Networking Solutions

from Grandstream







Grandstream Networks has been Connecting the World since 2002.

Grandstream has been connecting the world since 2002 with unified communications and networking solutions that make communicating more impactful than ever before. Our award-winning solutions provide everything needed to build a seamless, easy-to-manage communication platform, offering a one-stop-shop for all networking, unified communications, collaboration and physical security solutions.



Table of **Contents**

1	Why Choose Networking Solutions from Grandstream? Market Leading Benefits of the GWN Series	04 05
2	Wi-Fi Access Points Wi-Fi 6 Access Points Wi-Fi 5 Access Points Comparison Chart - Wi-Fi 6 Comparison Chart - Wi-Fi 5	06 08 09 10 12
3	Network Switches GWN Series Network Switches	14 15
4	Routers GWN Series Wi-Fi Routers	16 17
5	Network Management Embedded Controller GWN. Cloud GWN Manager	18 19 20 21
6	Key Security Features	22
7	Wi-Fi Enabled Devices from Grandstream	24
8	Wi-Fi Hotel Deployment Scenario Aquarius Motor Inn Case Study	26 28
9	Wi-Fi Office Deployment Scenario Stonex India Case Study	31 33
10	Wi-Fi Large Event Deployment Scenario Electric Avenue Music Festival	35 37

Intro

Why You Should **Choose Grandsteam** for Your Networking Solutions Needs.



Grandstream's GWN series of networking solutions is designed to make networking easy without sacrificing power. We offer every access point and management platform you need to build a powerful Wi-Fi solution for any setting. Our APs offer industry-leading range, client support, security and roaming while providing indoor, outdoor and long-range options. For management, we offer free cloud and mobile app management with GWN.Cloud, on-premise software management with GWN Manager, and our APs include built-in Wi-Fi controller software as well. Our solutions can be paired with Grandstream routers and third party routers, making them ideal for and existing Wi-Fi deployments.



Market Leading Benefits of the GWN Series Wi-Fi Access **Points**

- » Wired and wireless Internet access can be managed from a single dashboard.
- The solution is scalable and can be tailored for small, medium, or large businesses with no extra fees involved.
- » All GWN access points have an embedded controller for easy set up management directly from the Web UI.
- » Manage and streamline mass GWN AP deployments in multiple locations through our cloud platform, GWN.Cloud, or through the on-premise software controller, GWN Manager.
- One GWN7000 router can support multiple networks, allowing for private and public networks to be managed from the same device
- » GWN devices work with 3rd party routers and access points.
- » A unique security certificate is built into every GWN series AP to encrypt that data and traffic going back and forth between the AP, the controller and the controller's web user interface.
- Random default password generated per AP to increase security protection.
- Anti-Hacking security, critical data and control lock down.
- GWN series now offers Wi-Fi 6, the latest and greatest standard for Wi-Fi technology



GRANDSTREAM IN THE WI-FI ALLIANCE

Wi-Fi Alliance® is the worldwide network of companies bringing you Wi-Fi®, one of the world's most valued communications technologies. Our vision is to connect everyone and everything, everywhere.

Wi-Fi Alliance drives global Wi-Fi adoption and evolution through thought leadership, spectrum advocacy, and industry-wide collaboration.



GWN Series Wi-Fi 6 Access Points



Enterprise Wave-2 Wi-Fi Access Point

- » 2.33Gbps wireless throughput and 2x Gigabit wireline ports
- » Dual-band 2x2:2 MIMO technology
- » Support for more than 200+ Wi-Fi client devices
- »Up to 175-meter coverage range



Enterprise Wave-2 Wi-Fi Access Point

- » 2.33Gbps wireless throughput and 2x Gigabit wireline ports
- » Dual-band 4x4:4 MIMO technology
- » Support for more than 200+ Wi-Fi client devices
- » Up to 175-meter coverage range



Outdoor Long-Range Wi-Fi 6 Access Point

- » 2.33Gbps wireless throughput and 2x Gigabit wireline ports
- » Dual-band 4x4:4 MIMO technology
- » Support for more than 200+ Wi-Fi client devices
- »Up to 175-meter coverage range



Outdoor Long-Range Wi-Fi 6 Access Point

- » 3.55Gbps aggregate wireless throughput, 2.5Gbps aggregate wired throughout
- » Dual-band 4x4:4 MU- MIMO with DL/UL OFDMA technology
- » Support 750+ concurrent Wi-Fi client devices
- »Up to 300-meter coverage range

GWN Series Wi-Fi 5 Access Points

Wi-Fi AP with Integrated Ethernet Switch



GWN7602

- »1.17Gbps aggregate wireless throughput, 1x Gigabit and 3x 100Mbit wireline speed
- »Dual-band 2x2:2 MIMO technology
- »Support for more than 250+ Wi-Fi client devices
- »Up to 100-meter coverage range



Enterprise 802.11ac Access Point

- »1.75Gbps wireless throughput and 2x Gigabit wireline ports
- »Dual-band 3x3:3 MIMO technology
- »Support for more than 250+ Wi-Fi client devices
- »Up to 175-meter coverage range



Indoor Wi-Fi Access Point

- »2.03 Gbps wireless throughput and 2 Gigabit wireline ports
- »5GHz 4×4:4 MU-MIMO, 2.4 GHz 2x2:2 MU-MIMO
- »Supports up to 200 concurrent Wi-Fi client devices



Enterprise Wave-2 Wi-Fi Access Point



- »2.33Gbps wireless throughput and 2x Gigabit wireline ports
- »Dual-band 4x4:4 MIMO technology
- »Support for more than 200+ Wi-Fi client devices
- »Up to 175-meter coverage range



High-Performance Outdoor Long-Range Wi-Fi Access Point

- »1.75Gbps wireless throughput and 2x Gigabit wireline ports
- »Dual-band 3x3:3 MIMO technology
- »Support for more than 250+ Wi-Fi client devices
- »Up to 175-meter coverage range



Outdoor Long-Range Access Point

- »1.17Gbps aggregate wireless throughput, 1x Gigabit and 3x 100Mbit wireline speed
- »Dual-band 2x2:2 MIMO technology
- »Support for more than 250+ Wi-Fi client devices
- »Up to 100-meter coverage range

