

# IPv6 Readiness Report

hea.uum.edu.my — hea.uum.edu.my



Scan to verify

Category: Education • Generated: 04 Jul 2026, 22:24 MYT • Last Checked: 04 Jul 2026, 03:16 MYT • Verification ID: 0dd1c757-2800-41b4-a78c-845c91842e19

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>

Audit trail: <https://ipv6.my6.my/audit/0dd1c757-2800-41b4-a78c-845c91842e19>

<p><b>X</b></p> <p><b>Non-Compliant</b></p> <p>MGv6C-1.0</p>	<p><b>15%</b></p> <p><b>No IPv6 Support</b></p>	<p><b>IPv6-ONLY READINESS</b></p> <p>Website: <b>X Not Ready</b></p> <p>DNS: <b>X Not Ready</b></p> <p>Email: <b>X Not Ready</b></p>
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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	<b>Signing Algorithm</b>	<b>INFO</b>	No DNSKEY record found.

**Email Services** (25%) 0 / 6

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

**IPv4 Baseline** (15%) 3 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	103.5.180.127
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4 — 38ms TTFB.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 92ms TTFB.

## Audit Trail & Evidence Record

Verification ID	0dd1c757-2800-41b4-a78c-845c91842e19
Domain	hea.uum.edu.my
Check Mode	Scheduled
Status	Completed
Started	04 Jul 2026, 03:15:49 MYT
Finished	04 Jul 2026, 03:16:01 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/0dd1c757-2800-41b4-a78c-845c91842e19

## Integrity Verification

✓ <b>INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	52d375de914e17f6c1e1704cc029582d02a5597bbbd271c75b19f2f5ee66607a
http_headers	50b0e67d0a7d438be47f2f8b8f4eb764bc0c943248356bf030c20fa7769e6bbf
dns_responses	dc557ba0ec5de9591ff59dd02955ed845343c6f79c9da8cad763d6118d0a3f9d
tls_handshake	ab27e8fd5b6511e31603215a599561213442c7dc890295d70b41645034f970e
connectivity_log	1008f9eefdb530a05c3ec56c36ae0268b0c0868b3a9276a4ee34ba144caefa78
dns_resolution_times	7f9d2e069d5b0c5ead614a40580b430f9857250b8f8729ea24c2f71022467bed

## Test Node Identity

Os	Linux srv1440888 6.8.0-124-generic #124-Ubuntu SMP PREEMPT_DYNAMIC Tue May 26 13:00:45 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.32
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	27.61	28.54	35.72	51.59	+8.1
Google	IPv4	51.26	51.66	34.63	63.4	-16.6
Google	IPv6	62.64	75.53	59.56	63.56	-3.1
Cloudflare	IPv4	30.59	36.29	29.05	33.32	-1.5
Cloudflare	IPv6	67.3	80.17	61.76	91.91	-5.5



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 2660
;; 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. 292 IN A 103.5.180.127
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 358
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 13046
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 5250
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 10970
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 52810
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

### RRSIG

### DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 11438
;; 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. 293 IN SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
```

#### DNSSEC\_VALIDATION

```
;; resolution failed: ncache nxrrset
; negative response, fully validated
; hea.uum.edu.my. 292 IN \-SOA; -$NXRRSET
; uum.edu.my. SOA dns1.uum.edu.my. admin.dnsvault.net. 2026061978 10800 3600 604800 86400
; uum.edu.my. RRSIG SOA ...
; DEK3638LQVKIUFM2G0ERBVG5Q2T7TM0.uum.edu.my. RRSIG NSEC3 ...
; DEK3638LQVKIUFM2G0ERBVG5Q2T7TM0.uum.edu.my. NSEC3 1 0 0 DC8EBCBA33EE44B3 DG9UGP4TN0KG4FJ8ELSJ7AC509J031NM A RRSIG
```





```
0070 - 40 9c 82 f3 55 22 b2 67-bc b3 b0 73 62 1f 7b 39 @...U".g...sb.{9
0080 - bd 15 89 70 1a 96 26 22-48 2d 49 e3 75 63 a1 7f ...p..&"H-I.uc..
0090 - 58 20 a7 a0 bb 7b 33 49-7b 66 08 eb 19 eb d8 d8 X ...{3I{f.....
00a0 - fa b0 5f 2e 43 1a 85 96-e6 a7 ce 00 fd ae 26 a1 .._.C.....&.
00b0 - 57 4d b1 83 fb 54 e1 e4-df 1c 1b ec fc b2 92 04 WM...T.....
```

```
Start Time: 1783106160
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	19.7 ms
TTFB	38.54 ms
Total Time	38.58 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	18.11 ms
TTFB	91.83 ms
Total Time	91.85 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 0.020549 0.433248
TCP Connect IPv4 → port 443	000 0.021630 0.000000

## Test Node Network Evidence

Node Profile	dual stack
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### Egress Connectivity

IPv4 Egress	unreachable
IPv6 Egress	unreachable

### Sysctl IPv6 Flags

net.ipv6.conf.all.disable_ipv6	0
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### IPv6 Routes

```
2a02:4780:5e::/48 dev eth0 proto kernel metric 256 pref medium
fe80::/64 dev eth0 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
```