

# IPv6 Readiness Report

## kpk.gov.my — kpk.gov.my

Category: Government • Generated: 20 Apr 2026, 21:24 MYT • Last Checked: 07 Mar 2026, 01:03 MYT • Verification ID: 44388c76-4acd-4f5e-b17e-af36839b725f

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/44388c76-4acd-4f5e-b17e-af36839b725f>**Non-Compliant**

MGv6C-1.0

**42%****Partial Support****IPV6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPV4 ADDRESSES**

203.217.177.60

**Network Information (WHOIS / RDAP)**

IPv4 Network	
Organization	JAKIM
Country	MY
ASN	AS17564
ASN Name	GITN-PCN-AS-AP GITN M Sdn. Bhd., MY
Network (CIDR)	203.217.177.64/32

**Web Services** (35%)

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#	CHECK	RESULT	DETAIL
1	<b>AAAA Record</b>	<b>FAIL</b>	No AAAA record found in DNS.
2	<b>Globally Routable IPv6</b>	<b>FAIL</b>	IPv6 address is not globally routable.
3	<b>HTTP over IPv6</b>	<b>FAIL</b>	HTTP is not accessible over IPv6.
4	<b>HTTPS over IPv6</b>	<b>FAIL</b>	HTTPS is not accessible over IPv6.
5	<b>IPv6-Only Reachability</b>	<b>FAIL</b>	Site is not reachable when limited to IPv6-only.
6	<b>TLS Certificate Valid (IPv6)</b>	<b>FAIL</b>	TLS certificate is invalid, expired, or hostname mismatch over IPv6.
7	<b>Dual-Stack (IPv4 + IPv6)</b>	<b>FAIL</b>	Domain is IPv6-only or IPv4-only.
8	<b>HTTP/3 (QUIC)</b>	<b>FAIL</b>	No HTTP/3 support detected.

**DNS & DNSSEC** (25%)

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#	CHECK	RESULT	DETAIL
1	<b>NS Has AAAA Record</b>	<b>PASS</b>	Nameserver has IPv6 address.
2	<b>NS Reachable via IPv6</b>	<b>PASS</b>	Nameserver is reachable via IPv6 on port 53.
3	<b>NS Answers Queries via IPv6</b>	<b>FAIL</b>	Nameserver does not answer queries over IPv6.
4	<b>DNSSEC Validated</b>	<b>PASS</b>	DNSSEC fully validated.
5	<b>Reverse DNS (PTR)</b>	<b>FAIL</b>	No PTR record found.
6	<b>DS Record at Parent</b>	<b>PASS</b>	DS record found at parent zone.
7	<b>RRSIG Valid</b>	<b>PASS</b>	RRSIG signatures are current and valid.
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%) 2 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	203.217.177.60
2	<b>HTTP over IPv4</b>	<b>FAIL</b>	HTTP is not accessible over IPv4.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 502ms TTFB.

## Audit Trail & Evidence Record

Verification ID	44388c76-4acd-4f5e-b17e-af36839b725f
Domain	kpkm.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:02:28 MYT
Finished	07 Mar 2026, 01:03:38 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/44388c76-4acd-4f5e-b17e-af36839b725f

## Integrity Verification

✓ <b>INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	3fa343a59416ed1c457dfa7ef8f6ce2998953cc908bec04905e5580b9e11822f
http_headers	b89967291929149471d5a9535988b9d4569460814c8e2a5a10c76b116180dfe6
dns_responses	d0dfa4d8edc9b683626e01c08d14bc5efa188623e7b75708ef0a2b299ad04f47
tls_handshake	9da3217086001f4512c7a46b787fd1b622e6bbc6b7a95e6863553f36745ec1f6
connectivity_log	707f919cc1484ba249f330a17009eb4439fbd2b568c77da7ca52e72593c668aa
dns_resolution_times	d087f431afbda1def887b9fcd6d93eed09011f407a8127e0e0f4be9d48a08c5

## 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	8.55	17	17.06	17.13	+8.5
Google	IPv4	30.96	42.46	30.88	31.84	-0.1
Google	IPv6	33.42	37.47	34.88	57.41	+1.5
Cloudflare	IPv4	17.88	18.97	19.14	19.87	+1.3
Cloudflare	IPv6	35.46	45.48	35.09	45.13	-0.4



