**Razor and VPN Client Installation Instructions**
**(CentOS 6.x, Red Hat 6.x, Oracle 6.x, SUSE 11, Ubuntu 12.x, 64bit)**

These instructions document the process for installing the OpenVPN software and the Razor Linux client software on your workstation.

**Install the OpenVPN Client Software**

This section documents how to install the OpenVPN software on Linux (i.e. you need root permissions).

CentOS/Red Hat/Oracle:
  wget http://download.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
  rpm -ivh epel-release-6-8.noarch.rpm
  yum update  {takes a while to complete}
  yum install openvpn

SUSE:   zypper install openvpn

Ubuntu:  apt-get install openvpn

**Configure the OpenVPN Client**

The following section shows how to configure the OpenVPN client to connect to the Razor Cloud (i.e. you need root permissions).

CentOS/Red Hat/Oracle/SUSE/Ubuntu:

  Copy the files in the $HOME/keys folder of the Razor Cloud server and the etc-openvpn folder of the EC2Razor-Client-Linux.tar.gz file to the /etc/openvpn folder.

    cp ca.crt /etc/openvpn
    cp ta.key /etc/openvpn
    cp client.conf /etc/openvpn
    cp client*.crt /etc/openvpn
    cp client*.key /etc/openvpn

  Create a soft link for the two client files (use the appropriate client number):

    ln -s /etc/openvpn/client01.crt  /etc/openvpn/client.crt
    ln -s /etc/openvpn/client01.key  /etc/openvpn/client.key

Update the 'remote' entry in the client.conf file with the Elastic IP of the Razor Cloud server.

NOTE: Before creating the soft-link, you need to choose the client number for this workstation and then link to the appropriate client files (e.g. client01 or client02 or client03, etc). Two workstations should not be connected to the Razor Cloud system using the same client files and the same IP address.

**Configure the OpenVPN Service to Start Automatically**

The following section documents how to configure the operating system to automatically start the OpenVPN service at boot time.

CentOS/Red Hat/Oracle:  chkconfig openvpn on
SUSE:   chkconfig --set openvpn on
Ubuntu:   /etc/init.d/openvpn restart

NOTE: To start the service without a reboot you type '/etc/init.d/openvpn restart'
NOTE: Use 'ping 10.8.0.1' to test the connection to the Razor Cloud server.

**Install the Razor Linux Client Software**

This section documents how to install the Razor client software on Linux.

Copy the files in the Razor_5.3.03 folder in the EC2Razor-Client-Linux.tar.gz file to an empty folder on the client system and update the permissions to executable.

Install missing libraries and fonts that are needed by the Razor client software.

CentOS/Red Hat/Oracle:          yum  install  libXp-1.0.2-2.1.el6.i686  libXt-1.1.4-6.1.el6.i686
                                yum  install  openmotif-2.3.3-8.el6.i686  libXpm-3.5.10-2.el6.i686
                                yum  install  xorg-x11-fonts-ISO8859-1-75dpi

SUSE:   Use Yast to install the openmotif and openmotif-libs packages.  They are part of software
        development kit, SLE-11-SDK-DVD-i596-GM-Media1.iso, which can be downloaded from the
        Novell web site at: http://download.novell.com/Download?buildid=fQKpDcAhPVY&ref=suse

Ubuntu:  apt-get install  ia32-libs  libmotif4:i386  xfonts-75dpi

NOTE: You will need to allow the TCP ports for issues, versions, and threads through the firewall.  The following is suggested:

        RAZOR_ISSUES_PORT=17001
        RAZOR_VERSIONS_PORT=18001
        RAZOR_THREADS_PORT=19001

NOTE: To allow TCP port 17001 though the Ubuntu firewall type

        sudo ufw allow 17001/tcp

NOTE:  In SUSE, use YaST to allow data from TCP port 17001 (e.g. Allowed Services →Advanced).
NOTE: To allow TCP port 17001 through the CentOS/RedHat/Oracle firewall type the following:

