

HPCC - Hrothgar

Getting Started User Guide – X Server



High Performance Computing Center
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User Guide

Many Unix and Linux programs require X Server for graphical output. These programs require an X Server to be running on your workstation.

If the local workstation runs Linux/Unix or Mac, X Server is installed by default. For running programs with graphical output on Hrothgar, a user needs to log in to Hrothgar by command “ssh -Y <eraider>@hrothgar.hpcc.ttu.edu”.

If the local workstation runs Windows, users have to install an X Server program. Xming and Cygwin/X are free X Servers, and they provide similar interface and functions. In this document, we use Xming as an example for how to use X Server on Windows operating systems.

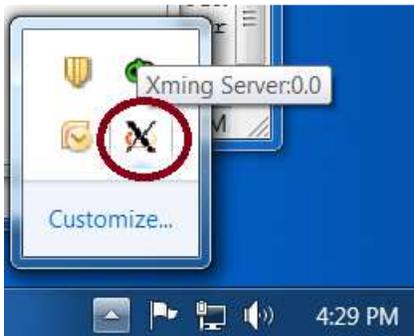
1. Download and Installation

The latest release of Xming can be found at <http://www.straightrunning.com/XmingNotes/>. On the webpage, find the “Releases” section, click and download “Xming” under “Public Domain Releases”, as shown in below. After it’s downloaded, follow the “Windows Installers” section to install it on the local computer.

Public Domain Releases	Version	State/Notes	Released	MD5 signature	Size MB
Xming-fonts	7.5.0.47	Public Domain	15 Apr 2012	c4cea5aa3620c64680306fc83cece960	30.8
Xming	6.9.0.31	Public Domain	4 May 2007	4cd12b9bec0ae19b95584650bbaf534a	2.10
Xming-mesa				e580debbf6110cfc4d8fcd20beb541c1	2.50

2. Start Xming

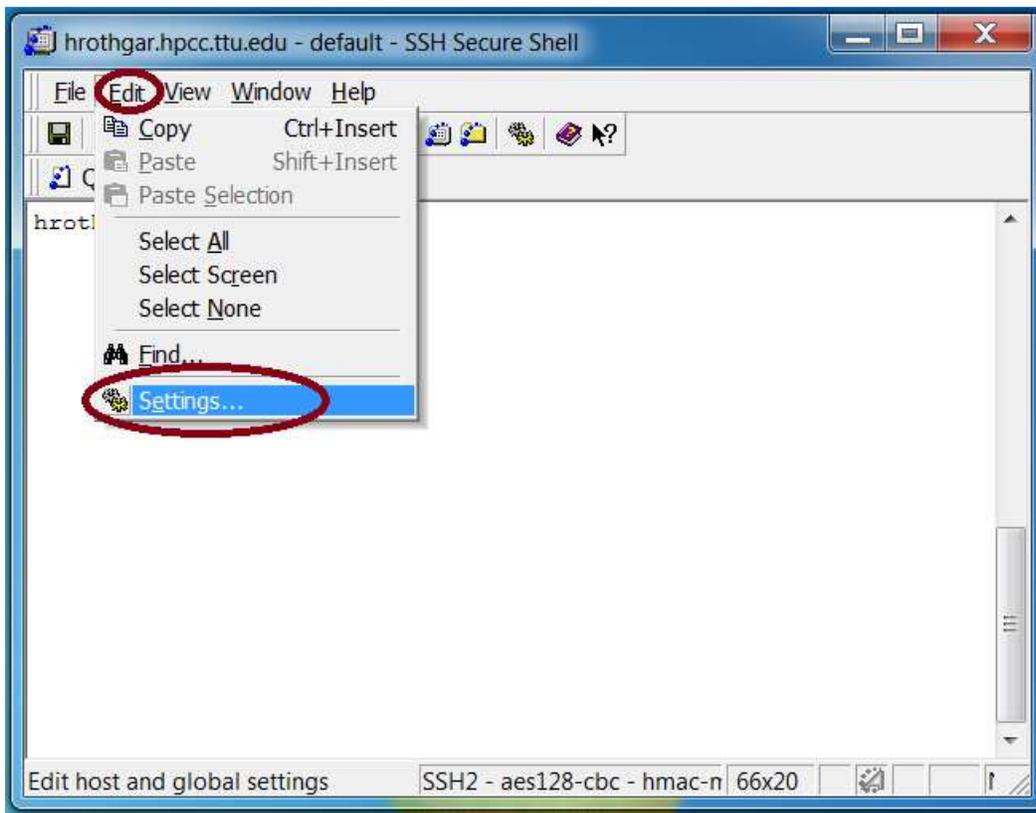
Xming can be started from Start -> All Programs -> Xming -> Xming. After it is started, there will be an X shaped icon at the task bar. If not, click the expanding arrow to check it, as shown in below:



