HIKVISION

How to use ONVIF Test Tool

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IPv6 Environment Setup

Note:

This part is mainly for passing the test of IPv6 function, and the environment is just our suggestion, you can surely refer to the ONVIF DEVICE TEST TOOL INSTALLATION GUIDE which you can get when you download the tool.

You may need to download clients as below to finish this part:

- VMware;
- m0n0wall;
- 1. Download VMware Workstation from official website and installiton your PC, here we take VMware-workstation-full-7.1.3-324285 as example

VMware Workstation Setup	
Performing the Requested O	perations
Please wait while the wizard perfor minutes.	rms the requested operation. This may take several
Status: Installing packages on the	system

- 2. Download m0n0wall and install it, here we use generic-pc-1.32-vm.zip
- 3. Open m0n0wall.vmx with WMware program and click power on



4. For the first time setup, follow the instruction appeared to set an IP address for the m0n0wall, Enter **2** for IP address setting.

🔁 m0n0wall - VMware Workstation	
File Edit View VM Team Windows Help	
Sidebar × 🔒 Home × 🖓 m0n0wall ×	
□ Powered On Port configuration:	
tim m0n0wall LAN → EMP	
Windows X WAN -> em1	
м0n0wall console setup	

1) Interfaces: assign network ports	
2) Set up LAN IP address	
3) Reset webGUI password	
4) Reset to factory defaults	
5) Reboot system	
6) Ping host	
Enter a number: 2	
Enter the new LAN IP address: 10 13 1 250	
Subnet masks are entered as bit counts (as in CIDR potation) in	м0п0wall.
∍.g. 255.255.255.0 = 24	
255.255.0.0 = 16	
255.0.0 = 8	
< Еnter the new LAN subnet bit count: ^G^@	
To direct input to this VM, click inside or press Ctrl+G.	🛶 🖏 🖏 🖉

5. Enter 24 to set the DHCP IP segment

6. Press Enter to finish the setup



- 7. Open the IE browser on the host computer and input IP address of m0n0wall
- 8. Login with default account: admin/mono
- 9. Go to System > Advanced and check the checkbox of Enable IPv6 support and Save

(a) m@n@wall*	webGUI Configuration monowall.local
System General setup IPv4 Static routes IPv6 Static routes	System: Advanced setup Note: the options on this page are intended for use by advanced users only, and there's NO support for them.
Firmware Advanced User manager Interfaces (assign) LAN WAN Firewall IPv4 Rules IPv6 Rules	IPv6 support IPv6 support After enabling IPv6 support, configure IPv6 addresses on your LAN and WAN interfaces, then add IPv6 firewall rules. Note: you must set an IPv6 address on the LAN interface for the IPv6 support to work. Save
NAT Traffic shaper Aliases Services DNS forwarder Dynamic DNS DVCP senver	Filtering bridge Enable filtering bridge This is no longer available because it is not applicable with if_bridge, the new way of bridging in FreeBSD. Filtering always occurs on the member interfaces of the bridge. It is retained here as a notice for those accustomed to using this option.
DHCP relay SNMP Proxy ARP Captive portal Wake on LAN VPN IPsec PPTP	Spoof Checking Disable Spoof Checking on bridge Spoof Checking blocks packets not sourced from the subnet of the interface the packet was recieved on. This option only affects bridged interfaces. Save

