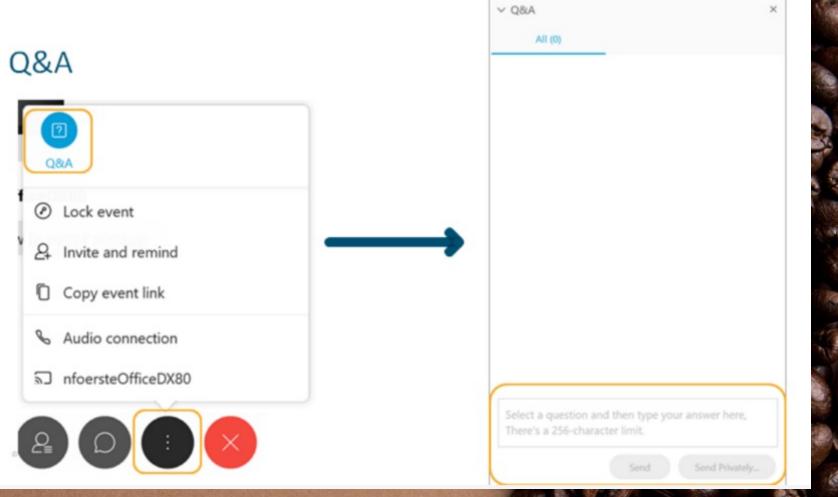
cisco

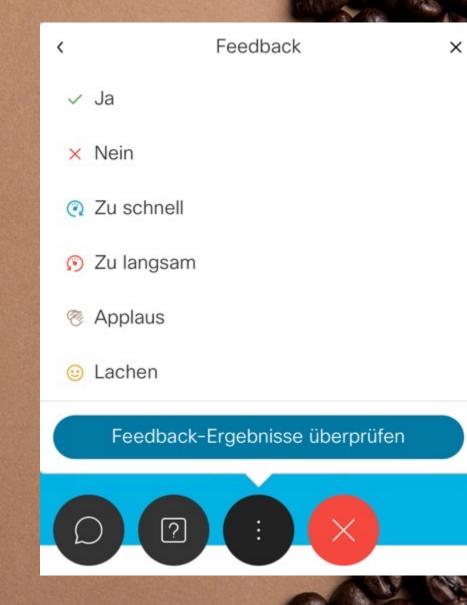
Cisco SASE Lösung mit Meraki SD-WAN Integration Virtual Espresso Webinar

Mittwoch, 8. Dezember 2021, 15:00 Uhr

function to get your question answered



and use feedback button for answering polling questions





and stay focused during the session...

There will be a Quiz at the end with a Chance to win nice Prices!



1st Price Cisco Headset HS730

3rd Price Coffee Cup 2nd Price Thermo Bottle

CISCO

cisco SECURE

CISCO The bridge to possible

Cisco SASE Lösung

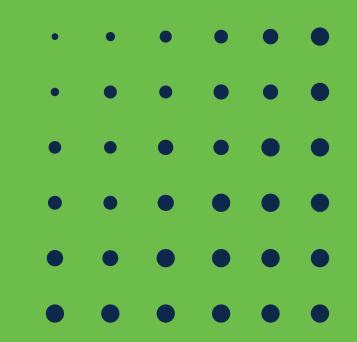
Meraki SD-WAN Integration

Cyrill Meier Security Architect Dezember 2021

Agenda

- Was ist SASE?
- SASE Use-Case
- Global cloud architecture
- Umbrella Übersicht
- Testresultate
- Demo

Was ist SASE?



Gartner: Secure Access Service Edge (SASE)

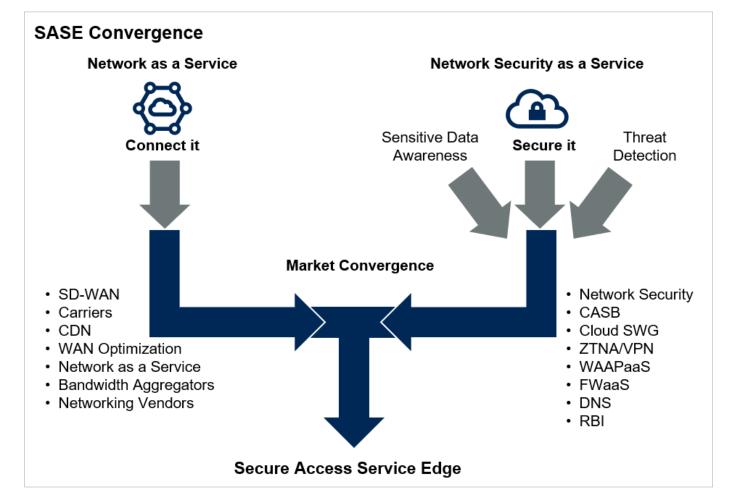
Convergence of networking and security services including SWG, CASB, DNS protection, firewall-as-a-service, SD-WAN, and zero trust network access

Benefit rating: Transformational

Market penetration: Less than 1% of target audience

Maturity: Emerging

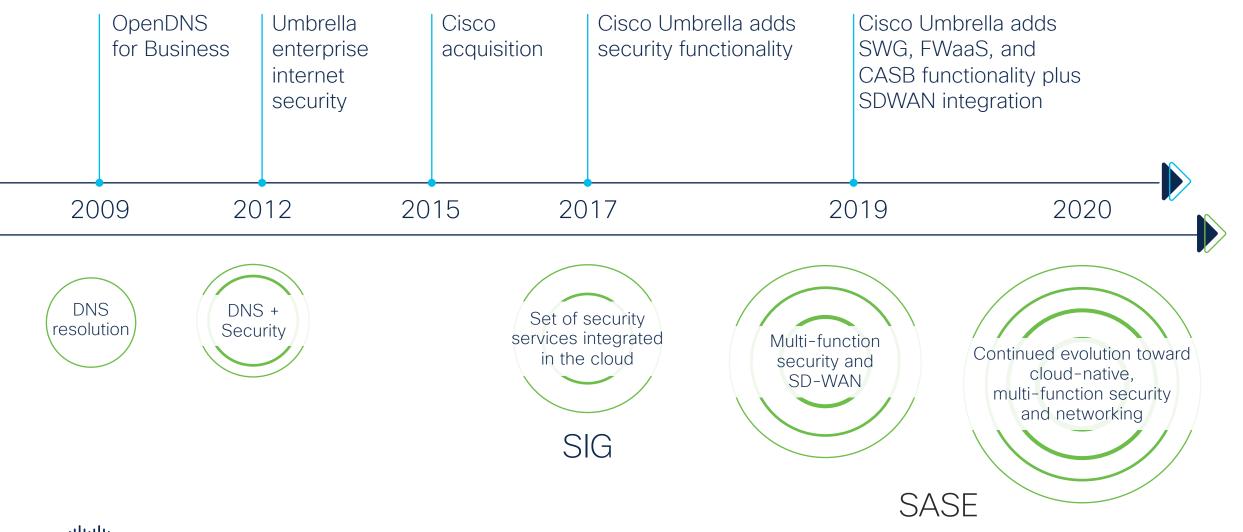
Gartner, The Future of Network Security Is in the Cloud, Neil MacDonald, Aug 30, 2019



