


# IPv6 Readiness Report

mafhq.mil.my — mafhq.mil.my

Category: Government • Generated: 20 Apr 2026, 21:53 MYT • Last Checked: 07 Mar 2026, 01:02 MYT • Verification ID: ea500cd7-6c71-439e-be02-4dd8f466b934

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

Audit trail: <https://ipv6.my6.my/audit/ea500cd7-6c71-439e-be02-4dd8f466b934>

 <b>Non-Compliant</b> <small>MGv6C-1.0</small>	<b>15%</b> <b>No IPv6 Support</b>	<b>IPv6-ONLY READINESS</b> Website: <b>X Not Ready</b> DNS: <b>X Not Ready</b> Email: <b>X Not Ready</b>
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<b>IPv4 ADDRESSES</b> 210.187.101.51
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## Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	SUNWAYCOLLEGE-TMNET
Country	MY
ASN	AS4788
ASN Name	TTSSB-MY TM TECHNOLOGY SERVICES SDN. BHD., MY
Network (CIDR)	210.187.101.0/25

Web Services (35%) <span style="float: right;">0 / 8</span>			
#	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%) <span style="float: right;">0 / 5</span>			
#	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>FAIL</b>	No DS record at parent.
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>	210.187.101.51
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4.

### Audit Trail & Evidence Record

Verification ID	ea500cd7-6c71-439e-be02-4dd8f466b934
Domain	mafhq.mil.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:01:59 MYT
Finished	07 Mar 2026, 01:02:09 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/ea500cd7-6c71-439e-be02-4dd8f466b934

### Integrity Verification

<b>✓ INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	b2a4397ceb080e47fa8cd117582477884b6b38eafe0fa6c3e921b274ebaafe55
http_headers	a4d291d0ad0fd3be4b78e2ecd0e5e8731705a49fbf659be7cab8f442ef7a1785
dns_responses	0671d67ee904884a30baacfaf4794252602065ac697fb7c2d73a053e3369619c
tls_handshake	44b0d2652064ede1e3a8b77907d3aaf653e1b3f0a20d799d3801167b4c22af9a
connectivity_log	f66d58f5d6044d7d450a02b21aa3dbc2f967e0e9e2bb18d8678496949427402b
dns_resolution_times	618163b45d35d00e7d10c287ea1491acc0eb56cb268df2714295f54719b0ab59

### 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	7.93	16.94	7.05	8.05	-0.9
Google	IPv4	21.39	39.54	33.71	42.69	+12.3
Google	IPv6	26.83	1034.53	26.32	44.75	-0.5
Cloudflare	IPv4	9.75	20.2	9.07	15.99	-0.7
Cloudflare	IPv6	9.24	51.61	45.05	55.55	+35.8



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## DNS Evidence

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### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 63693
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mafhq.mil.my. 001091INSOA dns-external. hostmaster. 22 900 600 86400 3600
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 55047
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mil.my. 001794INSOA b.nic.my. hostmaster.nic.my. 2026018480 1800 900 604800 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 13650
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mafhq.mil.my. 001800INSOA dns-external. hostmaster. 22 900 600 86400 3600
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 38514
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
mafhq.mil.my. 003600INNS dns-external.
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 33032
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mafhq.mil.my. 001800INSOA dns-external. hostmaster. 22 900 600 86400 3600
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 12603
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mafhq.mil.my. 001800INSOA dns-external. hostmaster. 22 900 600 86400 3600
```

### RRSIG

```
dns-external. hostmaster. 22 900 600 86400 3600
```

### DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 16244
```

```
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
mafhq.mil.my. 1800 IN SOA dns-external. hostmaster. 22 900 600 86400 3600
```

**DNSSEC\_VALIDATION**

```
; unsigned answer
mafhq.mil.my. 3600 IN SOA dns-external. hostmaster. 22 900 600 86400 3600
```



