



IPv6 Readiness Report

kns.gov.my — kns.gov.my

Category: Government • Generated: 21 Apr 2026, 19:15 MYT • Last Checked: 07 Mar 2026, 01:01 MYT • Verification ID: 28d21a20-84e3-4371-b504-5d20c365b2de
Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>
Audit trail: <https://ipv6.my6.my/audit/28d21a20-84e3-4371-b504-5d20c365b2de>

 Non-Compliant <small>MGv6C-1.0</small>	 35% Partial Support	IPV6-ONLY READINESS Website: ✗ Not Ready DNS: ✓ Ready Email: ✗ Not Ready
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IPV4 ADDRESSES 150.242.182.131
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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%)				0 / 6
#	CHECK	RESULT	DETAIL	
1	MX Record Exists	FAIL	No MX record found in DNS.	
2	MX Server Has IPv6	FAIL	MX server has no IPv6 address.	
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	FAIL	No SPF record found.	
6	DKIM Selector	INFO	No common DKIM selector found.	
7	DMARC Record	FAIL	No DMARC record found.	

IPv4 Baseline (15%)				3 / 3
#	CHECK	RESULT	DETAIL	
1	A Record	PASS	150.242.182.131	
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4 — 258ms TTFB.	
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 242ms TTFB.	

Audit Trail & Evidence Record

Verification ID	28d21a20-84e3-4371-b504-5d20c365b2de
Domain	ksn.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:01:32 MYT
Finished	07 Mar 2026, 01:01:37 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/28d21a20-84e3-4371-b504-5d20c365b2de

Integrity Verification

<p>✓ INTEGRITY VERIFIED</p>	
Algorithm	hmac-sha256-v1
Root Hash	8dcc86f96a555c76b9e69c06ac5fbc195433cdc312dfcbcc73dccb8584a8fed0
http_headers	3c447b5cffbba12aae14be469748405b70e624a4222a27f417f71cc6d02364ef
dns_responses	a6a1945caf592f7c159f1be835b0e7b4154d499e528cd2c57dafcf2c12e60504
tls_handshake	5f04e187ca2ec8cbdbc8fd51aba81f240a183f867c7346002a6b2a3ef7cb7641
connectivity_log	e4a451c495b146b93cca996b13e1dfacc3b618a8d99f3f5a2d0e353b0b4d8b8c
dns_resolution_times	4038d62678f5d545a820dc4d67058e6c67dc536fe11bba818a7680034e67570f

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	17.33	23.39	24.83	25.9	+7.5
Google	IPv4	35.44	45.25	30.2	38.99	-5.2
Google	IPv6	36.14	52.3	37.98	40.98	+1.8
Cloudflare	IPv4	9.02	13.76	15.87	24.21	+6.9
Cloudflare	IPv6	8.79	27.98	42.5	56.32	+33.7

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 56382
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ksn.gov.my. 00216000IN A 150.242.182.131
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 17204
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ksn.gov.my. 00216000IN DS 1069 8 2 03DE662BA2E314728939A4FD7A31CA472F71B8ED341C9BA4089B1471 5D233C5D
ksn.gov.my. 00216000IN DS 1069 8 1 1753351F85E0C059460FA3F9FE77FD3139C102CE
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 36586
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
ksn.gov.my. 00180000IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2025110545 10800 3600 604800 38400
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 19522
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ksn.gov.my. 00216000IN NS dns2.gitn.net.my.
ksn.gov.my. 00216000IN NS dns1.gitn.net.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 64360
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ksn.gov.my. 00360000IN TXT ""_globalsign-domain-verification=ul-Vk7MRzaAEZFYs0Si2fnoVcUe-bh1WVTAs2S40e-"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 55341
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
ksn.gov.my. 00180000IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2025110545 10800 3600 604800 38400
```

RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2025110545 10800 3600 604800 38400
SOA 8 3 38400 20260402101218 20260303091218 42309 ksn.gov.my. rBtHyRd7rjKXTNielnhTwsch15luidBOPPmpDVZWD8Kuj3SdtXNN/U9
RRxLcD0Xj70XtbLmFwPYRTxHlNIuzYlvDLaLx1NJKL8jEM5tpHFQ3dXn ew+r2NBHAeHle+EWPTJnTX8JeeLfwI37rUs9ds0/qJrQh3+wNr7drTcP UAs=
```

DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 52646
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
ksn.gov.my. 21600 IN DNSKEY 256 3 8 AwEAAbhvFDfULBAbd002n0EoMIVuW0Sces9iyj7MoxL0hKJrSN9jxK7 YN537G5RCG1q+Ggn19tTrvJ+rXaynJmgRXy7GpXxuY6is2aGpFvX2tKX
U2377j5srQdK/pjxoYTzC8DpgCVJeaA85LhgH+lt+LSGFgIJY9/ZDmtS Bh8t0y8v
ksn.gov.my. 21600 IN DNSKEY 257 3 8 AwEAAaqTrx1PpLI5om0+Rm6RcMV8J3GoH0qXRR0eb00TBCCOM+Zln0Da ZtSov+S3dcBUfpoFcsIiiBT0aY34LryWerJ2wdXCLK1qomvv5gLLvkWR
l3omVA01SAhgVj09DnACugdiEfa2U6/8+yUi40cTh2jkoQqz1v1oTbGb 51X8P×9AR1T1UtI/VZv9b2yuP1LZQE6uq4hqLNx9CmJ0QuHCDwrkRwKm
fCeLY02et3J14BTIOh40fj4DeQvIr+Cn7VnTzTH0u9wavLcKG66x02X+ 3dyNVhmSBh/Nbin1D24wVFmnnQCtWfiWEMJHm3jqeYAMu9tiUFRofL +SbUXjE2hhE=
```

DNSSEC_VALIDATION