GWN Series Wi-Fi 6 AP Comparison

	Indoor Access Points		
Model	GWN7660	GWN7664	
Client Devices	256+	512+	
Range	up to 175 Meters	up to 175 Meters	
Network Interfaces	2x autosensing 10/100/1000 Base-T Ethernet Ports	1x 1G Port and 1x 2.5G Po	
PoE/PoE+	Supports PoE 802.3af/ 802.3at; Max Consumption: 9W	Supports PoE 802.3af/ 802 Max Consumption: 17V	
2.4G Throughput	573.5Mbps (2x2:2 MIMO)	1147Mbps (4x4:4 MIMO)	
5G Throughput	1201Mbps (2x2:2 MU-MIMO)	2402Mbps (4x4:4 MU-MIMO)	
Wi-Fi Standards		IE	
SSIDs		32 SSIDs to	
Network Management			
Antennas	2 dual band internal antennas	8 individual internal antennas, 4	
Wi-Fi & System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise (TKIP/AES); WPA3, anti-h certificate and		
Dimensions	180.4x180.4x40.8mm	205.3mm(L) x 205.3mm(W) x 40	
Mounting	Indoor wall mount or ceiling mount, kits included	Indoor wall mount or ceiling kits included	

	Outdoor Access Points			
	GWN7660LR	GWN7664LR		
	256+	750+		
	up to 250 Meters	up to 300 Meters		
ort	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports		
.3at; /	Supports PoE 802.3af/ 802.3at; Max Consumption: 12.9W	Supports PoE 802.3af/ 802.3at; Maximum Power Consumption: 18W		
	573.5Mbps (2x2:2 MIMO)	1147Mbps (4x4:4 MIMO)		
	1201Mbps (2×2:2 MU-MIMO)	2402Mbps (4×4:4 MU-MIMO)		
EE 802.11 a/b/g/n/ac/ax				
al, 16 per	radio (2.4Ghz and 5Ghz)			
GWN.Cloud GWN Manager Embedded Controller				
per band	2 dual band external antennas	4 dual band external antennas		
acking secure boot and critical data/control lockdown via digital signatures, unique security random default password per device				
5.9mm(H	358.3mm(L) x 115mm(W) x 45.3mm(H)	562.3mmx140mmx44.9mm		
mount,	Outdoor wall or pole mount, kits included	Outdoor wall or pole mount, kits included		

GWN Series Wi-Fi 5 AP Comparison

Indoor Access Points				
Model	CWNIZGO2	CWN764F		
Client Devices	GWN7602 Up to 80	GWN7615 200+	GWN 20	
Range	100 Meters	175 Meters	N/	
Network Interfaces	1x 10/100/1000M uplink Ethernet port with PoE/PoE+, 2x 10/100M Ethernet port with PSE, 1x10/100M Ethernet port	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing Base-T Ethe	
PoE/PoE+	Supports 802.3 az; PoE 802.3af/ 802.3at PSE max output per port: 6W; Max Consumption: 20W	Supports PoE 802.3af/802.3at; Max consumption: 12.5W	Supports PoE 802.3a Maximum Cons	
2.4G Throughput	300Mbps (2x2:2 MIMO)	450Mbps (3x3:3 MIMO)	300N (2x2:2	
5G Throughput	867Mbps (2x2:2 MIMO)	1300Mbps (3x3:3 MU-MIMO)	1733I (4×4:4 M	
Wi-Fi Standards	IEEE 802.11a/b/g/n/ac (Wave-2)	IEEE 802.11a/b/g/n/ac (Wave-2)	IEEE 802.11 a/b/	
SSIDs	8 SSIDs total, 4 per radio	32 SSIDs total, 16 per radio	16 SSID 8 per	
Network Management	GWN.Cloud GWN Manager	GWN.Cloud GWN Manager Embedded Controller	GWN. GWN M Embedded	
Antennas	2 dual band internal antennas	2 dual band internal antennas	6 dual bar ante	
Wi-Fi & System Security	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enteprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2 Enterprise, anti- boot and critica lockdown via di	
Dimensions	135x115x30mm	205.4x205.4x45.9mm	205.3mmx205.	
Mounting	Wall Mountable	Indoor wall mount or ceiling mount	Indoor wal ceiling	
Weatherproof Capabilities	N/A	N/A	N	

		Outdoor Access Points	
7625	GWN7630	GWN7605LR	GWN7630LR
)+	200+	100+	200+
A	175 Meters	250 Meters	300 Meters
g 10/100/1000 ernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports	2x autosensing 10/100/1000 Base-T Ethernet Ports
802.3az f/ 802.3at; umption: <13W	Supports PoE 802.3af/ 802.3at; Max Consumption: 16.5W	Supports PoE 802.3af/802.3at; Max Consumption: 10.16W	Supports PoE 802.3af/802.3at; Max Consumption: 16.5W
lbps MIMO)	600Mbps (4x4:4 MIMO)	300Mbps (2x2:2 MIMO)	600Mbps (4×4:4 MIMO)
Иbps J-MIMO)	1733Mbps (4×4:4 MU-MIMO)	867Mbps (2x2:2 MU-MIMO)	1733Mbps (4×4:4 MU-MIMO)
g/n/ac (Wave-2)	IEEE 802.11 a/b/g/n/ac (Wave-2)	IEEE 802.11 a/b/g/n/ac (Wave-2)	IEEE 802.11a/b/g/n/ac (Wave-2)
s total, radio	32 SSIDs total, 16 per radio	16 SSIDs total, 8 per radio	32 SSIDs total, 16 per radio
Cloud anager Controller	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller	GWN.Cloud GWN Manager Embedded Controller
d internal nnas	4 dual band internal antennas	2 dual band antennas	4 detachable/changeable dual- band omnidirectional antennas
PSK, WPA/WPA2 hacking secure al data/control gital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/ WPA2 Enterprise (TKIP/AES), anti- hacking secure boot and critical data/control lockdown via digital signatures	WEP, WPA/WPA2-PSK, WPA/WPA2 Enterprise, anti-hacking secure boot and critical data/control lockdown via digital signatures
3mmx45.9mm	205.3x205.3x45.9mm	358.3x115x45.3mm	533.1x115x40mm
mount or mount	Indoor wall mount or ceiling mount	Outdoor metal bar mount or wall mount, kits included	Wall mount or pole mount
A	N/A	IP66-level	IP66-level



