Got a Render Farm?

Smedge 2010

The Smedge that holds it all together

The next generation technology of Smedge is all you need to get your farm working for you without specialized training and without breaking the bank. Smedge gives you the power and flexibility of more expensive solutions with the intuitive interface that artists have loved for over a decade. Seamless cross platform operation combines your Windows, Linux and Mac hardware interchangeably. Extension is no problem, allowing integration into any pipeline and support for custom toolsets. Whether your farm is 5 machines or 500, Smedge can give you a stable and easy to use interface to put the power of your farm to work for you.

Proven Performance

• Stability you need

Client/Server Architecture

Smedge uses a proven client/server architecture to provide robust and scalable performance. Configuration of the client/server architecture is automatic, simplifying installation and maintenance.

Self Managing Performance Scaling

Smedge components automatically scale and release resources as they are needed, dynamically utilizing as little of your node resources as needed.

Event Driven Architecture

Smedge components are automatically updated with only the information they need as that information becomes available to the system for a responsive feel without excessive network usage.

Production Tested

Smedge has been in production use for over 12 years worldwide. It is currently in use at locations ranging from a handful to several hundreds of nodes, including effects shops, commercial render farms, architecture and engineering firms, TV stations, and educational institutions.

• Features you want

Full Compliment of Supported Products

Smedge supports all of the popular rendering products currently available. Out of the box, it can control 3D Studio Max, 3Delight, After Effects, Air, Aqsis, Blender, Cinema 4D, Combustion, Fryrender, Fusion, Gelato, Houdini, Lightwave, Maxwell, Maya, MayaMan, mental ray, Nuke, Rendition, Shake, Viz, Vue, XSI, and more. It also has a built-in system for sending arbitrary commands to your nodes, from custom rendering commands to software installations.

Seamless Cross-Platform Integration

All Smedge components work identically on Windows, Linux and Mac computers, and can seamlessly interconnect creating a heterogeneous network from all of your available hardware.

Automated Background Operation

Smedge can be used in a simple click and render mode, or it can be set to run automatically at boot as a Service or daemon.

Powerful Prioritization

Smedge includes several levels of prioritization including prioritized "Pools" of nodes, and a numerical priority on the Job. You can also configure either "first-in, first-out" or "round robin" style distribution for equivalent priority jobs.

Intuitive Interface

• Graphical tools you can understand

With a consistent user interface for all Products, the Smedge graphical interface components provide an easy to understand portal for artists, TDs, and system administrators to control the system. Smedge has both the ability for a small shop to allow anyone to control anything from anywhere, and the ability to lock down aspects of that control globally, for the security larger facilities need.

The main GUI component provides detail without confusion. Using a flexible, modeless control interface it also provides rich display of the details to monitor progress and easily find and fix problems when needed. It can integrate with frame viewing applications to automatically view rendered frames and frame sequences from directly in the interface. It can also integrate with remote desktop applications to easily access each node directly from any other, a handy tool for system administration.

Event Actions and Status Display

Smedge includes other graphical components. Herald allows you to respond to any event in the Job life-cycle with an array of possible actions, including sending emails or executing arbitrary commands. It can extract data from the Job that triggered the event to include in the action. Another useful tool is Conspectus, showing a graphical overview of the current CPU and memory usage on every node on your system from a single simple window.

• Scripting tools you can use

Smedge also includes a complete suite of command line based tools that can interact with the system. Using these tools it is possible to completely integrate Smedge into any pipeline, and even to completely replace the default graphical UI with whatever customized interface you desire.

These tools can also be used to integrate Smedge into your artists' workstation interface. Smedge includes scripts to integrate with applications like Maya and After Effects, giving your artists a comfortable way to get their work into the system without requiring them to open and run a separate GUI application.

Inherent Flexibility

• Automatic Configuration

Automatic Node Configuration

You can configure a system-wide "default" configuration for your nodes. Nodes will automatically update to these default settings when they connect to the system, without any interaction from the user at installation or run time.

Automatic Product Integration

Smedge can automatically find and configure itself to run the latest installed version of many of the rendering applications that it controls. This can simplify first time installation, making operation as simple as install, run, render.

Centralized Control

Users can configure any attribute of any node from any other node. They can also configure several nodes all at once. Of course, this control can also be restricted so general users can't mess up the system, but administrators can still make changes without having to move around between machines or copy configuration files manually.

