

DATA SHEET

HiveManager™ Private Cloud

Enterprise Access Network Management Offering Intuitive Configuration Workflows,
Real-Time & Historical Monitoring, and Simplified Troubleshooting



HiveManager™ Private Cloud

HiveManager Private Cloud is an industry-leading and visionary approach to cloud-managed networking, built from the ground up to take full advantage of the SD-LAN and SD-WAN solution from Aerohive. Working in tandem with Aerohive's cutting-edge HiveOS, HiveManager Private Cloud leverages state-of-the-art cloud technology. Benefit from unified, full-stack management of Wi-Fi, switching and routing, centralized monitoring and configuration, real-time and historical reporting, simplified troubleshooting, integrated RF planner tools and much more.

Summary

HiveManager Private Cloud leverages the Aerohive's Cloud Services (ACS) platform to provide cloud-based access network management, a suite of APIs for network integration and custom application development as well as the underlying Big Data platform.

Engineered from the ground up as a true cloud, it provides unparalleled performance, speed and flexibility for network access management and analytics needs.

As an industry-first, Aerohive partners and customers with large scale requirements above five thousand devices can deploy their own Private Cloud instance of HiveManager, with a capacity of up to one million connected access points, switches, and routers.

The Private Cloud RDC (Regional Data Center) provides the same benefits and features as Aerohive's Public Cloud, including support for Aerohive Connect™, Select™, and Insight™, but can be located within a customer's or partner's own infrastructure.

It is an ideal solution for Managed Service Providers (MSPs) or enterprises who want the scalability and elasticity of the cloud with the added control of hosting it in their on-premises datacenter or in their own Cloud Service Provider account.

Key Features of HiveManager

Auto-Provisioning: With zero-touch deployment, automatically apply a configuration policy, upgrade software and more.

Dashboard: Intuitive, visual dashboard with contextual filters for a comprehensive overview of network assets, application and data usage as well as user activity.

Comparative Analytics: Anonymously compare operational and performance-based metrics to those of other organizations of a similar size and vertical.

Application Visibility and Control: Visibility and control of application usage on the network, for professional and recreational applications and network services.

Monitoring: Real-time and historical view of devices, clients, alarms and events with automated out-of-band alerting.

Simplified Deployment: Guided workflows for creating and deploying network policies, with optional advanced configuration.

Guest Access: Flexible onboarding and management options for visitor and BYOD devices including intuitive Captive Web Portals, Social Login and PPSK.

Network Health: Real-time and historical view of client and device health with built-in remediation tools.

Deployment Scalability: Centrally manage one million network connected devices including access points, switches, and routers.

Troubleshooting: Help-desk optimized interface to triage historical and real-time client problems with actionable data to reduce escalations and provide a better end-user experience.

Full-stack Management: Single pane-of-glass management and visibility of wired and wireless devices.

Multi-tenancy: Allows MSPs and large corporations to efficiently manage multiple customers or subsidiary accounts from one master account with VHM switching or Hierarchical Management (HHM).

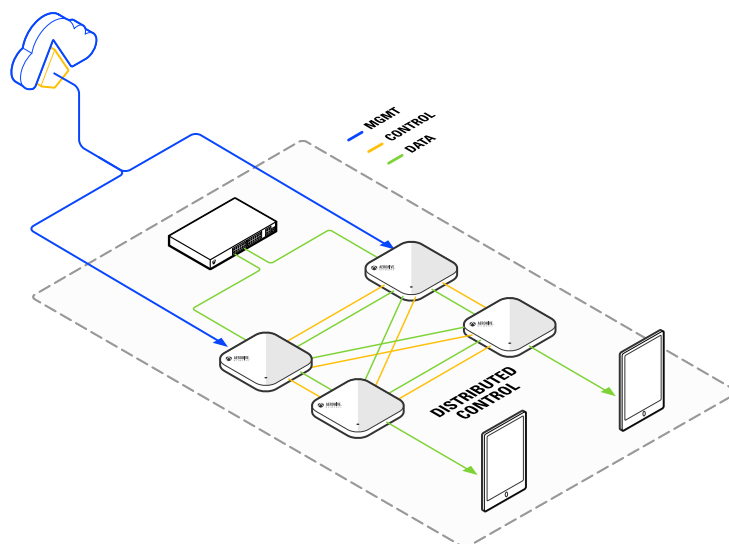
IoT Management: Securely connect IoT devices with AES encryption using Aerohive's unique Private Pre-Shared Key (PPSK).

