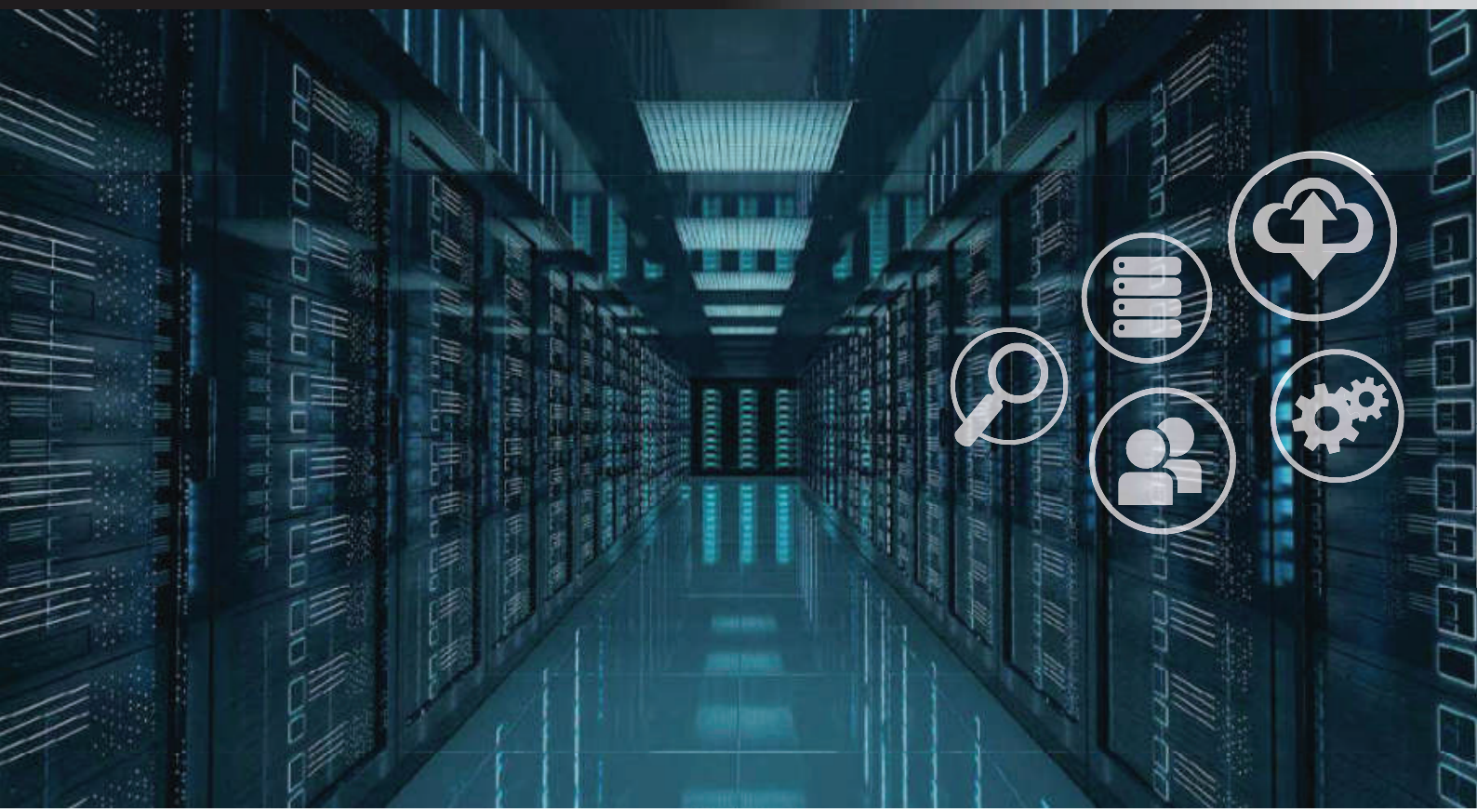
Tyrone®

ProServe
Formerly known as TSM



TYRONE SERVER MANAGEMENT

Tyrone®

ProServe
Formerly known as TSM

TYRONE ProServe
(FULL-FEATURED SERVER MANAGEMENT SOLUTION)

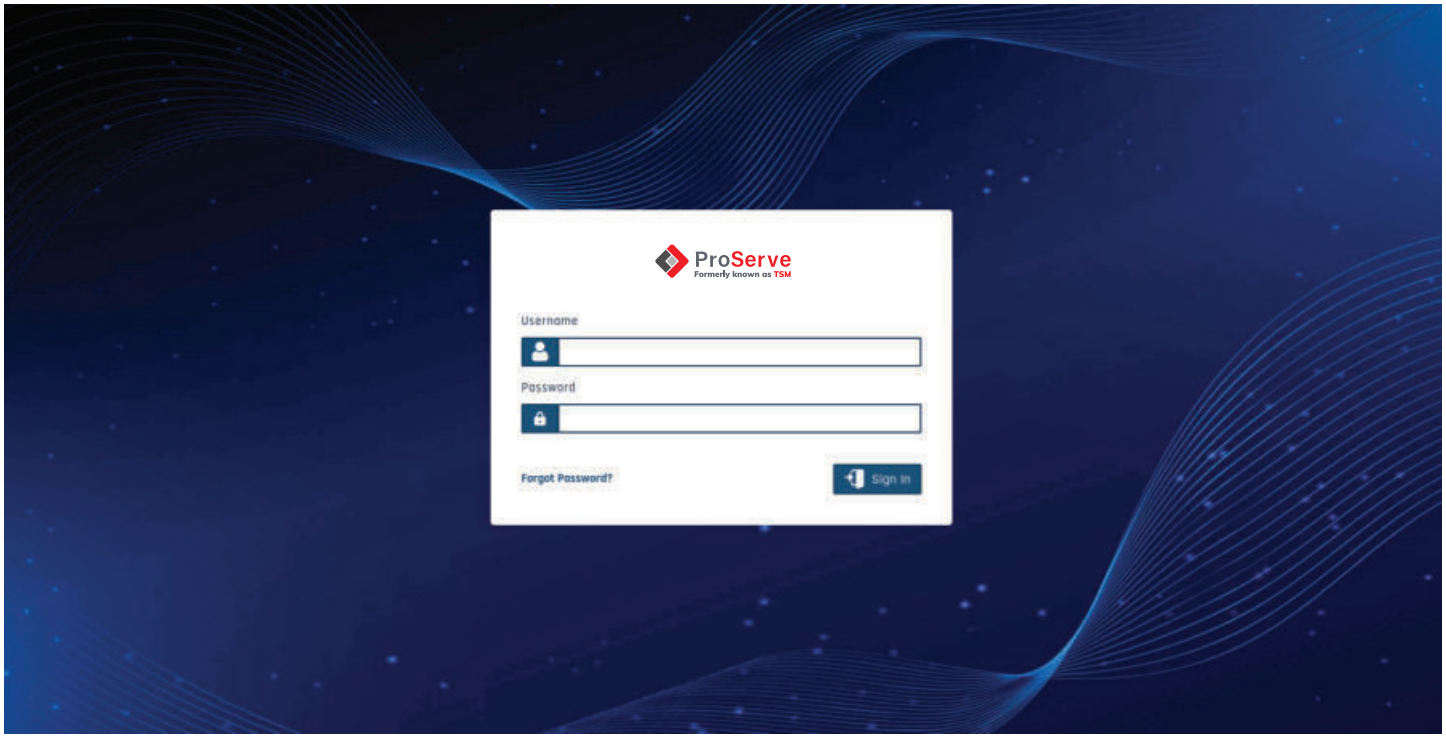
Tyrone ProServe is a suite of scalable and secure systems management solution. It allows IT managers to get remote access of Servers with BMC implementing IPMI and Agent based Management Applications. It allows users to monitor server system's health and to manage critical events of remote systems via GUI, CLI and API's

Key features of **Tyrone ProServe** includes

- IPMI 2.0 Support
- Redfish Support
- GUI, CLI, API's to control IPMI functions
- iKVM (Keyboard, Video, and Mouse)
- Virtual Media Redirection
- 3rd Party Authentication, Multi-Factor Authentication
- BIOS & Firmware update, OS Deployment
- System Management Architecture for Server Management (SMASH) Support

The high level architecture includes:

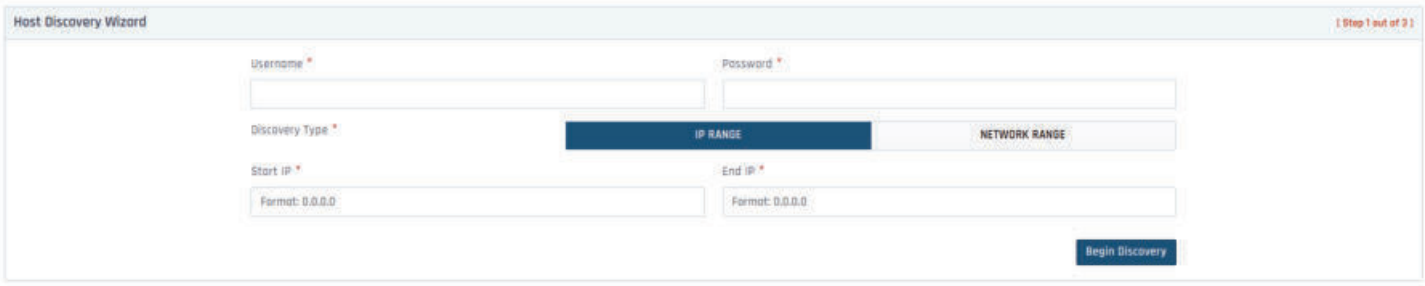
- Tyrone ProServe management
- Management console
- Network Connectivity LAN/WAN
- BMC Interface via IPMI/LAN Port

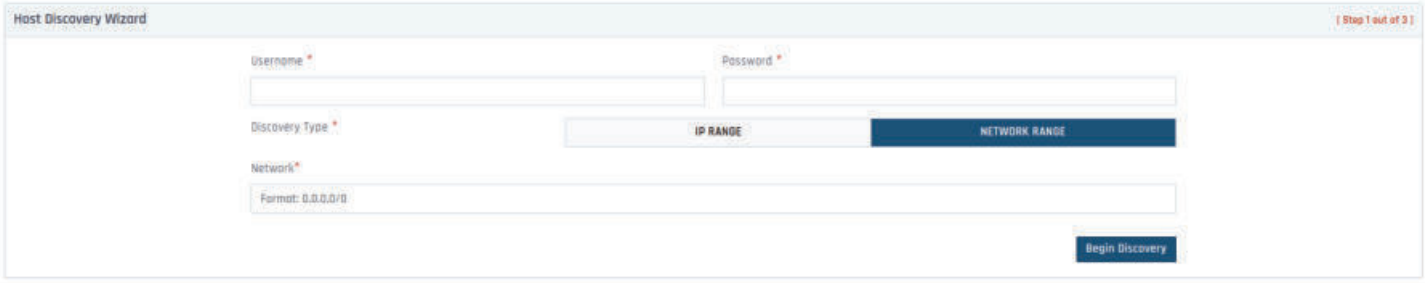


Tyrone ProServe detailed Specifications and Features:

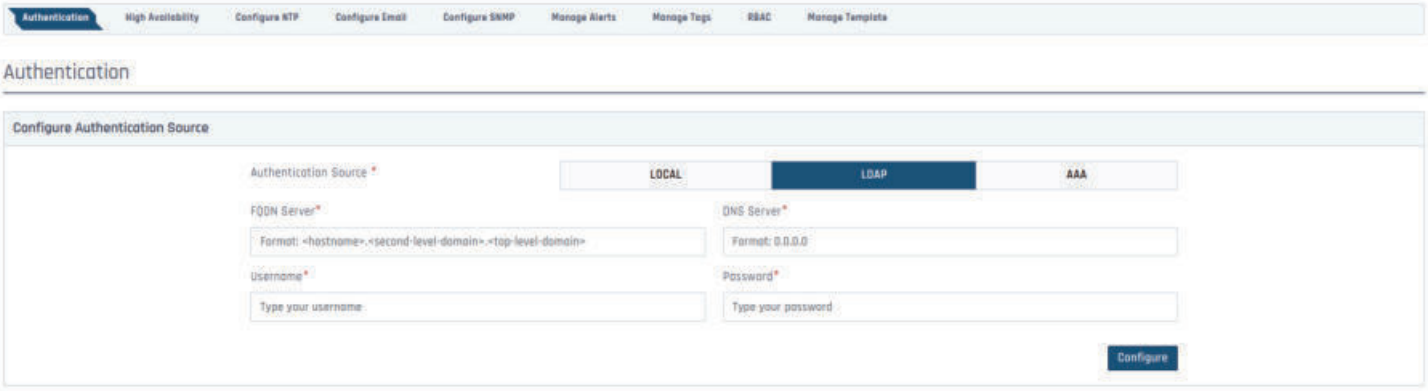
1. Discovery and Group Management

Automatically discover provisioned servers within the IP range via out-of-band (agent free/IPMI) and in-band (agent managed) connections. IT managers can then group the discovered servers based on profile.

