IPv6 Readiness Report

hea.uum.edu.my — hea.uum.edu.my

Scan to verify

Category: Education • Generated: 02 Nov 2026, 03:00 MYT • Last Checked: 08 Aug 2026, 18:16 MYT • Verification ID: bd18ca08-cbed-425d-93ee-9223fe7f5e38
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/bd18ca08-cbed-425d-93ee-9223fe7f5e38

✗
Non-Compliant
MGv6C-1.0

15%
No IPv6 Support

IPV6-ONLY READINESS
Website: ✗ **Not Ready**
DNS: ✗ **Not Ready**
Email: ✗ **Not Ready**

IPV4 ADDRESSES
103.5.180.127

Network Information (WHOIS / RDAP)

	IPv4 Network
Organization	Universiti Utara Malaysia
Country	MY
ASN	AS132035
ASN Name	UUM-MY-AS-AP - Computer Center, MY
Network (CIDR)	103.5.180.0/22

Web Services (35%) — 0 / 8

#	CHECK	RESULT	DETAIL
1	**AAAA Record**	FAIL	No AAAA record found in DNS.
2	**Globally Routable IPv6**	FAIL	IPv6 address is not globally routable.
3	**HTTP over IPv6**	FAIL	HTTP is not accessible over IPv6.
4	**HTTPS over IPv6**	FAIL	HTTPS is not accessible over IPv6.
5	**IPv6-Only Reachability**	FAIL	Site is not reachable when limited to IPv6-only.
6	**TLS Certificate Valid (IPv6)**	FAIL	TLS certificate is invalid, expired, or hostname mismatch over IPv6.
7	**Dual-Stack (IPv4 + IPv6)**	FAIL	Domain is IPv6-only or IPv4-only.
8	**HTTP/3 (QUIC)**	FAIL	No HTTP/3 support detected.

DNS & DNSSEC (25%) — 0 / 5

#	CHECK	RESULT	DETAIL
1	**NS Has AAAA Record**	FAIL	No nameserver has an AAAA record.
2	**NS Reachable via IPv6**	FAIL	No nameserver is reachable over IPv6.
3	**NS Answers Queries via IPv6**	FAIL	Nameserver does not answer queries over IPv6.
4	**DNSSEC Validated**	FAIL	DNSSEC validation failed or zone is unsigned.
5	**Reverse DNS (PTR)**	FAIL	No PTR record found.
6	**DS Record at Parent**	FAIL	No DS record at parent.
7	**RRSIG Valid**	FAIL	No valid RRSIG found.

#	CHECK	RESULT	DETAIL
8	**Signing Algorithm**	INFO	No DNSKEY record found.

Email Services (25%) — 0 / 6

#	CHECK	RESULT	DETAIL
1	**MX Record Exists**	FAIL	No MX record found in DNS.
2	**MX Server Has IPv6**	FAIL	MX server has no IPv6 address.
3	**SMTP Reachable via IPv6**	FAIL	SMTP is not reachable over IPv6.
4	**STARTTLS over IPv6**	FAIL	STARTTLS not available over IPv6.
5	**SPF Record**	FAIL	No SPF record found.
6	**DKIM Selector**	INFO	No common DKIM selector found.
7	**DMARC Record**	FAIL	No DMARC record found.

IPv4 Baseline (15%) — 3 / 3

#	CHECK	RESULT	DETAIL
1	**A Record**	PASS	103.5.180.127
2	**HTTP over IPv4**	PASS	HTTP (port 80) responds over IPv4 — 35ms TTFB.
3	**HTTPS over IPv4**	PASS	HTTPS (port 443) responds over IPv4 — 88ms TTFB.

