

IPv6 Readiness Report

kpk.gov.my — kpk.gov.my

Category: Government • Generated: 20 Apr 2026, 21:23 MYT • Last Checked: 07 Mar 2026, 01:19 MYT • Verification ID: c2a751ae-0bed-43e8-84a2-d439e0b74626

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

Audit trail: <https://ipv6.my6.my/audit/c2a751ae-0bed-43e8-84a2-d439e0b74626>

| | | |
|---|--------------------------------------|---|
| X Non-Compliant MGv6C-1.0 | 47% Partial Support | IPv6-ONLY READINESS Website: X Not Ready DNS: ✓ Ready Email: X Not Ready |
|---|--------------------------------------|---|

IPv4 ADDRESSES

150.242.183.223

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) | 150.242.180.0/22 |

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%)

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. |
| 8 | Signing Algorithm | INFO | RSASHA256 |

Email Services (25%) 4 / 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 | FAIL | SMTP is not reachable over IPv6. |
| 4 | STARTTLS over IPv6 | FAIL | STARTTLS not available 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 | 150.242.183.223 |
| 2 | HTTP over IPv4 | FAIL | HTTP is not accessible over IPv4. |
| 3 | HTTPS over IPv4 | PASS | HTTPS (port 443) responds over IPv4 — 57ms TTFB. |

Audit Trail & Evidence Record

| | |
|-------------------|--|
| Verification ID | c2a751ae-0bed-43e8-84a2-d439e0b74626 |
| Domain | kpk.gov.my |
| Check Mode | Manual |
| Status | Completed |
| Started | 07 Mar 2026, 01:18:32 MYT |
| Finished | 07 Mar 2026, 01:19:48 MYT |
| Test Node Profile | dual stack |
| Engine Version | 2.0.0 |
| MGv6C Version | 1.0.0 |
| Audit URL | https://ipv6.my6.my/audit/c2a751ae-0bed-43e8-84a2-d439e0b74626 |

Integrity Verification

| | |
|------------------------------------|--|
| <p>✓ INTEGRITY VERIFIED</p> | |
| Algorithm | hmac-sha256-v1 |
| Root Hash | 07a4cdd551414d0d25c660c29e398b0fa364d0e60a1e5dec1e6448d9ffb3816b |
| http_headers | fe478730fee8ad600c5067dc1e647c0727cbb644122261820126bb19c95e16ed |
| dns_responses | a1bebb7c97048d93fdb3b6e3450441c7744080e037df886ba4889970b2251da |
| tls_handshake | 6809a26ceb4bbda8600bae4a50196b63a0a9ea523ec19df78218c5973fc8c76d |
| connectivity_log | 838a8a904d6b699a5ae5be267b3637c7f14d8a415bbb9ada01c8698f49d4556f |
| dns_resolution_times | 3e437213f9bb4eefb503be9637650541d044452c2e510dfac3489ed9e5bd5acc |

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 | 10.93 | 16.06 | 6.36 | 17.57 | -4.6 |
| Google | IPv4 | 26.98 | 28.13 | 18.91 | 35.31 | -8.1 |
| Google | IPv6 | 26.17 | 31.08 | 26.83 | 39.06 | +0.7 |
| Cloudflare | IPv4 | 9.02 | 10.64 | 17.16 | 23.31 | +8.1 |
| Cloudflare | IPv6 | 21.06 | 41.54 | 11.87 | 39.28 | -9.2 |

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 63760
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 002662 IN A 150.242.183.223
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 18278
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 0020592 IN DS 46999 8 1 4FD5EB3F72F06734A6735816F5D9CA77CE6A78B9
kpk.gov.my. 0020592 IN DS 46999 8 2 CAF64F789B33565C2786A7DF8D5FC39687A95DC82C508D04009B07FB 844275B7
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 18086
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 00300 IN MX 5 alt1.aspmx.l.google.com.
kpk.gov.my. 00300 IN MX 10 alt4.aspmx.l.google.com.
kpk.gov.my. 00300 IN MX 5 alt2.aspmx.l.google.com.
kpk.gov.my. 00300 IN MX 1 aspmx.l.google.com.
kpk.gov.my. 00300 IN MX 10 alt3.aspmx.l.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 24264
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 003600 IN NS dns2.gitn.net.my.
kpk.gov.my. 003600 IN NS dns1.gitn.net.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 18530
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 003600 IN TXT "google-site-verification=MN0b-wERQhrJVWjODRESzIdePu62NBZqBwj0Cp4tmdE"
kpk.gov.my. 003600 IN TXT "MS=A588D3AE048D0C788852E77E09140AD96B129CDF"
kpk.gov.my. 003600 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"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 52938
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kpk.gov.my. 001800 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2025081528 10800 3600 604800 38400
```

RRSIG

```
dns1.gitn.net.my. planning.gitn.com.my. 2025081528 10800 3600 604800 38400
```