TLS Handshake Evidence

IPV4 Connection

IP Used	210.187.101.51
IP Version	4

```

depth=0 C = MY, ST = Wilayah Persekutuan Kuala Lumpur, O = MARKAS ANGKATAN TENTERA MALAYSIA, CN = www.mafhq.mil.my
verify error:num=20:unable to get local issuer certificate
verify return:1
depth=0 C = MY, ST = Wilayah Persekutuan Kuala Lumpur, O = MARKAS ANGKATAN TENTERA MALAYSIA, CN = www.mafhq.mil.my
verify error:num=21:unable to verify the first certificate
verify return:1
depth=0 C = MY, ST = Wilayah Persekutuan Kuala Lumpur, O = MARKAS ANGKATAN TENTERA MALAYSIA, CN = www.mafhq.mil.my
verify return:1
CONNECTED(00000010)
---
Certificate chain
0 s:C = MY, ST = Wilayah Persekutuan Kuala Lumpur, O = MARKAS ANGKATAN TENTERA MALAYSIA, CN = www.mafhq.mil.my
i:C = GB, O = Sectigo Limited, CN = Sectigo Public Server Authentication CA OV R36
a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
v:NotBefore: Oct 17 00:00:00 2025 GMT; NotAfter: Nov 17 23:59:59 2026 GMT
-----BEGIN CERTIFICATE-----
MIIH0TCCBaGgAwIBAgIRA0WJGZznk/c+Q/blod89o0cDQYJKoZIhvcNAQELBQAw
YDELMAkGA1UEBhMCR0IxBGDAWBgNVBAoTD1NLY3RzZ28tTGltaxRLEZDE3MDUGA1UE
AxMuU2VjdGlnbyBQdWJsaWwU2V2dmVvIEF1dGhLbnRyY2F0aW9uIENBIE9WIFZl
NjAeFw0yNTEwMTcwMDAwMDBaFw0yNjExMTcyMzU5NTlaMH4xCzAJBgNVBAYTAkIZ
MSkwJWYDVQQIEyBxYWxheW9uIEF1dGhLbnRyY2F0aW9uIEB1c2VjZ28tTGltaxRLEZ
A1UEChMgTUFSS0FTIEF0R0tBEVFOIFRFRFRFRFRFRFRFRFRFRFRFRFRFRFRFRFRFR
Ehd3dy5tYWZocS5taWwU2V2dmVvIEF1dGhLbnRyY2F0aW9uIEB1c2VjZ28tTGltax
RLEZDE3MDUGA1UEChMgTUFSS0FTIEF0R0tBEVFOIFRFRFRFRFRFRFRFRFRFRFRFR
AQCyVbLT4x64SbP4x/8vjBxeLEUitbsdz6uXym05pN2qsbsF+XJfXa+kTRtYIS8r
nJuZE2RVHhI5/3ch2jvVZLJ7uxiANLZSCZE/d9LMCF/RH48F0brWY1L17n+IeRmv
RS08gerE3tKPGwX8lG4Tz/obc7apaTNXQDdPLh40T4kELBiPQ7mwolQ+9MtV22E5
P6VKzeLGDqP8QrI+hde7LABFsQhamYSnt+X23T9xpHmnhEWZPD6Q+gWY10cyFsG
ybKpNjmuXLLsX1PnxfbjUPE5xc9Kyb9jhpYbVpft3s9outC7c6oH1h6VPFvZqJ7
GMx22TG2qRo40WY8K/BwfuLAgMBAAAgggNOMIIDSjAFBgNVHSMGDAWgBTJZnS7
c6iNLF10DqZkZj5s3IpyCkAdBgNVHQ4EFgQUdI+E8SjYF+61GX16H8zFBuP38IMw
DgYDVR0PAAQH/BAQDAgWgMAwGA1UdEwEB/wQCMAAwEwYDVR0LBAwCgYIKwYBBQUH
AwEwSgYDVR0gBEMwQTA1BgwrbGEEAbIxAOIBAwwQJTAjBggrrBgEFBQCCARYXaHR0
cHMGLy9zZWNoaWdvLmNvbS9DUFMwYCAyZ2E5MAkGA1UdHwRNNMswSABHoEWG
Q2h0dHA6Ly9jcmwuc2VjdGlnby5jb20vU2VjdGlnb1B1Ym9uY1NlcnZlcF1dGhL
bnRyY2F0aW9uQ0FPVLIzNi5jcmwvYQGCCsGAQUFBwEBBHGwdjBpBggrrBgEFBQcw
AoZDaHR0cDovL2NydC5zZWNoaWdvLmNvbS9TZWNoaWdvUHViGJlU2V2dmVvYXV0
aGVudG1jYXRpb25DUU9WUjM2LmNydDAjBggrrBgEFBQcwAYYXaHR0cDovL29jczA3
c2VjdGlnby5jb20wKQYDVR0RBCIwIIQd3d3Lm1hZm9uLm1pbnRyY2F0aW9uIEB1
c2VjZ28tTGltaxRLEZDE3MDUGA1UEChMgTUFSS0FTIEF0R0tBEVFOIFRFRFRFRFR
bWLSLm15MIIIBfwYKKwYBBAHWeQIEAgSCAW8EggFRAwKAdgDYCVU7LE96/8gWGW+U
T4WrsPj8XodVJg8V055yu0VFAAAAZnyT073AAAEAwBHMEUCIG2VZbHk5mP40L2g
UjK7j0QRxnXHC4oqiv/HQz1A/WZAIeAz6WdCzJm0JD5tCyaIP4/Ksnuh+2VxMx
xHmihdL50fIAdgCvZ4g7V7B03Y+m2X72LqjrgQRHcWdWJF5V1gww54WH0gAAAZny
t08LAAAEAwBHMEUCIFNj8ETSqWAKFpAc2CQ6pN3vP07oGAM0J2QQLGhyUZZPAIEA
jIR0+z6SHGItYd7z6s/8tL3HzNgratC5FLsE4qG9Bv8AdwCsqzBwb0vshDH0E9L0
kV8RHkIk07HypoxPPCs7px4CwwAAAZnyT05HAAAEAwBIMEYCIQCNjv/YH9rSZCmj
jtFwsDdXXAAcLUNROQMgsWGGC91AWAIhALXZ2CsZrPhpn5S62LWY710DkagIyzXi
iFofc5C9/PksMA0GCSqGSIb3DQEBwUAA4IBBQB5uEouBGoHzuRU8kiKZqYPrKUE
Cbq6iJqeF42arzd/5UyovHjCJVRDhw6o9+bIAIPTks/KcnsCn/967z04ZzKykWs
xHpmYgpl4AEiVU6hEFyIHqX0ct7jVlk0eRW/98FcUmwAjD26g1iPHdc4nPxm0pZ
swaYq95dqz08F3b7u4u18q4can78Q4wcLEQZzjvMwvCap+V8AsshbPkXcIAVcyD
Bx9mAbPZkhkj5hhtrXKvmbBtr2nNf+MfFh1vUSKrQcGTz5N4BLyqLfpktJpbH497
dF+LCMGQF/SzvmBU7xn8MwE+UpkFc8amF2WnZvpb05Wj0seONY7x0E00LWY58UxM
6PnuIvoE4Xu1F8C5L7pvyS5NSddAE2PGxVaHSd0weoa1ZzNr0IAIajrRjXFBNoMS
J0otidZr5bm51UV263Ziooqn7ri0KXQW6S2xpg4/LgmtIKW1l6Za0DGe7onAe0
o3oj8Bs0eJU2PAgD3Sxh1Yxr0IqxZ7CMwQI248=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, ST = Wilayah Persekutuan Kuala Lumpur, O = MARKAS ANGKATAN TENTERA MALAYSIA, CN = www.mafhq.mil.my
issuer=C = GB, O = Sectigo Limited, CN = Sectigo Public Server Authentication CA OV R36
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: X25519, 253 bits
---
SSL handshake has read 2514 bytes and written 407 bytes
Verification error: unable to verify the first certificate
---
New, TLSv1.2, Cipher is ECDHE-RSA-AES256-GCM-SHA384
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE

```

```

Expansion: NONE
No ALPN negotiated
SSL-Session:
  Protocol : TLSv1.2
  Cipher   : ECDHE-RSA-AES256-GCM-SHA384
  Session-ID: 9A82D8CB36653BA388AC2A9AFB06D1A197789B395C96BBDE4A91F85B2DEEF4DD
  Session-ID-ctx:
  Master-Key: 32292E3E135BA13642F51CF356644C431D574A6710C9C465DE341404C77E834D144A18F453CFA3136DEE7C55F036198C
  PSK identity: None
  PSK identity hint: None
  SRP username: None
  TLS session ticket lifetime hint: 7200 (seconds)
  TLS session ticket:
0000 - 0b b4 2e 63 61 8b e7 39-6d c5 f8 d2 0f 73 bc 4b ...ca..9m....s.K
0010 - ef 9b c0 8f 3e ee e0 8b-66 dc b7 d0 51 7e d2 53 ....>...f...Q~-S
0020 - 9e 61 a1 10 0f 46 de e0-6c 77 81 cb bb 9f 44 48 .a...F..lw....DH
0030 - 8e 76 0a 5a a8 0b c0 63-9d 09 d9 7d 5f 66 a2 8d .v.Z...c...}_f..
0040 - a4 ca 1f 2d 6f 63 18 e1-bf 86 7d 49 55 43 7d 54 ...-oc...}IUC}T
0050 - 1b 49 9b 45 b9 25 67 52-aa 50 d1 f0 33 69 f5 b5 .I.E.%gR.P..3i..
0060 - 0e 0c 4a 7b 04 02 3e 94-ae 17 8e dc b9 b3 af bb ..J{..>.....
0070 - 5c f2 32 09 9f 56 1b fb-c8 b9 8a ce ad 5b b9 9a \.2..V.....[...
0080 - da f9 04 d3 8b a2 a7 28-80 d3 e3 d0 de d5 44 93 .....(.....D.
0090 - 6e 00 5b 7b fe 9f 9b 6b-48 29 7b 7c 19 e4 0c ed n. [{...kH} { }....
00a0 - 2e 58 1d ea 25 dc 62 05-b3 a2 d1 65 01 59 ce 7b .X..%.b....e.Y. {
00b0 - fe f5 b0 f6 57 a6 db 26-86 ab 98 7e fe c6 81 03 ....W..&...~....

Start Time: 1772787728

