ZyXEL

Key Features

- **3-in-1 Hybrid AP including AP Controller Mode, Managed AP Mode and Stand-alone AP Mode**
- **Centralized Management for Up to 24 WLAN Access Points**
- **Back-up Redundancy Supported to Provide Reliable Connection Service**
- **Secured Tunnels for Communication between Controller and Managed AP to Prevent Leaking of Configurations**
- **Enterprise-class Access Point Functionalities with Comprehensive Configuration Interfaces**
- **Built with LSOH (Low Smoke Zero Halogen) Material for Plenum Rating UL 2043 Support**

Enterprise Wireless LAN

ZyXEL Wireless LAN Access Points 3000 Series

Best Choice for Enterprise WLAN Deployments

ZyXEL's Wireless LAN Access Points 3000 Series is a business-class access point that offers all the usual enterprise features in addition to being a hybrid wireless controller and RADIUS server. With the "hybrid" features, Wireless LAN Access Points 3000 brings the lowest TCO (total cost of ownership) by turning the traditional AP into a controller or a managed AP in contrast to traditional controller systems.

Key Benefits

No Extra Cost Converting Stand-alone AP Architecture into Management WLAN Architecture

The ZyXEL Wireless LAN Access Points 3000 Series is a "hybrid" AP that acts as a enterprise-class AP in "stand-alone" mode and/or in "AP controller" mode at the same time. The hybrid AP has full flexibility to deploy secure and reliable WLAN networks and is able to manage up to 24 APs and is suitable for companies with 300-500 staffs. In the initial phase constructing a WLAN, the 3000 Series AP can be configured as a fully functional AP in "stand-alone" mode; with more APs installed, the 3000 Series AP can be set to the AP controller mode to manage all other access points. When a new branch office is established, one of the managed 3000 Series AP can become another controller to manage a separate WLAN network.

Simplified Management with Scalability

The Wireless LAN Access Points 3000 Series can centrally manage up to 24 access points for diversified applications; these access points could include dual-band NWA-3160, dual-band and dual-radio NWA-3500, high-power NWA-3163, draft 11n 2.0 support NWA-3166 and outdoor dual-radio NWA3550. The capability to support a wide range of managed access points enables network administrators to choose the best AP for desired applications, and the management interface reminiscing single AP also helps the staff to easily oversee all the WLAN access points, even they are not on the same site.

Secure Architecture for Reliable, Scalable Wi-Fi Networks

The Wireless LAN Access Points 3000 Series meets the security and high availability demanded by enterprises as all communications between the hybrid AP and managed AP are performed in a secured tunnel. Since no configuration data is stored on the managed AP, sensitive setup information is not exposed even if the AP is stolen. The hybrid AP also provides the scalability to manage APs across different networks.

Enterprise-class Access Point Functionality

The Wireless LAN Access Points 3000 Series is a series of full-function, enterprise-class AP providing 802.11a/b/g connectivity, up to 8 SSIDs per radio, profile-based management, leading QoS technology for VoWiFi applications, as well as comprehensive management features for massive deployments.

Plenum Rating with Ease of Deployment

The Wireless LAN Access Points 3000 Series is also equipped with PoE (Power-over-Ethernet) capabilities designed for small to medium enterprises. It is built with LSOH (Low Smoke Zero Halogen) material and is compliant with UL2043, the so-called plenum rating. It reduces the amount of toxic and corrosive gases emitted during the production process to protect people and equipments from the harmful emission. With the mentioned features, 3000 Series AP is the best choice to add wireless access to your existing business network or hospitality environment.