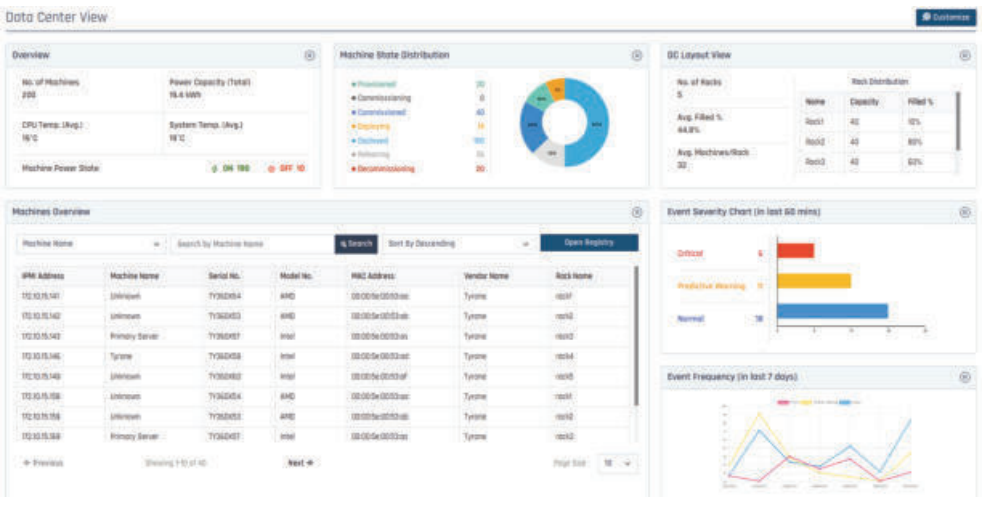




- Supports configuration of systems at DC and DR in High Availability model

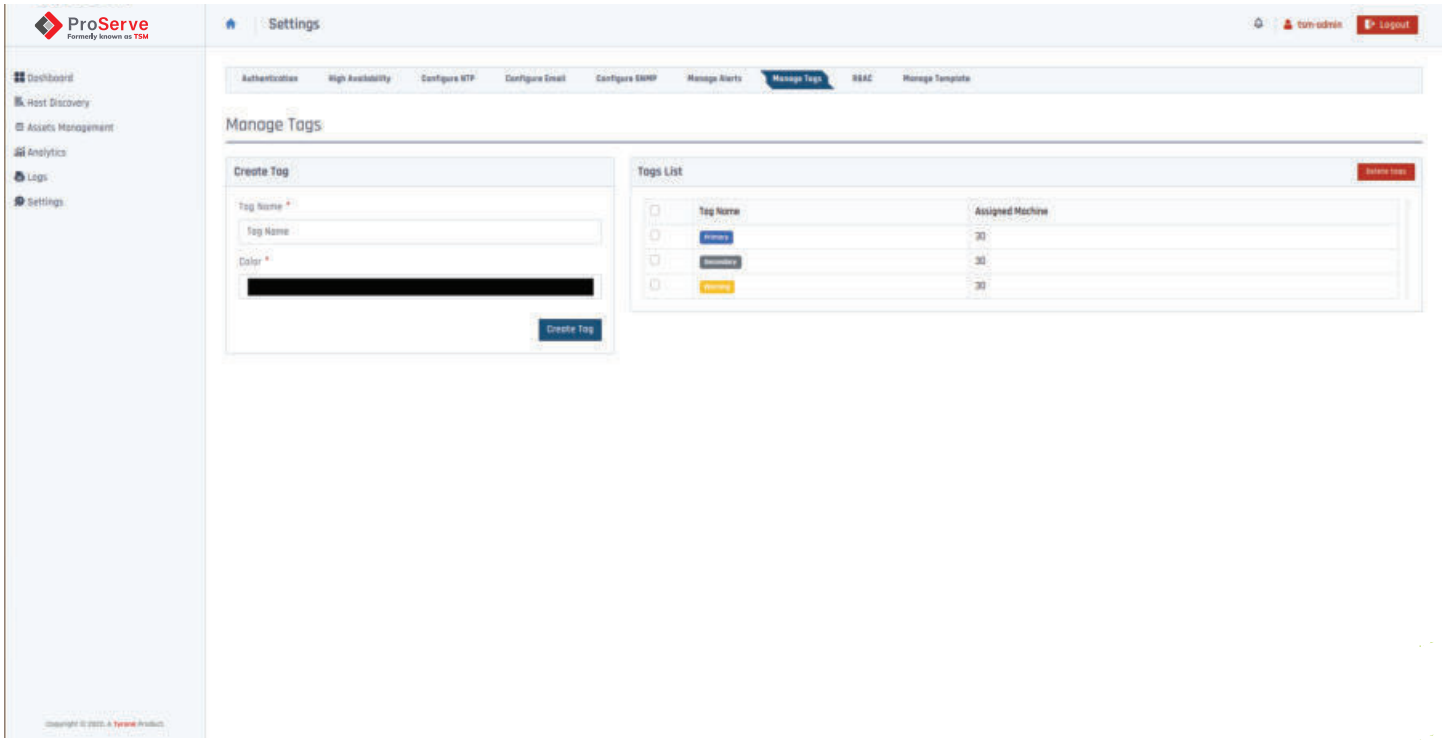


- Remote accessibility to multiple servers simultaneously for single source of truth management (scalable to manage upto six thousands servers)

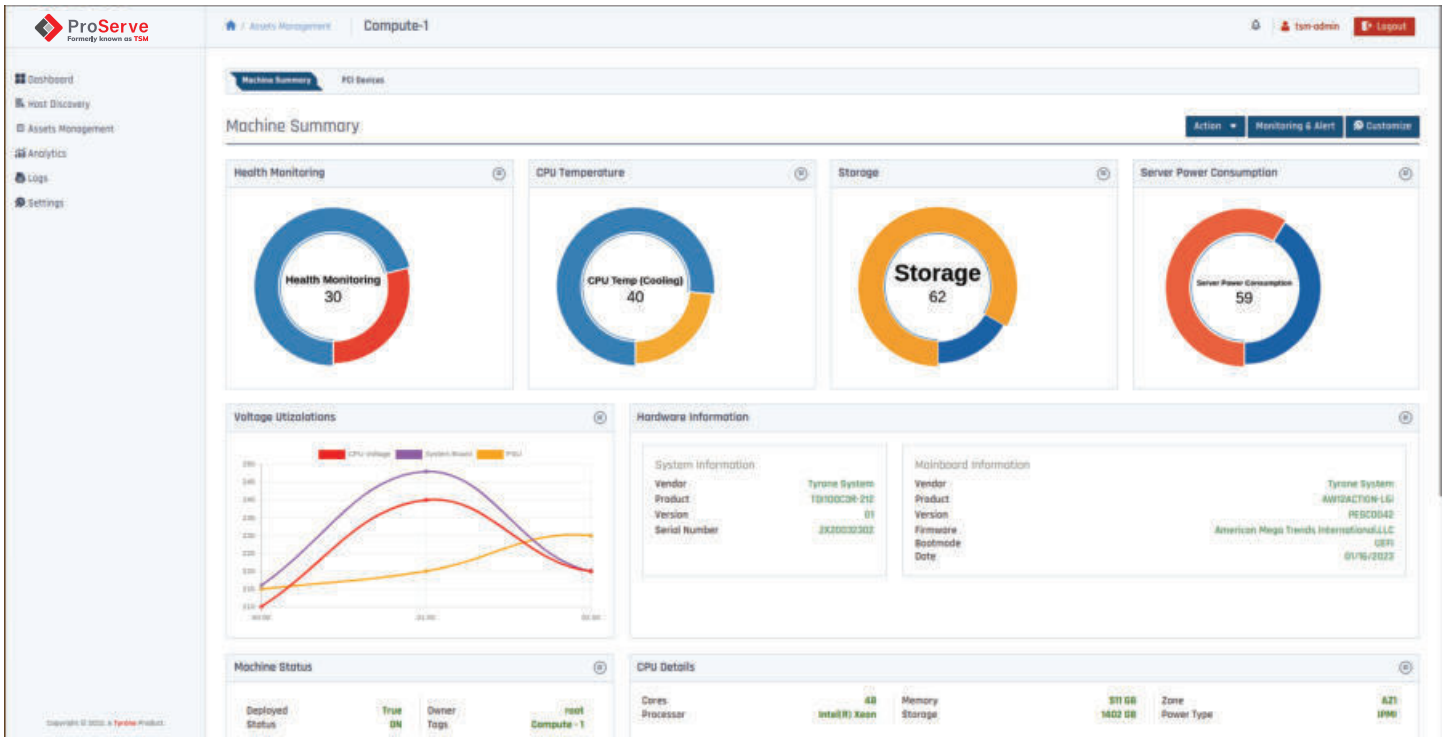


Asset Tracking and Management using inherent metadata tagging, enabling sorting mechenism using user defined attrubutes .
Traking of hardware assets and firmware versuins of all manages servers via out-of-band(agent free/IPMI) and in-band (agent managed) connections

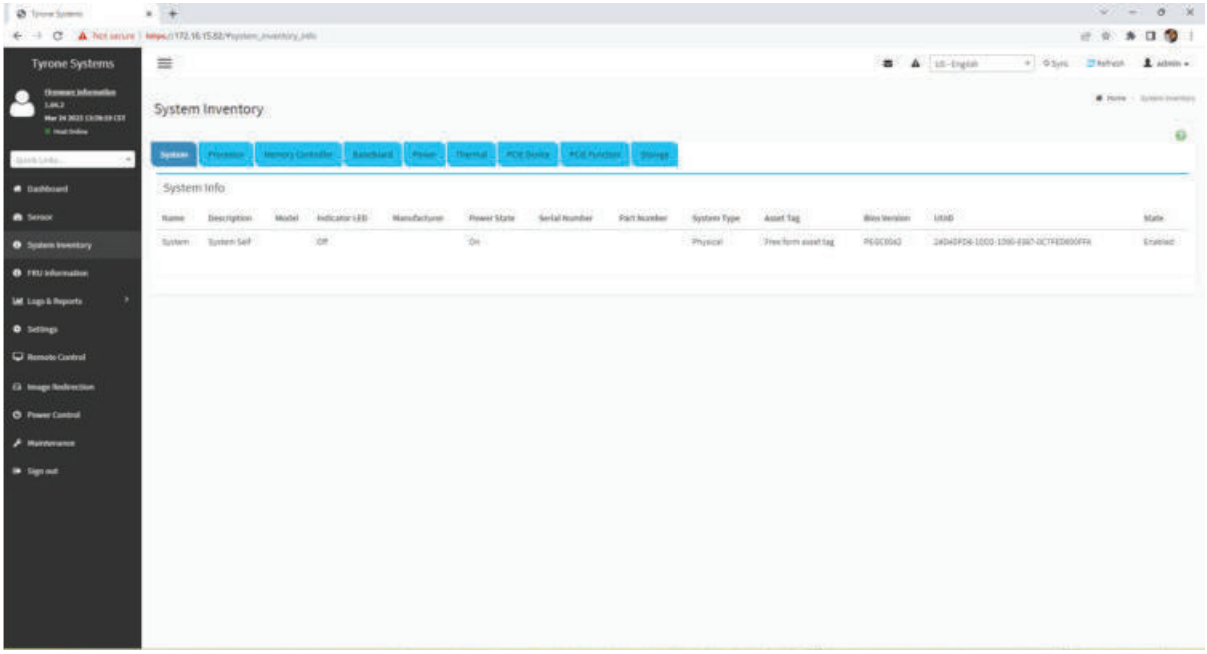
- Asset Tagging based on user assign attributes
- Self Service portal for comissioning /decommissioning, provisioning / deprovisioning capabilities



