Windows 7 Professional 64 bit Installation and Configuration for MassLynx or Empower Controlled Ethernet Instrument Communication

Version 3 Jan 2013

PLEASE READ BEFORE CONTINUING:

This document applies to

- i) MassLynx or Empower installations where the PCs have not been supplied by Waters i.e. without the Waters image for Windows 7 Professional 64 bit installed, or
- ii) MassLynx installations controlling 'legacy' ftp-boot sequence type MS instruments.

For newer dynamic boot sequence instruments the configuration steps mentioned in this document should be done automatically by the Waters imaging process. However, if there are issues with communications this document can serve as a checklist for the PC set-up.

Refer to the disk imaging procedure documents (included on the reimage media with all Waters PCs) for details on what steps to perform with respect to additional PC configuration after applying a Waters image.

<u>Note:</u> Waters' responsibility is only to configure the settings necessary for software and instrument operation, not to install the operating system on any PCs. Operating system installation is the end-user's responsibility.

Depending on how the image was installed/configured by the end user, certain steps in this document may not apply. Accordingly decide which steps may need to be followed and which ones do not.

1. Purpose

This document outlines the procedure to configure a Microsoft Windows 7 Professional 64 bit operating system in order for Empower or MassLynx controlled instruments to communicate and function correctly.

2. Scope

It is assumed that the engineer configuring the PC is familiar with Windows 7 Professional 64 bit operation and its general operational use. It is also assumed that the starting point for this configuration is from a new installation of Windows 7 Professional 64 bit on an IBM PC. <u>Note</u>: when a Windows 7 Professional 64 bit OS is installed as a new installation any previous Windows OS is overwritten and all data lost.

To configure a Waters-imaged PC for 'legacy' ftp-boot sequence type MS instruments (e.g. Quattro Premier/XE, Quattro Micro, QToF Premier etc) FTP communications must be configured – go directly to Appendix A.

For instructions on how to configure Windows 7 for successful operation of MassLynx when installed with Security, please refer to Service Note: "Configuring Windows 7 for MassLynx Security".

Note: This document was written from a MassLynx perspective but applies equally to PCs for Empower use.

3. Hardware/Software Required

- Current or High Spec IBM e.g. M5x or C20x (Host) PC
- Windows 7 Professional 64 bit with valid license

Note: The PC will have one network card dedicated for a LAN Ethernet connection and a second network card to communicate with the Waters MS instrument embedded PC and any Ethernet controlled Waters inlets that are attached.

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5. PC Bios Setup

Switch on the IBM PC and press F1 to enter the **BIOS** setup screen. Use the arrows to scroll across to each tab and set the following:

- Power tab set Hard Disk Timeout to Disable
- Advanced tab set Plug and Play Operating System to Yes
- Devices tab Serial Port Setup set Serial Ports A and B to Enable

Select F10 to Save Changes and Exit – select Yes to accept.

6. Initial windows startup

On initial boot ensure the Windows 7 Professional 64 bit DVD is in the DVD drive of the PC and select the option to boot from CD when prompted. Ensure the Windows 7 Setup screen appears and the **Custom** installation option is selected, chose to perform a new installation of Windows 7. You will be required to enter the PC Name and description, enter appropriate details e.g. name C20x-SWTx.

If configuring for Empower the **Region**, **Language and Keyboard** settings must be set to English (United States)

Accept the End User License agreement.

7. MassLynx V4.1 PC Configuration

7.1 Enabling Administrator Account

By default the Administrator account is disabled in Windows 7 so you need to enable the Administrator account. From the **Start** menu right click **Computer** and select **Manage** to open **Computer Management**.

In Local Users and Groups click Users, select Administrator, right click and select Properties. Uncheck Account is disabled option then click OK.



Right click **Administrator** and chose **Set Password...** to set the Administrator account's password. Click **Proceed** to the warning dialog.

Set Pas	sword for Administrator			
	Resetting this password might cause irreversible loss of information for this user account. For security reasons, Windows protects certain information by making it impossible to access if the user's password is reset.			
	This data loss will occur the next time the user logs off.			
	You should use this command only if a user has forgotten his or her password and does not have a password reset disk. If this user has created a password reset disk, then he or she should use that disk to set the password.			
	If the user knows the password and wants to change it, he or she should log in, then press CTRL+ALT+DELETE and click Change Password.			
	For additional information, click Help.			
	Proceed Cancel Help			

Enter the new password and click **OK**.