Key Applications

Remote Management

Wi-Fi deployment with several distributed branch offices is common and the management over the equipments of these independent sites is also essential to the enterprises. ZyXEL Wireless LAN Access Points 3000 Series is featured with various of management solutions that can help HQ supervise its multiple sites.
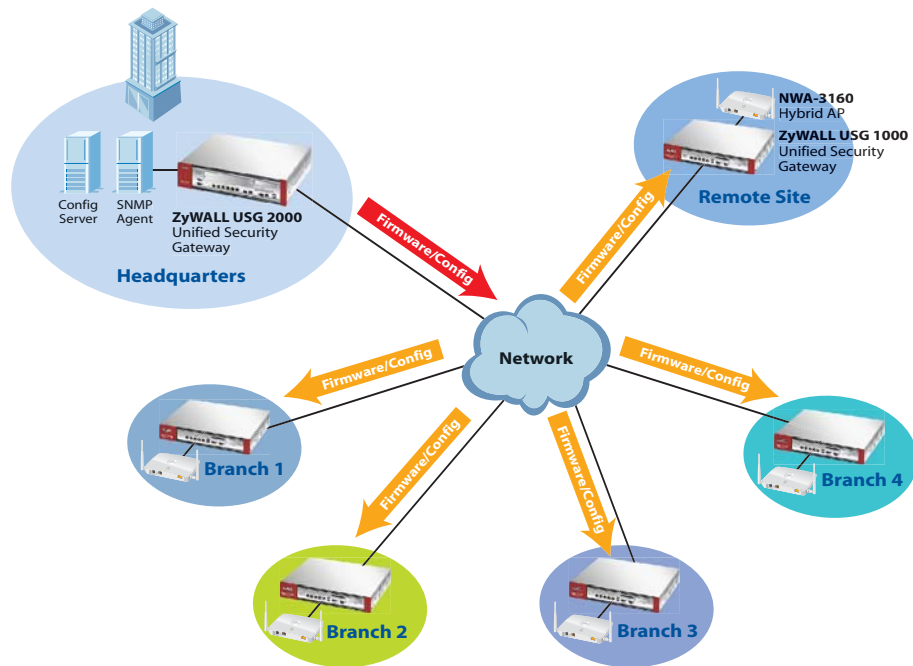
Centralized Management

ZyXEL Wireless LAN Access Points 3000 Series, including NWA-3160, NWA-3163, NWA-3166, NWA-3500 and outdoor AP NWA3550, can be configured as WLAN controller or managed AP. With this comprehensive feature, the Wi-Fi overlay networks can be monitored and managed in real-time. Also, back-up redundancy feature is considered for controller which can guarantee the users with uninterrupted service.
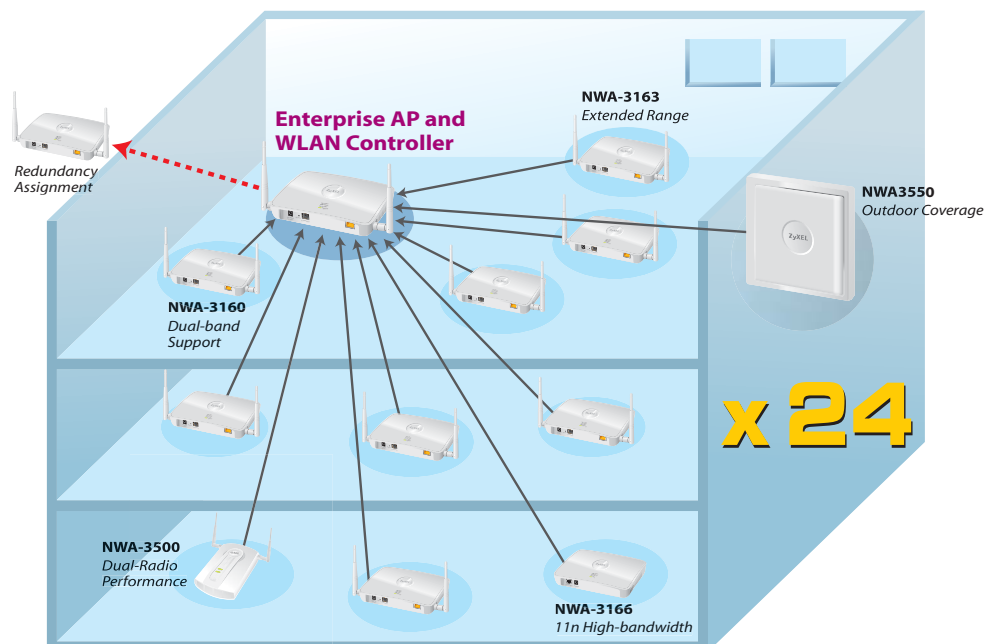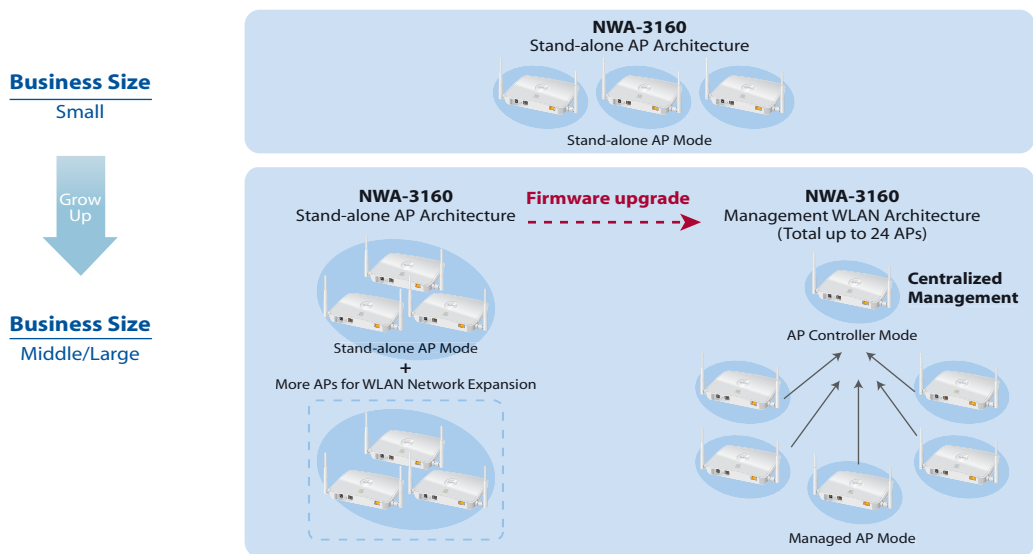
Pay as You Grow

