayed.

🚰 Con	figure syster	n			
Over View	- <u> </u>	Agilent Technologies 6890 Plus - Configuration			<u>√ </u> <u>□</u> K
	Communicatio	n Hardware Options Val	ves Options Auxiliary Options		<u>X</u> <u>C</u> ancel
		Communication settings			
		C Local Serial Port			
		800 MIB Serial Port	Star 800 MIB N*2	•	
		C Ethernet	10.190.200.98		
		L			
		RS232 Settings			
		Port Number 3	Bauds Rate   19200 Bds		
		<u> </u>			
HP_6890_HNM.DLL 1.11.2.1					
Aqilent 6	890	6890	Idle	Free	

- 9. Select 800 MIB serial port and in the dropdown list, select the MIB Interface previously configured. Set the communication Bauds Rate and enter in the Port Number field, the port number of the where the 6890 is connected to. To find the baud rate of the GC refer to the Agilent 6890 GC Control Manual.
- 7. Click on the *Hardware Options* tab, the following screen will be displayed.

🚰 Соп	figure system			
Over View	Agilent Technologies 6890 - Configuration			
	Communication H	ardware Options Valves Options Auxiliary Options		X <u>C</u> ancel
	Hardware			
	Chromatograph	Agilent Technologies 6890	•	
	Inlet Type	Front Back None		
	Detector Type	Front Back None		
		Front Back		
	Autosampler Typ	e No Sampler 🗾 No Sampler		
	100 Vial Tray			
A	ци соол цилли 10-	4.4		
6890-	7673	Agilent Technologies 6890 Gas Idle	Free	

In this screen, select the *Chromatograph* model, the *inlet type*, the *detector type* and the *autosampler type* if present. If the GC is equipped with Valves or Auxiliary modules click on the appropriate tab to configure them (refer to the *Agilent 6890 GC control manual* for more details).

- 8. Click on the OK button to finish the configuration of the system.
- 9. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# Example 3: Agilent 6890 GC with 7673 Autosampler in Ethernet communication mode



To configure the system shown above please do the following steps:

- 1. Setup the BOOTP server to give the Agilent 6890 GC an IP address (refer to section *BOOTP Configuration* of this manual). It is possible to give a fixed IP address to the GC, for more information, refer to the *Agilent 6890 GC Control Manual*.
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				X
	System (Creatin	ng a new item)	_	
	Name	6890-7673		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server		Sequence server	SANTAMARIA
	System locked			
<u>Help</u> <u>Cance</u>	1		≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.
| Edit System |  | × |
|-------------|--|---|
| Edit System | System Name:<br>6890-7673<br>Select which groups/projects control this system:<br>Group: Group 1 |   |
|             | Projects associated to Group 1 :<br>benzene toluene  |   |
|             | More▼<br>≪> Previous Sext Vector   | ] |

- 4. To configure that system, it is mandatory to install one device:
  - 1. Agilent Technologies 6890 Gas Chromatograph

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 6890 Gas Chromatograph and press *OK*. When the device has been added the screen should be as below.

Edit System	<u>×</u>				
	System Name: 6890-7673 Instrument device(s) installed				
	Default Device Name       Add         Agilent Technologies 6890 Gas Chrom       Agilent Technologies 6890 Gas C         Remove				
Image: Help     Cancel	al				

Please note that even if the GC is equipped with a 7673 autosampler, only the 6890 device must be added as the 6890 gas chromatograph controls the autosampler.

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"

ConfigManag	er.exe	×
?	Do you want to configure your system now ?	
	Yes No	

6. Press the 68x0 icon and click on the *Communication* tab, the following screen will be displayed.

Configure system				
Over View	Agilent Technol	_√_ <u>о</u> к		
	Communication Hardware Options Valve:	s Options Auxiliary Options		<u>X</u> <u>C</u> ancel
	Communication settings			
	C Local Serial Port			
	C 800 MIB Serial Port	Star 800 MIB N°2	-	
		10.190.200.98		
	RS232 Settings			
	Port Number  🗲	Bauds Rate 19200 Bds	J	
A	10 2000 ILN/ JUL 4 44 2 4			
Agilent 6	890 6890	Idle		

Select *Ethernet* and type the IP address of the GC in the corresponding field.

7. Click on the *Hardware Options* tab, the following screen will be displayed.

Configure system					
Over Agilent Technologies 6890 - Configurati	ion				
Communication Hardware Options Valves Options Auxiliary Options		<u>X</u> <u>C</u> ancel			
Hardware					
Chromatograph Agilent Technologies 6890	<b>_</b>				
Front Back					
Inlet Type None None	<b>_</b>				
Front Back					
Detector Type None 💌 None	•				
Front Back					
Autosampler Type No Sampler Type No Sampler	<b>•</b>				
100 Vial Tray 🔲 Present					
HP_6890_1HW.DLL 1.8.1.1					
6890-7673 Agilent Technologies 6890 Gas Idle	Free				

In this screen, select the *Chromatograph* model, the *inlet type*, the *detector type* and the *autosampler type* if present. If the GC is equipped with Valves or Auxiliary modules click on the appropriate tab to configure them (refer to the *Agilent 6890 GC Control Manual* for more details).

