

# IPv6 Readiness Report

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



Scan to verify

Category: Education • Generated: 04 Jul 2026, 22:24 MYT • Last Checked: 04 Jul 2026, 03:15 MYT • Verification ID: e04e9d65-e2e9-431e-a75a-2a2d41ecfc3f

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

Audit trail: <https://ipv6.my6.my/audit/e04e9d65-e2e9-431e-a75a-2a2d41ecfc3f>

<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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<p><b>IPv4 ADDRESSES</b></p> <p>119.40.116.110</p>
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## Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	UNIVERSITI PUTRA MALAYSIA
Country	MY
ASN	AS38868
ASN Name	UPM-AS-AP - Universiti Putra Malaysia AS, MY
Network (CIDR)	119.40.112.0/20

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	PASS	DS record found at parent zone.	
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>	119.40.116.110
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4 — 176ms TTFB.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 30ms TTFB.

### Audit Trail & Evidence Record

Verification ID	e04e9d65-e2e9-431e-a75a-2a2d41ecfc3f
Domain	akademik.upm.edu.my
Check Mode	Scheduled
Status	Completed
Started	04 Jul 2026, 03:15:43 MYT
Finished	04 Jul 2026, 03:15:48 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/e04e9d65-e2e9-431e-a75a-2a2d41ecfc3f

### Integrity Verification

<p><b>✓ INTEGRITY VERIFIED</b></p>	
Algorithm	hmac-sha256-v1
Root Hash	3a08484149d9b6b23668ee35376df8d9c066fbcc2bd8a8b2853e4b6e49ef8bf
http_headers	1a26a40fe6dc29f348ce1263c9b9b8d3072ead01d6dfc423f3153acf5803e7a7
dns_responses	5add6844ab2147dbfb487faecae3539a725b63ea56464cac225dc469741d4600
tls_handshake	d48a66990556f780de8596e50881f120d6d3e8aa2e4cd0886716fb09816306a6
connectivity_log	65ff85118d8872a143ff78f61e7c6724e91057e97a9fcf284468d1e77b46eb55
dns_resolution_times	bf8fbc0042d4526de08245267717407dfe1fb4a4034247d12442631ed08568ca

### 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	21.84	27.64	29.86	35.05	+8
Google	IPv4	65.88	66.96	49.15	63.11	-16.7
Google	IPv6	51.19	51.4	53.51	55.95	+2.3
Cloudflare	IPv4	20	32.36	25.74	29.95	+5.7
Cloudflare	IPv6	63.99	68.14	31.86	69.72	-32.1



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 20432
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 299 IN CNAME spelextha.upm.edu.my.
spelextha.upm.edu.my. 299 IN A 119.40.116.110
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 6516
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3598 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 40657
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3598 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 47358
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3598 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 7489
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3598 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 49243
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
```

```
;; ANSWER SECTION:
akademik.upm.edu.my. 299 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3599 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```