Set Password for Adm	inistrator	? 🔀
New password:	•••••	
Confirm password:	•••••	
1 If you click OK, th	e following will occur:	
This user account files, stored passw	t will immediately lose access vords, and personal security o	to all of its encrypted certificates.
If you click Cancel, the occur.	password will not be change	ed and no data loss will
	OK Cancel	

Note: Ensure the Administrator's password is noted and provided to the customer.

7.2 Activating Windows 7 Professional 64 bit

Login into Windows 7 as Administrator and go to **Control Panel > System and Security > System**. Click on the **Activate Windows Now** link to activate the windows. Click **Activate Windows Online**. If it is required to change the product key, use **Change product key** link.



7.3 Changing Name of LANs

Go to **Control Panel > Network and Internet > Network and Sharing Center**. Here you can see all the active network connections of the PC. To change the instrument network connection to a meaningful name click **Change adapter settings**.

Control Panel 3	 Network and Internet Network and Sharing Cent 	ter • + Search Co	ntrol Panel
Control Panel Home	View your basic network information	and set up connections	
Change adapter settings Change advanced sharing settings	MS8-SWT22 Multiple (This computer) View your active networks	networks Internet	See full map
	waters.com Work network	Access type: Internet Connections: J Local Area Co	onnection
	Unidentified network Public network	Access type: No network a Connections: Uccal Area Co	onnection 2
	Change your networking settings Set up a new connection or network Set up a wireless, broadband, dial-up, a	ad hoc, or VPN connection; or set up a roo	iter or access point.
	Connect to a network Connect or reconnect to a wireless, wi	red, dial-up, or VPN network connection.	
	Choose homegroup and sharing optio Access files and printers located on ot	ns her network computers, or change sharing	g settings.
See also HomeGroup Internet Options	Troubleshoot problems Diagnose and repair network problems	s, or get troubleshooting information.	

Select the Instrument Network connection and click ${\bf Rename\ this\ connection}.$ Change the name to "Instrument LAN".

) 	▶ Control Panel ➤ Network ar	id Internet 🕨 Network Connec	tions ► 🔫 😽 Sε	arch Network Co	nnections	
Organize 🔻	Disable this network device	Diagnose this connection	Rename this connection	»	-	1 (
Insti Unic Intel	rument LAN Jentified network (R) Gigabit CT Desktop Adapt	Local Area Connect waters.com Intel(R) 82567LM-3	ion Gigabit Netwo			

7.4 Joining the PC to a Domain

Login into Windows 7 as Administrator and go to **Control Panel > System and Security > System**. Click on **Change settings** link to launch the **System Properties** dialog.

Control Panel +	System and Security + System + 4 5 au	ch Centrol Panel
Control Panel Home Device Manager Remote settings System portection Advanced system settings	View basic information about your computer Windows edition	
	Com C C Verbarge to donain or C C C C C C C C C C C C C C C C C C C	SChange settings
Tee also Action Center Windows Update Performance Information and Tools	Wind V p DK Cancel Apply	genuine" Microsoft

Click Change and enter the required Computer name and Domain, click OK.

Computer Name/Domain Changes				
You can change the name and the membership of this computer. Changes might affect access to network resources. <u>More information</u>				
Computer name:				
m58-swt22				
Full computer name: m58-swt22 More				
Omain:				
Softwaretest.MSTechnologies.Loca				
© Workgroup: WORKGROUP				
OK Cancel				

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When prompted, enter the Administrator credentials of the Domain. Restart the PC to apply the changes.

Windows Security
Computer Name/Domain Changes Enter the name and password of an account with permission to join the domain.
Administrator ••••••• Domain: Softwaretest.MSTechnolo
OK Cancel

7.5 Changing User Account Control (UAC) Setttings

Go to **Control Panel > System and Security > Action Center** and click on **Change User Account Control Settings** to change the notification level of the account

🕒 🕞 🖛 🕨 Control Panel 🔸 🕈	System and Security + Action Center + 6-	νel μ
Control Panel Home Change Action Center settings	Review recent messages and resolve problems Action Center has detected one or more issues for you to review.	0
 Change User Account Control. actings View archived messages 	Security	
View performance information	Virus protection (Important) Windows did not find antivirus software on this computer. Turn off messages-about virus protection	
	Windows Defender needs to scan your computer Scanning on a regular basis helps improve the security of your computer. Scan now	
	Maintenance	
	Set up backup Your files are not bring backed up. Turn off messages about Windows Backup	
	If you don't see your problem listed, try one of these	
See also Backup and Bactore	Find and fix problems Recovery Restore your computer to an earlier time	
Windows Update Windows Program Compatibility Troubleshooter		



Change the level to Never notify, click OK and restart the PC.

