

# IPv6 Readiness Report

ums.edu.my — ums.edu.my



Scan to verify

Category: Education • Generated: 13 Jun 2026, 19:04 MYT • Last Checked: 13 Jun 2026, 01:26 MYT • Verification ID: e8ce36a4-a062-4c50-8c15-21225b1d7439

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

Audit trail: <https://ipv6.my6.my/audit/e8ce36a4-a062-4c50-8c15-21225b1d7439>

<p><b>X</b></p> <p><b>Non-Compliant</b></p> <p>MGv6C-1.0</p>	<p><b>28%</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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<p><b>IPv4 ADDRESSES</b></p> <p>103.26.197.21</p>
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## 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%)				1 / 5
#	CHECK	RESULT	DETAIL	
1	NS Has AAAA Record	PASS	Nameserver has IPv6 address.	
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.	

#	CHECK	RESULT	DETAIL
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	e8ce36a4-a062-4c50-8c15-21225b1d7439
Domain	ums.edu.my
Check Mode	Scheduled
Status	Completed
Started	13 Jun 2026, 01:23:21 MYT
Finished	13 Jun 2026, 01:26:43 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/e8ce36a4-a062-4c50-8c15-21225b1d7439

### Integrity Verification

<b>✓ INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	1e0ce3195d8debe31dfd681ba386805c5cc9b30368e2167678d7ffbdaa69fe2d
http_headers	7e34ce3ec5ec0763523b97b1c0848be342b61c0e4fee22402137faff7d8204cf
dns_responses	030702398dbb63b89f14329d2899f035005a791fe0caf8c845e663d124e3f8e8
tls_handshake	44be3a8df0fd18ed2394386e734512c1952b97396a1f97ef97b21ce01ca07b72
connectivity_log	6aaf11ff216d8f296cd82d7cfc97be8d3e2b59da5ff652aee882f26d279b0392
dns_resolution_times	ac40027048da3fefc3ee71877721918e92a63e3a30b122348a3a6a050a7a72ee

### 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	8.3.31
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	7.11	8.39	8.86	9.04	+1.8
Google	IPv4	29.22	74.44	76.35	86.76	+47.1
Google	IPv6	31.96	75.19	65.88	74.74	+33.9
Cloudflare	IPv4	23.39	24.02	10.75	25.61	-12.6
Cloudflare	IPv6	23.81	106.93	23.71	117.89	-0.1



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 63145
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ums.edu.my. 002256 IN A 103.26.197.21
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 46579
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
edu.my. 002115 IN SOA e.nic.my. hostmaster.nic.my. 2026046676 1800 900 604800 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 19379
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ums.edu.my. 002258 IN MX 0 ums-edu-my.mail.protection.outlook.com.
ums.edu.my. 002258 IN MX 10 alt3.aspmx.l.google.com.
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 52612
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 5

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ums.edu.my. 002256 IN NS ns2.ums.edu.my.
ums.edu.my. 002256 IN NS ns3.ums.edu.my.
ums.edu.my. 002256 IN NS ns1.ums.edu.my.
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 33693
;; flags: qr rd ra; QUERY: 1, ANSWER: 8, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ums.edu.my. 002258 IN TXT "cisco-ci-domain-verification=579409d37143004f0508b62007afa94b395e502c3d7207fcd4a447a51ef9fcb5"
ums.edu.my. 002258 IN TXT "google-site-verification=mvLTjwIFLPqAITvw-krqWtgQXCvc27GtZ6rGbFoZ22s"
ums.edu.my. 002258 IN TXT "google-site-verification=X7c-47i0F8VRjYLOjbF9P_4u0Z8xQsVrV0pQPQwa2LY"
ums.edu.my. 002258 IN TXT "google-site-verification=18Rp0rjLHLWuj_e7eewqinLL0NB0aviKUVMAR7aiu4I"
ums.edu.my. 002258 IN TXT "google-site-verification=cm8w-Ygo38p8pc4ZiXYP2F_oMF-G7UbMQt4RJfY5pQ0"
ums.edu.my. 002258 IN TXT "google-site-verification=zG5EJ1_agzVT2MPRcH0kAjQ3T0DCI_RICSHHm0DlkG4"
ums.edu.my. 002258 IN TXT "v=spf1 include:spf.protection.outlook.com -all"
ums.edu.my. 002258 IN TXT "MS=ms82542685"
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 14187
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
ums.edu.my. 00456 IN SOA ns1.ums.edu.my. dns_admin.ums.edu.my. 2026051099 10800 3600 604800 1800
```

**RRSIG**

