

Product Highlights

Management

Virtual Stacking of up to 32 units from a single console

Physical Stacking

Manage up to 576 Gigabit ports from a single IP address

PoE and PoE + models

More power on the ethernet ports to support VoIP and wireless applications



DGS-3420 SERIES

xStack Layer 2+ Managed Stackable Gigabit Switches

Features

Flexibility

- 20/48 10/100/1000BASE-T ports or 20 SFP slots
- 4 Combo 10/100/1000BASE-T/SFP ports¹
- 4 10-Gigabit SFP+ uplink ports
- 802.3af and 802.3at Power Over Ethernet support²
- Optional External Redundant Power Supply
- High Bandwidth Physical/Virtual Stacking**
- Physical stack of up to 12 units, 576 Gigabit ports
- Stackable through 2 10-Gigabit SFP+ ports
- Up to 40 Gbps Full-Duplex Stacking Bandwidth
- Virtual Stack of up to 32 units using single IP Management

Security

- L2/L3/L4 Multi-Layer Access Control
- External RADIUS/TACACS+ Authentication
- SSH/SSL support
- 802.1X Guest VLAN
- Web-based Access Control (WAC)
- MAC-based Access Control (MAC)
- D-Link Safeguard Engine
- Supports Microsoft® NAP

Enhanced L2+ Features

- IPv4/v6 Static Routing
- RIP/RIPng

Quality of Service

- 802.1p Priority Queues/Multi-Layer CoS
- Time-based QoS

Reliability

- Redundant Power Supply (RPS) support
- 802.1D/802.1w/802.1s Spanning Tree
- Loopback Detection (LBD)
- Ethernet Ring Protection Switching (ERPS)

Traffic Monitoring/Bandwidth Control

- Traffic Segmentation
- Granular Bandwidth Control Down to 64 Kbps per port
- Granular Broadcast Storm Control Down to 1 pps per port
- 802.3ad Link Aggregation
- RMON support
- Port mirroring

Green

- Time-based PoE
- Power Saving

The xStack DGS-3420 Series of next generation Layer 2+ Gigabit switches delivers performance, flexibility, security, multi-layer Quality of Service (QoS), and accessibility, along with redundant power solutions for businesses. With high Gigabit port densities, Gigabit SFP, 10-Gigabit SFP+ support, and advanced software solutions, these switches can act as either departmental access layer devices or aggregation switches to form a multilevel network structured with backbone and centralised high-speed servers.

Service providers can take advantage of the high SFP density switch (such as DGS-3420-28SC) to structure the aggregation of Fiber to the Building (FTTB) networks that are extended to the subscribers' sites.

Unparalleled Flexibility

Easily deployed and simple to manage, the DGS-3420 Series can be stacked with any switch that supports D-Link's Single IP Management to form a multi-level network structured with backbone and centralised high-speed servers. The virtual stack can include units located anywhere on the same network domain, and uses optional 10-Gigabit uplinks to move intra-stack traffic at 20 Gbps full duplex speeds.

Redundant Ring Stacking

Alternatively, depending on whether linear or fault-tolerant ring stacking is implemented, users can use one or two 10-Gigabit SFP+ ports to create a physical stack. 12 units or 576 Gigabit ports can be configured for a stack using direct attach cables to provide high-bandwidth with cost efficiency in mind.

¹ For DGS-3420-28TC/28SC/28PC models

² For DGS-3420-28PC/52P models

Security, Performance & Availability

The DGS-3420 Series provides a complete set of security features including L2/L3/L4 multi-layer Access Control Lists and 802.1X user authentication via TACACS+ and RADIUS servers.

The DGS-3420 Series offers extensive VLAN support including GVRP and 802.1Q VLAN to enhance security and performance. A robust set of L2/L3/L4 QoS/CoS solutions help ensure that critical network services such as VoIP, ERP, Intranet, and video conferencing are prioritised. The series also provides D-Link's Safeguard Engine to increase the switch's reliability, service ability, and availability to prevent malicious flooding of traffic caused by worms or virus infections. Bandwidth Control can be flexibly set for each port using pre-defined thresholds to assure a committed level of service for end users. For advanced applications, flow-based bandwidth control allows easy configuration of service types based on specific IP addresses or protocols.