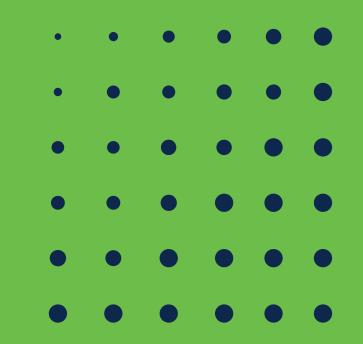
At Cisco, we're uniquely positioned to help

<image/>		
Networking	Security	Zero Trust
Largest SD-WAN solution provider	Defending 100% of the Fortune 100	Leader in Zero Trust two years running

Cisco Umbrella evolution



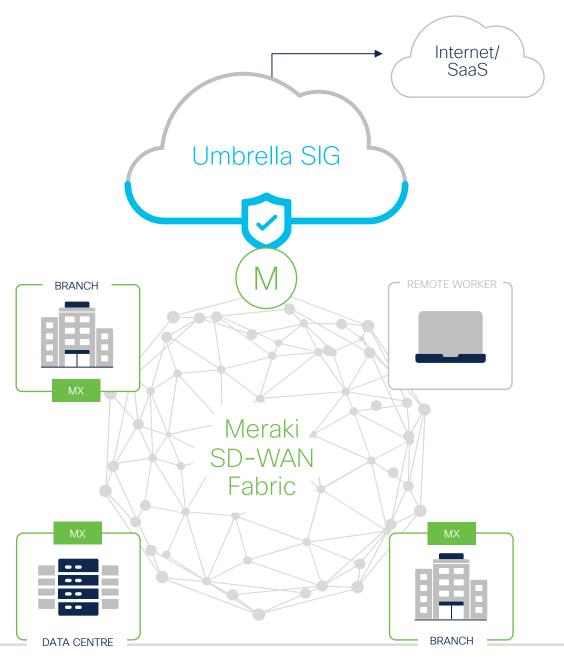
SASE Use-Case



Major use cases

Secure, optimized edge

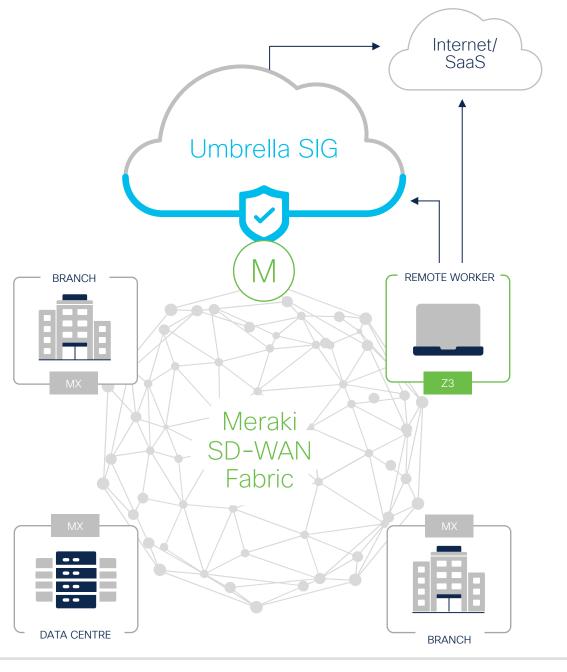
- Streamline connectivity to public and private apps across all office locations
- Secure branch-to-branch (east/west) traffic
- Provision SD-WAN fabric across thousands of users and locations
- Secure access to apps and direct internet access