- 8. Click on the OK button to finish the configuration of the system.
- 9. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



Example 4: Agilent 7890 GC with 7683 Autosampler in Ethernet communication mode



To configure the system shown above please do the following steps:

- Setup the BOOTP server to give the Agilent 7890 GC an IP address (refer to section BOOTP Configuration of this manual). It is possible to give a fixed IP address to the GC, for more information, refer to the Agilent 7890 GC Control Manual.
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System						×
	System (Proper	rties edition)				
	Name	7890-7683				
CAR.	Description		т			
			-to		1	
	Laboratory Description		_	<u> </u>		
	Acquisition server	FRFONW000008	•	Sequence server	FRF0NW000008	•
	System locked					
<u> Help</u> <u>X</u> Cancel				≪⊃ <u>P</u> revious	<b>☆</b> <u>N</u> ext	

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System			×
Edit System	System Name: 7890-7683 Select which groups/projects control t Group: G1 Projects associated to G1 : ♥ P1 ♥ P2 ♥ RM	his system:	Select all More •
<u>e</u> lp		Direvious	<b>☆</b> <u>N</u> ext

4. To configure that system, it is mandatory to install one device:

Agilent Technologies 7890 Gas Chromatograph

Click on the *Add* button, select in the *Device Type* list Agilent Technologies 7890 Gas Chromatograph and press *OK*. When the device has been added the screen should be as below.

Edit System		X
	System Name: 7890-7683	
	Instrument device(s) installed       Default Device Name       Agilent Technologies 7890 Gas Chromatogr       Agilent Technologies 7890 Gas Chromatogr	
Image: Concernent state	Image: Second state       Image: Secon	

Please note that even if the GC is equipped with a 7683 autosampler, only the 7890 device must be added as the 7890 gas chromatograph controls the autosampler.

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



🔓 🖬 Co	Configure system						
Over	Agile	nt Technologies 7890-GC • (	Configuration				
View 7890	View Communication Autosampler Inlets Columns Oven Detectors						
		Communication settings					
		IP address	10.190.201.13				
			Connect				
		Model :	Agilent 7890A				
		Serial number :	CN10744034				
		Firmware revision :	A.01.09.2				
	10 7000 HAR DU 4 0 0 250						
H#_7890_1HW.CCL 1.0.0.258							
/890-76	83 Agilent Tech	nologies /890 Gas Chromato <u>(</u> Idle	Free				

6. In the *Communication* tab, define the GC IP address and press *Connect:* 

7. The GC configuration (inlet types, detector types ...) is automatically uploaded from the instrument.

Agilant Technologies		🚡 Configure system						
r Agilent Technologies 7890-GC - Configuration								
Communication Autosampler Inlets	Columns   Oven   Detec	ctors						
Inlet type Gas Maximum pressure (Psi) Minimum pressure (Psi)	Front inlet S/SL Hel-3 100	tors   Back inlet COC He 100 0						
B 2000 UNE DU 4 0 0 050								
Avilant Technologica 7000 Coc Ch	uunntee Iulle	Ema						
	Communication Autosampler Inlets Inlet tvoe Gas Maximum pressure (Psi) Minimum pressure (Psi) 27890_IHM.DLL 1.0.0.258 Agilert Technologies 7890 Gas Chr	Communication       Autosampler       Inlets       Columns       Oven       Detect         Front inlet         Gas       Heve         Maximum pressure (Psi)       100         Minimum pressure (Psi)       0	Communication     Autosampler     Inlets     Columns     Oven     Detectors       Inlet type     Front inlet     Back inlet     COC       Gas     He     He       Maximum pressure (Psi)     100     100       Minimum pressure (Psi)     0     0					

- 8. Click on the *OK* button to finish the configuration of the system.
- 9. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# PerkinElmer GC Systems

## Example 1: PerkinElmer Autosytem with Autosampler



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)		
	Name	PE Autosystem		
	Description			
	Laboratory	[	•	Laboratories
	Description			
	Acquisition server	SANTAMARIA	Sequence server	
	System locked			
<u>Help</u> <u>Cance</u>	l		≪> <u>P</u> revious	<b>☆</b> <u>N</u> ext

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 4. To configure that system, it is mandatory to install one device:
  - 1. PerkinElmer Autosystem Gas Chromatograph

Click on the *Add* button, select in the *Device Type* list PerkinElmer Gas Chromatograph and press *OK*. When the device has been added the screen should be as below.