IPv6 Technology

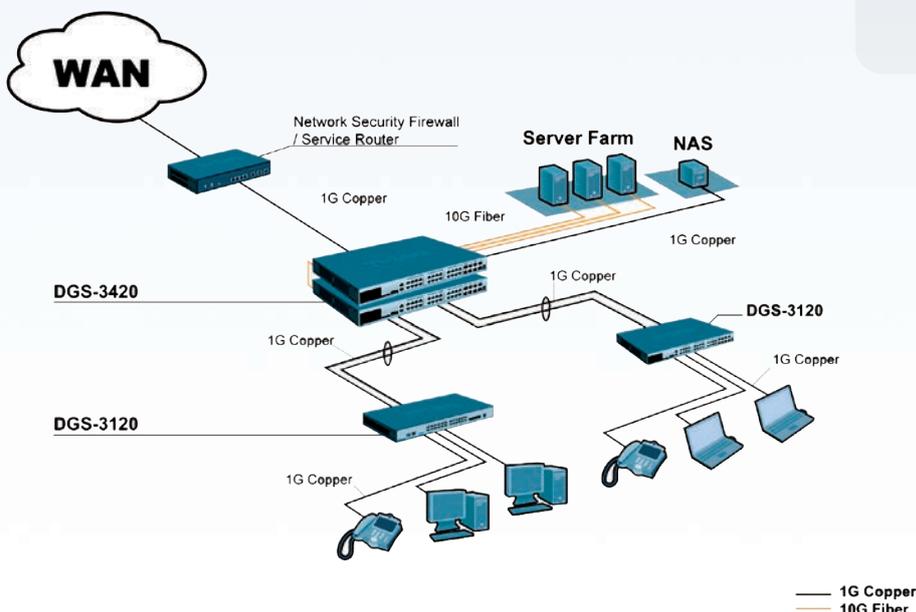
The DGS-3420 Series also features comprehensive IPv6 support, including IPv6 Tunnel, ICMPv6, DHCPv6, RIPng, and more. With 10-Gigabit connectivity and IPv6 support, the series enables you to future-proof your network for cost efficiency and longevity while meeting the requirements of future IPv6 capable network devices.

D-Link Green Technology

D-Link is striving to take the lead in developing innovative and power-saving technology that does not sacrifice operational performance or functionality. The DGS-3420 Series implements D-Link Green technology, which includes power saving through link status, smart fan design, increased heat dissipation, and cable length detection. The power saving feature automatically powers down ports that have no link or link partner. The Smart Fan design allows the built-in fans to automatically turn on only at a certain temperature, providing continuous, reliable, and eco-friendly operation of the switch.

The DGS-3420 Series also includes Time-based PoE which automatically switches off the power on PoE ports when not active to save energy.

Business Network Deployment



D-Link Assist Rapid Response Support

If the worst should happen to your network you need the very best support and fast. Downtime costs your business money. D-Link Assist maximises your uptime by solving technical problems quickly and effectively. Our highly trained technicians are on standby around the clock, ensuring that award-winning support is only a phone call away.

With a choice of three affordable service offerings covering all D-Link business products, you can select the package that suits you best:

D-Link Assist Gold - for comprehensive 24-hour support

D-Link Assist Gold is perfect for mission-critical environments where maximum uptime is a high priority. It guarantees four hour around-the-clock response. Cover applies 24/7 for every day of the year including holidays.

D-Link Assist Silver - for prompt same-day assistance

D-Link Assist Silver is designed for 'high availability' businesses that require rapid response within regular working hours. It provides a four hour response service Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist Bronze - for guaranteed response on the next business day

D-Link Assist Bronze is a highly cost-effective support solution for less critical environments. Response is guaranteed within eight business hours Monday to Friday from 8am to 5pm, excluding holidays.

D-Link Assist can be purchased together with any D-Link business product. So whether you're buying switching, wireless, storage, security or IP Surveillance equipment from D-Link, your peace of mind is guaranteed. D-Link Assist also offers installation and configuration services to get your new hardware working quickly and correctly.

