Digital Network Architecture Competitive Comparison

	Cisco	HPE	Huawei
Security			
Group users and devices for policy compliance	Software-Defined Access creates logical/virtual groups that allow security policy to move with the user.	VLAN based.	**Limited** Security group-based policies via free mobility capability in Agile Controller.
User and application segmentation	Software-Defined Access uses software-based segmentation to keep different traffic types separate.	Exception based.	
Encrypted-traffic threat detection	With Cisco infrastructure and Stealthwatch, organizations can analyze metadata and apply AI to provide real-time security insights for encrypted traffic with 99.993% accuracy.		
Encrypted-traffic threat and malware detection	Cisco security solutions—including Stealthwatch, TrustSec, Identity Services Engine, and Rapid Threat Containment—eliminate threats across the network.	**Limited** HPE requires network off-load.	

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Security			
Identify wireless interference or threats	Cisco Aironet access points use CleanAir, Hyperlocation Module, and Flexible Radio Assignment to locate and eliminate security threats and RF interference.	HPE's software-based solution lacks efficiency and does not provide continuous scanning on all channels.	Huawei's software-based solution lacks efficiency and doesn't provide granularity to detect and mitigate wireless interference.
Security active learning	Talos intelligence feeds strengthen defenses against known and emerging threats.	Through the Niara acquisition and integration in ClearPass, HPE can provide machine learning for security concerns.	
Trustworthy Systems	Secure development lifecycle is published and verifiable. Products have trust anchors, secure boot, and runtime prevention. Software is digitally signed.	**Limited**	Control plane is unencrypted by default. Access points do not have unique certificates to encrypt the control plane.
Distributed security anomaly detection			
Incident-response work flow optimization			

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Innovations			
Operational insights	Cisco is now shipping a second release of DNA Center that adds more network assurance, enhanced machine-learning capabilities, and over 100 actionable tips to help customers remediate network issues quickly and easily.	HPE's NetInsight is a brand-new product (announced in November 2017) that does not yet offer proof of customer success.	Huawei has recently launched CampusInsight 2.0 (announced in March 2017). However, it doesn't have any customer implementation success story.
Track user location via BLE or Wi-Fi	Cisco CMX, with Virtual BLE Beacon and Hyperlocation, supports tracking of BLE and Wi-Fi devices with location accuracy up to 1-2m.	**Limited** HPE has limited support with Bluetooth in the access points but lacks precise Wi-Fi based location.	**Limited** Huawei eSight works as a location server but it is very limited and use RSSI based location that provides low accuracy - 3 to 5m, according to Huawei WLAN location white paper.
Engage with customers on location	The Cisco CMX solution offers a better understanding of how users interact with the environment so businesses can make better decisions.	HPE provides BLE location in its access points, tags, and Meridian applications for way-finding and customer engagement.	
Monitoring by endpoint type	Cisco can use analytics to monitor behavior with Stealthwatch and Flexible NetFlow, and classify traffic on the edge and inside the network with TrustSec.	**Limited** Aruba switches support sFlow technology but are prone to false alarms, blurred analysis, and missed packets.	**Limited** iPCA is offered as an option, but provides limited platform support and visibility. Huawei eSight NTA Monitor access-layer routers and switches support standard traffic management protocols (NetStream, NetFlow, sFlow).
Support new capabilities without major upgrades	Through the integration of custom ASICs, UADP, and Access Point Modularity, Cisco offers support for new innovations.	**Limited** No support for modular APs. Switching platforms use a custom AISC with limited extensibility.	No current support for modular access points or switches.

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Network and Infrastructure Agility			
Assurance and analytics	Cisco is now shipping a second release of DNA Center that adds more network assurance and enhanced machine-learning capabilities to help customers quickly troubleshoot and remediate network issues.	HPE's NetInsight is a brand-new product (announced in November 2017) that does not yet offer proof of customer success.	**Limited** Huawei has limited network assurance and analytics support integrated into its network management solutions. Huawei recently launched CampusInsight 2.0 (announced in March 2017). However, it doesn't have any customer implementation success story.
Unified policy deployment	Across wired, wireless, and WAN.	HPE has a different interface for management.	**Limited**
Actionable data	Across wired, wireless, and WAN.	**Limited** HPE NetInsight provides actionable data only for wireless networks.	Huawei has no actionable tips for remediation for any issue detected.
Better experience for Apple users	Cisco and Apple have joined efforts to provide a better user experience for Apple device users connected to a Cisco network.	**Limited** Functionality can only be supported through manual QoS prioritization and Wi-Fi standards.	**Limited** Functionality can only be supported through manual quality-of-service prioritization.
Optimize wireless during peak usage	Flexible Radio Assignment automatically optimizes the network, improving user experiences during unpredicted times of high density.	**Limited** The Aruba AP345 supports dual 5GHz. However, it has just started shipping in the market and does not have a customer success story. Also, Aruba's implementation relies on locking the radios to a particular set of channels (band) in dual 5-GHz mode.	**Limited** Huawei supports software-based radio configuration in its AP8030 but it does not support dual 5-GHz radios in its access points.

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Network and Infrastructure Agility			
Consistent app performance across network	The Easy QoS application provides a simplified way to deliver end-to-end quality of service.		
Detect and set features to new device	Cisco Auto Smartports dynamically detects devices and configures ports based on device type.	**Limited** HPE can detect and set characteristics on an access point attaching to an HPE switch, but it cannot detect other types of devices.	
Power resiliency for infrastructure	Cisco offers Persistent PoE and Fast PoE and Universal PoE and provides multiple-level redundancy through StackWise.	HPE offers basic PoE/PoE+ (30W) support. A limited number of switches support dual power supplies for 1:1 power redundancy.	Huawei supports PoE, PoE+, PoE++, and Power over HDMI (PoH; 95W) on a single S5700 platform. Power redundancy is 1:1 PoH (95W) on a single S5700 platform.
Automation across WAN, WLAN, wired	DNA Center supports wired and wireless and can centrally provision WAN path selection with IWAN. Get automation, orchestration, security, encryption, app visibility, and control with DNA Center and TrustSec.	**Limited** HPE/Aruba's AirWave has basic, rudimentary automation support for its products. HPE uses SDN controllers and AirWave for automated deployment of switches and APs. Missing is the ability to manage WAN devices in AirWave.	**Limited** eSight's automation support will work through third-party entities that are not integrated within the eSight solution itself.

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Network and Infrastructure Agility			
Power over Ethernet	✓	**Limited** HPE has some UPOE-capable switches but does not support advanced PoE capabilities simultaneously. UPOE, Perpetual PoE, and Fast PoE must be managed in separate instances.	**Limited** Huawei has some UPOE-capable switches but does not support advanced PoE capabilities simultaneously. UPOE, Perpetual PoE, and Fast PoE must be managed in separate instances.
Policy-defined segmentation	✓	✗	**Limited**
Device profiling for granular policy	✓	✗	✗
Software-based patching	✓	✓	✓
mGig across 48 ports	✓	✗	✓
Audio video bridging	✓	✗	✗

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Programmability			
On-box analytics		 **Limited** Aruba's new OS-CX has an analytics engine available, but it is supported only on the platforms that have this OS (8400 and 8320 so far).	
ASICs support programmable pipeline			 **Limited** Huawei's ENP2 is in limited parts of its portfolio and has not been proven to enable features in the future.
Open standard Model-based programming capabilities		 HPE/Aruba has no support for open-standard programmable models.	 **Limited** Huawei NetConf support will work only via a customized Agile Controller solution.