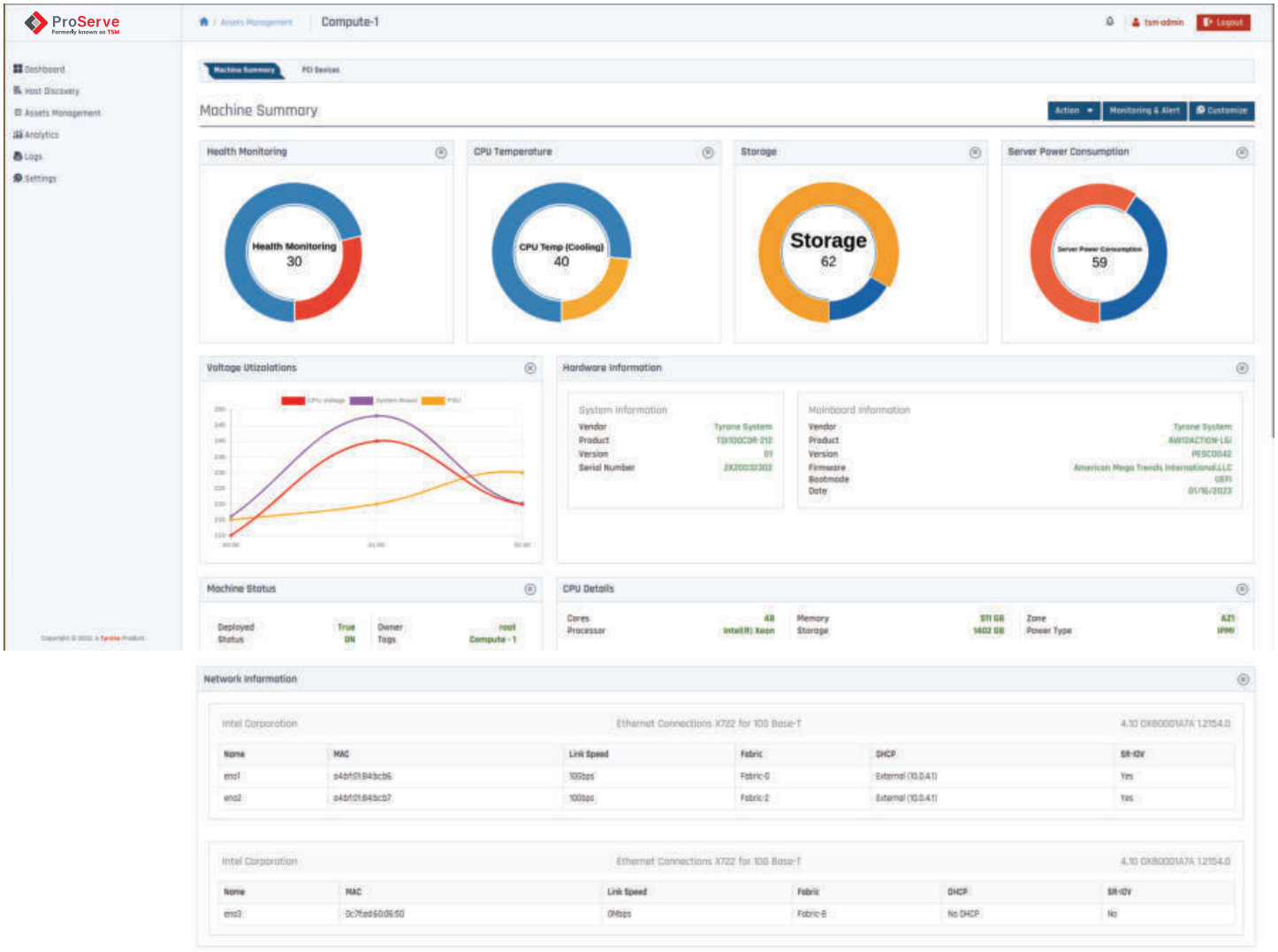
- Graphical overview of host's resources



- Inventory details of host system like Processors, Memory, Storage, Networking, and other components and option to export in customized form.



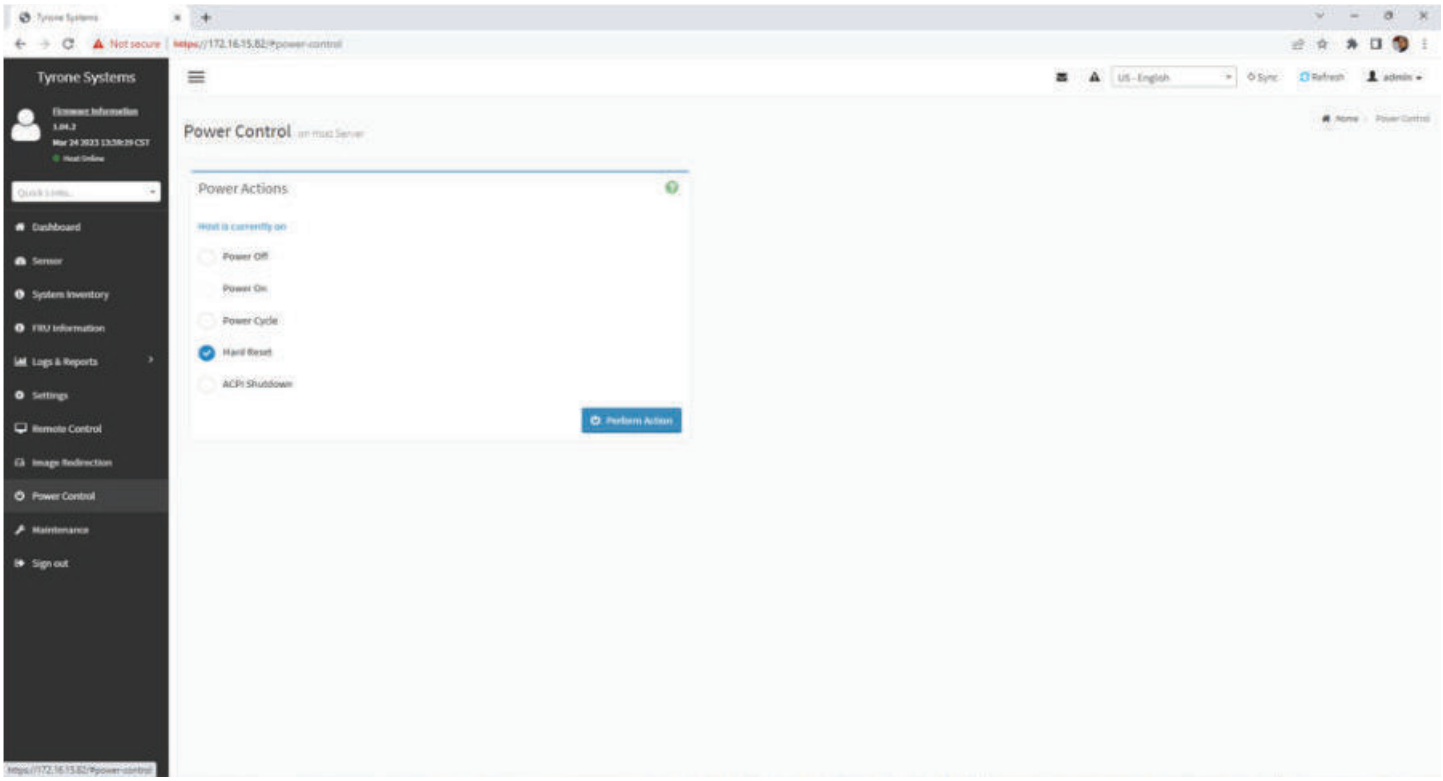
- View System information (firmware versions, server health, diagnostic information, Power statistics etc.)



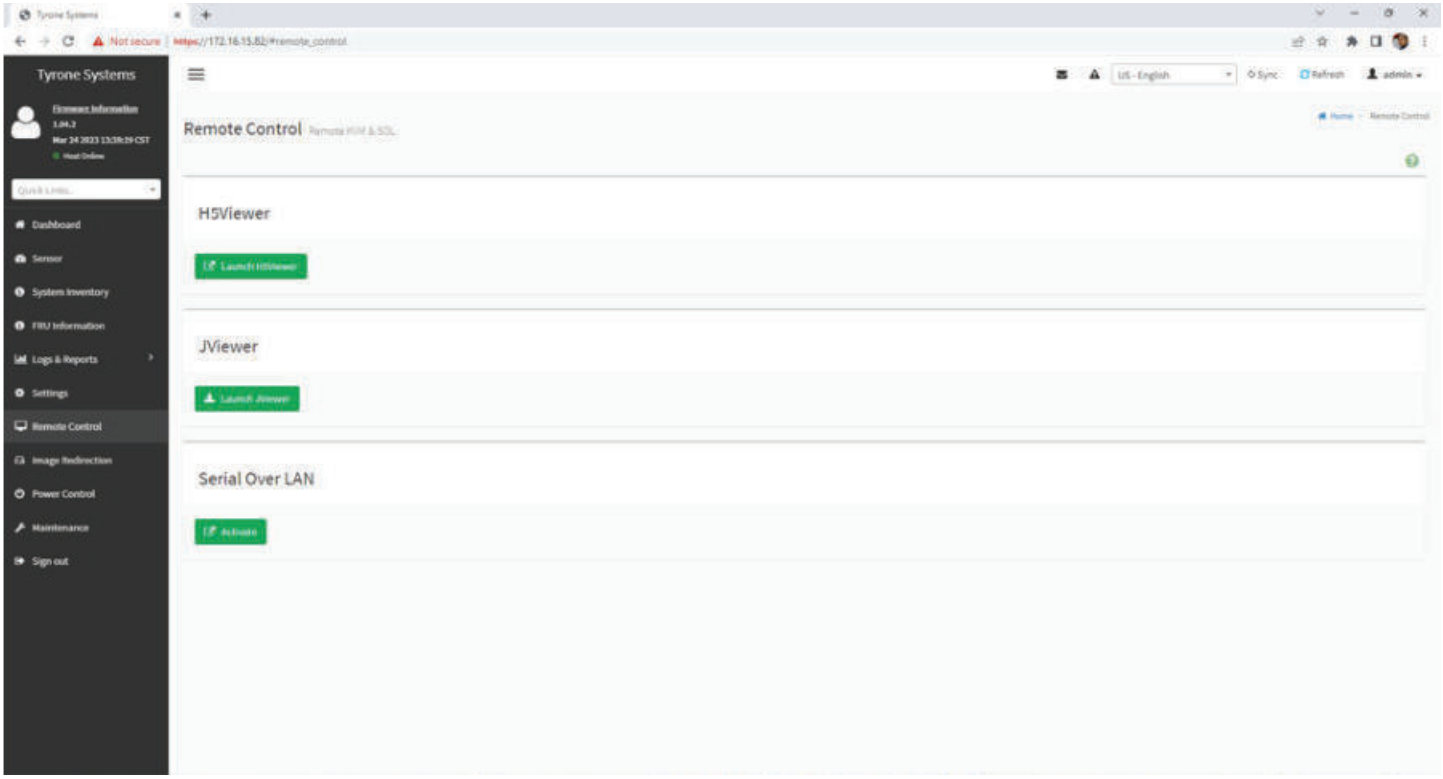
2. Remote Management, Configuration, Provisioning

Remote Management of multiple servers simultaneously for management tasks such as BIOS / firmware / driver update, scheduling, configuration and provisioning etc.

