

# IPv6 Readiness Report

kln.gov.my — kln.gov.my



Scan to verify

Category: Government • Generated: 04 Jul 2026, 22:39 MYT • Last Checked: 04 Jul 2026, 03:07 MYT • Verification ID: 6ca09a2c-be0c-4dd4-8899-4e9d33138476

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

Audit trail: <https://ipv6.my6.my/audit/6ca09a2c-be0c-4dd4-8899-4e9d33138476>

<p><b>X</b></p> <p><b>Non-Compliant</b></p> <p>MGv6C-1.0</p>	<p><b>37%</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>
--	---	--

<p><b>IPv4 ADDRESSES</b></p> <p>163.53.153.22</p>
---

## 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)	163.53.152.0/22

Web Services (35%) <span style="float: right;">0 / 8</span>			
#	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%) <span style="float: right;">3 / 5</span>			
#	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	<b>Signing Algorithm</b>	<b>INFO</b>	RSASHA256

**Email Services** (25%) 4 / 6

#	CHECK	RESULT	DETAIL
1	<b>MX Record Exists</b>	<b>PASS</b>	MX record found.
2	<b>MX Server Has IPv6</b>	<b>PASS</b>	MX server has AAAA record.
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>PASS</b>	SPF record found.
6	<b>DKIM Selector</b>	<b>INFO</b>	No common DKIM selector found.
7	<b>DMARC Record</b>	<b>PASS</b>	DMARC record found.

**IPv4 Baseline** (15%) 1 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	163.53.153.22
2	<b>HTTP over IPv4</b>	<b>FAIL</b>	HTTP is not accessible over IPv4.
3	<b>HTTPS over IPv4</b>	<b>FAIL</b>	HTTPS is not accessible over IPv4.

### Audit Trail & Evidence Record

Verification ID	6ca09a2c-be0c-4dd4-8899-4e9d33138476
Domain	klm.gov.my
Check Mode	Scheduled
Status	Completed
Started	04 Jul 2026, 03:06:55 MYT
Finished	04 Jul 2026, 03:07:26 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/6ca09a2c-be0c-4dd4-8899-4e9d33138476

### Integrity Verification

<b>✓ INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	a194e391f3b73b70a0b1aef98bd2f08bb726961d07003bfc4b03194b393450a4
http_headers	ae87b2e62d4f1c25d9d23d1d4c2a86bdf671dfb1095bbef4743293ce997e5dfd
dns_responses	38967f9465b23e2b7613c6117cb612b0dc29a17e7d02abc2732fb5a6ba7a125a
tls_handshake	6a0da089e88fdde4272aff0eef4fc493bfa93f50e71f09c0f89ebc3bab985541
connectivity_log	833860c27af68ec48704d14c1ebbee88d6785bcfa6efdaf4a3678f841e1eb318
dns_resolution_times	c31dc74ddc0eafdef04f6e3242ca85f94bcb50b79ae6e87ee23029fb27a4484f

### 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	21.28	30.04	31.61	37.72	+10.3
Google	IPv4	26.49	39.75	44.03	53.06	+17.5
Google	IPv6	42.57	48.51	51.46	52.24	+8.9
Cloudflare	IPv4	18.85	19.37	23.01	30.11	+4.2
Cloudflare	IPv6	22.86	30.33	34.18	63.94	+11.3