Open APIs: A full suite of REST APIs and webhooks including: monitoring, identity, presence and location, configuration.

Distributed Control

HiveManager is a Network Management System (NMS). It leverages Aerohive's unique distributed control architecture (built into HiveOS) and eliminates the needs for centralized network controllers. The control and data planes operate at the edge. With this **out-of-band control plane**, no control or data plane information traverses ACS.

As a result, network devices can operate without having to connect to HiveManager. This is essential to support continuous operation in the event the WAN connection to the HiveManager Cloud is interrupted. It also enables HiveManager to meet stringent regulatory restrictions and achieve optimal network performance.

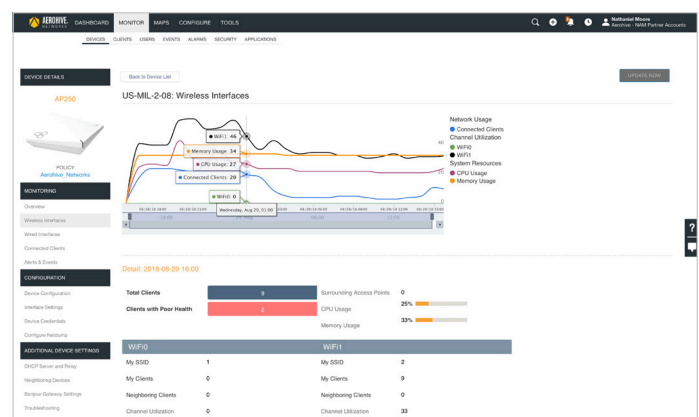
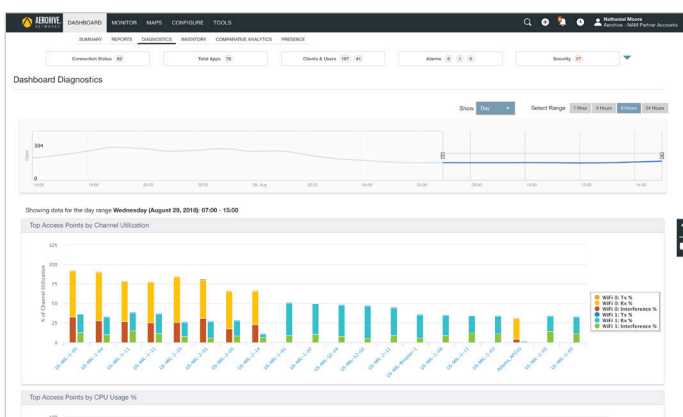
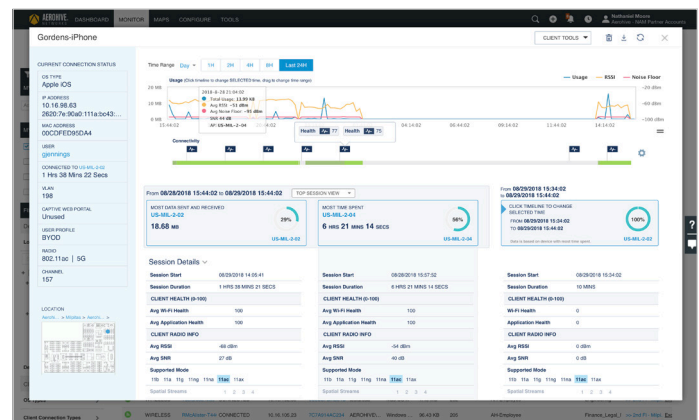
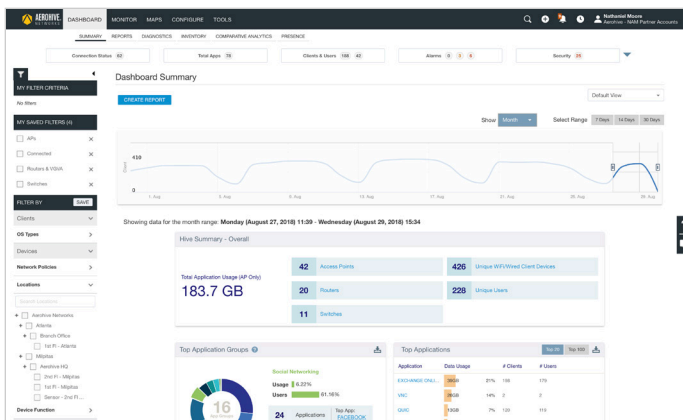