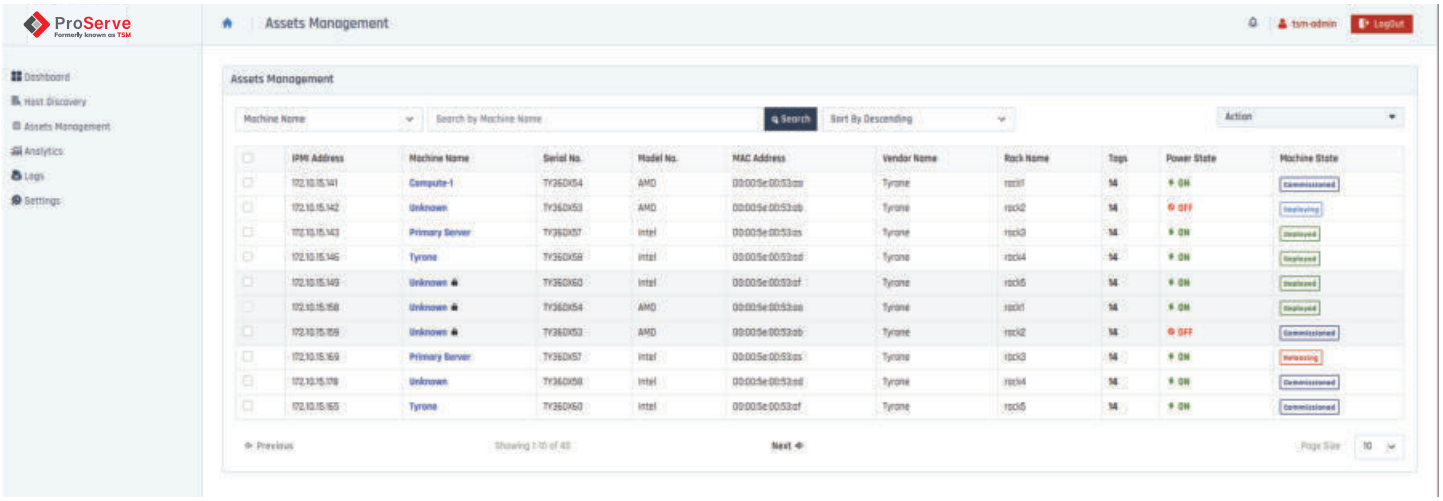
- Power Management (Power ON/Power Off)



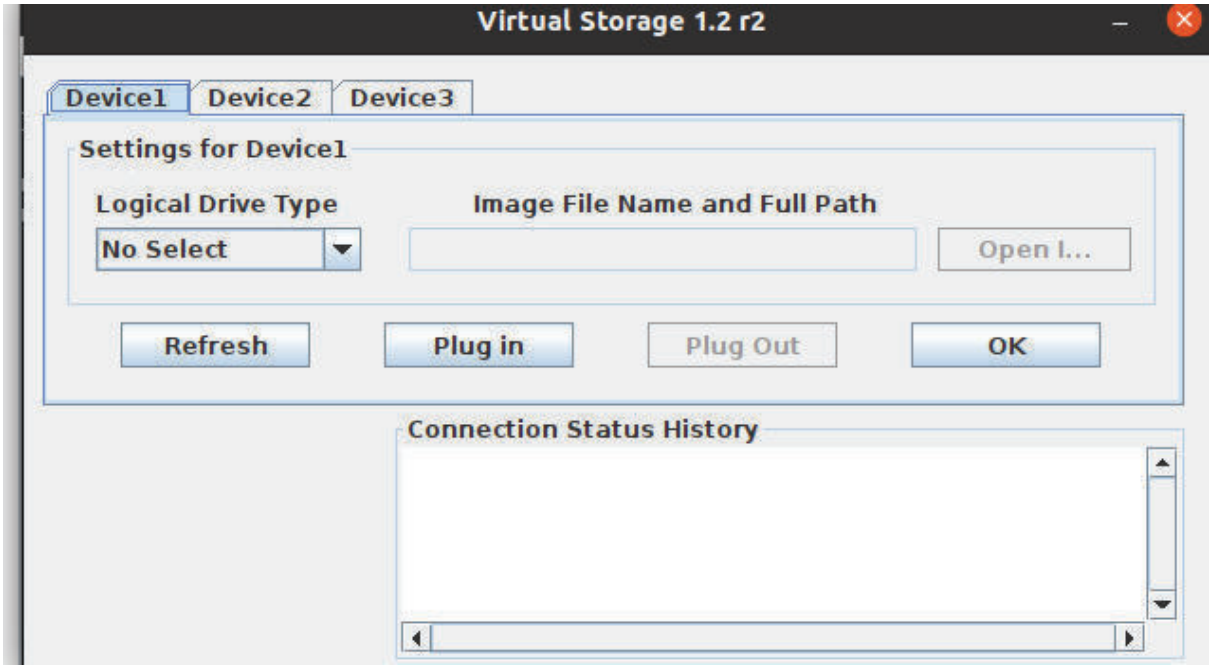
- Remotely connection via the iKVM



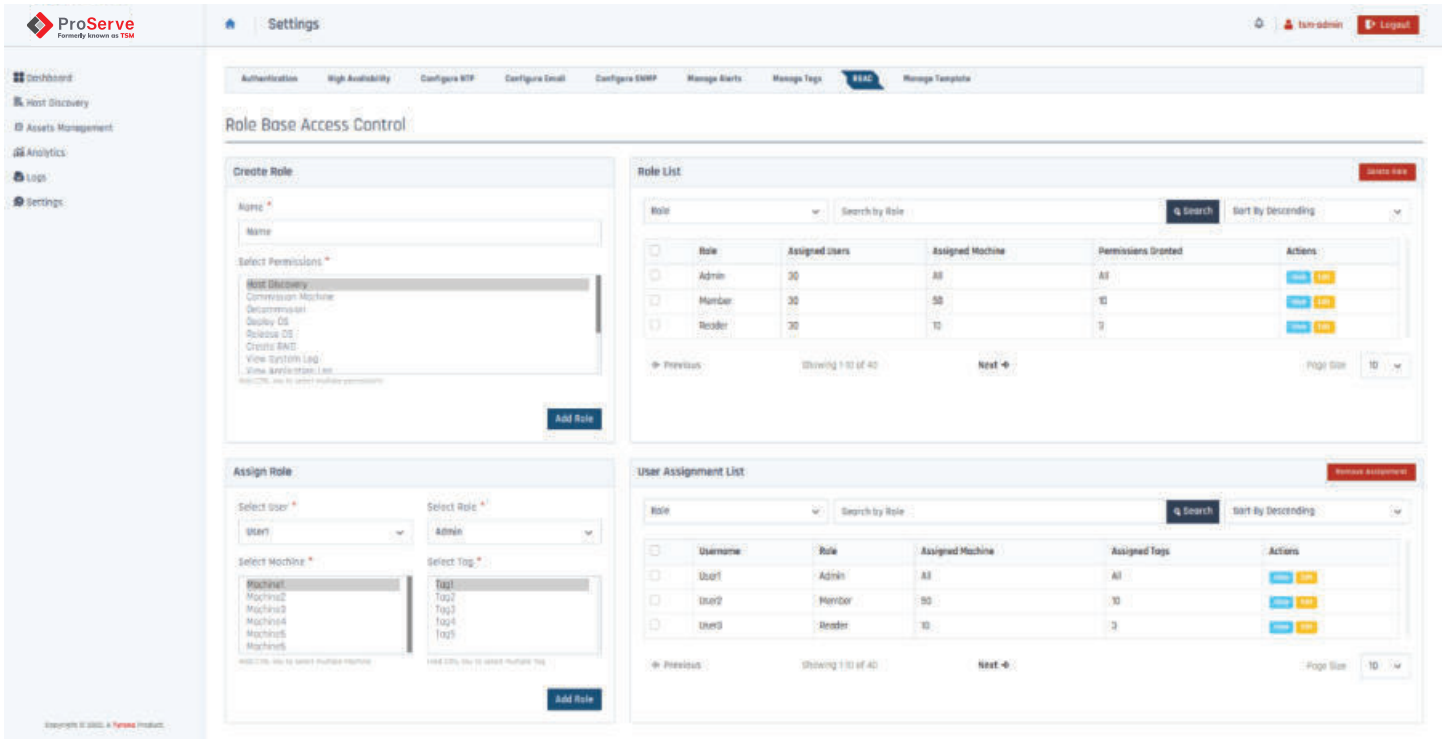
- Out-of-band BIOS/BMC/Firmware Update
- Life cycle management thru single unified platform and with capabilities of discovery, commissioning, deploying and retiring Servers
- Patch management for drivers, softwares update
- Provisioning with OS image (Ubuntu, CentOS, Windows, RHEL etc.) for profile creation and deployment with the press of a button
- Cloning of Servers based on common Hardware Profile based deployment (simultaneous on multiple systems) and Batch processing using user defined scripts based on Admin policies for updates and deployment and provide user specific templates to carry out simultaneous operations
- Batch processing of using user defined scripts tempelets based on Admin policies for updates and deployment
- Provisioning of Power Policies, Power Management Monitoring Profile import/export



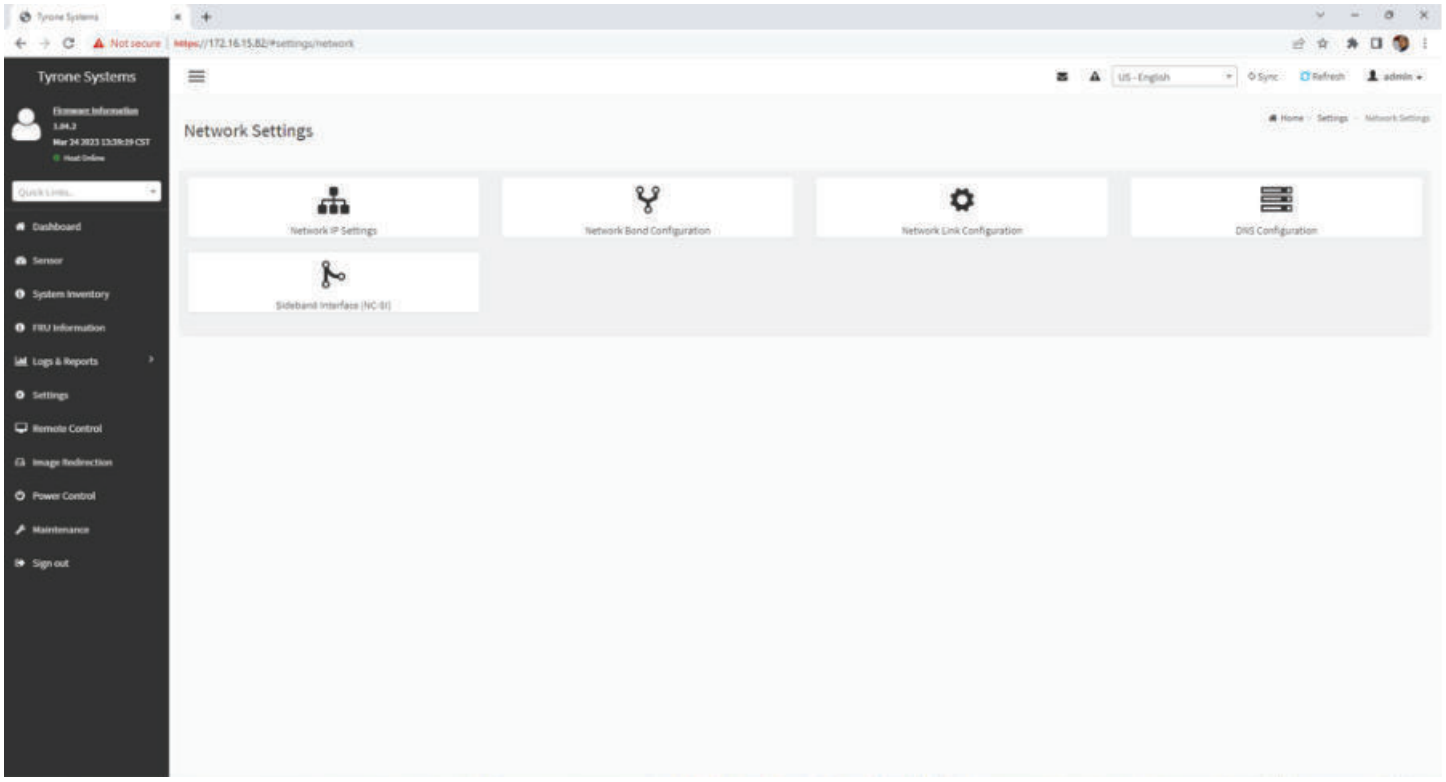
- Image redirection



- Configurations can be saved as template and can be reused.



