

IPv6 Readiness Report

kpk.gov.my — kpk.gov.my

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Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/c2a751ae-0bed-43e8-84a2-d439e0b74626>**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%)

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#	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%)

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#	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

✓ INTEGRITY VERIFIED	
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
tosG3m24shvtjF6euM9whb0z3f8v5GIJ5Y3c2i4bpAsH12bzsJphZpyl 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 AwEAAa13NPsAH3njY5bc1HeI8a8NTCutEiqxQ1CUEBaY0nw8kAur1nt LVHtdTbp7fV6+K1jvr+pYmD3liVFWfcJ1jo7uNXa2LuGZmT5Mdw0Lv
z14TEeHjYLPcYGjdkln5I+KpzNG/C5/B5KE4ag8NSSBQSK0T0tolH6H lX+A0JLL
kpk.gov.my. 002592 IN DNSKEY 257 3 8 AwEAAc2T14h1AF+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
tosG3m24shvtjF6euM9whb0z3f8v5GIJ5Y3c2i4bpAsH12bzsJphZpyl 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
```