OpenRSM
Remote systems & network Management

What OpenRSM is

OpenRSM is an integrated remote management platform. It manages systems and network. OpenRSM provides the following functionality

- ✓ Inventory / Assets management
- ✓ Remote control
- ✓ Software management
- ✓ Network monitoring
- ✓ Reporting / usage statistics
- ✓ Remote procedure call

OpenRSM is one of the very few (perhaps the sole) open source integrate d management systems. One of its business goals have been to prove that the open source co mmunity is m ature enough t o open t o the enterpri se management market. Thi s ma rket is dominated b e heavy, ex pensive and inflexible systems. OpenRSM on the contrary is:

- ✓ Lightweight
- ✓ Free
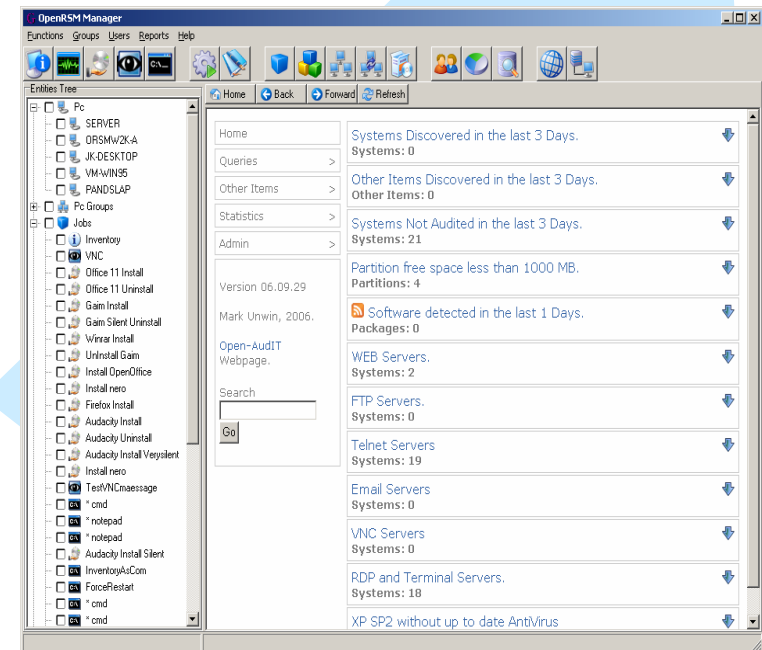- ✓ Integrated
- ✓ User centered
- ✓ Multiplatform

OpenRSM is entirely based on Open Source initiatives. Its source and binary packages are distr ibuted und er open source licensing (http://openrsm.sourceforge.net).

Architecture and components

OpenRSM is composed of the server , the agents and the Manage ment console. The management console is the administration graphical tool, the only component that interfa ces with the user. The server is the component that ac cepts and tran sparently deliv ers reque sts for management ta sks, originating f rom the management con sole. The ta sks are e xecuted at the agents.
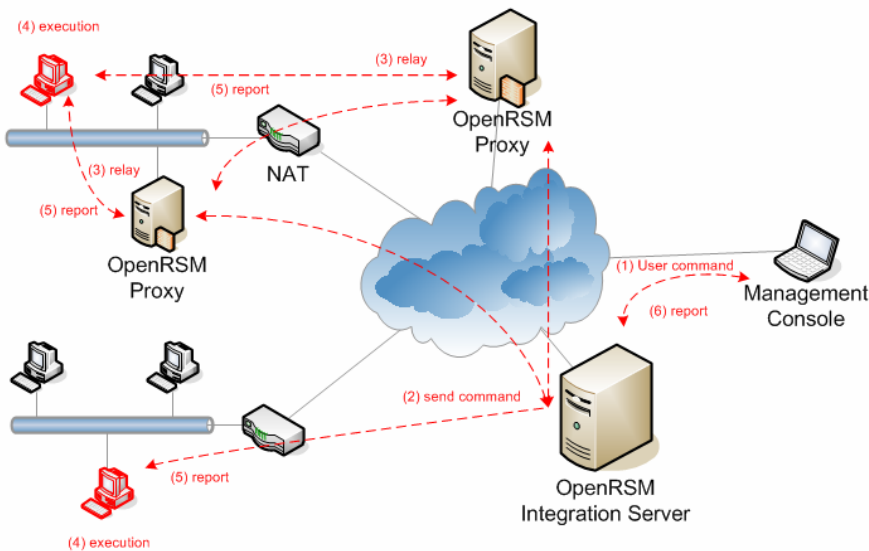

Research Academic Computer Technology Institute (R.A.CTI)

Networking Technologies Sector
www.cti.gr/nts

Architecture and job submission

OpenRSM Features

Server
- Integrated
  - Smart front-end for transparent orchestration
  - Lightweight, small memory footprint
- Modular
  - Interoperability among several technologies
  - Well known open source server-side technologies and platforms are used
- Reconfigurable
  - Single or distributed server logic
  - Installation efficiency and adaptability
- Scalable
  - Successfully tested for load up to 40000 jobs
  - Performance : 21 jobs / sec
- Proxying and cascaded proxying
- Minimum networking requirements : s.t.d. tcp/ip connectivity

Agent
- Lightweight
- Available for most widely used platforms
  - Windows NT/Server
  - Windows 2000/XP
  - *nix
- Secure
  - Invisible, waken by the server
  - No listening ports
  - No communication with other modules than the server
  - Secure communication protocol with the server
  - Cannot communicate with other than the designated server
- Flavours
  - Service
  - Background process
  - Graphic interface
  - Console application

Management Console
- Designed for speed and user efficiency
- OO design and modeling : jobs and machines are modeled as interacting entities
  - Reusable jobs
  - Jobs, machines grouping
  - Dynamic groups, searching by criteria
  - Reports
  - Usage and statistics
- Agent manual / automatic discovery
- User roles
- Multilanguage
- Job scheduling

Assets Management

- Based on WBEM/CIM, WMI protocol
- Based on OpenAudit open source tool
- Hardware, software inventory
    - Drivers, devices, applications, services, licenses, keys
- Dynamic reports and queries
    - Dynamic groups, searching by criteria
    - Reports
    - Usage and statistics
- User roles

Remote control

- Based on RealVNC open source tool
- Reverse connection implementation
    - Agent-initiated connection
    - Enhanced security, the agent is never a listener
- Proxying

Software delivery

- Based on software packaging
- User interactive or unattended (silent)
- Installation and uninstallation is supported
- Extended curl open source tool
- Automatic retrieval of installation / uninstallation switches
- Resuming unfinished jobs
- Download target applications

Monitoring

- Based on SNMP technology, NINO nms
- Monitoring of managed stations and network elements
- OID viewer
- Process viewers
- Graphs
- Traps

Remote procedure call

- Command types
    - Shell
    - process
- Job priorities and visibilities are supported
- Reusable, editable commands
- User roles

Contact Information:

Department of Computer Engineering and Informatics

Communication Networks Laboratory (CNL)

University of Patras

Patras, GR-26500 - GREECE

Tel: +30-2610-960470   , fax: +30 2610 960350

email: manos@ceid.upatras.gr