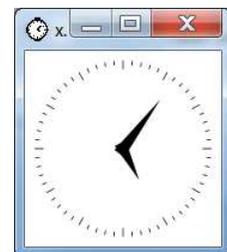
3. Configuration and test

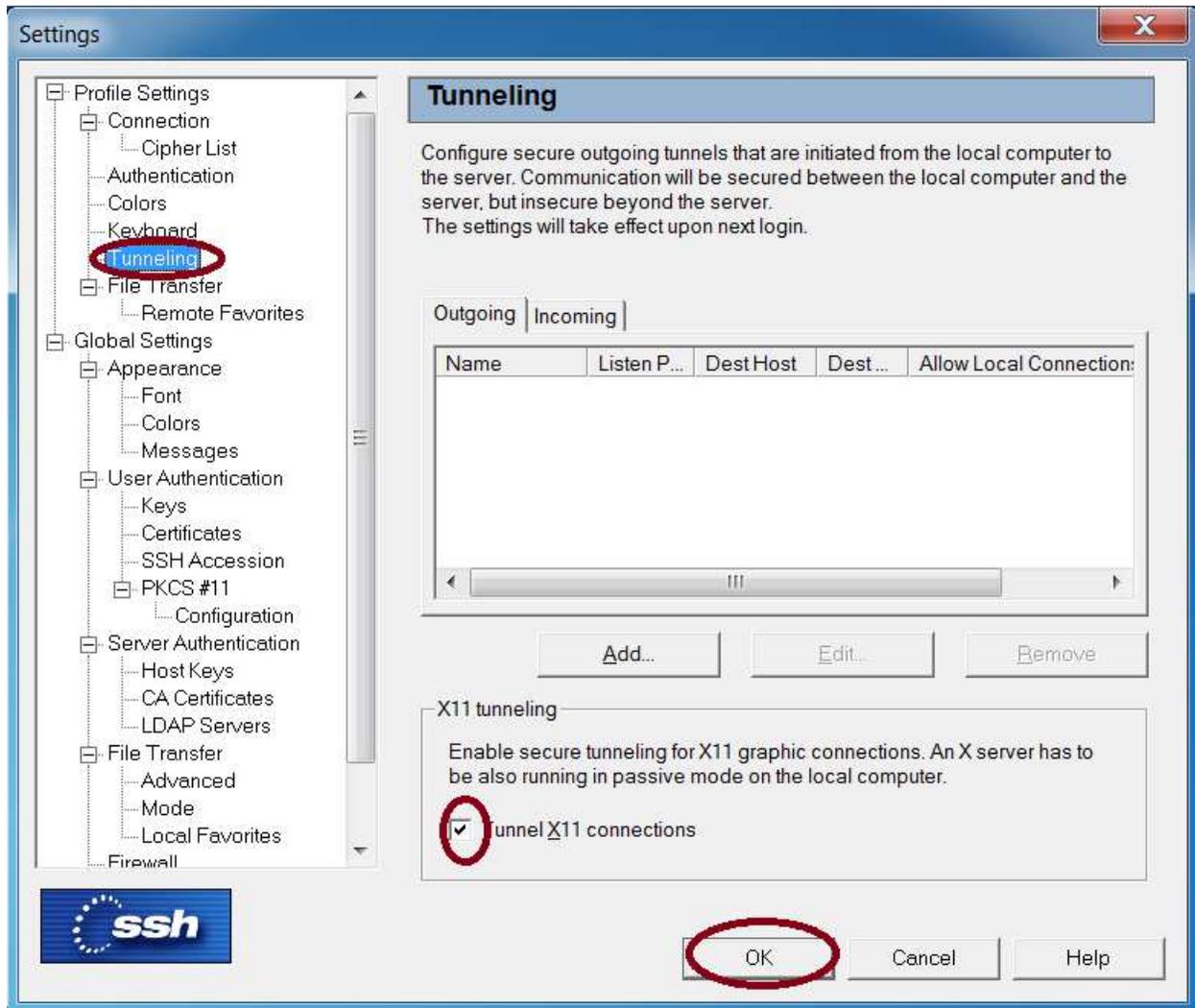
To be able to use an X server for graphical interface on Hrothgar, users have to enable X forwarding in the connection setting. The following is the instruction of how to configure SSH client for remote connection.