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 26568
;; 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. 2026042618 10800 3600 172800 38400
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 26026
;; 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 DS 33046 8 2 1692A73EAA4C22EA9048F5FDB85872E6407A7148034D311289C8B491 52ED4AF4
kln.gov.my. 3600 IN DS 33046 8 1 2A8BC4BA8ECDB2CD42030A71B9C00664FAEF3E41
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 54879
;; 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. 3600 IN MX 10 alt3.aspmx.l.google.com.
kln.gov.my. 3600 IN MX 10 alt4.aspmx.l.google.com.
kln.gov.my. 3600 IN MX 5 alt2.aspmx.l.google.com.
kln.gov.my. 3600 IN MX 5 alt1.aspmx.l.google.com.
kln.gov.my. 3600 IN MX 1 aspmx.l.google.com.
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 26480
;; 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 dns1.gitn.net.my.
kln.gov.my. 3600 IN NS dns2.gitn.net.my.
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 37585
;; 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 "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"
kln.gov.my. 3600 IN TXT "MS=E0F8E18400A7C13FE9E8FB3E68D209B229903979"
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 120
;; 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. 2026042618 10800 3600 172800 38400
```

RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2026042618 10800 3600 172800 38400
SOA 8 3 3600 20260802162218 20260703152218 35589 kln.gov.my. mbGaz6RK7Fz2kdE9P2g31S7X9YqiV1rBKf4Dova/q60y40rPUI7QmcwL
Kgi7NPj7oR1Axqic6WQFyZL/J036P9FGH6pHF60KXQbgb8Jje0XAewG5 gvxftrtFY2yZDbFN4pjYH9bAYjUAp4pRCGvgeIo0hQIXLnHFWap9qc6vc ano=
```

DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 52214
;; 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. 3576 IN DNSKEY 257 3 8 AwEAAAdHDEQkUL2nwyJfCeqiNnjXuMEN08Wyu13N0kSoBTKUthg0YwF/E wUzT6ILy9LLP5Z0Gn5vVqFtPIhAhc70E7RMjE0+4Bw0u8FKsLt30Mgyc
OPfPRI4MrfjyGPJ7xm5RhIZuLPWCqn01uAAxWjQq9aINi02zWxk+1319 gH3wsoEJ0sV+nWuH6yMX670sQ0Q6V3if0SaDMdnAsrR/7SP1yUeYpBiB
9/d2AMzQg/KiZc+bQl2x43BYjSylUgJ39blm03nlaIf0hoPs6+qxrB5b 7xL0Rj69y7gAKeiDyaGyms0Z8uiD0T3yGsxpAynM/cCNoLf4fe8dIX9t JxCGiHnnc38=
kln.gov.my. 3576 IN DNSKEY 256 3 8 AwEAAAZ2+A6SU22JCVL2Q3MhVyvp/ofA/cZyaSURnreqcqCBT7zPWRfgu N4UR77PCuYRNdb1/0hzrY0L7wFg3udq07mD9kwY/eVbHZpZpCULDMZgb
7I/peSKm/sz7qIXWLc+c0qd5PYfa0ziNyW4Weajofp5HoByHLTZMI5qR 28MTep7p
```

DNSSEC\_VALIDATION

```
; fully validated
kln.gov.my. 3576 IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2026042618 10800 3600 172800 38400
kln.gov.my. 3576 IN RRSIG SOA 8 3 3600 20260802162218 20260703152218 35589 kln.gov.my. mbGaz6RK7Fz2kdE9P2g31S7X9YqiV1rBKf4Dova/q60y40rPUI7QmcwL
Kgi7NPj7oR1Axqic6WQFyZL/J036P9FGH6pHF60KXQbgb8Jje0XAewG5 gvxftrtFY2yZDbFN4pjYH9bAYjUAp4pRCGvgeIo0hQIXLnHFWap9qc6vc ano=
```

---

## TLS Handshake Evidence

---

### IPv4 Connection

IP Used	163.53.153.22
IP Version	4

```
4047D98E94730000:error:0A000126:SSL routines:ssl3_read_n:unexpected eof while reading:../ssl/record/rec_layer_s3.c:316:
CONNECTED(00000010)
---
no peer certificate available
---
No client certificate CA names sent
---
SSL handshake has read 0 bytes and written 319 bytes
Verification: OK
---
New, (NONE), Cipher is (NONE)
Secure Renegotiation IS NOT supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
Early data was not sent
Verify return code: 0 (ok)
---
```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	163.53.153.22
Connect Time	6.37 ms
TTFB	11.03 ms
Total Time	11.04 ms
Error	Empty reply from server

### IPv4 HTTPS (port 443)

HTTP Status	0
Connected IP	163.53.153.22
Connect Time	7.16 ms
TTFB	0 ms
Total Time	12.63 ms
Error	OpenSSL SSL_connect: SSL_ERROR_SYSCALL in connection to kln.gov.my:443

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	000 0.007147 0.013476
TCP Connect IPv4 → port 443	000 0.006075 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
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