

Bio-ClusterGrid Installation Instructions

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The purpose of this document is to guide administrators in their set up of the Bio-ClusterGrid. There are 4 main steps that are explained in this document. Only step 1 – Install operating environment and bioinformatics applications and step 4 – Activate HPC Cluster Tools are explained in detail. The other steps are further explained in separate documents. The following instructions and screen shots illustrates the steps taken by the authors and does not take into account errors that may be encountered by the administrator using this guide.

General Guidelines:

1. Install operating environment (Solaris 9) + Bioinformatics applications
2. Install Sun Grid Engine/ SGE Enterprise Edition
3. Install Grid Engine Portal
4. Activate HPC Cluster Tools

Installation Method:

Solaris webstart using Solaris Installation CD

Pre-installation Preparations:

You will be installing from a DVD therefore check for DVD-ROM on your machine where the Bio-ClusterGrid will be set up. Your machine should also have a minimum of 1 GB free memory space.

Step 1. Install operating environment + Bioinformatics applications

Installation Procedure:

1. Insert Solaris Installation CD.
2. a) If the machine is switch off, power on the machine. When the boot up screen appears, press STOP+A.
b) If the machine is powered on, log in if necessary. Open a console, type 'init 6' from command line to reboot the machine. When the boot up screen appears, press STOP+A.
3. At the ok prompt, type 'boot cdrom' and press Enter/Return on keyboard.
4. Type 1 to choose English Language for installation when prompted. Setup will take 5-10 minutes.
5. When a console appears displaying a message asking if you wish to use swap for temporary copy of Solaris Installation software, type y. Then press RETURN or ENTER on the keyboard.
6. The following messages will be displayed:

- Copying mini-root to local disk
Copying platform specific files...
- When the Webstart Installation Welcome Screen is displayed, click on Next.
7. Select/Enter the options (depending on your network configurations) as they are prompted. The following is an example:
 - a. On the Network Connectivity screen, select Networked and click on Next.
 - b. On the Network Interface screen, select the interface that the network cable is plugged into.
 - c. DHCP: No
 - d. Hostname: v120
 - e. On the IP Address screen, IP: 192.168.0.126
 - f. Netmask: 255.255.255.0
 - g. Ipv6: No. Then click on Next.
 - h. On the Set Default Route screen, select Detect one.
 - i. Kerberos: No
 - j. Name Service: None
 - k. On the Time Zone screen, select Geographic Continent/Country/Region/Asia>Malaysia
 - l. Modify Date and Time accordingly.
 - m. Password: ***** Retype password to confirm.
 - n. On the Proxy Configuration screen, select Direct Connection to the Internet.
 - o. On the Confirm Information screen, click on Confirm.
 8. The message Please wait while system is... will be displayed. Ignore a pop up error window that says the route cannot be found. Click on Accept.
 9. After a few minutes, a Welcome screen will be displayed. Click on Next.
 10. Select Yes for both options (auto reboot and eject CD/DVD). Click on Next.
 11. On the Specify Media screen, select CD/DVD option and click on Next.
 12. Select the archive and on the Flash Archive Summary screen, click on Next.
 13. At the prompt for additional archives, select None. Click on Next.
 14. On the screen which shows the hard disk that the archive will be installed on, click on Next.
 15. On the Disk Selection screen, select the hard drive the Bio-ClusterGrid is going to be installed in (if there is more than one). Click on Next.
 16. On the Preserve Data screen, select No.
 17. On the Lay Out File Systems screen, click on Modify.
For Slice 1, type /swap in the first textbox. Type 1024 in the second textbox. Then click on the textbox to update the value for Free MB.
For Slice 0, type / in the first textbox. Type in the second textbox the exact value shown on the Free MB parameter. Then click on the textbox to update the value for Free MB which should now be 0. Click on Next.
 18. Click on Install Now.
 19. The Flash archive will be extracted from the DVD and installation begins.

Step 2. Install Sun Grid Engine/ SGE Enterprise Edition

Installation Procedure:

Please follow the instructions in a separate document, Sun Grid Engine Installation

Guide.

Step 3. Install Grid Engine Portal

Installation Procedure:

Please follow the instructions in a separate document, Grid Engine Portal Installation Guide.

Step 4. Activate HPC Cluster Tools

Activation Procedure:

1. Open a console, type `cd /opt/SUNWhpc/HPC5.0/bin/Install_Uutilities/bin`
2. Type `ctact -l -m v120` where v120 is the hostname of the Bio-ClusterGrid and the activation will start.

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