

IPv6 Readiness Report

ums.edu.my — ums.edu.my

Category: Education • Generated: 20 Apr 2026, 21:22 MYT • Last Checked: 07 Mar 2026, 01:27 MYT • Verification ID: e5ce1e14-3007-43b7-b80d-dbf876667bb8

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/e5ce1e14-3007-43b7-b80d-dbf876667bb8>**Non-Compliant**

MGv6C-1.0

23%**No IPv6 Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

103.26.197.21

Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	Universiti Malaysia Sabah
Country	MY
ASN	AS132874
ASN Name	UMS-AS-AP Universiti Malaysia Sabah, MY
Network (CIDR)	103.26.196.0/22

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	PASS	RRSIG signatures are current and valid.
8	Signing Algorithm	INFO	RSASHA256

Email Services (25%) 3 / 6

#	CHECK	RESULT	DETAIL
1	MX Record Exists	PASS	MX record found.
2	MX Server Has IPv6	PASS	MX server has AAAA record.
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	PASS	SPF record found.
6	DKIM Selector	INFO	No common DKIM selector found.
7	DMARC Record	FAIL	No DMARC record found.

IPv4 Baseline (15%) 2 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	103.26.197.21
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4.
3	HTTPS over IPv4	FAIL	HTTPS is not accessible over IPv4.

Audit Trail & Evidence Record

Verification ID	e5ce1e14-3007-43b7-b80d-dbf876667bb8
Domain	ums.edu.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:24:15 MYT
Finished	07 Mar 2026, 01:27:47 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/e5ce1e14-3007-43b7-b80d-dbf876667bb8

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	9e4b8052bb988c974c9c675faf1a364c090180ee258d956335084a756a890c62
http_headers	312b1e857f865247b29b9592276edd2d732de047474c6b4f378e17959fa69bdc
dns_responses	41afccab43433b16f987e5c8af1a6982a1a24f978f09d75b2068ded41a6ca51e
tls_handshake	97caebcb11bc4b07362b62a860547ef6d10bb6dfdebbe04a9b3630d7bda1c4ed
connectivity_log	3341183373fa89caecaa7c82cf21d8c9c758b6e801279597844a53506983bc3b
dns_resolution_times	b4eef66f89ec747705f5b113f8929ed54cc2d7734500c42aa04e2b397dc84891

Test Node Identity

Os	Linux srv1440888 6.8.0-101-generic #101-Ubuntu SMP PREEMPT_DYNAMIC Mon Feb 9 10:15:05 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.30
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	18.74	19.01	17.91	21.04	-0.8
Google	IPv4	31.21	72.48	92.23	93.44	+61
Google	IPv6	31.1	77.99	73.87	82.1	+42.8
Cloudflare	IPv4	19.27	22.55	20.99	23.21	+1.7
Cloudflare	IPv6	28.75	115.6	12.59	117.05	-16.2

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 3718
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ums.edu.my. 002977 IN A 103.26.197.21
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 10971
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
edu.my. 0001800 IN SOA b.nic.my. hostmaster.nic.my. 2026018484 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 47423
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ums.edu.my. 001684 IN MX 0 ums-edu-my.mail.protection.outlook.com.
ums.edu.my. 001684 IN MX 10 alt3.aspmx.l.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4466
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ums.edu.my. 003600 IN NS ns2.ums.edu.my.
ums.edu.my. 003600 IN NS ns1.ums.edu.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 13902
;; flags: qr rd ra; QUERY: 1, ANSWER: 8, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ums.edu.my. 002802 IN TXT "cisco-ci-domain-verification=579409d37143004f0508b62007afa94b395e502c3d7207fcd4a447a51ef9fcb5"
ums.edu.my. 002802 IN TXT "v=spf1 include:spf.protection.outlook.com -all"
ums.edu.my. 002802 IN TXT "google-site-verification=18Rp0rjLHLWuj_e7eewqinL0NBoaviKUVMAR7aiu4I"
ums.edu.my. 002802 IN TXT "google-site-verification=mvLTjwIFLpQAITvw-krqWtgQCvc27GtZ6rGbFoZ22s"
ums.edu.my. 002802 IN TXT "MS=ms82542685"
ums.edu.my. 002802 IN TXT "google-site-verification=X7c-47i0F8VRjYLOjbF9P_4u0Z8xQsVrV0pQPQWa2LY"
ums.edu.my. 002802 IN TXT "google-site-verification=zG5EJ1_agzVT2MPRcH0kAjQ3T0DCI_RICsHHm0DlkG4"
ums.edu.my. 002802 IN TXT "google-site-verification=cm8w-Ygo38p8pc4ZiXYP2F_oMF-G7UbMQt4RJfY5pQ0"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4419
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
ums.edu.my. 001003 IN SOA ns1.ums.edu.my. dns_admin.ums.edu.my. 2026030231 10800 3600 604800 1800
```

RRSIG

