Installation

Selecting an Engine Host

Before installing, select a host to run the Tractor engine. This host will need to run on Linux or Mac OS X; the supported versions are listed on the RenderMan Products download page. Blade hosts can be Linux, Mac OS X, or Windows.

Hosts with faster CPUs, more cores, and faster storage will be able to schedule faster and handle more throughput.

Larger disks tend to be important as more completed jobs can be saved for analysis.

Modest commodity drives are sufficient for large queues; 1 GB will store approximately 200,000 tasks. However, larger drives may be desirable if jobs will be archived in perpetuity for historical analysis. Also, disk space is required to store log files under the default configuration.

Virtual machines are not usually recommended for running tractor-engine unless care is taken to allocate CPU, disk, and network resources with nearly "bare metal" performance.

For simplicity, the engine host should not be running a web server or other server using port 80. The engine by default uses port 80, though it can be configured to use a different one.

Installation

1. **Download and run the installer.**

   The installer must be run as a user with system administrator privileges (e.g. as root on Linux). The installation directory is:

   - /opt/pixar/Tractor-VERSION on Linux,
   - /Appications/Pixar/Tractor-VERSION on OSX, and
   - C:\Program Files\Pixar\Tractor-VERSION on Windows.

   This path will be referred to as INSTALL_DIR in this documentation.

2. **Get a license.**

   Near the end of the installation process, the LicenseApp program will be launched to retrieve your license file. The license is only needed on the engine host, and only if you have not installed one previously. If you already have a license, or if you are just installing on blade hosts, then you can simply **dismiss the license dialog** using the close button. If you do need a license, then you should enter your RenderMan forum login, password, and the serial number that you received at purchase time; then the application will connect to Pixar and retrieve a license.

   If you need to download a license file after the engine has been installed, simply run the LicenseApp application, which is located in INSTALL_DIR/bin.

   By default the license file pixar.license will be downloaded to the parent of the installation directory (/opt/pixar or/Applications /Pixar). Alternatively, the license location can be overridden by setting the PIXAR_LICENSE_FILE environment variable or by setting LicenseLocation in your tractor.config file. Because Tractor is typically run in combination with a floating license server, the pixar.license file will be a "stub" or "redirector" license, which simply points at the license server machine.

   The engine manages the available Tractor seats; the total seat count represents the maximum number of tasks that can run concurrently across the farm. Blades do not require a license to start up, and do not consume seats while idle. The Dashboard does not consume a license.

3. **Choose the engine host.**

   The dashboard, blade, and command line tools need to be able to find the engine in order to communicate with it. By default, the engine advertises its location on the network using a simple multicast protocol that is suitable for many small installations. (For more information, see engine discovery.)

   However, a real nameserver entry for the engine host simplifies Tractor Dashboard use and is more suitable for production environments. Please consult with your system administrator regarding your site's best approach for creating a hostname aliastractor-engine to point to the engine host. This may involve:

   - adding a DNS CNAME record to point tractor-engine to the engine hostname, or
   - adding a 'cn' entry to the engine hostname's LDAP entry, or
   - adding a hostname alias to /etc/hosts.

   The commands host tractor-engine, nslookup tractor-engine, or ping tractor-engine can be used on client hosts to verify they can reach the engine using the hostname alias.

Command-line components such as tractor-blade, tractor-spool, and tq can point to a different engine by setting the TRACTOR_ENGINE environment variable or setting the --engine option to the desired HOSTNAME:PORT for your installation. References to tractor-engine in the configuration files may also need to be changed.