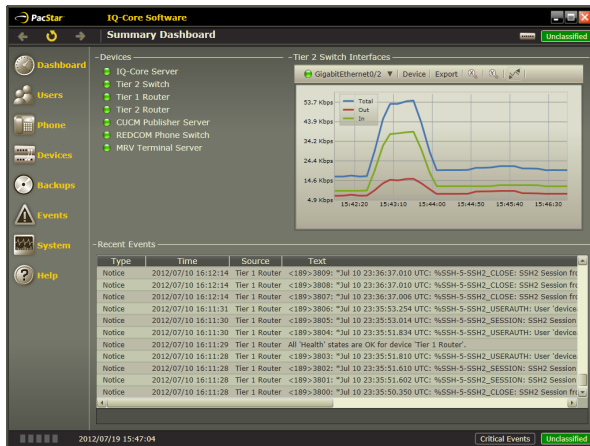


PacStar IQ-Core[®] Network Communications Manager



PacStar IQ-Core NCM is a robust communications management software platform providing:

- An intuitive user interface making set-up and operation by non-technical personnel quick and easy to learn with significantly fewer mis-configuration errors
- Powerful wizards and alerts with common user interfaces across all hardware and software applications automating complex and routine tasks.
- Interoperability with a broad range of tactical and enterprise communications hardware and systems, enabling easy, consistent operation even with upgrade and replacement of system components
- An extension of advanced IP-enabled unified communications (voice, video, data sharing, etc.) to the edge without any increase in complexity of operation
- Vendor agnostic remote management with the ability to monitor, change device configurations and troubleshoot from anywhere in the world.

IQ-Core NCM manages the PacStar 400, 1000, 2000 and 4000-series products and is deployed broadly throughout the US Department of Defense as well as in civilian and public safety organizations. The software is also available for integration into customer-specified systems, customized OEM and enterprise-class solutions.

Key Benefits

- Technology optimized for the edge
- Reduces requirement for advanced IT personnel by simplifying the interface of a complex network.
- A unified view - Real-time snapshot of the health of the network, and ability to provide backup and restorations of entire network.
- Interoperability - Integrates a broad range of data formats and communication protocols from multiple vendors.
- Adapts to user level - Designed for non-specialists, yet offers capabilities to meet the needs of advanced power users.
- Drives down costs - Reduces the number of specialists required to stand up and manage communications equipment, and reduces the training required.
- Enhances ability to meet mission objectives - Reduces setup time and improves uptime and configuration management, allowing comms to adapt to rapidly changing circumstances.

Flexible Plug-in Architecture

PacStar can quickly integrate support for nearly any hardware or software system. Device communication is via SSH, Telnet, SNMP, Serial, and Web Services.

Supported devices:

- Acme Packet Net-Net 3800 (Session Border Controller)
- Aruba Networks Mobility/Branch Controller
- Avaya Aura Application Server 5300 (AS5300)
- Avaya ERS 4500 switches
- Brocade FCX Series switches
- Cisco[®] 1800, 2800 and 3800 series (ISRs)
- Cisco 1900, 2900 and 3900 series Integrated Service Routers (ISRs)
- Cisco 5915 and 5921 Embedded Services Router (ESR)
- Cisco CSR 1000v
- Cisco ASA (Adaptive Security Appliance) 5500-series
- Cisco Catalyst[®] 3560 and 3750 series switches

- Cisco ES 2020 Embedded Service switches
- Cisco Nexus 3000 series switches
- Cisco Unified Communications Manager (UCM) 7.x, 8.x, 10.x and 11.x
- Cisco UCM Express
- Cradlepoint Wireless Routers
- DRS UPS 2000 TR-III
- iDirect Evolution 8000 Series Satellite Router
- Microsoft Active Directory
- Microsoft Certificate Authority
- Microsoft Exchange
- Microsoft Windows servers and workstations
- MRV Terminal Server
- NEXUS HAWK cellular/Wi-Fi/3G gateway
- Palo Alto Networks VM-Series Virtualized Next-Generation Firewall
- REDCOM HDX TDM gateway
- REDCOM[®] SLICE[®] TDM gateway
- Riverbed Steelhead WAN optimization appliances and VMs
- Sonus (NET) VX 400 and VX 900
- Vocality BASICS modules (router, replay,

voice, firewire and hybrid)

- VMWare ESXi 4.x and 5.x
- Generic network devices, using industry standard protocols including SNMP and Syslog. Includes MIB browser

Dashboard and Real-Time Data

IQ-Core NCM captures and processes system information in real-time, and displays it in dashboard and detail views. PacStar can tailor the dashboards and views to meet your requirements.