Node Presets

You can save and apply "preset" configurations to quickly apply settings to one or more machines. You can also save and load the Engine settings from a simple text file format, giving you even more flexibility in how you manage your network or configure new nodes.

• Powerful Extensibility

Simultaneous Product Version Support

Many products support simultaneous use of multiple versions of an installed render application. If you need to support an older version because of legacy plug-ins, for example, it is often as simple as adding only one or two lines into an INI style text file.

Simple but Powerful Custom Product Capability

Smedge has an even more sophisticated system for generating the ability to control new Products. This can be used to integrate with custom pipeline operations, again using a simple INI style text file to define the information required to control the application by command line, to monitor the process for errors and rendered image files, and to seamlessly integrate it into the standard UI with a minimum of fuss.

Full API Available

Smedge is built with high performance C++ code, and you can directly compile your own components that use the libraries to create Products (the components that manage Jobs), integrate 3rd party systems with compiled code for high performance, or even create your own custom applications for monitoring and interacting with the system. The API is consistent across platforms, so you can easily port your customizations to whatever hardware you need.

Looking to the Future

• Future Development

Smedge uses an annual release system to provide a constant stream of improvements and upgrades. These are just some of the changes planned for Smedge 2011, currently scheduled for release in October 2010:

• Unicode
Simplifies use in foreign languages.

• Centralized Software Updates
Update Smedge on your entire network from a single node without shutting down and restarting, even while work is running on your system.

• Stay-Resident Rendering
Decrease load time by leaving scene data available in memory between successive frames for an entire job.

• Runtime Product Editing
Create and edit Product configurations and multiple Product versions from a central location, without restarting.

• Job Grouping
Combine multiple Jobs into a group, which can be manipulated as a whole.

• Wake on LAN
Wake render nodes from a low power state when needed to reduce your electricity bill and protect the environment.

• Multiple Distribution Options
Render frames in reverse or binary descent order, and distribute Jobs using the priority as a ratio of nodes to use.

• Completely Distributed Master
Reduce network overhead and increase scalability far beyond the competition by distributing the Master's database management.

• Extended Event Architecture
Unified interface for all event actions, for Jobs, for Engines, and for arbitrary system events. Create actions dynamically from any node to be executed on any other node.

• Complete GUI Customizability
Customize the views, lists, toolbars, and menus to optimize the Smedge interface to your needs.

How It Stacks Up

Feature	Smedge	Qube	EnFuzion	Rush
Client-Server Architecture	automatic	manual	manual	distributed
All Components are Compiled for Optimum Performance	yes	yes	yes	no
Requires 3rd Party Applications for Basic Operation	no	no	no	yes
Automatic Node First Time Configuration Without User Interaction	yes	no	no	no
Decentralized Node and Job Control	yes	yes	yes	yes
Monitor Process Output in Real Time and After Work Completion	yes	yes	no	yes
Built-In File Transfer Optimization	yes	no	yes	no
Simultaneous Cross Platform Operation (Windows, Linux, Mac)	yes	yes	yes	yes
Machine Pool Prioritization	yes	yes	no	manual
User Level Permissions to Control System Operation	no	yes	no	yes
System Uses Specified User Account Used to Execute Work Processes	no	yes	no	no
Default Support for Leading Renderers Out of the Box	39	46	26	18
Simple Unrestricted Arbitrary User Command Distribution	yes	no	no	yes
Automatic Error Recovery for Failed Work and Crashed Nodes	yes	yes	yes	yes
Integrated Product License Validation	no	yes	no	no
Built-in Image Previews in Graphical Interface	no	no	yes	no
Rendered Frame File Validation and Listing	yes	no	no	no
Integrated Node Availability Time and Processor Restrictions	yes	yes	no	no
Simultaneous Product Versions	yes	yes	yes	yes
Custom Product Control	yes	yes	no	yes
Scriptable Pipeline Integration	yes	yes	yes	yes
Programmable API for Customization	yes	yes	yes	no
Included Web Interface	no	no	yes	no
Built-In System to Reuse Loaded Scene data	no	yes	no	no
Windows Drive Remapping	yes	yes	no	possible with scripting
Email Notifications	yes	yes	no	yes
Job Statistics Reporting	manual	automatic	manual	manual
Customizable Queuing Algorithms	no	yes	no	no
Licensing	node	server/client	node	node
Maximum cores per licensed node	unlimited	8	unlimited	unlimited
Cost per node	up to $100	up to $600	up to $400	up to $190

Comparisons based on published specifications as of February 2010.