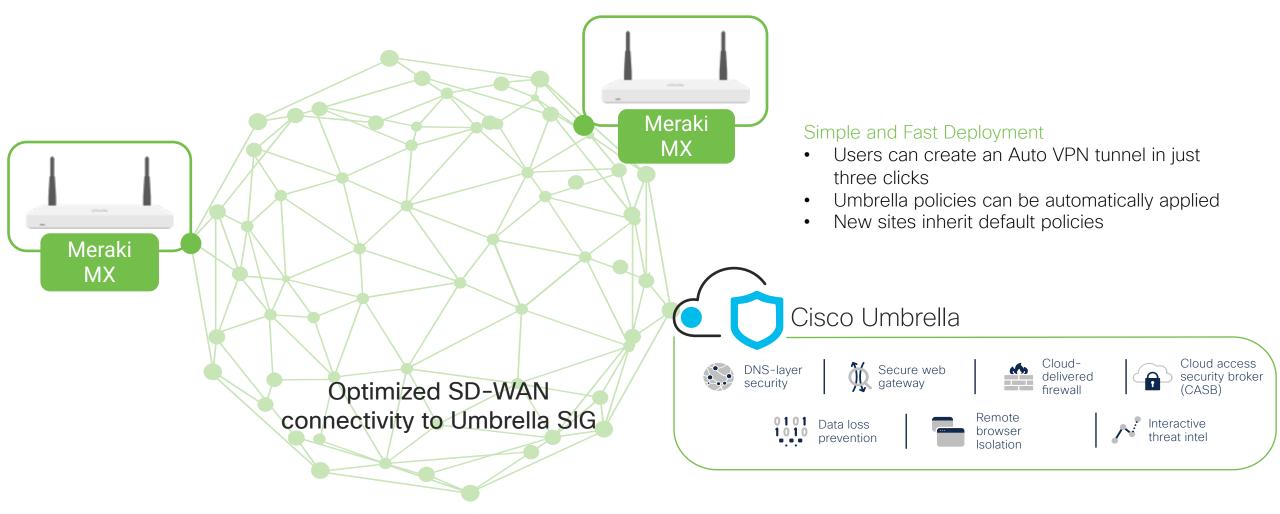
Major use cases

Secure remote worker

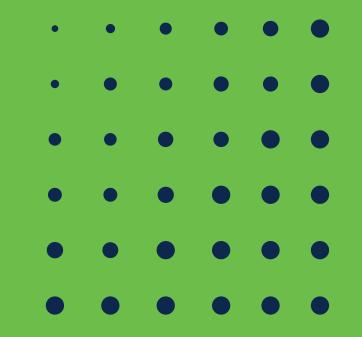
- Seamless connection to apps and data anywhere users work
- Secure access to internet and cloud apps
- Authenticate users and ensure device health before establishing connection



Best-in-Class & Seamless SASE Security



Global cloud architecture



Born in the cloud global architecture

Rapid scalability, continuous innovation, high performance - without downtime



Containerized, multi-tenant architecture powers scalability and reliability



Agile infrastructure delivers continuous innovation without customer downtime



Proven track record since 2006 with global data centers on six continents



Low latency delivers high performance and up to 73% latency reduction

Peering across the globe

Umbrella peering accelerates application performance

- Peering lowers latency by providing more direct paths
- Peering from data centers to more than 1,000 organizations including leading SaaS & laaS providers (always growing)
- Up to 50% performance increase with key applications

Examples of peering partnerships (not comprehensive)

SPs

- AT&T (Global)
- Bell
- Bharti Airtel
 Limited
- BT
- Charter
- China Mobile
- Google Fiber
- KDDI
- Rogers
- Swisscom 4
- Telkom
- Verizon
- Vodafone

laaS

- Alibaba
- Amazon
- Dell Services
 - Digital Ocean
 - Equinix
 - Fastly
 - Go Daddy
- Google
 - Huawei Cloud
 - Microsoft
- Rackspace
 - nackspa

Dropbox

SaaS

Adobe

Apple

Baidu

DocuSign

Microsoft

Salesforce

• Box

• NS1

• Oracle

Square

• WebEx

Cisco Umbrella earns SOC 2 Type II Compliance



What is SOC 2?



SOC 2 is a compliance framework that covers Security, Availability and Confidentiality trust services criteria.



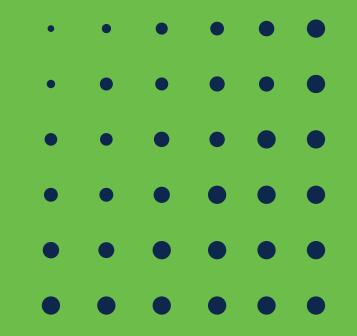
SOC 2 requires an independent audit and provides our customers and prospects with assurance that controls are implemented.



SOC 2 Type II requires that controls are tested for design & operating effectiveness over a minimum of 3month assessment period, typically annually thereafter.

After the audit, the SOC 2 Type II report is received and can be shared with customers and prospects under NDA.

Umbrella Übersicht

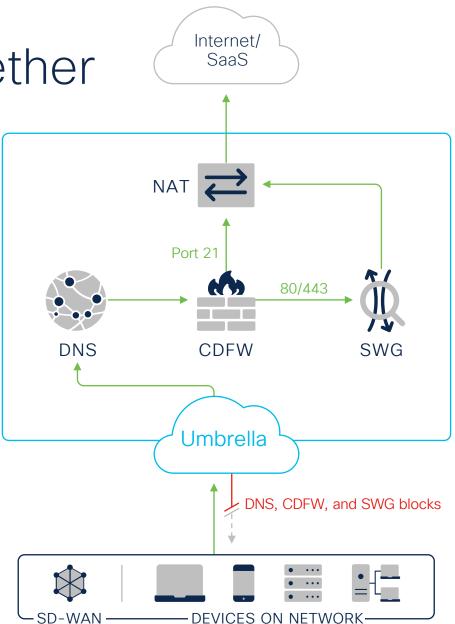


Cisco Umbrella Cisco Umbrella Cloud access Secure DNS-layer Cloud-delivered web security firewall (w/ IPS) security SecureX broker gateway Integrated security platform Data Cloud Interactive Remote browser loss malware threat Isolation detection prevention intelligence Visit our website to learn more • • • • [---• • • • www.umbrella.cisco.com/products SD-WAN **ON/OFF NETWORK DEVICES** Meraki MX Viptela

Enforcement that works together

Improved responsiveness and performance

- 1. DNS-layer security First check for domains associated with malware
- 2. Cloud-delivered firewall (CDFW) Next check for IP, port, protocol and application rules
- 3. Secure web gateway (SWG) Final check of all web traffic for malware and policy violations





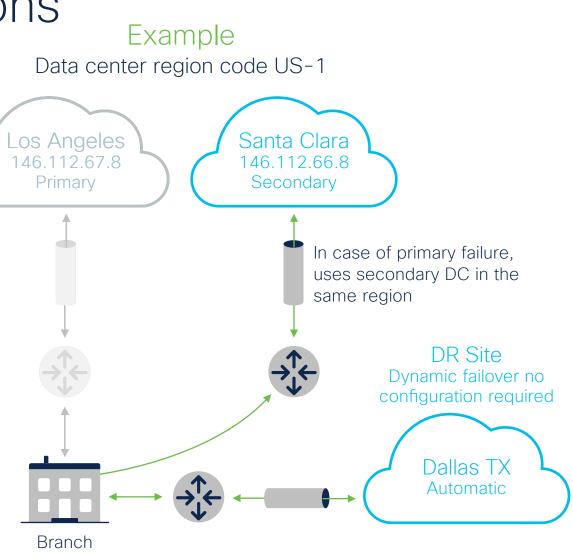
Tunnel internet connections

IPsec capacity

- 250 Mbps by default, with ongoing development to increase capacity
- Multiple tunnels can be deployed to support higher capacity