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 49140
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kpkm.gov.my. 001800 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2026021284 10800 3600 604800 38400
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 20634
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpkm.gov.my. 0021557 IN DS 58582 8 2 F64AAD258A3F056FA8C77C6E71154FF20D52DB7C380DD0258F10EE67 9B67D6FC
kpkm.gov.my. 0021557 IN DS 58582 8 1 2148B52CF48A2A9CFD98A02D56F4611121AE83B5
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 21143
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

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

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 51227
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

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

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 23661
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 8, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpkm.gov.my. 003600 IN TXT "VeEFkH4TwmfWcSPqS_PJDJ1nzcrgfNjp8LFhwmMMbi"
kpkm.gov.my. 003600 IN TXT "6fmn2usqSfq4/e6ryhJW/WUuiodyoKC1KqXVqyrwvg="
kpkm.gov.my. 003600 IN TXT "MS=ms37233412"
kpkm.gov.my. 003600 IN TXT "_globalsign-domain-verification=J6Rt3mBZve7rEr8d3fcZzkhbIB0_qG0Cf95d8nDSbh"
kpkm.gov.my. 003600 IN TXT "_globalsign-domain-verification=VeEFkH4TwmfWcSPqS_PJDJ1nzcrgfNjp8LFhwmMMbi"
kpkm.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"
kpkm.gov.my. 003600 IN TXT "MS=12D6322BEBE8739CEEAACBCD658BB15916284DB5A"
kpkm.gov.my. 003600 IN TXT "google-site-verification=68IGUmAid19o6MSIYEcI76L_V5xSwX3yn3Eb3DM_PDE"
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 35392
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
```

```
;; AUTHORITY SECTION:
kpkm.gov.my. 3600 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2026021284 10800 3600 604800 38400
```

RRSIG

```
dns1.gitn.net.my. planning.gitn.com.my. 2026021284 10800 3600 604800 38400
SOA 8 3 3600 20260404174259 20260305164259 426 kpkm.gov.my. Z3xs10466X6f/X+HDnMJ5R1z0FuAm7Zjy/HYQixT8A2A0GkwzHVJPRtb
djAKF7pxsDt6wVc3wb36fVTVGpT9wQz2MKX7t35uFPzLGDWltYAjmJ0o LCQ0Daaz36pY8RGRM/a7F4+ZIITg0l66amMxadIEzktxDFLSTLWwuWdH u90=
```

DNSKEY

```
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 36806
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpkm.gov.my. 3600 IN DNSKEY 256 3 8 AwEAAbMeb6LwNPwES38DImC8POU9IV06ZKazK3bAw0DJHmTx9KWzWlZ2 WwE6g60mXfX0N6y6Ux4BU2g9kNG7UTzMHUnCulthVksL4KfhXP8HrjCu
SmQwKZFv3KkpjjMsu9Jow30pq/pkVF60jng9mzfzxBZB2k1o7nNmTwpE FGHUPjwd
kpkm.gov.my. 3600 IN DNSKEY 257 3 8 AwEAAc9BcRvfaP9i2jMjE9vj0FG21IvIfGM7zVTdxAb5wHVC/teZLHQV B7GevybaYgXBxaGETiQBnv0MaJHTNpkJk1ahfyiR7baD+fEcJCfkt/m
MkUJFVLoeVvtBw/4wylLteomfj8AtKMRPt8mv9/AcCdYIANELazuv1jha BJvfLjwmh8eQjMIUUGE0MRZMAwca1YyKwo7dy4o8UmUIZ75t24FjwW/g
50KZXiVGWyt28NVs7B/YZPBFHj07hp2ORS0Nv8aoRabKlwrRvR0hhwGJ kMY/cHjGX/USWJRmnjCZ8HmhdD0WeYHobbW/nwLGI/FN12C45Ryf91tG 2kNFIw0n4sk=
```

DNSSEC\_VALIDATION

```
; fully validated
kpkm.gov.my. 3600 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2026021284 10800 3600 604800 38400
kpkm.gov.my. 3600 IN RRSIG SOA 8 3 3600 20260404174259 20260305164259 426 kpkm.gov.my. Z3xs10466X6f/X+HDnMJ5R1z0FuAm7Zjy/HYQixT8A2A0GkwzHVJPRtb
djAKF7pxsDt6wVc3wb36fVTVGpT9wQz2MKX7t35uFPzLGDWltYAjmJ0o LCQ0Daaz36pY8RGRM/a7F4+ZIITg0l66amMxadIEzktxDFLSTLWwuWdH u90=
```