7.6 Disabling Automatic Updates

Login into Windows 7 as Administrator and go to **Control Panel > System and Security > Windows Update > Change settings**. Select **Never check for updates** (**not recommended**) to disable automatic updates. Click **OK** to close the Control panel.

🌀 💭 📲 + Control Panel + System and Security + Windows Update + Change settings 🔹 4 Securit Control Pan	el P
Choose how Windows can install updates When your computer is online. Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also install them before shutting down the computer. Wow does automatic updating help me? Never check for updates (not recommended) Never check for updates (not	
OK Cancel	

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7.7 Disabling Windows Firewall

Go to **Control Panel > System and Security > Windows Firewall.** Click on the **Turn Windows Firewall on or off** link



Select the **Turn off Windows Firewall (not recommended)** option of each type of network and click **OK** to close the Control Panel

🕉 💭 🕶 🔗 « System and Sec	urity + Windows Firewall + Customize Settings	+ ++	Search Control Panel	
Custo	nize settings for each type of network modify the frewall settings for each type of network location	that you use.		
What an	e network locations?	one you use		
Domain	network location settings Turn on Windows Firewall Diock all incoming connections, including those in the ID Notify me when Windows Firewall blocks a new progr	e list of allowed progr	erns.	
0	Turn off Windows Firewall (not recommended)			
Home o	r work (private) network location settings			
3	C Turn on Windows Firewall			
	Block all incoming connections, including those in the Notify me when Windows Firewall blocks a new progr	e list of allowed progr am	2013.	
8	Turn off Windows Firewall (not recommended)			
Public n	etwork location settings			
3	Turn on Windows Firewall			
	Block all incoming connections, including those in th Notify me when Windows Firewall blocks a new progr	e list of allowed progr am	ama	
8	Turn off Windows Firewall (not recommended)			
		OK.	Cancel	

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7.8 Windows Defender – Disable Service

Windows Defender is a free program that helps protect your computer against pop-ups and security threats caused by spyware, how it may result in slow performance and interferes with MassLynx installs like **Connections INSIGHT**® (Remote Secure, webbased system monitoring Instant alert notification program).

For this reason Waters recommends that Windows Defender program is disabled. Right click **Computer** and select **Manage** to open **Computer Management**. Select **Services.** Find the **Windows Defender** Service and select **Stop** button to stop the Service and then from **Startup** type dropdown option select **Disable** and Press **Apply** then **OK** to close the dialog box. Now select **File** >**Exit** to close the Computer Management Window.

🛃 Computer Management (Local	The Service	1		Actions
System Table Control Control Control Control Control	Windows Defender Desception Protestion against apports and potervite by unwarded software	Windows Defaults Properties Occur Computed 22 Service Lagon, Records: Dependencies Service name: Weldebrild Service name: Weldebrild Display name: Weldebrild Display name: Weldebrild Service name: Weldebrild Descripter: Protection against sprease and potentially unwarked - software Path to secondable Path to secondable Protection against sprease and potentially unwarked - software Path to secondable Image: Path to secondable Service status: Supped Image: Path to status parameters flat again often you stat the service tense Service status: Supped Person You can specify the status parameters flat again often you stat the service tense Person Windows Connect Name - Cooling Regime: WCNC2NC hoads the software Windows Context Name - Cooling Regime: WCNC2NC hoads the software Windows Context Name - Cooling Regime: WorkC2NC hoads the software Sartied Windows Context Name - Cooling Regime: WCNC2NC hoads the software Sartied Windows Context Software Hort sec unstructers - Sartied Windows Event Calactor This sectors many set - Sartied Windows Event Calactor This sectors many set - Sartied	Bartup Type Log On As Advantatic Local Syste. Automatic Local Syste. Automatic Local Syste. Automatic Local Syste. Automatic Local Syste. Manual Network 5. Automatic Local Syste. Manual Local Service Manual Local Service	Sinder More Ac., More Ac., More Ac.,

7.9 Configuration to allow Acquity executables to operate through the Firewall

Waters does not currently recommend turning on the Firewall, this setup procedure is only detailed as a precaution in case the Firewall is re-enabled.

Create two dummy executable files on the desktop with the following name **WDHCPServerSvc.exe** and **ACQUITYServer.exe**. Go to **Computer > Desktop** and create two text files and rename to **WDHCPServerSvc.exe** and **ACQUITYServer.exe**

Make sure that files are displayed with proper extension. Otherwise go to **Organize** > **Folder and search options** and in the **View** tab uncheck **Hide extensions for known file types**.