GWN Series Network Switches

Enterprise Layer 2+ Managed Network Switch



- »8/16/24 Gigabit Ethernet ports and 2/4 Gigabit SFP ports
- »Smart power control to support dynamic PoE/PoE+ power allocation per port for the PoE models
- »Supports deployment in IPv6 and IPv4 networks
- **GWN7800** Series
- »Provides quaternary binding of IP, MAC, VLAN & port; ARP Inspection, IP Source Guard, DoS protection, port security & DHCP snooping
- »Local Web UI to manage switch; GWN.Cloud and GWN Manager, Grandstream's cloud and on-premise Wi-Fi management platform
- »Built-in QoS allows for prioritization of network traffic

Unmanaged Network Switches



»5 and 8 Gigabit RI45 ports, 4 port PoE+ output (GWN7700P & GWN7701P), 8 port PoE+ output (GWN7701PA)



»Green technology reduces power consumption »LED Indicators; Per port: Link/Activity/Speed Per device: Power

GWN7700

»Auto MDI/MDIX crossover for all ports

Series (Coming Soon)

- »802.3 af/at compliant and up to 30W on each port (GWN7700P/ GWN7701P/GWN7701PA only)
- »Broadcast/Multicast/Unicast Storm Control (fixed to 100Mbps) to monitor traffic levels
- »Unlink clear FDB Feature (GWN7701/GWN7701P/GWN7701PA only)
- »QoS Supports Default Strict Priority when present



GWN Series Routers

Dual-Band Wi-Fi Router



- »1.27Gbps aggregate wireless throughput with 5x auto-sensing Gigabit
- »Dual-band 2x2:2 MU-MIMO
- »Built-in VPN support allows easy access to corporate networks for remote employees
- »Supports 100 concurrent Wi-Fi client devices
- »Supports Mesh networking with Grandstream access points to provide easy network expansion
- »Powerful security features include guest network, network blacklist, Antihacking secure boot & critical data/control lockdown via digital signatures, and more
- »Rich firewall features including Anti-DoS, traffic rules, NAT and ALG
- »Secure cloud provisioning through GWN.Cloud



Wi-Fi 6 Dual-Band Router

- »Powered by Wi-Fi 6 (802.11ax) standard with up to 1.77Gbps wireless throughput
- »Dual-band 2x2:2 MU-MIMO with DL/UL OFDMA technology
- »Built-in VPN support allows easy access to corporate networks for remote
- »Supports 256 concurrent Wi-Fi client devices
- »Supports Mesh networking with Grandstream access points to provide easy network expansion
- »Powerful security features include guest network, network blacklist, Antihacking secure boot & critical data/control lockdown via digital signatures, and more
- »Rich firewall features including Anti-DoS, traffic rules, NAT and ALG
- »Secure cloud provisioning through GWN.Cloud



Multi-WAN Gigabit VPN Routers







- »1x GbE RJ45 port with IEEE 802.3af/at PoE Input and 2x GbE RJ45 ports with 48V Passive PoE output or IEEE802.3af (GWN7002/GWN7003)
- »Supports multiple Gigabit RJ45 ports and Gigabit SFP ports
- »Built-in VPN support allows easy access to corporate networks for remote employees
- »Multiple WAN ports with load balancing and failover to maximize connection reliability



- »Supports application/protocol monitoring and traffic statistics with Deep Packet Inspection (DPI)
- »Advanced QoS to ensure real-time performance of low-latency applications
- »Supports application, URL, DNS, and web content filtering to block access from unsecure contents
- »Embedded controller can manage itself and up to 150 GWN APs; GWN. Cloud offers a free cloud management platform for unlimited routers and **GWN APs**



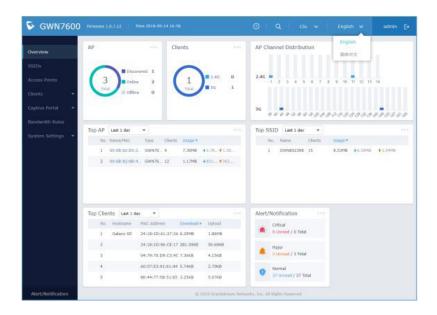
(Coming Soon)

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Network Management Options

Grandstream offers three FREE network management options to provide flexibility and customizability for your GWN series Wi-Fi Access Point deployments.

- 1 Embedded Controller
- **2** GWN.Cloud
- 3 GWN Manager



Embedded Controller

On-Premise Software Controller for Grandstream's GWN series

Our GWN series of Routers and APs includes controller software at no extra cost and it is simply built-in to the product's web user interface. Our embedded controllers can autodiscover and autoprovision any in-network GWN series AP from the designated Provisioning Master, which also offers a centralized provisioning and management interface. All GWN series APs, except the GWN7602, include a build-in controller that can support 30 or 50 other GWN series APs, depending on the model.

Here is a quick look at the easy 4 step process of setting up Wi-Fi networks with our built-in controllers:

- 1. Log in to the GWN router or APs web user interface.
- 2. The Setup Wizard will set up the device as the master and setup initial network settings
- 3. From the master's web UI, go to the "Access Points" screen, to see all innetwork GWN APs
- 4. Select the GWN APs you want to add to the network for automatic provisioning



GWN.Cloud

Cloud Controller for Grandstream's GWN series

GWN.Cloud is a free enterprise-grade, management platform for Grandstream GWN series devices. Thanks to streamlined monitoring and maintenance, managing your network across multiple locations has never been easier. Secure networks can be deployed in seconds, then later managed from the same interface. Keep an eye on the network's performance with real-time monitoring, alerts, statistics and reports that can be viewed using a web browser or the mobile application.

