

Ubiquiti Networks

UniFi Training

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UniFi Overview

- Ubiquiti Networks
- Wireless Solution
- Centralized WLAN Controller
- Cloud Management
- Per-User Rate Limiting
- Guest Control
- Access Controls
- Hotspot using Vouchers
- Hotspot using Payment Methods (Credit Card)
- Support for 802.11n and 802.11ac (Gigabit WiFi)
- Affordable option over Aerohive, Meraki, and Ruckus

Comparison Example

UniFi AP Pro

- 802.11n
- 2.4Ghz + 5Ghz
- Speed: up to 300Mbps
- MIMO: 2x2 (5Ghz)
- Price: **\$230**
- Controller/License: **Free**



Aerohive AP121

- 802.11n
- 2.4Ghz + 5Ghz
- Speed: up to 300Mbps
- MIMO: 2x2 (5Ghz)
- Price: **\$650**
- Controller/License: **\$85/year**



UniFi - Access Points

AP	Type	Radio	Band	Speeds	MIMO	Range
UniFi AP	Indoors	A,B,G,N	2.4Ghz	Up to 300Mbps	2x2	Up to 400 ft.
UniFi AP LR	Indoors	A,B,G,N	2.4Ghz	Up to 300Mbps	2x2	Up to 600 ft.
UniFi AP Pro	Indoors	A,B,G,N	2.4 + 5Ghz	Up to 450Mbps	3x3 (2.4Ghz) 2x2 (5Ghz)	Up to 400 ft.
UniFi AP AC	Indoors	A,B,G,N, AC	2.4 + 5Ghz	Up to 1.3Gbps	3x3 (2.4Ghz) 3x3 (5Ghz)	Up to 400 ft.
UniFi AP Outdoor	Outdoors	A,B,G,N	2.4GHz 5Ghz	Up to 300Mbps		Up to 600 ft.
UniFi AP Outdoors+	Outdoors	A,B,G,N	2.4Ghz	Up to 300Mbps		Up to 600 ft.
UniFi AP AC Outdoors	Outdoors	A,B,G,N, AC	2.4 + 5Ghz	Up to 1.3Gbps	3x3 (2.4Ghz) 3x3 (5Ghz)	Up to 600 ft.

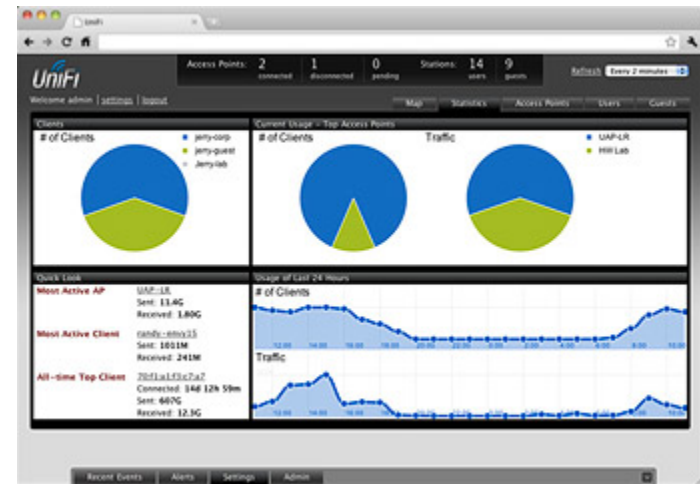
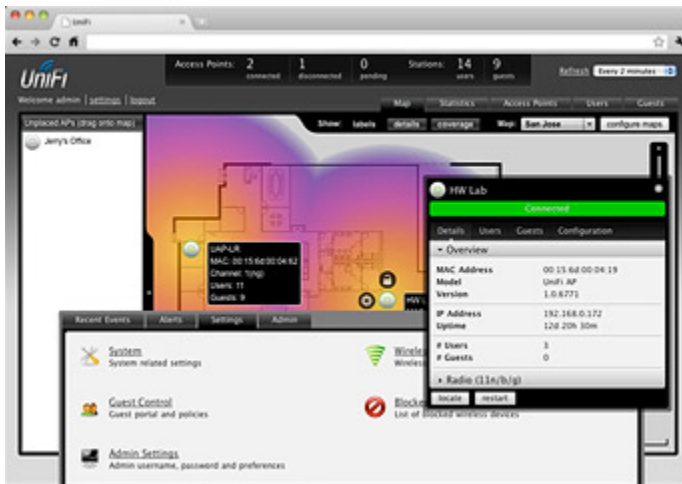


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UniFi – Wireless Controller

- Free
- Windows or Linux
- Virtualized
- Install in the cloud (Amazon)
- All Access Points and Wireless Networks managed



Pros and Cons

Pros

- Affordable
- Free WLAN Controller
- Easy setup
- Multiple wireless networks
- VLAN tagging (802.1Q)
- Guest Control
- Hotspot capability

