

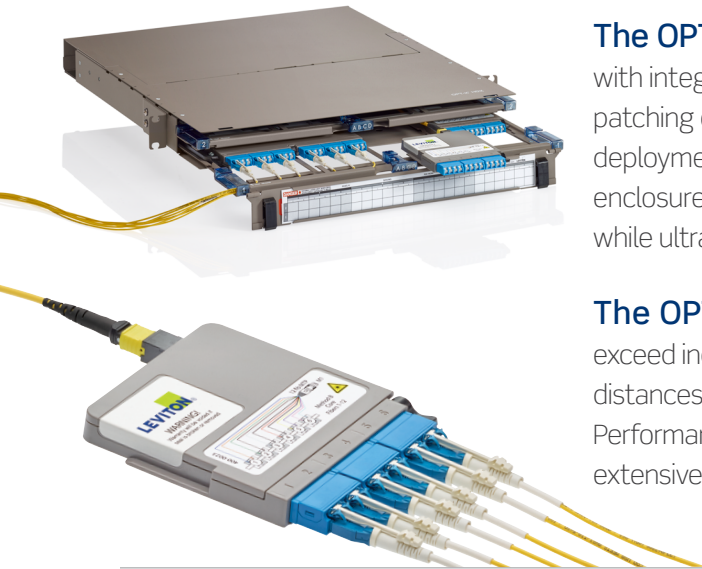


OPT-X[™] Fiber Optic System

Leviton's premier global fiber system supports applications requiring extended distances and multiple connection points between active devices. The HDX Unity System allows for open and closed patching, accepts Base8, 12, and 24 configurations, and supports migration to 400 Gb/s and beyond. OPT-X fiber optic systems are global solutions available everywhere.

RECOMMENDED FOR:

- Hyperscale Data Centers
- Mission Critical Networks
- Financial Institutions
- Extended Reach Networks
- Migration to 400G and Beyond
- Multiple Connection Points
- Main Distribution Area (MDA)



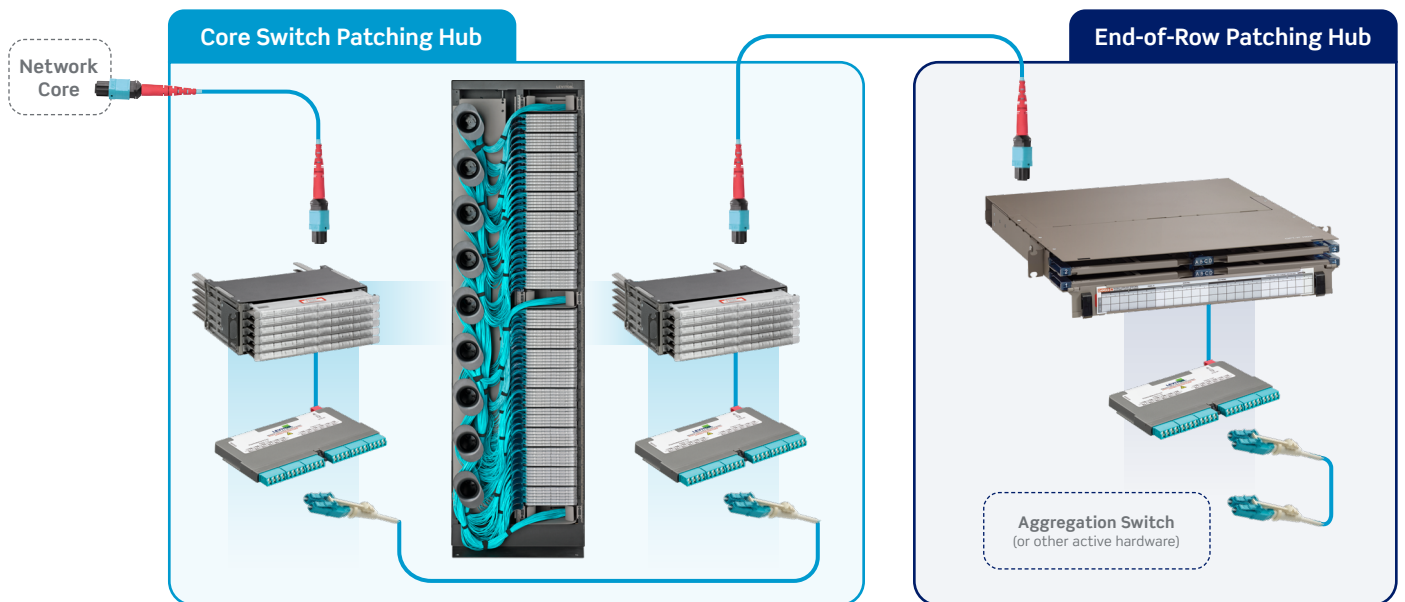
The **OPT-X HDX patching platform** improves network manageability with integrated cable management and port labeling in both closed- and open-patching options. OPT-X HDX Adapter Plates and Cassettes can accelerate deployment and MACs through easy one-hand installation and removal. HDX enclosures and panels offer manageable density at 96 fibers per RU (using LC), while ultra-high-density UHDX enclosures support up to 144 fibers per RU.