Edit System			×
	System Name: PE Autosystem		
	Instrument device(s) installed		
	Default Device Name Perkin Elmer Autosystem Gas Chromatograph	Device Name Perkin Elmer Autosystem Gas C	Add Remove
Image: Help     X Cance	9	<b>≪&gt; <u>P</u>revious</b> G≫ <u>N</u> ext	<u>√ ⊡</u> K

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. Press the PerkinElmer Autosystem icon, the following screen will be displayed.

🚰 Con	figure syst	em									
Over View		- Comm	Perkin — Valve	Elmer ) Inlet	Det	DSYSTEN Misc	FXL GC - GC Info:	Configura unkwnown	tion		
					Comm	nunication co	onfiguration			decFiointac	
			M port typ Local port	t NMP eer		800 MIB		-	сом:		
				o mib por					1. 💌		
ð	PE_AUTOSYS	TEM_IHM.	DLL 1.7.5.	0							
PE Aut	tosystem		Perkin	Elmer Au	utosys	stem Gas (	Idle		Free		

Select *STAR 800 MIB port* and in the dropdown list select the MIB Interface previously configured. Enter in the *COM* field, the port number of the MIB Interfacewhere the autosystem is connected to. Do not press the *Get from GC* button now.

- 7. Click on the *OK* button to close the configuration of the system.
- 8. Stop the system by right clicking on its name in the organization view.



9. Edit the system again and click *Ok* to configure it. Then click on the autosystem icon.

Press now the *Get from GC* button. This will upload the configuration of the GC. When it is done, the firmware revision of the GC and a message "Configuration loaded successfully" will be displayed (see following screen).

🚰 Cor	nfigure syste	m						
Over View		Perkin Ein Comm Valve In	ner AUTOSYSTE	M XL GC - GC Info:	Configura N°:N610-17	<i>tion</i> 64 Rev:1.	Got From GC	
			Communication	configuration			decHolinac	
		COM port type -	B port 800 MIB		-	СОМ : 6 🔶		
			, <u> </u>					
	Configuration loaded successfully							
4	PE_AUTOSYSTE	ЭИ_ IHW.DLL 1.7.5.0						
PE Au	tosystem	Perkin Elm	er Autosystem Gas	Cldle		Free		

- 10. Click on the OK button to finish the configuration of the system.
- 11. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



#### Example 2: PerkinElmer Autosytem with HS40



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *Star 800J MIB configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System						X
	System (Proper	ties edition)	_	_	_	
	Name	Perkin Elmer - HS40				
	Description					
	Laboratory			•	Laboratories	
	Description					
	Acquisition server	Cormoran	▼ Seque	ence server Co	rmoran	•
	C System locked					
Image: Market Back     Image: Market Back       Image: Market Back     Image: Market Back <th>ł</th> <th></th> <th>≪&gt; Er</th> <th>evious 🔹</th> <th>Next Vext</th> <th></th>	ł		≪> Er	evious 🔹	Next Vext	

- 4. To configure that system, it is mandatory to install 2 devices:
  - 2. PerkinElmer Autosystem Gas Chromatograph
  - 3. PerkinElmer HS40 Headspace sampler
- Click on the *Add* button, select in the *Device Type* list PerkinElmer Gas Chromatograph and PerkinElmer HS40 Headspace sampler then press *OK*. When the devices have been added the screen should be as below.

Edit System			×
	System Name: Perkin Elmer - HS40	_	_
	Instrument device(s) installed		<b></b>
	Default Device Name Perkin Elmer Autosystem Gas Chromatograph Perkin Elmer HS40 Headspace Sampler	Device Name Perkin Elmer Autosystem Gas Ch Perkin Elmer HS40 Headspace S	<u>A</u> dd Remove
Image: Balance       Image: B		<b>≪⊃ <u>P</u>revious</b>	<u> </u>

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. Press the PerkinElmer Autosystem icon, the following screen will be displayed.

Con 🖥	figure system	_ <b>_ _ _</b> ×
Over View	Perkin Elmer AUTOSYSTEM XL GC - Configuration           Comm         Valve         Inlet         Det         Misc         GC Info: unkwnown         Get F	≪tancel
	Communication configuration CDM port type C Local port STAR 800 MIB port Star 1	
A	PE_AUTOSYSTEM_IHM.DLL1.10.2.1	
Perkin E	Imer - HS40 Perkin Elmer Autosystem Gas Chromator Idle Free	

Select *STAR 800 MIB port* and in the dropdown list select the MIB Interface previously configured. Enter in the *COM* field, the port number of the MIB Interfacewhere the autosystem is connected to. Do not press the *Get from GC* button now.

7. Press the HS40 icon, the following screen will be displayed.

Cor 🚽	figure system	
Over View	Perkin Elmer HS40 Headspace - Configuration           Comm         Options         HS Info: unkwnown	
	Communication configuration	
Perkin I	PE_HS40_IHM.DLL 1.7.0.0 Emer - HS40 Perkin Elmer HS40 Headspace Sampler: Idle Free	

Select *STAR 800 MIB port* and in the dropdown list select the MIB Interface previously configured. Enter in the *COM* field, the port number of the MIB Interfacewhere the HS40 is connected to.