Technical Specifications	DGS-3420-28TC	DGS-3420-28SC
General		
Interfaces	<ul style="list-style-type: none"> • 20 10/100/1000BASE-T ports • 4 Combo 10/100/1000BASE-T/SFP ports • 4 SFP+ ports 	<ul style="list-style-type: none"> • 20 SFP ports • 4 Combo 10/100/1000BASE-T/SFP ports • 4 SFP+ ports
Optional Redundant Supply	• DPS-500	• DPS-500
Console Port	• RJ-45	
Management Port	• 10/100BASE-T	
Alarm Port	• 1	
SD Card Slot	• 1	
Performance		
Switch Fabric	• 128 Gpbs	
Packet Forwarding Rate	• 95.24 Mpps	
Packet Buffer	• 2 MB	
MAC Address Table	• 16K Entries	
IP v4/v6 Routing Table	• 1K/512 Entries	
IP v4/v6 L3 Forwarding Table	• 2K/1K Entries	
Jumbo Frame Size	• 13000 bytes	
PoE		
PoE Standard		
PoE Power Budget		
Physical		
MTBF (Hours)	• 287763 hours	• 300371 hours
Acoustic	<ul style="list-style-type: none"> • At Operation Temperature of: • below 30 °C: < 38.7 dB • above 30 °C: < 46.5 dB 	• At Operatios6.2 dB
Heat Dissipation	• 200.5 BTU/hr	• 205.3 BTU/hr
Power Input	• 100 to 240 V AC, 50/60Hz	• 100 to 240 V AC, 50/60Hz
Max Power Consumption	• 58.8 watts	• 60.2 watts
Dimensions (W x D x H)	• 441 x 310 x 44 mm	• 441 x 310 x 44 mm
Weight	• 4.12 kg	• 4.06 kg
Ventilation	• via Temperature Controlled Smart Fan (> 39 °C: High Speed; < 36 °C: Low Speed) ³	
Operating Temperature	• 0 to 50 °C	
Storage Temperature	• -40 to 70 °C	
Operating Humidity	• 10% to 90% RH	
Storage Humidity	• 5% to 90% RH	
Emission (EMI)	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick	
Safety	• CB, cUL, LVD	
Certification	• IPv6 Ready Logo Phase 2	

Technical Specifications	DGS-3420-28PC	DGS-3420-52T	DGS-3420-52P
General			
Interfaces	<ul style="list-style-type: none"> • 20 10/100/1000BASE-T ports • 4 Combo 10/100/1000BASE-T • PoE/SFP ports • 4 SFP+ ports 	<ul style="list-style-type: none"> • 48 10/100/1000BASE-T ports • 4 SFP+ ports 	<ul style="list-style-type: none"> • 48 10/100/1000BASE-T PoE ports • 4 SFP+ ports
Optional Redundant Supply	• DPS-700	• DPS-500	• DPS-700
Console Port	• RJ-45		
Management Port	• 10/100BASE-T		
Alarm Port	• 1		
SD Card Slot	• 1		
Performance			
Switch Fabric	• 128 Gpbs	• 176 Gpbs	• 176 Gpbs
Packet Forwarding Rate	• 95.24 Mpps	• 130.95 Mpps	• 130.95 Mpps
Packet Buffer	2 MB		
MAC Address Table	• 16K Entries		
IP v4/v6 Routing Table	• 1K/512 Entries		
IP v4/v6 L3 Forwarding Table	• 2K/1K Entries		
Jumbo Frame Size	• 13000 bytes		
PoE			
PoE Standard	• 802.3af and 802.3at		• 802.3af and 802.3at
PoE Power Budget	<ul style="list-style-type: none"> • 370 watts • (740 watts with DPS-700 RPS) 		<ul style="list-style-type: none"> • 370 watts • (740 watts with DPS-700 RPS)
Physical			
MTBF (Hours)	• 206190 hours	• 255608 hours	• 202462 hours
Acoustic	<ul style="list-style-type: none"> • At Operation Temperature of: • below 30 °C: < 40.3 dB • above 30 °C: < 52.5 dB 	<ul style="list-style-type: none"> • At Operation Temperature of: • below 30 °C: < 40.6 dB • above 30 °C: < 51.1 dB 	<ul style="list-style-type: none"> • At Operation Temperature of: • below 30 °C: < 43.2 dB • above 30 °C: < 54.8 dB
Heat Dissipation	• 1630.0 BTU/hr	• 276.2 BTU/hr	• 1723.4 BTU/hr
Power Input	• 100 to 240 V AC, 50/60Hz		
Max Power Consumption	478.0 watts	81.0 watts	505.4 watts
Dimensions (W x D x H)	441 x 310 x 44 mm		
Weight	• 5.75 kg	• 5.07 kg	• 6.24 kg
Ventilation	• via Temperature Controlled Smart Fan (> 39 °C: High Speed; < 36 °C: Low Speed) ³		
Operating Temperature	• 0 to 50 °C		
Storage Temperature	• -40 to 70 °C		
Operating Humidity	• 10% to 90% RH		
Storage Humidity	• 5% to 90% RH		
Emission (EMI)	• FCC Class A, CE Class A, VCCI Class A, IC, C-Tick		
Safety	• CB, cUL, LVD		
Certification	• IPv6 Ready Logo Phase 2		