When a company is small in business, it might need only 2 to 3 APs in the field, and configuration wouldn't be a problem. But as the company grows, the number of AP may increase and become a management headache if they require individual configuration and management. As a hybrid AP solution, ZyXEL's Wireless LAN Access Points 3000 Series has the "AP controller" mode and can be configured to manage as many as 24 APs, allowing enterprises to pay as they grow with easy, centralized configuration and management.

When an expanding business unit considers transforming into a managed WLAN structure, additional investments would be made to replace all devices in the field. However, ZyXEL users can turn the existing independent WLAN APs, including MWA-3160, NWA-3163, NWA-3166, NWA-3500 and NWA3550, into a centralized management system with easy firmware upgrades. To expanding companies, this is truly a protection to earlier investments.

Business Size
Small

Grow Up

Business Size
Middle/Large

NWA-3160
Stand-alone AP Architecture

Stand-alone AP Mode

NWA-3160
Stand-alone AP Architecture

Firmware upgrade

NWA-3160
Management WLAN Architecture
(Total up to 24 APs)

Stand-alone AP Mode
+
More APs for WLAN Network Expansion

Centralized Management

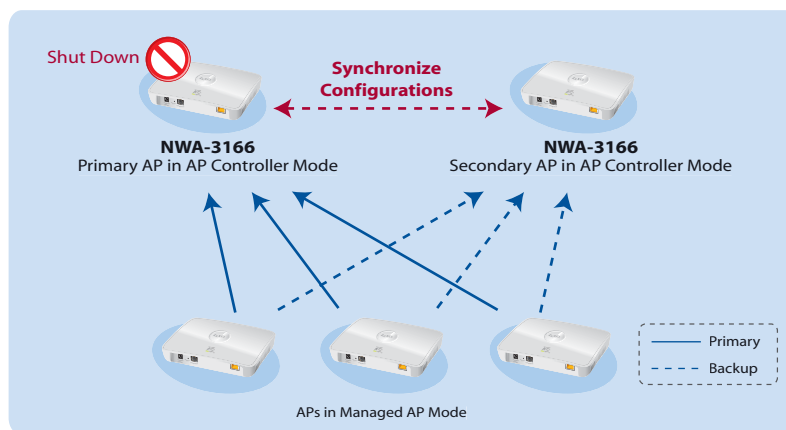AP Controller Mode

Managed AP Mode

Back-Up Redundancy

ZyXEL's Wireless LAN Access Points 3000 Series allows a secondary AP in "AP controller" mode assigned to take over management tasks if the primary AP in "AP controller" mode shuts down accidently. The information between the primary AP and the secondary AP is synchronized under two conditions:

 • The connection is set up for the first time
 • Whenever configurations are changed on the primary AP

When the primary AP comes back into service, all APs in "managed AP" mode will connect back to the primary one automatically.