```
; fully validated
ksn.gov.my. 21600 IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2025110545 10800 3600 604800 38400
ksn.gov.my. 21600 IN RRSIG SOA 8 3 38400 20260402101218 20260303091218 42309 ksn.gov.my. rBtHyRd7rjKXTNielnhTwscH15LuidB0PPGmpDVZWD8Kuj3SdtXNN/U9
RRxLcD0Xj7QXtbLmFwPYRTxHLNIuzYlVdLaLx1NJKL8jEM5tpHFQ3dXn ew+r2NBHAeHle+EWPTJnTX8JeeLFWI37rUs9ds0/qJrQh3+wNr7drTcP UAs=
```



```
Protocol : TLSv1.2
Cipher   : ECDHE-RSA-AES256-GCM-SHA384
Session-ID: B0EE478455E9FE287E8827370E2DD51777D2E861A036F0EFDE173107AEB6274D
Session-ID-ctx:
Master-Key: 54B195E46CBED33B1750EEF0918820872CB12B062DAAE0622A0A25A7AA2136A492380050D81604AD3D90C5DEB72C9AF3
PSK identity: None
PSK identity hint: None
SRP username: None
TLS session ticket lifetime hint: 7200 (seconds)
TLS session ticket:
0000 - d5 8d 98 c0 5e 87 2d 60-68 09 9e 9d 76 c4 f1 48   ....^.-`h...v..H
0010 - d0 e1 2b 82 5b ca 84 e9-60 84 52 fb 46 41 e2 08   ..+.[...`.R.FA..
0020 - 6f 90 a4 68 36 73 39 ba-e3 40 95 5c b2 26 4a 28   o..h6s9..@.\.&J(
0030 - 4b 0e 3a d9 70 17 12 d9-3e d3 3d 11 7c e9 de 6c   K.:p...>.=.|..l
0040 - 17 c1 8a 5c 29 00 97 02-6b e6 29 3b 56 3a 02 87   ..\)...k.);V:..
0050 - 29 08 36 da 57 33 27 f6-b4 12 34 ad f8 26 bd 72   ).6.W3'...4..&.r
0060 - 9c 4d b4 b9 43 ea 16 fb-6e f4 20 ea 24 0e 29 d4   .M..C...n. ($.).
0070 - ed 65 74 07 a3 13 6a b5-a2 2a 6e 13 62 f4 ef c1   .et...j..*n.b...
0080 - 29 8b 11 61 55 56 22 e7-a1 9f cd 82 d3 9c 54 a0   )..aUV".....T.
0090 - d8 a6 d7 27 a2 4e 6c 37-90 fd 00 31 a0 83 d0 63   ...'.Nl7...l...c
00a0 - d3 d8 7c 3c 61 39 d2 53-d3 91 1c ae 63 00 e7 c4   ..|<a9.S....c...
00b0 - 94 e7 3c 79 36 41 a8 d9-79 1c af 8c 91 49 38 9e   ..<y6A..y....I8.

Start Time: 1772787696
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	200
Connected IP	150.242.182.131
Connect Time	5.26 ms
TTFB	235.64 ms
Total Time	235.68 ms

Response Headers:

```
[
  "HTTP/1.1 200 OK",
  "Date: Fri, 06 Mar 2026 09:01:57 GMT",
  "Server: Apache/2.4.52 (Ubuntu)",
  "Set-Cookie: 221140486b431e384120e06e2fac7430=4b95gjjvnhcgpaareltdtglnl0nj; path=/; HttpOnly",
  "x-frame-options: SAMEORIGIN",
  "referrer-policy: strict-origin-when-cross-origin",
  "cross-origin-opener-policy: same-origin",
  "Expires: Wed, 17 Aug 2005 00:00:00 GMT",
  "Last-Modified: Fri, 06 Mar 2026 09:01:57 GMT",
  "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "Pragma: no-cache",
  "Content-Type: text/html; charset=utf-8",
  "Set-Cookie: cookiesession1=678B2890A6F290B33908864E73090FCB;Expires=Sat, 06 Mar 2027 09:01:36 GMT;Path=/;HttpOnly"
]
```

IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	150.242.182.131
Connect Time	5.39 ms
TTFB	259.95 ms
Total Time	259.99 ms

Response Headers:

```
[
  "HTTP/1.1 200 OK",
  "Date: Fri, 06 Mar 2026 09:01:58 GMT",
  "Server: Apache/2.4.52 (Ubuntu)",
  "Set-Cookie: 221140486b431e384120e06e2fac7430=an8ocr5trajob96rmbvsvmbro5; path=/; HttpOnly",
  "x-frame-options: SAMEORIGIN",
  "referrer-policy: strict-origin-when-cross-origin",
  "cross-origin-opener-policy: same-origin",
  "Expires: Wed, 17 Aug 2005 00:00:00 GMT",
  "Last-Modified: Fri, 06 Mar 2026 09:01:58 GMT",
  "Cache-Control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "Pragma: no-cache",
  "Content-Type: text/html; charset=utf-8",
  "Set-Cookie: cookiesession1=678B28902ACB193039AC1DB753028F00;Expires=Sat, 06 Mar 2027 09:01:37 GMT;Path=/;HttpOnly"
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	403 0.005256 0.065675
TCP Connect IPv4 → port 443	000 0.005611 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
--------------------------------	---

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
```