	Folder Options
🚱 🗢 💻 Desktop 🔸	General View Search
Organize Include in library	Folder views You can apply the view (such as Details or Icons) that you are using for this folder to all folders of this type.
Cut Copy	Apply to Folders Reset Folders
Paste	Advanced settings:
Undo Redo	 Files and Folders Always show icons, never thumbnails Always show menus
Select all	✓ Display file icon on thumbnails ■ ✓ Display file size information in folder tips
Layout	 Display the full path in the title bar (Classic theme only) Hidden files and folders
Folder and search options	 Don't show hidden files, folders, or drives Show hidden files, folders, and drives
🗙 Delete	Hide empty drives in the Computer folder Hide extensions for known file types
Rename	Hide protected operating system files (Recommended)
Remove properties Properties	Restore Defaults
Close	OK Cancel Apply

Now, Open Windows Firewall from Control panel. Click on the **Allow a program or feature through Windows Firewall** link. Press **Allow another program** which will open the **Add a Program** dialog. Browse and open the **ACQUITYServer.exe** file from desktop. Click **Add**

Add a Program	ettings.
Select the program you want to add, or click Browse to find or listed, and then click OK.	e that is not
Programs:	Home/Work (Private) Public
📙 Create a System Repair Disc	
🖉 🌈 Internet Explorer	
Internet Explorer (64-bit)	
Symantec Endpoint Protection	
Windows DVD Maker	
📰 Windows Fax and Scan	
😨 Windows Media Center	
Windows Remote Assistance	
The Area XPS Viewer	
Path: Impistrator/Deskton/ACOUITVServersvc.exel	Browers D
What are the risks of unblocking a program?	
You can choose which network location types to add this progra	am to,
Network location types Add	Cancel Allow another program

Check the **Domain** and **Public** option boxes.

add, change, or remove allowed programs and ports, cl	ick Change	settings.	
hat are the risks of allowing a program to communicate	ti.	Cha	nge setting
Allowed programs and features:			
Name	Domain	Home/Work (Private)	Public
SMC Service			
SNAC64 Service			
SNMP Trap			
Symantec Email			
WDHCP port			
WDHCPServer	2	2	
Web Management Service (HTTP)		0	
Windows Collaboration Computer Name Registrati			
Windows Firewall Remote Management			
Windows Management Instrumentation (WMI)			
Windows Media Player			
Windows Media Player Network Sharing Service			
		Details	Remove
		Allow souths	

Repeat these steps for adding another program: **WDHCPServerSvc.exe**

7.10 Adding WDHCP Port

Go to **Control Panel > System and Security > Windows Firewall** and click on the **Advanced settings** link to open the windows firewall with advanced security.

🖉 🖉 🔹 Control Panel 🔸	System and Security + Windows Firewall	• • • Sourch Control Panel
Control Panel Horse	Help protect your computer with Wi	ndows Firewall
Allow a program or feature through Windows Firewall	Windows Firewall can help prevent hackers or w through the Internet or a network.	alicious software from gaining access to your computer
Change notification settings	How does a firewall help protect my computer?	
Turn Windows Firewall on or off	What are network locations?	
Restore defaults	Update your Firewall settings	
Advanced settings Troubleshoot my network	Windows Firewall is not using the recommendation of the protect your computer.	nended 🛛 😚 Use recommended settings
	What are the recommended settings?	
	Domain networks	Not Connected 😒
	📕 🥸 Home or work (private) netv	vorks Connected 🕤
	Networks at home or work where you know an	d trust the people and devices on the network
	Windows Firewall state:	OH
	Incoming connections	Block all connections to programs that are not on the list of allowed programs
	Active home or work (private) networks:	ն waters.com
	Notification state:	Notify me when Windows Firewall blocks a new program
Sex she	Public networks	Not Connected @