Shut Down

Synchronize Configurations

NWA-3166
Primary AP in AP Controller Mode

NWA-3166
Secondary AP in AP Controller Mode

Primary
Backup

APs in Managed AP Mode

Specifications

Model	Wireless LAN Access Points 3000 Series				
	NWA-3160	**NWA-3163**	**NWA-3166**	**NWA-3500**	**NWA3550**
Product Photo					
Features	• Hybrid AP: Controller/Managed AP/Stand-alone AP • Dual-band support (802.11a/b/g)	• Hybrid AP: Controller/Managed AP/Stand-alone AP • Extended range (802.11b/g)	• Hybrid AP: Controller/Managed AP/Stand-alone AP • 802.11n draft 2.0 support (11a/g/n)	• Hybrid AP: Controller/Managed AP/Stand-alone AP • Dual radio (802.11a&g)	• Hybrid AP: Controller/Managed AP/Stand-alone AP • Dual radio (802.11a&g) • Outdoor extension
Main Design					
Wireless Technology	11a/b/g	11b/g	11a/b/g/n	11a/b/g	11a/b/g
Radio	1	1	1	2	2
Frequency Band		2.4 GHz (11b/g) • USA: 2.412 to 2.462 GHz • ETSI: 2.412 to 2.472 GHz • Taiwan: 2.412 to 2.462 GHz	5 GHz (11a) • USA: 5.15 to 5.35, 5.470 to 5.725 GHz, 5.725 to 5.825 GHz • ETSI: 5.15 to 5.35, 5.470 to 5.725 GHz • Taiwan: 5.25 to 5.35, 5.725 to 5.825 GHz		

Maximum Output Power

		NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550
11b/g	**54 Mbps**	16 dBm	20 dBm	17 dBm	16 dBm	16 dBm
	6 Mbps	18 dBm	23 dBm	17 dBm	18 dBm	18 dBm
11g/n	**20 MHz**	N/A	N/A	17 dBm	N/A	N/A
	40 MHz	N/A	N/A	13 dBm	N/A	N/A
11a	**54 Mbps**	13 dBm	N/A	18 dBm	13 dBm	13 dBm
	6 Mbps	15 dBm	N/A	18 dBm	15 dBm	15 dBm
11a/n	**20 MHz**	N/A	N/A	18 dBm	N/A	N/A
	40 MHz	N/A	N/A	18 dBm	N/A	N/A
Number of Antenna		2 Detachable	2 Detachable	3 Embedded	2 Detachable	2 N-type Connectors
Wired Data Rates		10/100 Mbps Auto-sensing (full-duplex switch)				

LAN & WAN

	NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550
Number of 10/100M LAN/Switch	1	1	1	1	1
PoE	Yes	Yes	Yes	Yes	Yes
Max. Power Levels at Powered Device	6.5 W	6.9 W	7.4 W	7.3 W	16.2 W

WLAN Features

	NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550
Maximum Throughput	Up to 33 Mbps	Up to 33Mbps	100-110 Mbps	Up to 33 Mbps	Up to 33 Mbps
WMM (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes
WEP	Yes	Yes	Yes	Yes	Yes
WPA (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes
WPA2 (Wi-Fi Certified)	Yes	Yes	Yes	Yes	Yes
Rogue AP Detection	Yes	Yes	Yes	Yes	Yes
EAP Type	MD5/TLS/TTLS/PEAP/SIM				

WLAN Management

	NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550
Controller	Yes	Yes	Yes	Yes	Yes
Managed AP	Yes	Yes	Yes	Yes	Yes