³ Fan speed is adjusted according to operating temperature.

Software Features

Stackability

- Virtual Stacking Support
- D-Link Single IP Management
- Up to 32 devices per virtual stack
- Up to 20G stacking bandwidth
- Physical Stacking
- Supports Duplex Chain/Ring topology
- Up to 40G stacking bandwidth
- Up to 12 units per stack

L2 Features

- MAC Address Table: 16K
- Flow Control
 - 802.3x Flow Control
 - HOL Blocking Prevention
- Jumbo Frames up to 13000 bytes
- IGMP snooping
 - IGMP v1/v2/v3 Snooping
 - Supports 960 groups
 - Port/Host-based
 - IGMP Snooping
 - Fast Leave
- MLD Snooping
 - MLD v1/v2 Snooping
 - Supports 480 groups
 - Host-based MLD Snooping Fast Leave
- Spanning Tree
 - 802.1D-2004 STP
 - 802.1w RSTP
 - 802.1Q-2005 MSTP
 - BPDU filtering
 - Root Restriction
- Loopback Detection
- 802.3ad Link Aggregation
- Max. 32 groups per device
 - 8 Gigabit ports or 2 10-Gigabit ports per group
- Port Mirroring
 - Supports 4 Mirroring Groups
 - Supports One-to-One, Many-to-One, Flow-based, and RSPAN mirroring
- L2 Protocol Tunneling
- ERPS (Ethernet Ring Protection Switching)

VLAN

- VLAN Group
 - Max. 4K Static VLAN Groups
 - Max. 255 Dynamic VLAN Groups
- 802.1Q Tagged VLAN
- 802.1v Protocol VLAN
- GVRP
- Double VLAN (Q-in-Q)
 - Port-based Q-in-Q
 - Selective Q-in-Q4
- MAC-based VLAN
- VLAN Trunking
- 802.1Qbb4

L3 Features

- 256 IP interfaces
- Loopback interface
- IPv6 Tunneling
- Proxy ARP
- Gratuitous ARP
- L3 Routing
 - 1K routing entries shared by IPv4/v6
 - Max. 1K IPv4 routes
 - Max. 512 IPv6 routes
 - 2K L3 forwarding entries shared by IPv4/v6
 - Max. 2K IPv4 entries
 - Max. 1K IPv6 entries
 - 256 static routing entries for IPv4, 128 entries for IPv6
 - RIP v1/v2
 - RIPng

QoS (Quality of Service)

- 802.1p Class of Service (CoS)
- 8 queues per port
- Queue Handling
 - Strict
 - Weighted Round Robin (WRR)
 - Strict + WRR
- CoS based on
 - Switch Port
 - VLAN ID
 - 802.1p Priority Queues
 - MAC Address