Availability

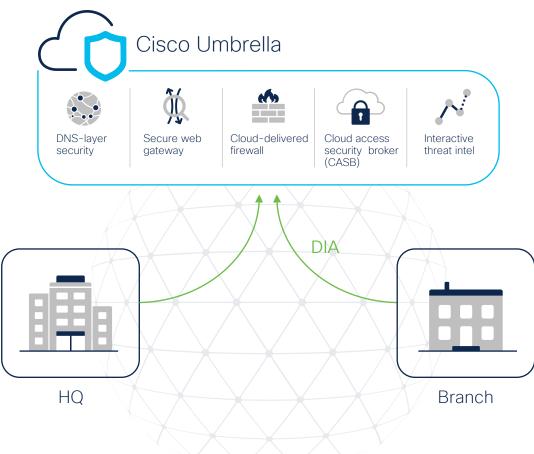
- Hard code primary, secondary (optional)
- Failover to secondary data center and disaster recovery is handled by anycast
- Failure detection uses IKE dead peer detection



Umbrella for Cisco SD-WAN

Fast forward time to value with automated security

- Hands-off automation: deploy IPsec tunnels across thousands of branches in minutes
- Top notch protection: defend against threats with the leader in security efficacy
- Simplified management: single pane of glass across all offices, users and roaming clients
- Deeper inspection & controls: SWG, CASB, and cloud-delivered firewall layer 3, 4, and 7



Meraki SD-WAN Connector Capabilities

UMB-SIG SD-WAN Connector

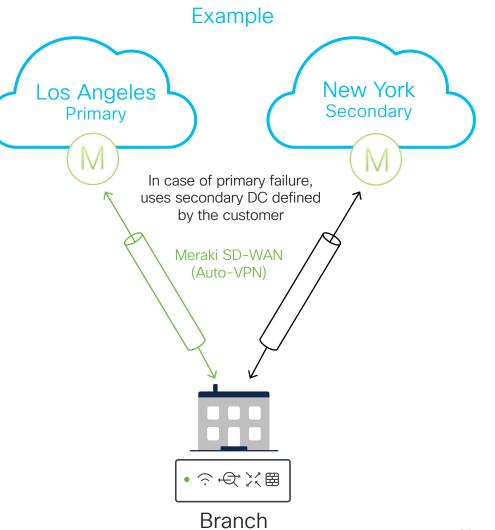
- 250 Mbps per UMB-SIG connector, ongoing development to increase capacity
- Multiple UMB-SIG connectors can be deployed to support higher capacity
- Supports VPN exclusions for DIA

Availability/HA

- Customer-defined primary and secondary DC
- Failover to secondary DC is handled by the Meraki SD-WAN fabric
- Initially available in select SIG DC's globally

Licensing

• Requires Umbrella SIG licensing + any MX license tier



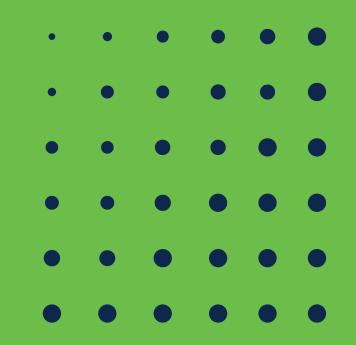
Cisco AnyConnect Security Mobility Client Entitlement for Mobility Client is included (excludes VPN functionality)

- AnyConnect can be used across an entire enterprise
- Both Umbrella DNS and Secure Web Gateway services can co-exist
- Protect assets on or off network
- Simple and consistent user attribution
- Choice of fail open or fail closed

AnyConnec	ct Secure Mobili	ty Client	0
Status Overview	Roaming Security		
VPN	Statistics Message History		
Roaming Security >	User Name: Last Connected: Logging: Secure Web Gateway:	Jummune 2118 Jumm Today 03: 53: 40 PM Disabled	•
	Ucense Web Protection Status: HTTP Requests: HTTPS Requests: Bypassed Requests:	Valid Protected 0	
	Unbrella Proxy: DNS Security IPv4 TCP Requests:	swg-url-praxy-https:sigpraxy.qq.opendns.com	
Collect dagnostic information for all installed components.	TCP Responses:	3026	¥



DNS security



Proven leader in cloud-native security







500M

authentication events every month







96%

Highest threat detection rate in the industry *

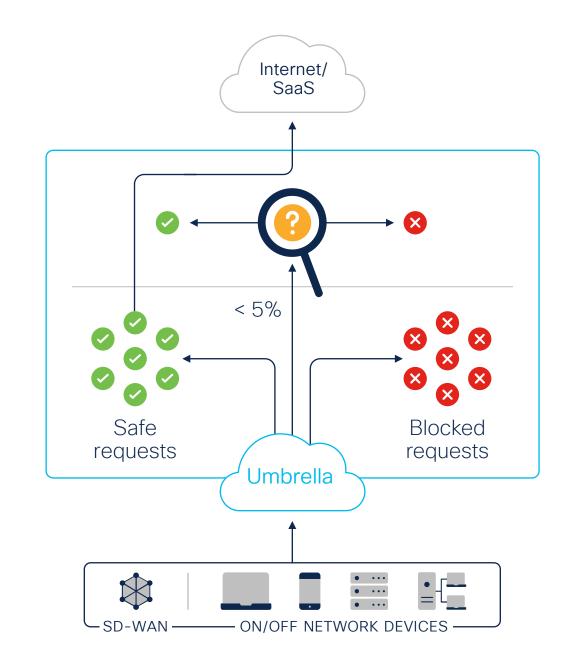
CISCO SECURE © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

* 7% better than the 2nd rated and 32% better than the 3rd rated vendors.

