MacLIVE

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About MacLIVE

For 20 years, StarNet has been a leading provider of software to connect Windows PCs to Unix and Linux systems. Over the past 10 years, an increasing number of engineers and other computer users have been switching to Mac workstations. While many X applications have been ported to Linux and can run locally on the workstation, Mac users also need to access other applications. Those connections, especially VPN and other WAN connections, are just as vulnerable to fatal network or power interrupts as connections from Macs.

First developed in 2008 for StarNet's X-Win32 Windows users, MacLIVE now offers Mac users the same set of next-generation LIVE session capabilities when connecting to remote servers.

Installation and Registration

System Requirements

- Mac OSX Leopard or Snow Leopard.
- X utilities installed.

Installation

1. Download the MacLIVE installation package
2. Double Click on the installer
3. Follow the instructions on the installer.

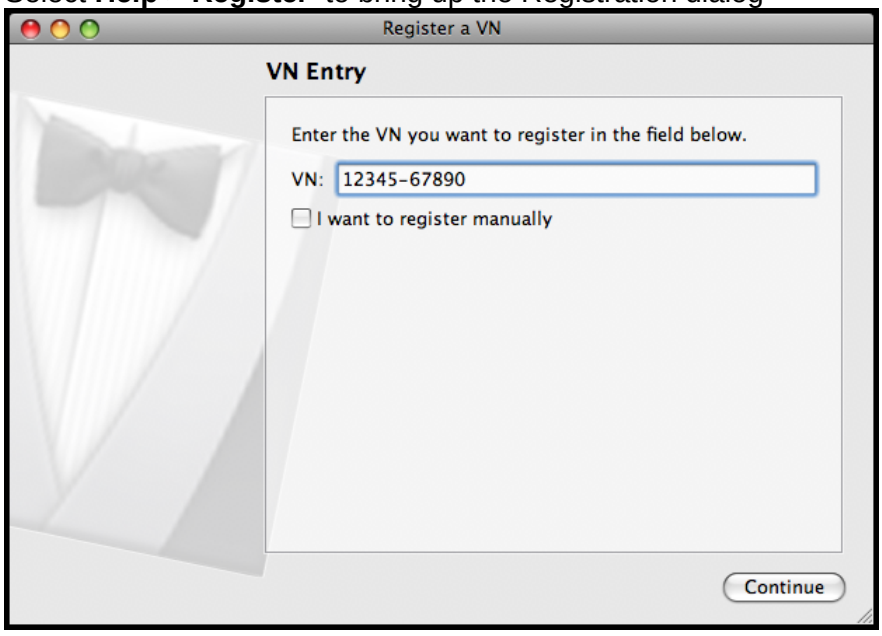
Uninstallation

1. Move the MacLIVE application to the Trash

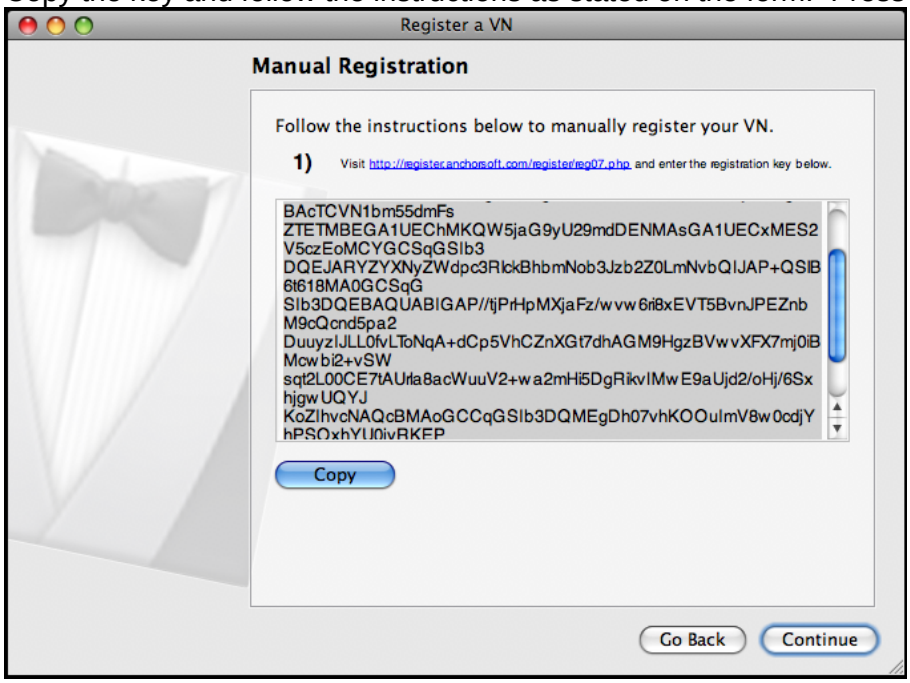
Registering MacLIVE

Unregistered copies of MacLIVE run with limited functionality. Connections can be created edited and launched and sessions can be created and edited. However Instances are disabled until MacLIVE has been registered.

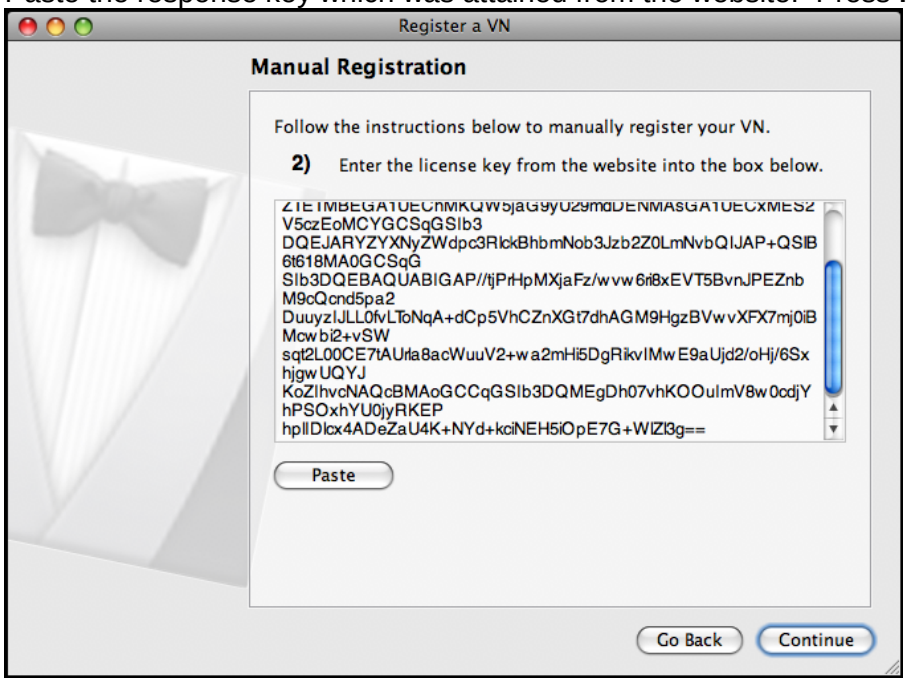
1. Launch MacLIVE
2. Select **Help > Register** to bring up the Registration dialog



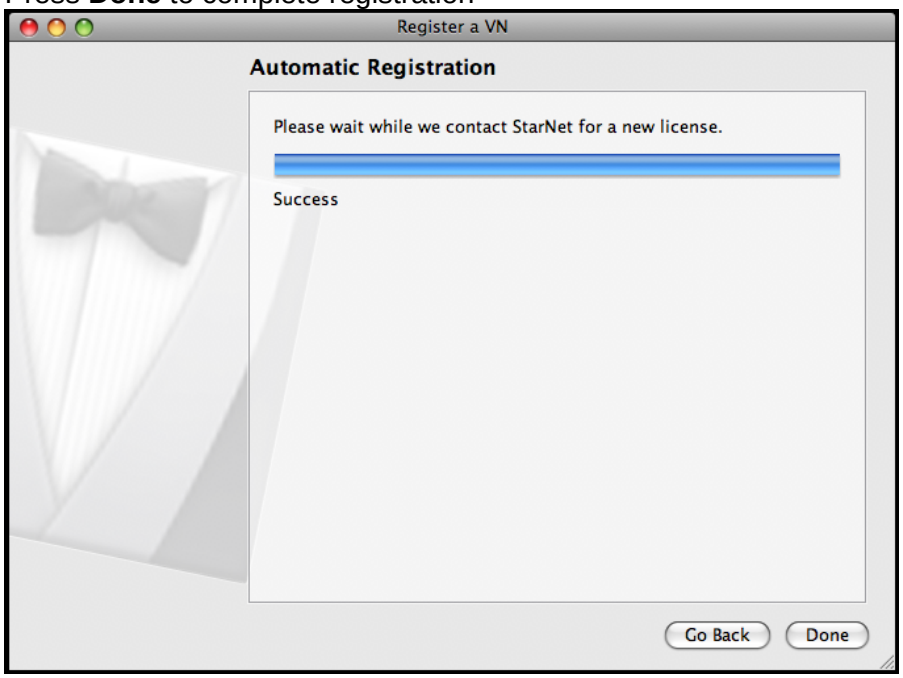
3. Enter the license key in the VN field.
4. For users with a connection to the outside internet Press **Next** and skip to step 8.
5. For users without an outside internet connection select **I want to register manually** and press **Next**
6. Copy the key and follow the instructions as stated on the form. Press **Next**