Aerohive's unique distributed control architecture.

Security and Operation

- Accounts are password protected and accessed via secure SSL
- Management traffic is encrypted and restricted using industry-proven CAPWAP protocol over HTTPS
- Out-of-band operation ensures no customer data traverses Aerohive's Cloud Services (ACS)
- Single-Sign-On (SSO) for administrator accounts
- Multi-Factor authentication with Google Authenticator for administrator accounts
- Multi-tenant architecture with secure account separation
- Centralized monitoring and management
- Integrated RBAC to delegate select HiveManager roles and permissions to different administrators
- VAR and partner management capabilities including account provisioning and maintenance
- HiveManager Cloud connectivity of network devices does not impact network operations servicing end-users
- 99.99% uptime, excluding maintenance windows

Intuitive Interface



Simplified Deployment

- Administrator portal for RDC management access
- Guided workflow for network policy deployment
- On-screen step-by-step guided configuration
- RF planner with map import and export
- Ability to swap simulated APs with real Aerohive APs on RF planner map
- Devices automatically connect to HiveManager for provisioning
- Devices auto-provision with network policy and firmware updates

Centralized Configuration

- Guest Access functionality
- Device templates for switches, routers and APs
- Aerohive device as RADIUS server or RADIUS proxy, and as DHCP server
- Centralized view of all configuration objects
- Ability to bulk edit device properties
- Ability to schedule firmware upgrade
- Command Line Interface (CLI) access to Aerohive devices
- Support for select Dell N-Series switches
- Active directory/LDAP
- IPv6 support
- Syslog and SNMP server configuration
- Auto-provisioning
- Configuration audit, backup, restore, import and export
- Support for Aerohive VPN gateway (VG-VA)
- Multi-tenant capability: supports multiple virtual organizations

Centralized Policy Management

- Device classification by location & time zone
- Customer application definition
- Client classification by location, OS type, MAC address
- Multiple user profiles for each SSID
- Time-based firewall and QoS policy
- Application, network and MAC layer firewall policy rules
- WIPS policy for rogue AP detection and mitigation

Security and Privacy

- Role-based access control
- Customer and network data is private and secure
- No customer data traverses Aerohive's network
- SSO for HiveManager administrators via SAML
- Optional multi-factor authentication with Google Authenticator for administrators

Security and Privacy (Continued)

- EU General Data Protection Regulation (GDPR): HiveManager supports features that can assist customers in responding to obligations resulting from GDPR, including:
 - Search for, download and delete personal data for specific users
 - Creation of reports to document the above actions

Dashboard

- Graphical widgets and status cards with drill-down capabilities
- Time-range slider on dashboard for historical view
- 360° views of Aerohive network policies, AP, client devices, users and apps
- Global search function by network policy, MAC address, serial number, user, hostname or application name
- 30-days of historic monitoring and reporting data
- Interactive Network Summary Report with easy sharing
- Savable contextual filters by location, SSID, policy, user, profile and client OS type
- Comparative Analytics to anonymously compare operational and performance metrics against other cloud customers of a similar size and industry

