

Cruz Edge Orchestration Solution

# Orchestrating the Edge and Managing Virtual Assets at Scale

*Minimize onsite technical support costs*

*Flexibility to choose distribute hardware and software technologies*

*Manage diverse software and configuration dependencies*

*Manage corporate compliance for security and configurations*

*Manage edge site software updates at scale*

## THE PROMISE AND THE CHALLENGES OF THE VIRTUALIZED EDGE

Deploying IT and network resources at the edge address several enterprise challenges while facilitating an increasing number of business models. Many enterprises must address both security and regulatory issues in private installations and closer to the customer. Having virtual resources near the customer or in remote sites has also created a new wave of innovation for technologies like 5G and IoT while allowing distributed processes to relieve network load and significantly improve response time.

The edge offers many advantages while presenting some interesting challenges. Sites are often remote, and often there are thousands of sites. Providing onsite technical resources to sites can be both costly and time-consuming, therefore, centralized remote management is essential.

To offer the variety of functions required by diverse business models utilized at the edge, customers must be able to choose from a broad offering of hardware and software components and competitive cost models. Orchestration needs to offer this flexibility.

Finally, orchestration must manage a specific site while scaling to replicate the advantages across many distributed sites.

## CRUZ EDGE ORCHESTRATION SOLUTION

The Cruz Edge Orchestration Solution manages the operating infrastructure software and virtualized functions at today's network edge and distributed compute initiatives. Key features address remote technical support and scaling issues associated with these solutions.

The integrated solution includes CruzControl and Cruz Operations Center (CruzOC). CruzControl is a unified system to manage all software lifecycle management. It includes image onboarding, version management, dependency policies, compliance validation, backup and restore, instantiation and deployment, planning and scheduling for site and multi-site upgrades. CruzOC delivers expansive IT resource management for multi-vendor, multi-technology assets.

Together, they provide a single console for Day 1 and Day 2 management of today's converging infrastructures and network operations.

## SOLUTION FEATURES

**Maintain Software Library** – Onboard, maintain, and automate access to software image library that supports the edge solution lifecycle.

**Maintain Software Compliance** – Integrated tools to discover, backup, monitor, and validate software versions and configurations against corporate standards.

**Bare Metal Software Management** – Manage the initial deployments of BIOS, Operating System, Hypervisor, and designated virtual function software, for un-staged edge installs or as required.

**Manage Virtual Software Updates** – Automate initial deployment or update of individual software, or associated groups of software components.

**Validate Software Dependencies** – Automate and/or manually create software version and configuration dependencies to support automated software updates.

**Manage External Functions** – End-to-end orchestration with automating processes to interact/configure software or network functions outside of the edge site. Includes network configuration, SDWAN orchestrators, and connected apps.

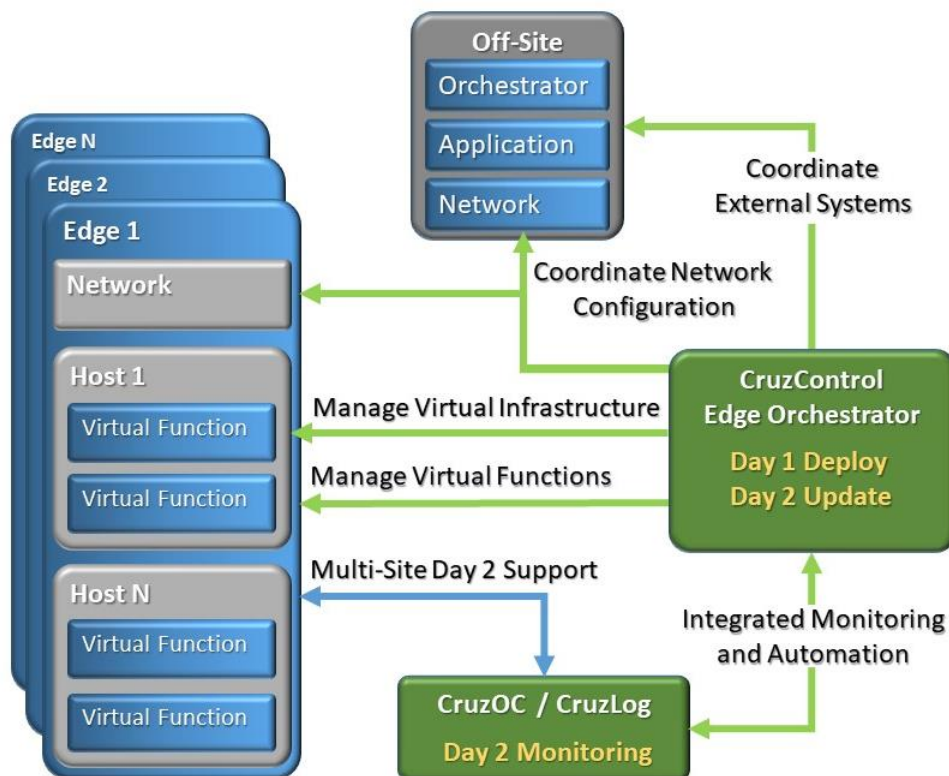
**Create Action Workflows** – Multi-step processes to support complex software deployments and dependencies.