- 8. Click on the OK button to close the configuration of the system.
- 9. Stop the system by right clicking on its name in the organization view.



10. Edit the system again and click *Ok* to configure it. Then click on the autosystem icon.

Press now the *Get from GC* button. This will upload the configuration of the GC. When it is done, the firmware revision of the GC and a message "Configuration loaded successfully" will be displayed (see following screen).

Configure system	1						_D×
Over View	Perkin Elmer AU	osystem t Misc	KL GC	Configura	tion 4 Rev:1	Sch	√ <u>□</u> K
	Con	munication co	nfiguration	l.		Get From GC	X Cancel
	COM port type C Local port STAR 800 MIB port	star 1		-	сом: 1 💼		
Townson	- to a data a concernant da						
	CHM.OLL 1.19.2.1						
Perkin Elmer - HS40	Perkin Elmer Autosystem	Gas Chromato	Idle		Free		

- 11. Click on the *OK* button to finish the configuration of the system.
- 12. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# **Thermo GC Systems**

## Example 1: Thermo GC 800 with Autosampler AS800



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- 2. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System				×
	System (Creatin	ng a new item)	_	
	Name	Thermo GC		
	Description			
	Laboratory		•	Laboratories
	Description			
	Acquisition server	HAVORN	Sequence server	HAVORN
	🔲 System locked			
Help	el		≪> <u>P</u> revious	\$> <u>N</u> ext  √ <u>□</u> K

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

3. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.



- 4. To configure that system, it is mandatory to install one device:
  - 1. Thermo 8000 Series Gas Chromatograph
  - 2. Thermo 800/850 Autosampler
  - 3. Star 800 MIB Analog Input signal

Click on the *Add* button, select in the *Device Type* list Thermo 8000 Series Gas Chromatograph and press *OK*. When the device has been added the screen should be as below.

Edit System		×
	System Name: Thermo GC	
	Default Device Name       Device Name         Star 800 MIB Analog Input Signal       Star 800 MIB Analog Input Signal         Thermo 800/850 Autosampler (Fisons/       Thermo 800/850 Autosampler (Fi         Thermo 8000 Series Gas Chromatogra       Thermo 8000 Series Gas Chromat	
	al <b>State State S</b>	

5. Click on the *OK* button and answer Yes to the question: "Do you want to configure your system now?"



6. Press the MIB Interface icon, the following screen will be displayed.

🕆 Configure system	
Over View       Mile INTERFACE Acquisition - Main Setup         Mile INTERFACE name       Mile INTERFACE name         Mile Interface       Image: Channels         Channel 1       Image: Channel 1         Channel 2       Image: Channel 3         Channel 4       Image: Channel 4	
mib Star 800 MIB Analog Input Signal #1 Idle Free	

In the dropdown list *MIB Interface name* select the MIB interface previously configured. Then select to which *Channel*, the GC detector is connected.

Correspondence between channel number and connector on the MIB Interface:

#### 800 MIB Interface:





7. Press the Thermo 8000 GC icon, the following screen will be displayed.

Over     CE8000 - Configuration       View     S Communication       S COptions     S Computer Hardware	пк
View Communication	
Communication Detailed Communication Setup Bauds Rate 3600 Bauds Comm Port Port 1 Communication not established CE8000 IHM.DLI 1.0.3.1	ancel
Thermo GC Thermo 8000 Series Gas Chron Idle Free	

Select 800 MIB Serial Port and in the dropdown list select the MIB Interface previously configured. Then enter in the Comm port field, the port number of the MIB Interfacewhere the autosystem is connected to and in the Bauds Rate field select 9600 bauds.

8. Click on the GC Options tab. The following screen will be displayed.

Con 🚽	ifigure system		
Over		CE8000 - Configuration	
	Communication GC Options Right channel	Options       GC 8000 Top         GC Type       GC 8000 Top         Flow control       Analog         3 way valve (NO)       GFC Device present (NO)         Available zones       Zone 1 present         Zone 1 present       Zone 2 present         Events number       Number of events         Post run options       Switch off oven power (NO)         Switch off zones power (NO)       Switch off zones power (NO)	
	Communication not	established CE8000 IHM.DLL 1.0.3.1	
Therm	no GC Therm	o 8000 Series Gas Chron Idle Free	

In this screen, configure the *GC Type*, the type of the *Flow control* and all the others options if they are present on the GC. To configure the detector installed click on the right or left channel tab and select the detector type.