```
b20vcmVwb3NpdG9yeS8wDQYJKoZIhvcNAQELBQADggEBAJmQyC1fQorUC2bbmANz
EdSIhLIoU4r7rd/9c446ZwTbw1MUcBQJfMPg+NccmBqixD7b6QDjynCy8SIwIVbb
0615XoFYC20UgDX1b10d65pHBf9ZjQCxQNqQmJYaumxtf4z1s4dfjGRzNpZ5eWl0
6r/4ngGPoJVpjemEuunl1Iig423g7mNA2eymw0LIYkN5S0wCuaiFIFJ6GLazhgDEw
fpoLu4usBC0mmQDo8dIm7A9+04orkjgTHY+GzYZSR+Y0fFukAj6KYXwidlNaLFMz
hriSqHkvoFlShx8xpfywgVcvzfT03PYkz6fiNJBonf6q8amaEsybwMbdqKwIX7e
SPY=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, ST = Putrajaya, L = Putrajaya, O = KEMENTERIAN PERTANIAN DAN KETERJAMINAN MAKANAN, CN = *.kpk.gov.my
issuer=C = BE, O = GlobalSign nv-sa, CN = GlobalSign RSA OV SSL CA 2018
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: ECDH, prime256v1, 256 bits
---
SSL handshake has read 3505 bytes and written 439 bytes
Verification: OK
---
New, TLSv1.2, Cipher is ECDHE-RSA-AES256-GCM-SHA384
Server public key is 2048 bit
Secure Renegotiation IS supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	203.217.177.60
Connect Time	5.26 ms
TTFB	0 ms
Total Time	10001.96 ms
Error	Operation timed out after 10001 milliseconds with 0 bytes received

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	203.217.177.60
Connect Time	10.12 ms
TTFB	413.09 ms
Total Time	413.21 ms

### Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Date: Fri, 06 Mar 2026 09:03:38 GMT",
  "2": "Server: Apache",
  "3": "X-Powered-By: PHP/8.3.28",
  "4": "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "5": "Expires: Wed, 17 Aug 2005 00:00:00 GMT",
  "6": "Pragma: no-cache",
  "7": "X-Content-Type-Options: nosniff",
  "8": "Strict-Transport-Security: max-age=63072000; includeSubDomains; preload",
  "9": "Permissions-Policy: geolocation=(self), camera=(), microphone=()",
  "10": "Set-Cookie: 314bf9e42f449b71d9222f12a14cbe0d=ufun6gn5pek1318psuc6o2nu48; path=/; HttpOnly;HttpOnly;Secure",
  "11": "Upgrade: h2,h2c",
  "12": "Connection: Upgrade",
  "13": "Location: https://kpk.gov.my/bm/",
  "14": "Last-Modified: Fri, 06 Mar 2026 09:03:38 GMT",
  "15": "Content-Type: text/html; charset=utf-8",
  "16": "Set-Cookie: cookiesession1=678B28BF164FE1A58C4302BAA88530A9;Expires=Sat, 06 Mar 2027 09:03:38 GMT;Path=/;HttpOnly",
  "17": "X-Frame-Options: SAMEORIGIN",
  "18": "X-XSS-Protection: 1; mode=block",
  "19": "Content-Security-Policy: upgrade-insecure-requests",
  "21": "HTTP/1.1 200 OK",
  "22": "Date: Fri, 06 Mar 2026 09:03:38 GMT",
  "23": "Server: Apache",
  "24": "X-Powered-By: PHP/8.3.28",
  "25": "Expires: Wed, 17 Aug 2005 00:00:00 GMT",
  "26": "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "27": "Pragma: no-cache",
  "28": "X-Content-Type-Options: nosniff",
  "29": "Strict-Transport-Security: max-age=63072000; includeSubDomains; preload",
  "30": "Permissions-Policy: geolocation=(self), camera=(), microphone=()",
  "31": "Set-Cookie: 314bf9e42f449b71d9222f12a14cbe0d=25uhsifvs660u4gk8r000ce3ac; path=/; HttpOnly;HttpOnly;Secure",
  "32": "Last-Modified: Fri, 06 Mar 2026 09:03:38 GMT",
  "33": "Content-Type: text/html; charset=utf-8",
  "34": "X-Frame-Options: SAMEORIGIN",
  "35": "X-XSS-Protection: 1; mode=block",
  "36": "Content-Security-Policy: upgrade-insecure-requests"
}
```

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.004890 0.010966
TCP Connect IPv4 → port 443	301 0.004771 0.289111

---

### 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
76.13.221.0/24 dev eth0 proto kernel scope link src 76.13.221.142
```