The **OPT-X Unity** solution of trunks, array patch cords, and cassettes exceed industry standards, offering superior channel performance, extended distances, and easy migration to 40, 100, 200, 400 Gb/s, and beyond. Performance assurance and extended distance calculations are available through extensive testing and analysis with the Leviton Optical Link Verification Tool.

Use Cases

Multiple Connection Points	Extended Distances	Flexible Deployment Options	Manageable Density
<p>Ultra-low-loss OPT-X Unity connectivity helps manage your power budget while allowing multiple connection points, even more than 4, in the end-to-end channel.</p>	<p>High performance cable and ultra-low-loss OPT-X Unity connectivity enable extended distances. This offers greater flexibility in network architectures, optical reach beyond industry standards, and opportunities to optimize network cost.</p>	<p>The OPT-X HDX patching platform includes panels, enclosures, distribution frames, and zero-RU options to allow for consistent patching form factor from the entrance facility or MDA to the TR or network edge.</p>	<p>The OPT-X HDX platform includes integrated patch cord and cable management, as well as multiple customizable port ID options.</p>

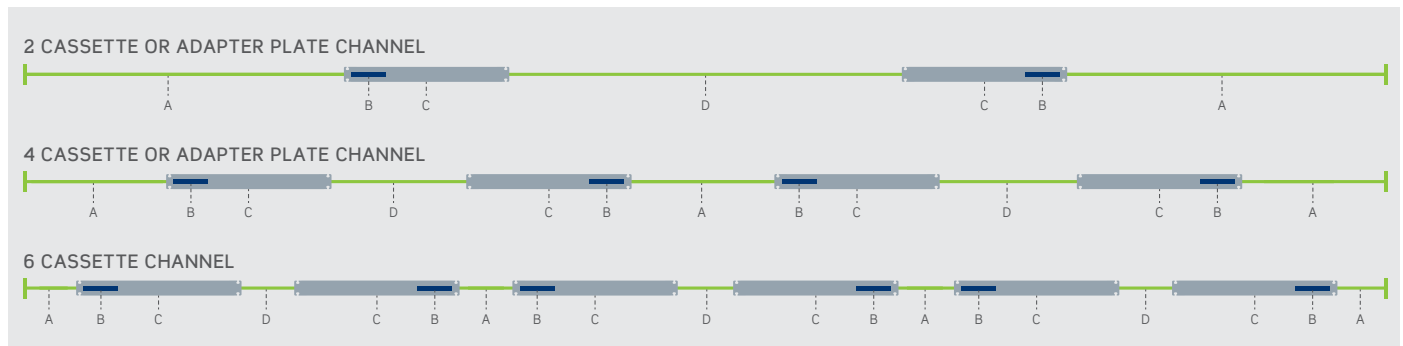
Example Network



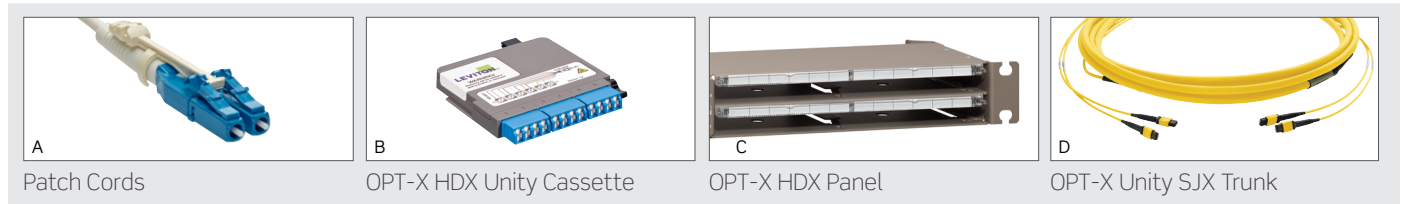
Total Channel Performance

Many organizations need to maximize existing cabling infrastructure or extend from that infrastructure. This can lead to the need for performance over distances that exceed industry standards, mating these signals through multiple connection points, or a combination of both. These scenarios may raise concerns about the passive channel's bandwidth capabilities and attenuation loss in relation to the transceiver transmit power and receiver sensitivity. HDX Unity maximizes the reach capability while offering the highest density of fiber connections and, as a system, Leviton's design tools can verify the expected performance of those end-to-end channels.

Channel Reach Performance Examples