9. Press the Thermo 800/850 AS icon, the following screen will be displayed.

Configure system				
Over	AS800_850 - Configuration			
View	<b>))))</b> AutoSampler			
		Type AS 800   Position Bight Injector	<u>X</u> <u>C</u> ancel	
-130000 ev				
		AutoSampler Configuration		
		C Local Serial Port		
142.7		800 MIB Serial Port Star 800 MIB		
		Bauds Rate 9600 Bauds 💌 Comm Port Port 2 💌		
		-AS800		
		AutoSampler Mode Standard		
		Vial Tray 32 Vial per Tray		
		· · · · · · · · · · · · · · · · · · ·		
·····	$\bowtie \triangleleft \succ \bowtie$			
A	Communication	not established AS800_850_IHM.DLL 1.0.3.1		
Therm	o GC Th	ermo 800/850 Autosampler (Fildle Free		

First select the *Type* of the autosampler and its *Position* on the GC. Then select *800 MIB Serial Port* and in the dropdown list select the MIB Interfacepreviously configured. Enter in the *Comm port* field, the port number of the MIB Interfacewhere the autosystem is connected to and in the *Bauds Rate* field select 9600 bauds. Finally, select the *Autosampler Mode* and the *Vial Tray* type.

- 10. Click on the OK button to finish the configuration of the system.
- 11. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# Waters LC Systems

### Example 1: Waters LC1 2690-2487-486



To configure the system shown above, please do the following steps:

- 1. Configure the MIB Interfaceon the acquisition server (refer to section *MIB Interface Configuration* of this manual).
- Create one GPIB\_Interface communication bus on the acquisition server (refer to section *Communication engine configuration* of this manual). This communication bus is mandatory to control the Waters modules. It will be called GPIB\_Interface bus 1.

Bus configuration	×
Hardware type :	GPIB_INTERFACE
Configuration Name :	GPIB_Interface bus 1
STAR 800 MIB Name :	800 MIB
Channel :	Channel 1
	C Channel 2
Controller address :	21
TX Buffer :	1024
RX Buffer :	1024
	V OK X Cancel

3. In the *Galaxie Configuration Manager*, create a new system. The following screen will be displayed.

Edit System					×
	System (Creatir	ng a new item)	_	_	
	Name	Waters LC1			
	Description				
	Laboratory		•	Laboratories	
	Description				1
	Acquisition server	SANTAMARIA	Sequence server	SANTAMARIA	]
	📕 System locked				
Help			≪> <u>P</u> revious	<b>⊄≫</b> <u>N</u> ext	

Enter the *Name* of the system, select in the *Acquisition server* and *Sequence server* the name of the acquisition server and the name of the sequence server. Then click on *Next*.

4. In the following screen associate one or more project(s) to the system and click on *Next*. If no groups/projects are defined, click on *Next*.

Edit System		×
Edit System	System Name: Waters LC1 Select which groups/projects control this system: Group: Group 1  Projects associated to Group 1 : benzene toluene	∑ Select all ∑ Unselect all More ▼
	Previous [	More ▼ More ▼

- 5. To configure that system, it is mandatory to install three devices:
  - 1. Waters 2690 Alliance
  - 2. Waters 2487 Dual Absorbance Detector
  - 3. Waters 486 Tunable Absorbance Detector

Click on the *Add* button, select in the *Device Type* list Waters 2690 Alliance and press *OK*. Repeat the same operation for the rest of the required devices. When the three devices have been added, the screen should be as below.

Edit System		×		
	System Name: Waters LC1			
	Instrument device(s) installed         Default Device Name       Device Name         Waters Corporation 2487 Dual Absorbance Detector       Waters Corporation 2487         Waters Corporation 2690 Alliance       Waters Corporation 2690         Waters Corporation 486 Tunable Absorbance Detector       Waters Corporation 486         Image: Corporation 486 Tunable Absorbance Detector       Waters Corporation 486	Add emove		
Help         ∑cance	IErevious5≫ ⊵ext	<u>√ Ω</u> K		

6. Click on the *OK* button and answer *Yes* to the question: "Do you want to configure your system now?"



7. Press the W2690 icon. Select in the *HPIB Hardware* field the name of the GPIB Bus previously configured to which the Alliance is connected (GPIB\_Interface bus 1). Configure the *Instrument address* number of the module. This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Waters 2690 Alliance User's manual to configure the GPIB unit

ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally check *Sample Thermostat Installed* and/or *Column Oven Installed* if those options are present in the module.

🚰 Configure system			
Over View	Waters Corporation HPLC - Configuration 2690 Alliance System		<u>√ 0</u> K
			X Cancel
002487			
W486	HPIB Interface		
	Instrument Address 2 🚖 And 3		
	HPIB Hardware GPIB_Interface bus 1	•	
	Hardware Options		
	Sample Thermostat Installed		
	Column Oven Installed		
W4T_2690_HMM.DLL 1.3	7.2.2		
Waters LC1	Waters Corporation 2690 Allianc Idle	Free	

8. Press the W2487 icon. Select in the *HPIB Hardware* field the name of the GPIB Bus previously configured to which the detector is connected (GPIB\_Interface bus 1). Configure the *Instrument address* number of the module. This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Waters 2487 User's manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally in *Module Start*, select Internal: Module is started by GALAXIE software.