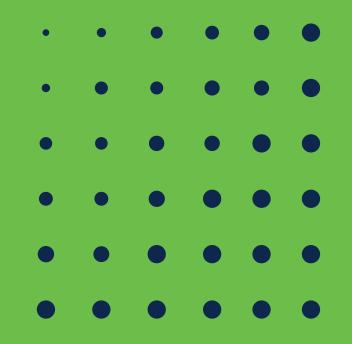
DNS-layer security

First line of defense

- Deploy enterprise wide in minutes
- Block domains associated with malware, phishing, command and control callbacks anywhere
- Stop threats at the earliest point and contain malware if already inside
- Accelerate threat response with an integrated security platform
- Amazing user experience faster internet access; only proxy risky domains



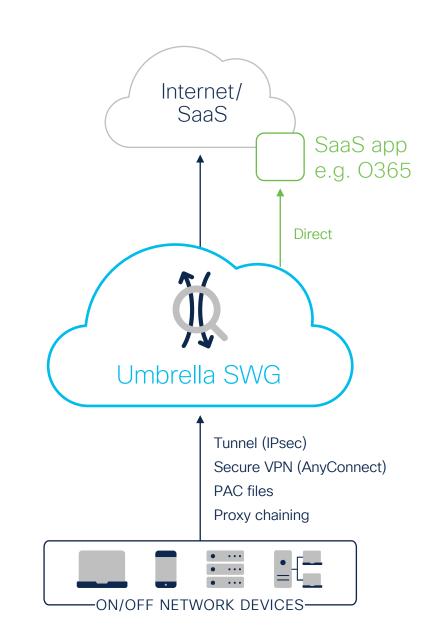
Secure web gateway



Umbrella SWG

Multiple functions and aggregated reporting in one cloud console

- Malware scanning includes two anti-virus engines and Secure Endpoint (AMP) lookup
- File type controls
- Full or selective SSL decryption
- Category or URL filtering for content control
- Secure Malware Analytics (Threat Grid) file sandboxing
- App visibility and granular controls
- Full URL level reporting



Categories

- Apply policy to a large number of sites
 - Content categories are used for "acceptable use policies"
 - Security categories are used for security policies
- Umbrella SWG uses Talos categories
 for both content and security
- Over 100+ categories
- Dynamic Cloud updates (full dataset)

Limit Content Access	
Access to these sites will be restricted based on the type of c	ontent served by the pages
Select Setting	
Base Content *	
CATEGORIES TO BLOCK SELECT ALL	
Academic Fraud	Nature
🗹 Adult 🗸 🗸	News/Media
Z Adult Themes	Non-Profits
Sexuality	Nudity
Alcohol	Online Communities
Arts	Online Meetings
Astrology	Online Trading
Auctions	Organizational Email

Cisco Secure Malware Analytics (Threat Grid) sandboxing

- Ability to detect hidden threats in files that are being downloaded
- A set of new or higher risk files are placed in a sandbox environment and checked for malicious activity/content
 - Alerts posted on files that do show bad activity
 - Umbrella threat intelligence is updated for that file

napect f	lee for malicious behaviors using a combination of static and dynamic analysis methods, in addition to file reputation s.	and advanced
•	File Impection Impact likes for malware using signatures, heuristics and file reputation (powered by Cisco Advanced Malware Protection).	
	Threat Grid Malware Analysis	
	Sandbox Region: Europe	
	CANCEL	BET & RETURN

Grid. While files will be flagged a samples, they will be stored for must select a sandbox region bef	s will be sent to for behavior analysis by Threat as private so they cannot be viewed as public analysis until a verdict has been reached. You ore you can enable Threat Grid in a policy, and elected this option cannot be changed. Choose	
Sandbox Region		
North America	*	Regior
 By ticking this box, you change the sandbox region 	acknowledge that you will not be able to n	Europe or Nor Americ

SIG Essentials now has a Cisco Secure Malware Analytics limit of 500 files per day SIG Advantage includes unlimited submissions and access to the full sandbox console for 3 users

Secure Malware Analytics (Threat Grid)

Sandbox inspection

- Files that make it through the anti-virus and malware scan by Cisco SecureX Malware Analytics and third-party tools (less than 50 Mb in size)
- Files that haven't been seen before by Cisco Secure Malware Analytics and have attributes that the Cisco Secure Malware Analytics model targets
- We are using libmagic for file type detection as well as listed file extension

Recent Retrospective Events				
SHA256	Threat Score	Malware Name	Date Detected	
7638f6d4a9cd3ea5fa88f9958da6e6e745b2931b96ecea	100	W32.7638F6D4A9-100.SBX.TG	Jul 30, 2019 at 3:22 AM	
526b2cad716f7dc1e568d5e68b8a251d19e129308806b	100	W32.526B2CAD71-100.SBX.TG	Jul 27, 2019 at 3:23 AM	
1a27fdf68d61964ddc13a62a75b15b7c94978def0b014	100	W32.1A27FDF68D-100.SBX.TG	Jul 26, 2019 at 3:24 AM	
49ade947bb9de7ce36f9735f90758d8425f939c2ce84b6	100	W32.49ADE947BB-100.SBX.TG	Jul 25, 2019 at 4:31 AM	
f9f23288188bc1a959e890084cc685db4ff9c50b95a52a	(100)	W32.F9F2328818-100.SBX.TG	Jul 24, 2019 at 3:26 AM	

File type control – categories and file types

Edit File Control Search for and apply policy controls for downloaded file types. Search file types All Groups 🗆 🌒 Audio 7> Compressed files 13> Data and database 10 >Disc and media files 4> Documents 10 >Executables 19> 12> Images System related files 9> \square Videos 23>

All Groups / Audio	
🗆 cda	
in mid	
mp3	
wav	
🗌 wma	
🗌 wpl	

Search for and apply policy controls for downloaded file types.

Edit File Control

SSL/HTTPS decryption in the cloud

- Visibility and set of security measures for the increased amount of encrypted web traffic
- Decryption, reporting and inspection for encrypted web traffic and files
 - No hardware expense
 - No scaling issues as encrypted Internet traffic increases
 - Ability to selectively decrypt

HTTPS Inspection

Configure how Umbrella should handle HTTPS traffic. See HTTPS Inspection

Enable HTTPS Inspection

HTTPS traffic is intercepted and decrypted to provide security and policy enforcement at the URL layer, and visibility into the URL path. By default, HTTPS inspection attempts to decrypt all HTTPS traffic. For any HTTPS traffic that should not be decrypted, create a bypass inspection group.