**Create/Schedule Groups Actions** – Associate and schedule actions against defined groups of devices across multiple edge or distributed locations.

**Manage Roll-back Scenarios** – Roll-back to back out simple or complex software update actions.

**Initiate Day 2 Monitoring Support** – Upon a success software management update, ensure that appropriate monitoring and support processes are initiated for new capabilities.

**Coordinate Monitoring and Automation** – Integrate with Day 2 monitoring and support processes for continuous software compliance across the edge solution and automated corrective processes are available.



### Managed Edge Software Assets

- Bare Metal (BIOS)
- Network OS (OS10, ...)
- Compute OS (Linux, MS)
- Hypervisor (KVM, ESXi, HyperV)
- Orchestrators (vCenter, Openstack)
- VM/Containers
- SDWAN Orchestrators (Velocloud, Silver Peak)
- VNF (Velocloud, Palo Alto, Juniper SRX, Cisco Silver Peak)

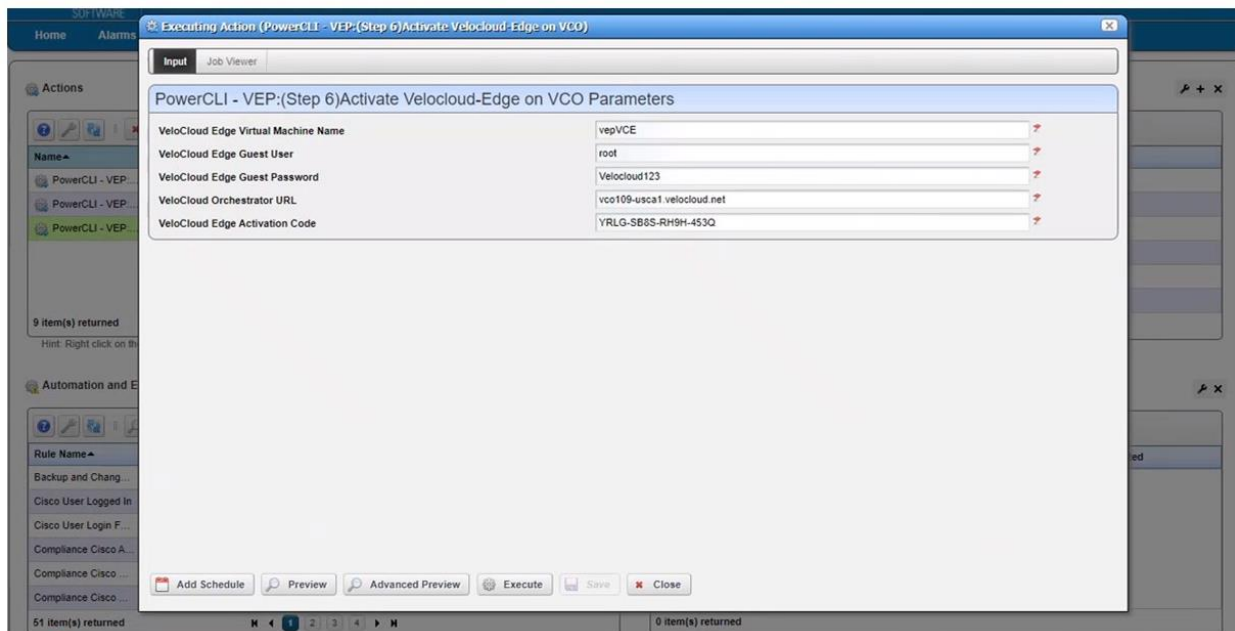
## THE VIRTUAL EDGE ORCHESTRATION USE CASE

