

IPv6 Readiness Report

umk.edu.my — umk.edu.my

Category: Education • Generated: 21 Apr 2026, 18:01 MYT • Last Checked: 07 Mar 2026, 01:30 MYT • Verification ID: 434da5ce-8cf5-4a3c-afb1-cf376ce05566

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/434da5ce-8cf5-4a3c-afb1-cf376ce05566>**X****Non-Compliant**

MGv6C-1.0

18%**No IPv6 Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

103.101.246.12

Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	Universiti Malaysia Kelantan
Country	MY
ASN	AS137005
ASN Name	UMK-AS-AP Universiti Malaysia Kelantan, MY
Network (CIDR)	103.101.244.0/22

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.
8	Signing Algorithm	INFO	No DNSKEY record found.

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%) 1 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	103.101.246.12
2	HTTP over IPv4	FAIL	HTTP is not accessible over IPv4.
3	HTTPS over IPv4	FAIL	HTTPS is not accessible over IPv4.

Audit Trail & Evidence Record

Verification ID	434da5ce-8cf5-4a3c-afb1-cf376ce05566
Domain	umk.edu.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:26:27 MYT
Finished	07 Mar 2026, 01:30:02 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/434da5ce-8cf5-4a3c-afb1-cf376ce05566

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	0b5d48898db1c3560b7578d7437ebc80b607709e03d2f4a277fcab20c3fe013f
http_headers	64f76da87146216eb86522f53471f34e4d26883aff32cd73c1fbbf85fd9ad54f
dns_responses	483db2e1eeca6f30b5481b2422571ecfce3eedaca145f809ca53eb85fcd51e88
tls_handshake	f4f0fc20e874a8b04f1c843f3b3e7bdce43b3e30c2580dbf12125ecb3cb1ec59
connectivity_log	c571529628ae93d3d5180dec20e307692d772428bf4569b1feeb29b40bc18e78
dns_resolution_times	0b8035d72a74024176227435909129d5f3cf1a78b47a2a6c4eda5af06924eac9

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	10.83	20.5	6.18	18.11	-4.7
Google	IPv4	36.16	48.54	30.77	37.85	-5.4
Google	IPv6	17.54	54.02	35.26	53.02	+17.7
Cloudflare	IPv4	7.99	8.63	9.03	21.12	+1
Cloudflare	IPv6	46.23	48.09	50.1	53.54	+3.9

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 49273
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
umk.edu.my. 0009000IN A 103.101.246.12
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 32148
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
edu.my. 00017630IN SOA b.nic.my. hostmaster.nic.my. 2026018485 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 55483
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
umk.edu.my. 0009000IN MX 5 ALT1.ASPMX.L.GOOGLE.COM.
umk.edu.my. 0009000IN MX 5 ALT2.ASPMX.L.GOOGLE.COM.
umk.edu.my. 0009000IN MX 1 ASPMX.L.GOOGLE.COM.
umk.edu.my. 0009000IN MX 10 ASPMX3.GOOGLEMAIL.COM.
umk.edu.my. 0009000IN MX 10 ASPMX2.GOOGLEMAIL.COM.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 50137
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
umk.edu.my. 0009000IN NS ns2.umk.edu.my.
umk.edu.my. 0009000IN NS ns1.umk.edu.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 7118
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
umk.edu.my. 0009000IN TXT "MS=ms60345149"
umk.edu.my. 0009000IN TXT "v=spf1 include:_spf.google.com include:mailgun.org include:spf.protection.outlook.com ~all"
umk.edu.my. 0009000IN TXT "6mvgbvlyx9jdk41l12g17w2y6gtdmr53"
umk.edu.my. 0009000IN TXT "MS=8AB53C8B76EE2E7433A7FB6782ABD3BD1227839E"
umk.edu.my. 0009000IN TXT "abuseipdb-verification=7ZeMw6nw"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 3203
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
umk.edu.my. 0009000IN SOA ns2.umk.edu.my. root.ns2.umk.edu.my. 2026021601 10800 1800 604800 86400
```

RRSIG

```
ns2.umk.edu.my. root.ns2.umk.edu.my. 2026021601 10800 1800 604800 86400
```

DNSKEY

```
;; Got answer:  
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 10014  
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 512  
;; AUTHORITY SECTION:  
umk.edu.my. IN SOA ns2.umk.edu.my. root.ns2.umk.edu.my. 2026021601 10800 1800 604800 86400
```

DNSSEC_VALIDATION

```
; unsigned answer  
umk.edu.my. IN SOA ns2.umk.edu.my. root.ns2.umk.edu.my. 2026021601 10800 1800 604800 86400
```

TLS Handshake Evidence

IPv4 Connection

IP Used	103.101.246.12
IP Version	4

```
4087C1FE00740000:error:8000006E:system library:BI0_connect:Connection timed out:../crypto/bio/bio_sock2.c:114:calling connect()
4087C1FE00740000: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	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8002.43 ms
Error	Failed to connect to umk.edu.my port 80 after 8002 ms: Timeout was reached

IPv4 HTTPS (port 443)

HTTP Status	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8002.47 ms
Error	Failed to connect to umk.edu.my port 443 after 8002 ms: Timeout was reached

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	000 0.000000 0.000000
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