Cons

- Support
- Customization
- Enterprise ready?
- Limited tuning options

Design

Design – Hardware

1. Site Survey

1. Number of Access Points
2. Access Point location

2. Access Point

1. Bandwidth Services (802.11g, n)
2. Dual Band (2.4GHz and/or 5GHz)
3. MIMO
4. Number of users per AP

3. Wireless Controller

1. Linux or Windows
2. Virtualized
3. Cloud or Local

Design – Network

1. Network Topology

1. AP (Access)
2. Wireless Controller (Core, SF)

2. Define networks (and VLANs)

1. Management (Untagged VLAN) – Controller & Access Point
2. User (Tagged VLAN)
3. Guest (Tagged VLAN)

3. Define Wireless networks (SSID)

1. User (Tagged VLAN)
2. Guest (Tagged VLAN)

Our Design – Hardware

1. UniFi AP Pro

1. 802.11n
2. 2.4GHz + 5GHz
3. ~200 user connections

2. Wireless Controller

1. Linux (Virtualized)
2. Local

Our Design – Network

1. Network Topology

1. Access Point (Access)
2. Wireless Controller (Core, SF)

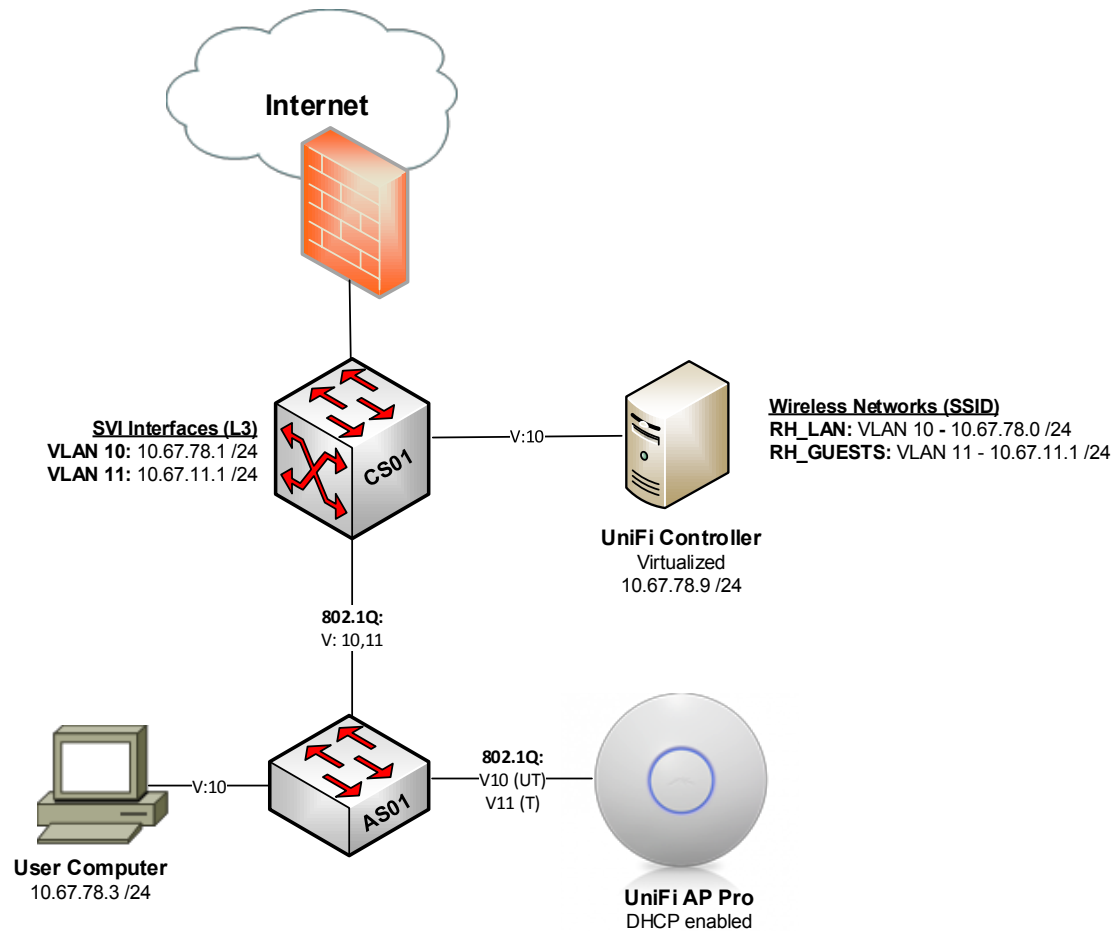
2. Define networks (and VLANs)

1. Management/User = 10.67.78.0 /24 (VLAN 10)
2. Guest = 10.67.11.0 /24 (VLAN 11)

3. Define Wireless networks (SSID)

1. User = RH_LAN (Untagged, Native VLAN ; VLAN 10)
2. Guest = RH_GUESTS (VLAN 11)

Network Design



Video Topics

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