

# IPv6 Readiness Report

akademik.upm.edu.my — akademik.upm.edu.my

Category: Education • Generated: 23 Apr 2026, 18:06 MYT • Last Checked: 07 Mar 2026, 01:10 MYT • Verification ID: 330c5f32-5379-4e48-8d7d-394de438d00e

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/330c5f32-5379-4e48-8d7d-394de438d00e>**Non-Compliant**

MGv6C-1.0

**15%****No IPv6 Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

121.120.69.205

**Network Information (WHOIS / RDAP)**

IPv4 Network	
Organization	MAXISNET-HSDPA
Country	MY
ASN	AS9534
ASN Name	MAXIS-AS1-AP Binariang Berhad, MY
Network (CIDR)	121.120.0.0/16

**Web Services** (35%)

0 / 8

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

**DNS & DNSSEC** (25%)

0 / 5

#	CHECK	RESULT	DETAIL
1	<b>NS Has AAAA Record</b>	<b>FAIL</b>	No nameserver has an AAAA record.
2	<b>NS Reachable via IPv6</b>	<b>FAIL</b>	No nameserver is reachable over IPv6.
3	<b>NS Answers Queries via IPv6</b>	<b>FAIL</b>	Nameserver does not answer queries over IPv6.
4	<b>DNSSEC Validated</b>	<b>FAIL</b>	DNSSEC validation failed or zone is unsigned.
5	<b>Reverse DNS (PTR)</b>	<b>FAIL</b>	No PTR record found.
6	<b>DS Record at Parent</b>	<b>PASS</b>	DS record found at parent zone.
7	<b>RRSIG Valid</b>	<b>FAIL</b>	No valid RRSIG found.
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>	121.120.69.205
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4 — 113ms TTFB.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 146ms TTFB.

### Audit Trail & Evidence Record

Verification ID	330c5f32-5379-4e48-8d7d-394de438d00e
Domain	akademik.upm.edu.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:10:38 MYT
Finished	07 Mar 2026, 01:10:41 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/330c5f32-5379-4e48-8d7d-394de438d00e

### Integrity Verification

<b>✓ INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	4ff4505c37c79806a954254ee711eb7d97e755be09769d85cba3cffeaff53d2e
http_headers	7276e7cad35ffef0c0d9cd51ff13757f7221698d9b1222d17433e28c79abab24
dns_responses	4b43fcf12f46050f391395e0c007fb6643798e3e2f3e35dbbf8de9a323564fe5
tls_handshake	bea90de084ae7fa030177076a0277ffc1672c190eb4daa1a5579d5e1a70cf643
connectivity_log	df0d14fbbdb0838799e4fae3798f3e568ddc8872378f2751d1e8d0bb3962997a1
dns_resolution_times	cadf5a8e2ebda9d7eee1bd37f6d386f46a66d4dd44aace850a690774315fc495

### 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	17.85	18.65	8.24	8.95	-9.6
Google	IPv4	33.4	39.14	28.74	29.01	-4.7
Google	IPv6	31.14	35.19	27.9	37.8	-3.2
Cloudflare	IPv4	8.34	8.95	7.95	9.66	-0.4
Cloudflare	IPv6	48.72	49.62	47.74	48.04	-1



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 50278
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 300 IN CNAME spelextha.upm.edu.my.
spelextha.upm.edu.my. 300 IN A 121.120.69.205
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 51907
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 299 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1800 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3434 3600 600 1209600 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 49157
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 300 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1037 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3432 3600 600 1209600 3600
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 55180
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 300 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1800 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3432 3600 600 1209600 3600
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 30628
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 300 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1800 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3434 3600 600 1209600 3600
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 53773
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
```

```
;; ANSWER SECTION:
akademik.upm.edu.my. 300 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1453 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3432 3600 600 1209600 3600
```

**RRSIG**

```
spelextha.upm.edu.my.
```

**DNSKEY**

```
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 12970
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
akademik.upm.edu.my. 299 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 1800 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3434 3600 600 1209600 3600
```

**DNSSEC\_VALIDATION**

```
;; resolution failed: ncache nxrrset
; unsigned answer
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.
; spelextha.upm.edu.my. 1798 IN \-SOA; -NXRRSET
; upm.edu.my. SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3432 3600 600 1209600 3600
```