🖉 🔂 Cor	nfigure system		×
Over View		Waters Corporation HPLC - Configuration 2487 Dual AbsorbanceDetector	<u>√ </u> <u>∩</u> K
W2690			<u>X</u> <u>C</u> ancel
W2487			
		HPIB Interface	
		Instrument Address 4 🗲 And 5	
		Module Start	
		Internal : Module started by GALAXIE software	
A			
	WAT_2487_THM.DLL 1	1.7.0.2	
Water	rs LC1	Waters Corporation 2487 Dual # Idle Free	

9. Press the W486 icon. Select in the HPIB Hardware field the name of the GPIB Bus previously configured to which the detector is connected (GPIB\_Interface bus 1). Configure the Instrument address number of the module. This GPIB unit ID must be unique to each module connected to the GPIB bus and must match the one configured in the module (refer to the Waters 486 Users manual to configure the GPIB unit ID number). The GPIB unit must also be different from the GPIB unit ID controller. Finally in Module Start, select Internal: Module is started by GALAXIE software.
| Cor 🖻        | nfigure system  |   |      |              |
|--------------|-----------------|---|------|--------------|
| Over<br>View |                 | Waters Corporation HPLC - Configuration<br>486 Tunable AbsorbanceDetector |      | <u>√ 0</u> K |
| W2690        |                 |   |      | X Cancel     |
| W2487        |                 |   |      |              |
|              |                 |   |      |              |
|              |                 | Instrument Address 22   |      |              |
|              |                 | HPIB Hardware GPIB_Interface bus 1  |      |              |
|              |                 | Module Start  |      |              |
|              |                 | Internal : Module is started by GALAXIE software                          |      |              |
|              |                 |   |      |              |
|              |                 |   |      |              |
|              |                 |   |      |              |
|              | WAT_486_IHM.DLL | 1.8.1.1   |      |              |
| Water        | s LC1           | Waters Corporation 486 Tunable Idle                                       | Free |              |

- 10. Click on the OK button to finish the configuration of the system.
- 11. Finally stop the system by right clicking on its name in the organization view. Then right click again and press start.



# Appendix

## **Check list for Galaxie installation**

The following list guides you into Galaxie installation. It lists the pre-requirements (firewall, anti virus...) that are needed to install Galaxie Software, and the actions to perform after the installation to set correct configuration (DCOM...)

#### Before launching Galaxie installation:

Enter the PC in the domain. For a Client/Server configuration, all computers must be in the same domain. For a standalone configuration, do not let it in a workgroup, enter it in a domain, in order to access all the folder options.

	Let only one network	card activated.	However,	make sure	one is activated.
--	----------------------	-----------------	----------	-----------	-------------------

De-activate all	Firewalls.
-----------------	------------

	De-activate the	Automatic	Windows	updates,	in orde	r to	avoid	the	automatic	reboots
during	g a sequence, o	r a single a	cquisition.							

		Set	"Windo	ws only	" for the	DEP	(Data	Execution	Prevention)	for PC	C under	XP	SP2
(ar	٦d	SP3	), Wind	ows 200	03 Serve	r (SP1	and S	P2)					

De-activate all Power saving (Hard drive, Wait, Disable Hibernate)

De-activate the network card power saving.

De-activate the Anti-Virus just before launch the Galaxie installation, and just during the Galaxie Installation.

Install Galaxie

#### After Galaxie installation:

Set DCOMs (recommended with the Diagnostic tool)

	Set the Directory rights	s (the Diagnostic	tool does not	do it) according	to the Installation
guic	le.				

Activate the Anti-virus, but exclude the Galaxie folder for the scan and the on-line protection. (This is mandatory)

Set all the setting that needs to be done according the Hints ans Tips of the Installation guide.

Reconnect the other network card if there are.

Reboot the computer.

## Cabling guide

#### Varian HPLC

Instrument	Cable Type	Part number
Polymer-Labs ELS 2100	RS232 Serial Cable	
ProStar 210	RS422 serial communication ribbon	03-935462-91
ProStar 215	RS422 serial communication ribbon	03-935462-91
ProStar 218	RS422 serial communication ribbon	03-935462-91
ProStar SD-1	RS422 serial communication ribbon	03-935462-91
ProStar 220	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar 230	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar 240	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar 310	GPIB cable 1m	81-839700-00
	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar 320	Analog cable to Star 800 MIB 3 m	03-907938-02
	Analog cable to Star 800 MIB 5 m	03-907938-03
	Analog cable to CIM	03-935220-01
ProStar 325	Ethernet cable 3 m	03-926129-01
	Ethernet cable 6 m	03-926129-02
ProStar 335	Ethornot coble 2 m	03-926129-01
	Ethemet cable 3 m	03-926129-02
	Ethernet cable 6 m	
Varian 356-LC	RS232 Serial Cable	