7. Paste the response key which was attained from the website. Press **Next**



8. Press **Done** to complete registration



LIVE Server Installation

Installation Options

The LIVE Server is available at the StarNet website:
LIVE Server 5.0: http://www.starnet.com/support/live/server.php?version=5.0
LIVE Server 6.0: http://www.starnet.com/support/live/server.php?version=6.0

For step by step instructions to install the LIVE Server, please refer to the System Specific Installation Instructions in the *LIVE Server Administrator's Guide*. The LIVE Server is available for Linux, Linux-64, Solaris, Solaris-x86, HPUX, and AIX.

Root Installations

If you are an administrator on the Linux machine on which you will install the Live Server, it is recommended that you use the root installation. This will install using RPM (or other system specific packages), which will automatically check dependencies, and install the server into the place where all users can test it.

Non Root Installations

Individual users who do not have root access can still test the LIVE functionality by installing the non-root package, which is a compressed tar file that will be installed in your home directory. The *Remote Server Interface Program* of the LIVE Connection must be edited in order to point to the the location of the LIVE Server Installation (rxlaunch sci5)

Post-Installation Testing

Ensure that sshd is installed on your remote system. You can test this out by running the command: ssh localhost. If you can log in through localhost your system has ssh installed

To test if the LIVE Server was installed correctly, run the command as a **non-root user:** rxlaunch sci5 (rxlaunch sci6 for version 6.0)

A message such as **<?xml version="1.0" encoding="UTF-8"?><Messages** should appear.

If no errors appear, the LIVE Server is running correctly. Otherwise, check to see that you have met the system requirements for your Unix OS and have all the proper libraries installed.

Notes

The LIVE server starts automatically when a LIVE client connects. The LIVE client connects to the LIVE server via SSH. The client runs the rxsci5 program, which in turn starts rxserver-bin, if it isn't already running. Communication between the LIVE components on the server are through files and named sockets in a directory named .nx-{-hostname} in your home directory, which is created automatically. You do not need to start anything after installation. It will automatically exit when you terminate your last running session. For security reasons, each user runs his own instance of the LIVE server (rxserver-bin).

Running MacLIVE

MacLIVE creates sessions based on the LIVE protocol which allow session persistency. These sessions can be suspended and resumed at a later time or terminated ending the session. The LIVE Server runs on the remote host allowing the session to stay active even after the LIVE client has disconnected.

The following Table Shows some of the advantages of LIVE Sessions.

Persistence	Session persistency means that even though your connection has disconnected from the host machine, the LIVE session is still actively running on the host machine. For example, you can start a long running compilation project through a LIVE session, suspend the session, and reconnect at a later time when the compilation has finished. With other connection methods closing the window will automatically terminate your session requiring you to start the compilation over from the beginning.
Mobility	All LIVE Session are stored on the remote Unix machine. Users can reconnect from any machine which has the LIVE client installed by simply logging into the machine using LIVE. A user can even start his session on the Unix machine, suspend it and reconnect to it from any machine running a LIVE client.
Collaboration	Multiple users can now connect to the same LIVE session to work and collaborate together at the same time. Users can choose to take control of the desktop, or they can simply view the desktop itself.
Compression	LIVE Sessions use a special protocol which cuts down on the amount of round trip X traffic thus increasing performance and lowering bandwidth.