Specifications

Centralized Management

- · Local data forwarding, no user traffic sent to the controller
- Bank-grade TLS encryption from end-to-end with X.509 certificate based authentication
- User and privilege management, support multi-factor safety authentication
- Mobile app for iOS and Android
- Network-based management and unified device configuration
- Network/device/client/guest monitoring
- Network topology to display the visual information of device and

Access Security and Control

- Supports access policy configuration (blacklist, whitelist, time policy schedule)
- Multiple WLAN security type including open, personal, enterprise, ppsk, etc.
- Bandwidth rules for client access
- Supports firewall to control both wired and wireless client
- · Rogue AP detection and alert

Reporting and Monitoring

- Real-time devices and client monitoring
- Detailed reports by network, device, client, etc
- Retrieval of historical data for statistical observations
- Customize monitoring pannel (add and remove chart, adjust the display order)

Supported Devices

- GWN Series Access Points: GWN7610, GWN7600(LR), GWN7630(LR), GWN7602, GWN7605(LR), GWN7615, GWN7660(LR), GWN7664(LR), GWN7624, GWN7625
- GWN Network Switches: GWN7801(P), GWN7802(P), GWN7803(P)
- GWN Routers: GWN7052, GWN7062

Enterprise Features

- Internet/LAN/Wi-Fi management
- Supports Wi-Fi Alliance Voice-Enterprise
- Support Mesh to extend wireless network
- Real-time Wi-Fi Scan for deployment
- URL access log collection
- · Multiple Wi-Fi performance optimization methods including band- steering, Minimum RSSI, ARP Proxy, IP multicast to unicast, etc
- · Multiple API for third-party application developing
- Presence API for pedestrian flow monitoring
- Supports Inventory to manage the unused device.
- · Supports device, client and inventory export

Captive Portals

- Splash page with built-in WYSIWYG editor
- · Facebook, Twitter, Google integration
- Multiple captive portal authentications including simple password, radius, custom field, email, sms etc.
- Voucher management, supports voucher download and print, support customize voucher logo and slogan
- External captive portal integration
- Real-time guest statistics and monitoring
- Advertisement integration with flexible strategies
- · Export guest info into file and automatically send to email

Maintenance

- · Real-time alerts with customize setting and notification
- Ping/traceroute/capture/ssh remote access
- Scheduled device firmware update and LED control
- Change log for audit trail
- · Remote access to device Web depend on secure tunnel

Languages

· English, Chinese, French, German, Portuguese, Spanish, Vietnamese, Arabic, Dansk, Suomi, Greek, Hebrew, Italian, Russian, Serbian



GWN Manager

On-Premise Software Controller for Grandstream's GWN series

GWN Manager is a free on-premise enterprise-grade, management platform for Grandstream GWN series devices. Typically deployed on a customer's private network, this flexible, scalable solution offers simplified configuration and management. Thanks to streamlined monitoring and maintenance, managing your network has never been easier. Keep an eye on the network's performance with real-time monitoring, alerts, statistics and reports that can be viewed using a web browser or the mobile application.

Specifications

Hardware requirements

For up to 200 Devices and 2000 Clients:

- CPU: Intel® Core™ i3-3240 or above
- · RAM: 4GB or above
- Storage: 250GB (SSD preferred, depend on retained data size)

For up to 3000 Devices and 30000 Clients:

- CPU: Intel® Xeon® Silver 4210
- · RAM: 16GB or above
- · Storage: 250GB (SSD preferred, depend on retained data size)

Deployment types

- Install rpm software package on CentOS
- · Run OVA format file by virtual software or system

Centralized Management

- Local data forwarding, no user traffic sent to the controller
- · Bank-grade TLS encryption from end-to-end with X.509 certificate based authentication
- User and privilege management, support multi-factor safety authentication
- Mobile app for iOS and Android
- Network-based management and unified device configuration
- · Network/device/client/guest monitoring
- Network topology to display the visual information of device and
- Layer2 and Layer3 based AP discovery

Access Security and Control

- · Supports access policy configuration (blacklist, whitelist, time policy schedule)
- Multiple WLAN security type including open, personal, enterprise, ppsk, etc
- Bandwidth rules for client access
- Supports firewall to control both wired and wireless client
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- Splash page with built-in WYSIWYG editor
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- · Voucher management, supports voucher download and print, support customize voucher logo and slogan
- External captive portal integration
- Real-time guest statistics and monitoring
- · Advertisement integration with flexible strategies
- · Export guest info into file and automatically send to email

Maintenance

- Real-time alerts with customize setting and notification
- Ping/traceroute/capture/ssh remote access
- Both configuration and data backup
- · Scheduled device firmware update and LED control
- · Change log for audit trail

Languages

· English, Chinese, French, German, Portuguese, Spanish, Vietnamese, Arabic, Dansk, Suomi, Greek, Hebrew, Italian, Russian, Serbian





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Wi-Fi Enabled Endpoints

Grandstream is one of the only companies in the world that offers everything you need to build powerful Wi-Fi voice and video networks. See our Wi-Fi integrated endpoints listed below.

IP Voice and Video Phiones



GXV3380

High-End Smart Video Phone for Android™

- Runs Android 7x
- Supports 16 lines and 16 SIP accounts
- 7-way HD audio conferencing & 3-way 1080p 30fps HD video capability
- 8" touch screen



GXV3370

IP Video Phone for Android™

- Runs Android 7x
- Supports 16 lines and 16 SIP accounts
- 7-way HD audio conferencing & 3-way 720p 30fps HD video capability
- 7" touch screen



GXV3350

High-End Smart Video Phone for Android™

- Runs Android 7x
- Supports 16 lines and 16 SIP accounts
- 6-way HD audio conferencing & 3-way 720p 30fps HD video capability
- 5" touch screen



GXV3240

IP Video Phone for Android™

- Runs Android 4.2
- Supports 6 lines and 6 SIP accounts
- 6-way HD audio conferencing & 3-way video capability
- 4.3" touch screen



GRP2600 Series

The GRP series features both essential and professional carriergrade IP phones.
Designed for mass deployment. This series IP phones features unified firmware and powerful features including Wi-Fi support.



WP Series

Cordless Wi-Fi Phone

- 7.5 hour talk time,
 150-hour standby
- Supports 2 lines and 2 SIP accounts
- Configurable pushto-talk



GHP Series

The GHP Series of hotel phones feature IP phones that can be customized based on the needs of any hotel. This series contain Wi-Fi adjacent models equipped with integrated dualband Wi-Fi to support wireless deployments.