Add domains and select categories you want to exempt from HTTPS inspection:

Privacy categories	*		
4 Categories Selected	ADD	0 Domains	ADD
Financial Institutions			
Health and Fitness			
Social Networking			
Webmsil		No Domain:	

Microsoft compatibility mode

Organizations rely on M365 to run daily business and require high performance

Microsoft doesn't recommend traffic inspection for M365

- Compatibility Mode ensures that M365 traffic transparently passes thru Umbrella – yet gains native Umbrella backbone performance improvements
- ✓ Uses Microsoft APIs to determine the domains recommended to be bypassed, saving work for the customers trying to keep their devices up to date
- ✓ No policies can be applied to M365 traffic when enabled, (e.g. no tenant controls)
- Umbrella will log all traffic sent to these domains

SWG users and groups

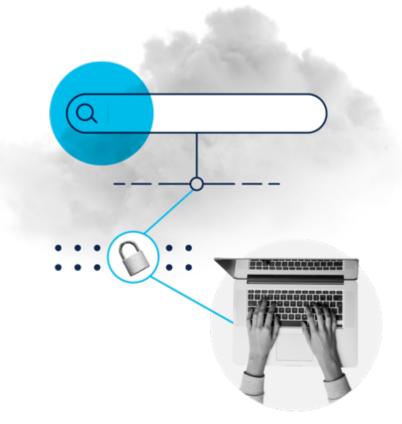
- CSV upload
 - Recommend CSVDE tool on Windows Domain Controller
- AD connecter Active Directory sync
 - Group filtering supported with data file
 - Standard AD connector install version 1.3.8+
 - Only one Domain Controller required, no VA required



New Umbrella remote browser isolation (RBI)

Added layer of protection for risky destinations and users

- Provide air gap between user device and browser-based threats
- Deploy rapidly without changing existing configuration
- Deliver a secure browsing experience with protection from zero-day threats



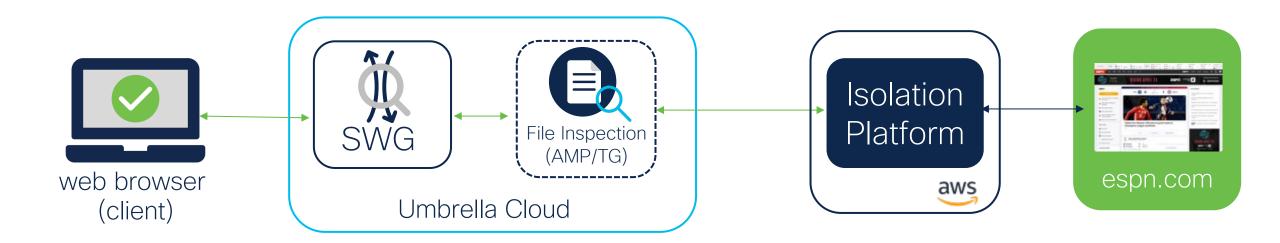
RBI integrated in a very simple and SASE way

Ruleset Rules

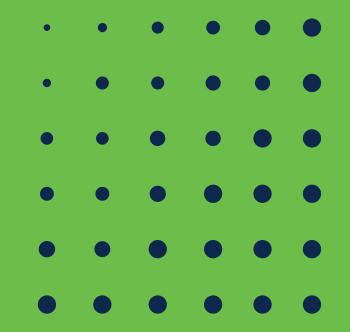
ADD RULE								
Priority	Rule Name	Rule Action	Identities	Destinations	Rule Configuration			
н	Isolate	Block	No Selections Add Identity	No Selections Add Destination	Any Day, Any Time Change Schedule No additional configuration applied	SAVE		
Ruleset s	Settings settings affect the rules within the ruleset a	 Warn Warns selected ruleset identities before allowing access to destinations. Block Blocks selected ruleset identities from 			st be configured through their respective components before being set here. Edit Edit Edit Edit			
Ruleset	t Name							
Ruleset	Identities							
Block P	age							
Tenant	Controls	accessing destinations.			Edit			
File Ana	alysis		 Isolate Isolates selected ruleset identities' web 				Edit	
File Typ	e Control	requests in a virtual cloud-ba			Edit			

RBI traffic flow overview

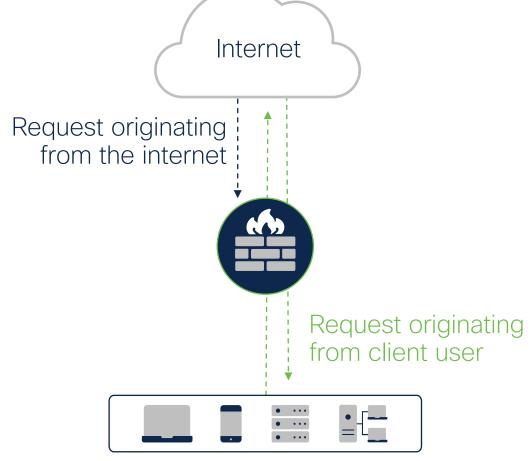




Cloud-delivered firewall



Umbrella firewall protects traffic from requests originating from a client user



Firewall use cases that protect traffic from requests originating from a client user are essential to securing access to the internet and controlling cloud app usage





Use this policy to control network traffic based on IP, port, and protocol. Rules are evaluated from the top down. For more information about Firewall Policy, view Manage Firewall.

ILTER	s c	ξ Search Firewall R	ule names or d	escriptions							
3 Tot	al										
	Priority	Name	Status	Action	Applications	Protocol	Source Criteria	Destination Criteria	Hit Count	Last Hit	
	1	Block SSH	Enabled	Block	ssh	Any	Any IPs Any Ports	Any IPs 1 Port	▲ 0/24hrs	▲ No Hits	
	2	p2p rule	Enabled	Block	Any P2P ftp	Any	Any IPs Any Ports	Any IPs Any Ports	25.0 /24hrs	Aug 24, 2020 - 09:33am	
	3	Default Rule	Enabled	~ Allow	Any Application	Any	Any IPs Any Ports	Any IPs Any Ports	69.1 k/24hrs	Aug 24, 2020 - 03:15pm	

Key use cases

Layer 7 application visibility and control

Block shadow IT over nonweb ports

Example: Stop use of unapproved SaaS apps

- WebEx allowed
- MS Teams video not allowed
- Google Hangouts not allowed

Block insecure applications on non-standard ports

Example: Stop remote virtual terminal connection into other networks

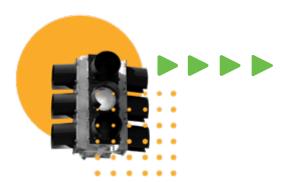
 Such as telnet via nonstandard port 8080

