MetalSoft Bare Metal Automation Platform

Bring agility to your datacenter

AT A GLANCE

MetalSoft provides end-to-end bare metal automation that enables physical infrastructure to change quickly and reliably with no human intervention.

KEY BENEFITS

- Deliver infrastructure faster
- Enable self-service
- Get end-to-end visibility
- Reduce resource waste
- Reduce human errors
- Replace many poorly integrated open-source tools
- Increase application performance
- Reduce networking latency
- 69% reduction in the cost of bare metal infrastructure management
- 4x Return on Investment

What is MetalSoft?

MetalSoft is the world's most sophisticated bare metal automation platform. It enables you to leverage the performance and cost benefits of bare metal while also increasing your infrastructure's agility.

With MetalSoft you can build a solid, reliable foundation for your business that will support the rapid shifting of resources from one project to another, as today's economic landscape demands.

Our platform acts as an orchestrator for all your data centers. It takes over the entire life-cycle management of servers, leaf-switches, and storages and enables self-service driven end-to-end infrastructure delivery.

It reduces resource waste and human error through automatic discovery, inventory management, automatic IPAM, built-in monitoring, and much more. It provides a single pane of glass for all your data centers and equipment.

How Does It Work?

Starting from an abstract graphical blueprint, Terraform manifest or CLI command MetalSoft executes the appropriate transformations on all involved equipment to deliver the desired infrastructure.
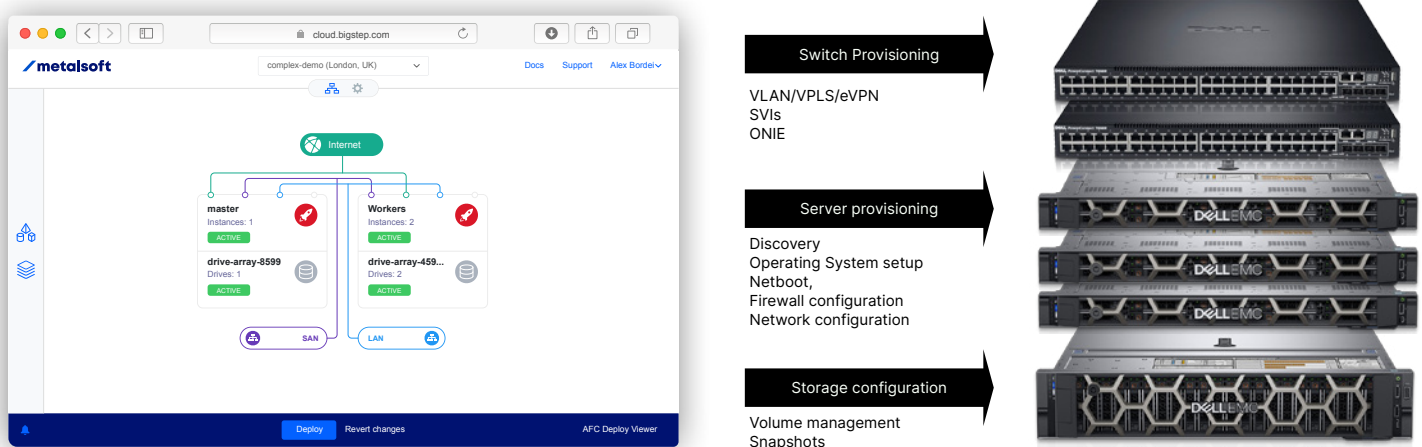

Fig. 1 - Blueprint designed in self-service interface triggers provisioning across all equipment

End-To-End Provisioning:

- ✓ Deploys CentOS, Ubuntu, Windows, ESXI
- ✓ Switch port VLAN/eVPN/EPG configuration
- ✓ IP Address (subnet block) allocation
- ✓ VLAN/eVPN/EPG allocation
- ✓ Switch gateway configuration (SVI)
- ✓ Server boot order configuration
- ✓ Server network configuration
- ✓ Server SNMP configuration
- ✓ Server firewall configuration

- ✓ Server RAID configuration
- ✓ Switch port SAN network configuration
- ✓ DNS configuration
- ✓ Storage LUN provisioning
- ✓ Server secure cleanup
- ✓ Switch VLAN/eVPN cleanup
- ✓ Storage snapshots cleanup
- ✓ Performs netboot coordination
- ✓ Performs custom post-install scripts

How is MetalSoft used?

MetalSoft is used by service providers and enterprises to optimize operations or build private or commercial bare metal cloud offerings.