Video Conferencing & Facility Management



GAC2500

Android™ Enterprise Conference Phone

- Runs Android 4.4
- Supports 6 SIP accounts and 7-way voice conferencing
- 4.3 inch capacitative touch screen



GAC2570

Android™ Enterprise Conference Phone

- Integrated Wi-Fi 6, Dual-band 2.4 & 5GHz with 802.11 a/b/g/n/ac/ax
- 12 omnidirectional microphones with **MMAD**



GVC3210

Video Conferencing **Endpoint**

- Runs Android 6x
- Support for Miracast wireless content sharing
- Video quality up to 4k resolution



GVC3212

Ultra HD Multimedia Conferencing System

- Runs Android 9.0
- 5-way 1080P or 9-way 720P
- Video quality up to 4k resolution
- GMD1208 desktop wireless microphone



GVC3220

IPVideoTalk HD Conferencing Device

- Runs Android 9.0
- 5-way 1080P or 9-way 720P
- · Video quality up to 4k resolution
- GMD1208 desktop wireless microphone



GSC3510

SIP Intercom Speaker and Microphone

- Full-duplex speakerphone with HD acoustic chamber, echo cancellation
- 3 directional mics with MMAD & beamforming-array



GSC3505

1-way Public Address SIP Speaker

- Speaker with HD acoustic chamber
- Features SIP paging, multicast paging, call waiting with priority override

Hotel Deployment Scenario

THE PROBLEM

With the advantages such as high-bandwidth, low-cost, and roaming benefits, a local wireless network can effectively offload a cellular network in high-user density areas to create a better user experience. However, many current hotel WLAN deployments cannot provide coverage with a clear signal and reliable speed to guest rooms due to a lack of appropriate planning. Many hotels still use access point APs in the 2.4G band, and the 2.4GHz band is an open band meaning that there are many other types of devices working in this band, such as: microwave ovens, Bluetooth, wireless phones, external APs, surveillance cameras, etc., It can disrupt interference to Wi-Fi devices and with only 3 channels (Chanel 1 / 6/11) in 2.4GHz, which makes channel reuse difficult.

THE SOLUTION

Grandstream's hotel room wireless coverage solution includes two different role types of GWN series access points APs.

Central AP (CAP)

The CAP requires access the wired network and connects wirelessly with the RE andis responsible for data transmission. All GWN76XX (except GWN7602) access point APs can act as a CAP. The GWN7630 is suitable for high-density indoor scenarios such as hallways, reception desk areas, large conference halls, or used to create a MESH network. Long-Range APs such as the GWN7660LR can be used the central access point CAP for hotel outdoor amenity spaces to provide high-performance and stable network access services.

Range Extender (RE)

The RE only connects to the CAP wirelessly, and can be used quickly after power-on, thus effectively extending the wireless network coverage of CAP. By utilizing the GWN7602 as an RE, it can not only provide the wireless coverage function of ordinary access points, but GWN7602 itself also contains a PSE Port, a Gigabit POE/POE+ Port, and two Ethernet Ports. After the RE wireless is successfully connected to a CAP, the wired port can provide network service to different types of end devices, such as Grandstream IP phones, surveillance equipment and PCs. Therefore, GWN7602 can be specifically used for wireless access in hotel and individual wireless coverage in room.

Key GWN Series Features for a Hotel Deployment

Time Policy

The timed client disconnect feature allows the system administrator to set a fixed time for which clients should be allowed to connect to the access point, after which the client will no longer be allowed to connect for a user configurable cooldown period. This enables the hotel to be able to give guests access to the Wi-Fi during the days of the their stay.

LED Scheduling

The LED schedule feature is used to set the timing when the LEDs are ON and when they will go OFF at customer's convenience. This can be useful for when the LEDs become disturbing during some periods of the day, such as hotel rooms where the LED lights can be annoying to clients trying to sleep at night

Captive Portal

Captive Portal feature on GWN series helps to define a Landing Page that will be displayed on Wi-Fi clients' browsers when attempting to access Internet. Once connected to a GWN AP, Wi-Fi clients will be forced to view and interact with that landing page before Internet access is granted. This is a great Marketing tool for hotels.

MESH Network

With MESH networks. wireless connection is established between multiple APs, which is used to pass-through data traffic rather than client association. Each AP will evaluate the wireless channels available and route the connection through the fastest available channel. A hotel will likely deploy many APs and setting up a MESH network can help to keep the system organized.

GWN.Cloud

GWN.Cloud is an enterprise grade, management platform for Grandstream access points. A hotel may not always have an IT person on-site. The cloud platform allows for a user to access the network from the cloud platform. In case of emergencies the IT person could still login to the system to resolve any issues.

CASE STUDY

Aquarius Motor Inn

About the Motor Inn

Aguarius Motor Inn has excellent service and facilities including a swimming pool, private spa pool, SKY Guest Select (50+ SKY channels), and free, unlimited, wireless internet.

Aguarius Motor Inn is in a quieter part of the Mount and is the ideal 'base' to explore the area. Whether it's the glorious stretch of white sandy beaches, the bustling harbor with its many visiting cruise liners, the fantastic hot saltwater pools, or the Mount itself, they are within close proximity of all the major attractions.



THE PROBLEM

Aguarius Motor Inn is located in Mount Maunganui, Tauranga New Zealand. It is a sizeable multi-story motel with an emergency New Zealand housing facility operated by the New Zealand government. The Aquarius Motor Inn needed a new and affordable Wi-Fi access point solution to provide a stable Wi-Fi connection throughout the grounds. Their installer, Networxit NZ, worked with Go Wireless NZ to provide a quality solution to deliver full Wi-Fi coverage without excessive cabling and financial outlay. The solution the inn was looking for had to be both mesh-capable and low-budget. Aquarius Motor Inn was previously using Ubiquiti access points that were failing their network requirements due to the 2.4G network not fitting their capacity.