Windows Firewall with Advanced Security	Interant Rules			-	-	Actions
Control Rules Cutbound Rules Connection Security Rules Mantaring	Name BranchCache Content Retrieval (HTTP-In) BranchCache Hostad Cache Server (HTT, BranchCache Perr Discovery (WSD-In) Cannectto a Network Projector (TCP-In) Cannectto a Network Projector (WSD Ev. Cannectto a Network Projector (WSD Fr.) Cannectto a Network on University Care Networking - Dynamic Host Carlig. Care Networking - Dynamic Host Carlig. Care Networking - Dynamic Host Carlig. Care Networking - Multicast Listener Rep. Care Networking - Multicast Listener Rep. Care Networking - Multicast Listener Rep. Care Networking - Statet In Big UCMP. Care Networking - Statet Advisioarement. Care Networking - Time Exceeded QCMP Distiliated Travestion Coordinator (PPC) Distiliated Travestion Coordinator (PC) Distiliated Travestion Coordinator (PC)	Oraup BranchCache - Content Reb BranchCache - Hontel Cach BranchCache - Hontel Cach BranchCache - Hontel Cach BranchCache - Peer Discove Connectto a Network Proje Core Networking Core Netwo	Profile All All Private Dormain Dormain Dormain All All All All All All All All All Al	Enable No No No No No No No No No No No No No		Internet Note: ■ New Rule ▼ Filter by State ■ Properties ■ Help
ii ii	< IN	Proposition restatement con-	FOMIDIA	140	÷ 1	

Select **Inbound Rules** and click **Action > New Rule** to open a new inbound rule wizard. Here select Rule Type as **Port** and click **Next**. In Protocol and Ports, select **UDP** option, **Specific local ports** and enter **67** and click **Next**



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🗁 New Inbound Rule Wizard	
Protocol and Ports	
Specify the protocols and ports to	which this rule applies.
Steps:	
Bule Type	Does this rule apply to TCP or UDP?
Protocol and Ports	© TCP
 Action 	O UDP
 Profile 	
 Name 	Does this rule apply to all local ports or specific local ports?
	All local ports
	Specific local ports: 67
	Example: 80, 443, 5000-5010
	Learn more about protocol and ports

In Action page, select Allow the connection option and click Next. Check all the options which includes Domain, Private and Public in Profile page and click Next.

🔗 New Inbound Rule Wizard	i 💌
Action	
Specify the action to be taken v	when a connection matches the conditions specified in the rule.
Steps:	
Rule Type	What action should be taken when a connection matches the specified conditions?
Protocol and Ports	Allow the connection
Action	This includes connections that are protected with IPsec as well as those are not.
Profile	Allow the connection if it is secure
Name	 Learn more about actions
	< <u>B</u> ack <u>N</u> ext > Cancel

👉 New Inbound Rule Wizard	×
Profile	
Specify the profiles for which this i	ule applies.
Steps:	
Rule Type	When does this rule apply?
Protocol and Ports	
Action	Domain
Profile	Applies when a computer is connected to its corporate domain.
Name	✓ Private
	Applies when a computer is connected to a private network location.
	✓ Public
	Applies when a computer is connected to a public network location.
	Learn more about profiles
	< <u>B</u> ack <u>N</u> ext > Cancel
🔐 New Inbound Rule Wizard	
With New Inbound Rule Wizard	×
Wew Inbound Rule Wizard Name Specify the name and description	of this rule.
New Inbound Rule Wizard Name Specify the name and description Chase	of this rule.
Wew Inbound Rule Wizard Name Specify the name and description Steps:	of this rule.
 New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type 	of this rule.
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports	of this rule.
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action	of this rule.
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile	of this rule. Name: WDHCP port
Wew Inbound Rule Wizard Name Specify the name and description Steps: Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (rational):
 New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name 	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
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New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
 New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name 	of this rule. Name: WDHCP port Description (optional): [w/DHCP Port
 New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name 	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iw/DHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): M/DHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iwDHCP Port
New Inbound Rule Wizard Name Specify the name and description Steps: Rule Type Protocol and Ports Action Profile Name	of this rule. Name: WDHCP port Description (optional): iwDHCP Port

Finally, provide the Name and Description of the new inbound rule and click Finish

7.11 Acquisition Card Setup

Go to Control Panel > Network and Internet > Network and Sharing Center and click on Instrument LAN link and Properties. Select Internet Protocol Version 4 (TCP/IPv4). Click on the Properties button.

[Note: Another way to launch properties is, click on the **Change adapter settings** link and select **Instrument LAN > Properties**]

🕖 🖉 🕴 🖡 Control Panel 🕴	 Network and Internet Network and Sharing Cer 	nter • 49 Sourch C	iontroi Panel
Control Panel Home	View your basic network information	n and set up connections	
Change adapter settings Change advanced sharing settings	MS8-SWT22 (This computer) View your active networks waters.com Work network	e networks internet Access type Internet Connections: I Local Area (Access type No network Connections: I Intrument	See full map connect or disconnect Connection
ine alter tameGroup nternet Options	Change your networking settings Set up a new connection or network Set up a wireless, broadband, dial-up, Connect to a network Connect to a network Connect to reconnect to a wireless, w Choose homegroup and sharing opto Access files and printers located on o Troubleshoot problems Diagnose and repair network problem	ad hoc, or VPN connection; or set up a m irred, dial-up, or VPN network connection ons ther network computers, or change sharin 1s, or get troubleshooting information.	suter or access point.