- **Enable bare metal infrastructure agility -** Your physical infrastructure will be able to adapt to shifting business priorities quickly and reliably.
- **Enable self-service -** Enable cloud-like, end-user-driven consumption of physical resources.
- **Get end-to-end visibility -** Get a bird's eye view of all equipment in all your data centers and reduce waste.
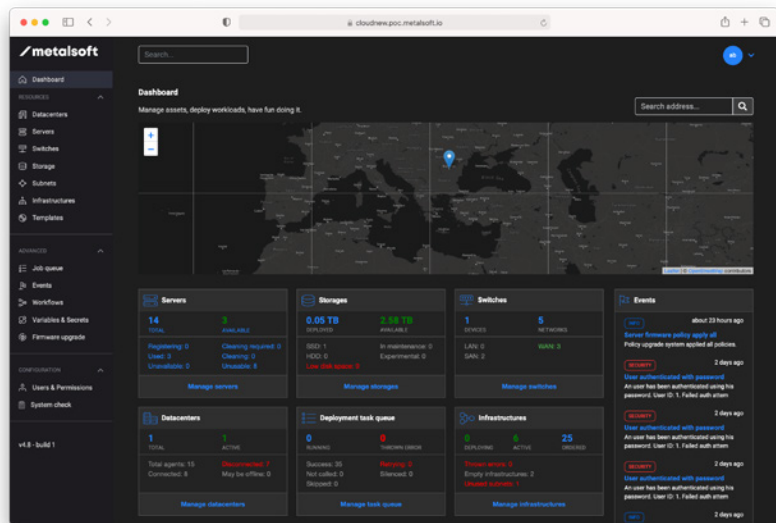

Fig. 2 - Admin interface showing the Dashboard

Key features

Centralized Control and Visibility

- **End-to-end provisioning -** MetalSoft provisions switches, servers, and storage in an orchestrated way.
- **Self-service portal -** Drag and drop user interface enables users to manage bare metal infrastructures remotely.

- **Admin portal** - Back-office user interface for NOC, support, and capacity planning.
- **Automatic server discovery -** MetalSoft automatically identifies a server's configuration, its vendor, all components, network connections.
- **Dynamic unattended OS install -** MetalSoft generates kickstart or other configuration files used during the unattended install process at runtime based on user-defined templates and environment-specific variables.
- **Zero-Touch Enrollment -** MetalSoft can enroll a server into the application automatically upon racking.
- **Deploy Graph Viewer-** MetalSoft enables admins to see the steps of a provisioning process, troubleshoot, fix and retry or skip failed steps.
- **CLI -** MetalSoft provides a very good CLI to further script certain tasks and simplify integrations.
- **Kubernetes Provisioning -** MetalSoft provisions an entire Kubernetes cluster complete with storage and network configurations.
- **VMWare vSphere Provisioning -** MetalSoft provisions an entire vSphere cluster complete with storage, and network configurations.
- **Netboot support -** MetalSoft can operate in fully disk-less mode, enabling fast server upgrade and downgrade with just a reboot.
- **RAID configuration support** - MetalSoft can configure RAID arrays.

Advanced network provisioning

- **Advanced Network Provisioning -** MetalSoft supports complex setups such as multiple IPs and VLANs on M-LAG links
- **L2 Tenant Isolation -** Each MetalSoft tenant network is a private dynamically constructed L2 broadcast domain.
- **Automatic IPAM -** MetalSoft handles IP allocation automatically. Each tenant has its own private IPv4 subnet and its own IPv4 gateway.
- **Automatic VLAN/EPG/eVPN management -** MetalSoft automatically maintains unique VLAN/EPG/eVPN identifiers

FOR MORE INFORMATION

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across the entire network to isolate tenants and eliminate accidental overlaps.

- **ONIE support -** MetalSoft is able to write the firmware on a switch and install the initial configuration.

Proactive Management

- **Policy-based automatic firmware upgrade -** Perform automatic, periodic firmware upgrade of server components.
- **Built-in monitoring -** Monitor Average load, memory, and disk utilization, network traffic as well as temperature, fan speed, power consumption, and more with built-in monitoring.
- **On-demand metering and charge-back -** MetalSoft meters on-demand utilization of servers, IP space, and storage. It also does SFLOW based traffic accounting.
- **System check support -** The system is able to detect miss-configurations, network issues, or other hardware issues before they can hinder provisioning.
- **Secure cleanup support** - The system cleans servers before they are released back to the pool by writing zeros or changing the encryption key on self-encrypting drives.

Enterprise-Ready

- **Multi-vendor** - Designed to work in heterogeneous environments. We support all major brands of servers, switches, and storage systems.
- **Workflow support -** User-defined jobs can be attached at various points in the provisioning process to enable customized provisioning or react to events.
- **RBAC Support**- Users can have custom roles associated with them with specific permissions.
- **LDAP Support** - The system integrates with an external LDAP system for authentication and authorization.
- **Built-in 2FA** - Embedded two-factor authentication further protects user from security incidents.
- **Audit Log** - All actions performed by admins or users are logged and can be retrieved at any time by an external system.

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