

IPv6 Readiness Report

kpdn.gov.my — kpdn.gov.my

Category: Government • Generated: 20 Apr 2026, 21:24 MYT • Last Checked: 07 Mar 2026, 01:22 MYT • Verification ID: e4c43015-fc21-4561-9594-df0956fbe8d0

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/e4c43015-fc21-4561-9594-df0956fbe8d0>**Non-Compliant**

MGv6C-1.0

37%**Partial Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

103.8.146.242

Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	PCN
Country	MY
ASN	AS141201
ASN Name	JDN-AS-MY Jabatan Digital Negara JDN, MY
Network (CIDR)	103.8.146.16/28

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%)

2 / 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	FAIL	DNSSEC validation failed or zone is unsigned.
5	Reverse DNS (PTR)	FAIL	No PTR record found.
6	DS Record at Parent	FAIL	No DS record at parent.
7	RRSIG Valid	FAIL	No valid RRSIG found.
8	Signing Algorithm	INFO	No DNSKEY record found.

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	103.8.146.242
2	HTTP over IPv4	FAIL	HTTP is not accessible over IPv4.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 63ms TTFB.

Audit Trail & Evidence Record

Verification ID	e4c43015-fc21-4561-9594-df0956fbe8d0
Domain	kpdn.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:21:28 MYT
Finished	07 Mar 2026, 01:22:25 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/e4c43015-fc21-4561-9594-df0956fbe8d0

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	8663ef60cdc09fc989ddf8a0625c492a6717630bcf6a2f49bf14ec57dff1f630
http_headers	8916b776ec382efa12596e7c95ee54b8375c54a236086ab4efaa1ad50155d568
dns_responses	b6d0277b4b3f1321a00d1a4e4426b4c8b60b1b2c2ef5b0f6beb4508032b890fd
tls_handshake	4420c7b2390f07ac6b24b24e9557dbbd9c cbfbee2f7a66017a2bc40b8a641d65
connectivity_log	81388c2df0a5895763429ac9c4dd6f43f983d269c0bccf3ea7cbb0faf0ba0b68
dns_resolution_times	c87b71d2b4a20d9a093945f32b52b7e819df467be06f880b3f0a755e505ecf5f

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	9.73	16.23	10.02	17.95	+0.3
Google	IPv4	14.96	16.18	19.93	28.32	+5
Google	IPv6	34.68	45.92	43.27	43.39	+8.6
Cloudflare	IPv4	9.66	17.45	9.65	9.97	-0
Cloudflare	IPv6	48.94	51.04	20.3	20.79	-28.6

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 12277
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kpdn.gov.my. 00018000IN0SOA0dns1.gitn.net.my. planning.gitn.com.my. 2026030401 10800 3600 604800 38400
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 58433
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
gov.my. 00017690IN0SOA0b.nic.my. hostmaster.nic.my. 2026018484 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 43870
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpdn.gov.my. 0003000IN0MX05 alt1.aspmx.l.google.com.
kpdn.gov.my. 0003000IN0MX05 alt2.aspmx.l.google.com.
kpdn.gov.my. 0003000IN0MX010 alt3.aspmx.l.google.com.
kpdn.gov.my. 0003000IN0MX010 alt4.aspmx.l.google.com.
kpdn.gov.my. 0003000IN0MX01 aspmx.l.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 41670
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpdn.gov.my. 00033360IN0NS0dns1.gitn.net.my.
kpdn.gov.my. 00033360IN0NS0dns2.gitn.net.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4610
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kpdn.gov.my. 0003000IN0TXT0"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"
kpdn.gov.my. 0003000IN0TXT0"google-site-verification=xbuveSwJtM4800qqAHaaeaLXtki4sFKEAghbw10-XQ"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 36219
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kpdn.gov.my. 00018000IN0SOA0dns1.gitn.net.my. planning.gitn.com.my. 2026030401 10800 3600 604800 38400
```

RRSIG

```
dns1.gitn.net.my. planning.gitn.com.my. 2026030401 10800 3600 604800 38400
```

DNSKEY

```
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 27749
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kpdn.gov.my. 922 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2026030401 10800 3600 604800 38400
```

DNSSEC_VALIDATION

```
; unsigned answer
kpdn.gov.my. 3600 IN SOA dns1.gitn.net.my. planning.gitn.com.my. 2026030401 10800 3600 604800 38400
```



```
Protocol : TLSv1.2
Cipher   : ECDHE-RSA-AES256-GCM-SHA384
Session-ID: 3C20CF5FE7972BD08BADA2E333C04C0A20695170801899CA2FDB22B8708E8CA
Session-ID-ctx:
Master-Key: C495849F9F137023FAFADB8B831165ABF9B2C4820DAA751D83E2465151ADCE8F09373D0045DA539EFD2D0D0673F0F721
PSK identity: None
PSK identity hint: None
SRP username: None
TLS session ticket lifetime hint: 7200 (seconds)
TLS session ticket:
0000 - 6b 6e 86 e8 25 90 a8 4f-fe 39 4c f9 c2 ea b1 09 kn..%.0.9L....
0010 - d4 4b 22 9a 2e f2 57 97-dc 3c 6e 21 0c 97 71 dd .K"...W!<n!..q.
0020 - aa b5 9c f5 73 7d df a0-71 68 0d 8d ef f3 8e 4c ...s)..qh....L
0030 - 46 93 74 90 32 e0 ed 13-3f a7 8f df 9e 54 af ac F.t.2...?....T..
0040 - 40 70 c4 31 b9 67 8e 64-42 b4 64 cc 31 29 55 4a @p.l.g.dB.d.1)UJ
0050 - c8 70 70 95 28 3a 8e 64-64 ff dc 2b ae 55 ca 92 .pp.(.dd..+.U..
0060 - 17 11 24 dc 16 7e 02 cf-b2 22 f6 a0 f5 5c 6e 42 ..$.-..."\nB
0070 - ca 54 05 2d 33 60 a6 b7-5c 8e 3a b1 d8 b5 23 95 .T.-3`..:..#.
0080 - 8b 2e 90 9d 33 a2 15 0a-c2 c5 93 4e 5b 86 29 11 ...3.....N(.).
0090 - d9 19 53 89 76 f8 8b 5e-31 cc 0b bd 12 3d 92 51 ..S.v.^1....=-.Q
00a0 - 47 2d c2 a9 5b ab 63 00-79 c9 a0 35 0a 41 15 0e G-..[.c.y..5.A..

Start Time: 1772788925
Timeout : 7200 (sec)
Verify return code: 21 (unable to verify the first certificate)
Extended master secret: yes
---
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	103.8.146.242
Connect Time	8.56 ms
TTFB	0 ms
Total Time	10001.71 ms
Error	Operation timed out after 10001 milliseconds with 0 bytes received

IPv4 HTTPS (port 443)

HTTP Status	500
Connected IP	103.8.146.242
Connect Time	9.4 ms
TTFB	42.21 ms
Total Time	42.27 ms

Response Headers:

```
[  
  "HTTP/1.1 500 Internal Server Error",  
  "Content-Length: 38644",  
  "Content-Type: text/html"  
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	500 0.014132 0.031586
TCP Connect IPv4 → port 443	000 0.013652 0.000000

Test Node Network Evidence

Node Profile	dual stack
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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
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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
```