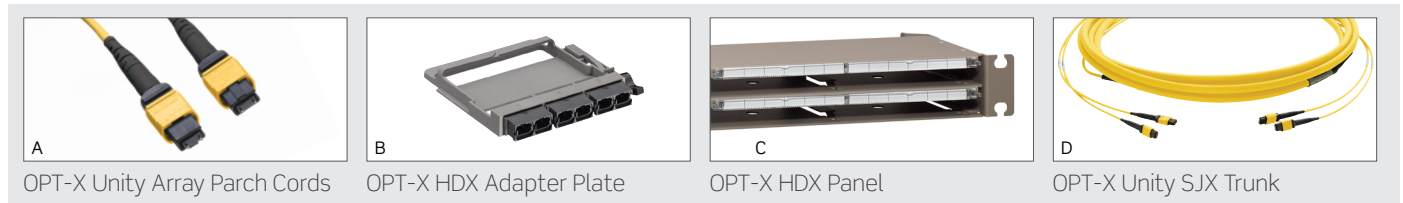
Duplex Transceivers and Base 8/12 or 24 MTP-LC Cassettes



OM4	10G SR						25G SR						40G BiDi					
# of Connection Points	2		4		6		2		4		6		2		4		6	
MTP® Type	12	24	12	24	12	24	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. leviton.com/ns/global-locations																	

OS2	10G LR						40G LR						100G CWDM4					
# of Connection Points	2		4		6		2		4		6		2		4		6	
MTP Type	12	24	12	24	12	24	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. leviton.com/ns/global-locations																	

Parallel Transceivers and MTP Adapter plates

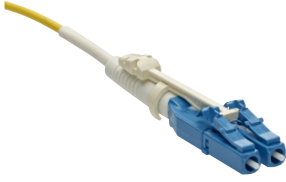


	OM4 — 40G SR4				OM4 — 100G SR4				OS2 — 100G PSM4			
# of Connection Points	2		4		2		4		2		4	
MTP Type	12	24	12	24	12	24	12	24	12	24	12	24
Reach (m)	For expected optical reach data, contact your local sales person. leviton.com/ns/global-locations											

Leviton can calculate reach for virtually any transceiver type. Contact 800-722-2082 for additional support or visit leviton.com/ns/global-locations.

The engineered link values listed in the tables are outputs from Leviton's Optical Link Verification Tool. To obtain these expected reach distances, the products must be properly installed by a Leviton Certified Installer. Additionally, the active equipment at both ends of the link must be properly installed and in good working condition, and meet appropriate IEEE 802.3 standards for the specific application. Leviton stands behind its system warranties, located at <https://leviton.com/ns/warranties>. As a variety of applications and connection points are possible, contact 800-722-2082 or appeng@leviton.com for specific design consultation and Link Performance verification.

DUPLEX OPTICS CHANNELS



Duplex Patch Cords

Fiber Patch Cords

Fiber Optic Patch Cords are designed to interconnect or cross connect fiber networks within structured cabling systems for data centers, Broadband CATV, Passive Optical Networks (PON), WDM or DWDM multiplexing, FTTH, and voice services in metropolitan and access networks.