Others

	NWA-3160	NWA-3163	NWA-3166	NWA-3500	NWA3550
Plenum Rating	Yes	Yes	Yes		

Model	Wireless LAN Access Points 3000 Series				
	NWA-3160	**NWA-3163**	**NWA-3166**	**NWA-3500**	**NWA3550**
Product Photo					
Standard Compliance					
Ethernet	IEEE 802.3, IEEE 802.3u				
PoE	802.3af				
Radio Modulation	IEEE 802.11a: BQSK, QPSK, 16-QAM, 64-QAM IEEE 802.11b: DBQSK, DQPSK, CCK IEEE 802.11g: BQSK, QPSK, 16-QAM, 64-QAM IEEE 802.11n: BQSK, QPSK, 16-QAM, 64-QAM				
Certification					
Radio	• FCC Part 15C 15.247 • FCC Part 15E • ETSI EN 300 328 V1.7.1 • ETSI EN 301 893 V1.2.3: 08-2003 • DGT LP0002 • Industry Canada RSS-210 • Australia (C-Tick) CISPR22	• FCC Part 15C 15.247 • DGT LP0002	• FCC Part 15C 15.247 • FCC Part 15E • ETSI EN 300 328 V1.7.1 • ETSI EN 301 893 V1.2.3: 08-2003 • DGT LP0002 • Industry Canada RSS-210 • Australia (C-Tick) CISPR22	• FCC Part 15C 15.247 • FCC Part 15E • ETSI EN 300 328 V1.7.1 • ETSI EN 301 893 V1.2.3: 08-2003 • DGT LP0002 • Industry Canada RSS-210 • Australia (C-Tick) CISPR22	• FCC Part 15C 15.247 • FCC Part 15E • ETSI EN 300 328 V1.7.1 • ETSI EN 301 893 V1.2.3: 08-2003 • DGT LP0002 • Industry Canada RSS-210 • Australia (C-Tick) CISPR22
EMC	• FCC Part 15B • EN 301 489-17 V1.2.1: 08-2002 • EN 301 489-1 V1.5.1: 11-2004 • EN 55022: 2006 • ICES-003	• FCC Part 15B	• FCC Part 15B • EN 301 489-17 V1.2.1: 08-2002 • EN 301 489-1 V1.5.1: 11-2004 • EN 55022: 2006 • ICES-003	• FCC Part 15B • EN 301 489-17 V1.2.1: 08-2002 • EN 301 489-1 V1.5.1: 11-2004 • EN 55022: 2006 • ICES-003	• FCC Part 15B • EN 301 489-17 V1.2.1: 08-2002 • EN 301 489-1 V1.5.1: 11-2004 • EN 55022: 2006 • ICES-003
Safety	• CSA International • CSA 60950-1 • IEC 60950-1 • EN 60950-1 • UL 60950-1 • EN 60601-1-2: 2002 (Medical Electrical Equipment)	• CSA International • CSA 60950-1 • IEC 60950-1 • EN 60950-1 • UL 60950-1	• CSA International • CSA 60950-1 • IEC 60950-1 • EN 60950-1 • UL 60950-1 • EN 60601-1-2: 2002 (Medical Electrical Equipment)	• CSA International • CSA 60950-1 • IEC 60950-1 • EN 60950-1 • UL 60950-1 • EN 60601-1-2: 2002 (Medical Electrical Equipment)	• ICES-003 • CSA International • CSA 60950-1 • IEC 60950-1 • EN 60950-1 • UL 60950-1
Physical Specifications					
Power Supply	12 V DC, 1.5 A				
Dimensions (W x D x H, mm)	138.5 x 198.5 x 47.5	138.5 x 198.5 x 47.5	138.5 x 198.5 x 47.5	212.5 x 138.5 x 52	256 x 246 x 82
Weight (g)	420	420	420	420	2000
Environmental Specifications					
Operating Temperature	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	-40°C ~ 60°C
Operating Humidity	20% ~ 95% (non-condensing)	20% ~ 95% (non-condensing)	20% ~ 95% (non-condensing)	20% ~ 95% (non-condensing)	10% ~ 90% (non-condensing)