```
ns1.ums.edu.my. dns_admin.ums.edu.my. 2026051099 10800 3600 604800 1800
SOA 8 3 86400 20260712135917 20260612125917 6595 ums.edu.my. f9Ua6NC3SItEeMpVKYLLX662U63z28uT+wDgPjF6W0oTImSz8zAyd+h0
ARi/AhaujVNR4LT46A2z0khLh8s3iNaxj3HKvLwUVp7np5VLXXmoqwFQ nNncQtKmmTNk1k24gk4xBlApVXD1oQacEaCMf8F1ueYZfSf6KheAvE20 +Ic=
```

**DNSKEY**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 63001
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ums.edu.my. 0085015 IN DNSKEY 256 3 8 AwEAAaKxuR+ATef/8Dt6JlFwi0ZSTF7TlvBrnp710u9990DC1a0w6uRPM M2tCkxuwQsB1lNESJwurPkJDv1G676RjlnC6y3Sg+KZ1Crxr/mq2B1oL
izsc8L9ucwYjIOUo5RQJ0Eeag5bGkcHw203r8ZZT0/XVyFtVQjCi7QnQ h78rvZXj
ums.edu.my. 0085015 IN DNSKEY 257 3 8 AwEAAb7LfcswYg/WUPMGpXZ9q3S1Ai1L7UqDxvtkFLHuRE5jLW0QU3D1 GFZFpB8yG0DNvnpYsAncJmLmsvA6M84TG00/K8UQ6FRY1Yli+hCAyl8u
v9Po1NY0ggWvB5sUcv/didm6c4yh2BBzdJqOAd/v9THohGcgUrrrY6L0H xCLV0F70XR6yJwoue6UPGP88fZaLe83YoECdiFA6zBHceYVBQ0+eVE+n
zpbRp/zlSer0FCEsvaHDn2hiyruMt8EmA7IiAgG+rAsepDvGB1G6K9NR SIWELxKbMdXTwnQ3R9GWNJkZo00vzepKj/8v7iQ37i70zADYzcx2cPi f+BzSPVQz0M=
```

**DNSSEC\_VALIDATION**

```
;; validating ums.edu.my/SOA: no valid signature found
; unsigned answer
ums.edu.my. 0085009 IN SOA ns1.ums.edu.my. dns_admin.ums.edu.my. 2026051099 10800 3600 604800 1800
ums.edu.my. 0085009 IN RRSIG SOA 8 3 86400 20260712135917 20260612125917 6595 ums.edu.my. f9Ua6NC3SItEeMpVKYLLX662U63z28uT+wDgPjF6W0oTImSz8zAyd+h0
ARi/AhaujVNR4LT46A2z0khLh8s3iNaxj3HKvLwUVp7np5VLXXmoqwFQ nNncQtKmmTNk1k24gk4xBlApVXD1oQacEaCMf8F1ueYZfSf6KheAvE20 +Ic=
```

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## TLS Handshake Evidence

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### IPv4 Connection

IP Used	103.26.197.21
IP Version	4

```
40278CB5C5790000:error:8000006E:system library:BI0_connect:Connection timed out:../crypto/bio/bio_sock2.c:114:calling connect()
40278CB5C5790000: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	48.59 ms
TTFB	98.82 ms
Total Time	8101.2 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, 12 Jun 2026 17:26:22 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	8002.44 ms
Error	Failed to connect to ums.edu.my port 443 after 8002 ms: Timeout was reached

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.051694 0.105617
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
```