- Leviton-patented LC Unibody connector with SPECTRO-LINK™ Technology includes reversible polarity feature, allowing polarity changes in the field without moving or twisting fiber
- Cable jacket color-coded for easy ID of fiber
- 100% tested for insertion loss and single-mode for return loss
- Leviton design is ideal for high-density applications

Fiber Patch Cords	Plenum Part No.	LSZH Part No.
OM4, LC-LC Low loss Patch Cord, 1 m	PCF-M4PR2VV-0010MAB	LPC-M4R2LULU0010
OM4, LC-LC Low loss Patch Cord, 3 m	PCF-M4PR2VV-0030MAB	LPC-M4R2LULU0030
OM4, LC-LC Low loss Patch Cord, 5 m	PCF-M4PR2VV-0050MAB	LPC-M4R2LULU0050
OS2, LC-LC Low loss Patch Cord, 1 m	PCF-S2PR2VV-0010MAB	LPC-S2R2LULU0010
OS2, LC-LC Low loss Patch Cord, 3 m	PCF-S2PR2VV-0030MAB	LPC-S2R2LULU0030
OS2, LC-LC Low loss Patch Cord, 5 m	PCF-S2PR2VV-0050MAB	LPC-S2R2LULU0050
LC-LC Low loss Patch Cord	PCF-**PR2VV-xxxxMAB	LPC-**R2LULUxxxx

** Fiber Type: M4 (OM4), S2 (OS2)
 xxxx Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)



Cassettes

OPT-X HDX Fiber Cassettes

HDX Unity MTP® Cassettes are engineered for the most demanding data center networks, where extended reach and multiple connection points are required. They are pre-terminated, pre-tested, and are built custom to your specifications.

- Ultra-low-loss Base8, Base12, and Base24 MTP connectors
- Leviton-patented IP5x-rated internal shutters on LC adapters eliminate need for dust plugs to reduce waste, speed deployment, and ensure safer installation
- Universal Polarity Base8, Base12, and Base24 Breakout Cassettes MTP-LC require method B trunks with one cassette on each end
- Pre-terminated fiber eliminates the need for complicated field terminations and splices
- Easy one-hand installation and removal
- Option of pinned (male) or unpinned (female) MTP connector

Base8 Cassettes – Popular Configurations	Part No.
OM4, 3x8-fiber MTP (male) to LC Shuttered (aqua), 4:1 Breakout Cassette, Universal Polarity	42LSM1-41C
OM4, 3x8-fiber MTP (male) to LC Shuttered (heather violet), 4:1 Breakout Cassette, Universal Polarity	42GSM1-41C
OS2, 3x8-fiber MTP (male) to LC Shuttered (blue), 4:1 Breakout Cassette, Universal Polarity	U2LSM1-41C

Base12 Cassettes – Popular Configurations	Part No.
OM4, 12-fiber MTP (male) to LC shuttered (aqua), Universal Polarity	41LSM4-UNN
OM4, 12-fiber MTP (male) to LC shuttered (heather violet), Universal Polarity	41GSM4-UNN
OS2, 12-fiber MTP (male) to LC shuttered (blue), Universal Polarity	U1LSM4-UNN

Base24 Cassettes – Popular Configurations	Part No.
OM4, 1x24-fiber MTP (male) to LC shuttered (aqua), 12:1 Breakout Cassette, Universal Polarity	42LSM2-21C
OM4, 1x24-fiber MTP (male) to LC shuttered (heather violet), 12:1 Breakout Cassette, Universal Polarity	42GSM2-21C
OS2, 1x24-fiber MTP (male) to LC shuttered (blue), 12:1 Breakout Cassette, Universal Polarity	U2LSM2-21C

PARALLEL OPTICS CHANNELS



Array Patch Cords

OPT-X Unity Fiber Array Patch Cords

OPT-X Unity MTP® Array Cords are designed to cross connect from structured cabling directly into active equipment with an MPO/MTP transceiver interface. They are also used as direct interconnect cables for point-to-point connections. MTP connectors offer ultra-low-loss performance to support maximum distance and multiple connection points while staying within IEEE low-loss limits.