Provided By Networxit New Zealand

PRODUCTS DEPLOYED



GWN7630 Wi-Fi 6 Indoor **Access Point** Indoor public spaces



GWN7605 Wi-Fi AP Indoor **Access Point** Retail locations



GWN7630LR **Outdoor Long Range Access Point**

Outdoor areas



GWN.Cloud Cloud Management Platform

Access Point Management

THE SOLUTION

Grandstream's GWN Wi-Fi Access Points were chosen due to their ability to provide excellent meshing functionality that aligned with Aquarius Motor Inn's goals and price range. To test the solution, Networxit chose the GWN7625 (ac wave 2 4x4:2 antenna gains 2.4Ghz 3.5dBi/ 4.5Ghz 5dBi) and a smaller GWN7602. The increase in gain as opposed to a typical 3dBi integrated antenna for a 2x2 802.11ac small/ medium enterprise-grade access point provided better connectivity and meshing capabilities than the currently deployed Ubiquiti device.

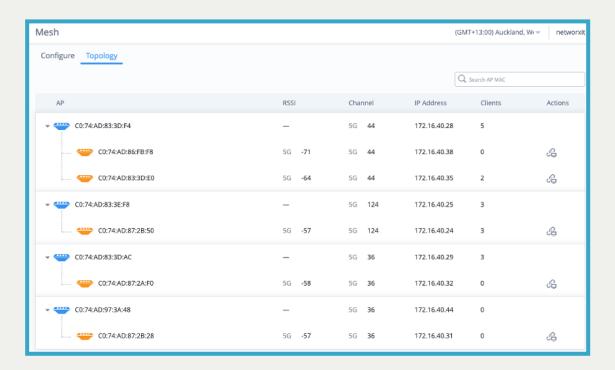
The GWN7602 was housed in the installer's steel garage with a 2-meter air gap to the house and 3 walls to the office with the master GWN7625. The signal had to penetrate the house and garage and provide a healthy mesh connection. To the installer's surprise, they were getting greater than > 15Mbps throughput over the mesh connection.

Networxit NZ tested the devices in a different client site where floors and walls were constructed with concrete, which caused signal penetration issues. A GWN7630 was deployed as a master device and cabled this using VDSL extenders to the core LAN, with a GWN7625 as the slave device. The testing resulted in complete room coverage and provide no less than 20Mbps across the coverage area. With testing complete, this model of a meshing solution was then used at the Aquarius Motor Inn motel as a proven way to overcome cabling and building material constraints.

Fourteen Wi-Fi Access Points, nine GWN7630s, four GWN7605s, and a single GWN7630LR were deployed. The GWN7630LR was deployed outside as a backup device if meshing is interrupted or delayed. The GWN7630s and GWN7605s were installed downstairs in the roof and downstairs in the building apartments. The upstairs apartment roofs house the cabled master access points and downstairs access points operate over a mesh connection to the master devices.

THE RESULT

The GWN Wi-Fi access points created a solution that provides all the rooms within the Aquarius Motor Inn motel with a stable and completely covered Wi-Fi environment. The 40-50 users who regularly rely on the network for email and internet access now have consistent Wi-Fi access throughout all the rooms. Throughout the mesh deployment, Wi-Fi speeds never drop under 20 Mbps, even in rooms that have severe construction interference. Due to choosing Grandstream, the Aquarius Motor Inn was able to create a cost-effective Wi-Fi solution for their business and customers.









9

Office Deployment Scenario

THE PROBLEM

With the tremendous growth of Wi-Fi clients and mobile Internet applications, wireless LANs have evolved from the pursuit of connectivity and coverage to the goal of high-capacity access. Offices with multiple floors or buildings require a high capacity coverage to support as many wireless clients as possible. In this scenario, a company requires a wireless deployment for all office phone and laptops, and requires seamless roaming. Before a new network deployment is delivered, the IT team should run a few tests; in this case a test is run at night time after work, in which the current network speed always reaches the full speed of their ISP bandwidth. However, after the wireless network is put into use at daytime, the user experience is unexpectedly terrible, and employees continuously complain the slow network. However, the measured export bandwidth utilization on the ISP router is low. So, how do they solve the problem?

THE SOLUTION

In order to achieve the strongest signal coverage, the administrator deployed access points with full coverage to all workstations, and floors and added access point installation for outdoor terraces, hallways and other common areas. Additionally, the company IT team needed an easy-to-use on-premise management system as required by the company's privacy policy.

- GWN Manager- The GWN Manager provides an easy and intuitive Web UI to manage and monitor GWN76xx Access Points, it provides users access to all GWN Access Points settings, without any additional on-premise infrastructure.
- GWN7630- Used in the Front Desk/Reception area that supports 200+ clients and has a 175-meter coverage range.
- GWN7630LR acts as a Master for a mesh system with GWN7605's placed on each office floor to provide network coverage to all employee's no matter where they are.
- GWN7605 Provides coverage for conference rooms which typically contain many devices in a small space, with additional Wi-Fi dependent devices such as video conferencing equipment that rely stable wi-fi network coverage.
- GWN7660LR Wi-Fi 6 long-range access point with weatherproof casing to provide a network connection for outdoor work spaces.

Key GWN Series Features for an Office Deployment

QoS for Voice & Video

GWN series APs include built-in QoS, which makes them ideal for extending VoIP connections through Wi-Fi. With QoS, businesses can prioritize voice and video traffic over their Wi-Fi network, making sure that critical communications are not impacted by general network usage.

Guest Access

Offices with visitors and/or clients can provide guests access to the Wi-Fi network using the Captive portal. A landing page can be set up and provide guests a password that they can use to login ensuring security for the whole office's network.

Scalibility

The scalability of the GWN series allows any sized business to grow their network with their business growth. An office network needs to have the ability to start small, but expand in their coverage and capacity as needed without having to overhaul or build an entirely new network. A scalable solution can set up any business for success.

MESH Networks

With MESH networks, wireless connection is established between multiple APs, which is used to pass-through data traffic rather than client association. Each AP will evaluate the wireless channels available and route the connection through the fastest available channel. In an office setting, creating a MESH network will allow for organization.

GWN Manager

Some companies don't allow Cloud management platforms due to privacy policies. The GWN Manager is the on-premise version of the GWN.Cloud, allowing for easy management of the access points from Grandstream.

CASE STUDY

Stonex India

About Stonex

Stonex India is one of the largest providers of natural stone in Asia. They procure, process and sell over 500 varieties of stone curated from all over the world, highlighted by a luxury collection of white marble, granite, travertine, onyx, limestone, and semiprecious stones. In 2020, Stonex India sold over 8 million square feet of stone.