Example: Stop file transfer

 Such as FTP via nonstandard port 1003 Block unsanctioned traffic over non-web ports

Example: Stop use of unapproved traffic

 Block all peer-to-peer traffic (e.g. TOR or BitTorrent)



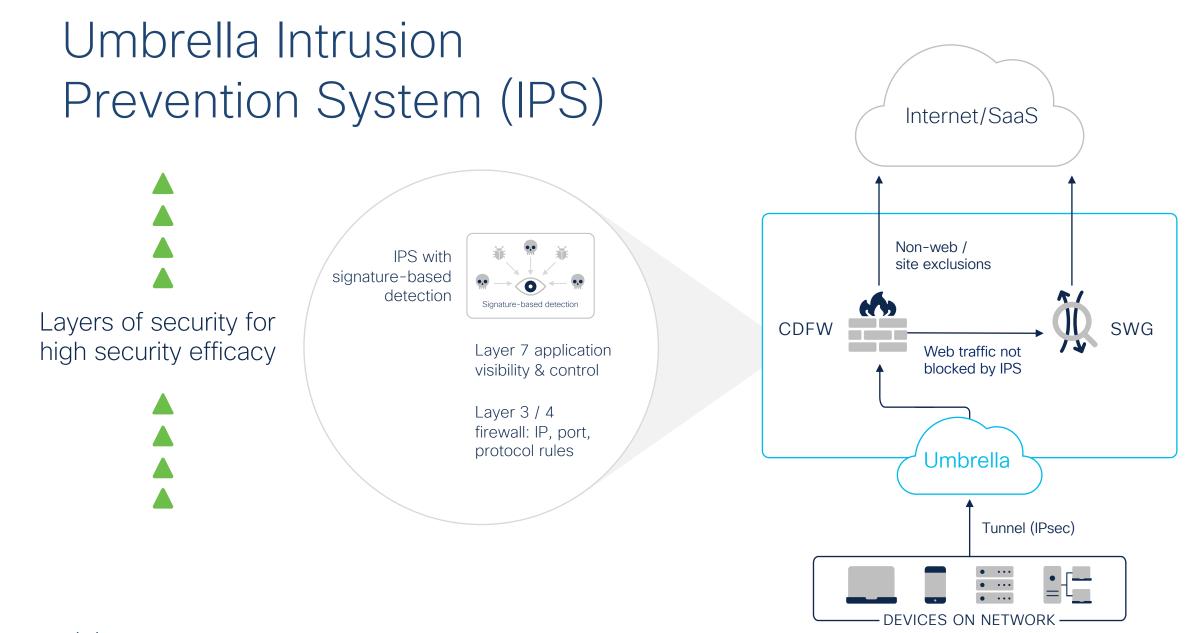
Umbrella Intrusion Prevention System (IPS)

Capabilities

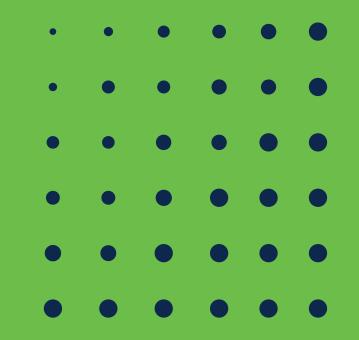
- Deepen Umbrella cloud firewall
 protection for client-driven traffic
- Use signature-based detection (Snort 3) to examine network traffic flows & prevent vulnerability exploits
- Add layer of detection/blocking for malware, botnets, phishing, and more
- Leverage Cisco Talos' 40K+ signatures (and growing) to detect and correlate threats in real-time

Results

- Simplify management via Umbrella's single, unified dashboard
- Remove capacity concerns of appliances by using scalable cloud compute resources
- ✓ Stop more threats with the industry's most effective threat intelligence
- Detect/block exploitations of vulnerabilities



CASB functionality



General CASB types (multimode)

Inline/proxy

- High impact deployment
- Agent or traffic redirection
- No API to app protecting
- Limited retrospective
- Real-time enforcement inline
- Limited east-west & cloud-to-cloud
- All application coverage



Out of band/API

- Low impact deployment
- Agentless no user experience impact
- Relies on API of cloud apps
- Retrospective
- Near real-time enforcement
- Universal coverage
- Sanctioned app coverage



CASB types continued

• • •

Inline/proxy

Umbrella

- App visibility & blocking
- Advanced app control
 - Block uploads (i.e. Dropbox/Box)
 - Block attachments (i.e. webmail)
- Tenant controls
- Inline DLP

Out of band/API

Umbrella

 Data-at-rest cloud malware detection

Cloudlock

- User behavior monitoring/alerts
- Cloud storage policy enforcement
- DLP quarantine and revocation actions (out of band)
- OAuth apps: visibility & control

App discovery and controls

Visibility into shadow IT and control of cloud apps

- Full list of cloud apps in use
- Reports by category and risk level
- Number of users and amount of incoming and outgoing traffic
- Blocking of high-risk categories or individual apps

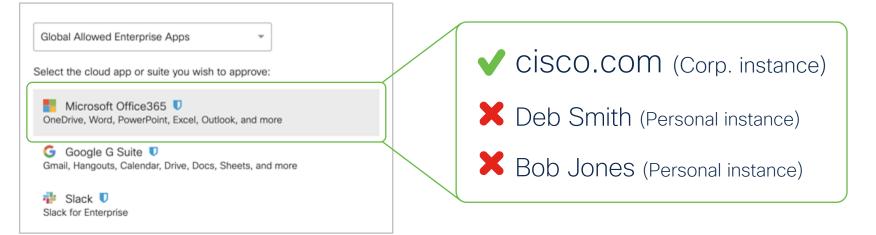
App Disco	very							
Aboard								
Search for App / Vendor 0, 0	mgory + Risk +	App Type + Litter	· Date ·					
Category: Games a Accounting a	Clear all filters							
O UNEVENED BITS	UNDER AUDIT (2)	NOT APPROVED (8)	APPROVED (1)					ALL APPS (M)
Unreviewed Apps (61 For Application		Vendor -		Weighted Risk +	Identities () -	DNS Requests -	Blocked -	Label 0
Accounting		ProxySile		Very High		323	97%	C Unreviewed Block Tris app 0
Accounting		OperVPN		Yery High	,	344	90%	C Unreviewed Block this app 0
H Averymizer		Hicle My Ass		140		361	995	C Unreviewed Disck this stop (0
According		Express/PN		Har	2	348	975	C Unreviewed Dirck this app 0
Tertilate Acception	1	Donhilata		Har .		238	995	C Unneversed
Acconymizer		NordVPN		140	3	323	995	C Unnexterned Block this app 0
X According		Anonymox		Hat		2	102%	C Unreviewed Block this app (0
Acception		SoftEther Project		Medium	1	4	1	O Unrealised Block this app 0
Carries Garres		Danis Games		Medure	*	355		Unreviewed
Inveltor		Turnettear		and the second s		316		() Unreviewed

