# IPv6 Readiness Report

**kbs.gov.my — kbs.gov.my**

Scan to verify

Category: Government • Generated: 02 Nov 2026, 03:05 MYT • Last Checked: 08 Aug 2026, 18:12 MYT • Verification ID: a0cfa655-afbb-4ce3-8ec4-be2043d2ad29
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/a0cfa655-afbb-4ce3-8ec4-be2043d2ad29

✗
**Non-Compliant**
MGv6C-1.0

**45%**
**No IPv6 Support**

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

**IPV4 ADDRESSES**
202.75.6.253

## 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%) — 1 / 3

| # | CHECK | RESULT | DETAIL |
|---|---|---|---|
| 1 | **A Record** | PASS | 202.75.6.253 |
| 2 | **HTTP over IPv4** | FAIL | HTTP is not accessible over IPv4. |
| 3 | **HTTPS over IPv4** | FAIL | HTTPS is not accessible over IPv4. |

## Audit Trail & Evidence Record

| | |
|---|---|
| **Verification ID** | a0cfa655-afbb-4ce3-8ec4-be2043d2ad29 |
| **Domain** | kbs.gov.my |
| **Check Mode** | Manual |
| **Status** | Completed |
| **Started** | 08 Aug 2026, 18:11:07 MYT |
| **Finished** | 08 Aug 2026, 18:12:13 MYT |
| **Test Node Profile** | dual stack |
| **Engine Version** | 2.0.0 |
| **MGv6C Version** | 1.0.0 |
| **Audit URL** | https://ipv6.my6.my/audit/a0cfa655-afbb-4ce3-8ec4-be2043d2ad29 |

## Integrity Verification

✓ **INTEGRITY VERIFIED**

| | |
|---|---|
| **Algorithm** | hmac-sha256-v1 |
| **Root Hash** | 020f9878b38d9f9b86419d5b036497b0bdcebada3133ff67b3014fffe25970e2 |
| **http_headers** | 51ffe1e97d19f0f5297915181e7d61b6384cae8f45c006f38e7839416dbeb709 |
| **dns_responses** | c7bed2a2b02dfc178a93220f3f31fea918d001c69a6f99a79d1de86a6b740d1a |
| **tls_handshake** | 236a68e3dd7bbc3e719fcbf5fab9dbd8ea49cf0b2a75b758e1ba3b3e75a6ddda |
| **connectivity_log** | c571529628ae93d3d5180dec20e307692d772428bf4569b1feeb29b40bc18e78 |
| **dns_resolution_times** | 8c884c87f90c389f152c91a2e3644be8a173b27ce8a5ba9a1fdfe7a0cf5dc687 |

## 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 | 22.68 | 24.28 | 24.98 | 26.06 | +2.3 |
| **Google** | IPv4 | 42.72 | 162.03 | 147.74 | 160.71 | +105 |
| **Google** | IPv6 | 152.35 | 164.15 | 159.31 | 168.79 | +7 |
| **Cloudflare** | IPv4 | 22.68 | 23.91 | 23.21 | 26.8 | +0.5 |
| **Cloudflare** | IPv6 | 33.03 | 50.17 | 26.95 | 35.6 | -6.1 |

## DNS Evidence

### A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 10283
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
kbs.gov.my.	3600	IN	SOA	dns1.gitn.net.my. root.dns1.gitn.net.my. 2026062072 3600 900 3600000 3600
```

### DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 43164
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kbs.gov.my.	58873	IN	DS	35704 8 2 EFCD896BCA7730AF2FFABE58D0C1E7D2990AB94DAE4269AC84B7AE24 6D45531B
kbs.gov.my.	58873	IN	DS	35704 8 1 C53E39ECA042F572904E06C2DEB67B7F0951B50D
```

### MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45711
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

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

### NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 34115
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

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

### TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 57471
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kbs.gov.my.	300	IN	TXT	"google-site-verification=ijt89L0ft-PhNeBtZVfkyD4rdU85XxeAni8fqx__Cus"
kbs.gov.my.	300	IN	TXT	"v=spf1 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"
kbs.gov.my.	300	IN	TXT	"MS=E24042AAA3B136D5C11F7E39C30D5AC0224D28F4"
```

### AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 24874
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
kbs.gov.my.	3600	IN	SOA	dns1.gitn.net.my. root.dns1.gitn.net.my. 2026062072 3600 900 3600000 3600
```

### RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2026062072 3600 900 3600000 3600
```

```
SOA 8 3 3600 20260906205202 20260807195202 1416 kbs.gov.my. YN22Q99+b6DMqkf29IvF3IKPCwoev3h2dXfJ8+QAVTtdqDfsQPkWN3tN
iR7AAc6BBBJpWDbd752xOgm3staMrKbQaivGgwjeRFPdXkN4a6KGR0v+ +r/Fk/bfo13Qk7EnR1hAKAnppl/Oc61RstJ+xXaBVv5wgSArCllBNmhk KOU=
```

### DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 49536
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
kbs.gov.my.□□3583□IN□DNSKEY□256 3 8 AwEAAbmXYTkF8YiZBTuo1yD9XtGcEi4P37A3jaXq160nv5bQWZ9E4Cqg NIrPWSRsAIN1tFKy4nwadchU0DsOtjCnlsKbJxDMqkSAD9B7Hf4UjByM
2koKp6TjRmQXlfNWxPSQDXBnKzs3VHfVsprVbisWfYGqMumulJaoR9yk epkKGhA1
kbs.gov.my.□□3583□IN□DNSKEY□257 3 8 AwEAAbMEcIMJAC331NDM8i5YpHrcd2c2INnAjDIHLgS+/M4BDa31s6uv wmsxe7+Bk0IilZRiICMTXxrA56JYqZYnHg43JyGovHk6383S+EZ9rMva
y6OVO1JUFmVXAf3RotnBKu5idLciOx2TH3KfxjC2eoU99H2E+HNllDsC /KX2ku4PYApsRvUsMVD3CdtXxeqUOtv5c5XLjIX+cwqV3v3F+uyVAWd5
Kt7V7CF8pyVVAIixY5+uuVokya/cQ/iegFyc6Xki4oWlsZIJ8RZDBZ2Y kokJqH5ep5lC3q483bo2kPnIZg7kEcVdoE5cfy9gAjwCzcDO3QnoN6G0 Pr6RRq0E9G0=
```

### DNSSEC_VALIDATION

```
; fully validated
kbs.gov.my.□□3583□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026062072 3600 900 3600000 3600
kbs.gov.my.□□3583□IN□RRSIG□SOA 8 3 3600 20260906205202 20260807195202 1416 kbs.gov.my. YN22Q99+b6DMqkf29IvF3IKPCwoev3h2dXfJ8+QAVTtdqDfsQPkWN3tN
iR7AAc6BBBJpWDbd752xOgm3staMrKbQaivGgwjeRFPdXkN4a6KGR0v+ +r/Fk/bfo13Qk7EnR1hAKAnppl/Oc61RstJ+xXaBVv5wgSArCllBNmhk KOU=
```

## TLS Handshake Evidence

### IPV4 Connection

| | |
|---|---|
| **IP Used** | 202.75.6.253 |
| **IP Version** | 4 |

## HTTP Response Evidence

### IPv4 HTTP (port 80)

| | |
|---|---|
| **HTTP Status** | 0 |
| **Connected IP** | |
| **Connect Time** | 0 ms |
| **TTFB** | 0 ms |
| **Total Time** | 8002.26 ms |
| **Error** | Failed to connect to kbs.gov.my port 80 after 8002 ms: Timeout was reached |

### IPv4 HTTPS (port 443)

| | |
|---|---|
| **HTTP Status** | 0 |
| **Connected IP** | |
| **Connect Time** | 0 ms |
| **TTFB** | 0 ms |
| **Total Time** | 8002.57 ms |
| **Error** | Failed to connect to kbs.gov.my port 443 after 8002 ms: Timeout was reached |

## Connectivity Test Evidence

| Test | Result |
|---|---|
| **TCP Connect IPv4 → port 80** | 000 0.000000 0.000000 |
| **TCP Connect IPv4 → port 443** | 000 0.000000 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
```