They have more than 450 employees spread throughout their headquarters in New Delhi, a showroom in Delhi, and one of Asia's finest manufacturing facilities in Kishangarh.



THE PROBLEM

As Stonex India grew, their facilities grew too. They needed to ensure that staff and guests had Wi-Fi access throughout their showroom and their state-of-the-art manufacturing facility. They were in search of a powerful, modern solution that could handle hundreds of devices and provide strong security protection right out-of-the-box. Showroom staff required a strong Wi-Fi signal to provide top-notch customer service while being able to communicate with other staff, while factory employees needed a reliable Wi-Fi connection to ensure access to critical manufacturing plans. Most importantly, Stonex India wanted a Wi-Fi solution that could be easily installed while being easy-to-manage from one centralized interface.



Provided By TNS Networking

TNS is your trusted Solution provider with over 1 million Man-hours of Domain Expertise in Network Integration, Servers, Storage and Virtualization, AV Integration, Physical and Information Security, Building Management Systems etc.

PRODUCTS DEPLOYED



GWN7630 Wi-Fi Indoor Access Point Indoor spaces



GWN7630LR
Outdoor Long-Range
Wi-Fi Access Point
Outdoor areas



GWN.Cloud
Cloud Management
Platform
Access Point Management

WHY GRANDSTREAM?

Grandstream was chosen to build a powerful, modern Wi-Fi network that can provide a strong and reliable connection for hundreds of devices along with strong security protection. The QoS feature on GWN series devices ensured a strong staff network bandwidth while blocking website cookies on guest networks. Captive portals were created and used in the deployment to offer secure Wi-Fi access to guests.

GWN7630

The GWN7630 is a high-performance 802.11ac Wave-2 Wi-Fi access point and offers dual-band 4×4:4 MU-MIMO technology and a sophisticated antenna design for maximum network throughput and expanded Wi-Fi coverage range.

GWN7630LR

Long-range APs were chosen to provide extended coverage range both indoors and outdoors. The GWN7630LR is an outdoor long-range 802.11 ac Wave-2 Wi-Fi access point, offers weatherproof casing and heat resistant technology, dual-band 4×4:4 MU-MIMO technology, and a sophisticated antenna design for maximum network throughput that supports 200+ clients and an expanded 300-meter coverage range.

GWN.Cloud

Both sites were integrated on one centralized cloud management platform, GWN.Cloud. GWN.Cloud is a free enterprise-grade, management platform for Grandstream GWN series devices. Thanks to streamlined monitoring and maintenance, managing your network across multiple locations has never been easier.

THE SOLUTION

Stonex India hired TNS Networking Solutions Pvt Ltd to create and install their new networkingsolution. TNS Networking Solutions introduced Stonex to Grandstream's GWN Series of networking solutions, which they adopted throughout their showroom and factory. The solution featured 80 of Grandstream's GWN7630LR Long-Range Wi-Fi Access Points and utilized GWN.Cloud, Grandstream's free enterprise-grade management platform, to centrally manage the entire solution. This cloud management platform allowed Stonex India to manage all 80 access points in one account that can be accessed from anywhere via the web and a mobile app. GWN.Cloud also made it easy for them to monitor and check performance and adjust network settings remotely.

TNS Networking Solutions installed 60 GWN7630LR's indoors and outdoors at Stonex's factory and 20 GWN7630LR's indoors at their showroom. TNS Networking Solutions deployed captive portals across all APs to offer secure and trackable Wi-Fi access for Stonex India's guests. They utilized QoS to ensure that network access for Stonex's staff is never impacted-by and is prioritized-over guest traffic. QoS settings along with URL filtering were also used to limit guest network bandwidth while blocking website cookies.

10 Large Event Deployment Scenario

THE PROBLEM

For large event spaces such as concerts, festivals, sporting events and more, a facility often requires a powerful and stable Wi-Fi environment that needs to support the mobility needs of a dense group of people whether its spectators, event staff, or management and needs to cover a vast amount of indoor and/or outdoor space. The GWN series possesses several important features that are crucial this type of environment to ensure the safety and well-being of all parties involved to create a successful event. Due to limitations on outdated Wi-Fi technology, event spaces need to be able to support the amount of devices being used on a network as well as ensuring adequate coverage range and ease of management to ensure a smooth and stable event.

THE SOLUTION

Event facilities are responsible for a multitude of people condensed into a space and in order keep full control of a Wi-Fi network, event staff need to be able to create a safe environment in case of any emergencies and to ensure that the event operates in a smooth manner. Grandstream's GWN series Wi-Fi 6 access points supports the most advanced Wi-Fi standard, allowing it to be ideal for high density Wi-Fi networks that require maximum speeds and client support and long-range models come equipped with IP66 weatherproof casing. GWN series APs can also be configured to create a mesh network in order to provide better coverage in hard to cover areas and create back-up in case an AP goes down allowing any event space to maintain a stable Wi-Fi network.

- Large Coverage Range: Aarge coverage range ensures that Wi-Fi is available for artists, management, and spectators to use across the venue. GWN series longrange access points can cover up to 750+ meters.
- Strong Wi-Fi Signal and Network Speeds: Ensuring that fast Wi-Fi connection is available in all outdoor areas, a Wi-Fi speed of 2.03Gbps ensures that a reliable network is provided to the indoor space for key management personnel.
- Cloud Management: Cloud configuration and management of Grandstream's Wi-Fi access points throughout any venue using Grandstream's free GWN.Cloud, a cloud-based management and configuration tool for all access points allows for an easy of deployment, and a cost-free management option.

Key GWN Series Features for an Event Deployment

Wi-Fi 6

Grandstream's GWN series Wi-Fi 6 access points supports the most advanced Wi-Fi standard, allowing it to be ideal for high density Wi-Fi networks that require maximum speeds and client support This is highly important for any event space where a high number of devices are condensed into one area. This allows for all spectators, management, artists, and more to access the network without interruption.

Wi-Fi Signals & Speed

GWN series access points provides Wi-Fi speeds of up to 2.03Gbps ensuring that fast Wi-Fi connection is available in all outdoor areas and ensures that a reliable network is provided to the indoor space for key management personnel. In addition to this, the 2x2:2 MU-MIMO and 4x4:4 MU-MIMO on the APs helps users to stay connected and receive a stable connection across the venue while prioritizing specified devices.

