# IPv6 Readiness Report

**jpa.gov.my — jpa.gov.my**

Scan to verify

Category: Government • Generated: 02 Nov 2026, 03:08 MYT • Last Checked: 08 Aug 2026, 18:07 MYT • Verification ID: ed7bd49f-410c-4666-855e-d97ea151e479
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/ed7bd49f-410c-4666-855e-d97ea151e479

⚠
**Partially Compliant**
MGv6C-1.0

**63%**
**Partial Support**

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

**IPV6 ADDRESSES**
2401:b00:4:1::2

**IPV4 ADDRESSES**
202.75.5.12

## Network Information (WHOIS / RDAP)

| | IPv6 Network | IPv4 Network |
|---|---|---|
| Organization | GITN Sdn. Bhd. | GITN Sdn. Bhd. |
| Country | MY | MY |
| ASN | AS17564 | AS17564 |
| ASN Name | GITN-PCN-AS-AP - GITN (M) Sdn. Bhd., MY | GITN-PCN-AS-AP - GITN (M) Sdn. Bhd., MY |
| Network (CIDR) | 2401:b00::/32 | 202.75.4.0/22 |

## Web Services (35%) — 3 / 8

| # | CHECK | RESULT | DETAIL |
|---|---|---|---|
| 1 | **AAAA Record** | PASS | 2401:b00:4:1::2 |
| 2 | **Globally Routable IPv6** | PASS | All addresses are 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)** | PASS | Domain has both A and AAAA records. |
| 8 | **HTTP/3 (QUIC)** | FAIL | No HTTP/3 support detected. |

## DNS & DNSSEC (25%) — 4 / 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** | PASS | DNS queries answered 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 | 202.75.5.12 |
| 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** | ed7bd49f-410c-4666-855e-d97ea151e479 |
| **Domain** | jpa.gov.my |
| **Check Mode** | Manual |
| **Status** | Completed |
| **Started** | 08 Aug 2026, 18:05:15 MYT |
| **Finished** | 08 Aug 2026, 18:07:55 MYT |
| **Test Node Profile** | dual stack |
| **Engine Version** | 2.0.0 |
| **MGv6C Version** | 1.0.0 |
| **Audit URL** | https://ipv6.my6.my/audit/ed7bd49f-410c-4666-855e-d97ea151e479 |

## Integrity Verification

✓ **INTEGRITY VERIFIED**

| | |
|---|---|
| **Algorithm** | hmac-sha256-v1 |
| **Root Hash** | 6c7234e9c0ddc428a1a980014390f1ff672e0616548c7fbe206aa71be587dad4 |
| **http_headers** | 9653a0ad5eb78928711172ca2f56049eb0545789654b2969723f1613a57e1450 |
| **dns_responses** | f1e9690066cc3c63d7e4c0d6100c31e44255239efacb05c2db7f1bb75380fda2 |
| **tls_handshake** | 5c01f5cf7e985c0b8777897907c927b9ff20902db2510d6f2569a98a848c6ace |
| **connectivity_log** | 984df820bbcc6bbfbb056bbe48c308184a576171583b285122107f3d0fc1ccfd |
| **dns_resolution_times** | cdc86da2004cd8a276374cc7c0a3e1e1aa6dbf6171beb68e71f0f7aec587f4a1 |

## 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 | 21.8 | 22.5 | 21.94 | 24.37 | +0.1 |
| **Google** | IPv4 | 165.57 | 242.39 | 39.51 | 168.07 | -126.1 |
| **Google** | IPv6 | 162.86 | 168.38 | 41.64 | 160.57 | -121.2 |
| **Cloudflare** | IPv4 | 23.68 | 29.74 | 21.54 | 24.29 | -2.1 |
| **Cloudflare** | IPv6 | 26.2 | 33.97 | 35.1 | 41.81 | +8.9 |

## DNS Evidence

### A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 2426
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
jpa.gov.my.□□3600□IN□A□202.75.5.12
```

### DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 8495
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
jpa.gov.my.□□53468□IN□DS□10585 8 1 C25AD71EB88A853B44CB9404F87755C6B59F77F2
jpa.gov.my.□□53468□IN□DS□10585 8 2 559B4200A711236A442CED9E368726683EB10ACDBD69A1051650E8DC 3FBEB714
```

### MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 9277
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

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

### NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 22814
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

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

### TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 9498
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
jpa.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"
jpa.gov.my.□□300□IN□TXT□"MS=ms81949389"
jpa.gov.my.□□300□IN□TXT□"google-site-verification=EbokZKYVORwjX-zEka5luVAXG3YxgUzYZDU4fPQFVDI"
jpa.gov.my.□□300□IN□TXT□"google-site-verification=0Ia5Kq-7uXi6k9YX8s4Dmk_sAxKqOaDaPf0Gw1Zavb4"
```

### AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 20136
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
jpa.gov.my.□□3600□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026032458 3600 900 3600000 3600
```

### RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2026032458 3600 900 3600000 3600
SOA 8 3 3600 20260906181127 20260807171127 48819 jpa.gov.my. oLXOI77QBRgRl2YV8R+PkJEkqpWUlq8GAVzONRfkdhP9NJ8MDOmgZgVe
qIm56o1BCiXS3Z/FuTi4n93fW08pWrO/CZkqThfE+fGKKc9uNzvpLyBm rp0a8dWsEmKd0cfgSumPFn1/De/aWEMDz7+k/J2OuTpteZcW83nLyMhN mCU=
```

### DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 25253
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
jpa.gov.my.□□3575□IN□DNSKEY□257 3 8 AwEAAee5BlEcFyQ/8eG3oVpBGpc2Q34Fv1PnRLeDI9XHNPs881reREOc iLEnStp1A5otEdRz8VCrr61qmFI2p3Ex3jcsUoq6wP13dOXSQRB5OW3o
vXwWxtfjoraKZmXtdhjFRv0bYTuiyNAIYJaM0X+D5n5y50eIBx+/SWWv GwI5DwoBTUZOJl8gifzFYZlT3oosLAqsCmhEb50UVE2yBa35YCQTkvJ1
Nug3aTO5gsK0lbZyLYcmIjx4TxXjMqlyQgFSjmvaIqyk33LUj1+MAyrH hD44sMCR5Kzw3nPi4p/rdvfUWGE7uCy0L57M9xu5RnYwm+D+9tDLlV+I kcI686ZoH0U=
jpa.gov.my.□□3575□IN□DNSKEY□256 3 8 AwEAAbjc+x54hkGYyBhH3W0PXuZ2ks1LDzy3Wliwu4XMkFqRUjratrhD 8WyUeMv7cWBEky/4yclXOBsTK8hVduSwGiZWGPqDIseyyPnvaMzrCZVS
X3PsguYkwWoKpmJKxc3mxj8l3oDQg4HclYaixdgaBYvaa9Tg5rQTnyye OhdTME7Z
```

### DNSSEC_VALIDATION

```
; fully validated
jpa.gov.my.□□3575□IN□SOA□dns1.gitn.net.my. root.dns1.gitn.net.my. 2026032458 3600 900 3600000 3600
jpa.gov.my.□□3575□IN□RRSIG□SOA 8 3 3600 20260906181127 20260807171127 48819 jpa.gov.my. oLXOI77QBRgRl2YV8R+PkJEkqpWUlq8GAVzONRfkdhP9NJ8MDOmgZgVe
qIm56o1BCiXS3Z/FuTi4n93fW08pWrO/CZkqThfE+fGKKc9uNzvpLyBm rp0a8dWsEmKd0cfgSumPFn1/De/aWEMDz7+k/J2OuTpteZcW83nLyMhN mCU=
```

## TLS Handshake Evidence

### IPV4 Connection

| | |
|---|---|
| **IP Used** | 202.75.5.12 |
| **IP Version** | 4 |

### IPV6 Connection

| | |
|---|---|
| **IP Used** | 2401:b00:4:1::2 |
| **IP Version** | 6 |

## HTTP Response Evidence

### IPv4 HTTP (port 80)

| | |
|---|---|
| **HTTP Status** | 0 |
| **Connected IP** | |
| **Connect Time** | 0 ms |
| **TTFB** | 0 ms |
| **Total Time** | 8002.88 ms |
| **Error** | Failed to connect to jpa.gov.my port 80 after 8002 ms: Timeout was reached |

### IPv6 HTTP (port 80)

| | |
|---|---|
| **HTTP Status** | 0 |
| **Connected IP** | |
| **Connect Time** | 0 ms |
| **TTFB** | 0 ms |
| **Total Time** | 8003.02 ms |
| **Error** | Failed to connect to jpa.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** | 8002.81 ms |
| **Error** | Failed to connect to jpa.gov.my port 443 after 8002 ms: Timeout was reached |

### IPv6 HTTPS (port 443)

| | |
|---|---|
| **HTTP Status** | 0 |
| **Connected IP** | |
| **Connect Time** | 0 ms |
| **TTFB** | 0 ms |
| **Total Time** | 8002.74 ms |
| **Error** | Failed to connect to jpa.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 IPv6 → port 80` | `000 0.000000 0.000000` |
| `TCP Connect IPv4 → port 443` | `000 0.000000 0.000000` |
| `TCP Connect IPv6 → 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
```