

Cruz Edge Management Solution

Powerful Edge Automation, Monitoring, and Management

EDGE
COMPUTING

SOLUTION BENEFITS

Minimize onsite technical support costs

Allow BYOS/HW flexibility

Automate new solution deployment

Consistent and timely software upgrades

Automate bulk automated actions

Visualize navigation across numerous branch sites

Isolate problems across multi-components

Discover and manage existing equipment

Branch configuration and security compliance

Automate closed-loop corrective processes

Site resource preparation and restore for updates

Monitor environmental temperature and power metrics

THE EDGE OF POSSIBILITIES

The edge facilitates a wide range of important business opportunities. From delivering better internet services for 100s of restaurants to providing service providers with distributed 5G processing, edge infrastructure has become the core for many diverse and promising business models. Some example opportunities include:

- Align IOT or 5G support process closer to their customers
- Distribute cloud features for better latency and meet regulatory data restrictions
- Apply security routines earlier in the network flow
- Apply advanced network load optimization at the edge (SDWAN access)
- Video compression and enforcement of regional content policies
- Manage remote sites, like ships or oil rigs, in connected or disconnect modes, as conditions dictate

Edge solutions leverage key IT technologies to deliver the promise of these business models. For instance, software virtualization methods (VM, containers) allow network functions, applications and even storage, to be dynamically deployed, updated and replaced, while regulating their resource commitments by time and demand. In addition, hyper-converged infrastructure (HCI) clusters simplify the scaling of cloud capabilities in distributed locations. Finally, new compute processors are optimized to support varied business requirements such as network traffic or video management.

EDGE MANAGEMENT CHALLENGES

To make the business opportunities of edge solutions financially viable, operational challenges must be managed. The initial infrastructure deployment and processes to numerous distributed sites requires automated software management and remote access. Comprehensive asset management is also key to understanding the relationship between the varied technologies and their dependencies and also affect overall performance and software lifecycle. Ongoing software updates need to be automated to leverage the open software model, eliminate manual errors, and minimize onsite technical support. Site environmentals are also be key to ensure continuous edge solution operations. Finally, autonomous operations for sites that could be disconnected from WAN and centralized control needs to be provided.

CRUZOC EDGE MANAGEMENT SOLUTION

Dorado Software's **Cruz Operations Center (CruzOC)** is a unified Enterprise IT management system to view, monitor, deploy, and configure your datacenter infrastructure to let you maximize performance, reduce office/store visits, avoid unplanned truck rolls, and eliminate outages.

The CruzOC Edge Management Solution offers a single pane-of-glass for comprehensive security, compliance, health, performance, and software lifecycle orchestration for any infrastructure in your remote edge software-defined infrastructure and legacy hardware.

In a single solution, IT managers can view and manage diverse environments of multiple technologies – physical/virtual/compute/network – from multiple vendors.

With CruzOC, IT departments can simplify the deployment and management headaches with a single tool to obtain performance statistics; monitor health; backup/restore/deploy firmware; push and monitor configurations to wireless controllers, APs, and network switches; trigger network health alerts; automate repetitive tasks; simplify troubleshooting; and ensure service availability.

Pane-of-Glass Performance, Deployment, Configuration, Compliance for Edge Computing

The screenshot displays the Dorado CruzOC interface with the following components:

- Navigation Bar:** Home, Alarms / Events, Performance, Topology, Resources, Configuration Management, Compliance, Automation / Actions, Reports, Settings, Branch_Operations, Branch_Deploy, Branch_Compliance, Branch_Update.
- Alarms Panel:**

Severity	Entity Name	Resource IP	Date Opened	Event Name	Count	Message
Minor	System.10.128.30.210...		08/28/19 4:05:56 PM	monitorTargetInDeterminant	1	Monitor: Default Key Metrics for Managed Resources (internal fault: Target entity does not support selected metrics)
Informational	VM_10.87.0.2		06/12/19 10:34:31 AM	vimCreated	1	VM_10.87.0.2
Informational	VM_10.88.0.2		04/15/19 12:15:28 PM	vimCreated	1	VM_10.88.0.2
Informational	VM_192.168.53.150		07/19/19 2:25:19 PM	vimCreated	1	VEP_192.168.53.150
Major	VNF_10.87.0.55_VCE	10.87.0.55	08/02/19 4:40:22 PM	monitorTargetInReachable	3355	Monitor: EdsTest (timed out after waiting on ICMP response for 1000ms)
Critical	VNF_10.87.0.55_VCE	10.87.0.55	08/02/19 4:42:07 PM	monitorTargetDown	3090	Monitor: Default ICMP Monitor (timed out after waiting on ICMP response for 1000ms)
Major	VNF_10.87.0.55_VCE	10.87.0.55	08/02/19 4:42:07 PM	monitorTargetInReachable	3090	Monitor: Default ICMP Monitor (timed out after waiting on ICMP response for 1000ms)
Critical	VNF_10.87.0.55_VCE	10.87.0.55	08/27/19 2:04:11 PM	monitorTargetDown	2070	Monitor: EdsTest (timed out after waiting on ICMP response for 1000ms)
Informational	VNF_10.88.0.21_SBC	10.88.0.21	07/26/19 7:00:17 PM	monitorAttributeTrend	7	Monitor: Sonus Call Rate, sonusSystemCongestionCurrentStatisticsAvgCallRate range: Low Call Rate (>0)
Critical	VNF_10.88.0.27_FA-DL1	10.88.0.27	09/13/19 11:05:09 AM	bigipAuthFailed	1	
- Managed Edges Panel:**