Examples:

- Device up/down status
- Router and switch interface status
- Device internal temperatures
- Windows and application services up/ down status
- WAN/LAN bandwidth utilization and network performance
- Processor, memory, and disk utilization
- Monitor any SNMP value with custom thresholds for alerting

Configuration Management

IQ-Core NCM makes managing device configurations easy.

- Backup one or more devices
- Restoration of one or more devices
- Configurations are compressed into a single file
- Download configurations from remote locations
- Backups can be triggered “on change” daily and manually
- View and compare device configurations
- Apply configurations using templates that can query users for parameters
- Apply base level configurations via serial communications
- Clone IQ-Core NCM configuration using snapshots

Unattended Monitoring/Alerting

IQ-Core NCM consolidates events from devices (syslog SNMP and Cisco IP SLA), Windows event logs, and internally detected conditions.

- Real-time events displayed as they happen
- Events are stored, enabling troubleshooting of past problems
- Event forwarding to upstream syslog servers
- Alerts can be emailed to multiple recipients

Device Management

- Soft reset
- Easy password changing
- Fast console (SSH) access (true VT terminal, no manual login)
- Consolidated interface view (up/down, VLANs, IPs, etc.)
- Real-time bandwidth graphs, by interface
- Cisco IP SLA setup, graphing and alerting
- Virtual machine management
 - Resource monitoring (CPU, Memory, Disc, etc)
 - Power on/off guests and VMs
 - Smart VM shutdown on low battery power
- Take and restore snapshots, create and execute customized device command scripts
- One-click access to native user interfaces
- One-click access to frequently used device commands
- Ping directly from devices for troubleshooting purposes

User and Operator Provisioning

- Add and remove users from Active Directory/LDAP
- Auto-create Microsoft Exchange mailbox for user
 - Assign phone to user
 - Assign SIP properties to LSC user
 - Bulk import/export
 - Roles-based access to IQ-Core NCM capabilities

Phone and Line Provisioning

- Add and remove analog, VoIP and SIP phones – and associate with switch ports
- Detailed display of phone and line information
- Associate phone numbers with user names
- Phone type, IP, MAC, and registration status
- MLPP configuration
- Easy creation of auto-dial lines
- Cisco UCM search space and partition management
- View Cisco UCM route plan

Voice System Reporting

Call Detail Records

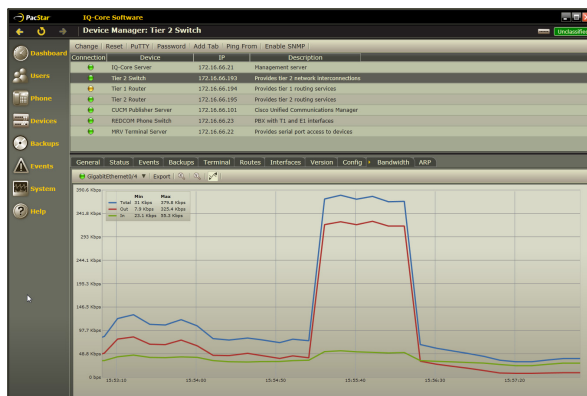
- Source phone number
- Destination phone number
- Source trunk when available
- Call start time and stop time
- Record searching/filtering

Call Management Reports

- Call volume and top callers reports
- Call quality reports
- Trunk statistics
- Reports by phone

Efficient Use of Resources

- Client/Server, multiple clients allowed
- Client and Server run on any Microsoft Windows® OS
- 1 GB RAM (2 GB recommended)
- 1 GHz CPU (1.5 GHz recommended)
- 5 GB disk space (15 GB recommended)
- Client/Server communication protocol suitable for low-bandwidth connections



This product may be covered by one or more of the following patents #8,654,749, #7,817,589, #8,270,325 #9,160,619. Additional patent(s) pending.