10. Go to Interfaces>LAN and set the LAN IPv6, Check IPv6 Router Advertisements and Save

(a) mõnðwall°	webGUI Config	guration monowall.lo
System General setup IPv4 Static routes	Interfaces: LA Primary configuratio	N Secondary IPs
Irvo Static routes Firmware Advanced User manager Interfaces (assign) LAN WAN Firewall	IP address IPv6 mode	172.6. 19.202 / 24 ▼ static ▼ Choosing 6to4 on the LAN interface will make it use the irst available /64 prefix within the WAN interface's 6to4 prefix (which is determined by its current IPv4 address).
IPv4 Rules IPv6 Rules NAT Traffic shaper	IPv6 address	2001:1:1:1:1:1:1 / 64 - Using a number less than /64 will cause RAs not to be ar nounced as there aren't enough subnet bits. i.e. /48
Aliases Services	Suggested IPv6 address	Router advertisements are not enabled on WAN interface.
DNS forwarder Dynamic DNS DHCP server DHCP relay SNMP Proxy ARP Captive portal Wake on LAN VPN IPsec PPTP Status	IPv6 RA	 Send IPv6 router advertisements If this option is checked, other hosts on this interface will be able to automatically configure their IPv6 address based on prefix and gateway information that the firewall provides to them. This option should normally be enabled. Managed address configuration If this option is checked, other hosts on this interface will use DHCPv6 for address allocation and non address allocation configuration. Other stateful configuration If this option is checked, other hosts on this interface will use DHCPv6 for non address allocation configuration. Souther stateful configuration If this option is checked, other hosts on this interface will use DHCPv6 for non address allocation configuration, such as DNS. Save Save Save Other stateful configuration Save Save Save Save Other stateful configuration Save Save

Note:

The IPv6 address is not specific, the number behind "/" means during the whole test,

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this certain bit of the address is fixed, in the example on the snapshot, the number is 64 mean the former 64 bit is fixed and it is always be 200:1:2:3, and you can set the number as you wish

The test device, main host, and m0n0wall need to in the same LAN.

ONVIF Test Tool Setup

Note: Or you can refer to the ONVIF TEST TOOL Installation Guide

Tool Configuration

1. Download the ONVIF Test Tool from the ONVIF website and install the client, here we take V13_06 as an example, and run the client after installation.



- 2. Go to Discovery and choose the corresponding NIC
- 3. Click Discover Device to show the online device, and then click Probe, Check in turn, you will see the basic information of the device in the scopes window.

	T 170 C 10 000					
UNVIF Device Test	1001-172.0.19.208					
neip						
Discovery Manageme	nt Conformance Test Diagnostics Debug					
		_	- Device Under Test Informa	ation		
NIC: 172.6.19.7 (本	[地连接]	•	EP Address:	uuid:30303230-3133-3036-3134-414152523432		
📃 Use Hardw	vare Notation		Type:	dn:NetworkVideoTransmitter		
Enable search opt	tions		Device IP:	172.6.19.130	Probe	
Scopes:		_	Device Service Address:	http://172.6.19.130:80/onvif/device_service -	Check	
		^	User Name:	admin		
		-	Password:	12345		
			Scopes:	onvif://www.onvif.org/type/video_encoder	*	
	Discover Devices			onvif://www.onvif.org/type/ptz		
IP	UUID	Ha		onvif://www.onvif.org/type/audio_encoder onvif://www.onvif.org/hardware/DS-6716HW		
172 6 19 130	unid:30303230-3133-3036-3134-4141525	D		onvif://www.onvif.org/location/country/china		
172.6.19.110	um:uuid:43505e98-1dd2-11b2-819b-0040	D:		onvif://www.onvif.org/name/Embedded%20Net%20DVS onvif://www.onvif.org/Profile/Streaming		
172.6.19.251	um:uuid:01a931c5-ab70-11b3-81fa-8ce7	D!		, ,		
172.6.19.252	um:uuid:a3d19564-1dd2-11b2-82c5-4419	D!				
172.6.19.190	um:uuid:ae647256-1dd1-11b2-8149-8ce7	D:				
172.6.19.225	um:uuid:384b3fad-1dd2-11b2-8079-8ce7	D!				
					$\overline{\mathbf{v}}$	
			Metadata Version:	1		
			Brand:	Hikvision		
			Model:	DS-6716HW		

Note: if you failed to get the information after click check button, check if the device support ONVIF protocol first.

4. Go to Management interface and set the parameter below, and password cannot include the username, for example, username is admin, password cannot be 123admin or admin123 and so on.