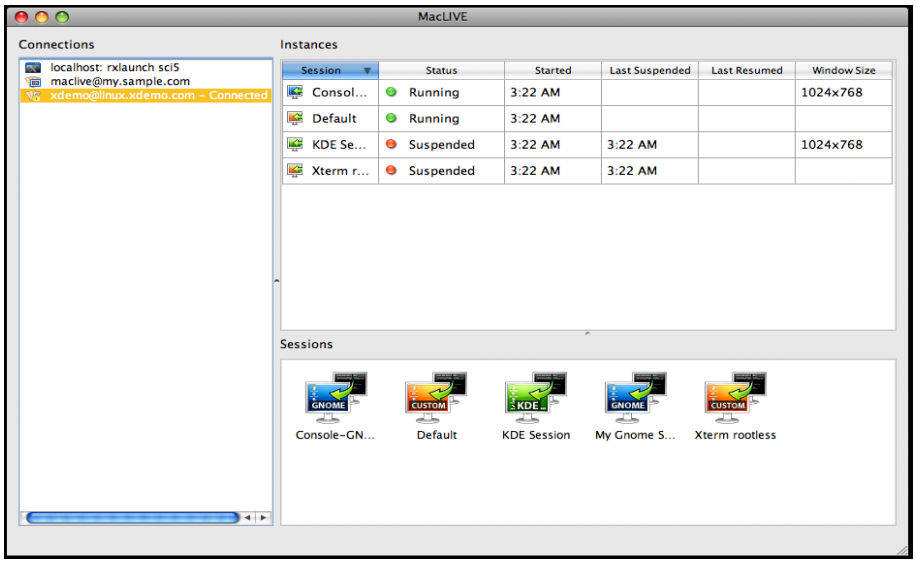
LIVE sessions require the LIVE server component to be installed on the remote UNIX/Linux host in order to function

Launching MacLIVE

1. Open a Finder Window
2. Select **Places > Applications**
3. Select and Open **MacLIVE**

Creating Your First LIVE Session

1. Launch MacLIVE. The MacLIVE interface is shown below



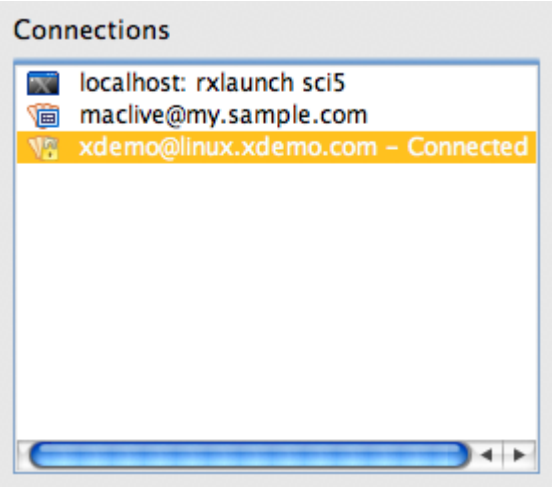
2. Select **Connection > New**
3. Create a New Connection (See Connections for details)
4. Double Click on the new connection to Connect to your remote system
5. Select **Session > New**
6. Create a New Session (See Sessions for details)
7. Double Click on the new session to launch an instance.
8. Instances can be suspended, resumed or terminated by selecting the option from the Instance Menu (See Instances for details)

Exiting MacLIVE

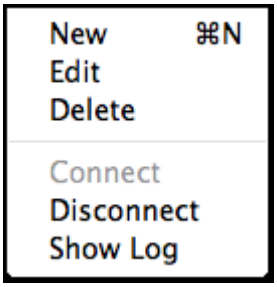
Select **File > Close** to exit MacLIVE. All connections will be disconnected and all running Instances will be Suspended

Connections

In order to run a LIVE Session, a connection must first be made to the LIVE Server. The LIVE Server component must be installed on a remote Linux or Unix system



Connection Menu



Menu Item	Description
New	Create a new Connection
Edit	Edit the currently selected Connection
Delete	Delete the currently selected Connection
Connect	Connect to the currently selected Connection
Disconnect	Disconnect from the currently Selected Connection
Show Log	Show the Connection dialog of the Connection

Launching Connections

Double click on a Connection to Launch the Connection. The running instances will be displayed in the Instance Browser, while the currently defined sessions will be displayed in the Session Browser.