- IPv4/v6 Address
- DSCP
- Protocol Type
- IPv6 Traffic Class
- IPv6 Flow Label
- TCP/UDP Port
- User-defined Packet Content
- Supports following actions for flows:
 - Remark 802.1p Priority Tag
 - Remark TOS/DSCP Tag
 - Bandwidth Control
 - Flow Statistics
 - Committed Information Rate (CIR), min. granularity 1 Kbps.
 - Bandwidth Control
 - Port-based (Ingress/Egress, min. granularity 64 Kbps)
 - Flow-based (Ingress, min. granularity 64 Kbps)
- Time-based QoS

ACL (Access Control List)

- Ingress ACL: support up to 6 profiles and 256 rules per profile
- Egress ACL: support up to 4 profiles and 128 rules per profile
- ACL based on
 - 802.1p Priority
 - VLAN ID
 - MAC Address
 - Ether Type
 - IPv4/v6 Address
 - DSCP
 - Protocol Type
 - TCP/UDP Port Number
 - IPv6 Traffic Class
 - IPv6 Flow Label
 - User-defined Packet Content
- ACL Statistics
- Time-based ACL
- CPU interface filtering

Security

- SSH v2
- SSL v1/v2/v3
- Port Security for up to 64 MAC addresses per port
- Broadcast/Multicast/Unicast Storm

Control

- Traffic Segmentation
- IP-MAC-Port Binding
 - ARP Packet Inspection
 - IP Packet Inspection
 - DHCP Snooping
 - DHCPv6 and NDP Snooping
 - Supports up to 500 Address Binding

Entries per device

- D-Link Safeguard Engine
- DHCP Server Screening
- CPU Interface Filtering
- ARP Spoofing Prevention
- BPDU Attack Protection

AAA

- 802.1X
 - Port-based Access Control
 - Host-based Access Control
 - Dynamic VLAN Assignment
- Web-based Access Control (WAC)
 - Port-based Access Control
 - Host-based Access Control
 - Dynamic VLAN Assignment
- MAC-based Access Control (MAC)
 - Port-based Access Control
 - Host-based Access Control
 - Dynamic VLAN Assignment
- Japan Web-based Access Control (JWAC)
 - Host-based Access Control
- Microsoft® NAP
 - Supports 802.1X NAP
 - Supports DHCP NAP
- Guest VLAN
- RADIUS and TACACS+ authentication for switch access
- 4-Level user account

Management

- Web-based GUI
- Command Line Interface (CLI)
- Telnet Server
- Telnet Client
- TFTP Client
- ZModem
- SNMP v1/v2c/v3
- SNMP Trap
- System Log
- RMON v1
 - Supports 1,2,3,9 Groups
- RMON v2
 - Supports ProbeConfig Group
- sFlow
- LLDP/LLDP-MED
- BootP/DHCP Client
- DHCP Auto-Configuration
- DHCP Relay
- DHCP Relay Option 60; 61
- DHCP Relay Option 82
- DHCP Server
- Flash File System
- Multiple Images
- Multiple Configurations
- CPU Monitoring
- Debug Command
- SNMP
- ICMPv6
- DHCPv6 Client
- DHCPv6 Relay
- DHCPv6 Server
- Trusted Host
- MTU Setting
- Microsoft® NLB Support
- UDP helper

OAM

- 802.3ah Ethernet Link OAM
- 802.3ah D-Link Extension: D-Link Unidirectional Link Detection (DULD)
- IEEE1588 Precision Time Protocol (PTP)
- Cable Diagnostics
- Connectivity Fault Management (CFM)
- ITU-T.Y.1731