ONVIF Device Test Tool	- 10.16.99.70
File Help	
Discovery Management Confi	ormance Test Diagnostics Debug
limeouts	
Message Timeout (ms):	30000
Reboot Timeout (ms):	120000
Time Between Tests (ms):	0
Operation Delay (ms):	eaboo
Time Between Requests (ms):	0
Environment	
DNS IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
NTP IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
GW IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
Multicast Address Range	
Use multicast address rang	je
IPv4 Min: 239.0.0.0	Max: 239.255.255.255
IPv6 Min: #15:0:0:0:0:080	00:0 Max: ff15:0:0:0:0:0:8000:0
Miscellaneous	
Security PTZ Events I/	0 Recording QuickInstall Credential Identifier Values Operator Actions
Use embedded passwords	for security tests
Provide own passwords	
Passwords: abcd12345	abcd12345
Secure method:	GetDeviceInformation 💌

5. Go to Management> Miscellaneous> Event and Click Get

ONVIF Device Test Tool	10.1/.114.200
File Help	Test Discussion Debug
Timeouts	
Message Timeout (ms):	30000
Reboot Timeout (ms):	120000
Time Between Tests (ms):	0
Operation Delay (ms):	60000
Time Between Requests (ms):	0
Environment	
DNS IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
NTP IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
GW IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588
Multicast Address Range	
Use multicast address rang	e
IPv4 Min: 239.0.0.0	Max: 239.255.255.255
IPv6 Min: ff15:0:0:0:0:0:80	0:0 Max: #f15:0:0:0:0:08000:0
Miscellaneous	
Security PTZ Events I/	D Recording QuickInstall Credential Identifier Values Operator Actions
First event topic:	ns 1 Device/HardwareFailure/StorageFailure
Topic namespaces:	tns 1="http://www.onvif.org/ver10/tonics"
	Ψ
Second event topic:	tns 1:Device/Trigger/DigitalInput 🔹
Second topic namespaces:	tns1="http://www.onvif.org/ver10/topics"
	Show only property events
Subscription Timpout (a):	
u	

6. Select the first and second event topic, we suggest to select **tns1:VideoSource/MotionAlarm** for both of them, otherwise, if the device does not support the event type you selected, you will fail the test.

ONVIF Device Test Too	- 10.17.114.200	
File Help		
Discovery Management Con	formance Test Diagnostics Debug	
Timeouts		
Message Timeout (ms):	30000	
Reboot Timeout (ms):	120000	
Time Between Tests (ms):	0	
Operation Delay (ms):	60000	
Time Between Requests (ms):	0	
Environment		
DNS IPv4: 10.1.1.1	IPv6: 2000:1:2:3:9a8b:afffe70:d588	
NTP IPv4: 10.1.1.1	IPv6: 2000.1.2.3.9a8b.aff fa70:d588	
GW IB-4: 10.1.1.1	IDC. 2000-1-2-2-0-0	
Multicast Address Bange	11 YU. 2000.1.2.3.3000.011670.0000	
Use multicast address ran	0e	
IPv4 Min: 229.0.0.0	M 220 255 255	
1PV4 Mill. 235.0.00		
IPv6 Min: (#15:0:0:0:0:0:0	UU:U Max: (#15:0:0:0:0:0:0:0:000:0	
Miscellaneous		
Security PTZ Events	/O Recording QuickInstall Credential Identifier Values Operator Actions	
First event topic:	tns1:VideoSource/MotionAlam	-
Topic namespaces:	tns1="http://www.onvif.org/ver10/topics"	
		Ψ.
Second event topic:	tns1:Device/Trigger/DigitalInput	-
Second topic namespaces:	tns1:Device/HardwareFailure/StorageFailure tns1:Device/Trigger/DigitalInput	
	tns1:Device/Trigger/Relay tns1:VideoSource/ImageTooDark/ImagingService	
	tns 1:Video Source //Motion Alam https://www.comment.com/alam	
	trs 1.monitoring/Operating Time/LastReset	
Subscription Timeout (s):	tns 1:Monitoring/Operating Time/LastReboot tns 1:Monitoring/Operating Time/LastClockSynchronization	L
	ths1:Device/Trigger/thshik:AlamIn	

7. Go to Conformance Test and click Start Conformance Test

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ONVIF Device Test Tool - 17	2.6.19.190	
Help		
Discovery Management Confor	mance Test Diagnostics Debug	
-Responsible Member-		
Member Name:		
Member Address:		Clear
Device Under Test Information		
Product Name:		
Brand:	ONVIF	
Model:	DS-2DF1-5284-A	
Other Information:		Clear
Test Execution Information		
Test Operator Name:		
Executing Organization Name:		
Executing Organization Address:		- Clear
Conformance		
Start Conformance Test		

8. Go to Diagnostics page to check the test result. Green means pass, red is failed. And you can use the control bar on the upper side to control the process.