Disconnecting

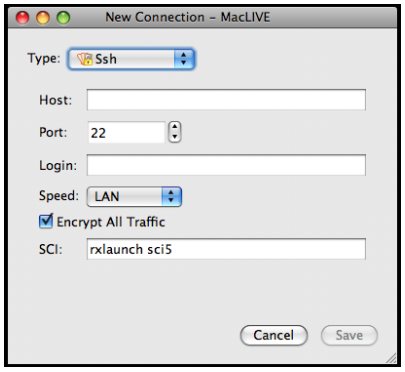
Right click on the Connection and select Disconnect to close the connection

Connection Methods

There are several methods to connect to a local or remote LIVE Server

SSH

Connect to a remote Linux system using the SSH protocol. On most modern Linux systems SSH is enabled by default.

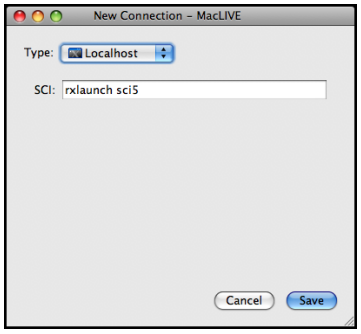


Property	Description
Host	The remote host or IP address where the LIVE Server is located
Port	The port that the remote host is listening on. The default value is the well known port number of the specified protocol. Only change this number if you know that the remote host is listening on a different port for your connection.
Login	The username on the remote system
Speed	The Connection Speed for the LIVE Server which optimizes the graphical/compression settings of LIVE sessions according to the type of Network connection used. Change the option according to the speed of your network.
Encrypt All Traffic	Enable SSH tunnelling. Check this option if you want to encrypt your DISPLAY encrypted through ssh. This is often needed when connecting through a firewall as the ssh port may be the only port open to the outside.
SCI	Remote Server Interface Program (**rxlaunch sci5**). This is the launcher program used to start the LIVE Server. If installed as root, or if rxlaunch is located in your system $PATH variable, this property does not need to be

	edited. If the LIVEServer is installed in a non standard location, (such as a nonroot install), provide the fully qualified PATH to the rxlaunch application.

Localhost

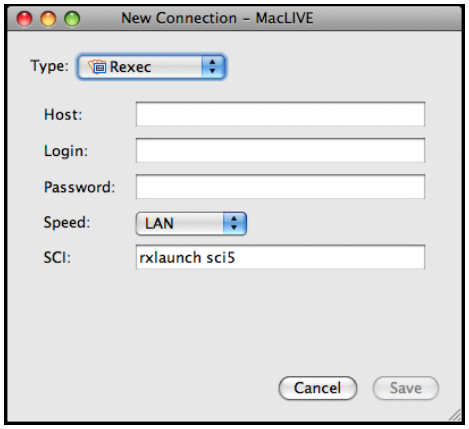
Connect to your local system.



Property	Description
SCI	Remote Server Interface Program (**rxlaunch sci5**). This is the launcher program used to start the LIVE Server. If installed as root, or if rxlaunch is located in your system $PATH variable, this property does not need to be edited. If the LIVEServer is installed in a non standard location, (such as a nonroot install), provide the fully qualified PATH to the rxlaunch application.

Rexec

Connect to a remote Linux system using the rexec protocol. On most modern Linux systems rexec is disabled by default.