        iptables -I INPUT -p tcp --dport 17001 -j ACCEPT
        service iptables save
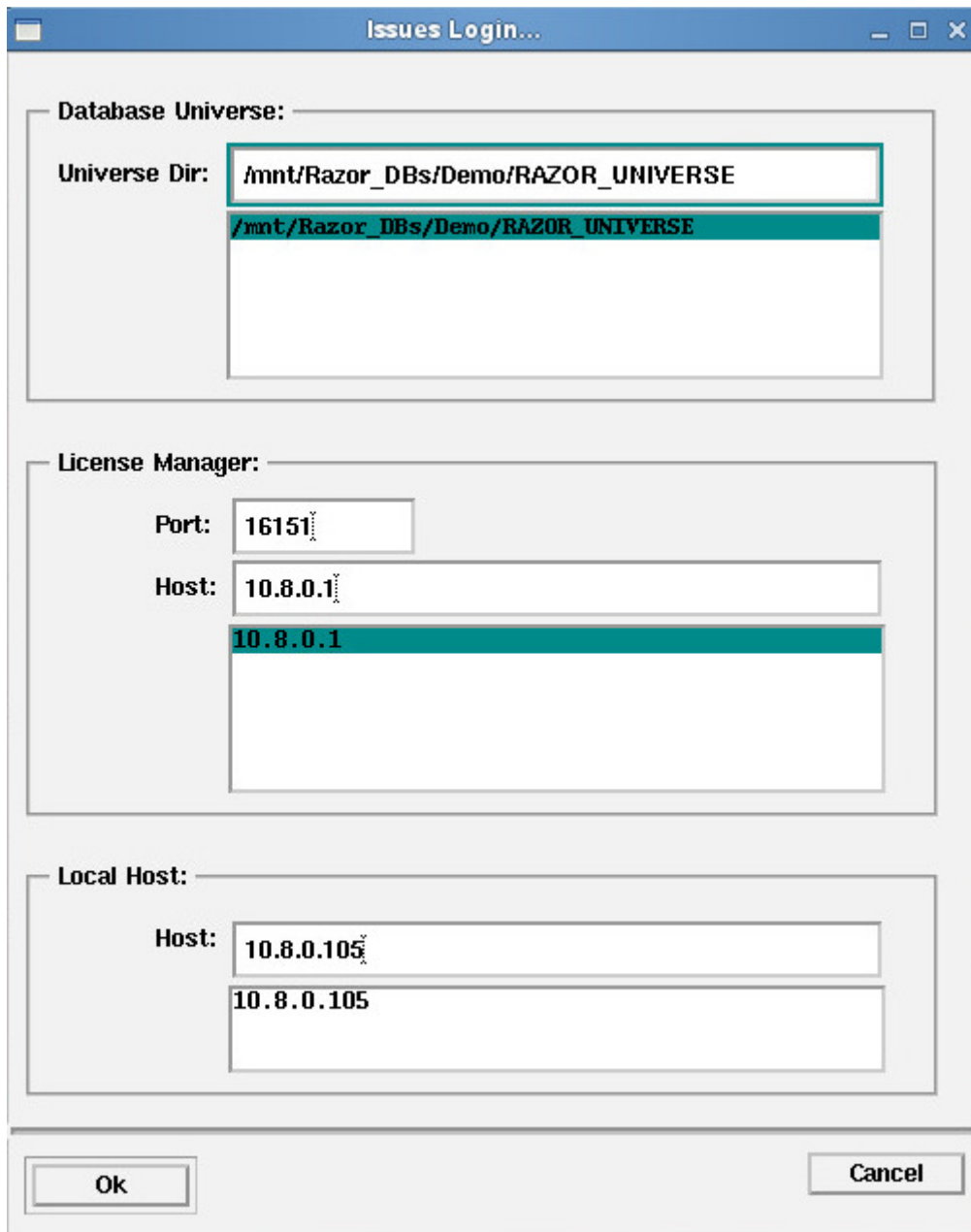        service iptables restart

**Connect to Razor Cloud Server**

CentOS/Red Hat/Oracle/SUSE/Ubuntu:

Define the environment variable RAZOR_ALT_CLIENT_IP_ADDR to the same address defined by the tun0 interface.  You can use the command ifconfig tun0 | grep inet to determine the address.

Define the environment variable RAZOR_ISSUES_PORT and allow this TCP port through the firewall.

Start the Razor client with the -remote option (e.g. issues -remote &)

Update the following entries in the login GUI (all other entries remain the same) and click OK
      Universe Dir: <your Razor DB path>/RAZOR_UNIVERSE
      Host: 10.8.0.1

NOTE: You can also start the "versions" or "threads" clients by typing:
      versions -remote &
      threads -remote &

NOTE: You can set ports for other clients by using RAZOR_VERSIONS_PORT and RAZOR_THREADS_PORT.

Once you connect to the Razor Cloud system you enter a valid username and password.



NOTE: User IDs are created during the setup of the Razor Cloud server. The "Save Password" feature is limited to a password that is less than 7 characters.

If you have any questions, please contact razor_support@visible.com