ONVIF Device Test Tool - 172.6.19.190					
Help					
Discovery Management Conformance Test Diagnostics Debug					
Run Run Current TR Run Selected T C Refresh Features 1 No R	epeat III Pause 🜑 Stop 💥 Halt 🔌 Clear 🗸 🗖 Save 🗸				
g ⊕ O IP Configuration	Step Details				
g ⊕ O Device Discovery	RTSS-4-1-2 NOTIFICATION STREAMING				
O ⊕ O Device Management	STEP 1 - Getting media service address				
	Transmit done				
	Receive done				
	STEP PASSED				
Audio & Video Streaming	STEP 2 - Connect to Media service				
Diffication Streaming Interface	Media service address: http://172.6.19.190/onvif/Media				
⁸	STEP PASSED				
⊕	STEP 3 - Creating media profile [name = 'Test']				
- Event Handling Transmit done					
B-I O Event Properties STEP PASSED					
g 🖻 🗖 🗘 Basic Notification	STELLASED				
- 문VENT-2-1-9 BASIC NOTIFICATION INTERFACE - SUE	STEP 4 - Getting metadata configurations				
EVENT-2-1-12 BASIC NOTIFICATION INTERFACE - RE	Iransmit done				
- ₩ ♦ EVENT-2-1-17 BASIC NUTIFICATION INTERP.	STEP PASSED				
EVENT 21 10 DASIC NOTIFICATION INTERFACE IN					
■ O EVENT-2-1-15 BASIC NOTIFICATION INTERFACE - INIT ■ O EVENT-2-1-20 BASIC NOTIFICATION INTERFACE - INIT ■ O EVENT	STEP 5 - Getting video source configurations				
EVENT-2-1-21 BASIC NOTIFICATION INTERFACE - UN	Receive done				
CVENT-2-122 BASIC NOTIFICATION INTERFACE. BE STEP PASSED					
Beal-Time Pull-Point Notification Interface					
STEP & Value Source and Metadata Configuration					
⊕ I O Capabilities					
	Briege 7- Adding video source configuration [token = 'Video SourceToken'] to profile				
B O Security Test Cases Transmit done					

9. If all passed, go to conformance Test and enter the test information correspondingly and generate Doc, Test Report and Feature list.

Help		
Discovery Management Confo	mance Test Diagnostics Debug	
Responsible Member		
Member Name:	HIKVISION	
Member Address:	No.700 Dongliu Road, Binjiang District, Hangzhou, China	Clear
Device Under Test Information		
Product Name:	DS-2CD2012-I	
Brand:	HIKVISION	
Model:	DS-2CD2012-I	
Other Information:		Clear
Test Execution Information		
Test Operator Name:	Carrie Feng	
Executing Organization Name:	HIKVISION	
Executing Organization Address:	No.700 Dongliu Road, Binjiang District, Hangzhou, China	*
		- Clear
Conformance		
Start Conformance Test		
Conformance Testing FAILED, D	etails are available at the Diagnostic tab.	1/9 of 1/9 done, uta
Profile C (Release Candidate)	IOT SUPPORTED	
Profile G (Release Candidate) I	AILED	
Conformance Testing FAILED (1	79 passed, 0 failed)	
Generate DoC	County Test Devet	

Device Configuration

1. All the steam video type need to be set to Video&Audio

	VISION®	Live View Playba	ick Picture	Application	Configuration
Ţ	Local	Video Custom Video	Audio ROI Display Info. o	on Stream Targe	et Cropping
···-	System	Stream Type	Main Stream(Normal)	\sim	
Ø	Network	Video Type	Video&Audio	$\overline{}$	
<u>Q</u> .	Video/Audio	Resolution	1920*1080P	~	
14	Image	Bitrate Type	Variable	\checkmark	
圁	Event	Video Quality	Medium	\checkmark	
B	Storage	Frame Rate	25	✓ fps	
~	Counting	Max. Bitrate	6144	Kbps	
Ē	Open Platform	Video Encoding	H.264	\checkmark	
모	EPTZ	H.264+	OFF	~	
		Profile	Main Profile	\checkmark	
		I Frame Interval	50		
		SVC	OFF	\checkmark	
		Smoothing		50 [Clear<->Smoo	oth]