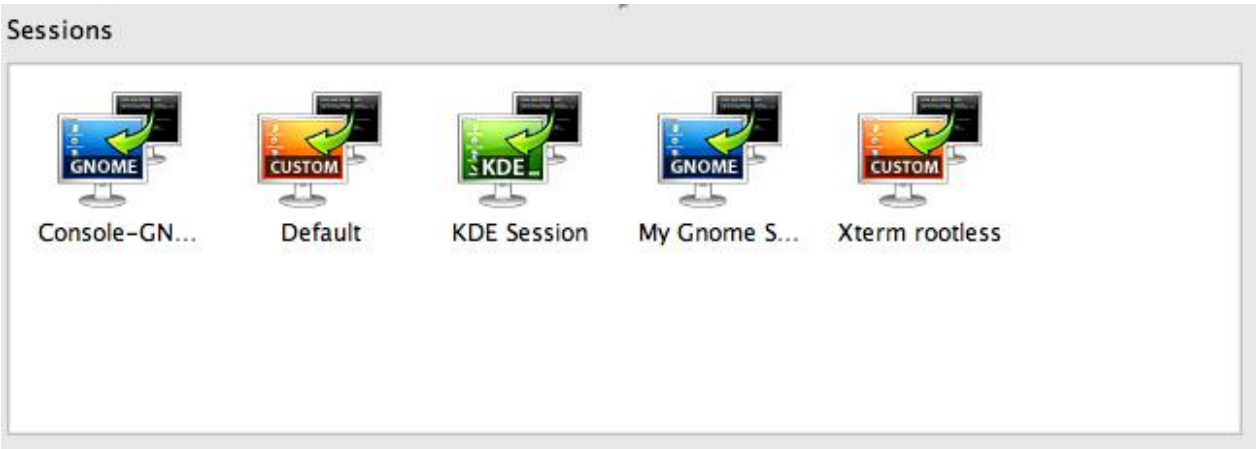
Property	Description
Host	The remote host or IP address where the LIVE Server is located
Login	The username on the remote system

Password	The password on the remote system
Speed	The Connection Speed for the LIVE Server which optimizes the graphical/compression settings of LIVE sessions according to the type of Network connection used. Change the option according to the speed of your network.
SCI	Remote Server Interface Program (rxlaunch sci5). This is the launcher program used to start the LIVE Server. If installed as root, or if rxlaunch is located in your system $PATH variable, this property does not need to be edited. If the LIVEServer is installed in a non standard location, (such as a nonroot install), provide the fully qualified PATH to the rxlaunch application.

Sessions

LIVE Sessions are templates stored on the remote Unix/Linux system which contain the default information to Launch a LIVE Session Instance.

To launch a new Instance of a LIVE Session, double click on the session icon, or right click on the session and press *Launch*

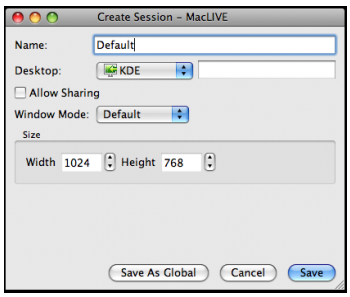


Session Menu

Menu Item	Description
New	Create a new Session
Edit	Edit the currently selected Session
Delete	Delete the currently selected Session
Launch	Launch the currently selected Session

Defining a Session

1. Right click on the Sessions window and select *New*.
2. The following screen appears



3. Select *Save* or *Save as Global* to save your session

Saving Sessions

LIVE Sessions can be global to all users or local to the current user. When defining a new session two options are available: *Save* and *Save as Global.* The sessions are stored in different directories specified in the LIVE.conf configuration file. Users must have proper directory permissions to *Add*, *Edit*, or *Remove* sessions

Session Options

Property	Description
Name	The name of the session.
Desktop	Three standard Unix/Linux desktops (**GNOME**, **KDE**, **CDE**) are included by default. A fourth type **Custom** allows for individual applications (specified in the field to the right) to be launched from the LIVE Server. Note: LIVE sessions assume that the desktop's launching application is located in the user's $PATH. If not, the fully qualified path name must be added in the field to the right.
Allow Sharing	Allow multiple users to connect to a running instance.
Window Mode	The display mode of the Instance • **Default:** LIVE Instances run in a window whose initial size is specified in the Size options • **Fullscreen:** LIVE Sessions are borderless taking up the entrie screen • **Rootless:** Each application runs in it's own individual window
Height	Window Height in pixels
Width	Window Width in pixels

Indirect Sessions on Gateway Servers

For users who want to install the LIVEServer on a gateway and then connect to the internal network using ssh, an Indirect method is recommended. Launching an instance of the session will automatically ssh to the internal machine thus indirectly connecting.

1. Create a new LIVE Session
2. Select Desktop: *Custom*
3. Enter the following command
   ssh -X [-l Username] Hostname Command

   -l Username: The username on the remote host. This can be different than the

username of the LIVE session. If -l Username is omitted, the current user's name will be submitted.

Hostname: The remote host specified as a hostname or IP address.

Command: The remote command to be run, for example xterm or gnome-desktop.

