IPv6 Readiness Report

kln.gov.my — kln.gov.my

Scan to verify

Category: Government • Generated: 02 Nov 2026, 03:05 MYT • Last Checked: 08 Aug 2026, 18:09 MYT • Verification ID: 8332daef-8009-4bed-afbd-9149ae18cde4
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/8332daef-8009-4bed-afbd-9149ae18cde4

✗
Non-Compliant
MGv6C-1.0

50%
No IPv6 Support

IPV6-ONLY READINESS
Website: ✗ **Not Ready**
DNS: ✗ **Not Ready**
Email: ✓ **Ready**

IPV4 ADDRESSES
202.75.7.122

Network Information (WHOIS / RDAP)

	IPv4 Network
Organization	GITN Sdn. Bhd.
Country	MY
ASN	AS17564
ASN Name	GITN-PCN-AS-AP - GITN (M) Sdn. Bhd., MY
Network (CIDR)	202.75.4.0/22

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%) — 3 / 5

#	CHECK	RESULT	DETAIL
1	**NS Has AAAA Record**	PASS	Nameserver has IPv6 address.
2	**NS Reachable via IPv6**	PASS	Nameserver is reachable via IPv6 on port 53.
3	**NS Answers Queries via IPv6**	FAIL	Nameserver does not answer queries over IPv6.
4	**DNSSEC Validated**	PASS	DNSSEC fully validated.
5	**Reverse DNS (PTR)**	FAIL	No PTR record found.
6	**DS Record at Parent**	PASS	DS record found at parent zone.
7	**RRSIG Valid**	PASS	RRSIG signatures are current and valid.

#	CHECK	RESULT	DETAIL
8	**Signing Algorithm**	INFO	RSASHA256

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	No common DKIM selector found.
7	**DMARC Record**	PASS	DMARC record found.

IPv4 Baseline (15%) — 2 / 3

#	CHECK	RESULT	DETAIL
1	**A Record**	PASS	202.75.7.122
2	**HTTP over IPv4**	FAIL	HTTP is not accessible over IPv4.
3	**HTTPS over IPv4**	PASS	HTTPS (port 443) responds over IPv4 — 470ms TTFB.

Audit Trail & Evidence Record

Verification ID	8332daef-8009-4bed-afbd-9149ae18cde4
Domain	kln.gov.my
Check Mode	Manual
Status	Completed
Started	08 Aug 2026, 18:08:55 MYT
Finished	08 Aug 2026, 18:09:25 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/8332daef-8009-4bed-afbd-9149ae18cde4

Integrity Verification

✓ **INTEGRITY VERIFIED**

Algorithm	hmac-sha256-v1
Root Hash	4627c9fe9376bcc53003d3f2d06600eae3f937c60634d10bce02d91c2b08f174
http_headers	43efb0e13c5e118f03b22b174007db9cbe90f911707282575df00123c2c613a7
dns_responses	1c1f57202fbb301c8e74d7de0bf34f2c4501a794bd4b898f136cc51920623911
tls_handshake	dd2bd3b406cf1d9e7dfdb5a47fc8dbe045b193c2efe516b5eb0a1ddd610cce51
connectivity_log	f4537aa1f4b1ea7448869fb13a93a93f027b0a808d3aa9c0e44315ef9ec4c7dd
dns_resolution_times	2ba27690aecac859361ec529181273c32b09eba72b93402b399d8ad920ab0f04

Test Node Identity

Os	Linux srv1440888 6.8.0-136-generic #136-Ubuntu SMP PREEMPT_DYNAMIC Wed Jul 1 21:53:05 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.33
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	29.52	39.49	24.32	28.28	-5.2
Google	IPv4	87.63	93.4	99.78	167.67	+12.2
Google	IPv6	161.57	168.52	167.52	178.21	+6
Cloudflare	IPv4	24.13	24.55	22.15	27.57	-2
Cloudflare	IPv6	29.07	36.08	19.3	53.08	-9.8

DNS Evidence

A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 39675
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
kln.gov.my.□□3600□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026080710 10800 3600 172800 38400
```

DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 25286
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kln.gov.my.□□58721□IN□DS□33046 8 2 1692A73EAA4C22EA9048F5FDB85872E6407A7148034D311289C8B491 52ED4AF4
kln.gov.my.□□58721□IN□DS□33046 8 1 2A8BC4BA8ECDB2CD42030A71B9C00664FAEF3E41
```

MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 64574
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kln.gov.my.□□300□IN□MX□1 aspmx.l.google.com.
kln.gov.my.□□300□IN□MX□10 alt4.aspmx.l.google.com.
kln.gov.my.□□300□IN□MX□5 alt1.aspmx.l.google.com.
kln.gov.my.□□300□IN□MX□10 alt3.aspmx.l.google.com.
kln.gov.my.□□300□IN□MX□5 alt2.aspmx.l.google.com.
```

NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 21712
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kln.gov.my.□□3600□IN□NS□dns2.gitn.net.my.
kln.gov.my.□□3600□IN□NS□dns1.gitn.net.my.
```

TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 48645
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kln.gov.my.□□3600□IN□TXT□"MS=E0F8E18400A7C13FE9E8FB3E68D209B229903979"
kln.gov.my.□□3600□IN□TXT□"google-site-verification=PGDEH3aqogsJUvwUW6mtsNFR_X3PCItrPjF4nKgunRE"
kln.gov.my.□□3600□IN□TXT□"v=spf1 ip4:103.245.89.99 ip4:103.245.89.108 ip4:103.8.147.12/30 ip4:219.92.54.177/32 ip4:103.156.82.32/29 ip4:103.156.83.32/29
include:_spf.google.com ~all"
kln.gov.my.□□3600□IN□TXT□"MS=ms26620342"
```

AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 44849
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
kln.gov.my.□□3600□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026080710 10800 3600 172800 38400
```

RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2026080710 10800 3600 172800 38400
SOA 8 3 3600 20260907025033 20260808015033 35589 kln.gov.my. L0+lhpdPEfJ6aihaB8Ma6HgVhqLEjvHIJdLHXwnWW/jwMzhCSROexE6W
8f4z30RbE82v0qqEuXRilPKQ9Uh2916KIfWKvtauKnBLAeeJ3+a4aqoy CaPQBK6wDyoJCd/b0OlNFUbixZRntroyPxLsrlVHnKptfQQtCaGjkaSr dXY=
```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 3994
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kln.gov.my.□□3590□IN□DNSKEY□256 3 8 AwEAAZ2+A6SU22JCVL2Q3MhVyvp/ofA/cZyaSUrnreqcqCBT7zPWRfgu N4UR77PCuYRNdb1/OhzrYOl7wFg3udq07mD9kwY/eVbHZpZPcULDmZgb
7I/peSKm/sz7qIXWLc+c0qd5PYfa0ziNyW4Weajofp5HoByHLTZMI5qR 28MTep7p
kln.gov.my.□□3590□IN□DNSKEY□257 3 8 AwEAAdHDEQkUL2nwyJfCeqiNnjXuMENO8Wyu13NOkSoBTkUthgOYwF/E wUzT6ILy9lLP5Z0Gn5vVqFtPIhAHc7OE7RMjEO+4BW0u8FKsLt30Mgyc
OPfPRI4MrfjyGPJ7xm5RhIZulPWCqn01uAAxWjQq9aINi02zWxk+13l9 gH3wsoEJOsV+nWuH6yMX670sQ0Q6V3ifOSaDMdnAsrR/7SP1yUeYpBiB
9/d2AMzQg/KiZc+bQl2x43BYjSylUgJ39blmO3nlalf0hoPs6+qxrB5b 7xL0Rj69y7gAKeiDyaGyms0Z8uiD0T3yGsxpAynM/cCNoLf4fe8dIX9t JxCGiHnnc38=
```

DNSSEC_VALIDATION

```
; fully validated
kln.gov.my.□□3590□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026080710 10800 3600 172800 38400
kln.gov.my.□□3590□IN□RRSIG□SOA 8 3 3600 20260907025033 20260808015033 35589 kln.gov.my. L0+lhpdPEfJ6aihaB8Ma6HgVhqLEjvHIJdLHXwnWW/jwMzhCSROexE6W
8f4z30RbE82v0qqEuXRilPKQ9Uh2916KIfWKvtauKnBLAeeJ3+a4aqoy CaPQBK6wDyoJCd/b0OlNFUbixZRntroyPxLsrlVHnKptfQQtCaGjkaSr dXY=
```