```
ns1.ums.edu.my. dns_admin.ums.edu.my. 2026030231 10800 3600 604800 1800
SOA 8 3 86400 20260405074356 20260306064356 6595 ums.edu.my. KBoPzYM01csq+57Gk9uyopz/fH3tilIMHHM9DhjrCB6KbSmbngy2qDq7
LKLIz5N/zGhgfvoh9DqKojSLPcsMYRL+E8bV6ebI6U54jBwRknCIxV09 XhnEPT4KTp459Vupx41jJmzqpmNiHkj6TMQqQqFp/rNVUxcB4RMZP16F jtI=
```

DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 42795
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ums.edu.my. 21600 IN DNSKEY 256 3 8 AwEAaAKxuR+ATef/8Dt6JlFwi0ZSTF7TlvBrnp710u9990DC1a0w6uRpm M2tCkxuwQsB1lNESJwurPkjDv1G676RjlnC6y3Sg+KZ1Crxr/mq2B1oL
izsc8L9ucwYjIOUo5RQJ0Eeag5bGkcHw203r8ZT0/XVyFtVQjCi7QnQ h78rvZXj
ums.edu.my. 21600 IN DNSKEY 257 3 8 AwEAAb7LfCsWYg/WUPMGpXZ9q3S1Ai1L7UqDxvtkFLHuRE5jLW0QU3Di GFZFpB8yG0DNvnpYsAncJmLmsvA6M84TG00/K8UQ6FRY1Yli+hCAyl8u
v9Po1NY0ggWvB5sUcv/didm6c4yh2BBzdJqOAd/v9THohGcgUrrrY6L0H xCLV0F70XR6yJwoue6UPGP88fZaLe83YoECdiFA6zBHceYVB0Q+eVE+n
zpbRp/zlSer0FCesvaHDn2hiyruMt8EmA7IIAg+rAsepDvGB1G6K9NR SIWELxKbMdXTwnQ3R9GWNJkZo00vzepKj/8v7iQ37i70zADYZcx2cPi f+BzSPVQz0M=
```

DNSSEC_VALIDATION

```
;; validating ums.edu.my/SOA: no valid signature found
; unsigned answer
ums.edu.my. 20763 IN SOA ns1.ums.edu.my. dns_admin.ums.edu.my. 2026030231 10800 3600 604800 1800
ums.edu.my. 20763 IN RRSIG SOA 8 3 86400 20260405074356 20260306064356 6595 ums.edu.my. KBoPzYM01csq+57Gk9uyopz/fH3tilIMHHM9DhjrCB6KbSmbngy2qDq7
LKLIz5N/zGhgfvoh9DqKojSLPcsMYRL+E8bV6ebI6U54jBwRknCIxV09 XhnEPT4KTp459Vupx41jJmzqpmNiHkj6TMQqQqFp/rNVUxcB4RMZP16F jtI=
```

TLS Handshake Evidence

IPv4 Connection

IP Used	103.26.197.21
IP Version	4

```
401764DE16790000:error:8000006E:system library:BI0_connect:Connection timed out:../crypto/bio/bio_sock2.c:114:calling connect()
401764DE16790000:error:10000067:BI0 routines:BI0_connect:connect error:../crypto/bio/bio_sock2.c:116:
connect:errno=110
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	302
Connected IP	103.26.197.21
Connect Time	51.33 ms
TTFB	105.57 ms
Total Time	8108.53 ms
Error	Failed to connect to www1.ums.edu.my port 443 after 8002 ms: Timeout was reached

Response Headers:

```
[
  "HTTP/1.1 302 Found",
  "Date: Fri, 06 Mar 2026 09:27:17 GMT",
  "Location: https://www1.ums.edu.my/",
  "Content-Type: text/html; charset=iso-8859-1"
]
```

IPv4 HTTPS (port 443)

HTTP Status	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8001.99 ms
Error	Failed to connect to ums.edu.my port 443 after 8001 ms: Timeout was reached

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.050483 0.104257
TCP Connect IPv4 → port 443	000 0.000000 0.000000

Test Node Network Evidence

Node Profile	dual stack
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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
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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
76.13.221.0/24 dev eth0 proto kernel scope link src 76.13.221.142
```