## RRSIG

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

## DNSKEY

```
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 24398
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
akademik.upm.edu.my. 298 IN CNAME spelextha.upm.edu.my.

;; AUTHORITY SECTION:
upm.edu.my. 3598 IN SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 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. 3598 IN \-SOA; -NXRRSET
; upm.edu.my. SOA ns1.upm.edu.my. wanhafizi.upm.edu.my. 3515 3600 600 1209600 3600
```





```

VAYDVR0fBE0wSzBjOeEgRYZDaHR0cDovL2Nybc5zZWNoawdvLmNvbS9TZWN0awdv
UHVibGljU2VydmyQXV0aGVudGljYXRpb255b290UjQ2LmNybDcBhAYIKwYBBQUH
AQEEeDB2ME8GCCsGAQUFBzACHkNodHRwOi8vY3J0LnNlY3RpZ28uY29tL1NlY3Rp
Z290dWJsaWNTZXJ2ZXJBRoZw50aWNoG1vbLjB3RSNDYucDdjMCMGCSGAQUF
BzABhdodHRwOi8vbn2zc5zZWNoawdvLmNvbTANBgkqhkiG9w0BAQwFAAOCAGEA
Yt0C9Fy+TqECFw40IospI92klGgoSZGP0S0XMBqmsGWZUQ7rux7cj1du6d9rd6C8
ze1B2eQjkrGkIL/0F1s7vSmgYVafsRoZd/IHUrkoQvX8FZwJsmPu7amgBfaY3g+d
q1x0jNGKb6I6BzdL6LgMD9qxp+3i7GQ0nd9J8LFSietY6Z4jUBzVo0oz8iAU840F
h2HhAuiPw1ai0VnY38RTI+8kepGWfGxfBwzWH9uIjeooIeaosVFvE8cmYUB4TSH
5dUyD0jHct2+8ceKEtIoFU/FfHq/mDaVnvcDCZxtIgitdMFQdMZAvehm0byhrDD
4NQCs0gaI9AAGfj4L90tkARzhQLNyRf87Kln+YU0lgCG9HLg3rG08q+Y4pplS0d
unQZ6ZxPNGIf0ApbPVf5hCe58EZwiWdHIMn9LPP6+F404y8NNugbQixBber+x536
WrZhFZLjEkhp7fFXf9r32rNPFb74X/U90Bdy4Lzpz+X1ukh1BuMxA/EEhDoTOS3L
7ABvc7BYSubQ24900cdkiZUh3ZwDrakMVRbaTxUM2p24N6d+ns2zptWCva6jzW
r8IWKIMzxLPv5Kt3ePKcUdvkBU/smqjSczTzSjIoR5QQA6lN1ZRSnuHIWCvh
JELtkYnTAH41QJ6SAW066GrrUESwN/cgZzL4JLEqz1Y=
-----END CERTIFICATE-----
2 s:C = GB, O = Sectigo Limited, CN = Sectigo Public Server Authentication Root R46
i:C = US, ST = New Jersey, L = Jersey City, O = The USERTRUST Network, CN = USERTrust RSA Certification Authority
a:PKKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA384
v:NotBefore: Mar 22 00:00:00 2021 GMT; NotAfter: Jan 18 23:59:59 2038 GMT
-----BEGIN CERTIFICATE-----
MIIGTCCBH2gAwIBAgIRANJ/u8HeNZ55Fq1hSVhgmcQwDQYJKoZIhvcNAQEMBOAQ
gYgx CzAJBgNVBAYTALVTMRMwEQYDVQIEwP0ZXcgSmVyc2V5MRQwEgYDVQHEwtK
ZXJzZXkgQ2l0eTEeMBwGA1UEChMVVGVhLlFVTRVJUUVVTVCB0ZXR3b3JrMS4wLWY0
VQ0DEyVU0VSU0VHJ1c3Q0U1NBIEUlc3RzZmZlYXRpb24gQXV0aG9yaXR5X5MB4XD0TIX
MDMyMjYwMDAwMFoXD0TMDExODIzNTk1OVowXzELMAKGA1UEBhMCR0IXGDABGbnV

```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	119.40.116.110
Connect Time	16.72 ms
TTFB	1112.78 ms
Total Time	1112.86 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, 03 Jul 2026 19:15:47 GMT",
  "7": "Server: Apache/2.4.41 (Ubuntu)",
  "8": "Host: akademik.upm.edu.my",
  "9": "Expires: Thu, 19 Nov 1981 08:52:00 GMT",
  "10": "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "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: PHPSESSID=2qq1hkmq4iaqp1jtvklo0cp1gl; path=/",
  "22": "Set-Cookie: cookiesession1=678B288D580C97D54DCBAE3162C1E2FE;Expires=Sat, 03 Jul 2027 19:16:11 GMT;Path=/;HttpOnly"
}
```

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	119.40.116.110
Connect Time	5.73 ms
TTFB	545.13 ms
Total Time	545.17 ms

#### Response Headers:

```
[
  "HTTP/1.1 200 OK",
  "Date: Fri, 03 Jul 2026 19:15:48 GMT",
  "Server: Apache/2.4.41 (Ubuntu)",
  "Host: akademik.upm.edu.my",
  "Expires: Thu, 19 Nov 1981 08:52:00 GMT",
  "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "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: PHPSESSID=lsni3cgc1c5lgsk64jurdvb3j6; path=/",
  "Set-Cookie: cookiesession1=678B288D0D0448370E7C48B9190B6139;Expires=Sat, 03 Jul 2027 19:16:11 GMT;Path=/;HttpOnly"
]
```

### Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.007474 0.014166
TCP Connect IPv4 → port 443	200 0.022058 0.091130

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

### 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
```