Green

- Power saving by Link Status
- Power saving by Cable Length
- Time-based PoE

MIB/IETF Standards

- RFC1213 MIB-II
- RFC1493 Bridge MIB
- RFC1907 SNMPv2 MIB
- RFC2571~2576 SNMP MIB
- RFC1271, 2819 RMON MIB
- RFC2021 RMON v2 MIB
- RFC2665 Ether-like MIB
- RFC2668 MAU MIB
- RFC2674 802.1p MIB
- RFC2233, 2863 IF MIB
- RFC2618 RADIUS Authentication Client MIB
- RFC1724 RIP v2 MIB
- RFC2096 IP Forwarding Table MIB (CIDR)
- RFC2620 RADIUS Accounting Client MIB
- Ping MIB
- Traceroute MIB
- D-Link Private MIB
- RFC768 UDP
- RFC783 TFTP
- RFC 791 IP
- RFC 793 TCP
- RFC 826 ARP
- RFC854 Telnet
- RFC951, 1542 BootP
- RFC2068 HTTP
- RFC3056, 5214 IPv6 Tunnel
- RFC2138 RADIUS
- RFC2139 RADIUS Accounting
- RFC1492 TACACS
- RFC3176 sFlow
- 82RFC2598 DiffServ Expedited Forwarding

xStack Layer 2+ Managed Stackable Gigabit Switches

Ordering Information	
DGS-3420-28TC	• 20 10/100/1000BASE-T and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁵
DGS-3420-28SC	• 20 SFP and 4 Combo 10/100/1000BASE-T/SFP and 4 SFP+ ⁵
DGS-3420-28PC	• 20 10/100/1000BASE-T PoE and 4 Combo 10/100/1000BASE-T PoE/SFP and 4 SFP+ ⁵
DGS-3420-52T	• 48 10/100/1000BASE-T and 4 SFP+ ⁵
DGS-3420-52P	• 48 10/100/1000BASE-T PoE and 4 SFP+ ⁵
Optional Management Software	
DV-600S	• D-View 6.0 Network Management Software Standard Edition
DV-600P	• D-View 6.0 Network Management Software Standard Edition
Optional 10 Gbps SFP+ Transceivers	
DEM-431XT	• 10 GBASE-SR SFP+ Transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-431XT-DD	• 10 GBASE-SR SFP+ Transceiver (with DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-432XT	• 10 GBASE-LR SFP+ Transceiver (w/o DDM), 10 km
DEM-432XT-DD	• 10 GBASE-LR SFP+ Transceiver (with DDM), 10 km
Optional 1 Gbps SFP Transceivers	
DEM-310GT	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage
DEM-311GT	• SFP transceiver, 1000BASE-SX standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage
DEM-312GT2	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 2 km, 3.3 V operating voltage
DEM-314GT	• SFP transceiver, 1000BASE-LXH standard, single-mode fiber, max. distance 50 km, 3.3 V operating voltage
DEM-315GT	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 80 km, 3.3 V operating voltage
DEM-330T	• SFP transceiver, 1000BASE-LX standard, single-mode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-330R	• WDM SFP transceiver, 1000BASE-LX standard, singlemode fiber, max. distance 10 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm
DEM-331T	• WDM SFP transceiver, 1000BASE-LX standard, singlemode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1550 nm, Rx wavelength 1310 nm
DEM-331R	• WDM SFP transceiver, 1000BASE-LX standard, singlemode fiber, max. distance 40 km, 3.3 V operating voltage, Tx wavelength 1310 nm, Rx wavelength 1550 nm
DEM-211	• SFP transceiver, 100BASE-FX multi-mode fiber, max. distance 2 km, 3.3 V operating voltage
DEM-210	• SFP transceiver, 100BASE-FX multi-mode fiber, max. distance 15km, 3.3 V operating voltage
Recommended 10 Gbps SFP+ Direct Attach Stacking Cables ⁸	
DEM-CB100S	• 10-GbE SFP+ 1 m Direct Attach Stacking Cable
DEM-CB300S	• 10-GbE SFP+ 3 m Direct Attach Stacking Cable
Optional Redundant Power Supplies	
DPS-500	• 140-watt redundant power supply
DPS-500DC	• 140-watt DC redundant power supply
DPS-700 ⁷	• 589-watt redundant power supply

⁴ Functions available in future firmware upgrade

⁵ Stacking cable and SD card are not included

⁶ Product available in future

⁷ Supported in DGS-3420/28PC and DGS-3420/52P only

⁸ These stacking cables are not included but are recommended to be purchased separately for the physical stacking functionality.



For more information: www.dlink.eu

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X S T A C K



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