- IP address management with DHCP and DNS for Configuration and Management of Network



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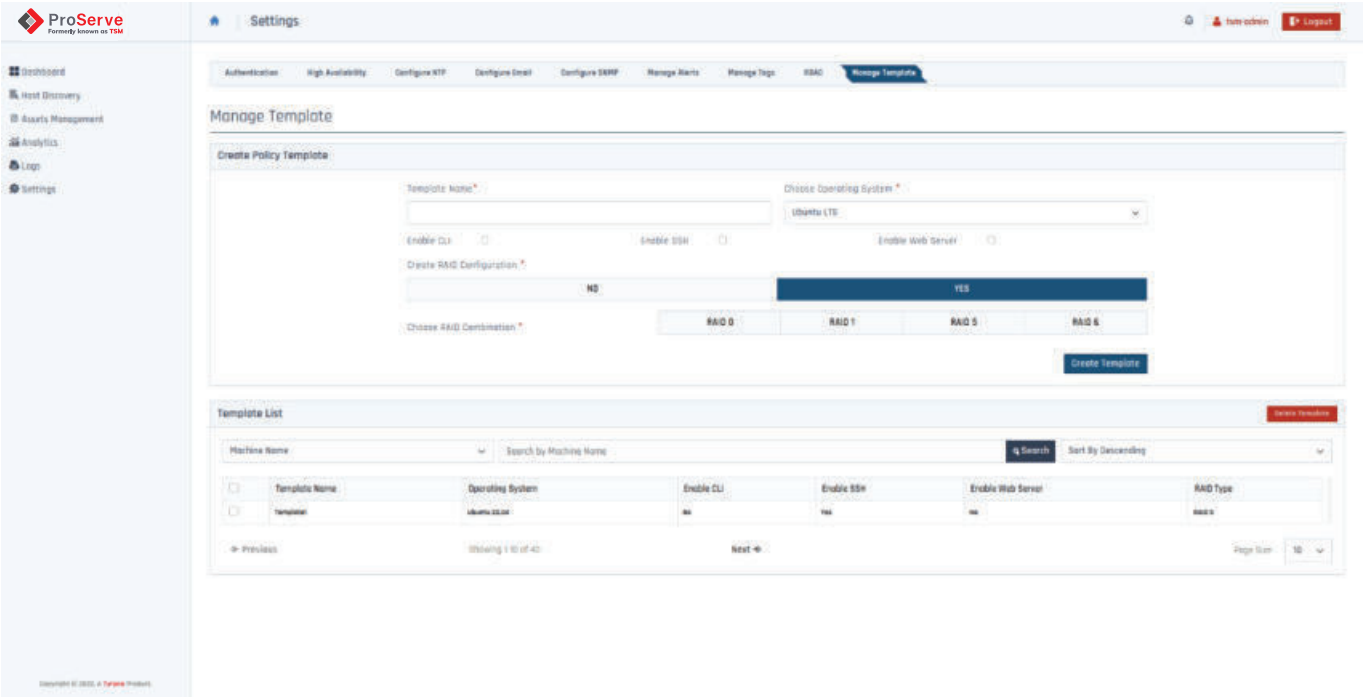
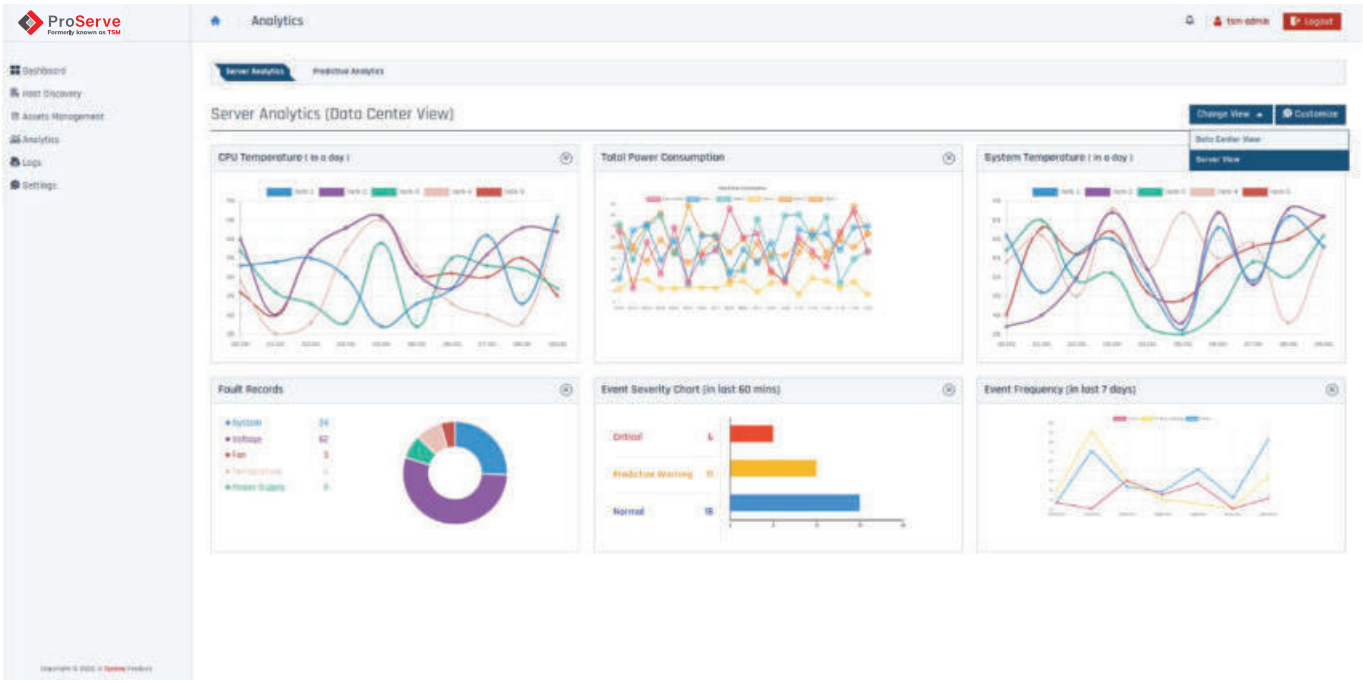
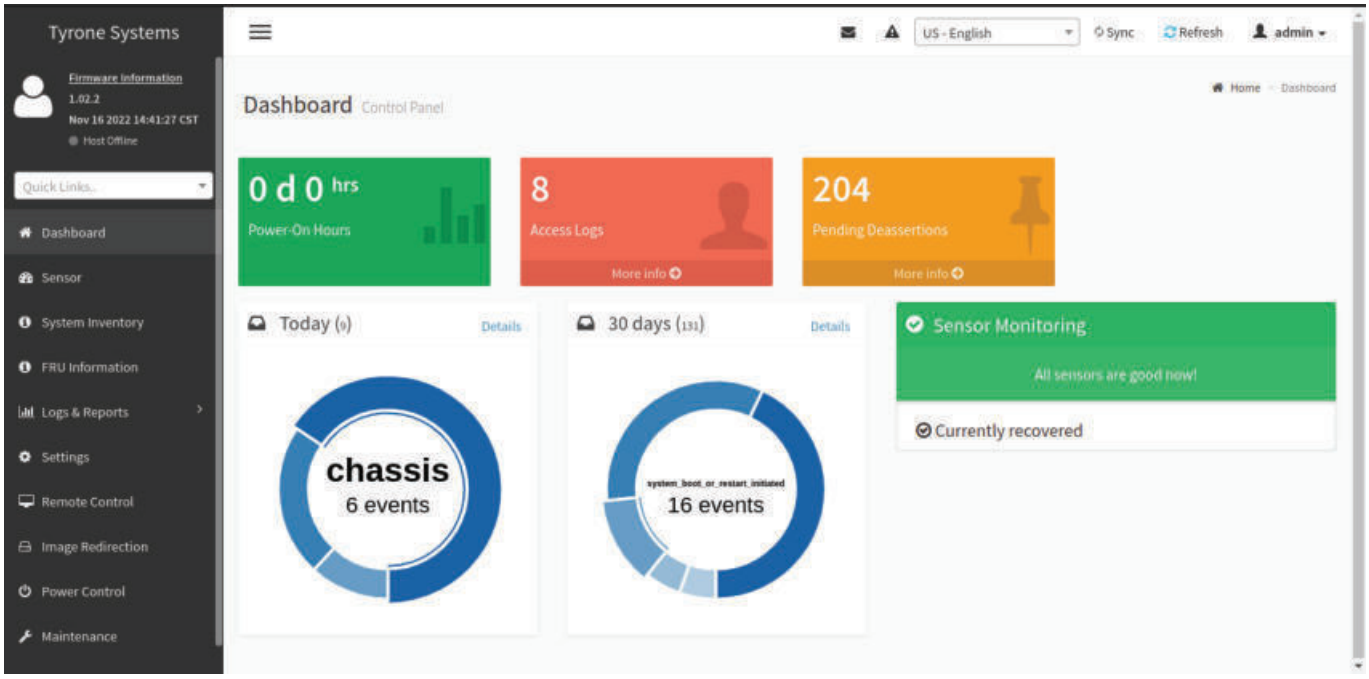