🃮 Instrument LAN Properties 📃 💌				
Networking Sharing				
Connect using:				
Intel(R) Gigabit CT Desktop Adapter				
<u>Configure</u> This c <u>o</u> nnection uses the following items:				
Image: Client for Microsoft Networks Image: Client for Microsof				
I <u>n</u> stall <u>U</u> ninstall <u>Properties</u>				
Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.				
OK Cancel				

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Select **Use the following IP address:** option and enter the IP address as **192.168.0.1** Click the **Advanced** button and press **Add** as well, input the IP Address **64.1.1.1** and Subnet Mask as **255.0.0.0**

Internet Protocol Version 4 (TCP/IPv4) Properties					
General					
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.					
🔘 Obtain an IP address automatica	lly				
• Use the following IP address:					
IP address:	192.168.0.1				
Subnet mask:	255 . 255 . 255 . 0				
Default gateway:					
Obtain DNS server address auto	Obtain DNS server address automatically				
• Use the following DNS server ad	• Use the following DNS server addresses:				
Preferred DNS server:					
Alternate DN5 server:					
Validate settings upon exit	Advanced				
L	OK Cancel				

Advanced TCP/IP Settings	? 💌
IP Settings DNS WINS	
IP addresses	
IP address Subnet n	nask
192.168.0.1 255.255. 64.1.1.1 255.0.0.	.255.0 0
Add Edit	Remove
Default gateways:	
Gateway Metric	
Add Edit	Remove
Automatic metric	
	OK Cancel

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Select the **WINS** tab and select **Disable NetBIOS over TCP/IP**. Click **OK** three times to exit the configuration dialogs

Advanced TCP/IP Settings
IP Settings DNS WINS
WINS addresses, in order of use:
Add Edit Remove
If LMHOSTS lookup is enabled, it applies to all connections for which TCP/IP is enabled.
 NetBIOS setting Default: Use NetBIOS setting from the DHCP server. If static IP address is used or the DHCP server does not provide NetBIOS setting, enable NetBIOS over TCP/IP.
Enable NetBIOS over TCP/IP
Oisable NetBIOS over TCP/IP
OK Cancel

Again open the **Instrument LAN** Properties dialog, click the **Configure** button and go to the **Advanced** tab. Select the **Link Speed & Duplex** property, set the value as **Auto Negotiation**. Go to the **Power Management** tab and uncheck the option **Allow the computer to turn off this device to save power**, click **OK**

Note: For MS instruments that require FTP communications, please refer to Appendix A for setup details before proceeding.

8. General PC Configuration

8.1 Screensaver

Go to **Control Panel > Appearance and Personalization > Personalization** and click **Screen Saver** then select the **None** option and press **OK**.

Control Panel +	Appearance and Personalization • Personalization •	4 Search Control Panel
Control Panel Home Change desktop icons Change mouse pointers	Channes the viewels and seconds an once second dec Screen Saver Settings Screen Saver	aver all at once.
Change mouse pointers Change your account picture	Screen saver Wat: 1 mmutzi On resume, display logon screen	Get more themes online
	Power management Conserve energy or maximize performance by adjusting display brightness and other power settings. Change power settings	Landscapes
See also Display Taskbar and Start Menu Ease of Access Center	Desktop Background Window Color Solid Color Windows 7 Basic Win One or more of the themes has been disabled by Remote Desktop Conn	Appir Sounds Screen Saver dows Default None rection settings.

8.2 Power Options

Go to **Control Panel > Hardware and Sound > Power Options** and click on **Create a power plan**. Select the **Balanced** option, enter the plan name as **MassLynx Power Plan** and click **Next**.

Townshines during a		
Control Panel Home	Select a power plan	
Require a password on wakeup	Power plans can help you maximize your computer's performance or conser	ve energy. Make a plan active by
Choose what the power button does	selecting it, or choose a plan and customize it by changing its power setting: plans	s. <u>Tell me more about power</u>
Create a power plan	Preferred plans	
Choose when to turn off the	Balanced (recommended)	Change plan settings
display	Automatically balances performance with energy consumption on cap	able hardware.
Change when the computer closer	Power saver	Change plan settings
sieeps	Saves energy by reducing your computer's performance where possibl	e.
	Show additional plans	

For both **Turn off the display** and **Put the computer to sleep** options, select **Never** and click **Create** to create the new power plan.