TLS Handshake Evidence

IPV4 Connection

IP Used	202.75.7.122
IP Version	4

```
depth=0 C = MY, ST = Wilayah Persekutuan Putrajaya, L = Putrajaya, O = Kementerian Luar Negeri Malaysia, CN = *.kln.gov.my
verify error:num=20:unable to get local issuer certificate
verify return:1
depth=0 C = MY, ST = Wilayah Persekutuan Putrajaya, L = Putrajaya, O = Kementerian Luar Negeri Malaysia, CN = *.kln.gov.my
verify error:num=21:unable to verify the first certificate
verify return:1
depth=0 C = MY, ST = Wilayah Persekutuan Putrajaya, L = Putrajaya, O = Kementerian Luar Negeri Malaysia, CN = *.kln.gov.my
verify return:1
CONNECTED(00000010)
---
Certificate chain
 0 s:C = MY, ST = Wilayah Persekutuan Putrajaya, L = Putrajaya, O = Kementerian Luar Negeri Malaysia, CN = *.kln.gov.my
   i:C = US, O = DigiCert Inc, CN = DigiCert Global G2 TLS RSA SHA256 2020 CA1
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Nov  7 00:00:00 2025 GMT; NotAfter: Dec  8 23:59:59 2026 GMT
-----BEGIN CERTIFICATE-----
MIIG8TCCBdmgAwIBAgIQAnusjQm7zr4GRGlhJj8utzANBgkqhkiG9w0BAQsFADBZ
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMTMwMQYDVQQDEypE
aWdpQ2VydCBHbG9iYWwgRzIgVExTIFJTQSBTSEEyNTYgMjAyMCBDQTEwHhcNMjUx
MTA3MDAwMDAwWhcNMjYxMjA4MjM1OTU5WjCBizELMAkGA1UEBhMCTVkxJjAkBgNV
BAgTHVdpbGF5YWggUGVyc2VrdXR1YW4gUHV0cmFqYXlhMRIwEAYDVQQHEwlQdXRy
YWpheWExKTAnBgNVBAoTIEtlbWVudGVyaWFuIEx1YXIgTmVnZXJpIE1hbGF5c2lh
MRUwEwYDVQQDDAwqLmtsbi5nb3YubXkwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAw
ggEKAoIBAQDCxpNhnqj/3ZdZdAZZLBP8KPqVvJPMuhrRr+pSSS6Xmf5wj1C1I4TV
LCz93HeUoS/gRKDfgfLrOEf1CdM2ptb/Paxh4KtvoAerVcHZushuGBKhtjRTdLz3
VstdW1udXsxS5fufPsVcXrIDRpdkSKJPjnZzePKDebmvVMeBe1jug1Iheaw+LOBT
MOUNLAGKzRAo+qKWXGzdFTOUkesEcEjPclTAZDQ2koPiL/yrRfOL3Z/EGhI/AAFj
01cHqod8lkwk4G3JyG/TrLDR7cB2lYZ0OSb2b0EZSFpyWQIon8p4s73viTX+fZnn
2nraphy5W+W4ZYiDbGSPpvUWGilcpfbzAgMBAAGjggOAMIIDfDAfBgNVHSMEGDAW
gBR0hYDAZsffN97PvSk3qgMdvu3NFzAdBgNVHQ4EFgQU2BvYMKC0w3/kNHF5K627
yGfOYe4wFwYDVR0RBBAwDoIMKi5rbG4uZ292Lm15MD4GA1UdIAQ3MDUwMwYGZ4EM
AQICMCkwJwYIKwYBBQUHAgEWG2h0dHA6Ly93d3cuZGlnaWNlcnQuY29tL0NQUzAO
BgNVHQ8BAf8EBAMCBaAwEwYDVR0lBAwwCgYIKwYBBQUHAwEwgZ8GA1UdHwSBlzCB
lDBIoEagRIZCaHR0cDovL2NybDMuZGlnaWNlcnQuY29tL0RpZ2lDZXJ0R2xvYmFs
RzJUTFNSU0FTSEEyNTYyMDIwQ0ExLTEuY3JsMEigRqBEhkJodHRwOi8vY3JsNC5k
aWdpY2VydC5jb20vRGlnaUNlcnRHbG9iYWxHMlRMU1JTQVNIQTI1NjIwMjBDQTEt
MS5jcmwwgYcGCCsGAQUFBwEBBHsweTAkBggrBgEFBQcwAYYYaHR0cDovL29jc3Au
ZGlnaWNlcnQuY29tMFEGCCsGAQUFBzAChkVodHRwOi8vY2FjZXJ0cy5kaWdpY2Vy
dC5jb20vRGlnaUNlcnRHbG9iYWxHMlRMU1JTQVNIQTI1NjIwMjBDQTEtMS5jcnQw
DAYDVR0TAQH/BAIwADCCAYAGCisGAQQB1nkCBAIEggFwBIIBbAFqAHcA1219ENGn
9XfCx+lf1wC/+YLJM1pl4dCzAXMXwMjFaXcAAAGaXYu4SAAABAMASDBGAiEAzoNR
EFquQVNthkBejKnrTt0uhaM0fvfwTP8U3ImwPlICIQCgY+UosHkpsTryMsUukKOB
LNjrVU3G5DFawgT/TsZXXwB3AMIxfldFGaNF7n843rKQQevHwiFaIr9/1bWtdprZ
DlLNAAABml2LuJ4AAAQDAEgwRgIhAMXvofzLbKgtUQXyikJfTp/YwiNC7gqks1zA
8A1Fx+cSAiEAkIrDV4wRdj1OeOictFQHWaCUIBkCjZvRyORNge2BmLkAdgCUTkOH
+uzB74HzGSQmqBhlAcfTXzgCAT9yZ31VNy4Z2AAAAZpdi7ieAAAEAwBHMEUCIAXP
j2M89zgMINVJertzpea6k1o/j1G0IZdscfVECbAUAiEA3AkfIJZrBetwXnS0yAEC
m9t/rpO9UAWB1RGLv5QaEAYwDQYJKoZIhvcNAQELBQADggEBAEVgzs9oJ5wPvkl8
8vUbrth9KdXcJY2HP/Oyf9Xg7pHQ1XMBKUbUeti1hG2yfItnZ4rUCUusKtz7AItS
gZGuMD4gl/rlrPUYwQ5g7c7lPcO6pl16H/xk75Ap6B94CmaBICrTcpNtlkWCyvFg
ddsCS+SKZ/8pZzp48tUwJEGt8ravyupsl04c8+ZXruuGau8nG/9eMXZ4HzApo5s1
wdHT6Rf3zthd8HOADMNdKm/ICVslFY9zqYFm3NQZVax2Hi14nUr+0GCj3CVAocN7
249Fj+B8aeENGtkpXl6/CkLKz28AibWhtoILNA6NazTaKRnSnwrJgtvXBXc0wZzE
AJMvZ/M=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, ST = Wilayah Persekutuan Putrajaya, L = Putrajaya, O = Kementerian Luar Negeri Malaysia, CN = *.kln.gov.my
issuer=C = US, O = DigiCert Inc, CN = DigiCert Global G2 TLS RSA SHA256 2020 CA1
---
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 2341 bytes and written 392 bytes
Verification error: unable to verify the first certificate
---
New, TLSv1.3, Cipher is TLS_AES_256_GCM_SHA384
Server public key is 2048 bit
Secure Renegotiation IS NOT supported
Compression: NONE
Expansion: NONE
```

```
No ALPN negotiated
Early data was not sent
Verify return code: 21 (unable to verify the first certificate)
---
DONE
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8003.43 ms
Error	Failed to connect to kln.gov.my port 80 after 8003 ms: Timeout was reached

IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	202.75.7.122
Connect Time	5.53 ms
TTFB	477.04 ms
Total Time	477.09 ms

Response Headers:


```
[
    "HTTP/1.1 200 OK",
    "Server: nginx",
    "Content-Type: text/html; charset=utf-8",
    "Connection: keep-alive",
    "Vary: Accept-Encoding",
    "Cache-Control: no-cache, private",
    "Date: Sat, 08 Aug 2026 10:09:19 GMT",
    "Set-Cookie: XSRF-
TOKEN=eyJpdiI6InpwTmwvazBhc0NmSmpUeVNEMjlxUXc9PSIsInZhbHVlIjoiNTBQSmtVMzRlRmtEVXpkQUlKdEtFd3FNaDZNeU5UWEsreEIrMStxRVNWcVhydGtZbmZSVjAwNVBQSkg2OUhsYjNVUjRtK3UvUy96K3c5OXJDNExVckVO
expires=Sat, 08 Aug 2026 12:09:19 GMT; Max-Age=7200; path=/; secure; samesite=lax",
    "Set-Cookie: portal-
session=eyJpdiI6ImFUV0ZuLzBhc2tzUVJXdHNqM3pEU0E9PSIsInZhbHVlIjoiTDl3NmluSjN0MkxqS1MySVpiUlFmZ2hFRnEvYkNDS1VpeDRZanY4c1ZoczViK243MTRwVlhsL2pLQnhWeCtBU3planJwV2hoUGJ3Vk1RY0YvM2h2dnp
expires=Sat, 08 Aug 2026 12:09:19 GMT; Max-Age=7200; path=/; secure; httponly; samesite=lax",
    "X-Frame-Options: SAMEORIGIN",
    "X-Content-Type-Options: nosniff"
]
```


Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	000 0.000000 0.000000
TCP Connect IPv4 → port 443	000 0.005604 0.000000

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
fd7a:115c:a1e0::1136:5807 dev tailscale0 proto kernel metric 256 pref medium
fe80::/64 dev eth0 proto kernel metric 256 pref medium
fe80::/64 dev tailscale0 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
```