Troubleshooting

- Client 360° behavioral analysis; real-time and historical network performance monitoring and optimization
- Help-desk optimized interface with problem summary and suggested remedy
- Dedicated Helpdesk user role
- Real-time troubleshooting with probe messages and stage filters
- Historical troubleshooting with automatic issue detection
- Mark issue resolved or escalate issue with email notification
- Built-in Command Line Interface (CLI) and remote SSH
- RADIUS test
- AP technical data download
- VLAN probe tool for simplified troubleshooting of the wired network
- Optional packet capture analysis with partner solution (*CloudShark*)

Monitor

- WIPS history report
- Drill-down capability from client list to client 360° view
- Device list with rich utilities for advanced configuration and investigation
- Real-time client list with SNR, RSSI, data usage and connection status
- Savable and reusable filters shared across dashboard and monitor
- Alarm and event lists with historical and real-time data
- PCI DSS 3.2 compliant reporting
- Rogue AP and rogue client monitoring
- Real-time data for connection clients and users
- Google Maps integration and navigation with floorplan upload capability

Support for the Following Aerohive Solutions

- Aerohive Select
- Aerohive Connect (*requires HiveCare Connect or HiveCare Partner Support*)
- Aerohive Insight (monitoring, identity, presence/location and configuration APIs)

Guest Access

- Onboarding and management of visitor and employee personal devices (BYOD)
- Provides multiple onboarding workflows via Captive Web Portal, Kiosk app and Guest Check-In applications
- Private PSK (PPSK), 802.1X (RADIUS) and PSK authentication
- Supports 3rd party and customized CVPs including HTML upload for added deployment flexibility

Supported Languages

- English, German, Spanish, French, Italian, Japanese, Korean, Portuguese, Chinese

Deployment Specifications

Minimum Hardware Specifications (Redundant Configurations):

HiveManager Private Cloud SM (On-Premises RDC):

- 22 VMs
- 70 virtual CPU Cores
- 324 GB memory
- 2 TB storage (SSD, local storage)

HiveManager Private Cloud SM (AWS-hosted RDC):

- 22 VMs
- 43 virtual CPU Cores
- 114 GB memory
- 2 TB storage (SSD, local storage)

HiveManager Private Cloud MD, L and XL:

- Platform sizing depends on task distribution and load; contact Aerohive for additional information.

Required Third-Party Software (Virtualization):

- VMware vSphere Enterprise 6.5 and up

Capacity:

- Each Private RDC can support up to 1 Million managed devices, depending on the resources allocated to its operation.

Co-Management of Private Cloud Deployments:

- Private Cloud environments are installed and managed in cooperation with Aerohive's DevOps group and require an annual DevOps service contract.

The service contract is priced based on the size of the deployment and number of managed network devices.

HiveManager Private Cloud - SKUs

SKU	DESCRIPTION
AH-HMNG-PC	HiveManager Private Cloud. Aerohive DevOps Pro Services to set up Private Cloud. Requires a statement of work; must be ordered with a devOps contract for monitoring and maintenance and NGCS Subscription SKUs for service.
AH-NGPC-DO-SM-1Y	HiveManager NG Private Cloud Dev Ops subscription for Private Clouds up to 300 end customer accounts or 7500 devices. Includes up to 12 upgrades and ongoing system monitoring and operational support for NGPC software.
AH-NGPC-DO-MD-1Y	HiveManager NG Private Cloud Dev Ops subscription for Private Clouds up to 600 end customer accounts or 15000 devices. Includes up to 12 upgrades and ongoing system monitoring and operational support for NGPC software.
AH-NGPC-DO-LG-1Y	HiveManager NG Private Cloud Dev Ops subscription for Private Clouds up to 3000 end customer accounts or 30000 devices. Includes up to 12 upgrades and ongoing system monitoring and operational support for NGPC software.
AH-NGPC-DO-XL-1Y	HiveManager NG Private Cloud Dev Ops subscription for Private Clouds up to 6000 end customer accounts or 50000 devices. Includes up to 12 upgrades and ongoing system monitoring and operational support for NGPC software.