😋 🔵 🗢 😼 « Power Optic	ons 🕨 Edit Plan	Settings	•	4 9	Sea	rch Control Panel	
Change settin Choose the sleep Turn off the Put the com	ngs for the p and display sett display: puter to sleep:	Ian: MassLynx Power Pl tings that you want your comp Never	an uter to use				
					C	reate Cance	21
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😋 💭 🗢 🗃 🖌 Control Panel 🔸	Hardware and Sou	nd • Power Options		•	49	Search Control Panel	
Control Panel +	Hardware and Sou	nd • Power Options		•	49	Search Control Panel	
Control Panel + Control Panel + Control Panel Home Require a password on wakeup Choose what the power button	Hardware and Sou Select a pow Power plans car selecting it, or o plans	nd • Power Options ver plan n help you maximize your computer choose a plan and customize it by ch	's performan anging its po	• ce or co ower set	++	Search Control Panel e energy. Make a plan a Tell me more about po	ictive by
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And select **MassLynx Power Plan** as default power plan. Now click on **Change plan settings** of the MassLynx Power Plan and go to **Change advanced power settings**.

					0.0
😋 🔵 🗣 😺 Control Panel 🔸 System and Security 🔸 I	Power Options 🔸 Edit Plan Settings	•	4	Search Control Panel	q,
Change settings for the pla	m: Massi vnx Power Plan				
Choose the sleep and display setting	gs that you want your computer to u	56.			
Turn off the display:	Never •				
9 Put the computer to sleep:	Never				
Characterization					
Change advanced power seconds					
		Save ch	anges	Cencel	

Expand the **Hard disk** option and change the **Setting** to **Never**. Click **OK**

Power Options
Advanced settings
Select the power plan that you want to customize, and then choose settings that reflect how you want your computer to manage power.
MassLynx Power Plan [Active]
 MassLynx Power Plan Require a password on wakeup Hard disk Turn off hard disk after Setting: Never Desktop background settings Wireless Adapter Settings Sleep USB settings Power buttons and lid
Restore plan defaults
OK Cancel Apply

8.3 Date and time

Go to **Control Panel > Clock, Language and Region** and click on **Date and Time**. Here press **Change time zone** button and ensure that **Automatically adjust clock for Daylight Saving Time** is checked.

Control Panel Home	Date and Time	• [*;	Search Control Planer	
System and Security Network and Internet Hardware and Souri Programs User Accounts	Add the Clock gadget to the des	atop	uage Change location s or other input methods	
User Accounts Appearance and Personalization • Clock, Language, a Ease of Access	Time Zone Setting: Set the time zone: Time zone: (UTC) Dublin, Edinburgh, Lisbon, London II Automatically adjust clock for Daylight Saving T Current date and time: 30 July 2010, 15:25	Time K Cancel		
	Dayinght Sawing Time ends on 31 October 2020 act go back 1 hour at that time. Notify me when the clock changes Get more time zone information online How do List the clock and time zone? CK	Cancel		

Appendix A: Setting up FTP Communications for MS Control

Note: If you are not sure as to whether your MS needs FTP communications to be setup, please refer to <u>MassLynx Communications Troubleshooting Guide</u>, Appendix C for a list of MS instruments and their associated communication protocols.

If the PC has a Waters image follow the instructions from Appendix A Section i) If the PC does not have a Waters image go to Appendix A Section ii)

i) Preconfigured Waters Image

The Waters image is not fully configured for FTP boot sequence instruments. To use the Waters image the following settings need to be changed:

- a) Enable Anonymous Authentication in the Default FTP site.
- b) Enable Basic Authentication for the Micromass account in the **Default FTP Site (FTP Authentication Rules,** allow **Micromass** account)
- c) Firewall exceptions

Alternatively, and usually more easily, uninstall the FTP service as detailed below, then follow the instructions from Section ii)

To uninstall the FTP service:

Right click **Computer** and select **Manage** to open **Computer Management**. Browse to **Services and Applications** > **Internet Information Services (IIS) Management**. In **Connections** expand the tree and select **Sites** > **Default FTP Site**, right click and select **Remove**.



Confirm the removal then proceed with the instructions in Section ii).

ii) Installing Internet Information Services (IIS)

Go to **Control Panel > Programs > Programs and Features** and click the **Turn Windows features on or off** link. Select all the options of **Internet Information Services** and click **OK** to complete the installation. It takes few minutes to configure components.



iii) IIS Properties Setup

Right click **Computer** and select **Manage** to open **Computer Management**. Select Internet Information Services (IIS) Manager.