- Ultra-low-loss MTP connectors in 8, 12, and 24 fibers for maximum network design flexibility
- Array patch cords offer migration path to 40, 100, 200, and 400 Gb/s

MTP-to-MTP Array Patch Cords, Method B	Plenum Part No.	CPR-Rated Part No. (B2ca)
8-Fiber, OS2, unpinned, 3 m	ULUP8MM-B003M	ULUP8CMM-B0030-S
12-Fiber, OS2, unpinned, 3 m	ULUP2LL-B003M	ULUP2CLL-B0030-S
24-Fiber, OS2, unpinned, 3 m	ULUP4JJ-B003M	ULUP4CJJ-B0030-S
8-Fiber, OS2, pinned, 3 m	ULUP8NN-B003M	ULUP8CNN-B0030-S
12-Fiber, OS2, pinned, 3 m	ULUP2KK-B003M	ULUP2CKK-B0030-S
24-Fiber, OS2, pinned, 3 m	ULUP4HH-B003M	ULUP4CHH-B0030-S
8-Fiber, OM4, unpinned, 3 m	UL548MM-B003M	UL548CMM-B0030-S
12-Fiber, OM4, unpinned, 3 m	UL542LL-B003M	UL542CLL-B0030-S
24-Fiber, OM4, unpinned, 3 m	UL544JJ-B003M	UL544CJJ-B0030-S
8-Fiber, OM4, pinned, 3 m	UL548NN-B003M	UL548CNN-B0030-S
12-Fiber, OM4, pinned, 3 m	UL542KK-B003M	UL542CKK-B0030-S
24-Fiber, OM4, pinned, 3 m	UL544HH-B003M	UL544CHH-B0030-S
8-Fiber, unpinned	UL**8MM-BxxxM	UL**8CMM-Byyyy-S
12-Fiber, unpinned	UL**2LL-BxxxM	UL**2CLL-Byyyy-S
24-Fiber, unpinned	UL**4JJ-BxxxM	UL**4CJJ-Byyyy-S
8-Fiber, pinned	UL**8NN-BxxxM	UL**8CNN-Byyyy-S
12-Fiber, pinned	UL**2KK-BxxxM	UL**2CKK-Byyyy-S
24-Fiber, pinned	UL**4HH-BxxxM	UL**4CHH-Byyyy-S

** Fiber Type: 5L (OM3), 54 (OM4), UP (OS2)
 xxx Length: : (e.g. 10 m = 010, 3 m = 003)
 yyyy Length: : (e.g. 10.2 m = 0102, 3.5 m = 0035)



Adapter Plates

OPT-X HDX Fiber Adapter Plates

HDX adapter plates connect to field-terminated backbone cabling or pre-terminated trunks.

- Compatible with OPT-X UHDX and OPT-X HDX Enclosures, Panels, and HDX Fiber Distribution Frame Patch Decks
- Easy one-hand installation and removal
- Visible sequential numbering to identify ports (for Tx and Rx)

Fiber Adapter Plates	Part No.
3 Duplex MTP Adapters (black), keyed up to keyed up	5FUHD-6MB*
3 Duplex MTP Adapters (black), keyed up to keyed down	5FUHD-6MP
Blank	5FUHD-BLK

* Not designed for use with single-mode applications

DUPLEX OR PARALLEL OPTICS CHANNELS



Enclosures and Panels	UHDx Part No.	HDX Part No.
OPT-X Flat Panel, 1RU	HDX1F-144	HDX1U-F96
OPT-X Angled Panel, 1RU	HDX1A-144	HDX1U-A96
OPT-X Fiber Enclosure, 1RU, sliding trays	5R1UD-S12	5R1UD-S08
OPT-X Fiber Enclosure, 2RU, sliding trays	5R2UD-S24	5R2UD-S16
OPT-X Fiber Enclosure, 3RU, sliding trays	—	5R3UD-S24
OPT-X Fiber Enclosure, 4RU, sliding trays	5R4UD-S48	5R4UD-S32
HDX Fiber Distribution Frame	—	F3168-22F
HDX Patch Deck (use with Frame)	—	F3168-DCK

Panels, Enclosures, and Distribution Frame HDX, UHDx, Distribution Frame Densities

