

IPv6 Readiness Report

ukm.my — ukm.my



Scan to verify

Category: Education • Generated: 04 Jul 2026, 22:30 MYT • Last Checked: 04 Jul 2026, 03:15 MYT • Verification ID: f56db504-fc6a-4f27-a08b-c9b46eba32b1

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

Audit trail: <https://ipv6.my6.my/audit/f56db504-fc6a-4f27-a08b-c9b46eba32b1>

<p>X</p> <p>Non-Compliant</p> <p>MGv6C-1.0</p>	<p>40%</p> <p>No IPv6 Support</p>	<p>IPv6-ONLY READINESS</p> <p>Website: X Not Ready</p> <p>DNS: X Not Ready</p> <p>Email: ✓ Ready</p>
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<p>IPv4 ADDRESSES</p> <p>103.219.237.14</p>
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Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	UNIVERSITI KEBANGSAAN MALAYSIA
Country	MY
ASN	AS135496
ASN Name	UKM-AS-AP - UNIVERSITI KEBANGSAAN MALAYSIA, MY
Network (CIDR)	103.219.236.0/23

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.	

#	CHECK	RESULT	DETAIL
8	Signing Algorithm	INFO	No DNSKEY record found.

Email Services (25%) 6 / 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	PASS	SMTP port 25 responds over IPv6.
4	STARTTLS over IPv6	PASS	STARTTLS supported over IPv6.
5	SPF Record	PASS	SPF record found.
6	DKIM Selector	INFO	DKIM selector found: google._domainkey
7	DMARC Record	PASS	DMARC record found.

IPv4 Baseline (15%) 3 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	103.219.237.14
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4 — 111ms TTFB.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 121ms TTFB.

Audit Trail & Evidence Record

Verification ID	f56db504-fc6a-4f27-a08b-c9b46eba32b1
Domain	ukm.my
Check Mode	Scheduled
Status	Completed
Started	04 Jul 2026, 03:15:43 MYT
Finished	04 Jul 2026, 03:15:52 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/f56db504-fc6a-4f27-a08b-c9b46eba32b1

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	247a0de93d97206fe1c301395900db95fd0b2ddb074af7ebb5f3e099871f08c8
http_headers	4e72d8e0bea746ece097bcdeb89514c3101c221780817d3add36794d9a9ccb07
dns_responses	f8a20d8966ef0ce3a79607038694c1f783504a4c437d6bb310eef3f1522241c6
tls_handshake	32052d0270ae51daedea433c2471757db270a1c07c835c68fae4f2009a12270f
connectivity_log	da22cfb33ed40fa7390b36fe94fcb252b77b40bab5c5c34a97149bd81775fbd7
dns_resolution_times	fed042dc7ec97346c4000a1d1e68f4d645d13dbf96a5843ce2999bfbada2f51c

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	37.7	48.25	32.48	40.37	-5.2
Google	IPv4	59.72	63.89	55.55	65.16	-4.2
Google	IPv6	58.04	70.36	67.08	71.04	+9
Cloudflare	IPv4	46.32	47.99	40.93	48.14	-5.4
Cloudflare	IPv6	21.84	25.34	35.37	41.67	+13.5

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 41383
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ukm.my. 000086400 IN A 103.219.237.14
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 57694
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
my. 00003593 IN SOA e.nic.my. hostmaster.nic.my. 2026052750 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 32745
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ukm.my. 000086400 IN MX 5 ALT2.ASPMX.L.GOOGLE.COM.
ukm.my. 000086400 IN MX 10 ASPMX2.GOOGLEMAIL.COM.
ukm.my. 000086400 IN MX 10 ASPMX3.GOOGLEMAIL.COM.
ukm.my. 000086400 IN MX 1 ASPMX.L.GOOGLE.COM.
ukm.my. 000086400 IN MX 5 ALT1.ASPMX.L.GOOGLE.COM.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4622
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 3

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ukm.my. 000086400 IN NS dns2.ukm.my.
ukm.my. 000086400 IN NS dns1.ukm.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 42795
;; flags: qr rd ra; QUERY: 1, ANSWER: 6, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
ukm.my. 000086400 IN TXT "brevo-code:ed12f0b80d894445ef0715485137c221"
ukm.my. 000086400 IN TXT "google-site-verification=Nx-3VrBzA7qQ0XPaouxzTWRwHmAU8RehgZhh4yrF06U"
ukm.my. 000086400 IN TXT "MS=1394E7C154EB8B4D57F869DFE6998030FCE213FB"
ukm.my. 000086400 IN TXT "KxM7BzX015q8k8mQ+8EbB70vAkYvSo2sY30dsc0sK/U="
ukm.my. 000086400 IN TXT "google-site-verification=vRaL7svRL_SSrqW_I7eCJlI0KBKVQe04cPkz1YKeqTY"
ukm.my. 000086400 IN TXT "v=spf1 a:smtp.ukm.my include:_spf.google.com include:spf.brevo.com include:_spf.ps.publicknowledgeproject.org ~all"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 13818
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
ukm.my. 00003593 IN SOA dns1.ukm.my. server.ukm.edu.my. 2026062201 7200 1800 1209600 86400
```

RRSIG

```
dns1.ukm.my. server.ukm.edu.my. 2026062201 7200 1800 1209600 86400
```

DNSKEY

```
;; Got answer:  
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 16844  
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 1232  
;; AUTHORITY SECTION:  
ukm.my. 3593 IN SOA dns1.ukm.my. server.ukm.edu.my. 2026062201 7200 1800 1209600 86400
```

DNSSEC_VALIDATION

```
; unsigned answer  
ukm.my. 86393 IN SOA dns1.ukm.my. server.ukm.edu.my. 2026062201 7200 1800 1209600 86400
```



