

IPv6 Readiness Report

ukm.my — ukm.my

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Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/447e034c-78a1-40c0-b18e-2a1595ba6cd8>**Non-Compliant**

MGv6C-1.0

32%**Partial Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

103.219.237.14

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.
8	Signing Algorithm	INFO	No DNSKEY record found.

Email Services (25%) 4 / 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	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 — 178ms TTFB.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 112ms TTFB.

Audit Trail & Evidence Record

Verification ID	447e034c-78a1-40c0-b18e-2a1595ba6cd8
Domain	ukm.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:10:31 MYT
Finished	07 Mar 2026, 01:10:56 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/447e034c-78a1-40c0-b18e-2a1595ba6cd8

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	20af3a688588762b3f46599ea40fa7855ba370dcd94becb8a080b804a0c7904
http_headers	447074b25160fd8d1d1bdad9b6122e1b84107a7e8aa8dd6e7bbc5d1736486533
dns_responses	54ccd307b418a14ce95039569646c4131aabcdf8d37d84e4c7846e35fe456e59
tls_handshake	32052d0270ae51daedea433c2471757db270a1c07c835c68fae4f2009a12270f
connectivity_log	f22b6675dd411ed4bdbd65554d695b98eb5db017e744b9c1323504f38c32c540
dns_resolution_times	a0c2d9510e70990a72b75a649d4d85a7f4626821a350476a8c8505c5dda76fdf

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	17.08	17.78	16.97	20.47	-0.1
Google	IPv4	15.94	16.46	33.15	38.33	+17.2
Google	IPv6	30.21	37.6	38.91	41.65	+8.7
Cloudflare	IPv4	26.09	33.01	24.7	30.4	-1.4
Cloudflare	IPv6	28.26	36.49	8.15	8.97	-20.1

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 36735
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ukm.my. 00021004 IN A 103.219.237.14
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 51692
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
my. 0001800 IN SOA a.nic.my. hostmaster.nic.my. 2026018482 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 9833
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ukm.my. 00021600 IN MX 5 ALT2.ASPMX.L.GOOGLE.COM.
ukm.my. 00021600 IN MX 1 ASPMX.L.GOOGLE.COM.
ukm.my. 00021600 IN MX 5 ALT1.ASPMX.L.GOOGLE.COM.
ukm.my. 00021600 IN MX 10 ASPMX2.GOOGLEMAIL.COM.
ukm.my. 00021600 IN MX 10 ASPMX3.GOOGLEMAIL.COM.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 48439
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ukm.my. 00020395 IN NS dns1.ukm.my.
ukm.my. 00020395 IN NS dns2.ukm.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 61357
;; flags: qr rd ra; QUERY: 1, ANSWER: 6, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ukm.my. 00021600 IN TXT "KxM7BzX015q8k8mQ+8EbB70vAkYvSo2sY30dsc0sK/U="
ukm.my. 00021600 IN TXT "MS=1394E7C154EB8B4D57F869DFE6998030FCE213FB"
ukm.my. 00021600 IN TXT "google-site-verification=vRaL7svRL_SSrqW_I7eCJlI0KBKV0e04cPkz1YKeqTY"
ukm.my. 00021600 IN TXT "v=spf1 a:smtp.ukm.my include:_spf.google.com include:spf.brevo.com include:_spf.ps.publicknowledgeproject.org ~all"
ukm.my. 00021600 IN TXT "google-site-verification=Nx-3VrBzA7q00XPouxzTWrwHmA8RehgZH4yrF06U"
ukm.my. 00021600 IN TXT "brevo-code:ed12f0b80d894445ef0715485137c221"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 17815
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
ukm.my. 0001800 IN SOA dns1.ukm.my. server.ukm.edu.my. 2026030601 7200 1800 1209600 86400
```

RRSIG

```
dns1.ukm.my. server.ukm.edu.my. 2026030601 7200 1800 1209600 86400
```

DNSKEY

```
;; Got answer:  
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 584  
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 512  
;; AUTHORITY SECTION:  
ukm.my. IN SOA dns1.ukm.my. server.ukm.edu.my. 2026030601 7200 1800 1209600 86400
```

DNSSEC_VALIDATION

```
; unsigned answer  
ukm.my. IN SOA dns1.ukm.my. server.ukm.edu.my. 2026030601 7200 1800 1209600 86400
```