- Accept Leviton HDX Adapter Plates, Cassettes, and Splice Modules
- OPT-X UHDx panels and enclosures accommodate up to 144 fibers (using LC) in a 1RU, 288 fibers in a 2RU, and 576 fibers in a 4RU size
- OPT-X HDX panels and enclosures accommodate up to 96 fibers (using LC) in a 1RU, 192 fibers in a 2RU, 288 fibers in a 3RU, and 384 fibers in a 4RU size
- Individual sliding trays in enclosures allow easy access to fiber connectors in dense applications
- Hinged front enclosure door provides easy means to install, remove, and update port ID labels
- Highly visible port locators in the front and rear of enclosure help easily identify specific ports
- 1RU flat and angled panels allow open access to patch cords and trunks; no moving parts
- Angled panel eliminates the need for horizontal patch cord cable managers
- The HDX Fiber Distribution Frame patches up to 3,168 LC Fibers for cross-connect and interconnect applications between backbone cables and active equipment

Trunks

OPT-X Unity SJX Ultra-Low-Loss Fiber Trunks

Factory-terminated and tested MTP® trunk cable assemblies feature ultra-low-loss connectors to support maximum distance and multiple connection points while staying within IEEE low-loss limits.



- Terminations available in 24-, 12-, and 8-fiber configurations
- Migration solution to 40, 100, 200, and 400 Gb/s networks
- Up to 70% faster install than field-terminated trunks
- 100% factory tested, with test results included in packaging
- See leviton.com/mtc to configure for your application
- Available in plenum and Riser/LSZH CPR cable ratings

Unpinned MTP-to-MTP, Method B Trunks		Base12		Base24	
		Plenum Part No.	CPR-Rated (B2ca) Part No.	Plenum Part No.	CPR-Rated (B2ca) Part No.
OM4	12-Fiber	FTU-FW2012LLxxxF36C36CN-NNBS	FTU-FZ012LLyyyy09B09BN-NNBS	—	—
	24-Fiber	FTU-FW2024LLxxxF36B36BN-NNBS	FTU-FZ024LLyyyy09B09BN-NNBS	FTU-FW4024JJxxxF36C36CN-NNBS	FTU-FZ024JJyyyy09C09CN-NNBS
	48-Fiber	FTU-FW2048LLxxxF36B36BN-NNBS	FTU-FZ048LLyyyy09B09BN-NNBS	FTU-FW4048JJxxxF36C36CN-NNBS	FTU-FZ048JJyyyy09C09CN-NNBS
	96-Fiber	FTU-FW2096LLxxxF36B36BN-NNBS	FTU-FZ096LLyyyy09B09BN-NNBS	FTU-FW4096JJxxxF36C36CN-NNBS	FTU-FZ096JJyyyy09C09CN-NNBS
	144-Fiber	FTU-FW2144LLxxxF36B36BN-NNBS	FTU-FZ144LLyyyy09B09BN-NNBS	FTU-FW4144JJxxxF36C36CN-NNBS	FTU-FZ144JJyyyy09C09CN-NNBS
OS2	12-Fiber	FT-AW2012LLxxxF36C36CN-NNBS	FTU-AZ012LLyyyy09B09BN-NNBS	—	—
	24-Fiber	FT-AW2024LLxxxF36B36BN-NNBS	FTU-AZ024LLyyyy09B09BN-NNBS	FTU-AW4024JJxxxF36C36CN-NNBS	FTU-AZ024JJyyyy09C09CN-NNBS
	48-Fiber	FT-AW2048LLxxxF36B36BN-NNBS	FTU-AZ048LLyyyy09B09BN-NNBS	FTU-AW4048JJxxxF36C36CN-NNBS	FTU-AZ048JJyyyy09C09CN-NNBS
	96-Fiber	FT-AW2096LLxxxF36B36BN-NNBS	FTU-AZ096LLyyyy09B09BN-NNBS	FTU-AW4096JJxxxF36C36CN-NNBS	FTU-AZ096JJyyyy09C09CN-NNBS
	144-Fiber	FT-AW2144LLxxxF36B36BN-NNBS	FTU-AZ144LLyyyy09B09BN-NNBS	FTU-AW4144JJxxxF36C36CN-NNBS	FTU-AZ144JJyyyy09C09CN-NNBS

xxx Length: (e.g. 10 ft = 010, 3 ft = 003) yyyy Length: (e.g. 10.2 m = 0102, 3.5 m = 0035)

MTP® is a registered trademark of US Conec, Ltd.

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