```

044CV98NRsU213f1kScIZntNagMBAAGjggGBMIIBFTAfBgNVHSMEGDAWgBRWc1hk
LfmsGrASKgRieaFAFYghSTAdBgNVHQ4EFgQU42Z0u3Boj5xdTg6mSo+bnYKcgpIw
DgYDVR0PAAQH/BAQDAgGGMBIGAIUdEwEB/wQIMAYBAf8CAQAwHQYDVR0LBBYwFAYI
KwYBBQUHAWEGCCsGAQUFBwMCMBSGA1UdIAQUMBIwBgYEVR0gADAIbgZngQwBAGIw
VAYDVR0fBE0wSzBjOeEgRYZDaHR0cDovL2NybzC5zZWNOaWdvLmNvbS9TZWNOaWdv
UHVibGljU2VydmlVY0XV0aGVudGljYXRpb255b290UjQ2LmNybDcBhAYIKwYBBQUH
AQEEeDB2ME8GCCsGAQUFBzAChkNodHRwOi8vY3J0LnNlY3RlZ28uY29tL1NlY3Rl
Z290dWJsaWNTZXJ2ZXJkdXR0ZW50aWNoZGlvdjV3b3RSNDYucDdjMCMGCCsGAQUF
BzABhdodHRwOi8vb2NzcC5zZWNOaWdvLmNvbTANBgkqhkiG9w0BAQwFAAOCAGEA
BZXDWHWC3cubb/e1I1kz181PFiK/ZUoH09ufmV0rc50bYH/XKkWUexSPqRkWKFKr
7r80uG+p7VNB8rifX6uopqKAgsvZtZs7iAFw04To6vNcxeBt1Eush3cQ4b8nbQR
MQLChgEAqwhuXp9P48T4QEBSksYav7+aFjNySsLYLPzNqVM3RNwvBdvp6vgDtGwc
xLKQZVuuNVIAoYyls8swhxDeSHKpRdxRauTLZ+pl+wGvy0pnrLEJGSz9m0Emfbod
e/XopR2NGqaHJ6bIjyxPu6UtyQGI26E7UAeozACRHz06Nx2jTAY9E6NeB6XuobE
wLK025ZRmvgLcURGIbrV24tGHHTGxCe8M3oGlpUSMTKQ2dkgLjZVyt+gKdFtWELZ
MuRdi+X3XsrR8LFz+aLUiDRfQqhmw3RxxjIyVKvuu9UPYY1nsvxYmFnUSEM+2q1z/
iPUry+xDY9MC6+IhleKT094VKdFVp7LXH42+wwU+17LroLQ2mK2N/nBLVBwaIhib
QXw4VYKwB86Bc6e56iqsc94KEgD/U4VsjmgfhK+Xp4NM+VYzTTa3QeV3p8x0M0cw
q1p8oZFA+0Bcz3FYWpDiE5j0NWKlw9hXsTyPY/HeZUV59aksKS0SRsmdfe8WJDPX
58uB9/7Lud0G3x0pxQAcffP0ayKavNwDTw4UfJ34cEw=
-----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-----
MIIGLTCCBH2gAwIBAgIRANJ/u8HeNZ55Fq1hSVhgmcQwDQYJKoZIhvcNAQEMBQAw

```


HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	103.219.237.14
Connect Time	19.84 ms
TTFB	128.52 ms
Total Time	128.69 ms

Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "2": "Location: http://www.ukm.my/portalukm",
  "3": "Cache-Control: max-age=604800",
  "4": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "5": "Connection: close",
  "6": "Content-Type: text/html; charset=UTF-8",
  "8": "HTTP/1.1 301 Moved Permanently",
  "9": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "10": "Location: https://www.ukm.my/portalukm/",
  "11": "Cache-Control: max-age=604800",
  "12": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "13": "Connection: close",
  "14": "Content-Type: text/html; charset=iso-8859-1",
  "16": "HTTP/1.1 200 OK",
  "17": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "18": "Vary: Accept-Encoding, Cookie, User-Agent",
  "19": "Cache-Control: max-age=3, must-revalidate",
  "20": "Cache-Control: max-age=604800",
  "21": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "22": "Content-Type: text/html; charset=UTF-8",
  "23": "Transfer-Encoding: chunked",
  "24": "Strict-Transport-Security: max-age=31536000"
}
```

IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	103.219.237.14
Connect Time	23.9 ms
TTFB	129.18 ms
Total Time	129.49 ms

Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "2": "Cache-Control: max-age=604800",
  "3": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "4": "Connection: close",
  "5": "Content-Type: text/html; charset=UTF-8",
  "6": "Location: https://www.ukm.my/portalukm",
  "7": "Strict-Transport-Security: max-age=31536000",
  "9": "HTTP/1.1 301 Moved Permanently",
  "10": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "11": "Cache-Control: max-age=604800",
  "12": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "13": "Connection: close",
  "14": "Content-Type: text/html; charset=iso-8859-1",
  "15": "Location: https://www.ukm.my/portalukm/",
  "16": "Strict-Transport-Security: max-age=31536000",
  "18": "HTTP/1.1 200 OK",
  "19": "Date: Fri, 03 Jul 2026 19:15:52 GMT",
  "20": "Vary: Accept-Encoding, Cookie, User-Agent",
  "21": "Cache-Control: max-age=3, must-revalidate",
  "22": "Cache-Control: max-age=604800",
  "23": "Expires: Fri, 10 Jul 2026 19:15:52 GMT",
  "24": "Content-Type: text/html; charset=UTF-8",
  "25": "Transfer-Encoding: chunked",
  "26": "Strict-Transport-Security: max-age=31536000"
}
```

```
}

```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.004014 0.010538
TCP Connect IPv4 → port 443	301 0.004770 0.047688

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
```