Accessories

Antenna

Model	EXT-108	EXT-109	EXT-114	EXT-118
Product Photo				
Frequency Band	2400 ~ 2500 MHz	2400 ~ 2500 MHz	2400 ~ 2500 MHz	2400 ~ 2500 MHz
Gain	8 dBi	9 dBi (peak)	14 dBi	18 dBi
VSWR	2.0:1 Max	1.5:1 Max	1.5:1 Max	1.5:1 Max
Polarization	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical
HPBW/Horizontal	360°	65°	30°	15°
HPBW/Vertical	15°	60°	30°	5°
Front to Back Ratio	N/A	15 dB	15 dB	26 dB
Impedance	50 Ω	50 Ω	50 Ω	50 Ω
Connector	N Type Jack	N Type Jack	N Type Female	N Type Female
Survival Wind Speed	216 km/hr	216 km/hr	216 km/hr	180 km/hr
Temperature	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C
Humidity	95% at 25°C	95% at 55°C	95% at 55°C	95% at 55°C
Radome Color	Gray-white	Gray-white	White	White
Radome Material	Fiber Glass	ABS	ABS, UV Resistant	ABS, UV Resistant
Weight	337 g	107 g	407 g	1.6 kg
Dimensions (mm)	f 19 x 250	114 x 114 x 40 (W x D x H)	200 x 200 x 50 (W x D x H)	360 x 360 x 16 (W x D x H)
Accessory Kit	• N Jack Adapter • Mounting Plate • Quick Installation Guide • Screw Kit	• Screw Kit • Cable: N-plug to RP SMA-plug; 30 cm • Converter Connector • Mounting Plate • Quick Installation Guide	• Mounting Plate • Quick Installation Guide • Cable: N-plug to RP SMA-plug; 30 cm	• Quick Installation Guide • Cable: N-plug to RP SMA-plug; 30 cm • Mounting Plate

Model	ANT2206		ANT3108	ANT3218
Product Photo				
Frequency Band	2400 ~ 2500 MHz	4900 ~ 5875 MHz	5150 ~ 5875 MHz	4900 ~ 5875 MHz
Gain	6 dBi	8 dBi	8 dBi	18 dBi
VSWR	2.0:1 Max	2.0:1 Max	2.0:1 Max	2.0:1 Max
Polarization	Linear, vertical	Linear, vertical	Linear, vertical	Linear, vertical
HPBW/Horizontal	65°	50°	360°	18°
HPBW/Vertical	75°	50°	20°	18°
Front to Back Ratio	12 dB		N/A	25 dB
Impedance	50 Ω		50 Ω	50 Ω
Connector	RP SMA Plug		N Type Female	N Type Jack
Survival Wind Speed	-		216 km/hr	216 km/hr
Temperature	-10°C to 55°C		-40°C to 80°C	-40°C to 80°C
Humidity	95% at 55°C		95% at 55°C	95% at 55°C
Radome Color	White, Black		White	Gray-white
Radome Material	ABS, UV Resistant		ABS, UV Resistant	ABS, UV Resistant
Weight	110 g		206 g	640 g
Dimensions (mm)	76 x 86 x 118 (W x D x H)		f 20 x 260	210 x 210 x 73 (W x D x H)
Accessory Kit	• Screw Kit • Quick Installation Guide		• N Jack CAP; Black • Mounting Plate • Quick Installation Guide	• Mounting Plate • Screws

Cable

Model	LMR 200	LMR 400	Cable Kit for Outdoor AP	EXT-300
Product Photo				
Specifications	RP-SMA plug to N-plug	N-plug to N-plug	RJ-45 CAT 5e STB Cable w/ Water-Proof cover 15 m	Jumper Cable & Surge Arrstor

Others

Model	Ceiling Mounting Kit	NWA3550 Mounting Kit	PSE Kits
Product Photo			

Specifications	For NWA-3160, NWA-3163, NWA-3165, NWA-3500	For NWA3550	• Input: AC 100 V to AC 240 V
			• Output:
			  48 Vdc/350 mA
			  (IEEE 802.3af compliant)
			  48 Vdc/500 mA
			  24 Vdc/800 mA
			  18 Vdc/1 A
			• Operation temperature:
			  -40°C to 85°C
			• Storage temperature:
			  -10°C to 70°C
			• Operation humidity:
			  5% to 90%

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