Instrument	Cable Type	Part number
ProStar 363	RS422 serial communication ribbon control cable	03-935462-91
	Analog Cable Star 800 MIB to ProStar 363, 3 m	03-907938-06
	Analog cable to CIM	03-935220-01
ProStar 400	RS422 serial communication ribbon	03-935462-91
ProStar 410	RS422 serial communication ribbon	03-935462-91
ProStar 420	RS422 serial communication ribbon	03-935462-91
ProStar 430	RS422 serial communication ribbon	03-935462-91
Prostar 500 CVM	RS422 serial communication ribbon	03-935462-91
ProStar 510	Serial cable to Star 800 MIB comm. port 3 m	03-907938-61
	Serial cable to PC comm. port 3 m	03-907938-62
ProStar 520	Ethernet cable 3 m	03-926129-01
	Ethernet cable 6 m	03-926129-02
ProStar 701	RS422 serial communication ribbon	03-935462-91
	Shielded cable to Varian Prostar detectors	R007200141
ProStar 9001/9002	GPIB cable 1 m	81-839700-00
9010/9012/9012-Q	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar 9050	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
ProStar CIM	RS422 serial communication ribbon	03-935462-91

#### Varian GC

Instrument	Cable Type	Part Number
CB 2400/2600	Analog/sync. cable (one per detector)	03-907938-04
CF-3400/3800	Serial control cable	03-907938-13
CP-3800	Communication kit	03-907892-91
3000 CC	Ethernet cable 3 m	03-926129-01
3900 GC	Ethernet cable 6 m	03-926129-02
CB 4000	Ethernet cable 3 m	03-926129-01
CF-4900	Ethernet cable 6 m	03-926129-02
CD 9200	Serial Cable to Star 800 MIB from 8200 (9	02 007020 12
CF-8200	pin D shell)	03-907936-12
Combi PAL CTC	Serial cable supplied by CTC	

#### Agilent GC

Instrument	Cable Type	Part number
5800	Serial cable to Star 800 MIB comm. port 3 m	03-907938-61
5690	Serial cable to PC comm. port 3 m	03-907938-62
6800	Serial cable to Star 800 MIB comm. port 3 m	03-907938-71
0090	Serial cable to PC comm. Port 3 m	03-907938-72
7800	Ethernet cable 3 m	03-926129-01
7890	Ethernet cable 6 m	03-926129-02
7672 with old controllor	Serial cable to Star 800 MIB comm. port	03-907938-81
7673 with old controller	Serial cable to PC comm. port	03-907938-82
7673 with G1512A	Serial cable to Star 800 MIB comm. port 3 m	03-907938-71
controller	Serial cable to PC comm. port 3 m	03-907938-72
Sync. cable between	Synchronization cable	03-007038-63
5890 and G1512A		00-907 900-00
controller		
Sync. cable between	Synchronization cable	03-907938-64
5890 and 7673 old		00 007 000-04
controller		

### Agilent/Waters LC

Instrument	Cable Type	Part number
Agilent 1100/1200 LC	GPIB cable 1 m	81-839700-00
_	GPIB cable 10 m	81-839701-00
	GPIB cable 18 m	81-839702-00
Agilant 1050 or	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
10190/1040 LC	GPIB cable 18 m	81-839702-00
All Matara controlled by	GPIB cable 1 m	81-839700-00
	GPIB cable 10 m	81-839701-00
GPIB	GPIB cable 18 m	81-839702-00

#### PerkinElmer GC

Instrument	Cable Type	Part number
PerkinElmer	Serial Cable to PC comm port	03-907938-83
Autosystem	Serial Cable to 800MIB comm port	03-907938-84

#### Thermo GC

Instrument	Cable Type	Part number
Thermo 8000 GC	Serial Cable to 800MIB comm port	03-907938-66
Thermo 800/850 AS	Serial Cable to 800MIB comm port	03-907938-86