Name	IP Address	Vendor	Model	Date created	Management State	Network Status	Severity
System.192.168.53.100_Edge_V14	192.168.53.100	Dell Inc.	Dell EMC VEP 4000	08/09/19 10:12 AM	Normal	Indeterminate	
System.10.128.30.210_Edge_V49	10.128.30.210	Dell Inc.	VEP-4000	06/12/19 4:13 PM	Normal	Responding	Minor
System.10.35.35.88_Del_R030	10.35.35.88	Dell Inc.	PowerEdge R030	04/15/19 12:40 PM	Normal	Responding	
- Managed VNF Resources Panel:**

Name	IP Address	Vendor	Model	Date created	Management State	Network Status	Severity
VNF_10.87.0.55_VCE	10.87.0.55	Velocloud	Velocloud Edge	05/24/19 11:51 AM	Normal	Not Responding	Critical
VNF_10.88.0.21_SBC	10.88.0.21	Sonus Networks...	Sonus SBC 5000	07/29/19 4:05 PM	Normal	Responding	Informational
VNF_10.88.0.42_FA_VM	10.88.0.42	PALO ALTO NET...	PA-VM	06/19/19 9:45 AM	Normal	Responding	Minor
VNF_192.168.53.170_SRX	192.168.53.170	Juniper Networks...	FinFly_SRX	08/29/19 11:53 AM	Normal	Responding	
- Map Context:** A map showing the geographical location of the managed resources, with a red dot indicating a critical issue near Sacramento, CA.

CRUZOC MANAGES YOUR EDGE

CruzOC offers critical features for managing any edge asset while optimizing support costs, reducing downtime, eliminating manual errors, and minimizing onsite visits.

Single Pane-of-Glass: Manage diverse, managed resources through their full lifecycle via a single interface.

Asset Management: Manage edge installations as an associated group of resources for holistic performance and root cause visibility.

Script and Action Automation: Predefined, industry-driven control processes to support automation, operator ease-of-use, and the reduction of manual errors.

Log & Telemetry Support: Collect, filter, analyze, and visualize comprehensive edge metrics via logs and streaming telemetry.

Low-level HW Component Visibility: Integrated management and visibility to underlying hardware that supports virtualized and specialized edge processes.

External Function Management: Manage automation and visibility to remote connectivity, resources, and processes.

Environmental Control: Monitor and manage components that control the site operational environment.

Autonomous Operation: Continuous management if an edge site disconnects from WAN or remote centralized management processes.

No-touch Office Deployment: Accelerate office rollout with technician-free automated resource and network configuration.

Consolidate Resource Management: Centralized visibility of all edge computing, networking, and application performance metrics, events, and traffic flow.

Software Lifecycle Management: Corporate-wide software updates to network devices with dependency validation for network functions, computer processes, and applications.

Active Security Compliance: Validate resource configurations, change auditing, and automated compliance enforcement for security politics.

Manage and operate any infrastructure with centralized edge to datacenter management



TECHNICAL SPECIFICATIONS

Edge Infrastructure Support Examples

- SD-WAN
- uCPE
- Virtualized Network Edge
- Cloud Compute Edge
- VxRail
- vSAN

Comprehensive Multi-tech/ Multi-vendor Support

- **Technology Examples:** Networking, Wireless, Storage, SD-WAN, Servers, Clients, Hyper Converged, Backup
- **Vendor Examples:** Cisco, Ruckus, Aerohive, DELL EMC, Brocade, Juniper, Netgear, Extreme, Foundry, HPE, F5, Sonicwall, Sonus, Aperi, Avaya, Lenovo Ericsson, Siemens, Enterasys, Nortel, Alcatel, 3Com and many more.
- **For more details and a complete device listing, contact sales@doradosoftware.com**

Supported Web Browsers

- Chrome
- Safari
- Firefox
- Internet Explorer

Deployment Options

- Supports single server and high availability deployments with MySQL and Oracle databases

Trials, Pricing, Options

- Free 30-day trial www.doradosoftware.com
- Low-risk, affordable subscription-based options in 1/3/5-year terms
- Perpetual licenses are available upon request
- Scales from 25 devices to unlimited

Demos, Quotes, Purchase

- Dell Technologies Representative, Reseller or sales@doradosoftware.com

Supported Operating Systems (64-bit)

- Microsoft Windows Server
- Linux for Redhat and CentOS
- Virtual Appliance

About Dorado Software

Dorado Software, Inc. is a leading provider of integrated resource management, performance monitoring, and service orchestration software to automate cloud operations across converged infrastructure fabrics. Dorado helps IT professionals to monitor, configure, and manage converged infrastructures (physical and virtual storage, servers, networking, applications), virtualized network functions and cloud services –from a single-pane-of-glass. www.doradosoftware.com.