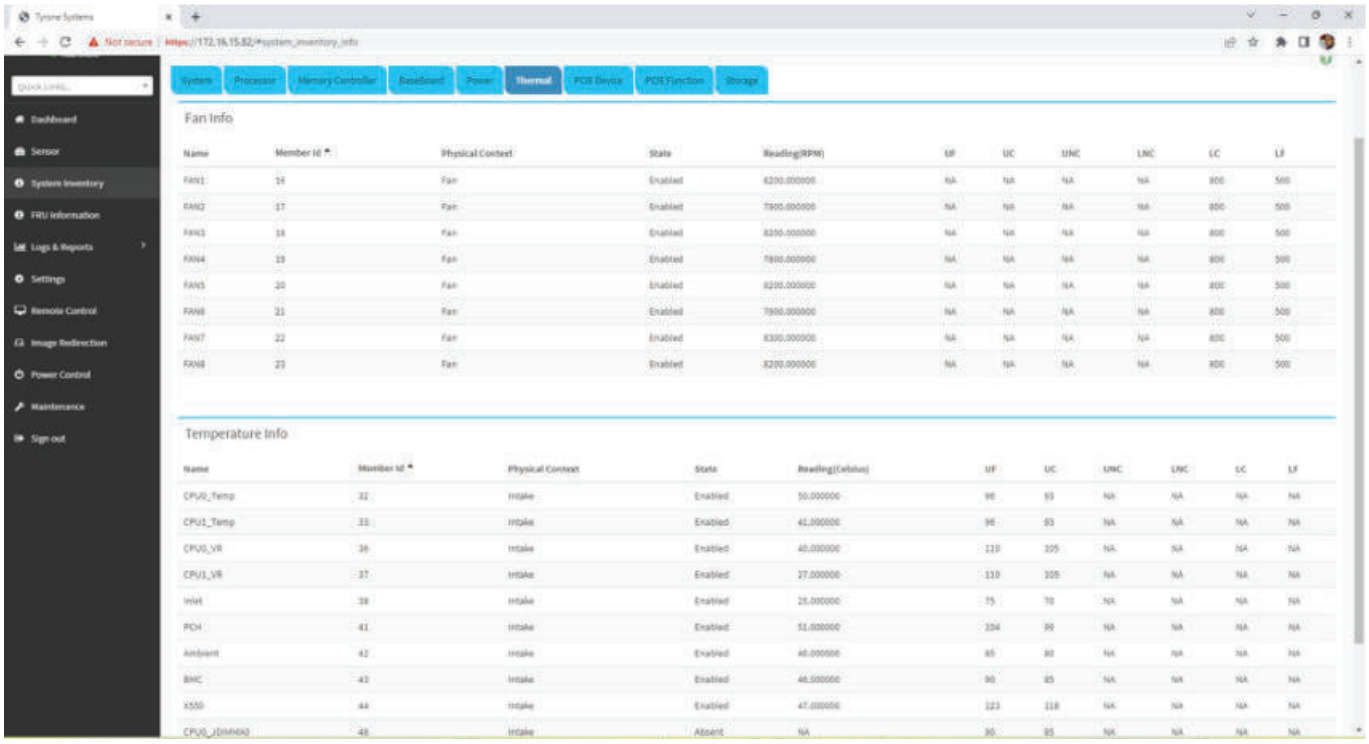
3. Real Time Monitoring and Analytics

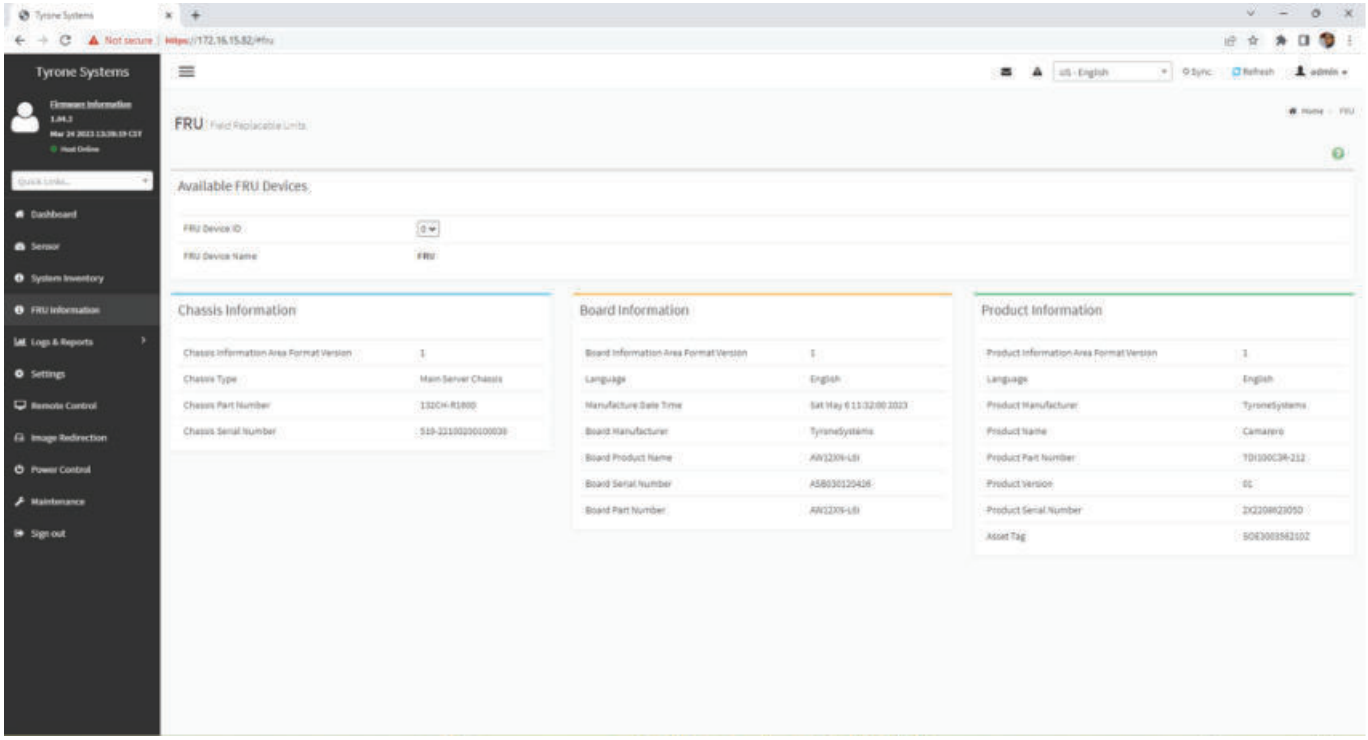
Server health management with real-time subcomponent monitoring, error detection, proactive health management, and server firmware synchronization to ensure performance and stability of a system.

- Monitor server and sub-component health in real time and act on alerts.
- Health status of critical components like Processors, GPU, Memory, Storage, Networking, and other parameters such as system cooling, temperature etc., blink LED to identify server.`
- Storage drives detection and reporting for actual & impending alerts. Self-Monitoring, Analysis and Reporting Technology (S.M.A.R.T enabled system monitoring and management.
- Check the firmware version of Tyrone Servers and identify outliers
- Comprehensive Inventory Management.
- Integrated server Diagnosis to automatically detect and Diagnose issue.

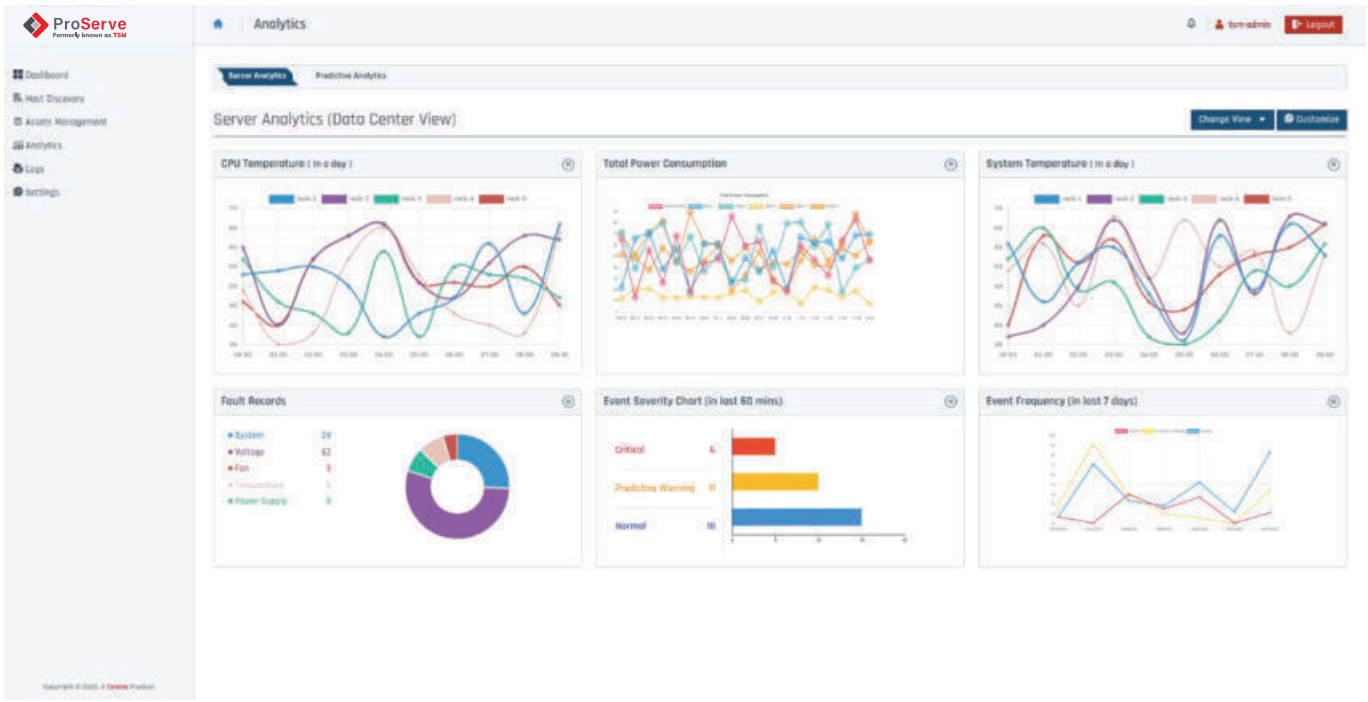



Tyrone Systems
Firmware Information
1.02.2
Nov 16 2022 14:41:27 CST
Host Offline
Quick Links...
Dashboard
Sensor
System Inventory
FRU Information
Logs & Reports
Settings
Remote Control
Image Redirection
Power Control
Maintenance
US - English
Sync
Refresh
admin
Home
Dashboard
Dashboard Control Panel
0 d 0 hrs
Power-On Hours
8
Access Logs
More info
204
Pending Deassertions
More info
Today (9)
Details
chassis
6 events
30 days (131)
Details
system_boot_or_restart_initiated
16 events
Sensor Monitoring
All sensors are good now!
Currently recovered


Fan Info
Temperature Info



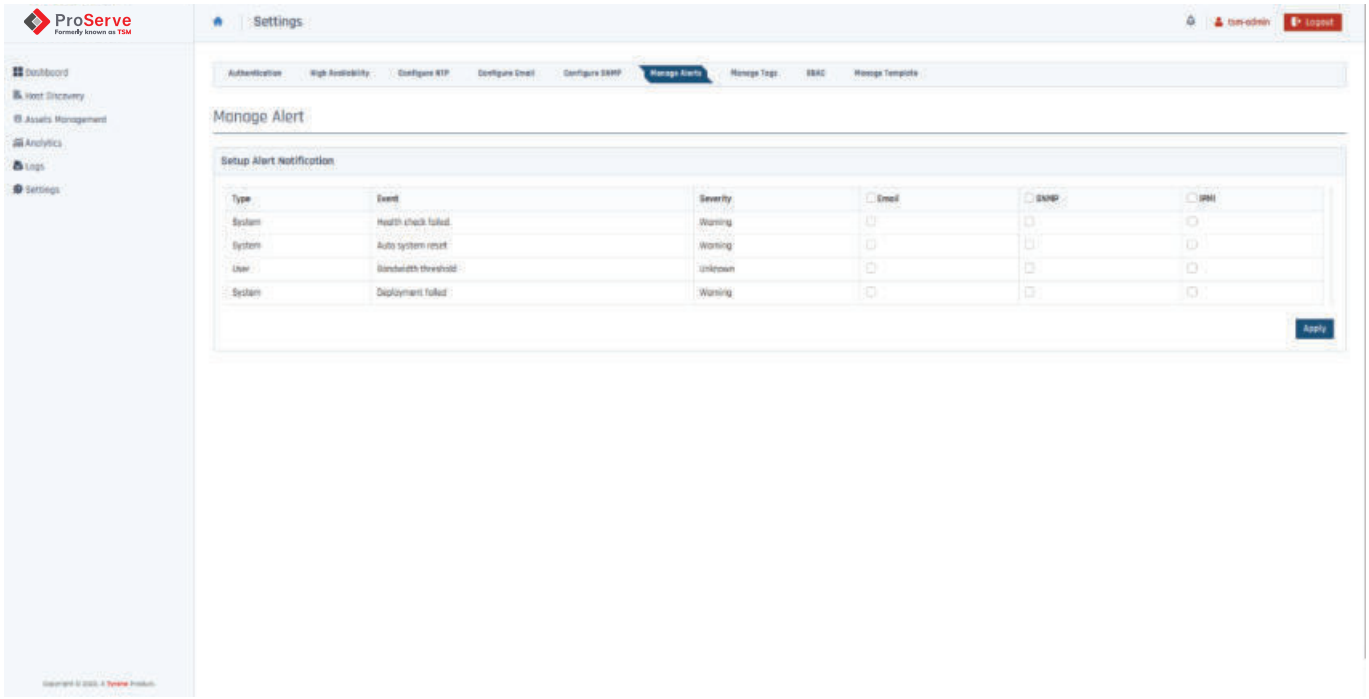
- Enhanced Capacity Planning
- Automatic Under-utilized Server Identification by analysing historical utilization and power data
- Data Center Layout Management by power budget enforcement, power capping etc.
- Predictive detection with built in analytics and inteligence to detect unhealthy devices in Servers (Processor, MBD, Memory, Fan, Power Supply, Storage, Voltage / Sensor Reading) (of multiple components) with alerts, anomaly detection, Server failure Indication and alerts
- Telemetry data for analytics