Many technology service business initiatives require moving network and computational processing closer to the customer or specific distributed sites. These locations are known as the EDGE. Fundamental to these business models' success is an effective support management strategy with limited onsite support staff and across the breadth of their infrastructure resources.

A central feature of all edge deployments is a flexible compute resource strategy. The key technologies are virtualized functions, network optimized compute processes and software-defined WAN capabilities. Although edge platforms can run applications beyond virtual network functions, they are generally positioned with an SDWAN (Velocloud) to optimize external network traffic and an associated firewall (Palo Alto, Juniper SRX, etc.) to provide extended routing and security features.

## CRUZ EDGE ORCHESTRATION BENEFITS

- Optimize hardware and software choices to meet your requirements and budget.
  - Operating system and hypervisor flexibility (Microsoft, Linux, ESXi , KVM, HyperV)
  - Virtual Functions (Velocloud, Palo Alto)
- Reduce manual software configuration across full edge solution – at scale.
- Reduce operating costs for time-to-deploy software updates and costly configuration error correction.
- Minimize cost of onsite support and windshield time with single pane-of-glass.
- Coordinate associated external management reducing complexity and addition software support costs
  - SDWAN Orchestrators (Velocloud, Silver Peak)
  - Remote Network components (Dell, Cisco, Juniper, etc.)
  - Remote Associated Apps (Azure, AWS, Datacenter)
- Reduce software and training costs with centralized support and automation of software lifecycle.
  - Action Workflow – Complex /integrated deployment processes
  - Actions Groups – Repetitive action across multi hosts/sites
  - Scheduling – Manage rollouts and downtime
  - Policy Management – Single source of corporate practices



Managing Velocloud Orchestrator Action

## TECHNICAL SPECIFICATIONS

## Edge Infrastructure Support Examples

- SD-WAN
- VNFs
- Virtualized Network Edge

## Comprehensive Multi-tech/ Multi-vendor Support

- **Technology Examples:** Networking, Wireless, Storage, SD-WAN, Servers, HyperVisors, Clients, Hyper Converged, Backup
- **Vendor Examples:** Cisco, Ruckus, Aerohive, Dell EMC, Brocade, Juniper, Linux, Redhat, Microsoft, Netgear, Extreme, Foundry, HPE, F5, Sonicwall, Sonus, Aperi, Avaya, Lenovo Ericsson, Velocloud, Palo Alto Networks, Silverpeak, Siemens, Enterasys, Nortel, Alcatel, 3Com and many more.
- **For more details and a complete vendor listing, contact [sales@doradosoftware.com](mailto: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
- Cloud data stores Azure, AWS
- Operating Systems: Microsoft Windows Server, Linux for Redhat and CentOS, Virtual Appliance and cloud hosted.

## Trials, Pricing, Option

- Free 30-day trial  
[www.doradosoftware.com](http://www.doradosoftware.com)
- Low-risk, affordable subscription-based options in 1/3/5-year terms
- Scales from 25 devices to unlimited

## Demos, Quotes, Purchase

- Dell Technologies Representative or Reseller or [sales@doradosoftware.com](mailto:sales@doradosoftware.com)

## 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.  
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