#### Star 800 MIBs

Star 800 MIB description	Part number
Star 800 MIB with 2 ADC Channels	03-907937-01
Star 800 MIB with 4 ADC Channels	03-907937-02
Star 800 MIB with 2 ADC Channels & 64 Mb Flash Memory	03-907937-06
Star 800 MIB with 4 ADC Channels & 64 Mb Flash Memory	03-907937-07
Star 800 MIB with 4 Serial Ports	03-907937-10
Star 800 MIB with 4 Serial Ports & 2 ADC Channels	03-907937-11
Star 800 MIB with 4 Serial Ports & 4 ADC Channels	03-907937-12
Star 800 MIB with 4 Serial Ports, 2 ADC Channels & 64 Mb Flash Memory	03-907937-16
Star 800 MIB with 4 Serial Ports, 4 ADC Channels & 64 Mb Flash Memory	03-907937-17
Star 800 MIB with 32 Relays	03-907937-20
Star 800 MIB with 32 Relays & 2 ADC Channels	03-907937-21
Star 800 MIB with 32 Relays & 4 ADC Channels	03-907937-22
Star 800 MIB with 32 Relays, 2 ADC Channels & 64 Mb Flash Memory	03-907937-26
Star 800 MIB with 32 Relays, 4 ADC Channels & 64 Mb Flash Memory	03-907937-26
Star 800 MIB with GPIB	03-907937-30
Star 800 MIB with GPIB & 2 ADC Channels	03-907937-31
Star 800 MIB with GPIB & 4 ADC Channels	03-907937-32
Star 800 MIB with GPIB, 2 ADC Channels & 64 Mb Flash Memory	03-907937-31
Star 800 MIB with GPIB, 4 ADC Channels & 64 Mb Flash Memory	03-907937-32
Star 800 MIB with 8 Serial Ports	03-907937-40
Star 800 MIB with 8 Serial Ports & 2 ADC Channels	03-907937-41
Star 800 MIB with 8 Serial Ports & 4 ADC Channels	03-907937-42
Star 800 MIB with 64 Relays	03-907937-50
Star 800 MIB with 64 Relays & 2 ADC Channels	03-907937-51
Star 800 MIB with 64 Relays & 4 ADC Channels	03-907937-52
Star 800 MIB with 2 GPIB	03-907937-60
Star 800 MIB with 2 GPIB & 2 ADC Channels	03-907937-61

Star 800 MIB description	Part number
Star 800 MIB with 2 GPIB & 4 ADC Channels	03-907937-62
Star 800 MIB with 4 Serial Ports & 32 Relays	03-907937-70
Star 800 MIB with 4 Serial Ports, 32 Relays & 2 ADC Channels	03-907937-71
Star 800 MIB with 4 Serial Ports, 32 Relays & 2 ADC Channels	03-907937-72
Star 800 MIB with 4 Serial Ports, GPIB & 2 ADC Channels	03-907937-81
Star 800 MIB with 4 Serial Ports, GPIB & 4 ADC Channels	03-907937-82
Star 800 MIB with GPIB & 32 Relays	03-907937-90
Star 800 MIB with GPIB, 32 Relays & 2 ADC Channels	03-907937-91
Star 800 MIB with GPIB, 32 Relays & 4 ADC Channels	03-907937-92

#### Star 800 MIBs / 850-MIB options and accessories

Options and accessories	Part Number
2 ADC Channel card (for existing Star 800 MIB)	03-907938-01
4-port serial card (for existing Star 800 MIB	03-907938-11
IEEE-488 GPIB Card (for existing Star 800 MIB)	03-907938-31
32 Relay Module (for existing Star 800 MIB)	03-907938-91
64Mb Flash Memory Module (for existing Star 800 MIB)	03-907938-92
Serial Cable adaptator RJ45 to 9 Pin	03-907938-14
Analog Cable to Star 800 MIB, tinned ends , 3m	03-907938-02
Analog Cable to Star 800 MIB, tinned ends , 5m	03-907938-03
Analog Cable to Star 800 MIB, 3-Pin Molex , 3m	03-907938-04
Analog Cable Star 800 MIB to ProStar 363, 3m	03-907938-06
GPIB Cable Extender	81-839794-00
Serial Cable for Star 800 MIB Firmware updates and to fix IP address	03-907938-42

#### 850 MIBs

850 MIB description	Plug type	Part number
	USA	03-950205-10
850 MIB interface (empty)	European	03-950205-20
	GB	03-950205-30
	USA	03-950205-11
850 MIB with 2 ADC Channels	European	03-950205-21
	GB	03-950205-31
	USA	03-950205-12
850 MIB with 4 ADC Channels	European	03-950205-22
	GB	03-950205-32

850 MIB description	Plug type	Part number
	USA	03-950205-13
850 MIB with 4 Serial ports	European	03-950205-23
	GB	03-950205-33
850 MIB with 8 Serial ports	USA	03-950205-14
	European	03-950205-24
	GB	03-950205-34
850 MIB, with 4 Serial ports & 2 ADC Channels	USA	03-950205-15
	European	03-950205-25
	GB	03-950205-35
	USA	03-950205-16
850 MIB, with 4 Serial ports & 4 ADC Channels	European	03-950205-26
	GB	03-950205-36
	USA	03-950205-17
850 MIB, with 4 Serial port s, 1 GPIB port & 2 ADC Channels	European	03-950205-27
	GB	03-950205-37
	USA	03-950205-18
850 MIB, with 1GPIB port	European	03-950205-28
	GB	03-950205-38
	USA	03-950205-19
850 MIB, with 1 GPIB port & 2 ADC Channels	European	03-950205-29
	GB	03-950205-39