Installing G09W with Linda

1) Install the G09W+Linda from the distribution CD.

2) Install Microsoft Windows Services for UNIX (SFU)

   a) Download from **www.microsoft.com/windows/sfu**. Version 3.5 is the version tested with G09W+Linda.

   b) Run the self-extractor and change the directory to a temporary directory like **c:\temp**.

   c) Start the installation by running **C:\temp\sfusetup.msi** from the start menu or by double clicking on the icon.

   d) After identifying yourself and accepting the license agreement select the **Custom** installation and remove all options except **Remote Connectivity**. Modify that option to install options on the hard disk. Then select **Local User Name Mapping with Password and group files**. Leave the password and group file names blank and accept the default Windows domain. Finally select the location for the utilities, **C:\SFU**.

3) Create a **.rhosts** file. Enter **edit c:\windows\system32\drivers\etc\.rhosts** from **the Start=>Run** dialog or a command window. Once in the editor, enter a line with the node name for each node to be used with G09W+Linda and a plus sign to allow any user to use G09W+Linda. Replace the plus sign with a list of users if only selected users are allowed to use G09W+Linda. For example:

   Alpha1 charlie
   Alpha2 +

   would allow user **charlie** on node **Alpha1** and any user on node **Alpha2** to run Linda.

4) Use the Registry Editor (**regedit**) to change the value of the parameter:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\RshSvc\DefaultTimeOut

   from **600** to **4294967** (double click on it to open an edit window).

   Then modify the value for:

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\LanmanServer\Parameters\IRPStackSize

   If this parameter is not present, add it as a new **DWord** value: Right click on **Parameters**, then choose **New=>DWORD Value**. Set the name to **IRPStackSize**, then double click on it. Change the base to **Decimal** and set the value to **25**.

   Close the Registry Editor and reboot the computer.

5) The SFU package uses the utility **rshpswd.exe** to store passwords. It needs to be run on each node by each G09W+Linda user once. If you installed SFU in the default location you can run **c:\sfu\common\rshpswd.exe** from the **Start=>Run** dialog or from Windows Explorer. Once this is done test the installation with

   rsh *node* **dir**

   in a command window with *node* replaced by the name of your node.

6) If a firewall is enabled on your system, specify exceptions for **TCP/IP Remote Shell Command** and for **cLindaLauncher**.

7) Share the G09W directory for use over the network: right click on the folder and select **Sharing and Security**. Enable sharing by clicking on the corresponding radio button. Click on the **Permissions** button and verify that **Everyone** or **Authenticated Users** has **Read** access. The ability to write files is not needed.

8) Start G09W and select **File=>Preferences**. Change the **Gaussian Bin Path** to

\\node\g09w

or the proper UNC naming location for your G09W installation. Also define the **Linda parameters**. Minimally, you need to specify the list of computers which will be used to for Linda runs, as in this example:

-nodelist "Alpha1 Alpha2"

The master node, where G09W starts, will be added by default but can be specified in this list. Other Linda parameters can be found in the Linda documentation.

9) Repeat steps 2-6 on each worker computer system. G09W must be installed on each machine which will be used as a master node.

10) Test the installation by modifying an input file like **g09w\tests\gjf\test397.gjf**. Add the line

%nprocl=n

where n is the number of nodes listed in the G09W **Preferences**. Use the Task Manager on each remote node to look for processes like **l302.exl** or **l502.exl**. These processes will also be seen on the Master node when corresponding the standard link, **l302.exe** or **l503.exe**, is active.

Frequently Asked Questions

Q) I got the error "Unable to execute the command" when I run **rsh beta3 dir**. What's wrong?

A) Check that you have run **rshpswd** for your account on node **beta3**.

Q) I need to stop the G09W+Linda process but I see that the ***.exl** process continues to run. How should I stop this? How about the remote nodes?

A) From the Task Manager, select the process **cLindaLauncher** and stop it. This will stop the G09 **.exl** processes on all nodes.

Q) When I start G09W it does not show the **Linda** item on the **Preferences**, and it has the wrong Revision number on the header, Rev. A.1. What's wrong?

A) Your **G09W** directory is not properly shared. Make sure it is shared for network access. Also double check that you typed the path for the **G09W** bin directory correctly in the G09W **Preferences**.