```
SOA 8 3 3600 20260404211933 20260305201933 20055 kpk.gov.my. F0yn01hSXjDc6Jzo2r2G+RkVsyGcus36Vn9/OfTYu/WonIKPMD35fN0Q
tosG3m24shvtjF6euM9whb0z3f8v5GIJ5Y3c2i4bpAsH12bzJphZpyl Xzp1GyMXwH0YwCbF8MvssYtgQwWeYjgt1Ugsy3DyvN0P2MxjeB0oPGKF Rc0=
```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 33526
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpk.gov.my. 002592 IN DNSKEY 256 3 8 AwEAAa13NPsAH3njY5bc1HeI8a8NTCutEiqQ1CUEBaY0nw8kAur1nt LVHtdTbp7fV6+K1jvr+pYmD3liVFWfcJ1jo7uNXa2LuGZmT5Mdw0Lv
z14TEeHjYLPcYGjdkln5I+KpzNG/C5/B5KE4ag8NNSBQSK0T0tolH6H lX+A0JLL
kpk.gov.my. 002592 IN DNSKEY 257 3 8 AwEAAc2Ti4h1AF+RcZLBw4DGtyCxKzo1zk0fcalqm2YYPczdfz0+nds/ 5bvm57UGionnQWJ292gweR4TnZpgxoCsHSGP0YaA21vsX6Wu/J3PoKnI
bYgRaYhT/kjCd04HdXcE4Vc0RmVIhQScLDVx7ifrvH4g7i9KtTXxwJQy bJdtMAqsxr08u6V9PAiKsU0Uw7ASxnfyja8Y0Rgx+/7ti3W/6kbsdcz
VnlG12lEzn9gS0zEF7mZ7u2ypko9Aw7MbTXvDALU7aDu2qKPE8gdM+uL WZjjowjEZh1KiejJ2Dy7sUwsGCKnRmJmuAjG/44hx1k5sFP9G3DE+d2l vT6J5YxUC5M=
```

DNSSEC_VALIDATION

```
; fully validated
kpk.gov.my. 003600 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2025081528 10800 3600 604800 38400
kpk.gov.my. 003600 IN RRSIG SOA 8 3 3600 20260404211933 20260305201933 20055 kpk.gov.my. F0yn01hSXjDc6Jzo2r2G+RkVsyGcus36Vn9/OfTYu/WonIKPMD35fN0Q
tosG3m24shvtjF6euM9whb0z3f8v5GIJ5Y3c2i4bpAsH12bzJphZpyl Xzp1GyMXwH0YwCbF8MvssYtgQwWeYjgt1Ugsy3DyvN0P2MxjeB0oPGKF Rc0=
```



```
b20vcmVwb3NpdG9yeS8wDQYJKoZIhvcNAQELBQADggEBAJmQyC1fQorUC2bbmANz
EdSIhIiO4r7rd/9c446ZwTbw1MUcBQJfMPg+NccmBqixD7b6QDjynCy8SIwIVbb
0615XoFYC20UgDX1b10d65pHBf9ZjQCxQNqQmJYaumxtf4z1s4dfjGRzNpZ5eWl0
6r/4ngGPoJVpjemEuunl1Iig423g7mNA2eymw0LIYkN5SqwCuaiFJ6GLazhgDEw
fpoLu4usBC0mmQDo8dIm7A9+04orkjgTHY+GzYZSR+Y0fFukAj6KYXwidlNaLFMz
hriSqHKvoFlShx8xpfywgVcvzfT03PYkz6fiNJBonf6q8amaEsybwMbdqKwIX7e
SPY=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, ST = PUTRAJAYA, L = PUTRAJAYA, O = KEMENTERIAN PERLADANGAN DAN KOMODITI, CN = *.kpk.gov.my
issuer=C = BE, O = GlobalSign nv-sa, CN = GlobalSign RSA OV SSL CA 2018
---
No client certificate CA names sent
---
SSL handshake has read 3010 bytes and written 658 bytes
Verification: OK
---
New, SSLv3, Cipher is AES128-SHA
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
SSL-Session:
  Protocol : TLSv1.2
  Cipher : AES128-SHA
```

HTTP Response Evidence

IPv4 HTTP (port 80)

| | |
|--------------|--|
| HTTP Status | 0 |
| Connected IP | |
| Connect Time | 0 ms |
| TTFB | 0 ms |
| Total Time | 8002.73 ms |
| Error | Failed to connect to kpk.gov.my port 80 after 8002 ms: Timeout was reached |

IPv4 HTTPS (port 443)

| | |
|--------------|-----------------|
| HTTP Status | 403 |
| Connected IP | 150.242.183.223 |
| Connect Time | 10.56 ms |
| TTFB | 58.52 ms |
| Total Time | 58.63 ms |

Response Headers:

```
{
  "0": "HTTP/1.1 302 Found",
  "1": "Server: Apache",
  "2": "Date: Fri, 06 Mar 2026 09:02:19 GMT",
  "3": "Content-Type: text/html; charset=UTF-8",
  "4": "Connection: keep-alive",
  "5": "Strict-Transport-Security: max-age=63072000; includeSubdomains; preload",
  "6": "X-Content-Type-Options: nosniff",
  "7": "Location: https://www.kpk.gov.my/kpk/ms",
  "8": "X-XSS-Protection: 1; mode=block",
  "9": "Feature-Policy: *'none'",
  "10": "Referrer-Policy: origin",
  "12": "HTTP/1.1 403 Forbidden",
  "13": "Server: Apache",
  "14": "Date: Fri, 06 Mar 2026 09:02:19 GMT",
  "15": "Content-Type: text/html; charset=iso-8859-1",
  "16": "Connection: keep-alive",
  "17": "Strict-Transport-Security: max-age=31536000 ; includeSubDomains",
  "18": "X-Content-Type-Options: nosniff",
  "19": "X-Frame-Options: sameorigin"
}
```

Connectivity Test Evidence

| Test | Result |
|-----------------------------|-----------------------|
| TCP Connect IPv4 → port 80 | 000 0.000000 0.000000 |
| TCP Connect IPv4 → port 443 | 302 0.004357 0.032619 |

Test Node Network Evidence

| | |
|--------------|------------|
| Node Profile | dual stack |
|--------------|------------|

Egress Connectivity

| | |
|-------------|-------------|
| IPv4 Egress | unreachable |
| IPv6 Egress | unreachable |

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
```