```

044CV98NRsU213f1kScIZntNagMBAAGjggGBMIIBFTAfBgNVHSMGDAWgBRWc1hk
LfmsGrASKgRieaFAFYghSTAdBgNVHQ4EFgQU42Z0u3Boj5xdTg6mSo+bnYKcgpIw
DgYDVR0PAAQH/BAQDAgGGMBIGAIUdEwEB/wQIMAYBAf8CAQAwHQYDVR0LBBYwFAYI
KwYBBQUHAWEGCCsGAQUFBwMCMBSGA1UdIAQUMBIwBgYEVR0gADAIbgZngQwBAGIw
VAYDVR0fBE0wSzBjOeEgRYZDaHR0cDovL2NybzC5zZWNOaWdvLmNvbS9TZWNOaWdv
UHVibGljU2VydmlVYQV0aGVudGljYXRpb255b290UjQ2LmNybDcBhAYIKwYBBQUH
AQEEeDB2ME8GCCsGAQUFBzAChkNodHRwOi8vY3J0LnNlY3RlZ28uY29tL1NlY3Rl
Z290dWJsaWNTZXJ2ZXJkdXRoZW50aWNoZGlvdjV3b3RSNDYucDdjMCMGCCsGAQUF
BzABhdodHRwOi8vb2NzcC5zZWNOaWdvLmNvbTANBgkqhkiG9w0BAQwFAAOCAGEA
BZXDWHWC3cubb/e1I1kz181PFiK/ZUoH09ufmV0rc50bYH/XKkWUexSPqRkWKFKr
7r80uG+p7VNB8rifX6uopqKAgsvZtZs7iAFw04To6vNcxeBt1Eush3cQ4b8nbQR
MQLChgEAqwhuXp9P48T4QEBSksYav7+aFjNySsLYLPzNqVM3RNwBdvp6vgDtGwc
xLKQZVuuNViaoYyls8swhxDeSHKpRdxRauTLZ+pl+wGvy0pnrLEJGSz9m0Emfbod
e/XopR2NGqaHJ6bIjyxPu6UtyQGI26En7UAeozACRHz06Nx2jTAY9E6NeB6XuobE
wLK025ZRmvgLcURGIbrV24tGHHTGxCe8M3oGlpUSMTKQ2dkgLjZVyt+gKdFtWELZ
MuRdi+X3XsrR8LFz+aLUiDRfQqhmw3RxxjIyVKvuu9UPYYInsvxYmFnUSEm+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	12.99 ms
TTFB	93.82 ms
Total Time	94.02 ms

Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Date: Fri, 06 Mar 2026 09:10:55 GMT",
  "2": "Location: http://www.ukm.my/portalukm",
  "3": "Cache-Control: max-age=604800",
  "4": "Expires: Fri, 13 Mar 2026 09:10:55 GMT",
  "5": "Connection: close",
  "6": "Content-Type: text/html; charset=UTF-8",
  "8": "HTTP/1.1 301 Moved Permanently",
  "9": "Date: Fri, 06 Mar 2026 09:10:55 GMT",
  "10": "Location: https://www.ukm.my/portalukm/",
  "11": "Cache-Control: max-age=604800",
  "12": "Expires: Fri, 13 Mar 2026 09:10:55 GMT",
  "13": "Connection: close",
  "14": "Content-Type: text/html; charset=iso-8859-1",
  "16": "HTTP/1.1 200 OK",
  "17": "Date: Fri, 06 Mar 2026 09:10:55 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, 13 Mar 2026 09:10:55 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	14.78 ms
TTFB	137.38 ms
Total Time	137.57 ms

Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Date: Fri, 06 Mar 2026 09:10:55 GMT",
  "2": "Cache-Control: max-age=604800",
  "3": "Expires: Fri, 13 Mar 2026 09:10:55 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, 06 Mar 2026 09:10:55 GMT",
  "11": "Cache-Control: max-age=604800",
  "12": "Expires: Fri, 13 Mar 2026 09:10:55 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, 06 Mar 2026 09:10:55 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, 13 Mar 2026 09:10:55 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 0.004497 0.011181
TCP Connect IPv4 → port 443	301 0.004979 0.026012

Test Node Network Evidence

Node Profile	dual stack
--------------	------------

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
```