Audit Trail & Evidence Record

Verification ID	bd18ca08-cbed-425d-93ee-9223fe7f5e38
Domain	hea.uum.edu.my
Check Mode	Manual
Status	Completed
Started	08 Aug 2026, 18:16:16 MYT
Finished	08 Aug 2026, 18:16:21 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/bd18ca08-cbed-425d-93ee-9223fe7f5e38

Integrity Verification

✓ **INTEGRITY VERIFIED**

Algorithm	hmac-sha256-v1
Root Hash	7b85748d42e62cd79a20a003111aff70e9875fe50b7e051a6c38835c7dd08549
http_headers	2f430adff105de020a61eb5d706f0e0741eaa0362e7c194f87a959ca8eb26186
dns_responses	eb2e03f7027be6351a0710bccfb0d6383aaf070a2d1efd402690717695b5e48e
tls_handshake	bf47e4f00078869b2880699455bdccff067a0dfe19084ca36b2924144a9fc994
connectivity_log	5e1bb590ac386d9568f80d5a0eeef612e1f8aca9e2856362afe71e55ba6b53ea
dns_resolution_times	f0dedf24bf4de1962212f9ac0d15e5912bb46319c6985079e2bbb88be9acede3

Test Node Identity

Os	Linux srv1440888 6.8.0-136-generic #136-Ubuntu SMP PREEMPT_DYNAMIC Wed Jul 1 21:53:05 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.33
Server Ipv4	76.13.221.142
Server Ipv6	2a02:4780:5e:2789::1

DNS Resolution Performance

Comparison of A (IPv4) vs AAAA (IPv6) query times across resolvers and transports. Shows median (p50) and 95th percentile (p95) of 3 samples per tuple.

Resolver	Transport	A p50 (ms)	A p95 (ms)	AAAA p50 (ms)	AAAA p95 (ms)	Delta (ms)
System	Default	21.34	21.45	19.37	20.93	-2
Google	IPv4	55.79	57.53	53.81	57.17	-2
Google	IPv6	162.42	171.46	78.86	267.29	-83.6
Cloudflare	IPv4	33.78	36.59	12.98	22.76	-20.8
Cloudflare	IPv6	52.1	56.7	23.97	44.16	-28.1

DNS Evidence

A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 62702
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
hea.uum.edu.my.□□297□IN□A□103.5.180.127
```

DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 46662
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 53675
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 37424
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 53745
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 17652
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

RRSIG

```

```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 18425
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1
```

```
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
uum.edu.my.□□299□IN□SOA□dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
```

DNSSEC_VALIDATION

```
;; resolution failed: ncache nxrrset
; negative response, fully validated
; hea.uum.edu.my.□□299□IN□\-SOA□;-$NXRRSET
; uum.edu.my. SOA dns1.uum.edu.my. admin.dnsvault.net. 2026062406 10800 3600 604800 86400
; uum.edu.my. RRSIG SOA ...
; DEK3638LQVKIUFM2G0ERBVGC5Q2T7TMO.uum.edu.my. RRSIG NSEC3 ...
; DEK3638LQVKIUFM2G0ERBVGC5Q2T7TMO.uum.edu.my. NSEC3 1 0 0 DC8EBCBA33EE44B3 DG9UGP4TN0KG4FJ8ELSJ7ACSO9J031NM A RRSIG
```