```

VAYDVR0fBE0wSzBjOeEgRYZDaHR0cDovL2Nybc5zZWNoaWdvLmNvbS9TZWNoaWdv
UHVibGljU2VydmyQXV0aGVudGljYXRpb255b290UjQ2LmNybDcBhAYIKwYBBQUH
AQEEeDB2ME8GCCsGAQUFBzAChkNodHRwOi8vY3J0LnNlY3RpZ28uY29tL1NlY3Rp
Z290dWJsawNTZXJ2ZXJBdXR0ZW50aWNoZGlvbJvb3RSNDYucDdjMCMGCCsGAQUF
BzABhdodHRwOi8vbnZzc5zZWNoaWdvLmNvbTANBgkqhkiG9w0BAQwFAAOCAGEA
Yt0C9Fy+TqECFw40IospI92kLggoSZGP0SQXMBqmsGWZUQ7rux7cj1du6d9rd6C8
ze1B2eQjkrGkIL/0F1s7vSmgYVafsRoZd/IHUrkoQvX8FZwUsmPu7amgBfaY3g+d
q1x0jNGKb6I6Bzdl6LgMD9qxp+3i7GQ0nd9J8LFSietY6Z4jUBzVo0oz8iAU840F
h2HhAuiPw1ai0VnY38RTI+8kepGWfGxfBWzwh9uIjeooIeaosVFvE8cmYUB4TSH
5dUyD0jHct2+8ceKEtIoFU/FfHq/mDaVnvcDCZxtIgitdMFQdMZAvehmObyhRdDD
4NQCs0gaI9AagFj4L90tkARzhQLNyRf87Kln+YU0lgCG9HLg3rG08q+Y4pplS0d
unQZ6ZxPNGIf0ApbPVf5hCe58EZwiWdHIMn9LPP6+F404y8NNugbQixBber+x536
WrZhFZLjEkhp7fFXf9r32rNPFb74X/U90Bdy4Lzp3+X1ukh1BuMxA/EEhDoTOS3L
7ABvc7BYSQubQ24900cdkiZUh3ZwDrakMVRbaTxUM2p24N6dB+ns2zptWCva6jzW
r8IWKIMxzxLPv5Kt3ePKcUdvkBU/smqjSczTzSjIoR5QQA6lN1ZRSnuHIWCvh
JELtKYNtAH41QJ6SAW066GrrUESwN/cgZzL4JLEqz1Y=
-----END CERTIFICATE-----
---
Server certificate
subject=CN = *.upm.edu.my
issuer=C = GB, O = Sectigo Limited, CN = Sectigo Public Server Authentication CA DV R36
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: X25519, 253 bits
---
```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	121.120.69.205
Connect Time	9.85 ms
TTFB	36.86 ms
Total Time	36.91 ms

#### Response Headers:

```
{
  "0": "HTTP/1.1 302 Object moved",
  "1": "Location: https://akademik.upm.edu.my/",
  "2": "Content-Length: 74",
  "3": "Content-Type: text/html",
  "5": "HTTP/1.1 200 OK",
  "6": "Date: Fri, 06 Mar 2026 09:10:41 GMT",
  "7": "Server: Apache/2.4.41 (Ubuntu)",
  "8": "Set-Cookie: PHPSESSID=b2a6g3nehtgiurbv1180a5pat4; path=/",
  "9": "Expires: Thu, 19 Nov 1981 08:52:00 GMT",
  "10": "Cache-Control: max-age=30, public",
  "11": "Pragma: no-cache",
  "12": "X-Content-Type-Options: nosniff",
  "13": "Referrer-Policy: origin",
  "14": "Feature-Policy: camera 'self'; execution-while-not-rendered: 'none'",
  "15": "Cross-Origin-Resource-Policy: same-site | same-origin",
  "16": "Permissions-Policy: document-domain=(self)",
  "17": "X-Frame-Options: SAMEORIGIN",
  "18": "Strict-Transport-Security: max-age=2592000",
  "19": "X-Powered-By: iDEC UPM 2017",
  "20": "Content-Type: text/html; charset=UTF-8",
  "21": "Set-Cookie: cookiesession1=678A8C37E779BB5F9744D86ECDE7781F;Expires=Sat, 06 Mar 2027 09:10:41 GMT;Path=/;HttpOnly"
}
```

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	121.120.69.205
Connect Time	4.42 ms
TTFB	26.57 ms
Total Time	26.58 ms

#### Response Headers:

```
[
  "HTTP/1.1 200 OK",
  "Date: Fri, 06 Mar 2026 09:10:41 GMT",
  "Server: Apache/2.4.41 (Ubuntu)",
  "Set-Cookie: PHPSESSID=oh7ej3etabakt8gkeide7e8531; path=/",
  "Expires: Thu, 19 Nov 1981 08:52:00 GMT",
  "Cache-Control: max-age=30, public",
  "Pragma: no-cache",
  "X-Content-Type-Options: nosniff",
  "Referrer-Policy: origin",
  "Feature-Policy: camera 'self'; execution-while-not-rendered: 'none'",
  "Cross-Origin-Resource-Policy: same-site | same-origin",
  "Permissions-Policy: document-domain=(self)",
  "X-Frame-Options: SAMEORIGIN",
  "Strict-Transport-Security: max-age=2592000",
  "X-Powered-By: iDEC UPM 2017",
  "Content-Type: text/html; charset=UTF-8",
  "Set-Cookie: cookiesession1=678A8C37E0AA5BD659C814F64923A631;Expires=Sat, 06 Mar 2027 09:10:41 GMT;Path=/;HttpOnly"
]
```

### Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.005043 0.009572
TCP Connect IPv4 → port 443	200 0.005007 0.039357

### 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
--------------------------------	---

### 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
```