```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	301
Connected IP	210.187.101.51
Connect Time	5.38 ms
TTFB	12.09 ms
Total Time	12.16 ms
Error	Could not resolve host: mafhq.mil.my

#### Response Headers:

```
[
  "HTTP/1.1 301 Moved Permanently",
  "Location: https://mafhq.mil.my:443/",
  "Content-Length: 98",
  "Content-Type: text/html"
]
```

### IPv4 HTTPS (port 443)

HTTP Status	301
Connected IP	210.187.101.51
Connect Time	5.33 ms
TTFB	239.53 ms
Total Time	239.67 ms
Error	Could not resolve host: mafhq.mil.my

#### Response Headers:

```
[
  "HTTP/1.1 301 Moved Permanently",
  "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0, no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "Pragma: no-cache",
  "Content-Length: 0",
  "Content-Type: text/html; charset=utf-8",
  "Expires: Wed, 17 Aug 2005 00:00:00 GMT",
  "Last-Modified: Fri, 06 Mar 2026 09:02:09 GMT",
  "Location: http://mafhq.mil.my/index.php/ms/",
  "Set-Cookie: 487b9b61a326ca4d81a58ae46eda69de=HGaiRYLE8EhVkemET1J44g6G1W1p46NukzpwBi7MdJWktToiHGgXVtSWte0H60F0PFkmZiZh0WH/EdT7LzKLIJ0gufGg==; path=/; HttpOnly; Secure",
  "Date: Fri, 06 Mar 2026 09:02:09 GMT",
  "Set-Cookie: cookiesession1=678B2867050158DF005586A8133DEA47;Expires=Sat, 06 Mar 2027 09:03:24 GMT;Path=/;HttpOnly",
  "Strict-Transport-Security: max-age=15552000",
  "X-Frame-Options: SAMEORIGIN",
  "X-Content-Type-Options: nosniff",
  "X-XSS-Protection: 1; mode=block",
  "Content-Security-Policy: upgrade-insecure-requests"
]
```

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.004886 0.011155
TCP Connect IPv4 → port 443	000 0.004820 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
--------------------------------	---

**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
```