MESH Network

With MESH networks. wireless connection is established between multiple APs, which is used to pass-through data traffic rather than client association. This allows for better coverage in hard to cover areas within an event space and creates back-up in case an AP goes down allowing any event space to maintain a stable Wi-Fi network.

Omni-Directional

In an open, outdoor space, such as a sports field, stadium, or concert venue, a long-range GWN series AP will come equipped with omni-directional antennas.

The omni-directional antennas can be deployed to radiate coverage evenly among 360 degrees in the horizontal direction or directed to specific angles.

GWN.Cloud

GWN.Cloud is an enterprisegrade, management platform for Grandstream access points. The cloud platform allows for a user to access the network from the cloud platform remotely from any device. **GWN.Cloud** makes deployment and management of the **Grandstream Access Points** easy which is vital to ensure that Wi-Fi coverage is there throughout the duration of the event.

CASE STUDY

Electric Avenue Music Festival

About Electric Avenue Music **Festival**

Electric Avenue Music Festival is regarded as New Zealand's biggest and boldest music festival featuring 50 artists, 5 stages, and 12 hours of music and art performances. This festival happens in one of New Zealand's biggest cities Christchurch at the iconic Hagley Park which is situated in the heart of the city. The festival took place on Feb 25th, 2023, with over 30,000 people in attendance to witness this spectacle of music and arts.



THE NEED

The music festival is spread out over a massive area of 800m x 200m which is comprised of numerous vendor stalls and five performance stages. Considering the large area to be covered and the magnitude of the event in the city there was a requirement to have reliable Wi-Fi that was simple to deploy. The music festival had used Unifi's Access Points for the previous 8 years, however, due to unreliable stock, lack of coverage, and difficulty of deployment a more comprehensive and reliable solution was required.

Electric Avenue Music Festival is the biggest event that happens in Christchurch and a reliable Wi-Fi connection is vital to ensure that the festival operates smoothly. The artists performing at the event and the management are particularly dependent on fast and reliable Wi-Fi to ensure that the festival takes place efficiently.



Provided By Wi-Fi Guys NZ

WiFi Guys is Christchurch and Canterbury's trusted name in WiFi sales, upgrades, installation and service support. Wifi Guys have delivered innovative solutions to offices, schools and industrial environments. They are also specialized in providing blanket coverage over rural farms and Point-to-Point radio data links stretching 50km and beyond.

PRODUCTS DEPLOYED



GWN7660LR Outdoor Long-Range Wi-Fi 6 Access Point Outdoor Coverage



GWN7624 In-wall Wi-Fi Access Point Inddor Coverage



Cloud Management Platform Access Point Management

THE SOLUTION

A total of 4 GWN7660LR Long Range Access points and 1 GWN7624 In-Wall Access Point were deployed, and these solutions were managed using Grandstream's free GWN.Cloud platform. The GWN7660LR Access points were used to provide connectivity across the large surface area of the outdoor venue space. The GWN7624 catered to key management personnel who were situated in an indoor space with dense walls and played a pivotal role in coordinating the event.

Large Coverage Range:

Considering the large square footage of open space that needed to be covered with a high-performance Wi-Fi connection, the GWN7660LR was an ideal choice for the venue. This device supports a 250 m coverage range and is enabled with the latest Wi-Fi 6 technology. This large coverage range ensures that Wi-Fi is available for artists and management to use across the venue.

Strong Wi-Fi Signal and Network Speeds:

The GWN7660LR provides Wi-Fi speeds of up to 1.77Gbps ensuring that fast Wi-Fi connection is available in all outdoor areas and the Wi-fi speed of 2.03Gbps ensures that a reliable network is provided to the indoor space for key management personnel. In addition to this, the 2x2:2 MU-MIMO with DL/UL OFDMA technology of the GWN7660LR and 4x4:4 MU-MIMO of the GWN7624 helps users to stay connected and receive stable connection across the venue while prioritizing more devices.

Cloud Management - Ease of Deployment:

Cloud configuration and management of Grandstream's Wi-Fi access points throughout the venue was a mandatory feature. The access points were deployed using Grandstream's free GWN.Cloud, a cloud-based management and configuration tool for all Grandstream's GWN Networking Solutions. The GWN.Cloud makes deployment and management of the Grandstream Access Points easy which is vital to ensure that Wi-Fi coverage is there throughout the duration of the event.

Free-of-Cost Wi-Fi Management Platform:

GWN.Cloud is a free-of-cost Wi-Fi management platform making the entire solution along with the Wi-Fi 6 Access Points cost-effective which is ideal for large venues like the Electric Avenue Music Festival. There is no cost for using GWN.Cloud, and you can deploy unlimited networks and access points.

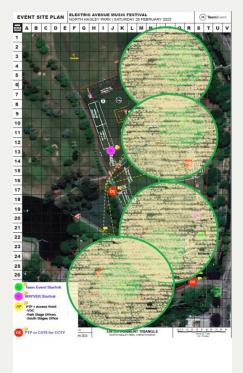
THE RESULT

With over 9 years of deploying Wi-Fi solutions at this music festival, this is the first time that the service provider's WiFi Guys did not have anyone contact them during the event with any issues from the deployment.

The reliable stock of Grandstream also helped as the service provider was easily able to order the required solutions and ship them to the customer. Once, the password was entered into the GWN.Cloud, the management at the venue could effortlessly plug the Access Point into the network and the configuration automatically downloaded making it easy to use and deploy

The reliable stock, ease of deployment and management, and overall cost-effectiveness of the solution makes Grandstream an ideal choice for Wi-Fi deployment. The music festival management team and service provider will now be using Grandstream's Wi-Fi solutions at future events.







COMPETITORS CONSIDERED

WiFi Guys NZ has been providing Wi-Fi for this event for the past 9 years and utilized Unifi's solutions for the previous 8 years. However, due to Unifi having unreliable stock and difficult deployment, the service provider decided to deploy Grandstream's GWN7660LR and GWN7624 thanks to the reliability of the solution, coverage range, and the fact that the access points are easy to manage using the GWN.Cloud and GWN mobile application.



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