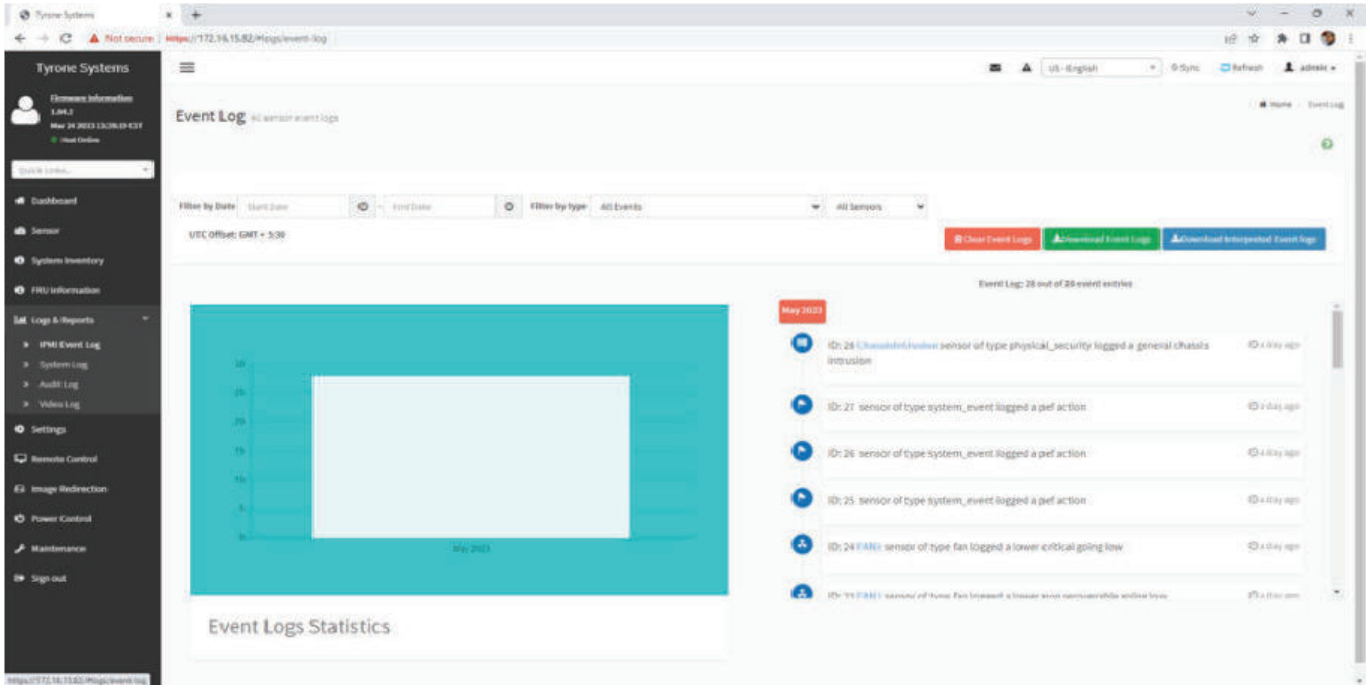


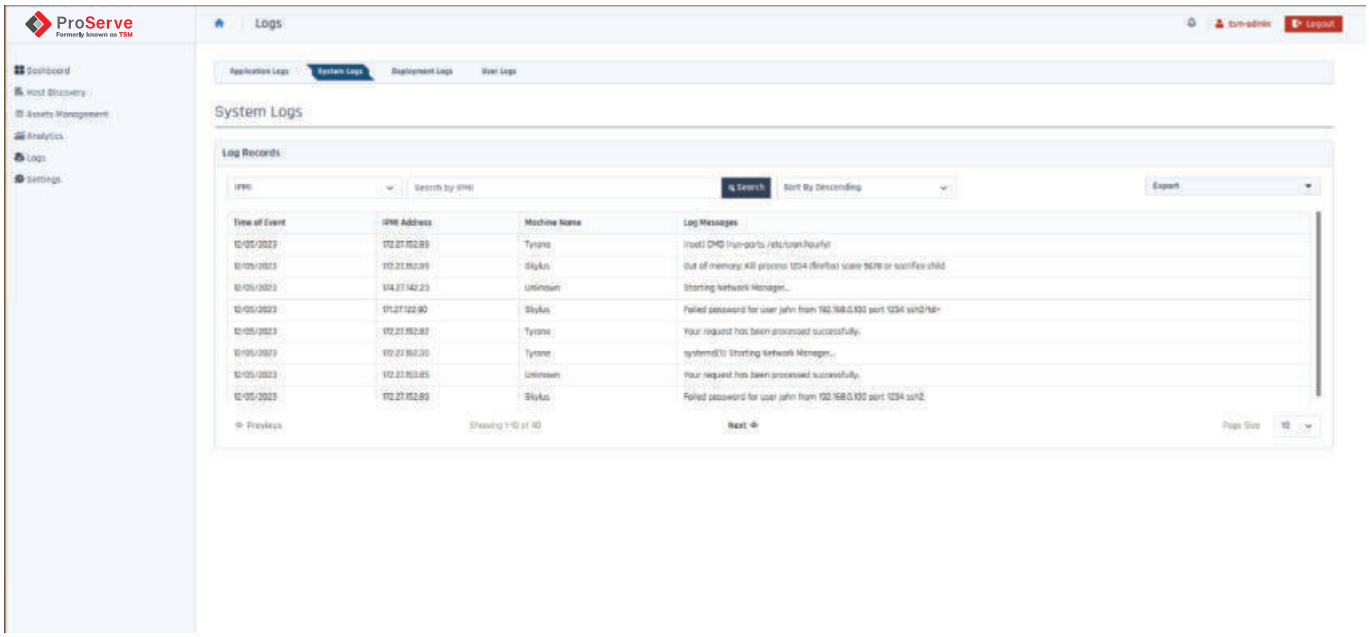
4. Notifications, Alerts, Reporting & Servicing

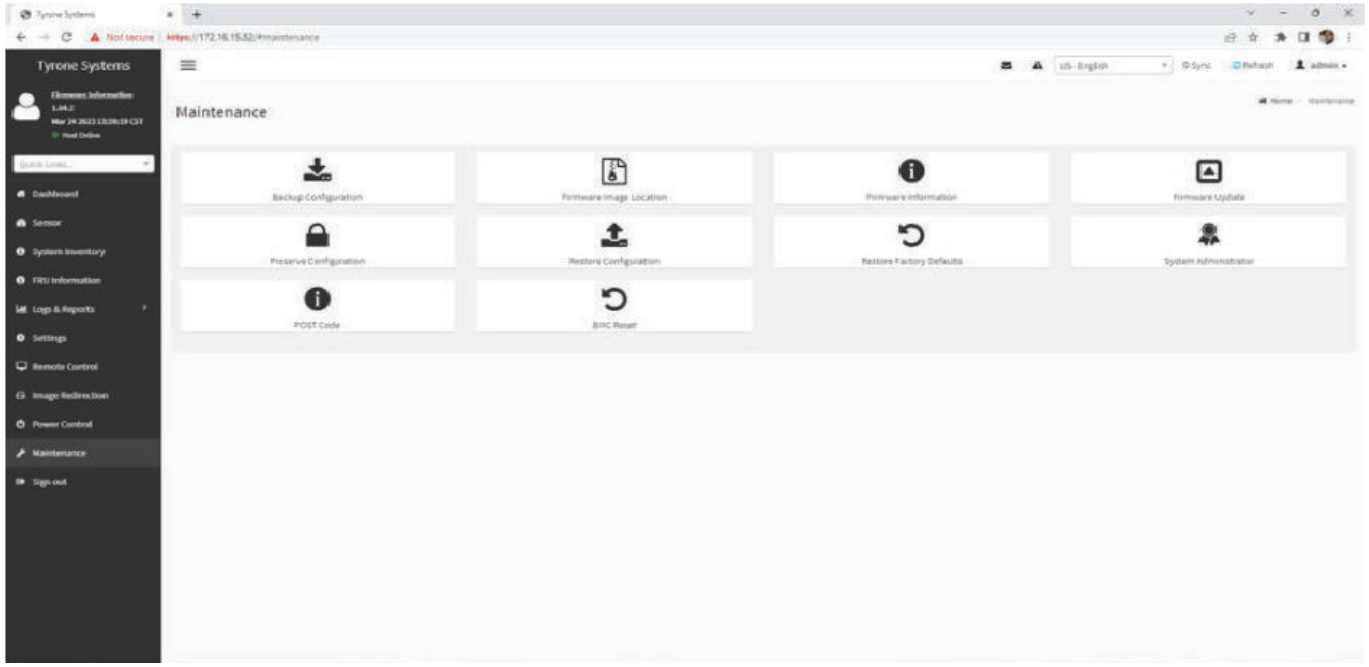
Monitoring of data center health, power, and thermals in real time and providing alerts and notifications

- Alerts based on custom power & thermal events
- Centralized reporting tools that provide comprehensive details inventory reporting, tailored reports etc.
- Event logs (with monitoring and extraction) based on real time events / health reporting,
- Offers Self Service portal for firmware and patch deployments.).
- Provision for integration of status monitoring of tickets generated and warranty details.
- System intrusion alerts\ notification through unified dashboard