Granular app controls

cisco App Discovery	Control Dropbox Select which settings should block or allow this application Application Settings (3 selected of 3 total)				
rch for App / Vendor Q Filter by Identity	Default Settings Applied in: Global Branch Policy, Security Only	Block	•		
	HR App Restrictive	Block			2
UNREVIEWED (3197) UNDER AUDIT (12		Block Uploads			E ALL APPS (3287)
II Apps (3,287 Found)	Global App Allow Applied in: Global Allow Policy	Allow Allow	Total Traffic 👻 Outb	ound Traffic 👻 Inbo	ound Traffic 👻 Label 🕄
Dropbox Cloud Storage	Label application as Not Approved T		- 51 MB total traffic + 4 MB + 48 MB	48 MB	4 MB Controls
Netflix FLIX Media	For more configuration options, go to Application Settings in the	policy section.	3 MB total traffic 88 KB 3 MB	3 MB	88 KB €dit app controls

Tenant controls

Select the instance(s) of Core SaaS applications that can be accessed by all users or by specific groups/individuals



Key Use Cases

Security

Ensure, sensitive data is created and stored in approved instances of cloud apps

Productivity

Only provide access to corporate instances of core SaaS apps

Inline DLP Cloud-native proxy DLP

Leverages SWG for connectivity, routing and SSL decryption

Robust DLP classification

- 80+ built-in data classifiers
- Custom keywords

Flexible DLP policy

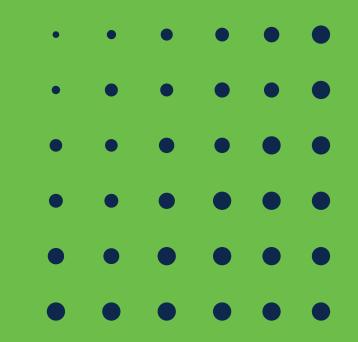
• Apply to specific identities and destinations with defined data classifications

Robust Reporting

 Includes identity, file name, destination, classification, pattern match, excerpt, triggered rule and more

cisco DLF	Data Classification	0					
e altalta	Polces / Management DLP Rules •						ъ
€	cisco DLP Report	iporis (
	887 Total						
	Detected ¥	identity.	Name	Destination	Classification		Action
	Aug 13, 2020 at 3:31 PM	A ProxyChain	Content	app-tester-workspace.slac	1 Match	Confidential Classification	Block
-	Aug 13, 2020 at 3:22 PM	A ProxyChain	Context	app-tester-workspace slac	1 Match	Confidential Classification	· Block
-	Aug 13, 2020 at 3:22 PM Aug 13, 2020 at 3:22 PM	A ProxyChain	Context	app-tester-workspace.slac	1 Match 1 Match	Confidential Classification	Block Block
-							
1	Aug 13, 2020 at 3.22 PM	A ProvyChain	Content	app-tester-workspace.slac	1 March	Confidential Glassification	Block
-	Aug 13, 2020 at 3.22 PM Aug 13, 2020 at 3.08 PM	A ProxyChain	Content Content	epp-tester-workspace.slac	1 March 1 Martch	Confidential Classification	Block

Security Efficacy



NEW AV-TEST security efficacy report!

Featuring Cisco Umbrella

Security efficacy is one of the top differentiators for Umbrella.

Umbrella is #1 in security efficacy- again!

- Focus of lab test: assessing each SWG vendor's ability to protect roaming and remote workers
- AV-TEST assessed both our SWG and DNS-layer protection security efficacy



Umbrella consistently performed better than the competition!

Get the report: <u>https://bit.ly/3jFNVwK</u>

Efficacy testing: SWG

- Data captured Sep-Oct 2020 by AV-TEST, using their samples (not Cisco's)
- Products configured to provide highest level of protection
- Umbrella SWG also with DNS security policy

Type of test	Umbrella	Zscaler	Palo Alto	Netskope	Akamai
Malicious PE files (Portable executables)	93.65	87.29	83.88	82.12	61.41
Malicious destinations	99.15	93.28	57.68	55.52	48.35
Phishing links	93.79	85.20	91.51	48.35	74.12
Total detection rate	96.39	89.67	73.15	61.90	58.43

% Detected (higher is better)

Better Together

Layer 7 firewall	
IDS/IPS	
Content filtering	
Malware protection	
Sandboxing	
AnyConnect remote VPN access	
Centralized enforcement, policy & reporting	
Site-to-site Auto VPN	
East-west security filtering	
URL filtering	
SSL decryption/inspection	
Data loss prevention (DLP)	
Remote Browser Isolation (RBI)	
Granular app control	
File type control	
Saas Tenant Restrictions	
CASB	

 ''l''''''
 Meraki

 ''l''''''
 Image: Cisco Umbrella





ella 🛛

Umbrella + Meraki

cisco Meraki 60

DEMO

Fragen?



Now it's time to play the game! Please use a real name as nickname. Win nice Prices!

Join at www.kahoot.it or with the Kahoot! app Game Pin: 554718



1st Price Cisco Headset HS730

3rd Price Coffee Cup 2nd Price Thermo Bottle

Cisco

OUTLOOK Upcoming Virtual Espresso

- Blog: <u>https://gblogs.cisco.com/ch-de/tag/virtual-espresso/</u>
- Topics:
 - 22. Dezember 2021: Cisco SD-Access Migrationsszenarien

Join the game at www.kahoot.it or with the Kahoot! app Game Pin: 554718

...so then - let the games begin...

Get ready to join

Game Pin: 554718



dankä villmal grazie mille merci beaucoup grazia fitg thank you

#