After logging into Hrothgar, click Edit -> Settings of the menu bar, as shown in the below screenshot:



On the "Settings" window (see the next page), click "Tunneling" from the left panel, and check "Tunnel X11 connection", then click OK (check the screenshot on the next page). After the Settings window is closed, type "exit" to exit Hrothgar, then click the enter key to login Hrothgar again. At this time, X forwarding is enabled. For testing, type "xclock" and enter. If a clock (see the right picture) shows up on the screen, the configuration is successful. Otherwise, check the installation of Xming and the configuration of SSH Client.





4. Interactive job with X server

To run GUI applications on Hrothgar, it is required to submit an interactive job, and then start the application from the compute node. The detailed steps are listed as below, and a screenshot which illustrates the steps are shown in the next page.

Step 1, log into Hrothgar with the configurations in Section 3.

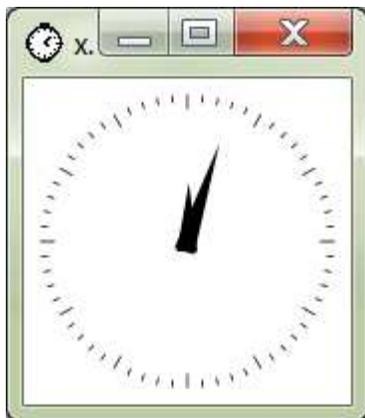
Step 2, run command "qlogin -q normal -pe fill 12 -P hrothgar". The system will schedule this interactive job to a free compute node. For example, in the screenshot on the next page, the job is scheduled to the node "compute-2-16". If there are no free compute nodes, the command returns "Your "qlogin" request could not be scheduled, try again later." If this happens, try it later.

Step 3, run the command that brings up the application. Here we use “xclock” as an example. If successful, a clock will appear on the screen.



```
hrothgar.hpcc.ttu.edu - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
hrothgar:$ qlogin -q normal -P hrothgar -pe fill 12
local configuration hrothgar.local not defined - using global configuration
Your job 178064 ("QLOGIN") has been submitted
waiting for interactive job to be scheduled ...
Your interactive job 178064 has been successfully scheduled.
Establishing /opt/gridengine/bin/rocks-qlogin.sh session to host compute-2-16.local ...
Rocks Compute Node
Rocks 6.0 (Mamba)
Profile built 15:46 09-Jan-2013

Kickstarted 15:53 09-Jan-2013
compute-2-16:$ xclock
Connected to hrothgar.hpcc.ttu.edu  SSH2 - aes128-cbc - hmac-n 89x12  NUM
```



User Guide

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For Comments/Suggestions on user guide hpcc@ttu.edu

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