4. The user will be prompted for a password when connecting to the second host.

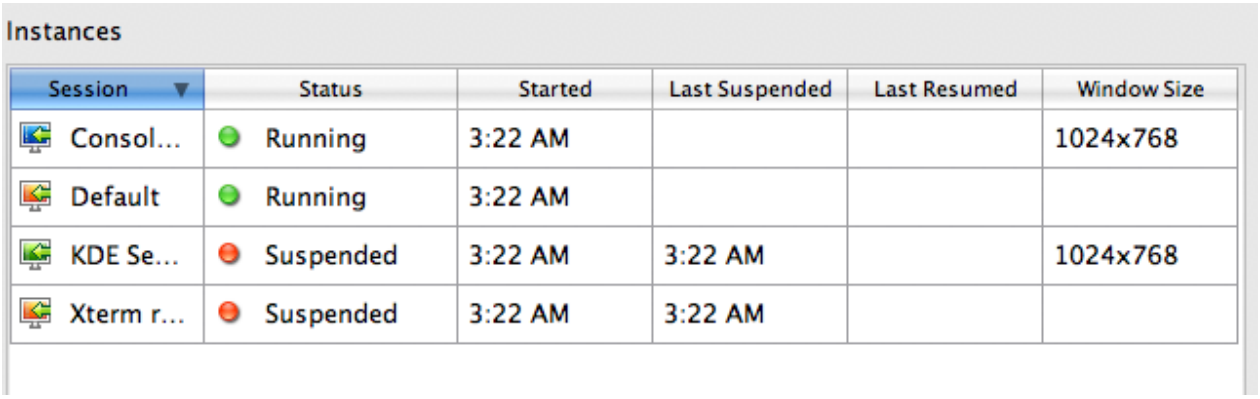
Multi-user Instances

Multiple users can connect to a running instance if Sharing is enabled in the LIVE Session. To connect to a shared instance select the *Shadow* button from the *Instance* menu and enter the secret key that was provided to you by the creator of the instance.

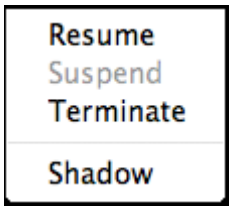
Instances

The top window shows all the currently running instances of a LIVE Session. The status column shows the current status of each instance. Running sessions are currently connected. Suspended sessions are currently disconnected and processing in the background. Working sessions are in the intermediate state of running and suspended. Multiple instances of each session are allowed and defined by their start time. If there are currently no running instances, this window will appear blank.

Double click on an instance to connect.



Instance Menu



Menu Item	Description
Resume	Resume the Selected Instance
Suspend	Suspend the Selected Instance
Terminate	Terminate the Selected Instance
Shadow	Connect to a Shared running Instance. The secret key is displayed when the Master Session is first launched.

Suspending Instances

Instances are automatically suspended when the LIVE server detects that a client has disconnected, either manually, or by an error (such as the network getting disconnected). Users can reconnect to a suspended instance without loss of data.

Manually Suspending Instances

Instances can be suspended by right clicking on a running instance in the Instance Browser and press *Suspend* to suspend the instance.

Instances can also be suspended by using a key combination.

1. Enter the key combination CONTROL+ALT+T to bring up the Suspend prompt.

2. Select the *Suspend* button to suspend the instance
   NOTE: Closing the Desktop window also brings up this dialog

Resuming Instances

Suspended Instances are marked with a red circle in the Instance Browser. To resume an Instance, double click on the Suspended Instance

Terminating Instances

Instances can be terminated by right clicking on a running instance in the Instance Browser and press Terminate to terminate the instance. If running a desktop log out using the standard Unix/Linux Desktop logout procedure (for example pressing the logout button in GNOME).

Terminating Instances from the Command Line

Each running instance runs its own nxagent process. Sending a TERM signal to an nxagent will terminate the associated session. The pid of an nxagent associated with a given session can be found using ps (or pidof, pgrep etc).

The rxserver.log file contains both the pid and the associated display number of a specific instance in the following lines.

Info: Proxy running in server mode with pid ‘pid_number’
Info: Waiting for connection from ‘127.0.0.1’ on port ‘<Display_number + 4000>’

NOTE: It is not recommended to terminate desktop instances from the command line as each desktop has it's own logout procedure which will be skipped if the nxagent process is killed possibly causing data errors

Contact StarNet

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- A customer support ticket system you can access online through X-Win32.

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