

# HiveOS 6.1

## Network Operating System Switching Features



**HiveOS Switching** delivers enterprise-class switching combined with advanced branch routing, security, and contextual policy enforcement

Aerohive HiveOS is the operating system that powers all Aerohive devices. HiveOS Switching delivers enterprise-class switching functionality combined with identity-based routing, security features like 802.1X, and contextual policy enforcement.

All Aerohive devices support the feature-rich HiveOS Cooperative Control architecture. HiveOS enables Aerohive devices to organize into groups, or “hives,” which allows functionality like fast roaming, user-based access control, and fully stateful firewall policies, as well as additional security and networking features—all without the need for a centralized or dedicated controller. This architecture has lower deployment and ownership costs with higher performance, reliability, and scalability than any of the networking competitors in the market today.

### Key Features and Benefits

#### Unified Control and Policy

Revolutionary user interfaces makes it easy and intuitive to create and deploy unified wired and wireless access policies across the entire network. Users will be granted the same permissions to the network based on identity and device type, regardless of how or where they attach to the network. HiveOS Cooperative Control protocols ensure all devices securely share policy information across the entire network, including 802.1X security policies.

#### Zero-Touch Provisioning

Aerohive’s zero-touch provisioning feature avoids the need for pre-configuration and costly truck rolls. Devices can be shipped to the install site, and once powered up and connected to the Internet, will automatically use the Aerohive Cloud Services Platform Redirector service to securely locate their HiveManager - whether that HiveManager is in the Aerohive public cloud or in a customer private cloud. Once connected to HiveManager, the switches will automatically download updated firmware and policy configuration information and immediately provide service to connected devices, without any need for administrator intervention.

#### Enterprise-Class Cloud-Enabled Switching

HiveOS supports advanced switching functionality like user-based QoS, storm control, and 802.1X multiple authentication for voice and data coexistence, along with traditional switch features such as LLDP, Spanning Tree, Jumbo Frames, and IGMP snooping. Combining these capabilities with cloud-based services such as on-demand provisioning, hands-free configuration and updates, and unified wired and wireless policies allows Aerohive HiveOS and Cooperative Control to provide a seamless, high-quality enterprise-class experience for all connected users.

#### Integrated Branch Routing

HiveOS also supports integrated branch routing, including features such as stateful firewall, IPsec VPN, identity-based routing, and Cloud Proxy. Aerohive devices can manage traffic via a combination of user identity and very granular mobile device management, which when combined with the local intelligence, cloud security services, and mobile device management capabilities of the Aerohive solution, gives every remote user headquarters-like security and productivity, regardless of their location.

For more information visit [www.aerohive.com/hiveOS](http://www.aerohive.com/hiveOS).

### Warranty and Support

Every Aerohive Networks device is backed by a limited lifetime hardware warranty. Extended product and technical support may be purchased separately and can include next day advanced replacement, 24x7 or 8x5 technical support, web and email support access, and software updates. For complete support terms go to [www.aerohive.com/support](http://www.aerohive.com/support).

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## Supported Standards Specifications

### IEEE

- IEEE 802.1D STP
- IEEE 802.1p Priority
- IEEE 802.1Q VLANs
- IEEE 802.1w RSTP
- IEEE 802.3x Flow Control
- IEEE 802.1AB LLDP
- IEEE 802.1X Access Control
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3 10BASE-T
- IEEE 802.3af PoE
- IEEE 802.3at PoE+

### RFCs

- RFC 768 UDP
- RFC 783 TFTP
- RFC 792 ICMP
- RFC 793 TCP
- RFC 826 ARP
- RFC 4251 SSH
- RFC 868 NTP
- RFC 2138 RADIUS Authentication
- RFC 2866 RADIUS Accounting
- RFC 1350 TFTP
- RFC 2131 DHCP

## Product Features

### Unified Control and Policy

- Create and Deploy Unified LAN/WLAN policies across the entire network
- Granular user-profile-based management defines VLANs, QoS, access, and security policies for each user and device

### Security

- Advanced 802.1X support
- Time-of-day and day-of-week access control
- Dual-authentication for MAC auth and 802.1X
- Trusted Platform Module (TPM) - Hardware-based key storage and encryption
- Industry-leading auto-configuration that avoids truck rolls

### Authentication

- 802.1X authentication with MAC-based authentication fallback for legacy devices
- RADIUS support with PEAP, EAP-TLS, TTLS, LEAP, and EAP-FAST
- LDAP authentication to directory servers, including OpenLDAP, Novell eDirectory, and Apple OpenDirectory
- Authentication to Microsoft® Active Directory™ with local credentials caching, also supports Global Catalog and multiple forests
- Multiple RADIUS server support
- RADIUS server with local database or RADIUS proxy
- Standard Interchange Protocol, version 2 (SIP2) support for validation of users against a Library Information Systems (LIS)
- MAC-based RADIUS authentication
- Dynamic Change of Authorization (RFC3576)

### PoE Management

- Allocate, prioritize, and control your PoE budget to make sure critical devices stay powered

### Trunking and Link Aggregation

- Support for up to 255 VLANs in order to segment traffic
- 802.1Q trunking support
- Combine up to 8 interfaces into one logical interface

### QoS for Voice and Data

- Powerful QoS features usually only found on high-end switches
- User profile-based queuing, scheduling and policing
- QoS assignment per VLAN, user profile, service, and MAC address
- Hardware-assisted DSCP and 802.1p classification and marking

### Topology Protection

- STP/RSTP to create loop-free, resilient topologies
- Hardware-assisted storm and flood control

### Management

- Central management
  - Management via HiveManager
  - Management via HiveManager Online
- Device Configuration
  - CLI via SSHv2 or console
- Monitoring
  - SNMP v1, v2c, and syslog

### Services

- DHCP Server
- RADIUS Server
- PPSK Server