TLS Handshake Evidence

IPV4 Connection

IP Used	103.5.180.127
IP Version	4

```
depth=0 C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
verify error:num=18:self-signed certificate
verify return:1
depth=0 C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
verify return:1
CONNECTED(00000010)
---
Certificate chain
 0 s:C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
   i:C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Jan 30 06:51:00 2023 GMT; NotAfter: Dec 31 06:51:00 2056 GMT
-----BEGIN CERTIFICATE-----
MIID+DCCAuCgAwIBAgIIHlQs0ljTtOEwDQYJKoZIhvcNAQELBQAwgZExCzAJBgNV
BAYTAkNBMQswCQYDVQQIEwJCQzESMBAGA1UEBxMJVmFuY291dmVyMRYwFAYDVQQK
Ew1Gb3J0aW5ldCBJbmMuMREwDwYDVQQLEwhGb3J0aW5ldDERMA8GA1UEAxMIRm9y
dGlXRUIxIzAhBgkqhkiG9w0BCQEWFHN1cHBvcnRAZm9ydGluZXQuY29tMCAXDTIz
MDEzMDA2NTEwMFoYDzIwNTYxMjMxMDY1MTAwWjCBkTELMAkGA1UEBhMCQ0ExCzAJ
BgNVBAgTAkJDMRIwEAYDVQQHEwlWYW5jb3V2ZXIxFjAUBgNVBAoTDUZvcnRpbmV0
IEluYy4xETAPBgNVBAsTCEZvcnRpbV0MREwDwYDVQQDEwhGb3J0aVdFQjEjMCEG
CSqGSIb3DQEJARYUc3VwcG9ydEBmb3J0aW5ldC5jb20wggEiMA0GCSqGSIb3DQEB
AQUAA4IBDwAwggEKAoIBAQDEwC1LPW/zAXCNtNzFmfhNTMdaA28alx+KQs4bCk8p
ycsOeMgtj3UjURN9rp2p3VEa43WQ+pL4MGQc4D0vKff+8E2LO38Aiumlle5MUIf9
PDWQNYmbp+upWjYDqYdRpEM3DTc+/km4jDHyk3z6fabWQIMlfECD9bvbzkVNW5Gh
8NIY65q7EbSBlfM8qSDVoEo5EuQEZVgJhdCrz1fEplPAZUXwPcL+RgX9g+gfaXVl
xayAPxoXzJ7mub1wPEl7WTxVYvBTyf6Rm3T/CLfAoCaFDNa8fy789BAkP9zau/Yk
2v1aUkzSn0jrNLvi7fIlmAU+V0Gj0sW88qa8iQ/H+qNZAgMBAAGjUDBOMAwGA1Ud
EwQFMAMBAf8wHQYDVR0OBBYEFNwJh6iZ+Ymx/9stkb3W7ex9o7tMMB8GA1UdIwQY
MBaAFNwJh6iZ+Ymx/9stkb3W7ex9o7tMMA0GCSqGSIb3DQEBCwUAA4IBAQCIkjwJ
Pmx2CGiiFaFup4v3kgC1lvmJHClzfjymxfxyhKS5ZY47lJwgcTCYYlD57Fb/rf/t
Kw/mOckAQ23Aas6gO8ArHoZYVg35FYORpEw6yWXnwCi4WFXoZhPxDbks1SxUGq0W
wKDpoNQoc3+ldBQjIKnamFyjiKiWKsMqntnfvuLNh85vpPN1CkYMn4LNJWu0ACSQ
4T+aea3qmvnFkfagjl+SHujybsqhWLyRCTG48bttAQ2EOYUc6d0litk60zywpiQJ
a4USaFAl4o/KrryMBFufrFpGIPMgWdqgUrYTQqPfS+DDmlNBAc2PcMhTheq9LnoM
DNqyb1dfEwDBRzIQ
-----END CERTIFICATE-----
---
Server certificate
subject=C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
issuer=C = CA, ST = BC, L = Vancouver, O = Fortinet Inc., OU = Fortinet, CN = FortiWEB, emailAddress = support@fortinet.com
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: X25519, 253 bits
---
SSL handshake has read 1681 bytes and written 409 bytes
Verification error: self-signed certificate
---
New, TLSv1.2, Cipher is ECDHE-RSA-AES256-GCM-SHA384
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
SSL-Session:
    Protocol  : TLSv1.2
    Cipher    : ECDHE-RSA-AES256-GCM-SHA384
    Session-ID: F073865C3AF6B1A121BA5D72A3B77B31589CB8833C85B03922A28DC2D2289A06
    Session-ID-ctx:
    Master-Key: B41C9325D2BB643AE163F7FB76F61B390B8D9EDF59CBF8167111FD22874593AAE579B052A75035FAA1FDEB358C0A8934
    PSK identity: None
    PSK identity hint: None
    SRP username: None
    TLS session ticket lifetime hint: 7200 (seconds)
    TLS session ticket:
    0000 - 16 d1 0d 9c 1b b6 22 11-4e ca d0 18 12 f3 8d 23   ......".N......#
    0010 - 6f 3a 0f 40 66 04 52 06-f8 d5 5c b6 61 56 1f 0d   o:.@f.R...\.aV..
    0020 - d4 fc 9b 17 59 a5 b4 38-f0 ac 96 30 60 c2 ca 67   ....Y..8...0`..g
    0030 - 3c bf 20 63 22 0a 80 87-5d 04 fe d5 b9 92 cc 66   <. c"...]......f
    0040 - d0 d9 9f 15 2e 72 e3 6c-93 3d 53 17 58 b9 61 3c   .....r.l.=S.X.a<
    0050 - 66 d2 7f b8 7b 4a 08 64-6a a8 7b 15 4f 9d 8c ce   f...{J.dj.{.O...
    0060 - 9f 16 ca e3 ff dc ab 2b-d8 f9 3b 9a f9 e7 aa de   .......+..;.....
```

```
    0070 - 3c e2 2c 34 2b 1d 3f 70-0b 1d e6 92 e6 0d 28 45   <.,4+.?p......(E
    0080 - e5 ab d0 60 52 a7 da ad-c1 7e 3b 54 cd 65 06 1c   ...`R....~;T.e..
    0090 - 67 17 33 b4 e9 89 d1 73-98 53 75 3e 0f ea c5 f0   g.3....s.Su>....
    00a0 - f5 7c f0 1c 5b 6c 2c c8-54 98 d0 36 3a d5 19 e8   .|..[l,.T..6:...
    00b0 - a0 45 85 de c5 93 9b 1a-62 76 b3 6b 4c 6a b6 0d   .E......bv.kLj..

    Start Time: 1786184181
    Timeout   : 7200 (sec)
    Verify return code: 18 (self-signed certificate)
    Extended master secret: yes
---
DONE
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	500
Connected IP	103.5.180.127
Connect Time	17.57 ms
TTFB	35.43 ms
Total Time	35.46 ms

Response Headers:

```
[
    "HTTP/1.1 500 Internal Server Error",
    "Content-Length: 40130",
    "Content-Type: text/html"
]
```

IPv4 HTTPS (port 443)

HTTP Status	500
Connected IP	103.5.180.127
Connect Time	16.64 ms
TTFB	83.67 ms
Total Time	83.7 ms

Response Headers:

```
[
    "HTTP/1.1 500 Internal Server Error",
    "Content-Length: 40130",
    "Content-Type: text/html"
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	200 0.017519 0.614247
TCP Connect IPv4 → port 443	000 0.016990 0.000000

Test Node Network Evidence

Node Profile	dual stack

Egress Connectivity

IPv4 Egress	76.13.221.142
IPv6 Egress	2a02:4780:5e:2789::1

Sysctl IPv6 Flags

net.ipv6.conf.all.disable_ipv6	0

IPv6 Routes

```
2a02:4780:5e::/48 dev eth0 proto kernel metric 256 pref medium
fd7a:115c:a1e0::1136:5807 dev tailscale0 proto kernel metric 256 pref medium
fe80::/64 dev eth0 proto kernel metric 256 pref medium
fe80::/64 dev tailscale0 proto kernel metric 256 pref medium
default via 2a02:4780:5e::1 dev eth0 proto static metric 1024 pref medium
```

IPv4 Routes

```
default via 76.13.221.254 dev eth0 proto static
10.6.101.0/24 dev wg0 scope link
10.6.102.0/24 dev wg0 scope link
76.13.221.0/24 dev eth0 proto kernel scope link src 76.13.221.142
172.29.0.0/24 dev wg0 scope link
```