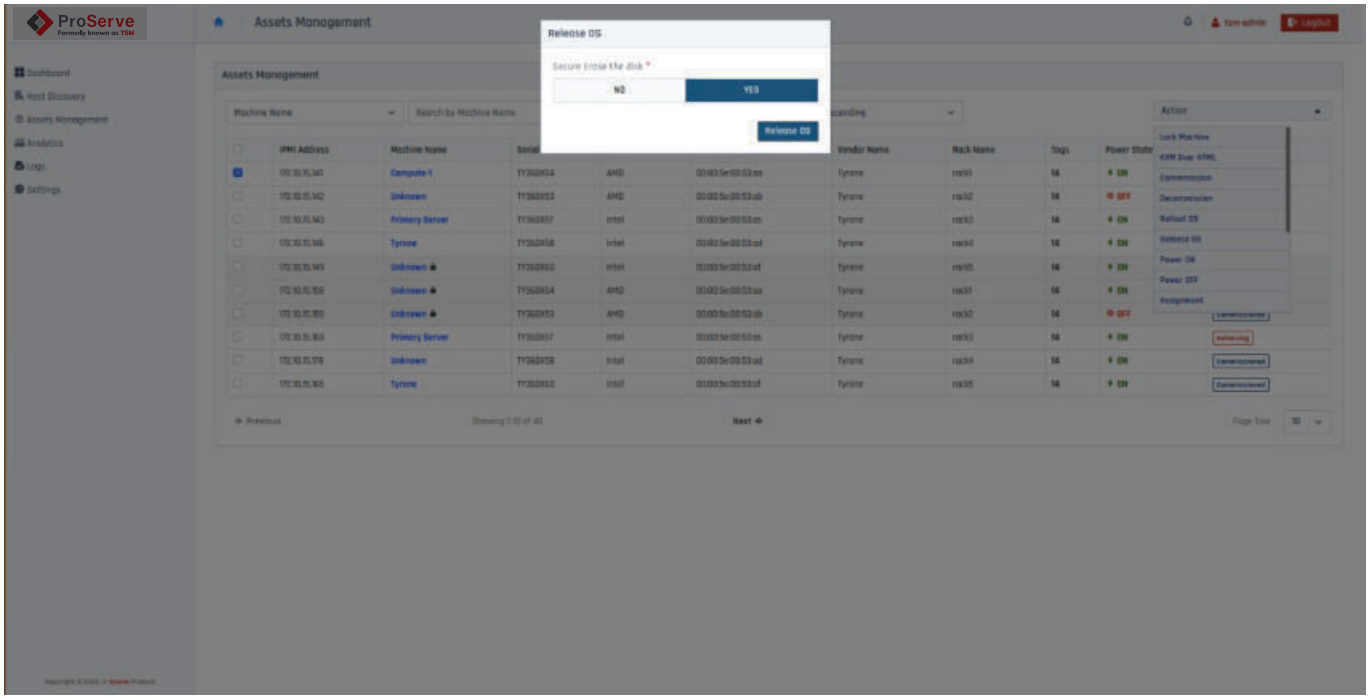


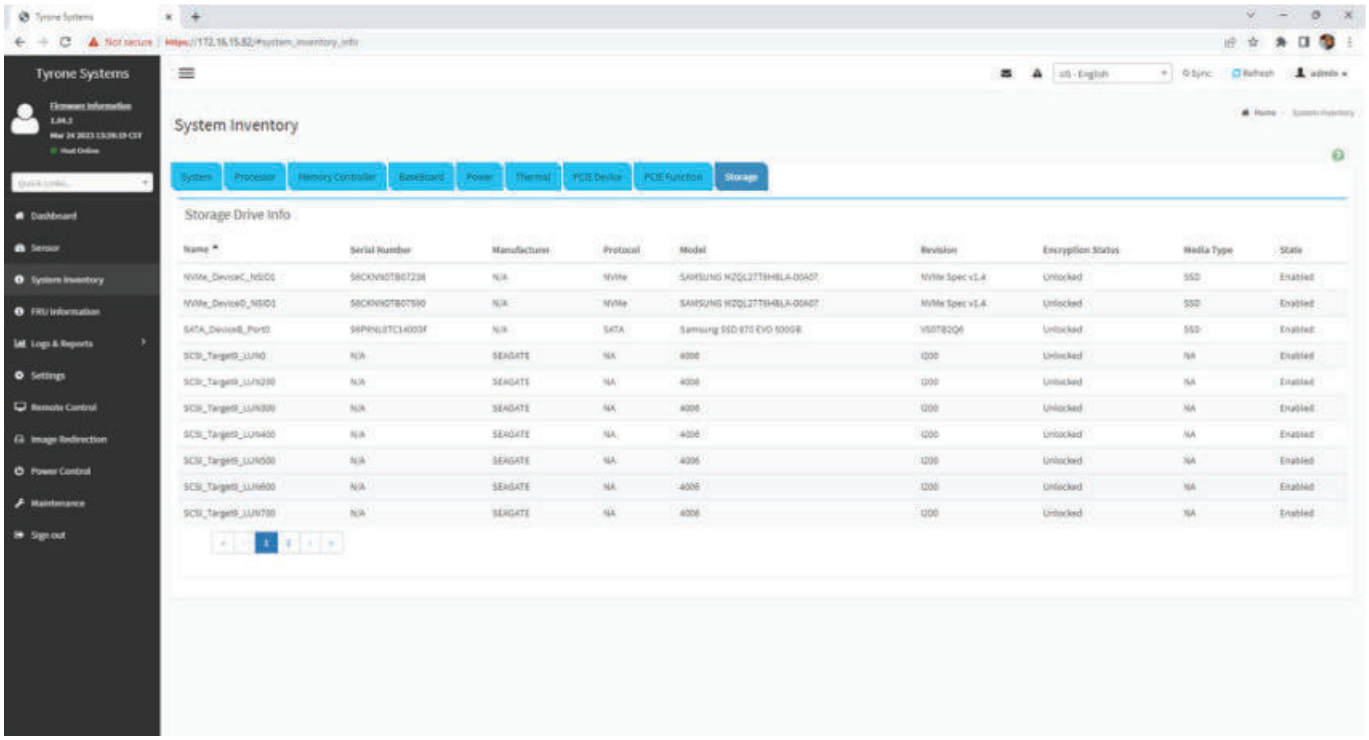
5. Miscellaneous

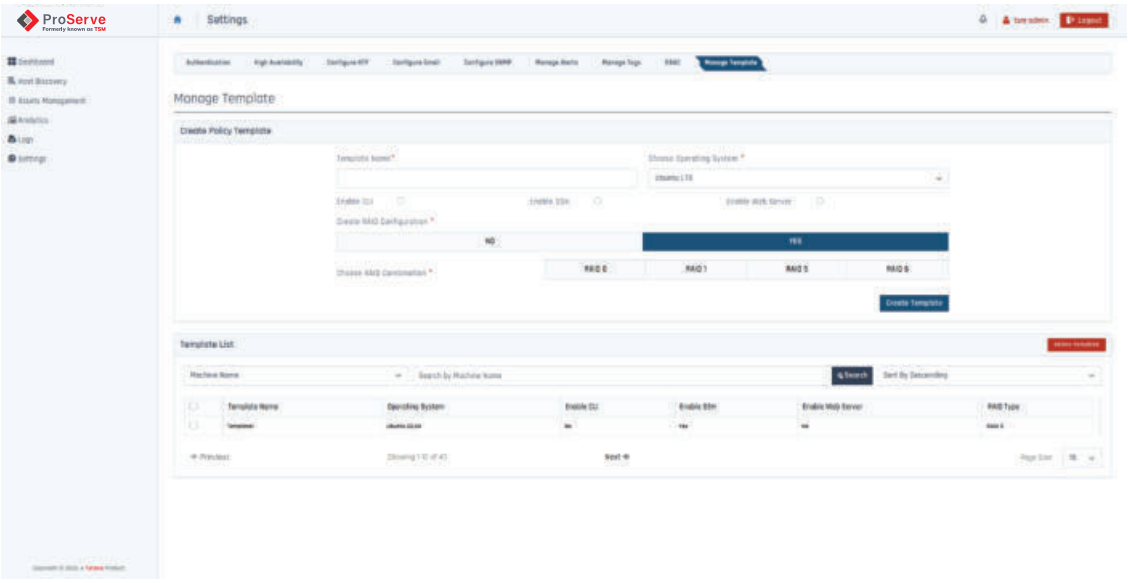
ProServe provides various miscellaneous features and can be customized as per user requirements by providing below enumerated features :

- Secure SED Management, Auto Lock with Local Key Management, Instant Secure Erase with coherent controller management utility, RAID Management & Virtual Disks Creation
- Intuitive web console that provides features with provision for inventory & health alerts
- RESTful APIs for Integrate with other solutions, Provides SDK based on programming language like Python or similar. Custom scripts confi¬gurations.
- Highly Customizable dashboard (user de¬fined with flexible name and widgets), Multiplatform Support, Industry Standard Protocols and underlying tools

- Alert if select component(s) populated are not in OEM Hardware System Compatibility list





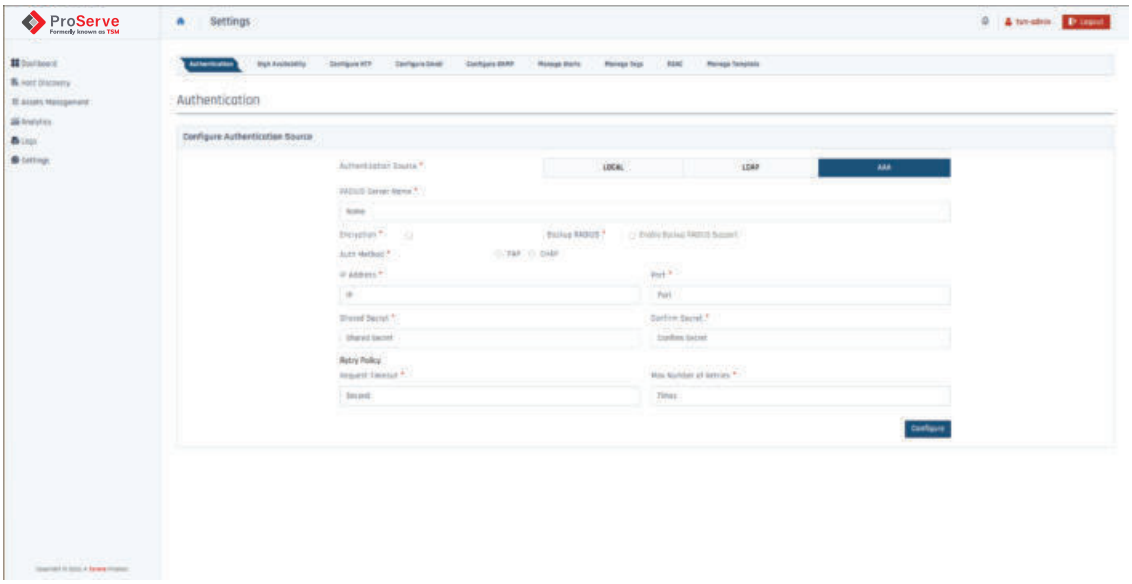


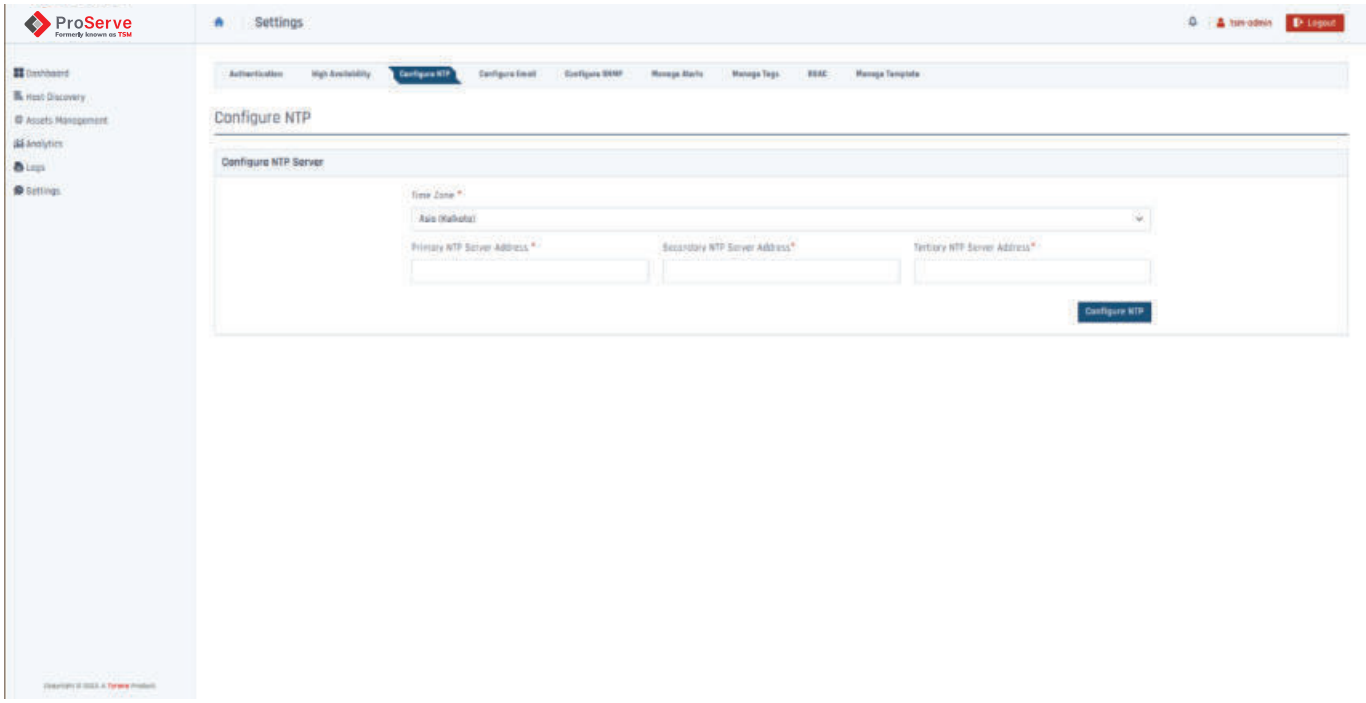
- Dynamic enable/disable of ports (USB etc.) remotely

6. Secure Authentication

Tyrone ProServe provides secure management using various authentication measures for secure Server Management. Such examples of measures include:

- HTTPS
- LDAP
- NTP
- Active Directory
- SMTP
- SNMP
- Radius/AAA
- SSH





7. Technical information

Tyrone ProServe uses industry standard protocols, Interface mechanism and user interface which enable user to perform System Management with ease and provides facility to customize, integrate in multi platforms. Such details are covered vide a comprehensive list comprising of:

a. Hardware Protocols:

- IPMI (2.0)
- Redfish
- HTTPS
- SSH/CLI
- SNMP

b. Management Interface:

- BMC, IPMI 2.0, IPMI over LAN,
- Serial over LAN
- Out of Band Management
- Agent based Management
- iKVM
- Virtual Media
- Redfish & SMASH Support

c. User Interface:

- REST APIs,
- HTML5 GUI
- JAVA
- CLI / PowerShell

 # TSM Product datasheet doesn't cover all features, there may be extensive features happened to be part of the TSM but have not reflected here. For such details kindly contact local Tyrone representative.

Tyrone®

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