In **Connections** expand to **Default Web site.** From the bottom of the tab select **Features View .** Go to the **IIS** section.



Double click on **Authentication**. Select **Anonymous Authentication**, click **Enable** in **Actions** which enables the anonymous authentication.



iv) Modules

Note: Depending on the image of Windows 7 Professional 64 bit installed, the steps in red may not apply and may be skipped

It is recommended to add modules instead of filters in Windows 7. Copy the files compfilt.dll, md5filt.dll, pwsdata.dll and sspifilt.dll from the Windows7-IISModules folder (attached to the same service note as this document) and paste into the folder: "C:\Windows\System32\intersrv"

Note: You must unzip this folder first.

Then, copy the "**Install_IIS_Modules.bat**" file from this to your desktop and run the batch file which installs the above said four IIS Modules

Now, go to **Control Panel > System and Security > Administrative Tools** and open the **Internet Information Services (IIS) Manager**. Select **Default Web Site >IIS > Modules**. In the **Action** pane click on the **Open Feature** link to show the recently configured modules.





v) FTP Service

Select **Sites** and click on **Add FTP Site** in **Actions** to add a FTP Site which launches the **Add FTP Site** wizard and enter the **FTP Site name:** 'Default FTP Site' and **Content Directory:** C:\



Click **Next** and enter the IP Address as **64.1.1.1**, Port as **21** and select **Allow SSL** options. Click **Next**.

I FTP Site				- ? - [
Binding and SSL Settings				
Binding				
IP <u>A</u> ddress:	<u>P</u> ort:			
64.1.1.1 -	21			
<u>Enable Virtual Host Names:</u> <u>V</u> irtual Host (example: ftp.contoso.com):]		
L		_		
Start FTP site automatically SSL				
Start FTP site automatically SSL No SSL				
SL No SSL Allow SSL Allow SSL				
 Start FTP site automatically SSL No SSL Allow SSL Require SSL 				
Start FTP site automatically SSL No <u>S</u> SL All <u>o</u> w SSL <u>R</u> equire SSL SSL <u>C</u> ertificate:				

Now Select the **Basic** Option for **Authentication**, and for **Allow access to:** select **Specified users** enter '*micromass'* in the edit field and check both **Read** and **Write** permissions and click **Finish**. Restart the PC.

Add FTP Site	? ×
Authentication and Authorization Information	
Authentication Anonymous Basic	
Authorization Allow a <u>c</u> cess to: Specified users micromass	
Permissions Image: Constraint of the second seco	
<u>Previous</u> <u>N</u> ext <u>Finish</u>	Cancel

Again go to IIS Manager and select **Default FTP Site**. Click on **Advanced settings** in the **Actions** pane. Enter value of **Control Channel Timeout** to **900** and **Max Connections** to **10** and Click **OK** and close the **IIS Manager**.



vi) Adding a User Account

Right click **Computer** and select **Manage** to open **Computer Management**. Expand **Local Users and Groups** to **Users**. Click **Action >More Actions > New User** which opens the **New User** dialog. Enter the details: User name as *Micromass*, Password as *analysis*, deselect the **User must change password at next logon**, select the **User cannot change password** and select the **Pass word never expires** options. Click the **Create** button to create the Micromass user account.

	1000	New User	10 II	
omputer Management (Local System Tools (2) Task Scheduler (2) Event Viewer	Nar Bi	Username Fullname Description:	Mcromaes	ing 15 1
Shared Folders Cocal Users and Groups Users Groups Performance Durice Manager Storage Disk Management Services and Applications		Password: Confirm password: User must often User cannot cha Password reviet Account is deal	er password at next lagon ange password angenes led	

Double click on the newly created Micromass account. Click on the **Member Of** tab. Verify that the Micromass user is a member of the **Users** group click **OK** to close down the Properties box.

vii) Configuring TELNET

Go to **Control Panel > Programs > Programs and Features** and click on **Turn windows features on or off**. Check the **Telnet Client** feature and Click **OK** to install.

Control Panel Home View Installed updates	Unir Te w	istall or change a program	intal Chaos	w. co Paupir.		
Turn Windows features on or aff aff Install a program from the network	Organia Name	Window: Features Turn Windows features on or off To turn a feature on, select its check box. To turn a feat check box. A filed box means that only part of the feat Print and Document Services Remote Differential Compression RP Listener Box Services for NFS Box Services for NFS	ure off, class a ure is turned o viP) 3	Durt	Vied On Size	
		m Currently installed programs Total size: 9 bytes 0 programs/installed			_	•