нік	VISION®	Live View F	Playback	Picture	Applicatio	on Configuration
Ţ	Local	Video Custom Vid	deo Audio	ROI Display	Info. on Stream	Target Cropping
	System	Stream Type	Sub-s	tream	\checkmark	
Ð	Network	Video Type	Video	&Audio	~	
<u>.</u>	Video/Audio	Resolution	704*5	76	~	
1	Image	Bitrate Type	Variat	le	~	
圁	Event	Video Quality	Mediu	m	~	
B	Storage	Frame Rate	25		✓ fps	
2	Counting	Max. Bitrate	1024		Kbps	
Ē	Open Platform	Video Encoding	H.264		~	
모	EPTZ	Profile	Main I	Profile	~	
		I Frame Interval	50			
		SVC	OFF		~	
		Smoothing		0	50 [Clear<	->Smooth]
		🗎 Save	e			

2. Need to record about 1 min video by SD card or NAS for record function test, and also you need to disable the record schedule when it is done in case the test process will be disrupted by the w/r of video.

HIKVISION®	Live View	Playback	Picture	Application	Configuration					
🖵 Local	Record Schedul									
System	C7 Enable									
Network										
Video/Audio	Continuou	s V X Delete	Delete All			Advanced	Continuous			
Image	0	2 4 6	8 10	12 14	16 18 20	22 24	Motion			
Event	Mon	2 4 6	8 10	12 14	16 18 20	22 24	Alarm			
Storage	Tue		1 T 1 T				Motion Alarm			
Schedule Settings	0 Wed	2 4 6	8 10	12 14	16 18 20	22 24	Motion & Alarm			
Storage Management	0	2 4 6	8 10	12 14	16 18 20	22 24	Event			
Counting	Thu									
Open Platform	Fri	2 4 6	8 10	12 14	16 18 20	22 24				
PTZ EPTZ	0	2 4 6	8 10	12 14	16 18 20	22 24				
	Sat									
	Sun	2 4 6	8 10	12 14	16 18 20	22 24				

3. Enable ONVIF and add admin user

HIKVISION®	Live View	Playback	Picture	Applicati	ion	Configuration			🕈 admin	🚯 Help	F+ Logo
manbion	2110 11011	r lay baon	, interest	, abbuoau					_	•	
🖵 Local	SNMP FT	P Email Platforn	Access HTTPS	QoS 8	02.1x	Integration Protocol	Network Service	Smooth Streaming	HTTP Listening	SRTP	
System	Enable I	Hikvision-CGI									
Network	Hikvision-CO	Hikvision-CGI Authenticat digest									
Basic Settings	Enable C	ONVIF									
Advanced Settings	ONVIF Vers	ion 18.12									
Video/Audio											
Image	User Lis	t					Add Modify	Delete			
Event	No.	U	ser Name				Level				
E Storago	1	admin				Adn	hinistrator				
Giorage					_						
Counting											
Open Platform											
EPTZ											
				@2010	9 Hilovision	Digital Technology Co	Ltd All Rights Rose	hed			

Note:

When run the ONVIF tool on certain PC system, the Tool may failed to enable the TLS1.2 function, you can go to Configuration> Network > Advanced settings to disable the HTTPs on the device or add TLS1.2 to your PC's registry list.

HIKVISION®	Live View	Playback	Picture	Appl	ication	Configuration			👱 adm	in 🕧 Help	E
Local	SNMP FTP	Email Platfor	m Access HTTPS	QoS	802.1x	Integration Protocol	Network Service	Smooth Streaming	HTTP Listening	SRTP	
System System Network	Enable	°S Browsing									
Advanced Settings	Server Certificate	e	default		~						
Video/Audio	🗎 S	ave									
Event Storage											
Counting Open Platform											
EPTZ											

Note:

Close the firewall during the whole the test



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