


IPv6 Readiness Report

kbs.gov.my — kbs.gov.my

Category: Government • Generated: 20 Apr 2026, 21:31 MYT • Last Checked: 07 Mar 2026, 01:23 MYT • Verification ID: c7d69451-4576-4eef-a1aa-ef0472dca8b7

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

Audit trail: <https://ipv6.my6.my/audit/c7d69451-4576-4eef-a1aa-ef0472dca8b7>

 Non-Compliant <small>MGv6C-1.0</small>	42% Partial Support	IPV6-ONLY READINESS Website: X Not Ready DNS: X Not Ready Email: X Not Ready
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IPV4 ADDRESSES 202.75.6.253

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)	202.75.4.0/22

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%)				3 / 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	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	202.75.6.253
2	HTTP over IPv4	FAIL	HTTP is not accessible over IPv4.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 390ms TTFB.

Audit Trail & Evidence Record

Verification ID	c7d69451-4576-4eef-a1aa-ef0472dca8b7
Domain	kbs.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:22:26 MYT
Finished	07 Mar 2026, 01:23:21 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/c7d69451-4576-4eef-a1aa-ef0472dca8b7

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	302861ad4baf9b5017d5ad361bc1246856efade071e66e6184e98500e6f46bb2
http_headers	b8d7d90eec4cb23f29443780947814019c434839831d98f1f05aa454235442c3
dns_responses	b9494d3dd454807efc3725eb1d3d5fb1ec0555ca72ea0e83032cfd5e1027d1a4
tls_handshake	f0313321e8899ef79d6f1e9d0e2e470e3b405031e98c7ca71f001ba54f45200a
connectivity_log	57d780a0009087de7baa5dae9009da952313d63c02f57834e9ae25ea52119cdc
dns_resolution_times	b1b9de5700268cb69eba5b219045887aa16ca2ed87ca92ecfe947d827874b19a

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	18.07	18.91	7.94	9.02	-10.1
Google	IPv4	24.84	29.34	30.13	36.47	+5.3
Google	IPv6	30.64	36.61	21.34	30.48	-9.3
Cloudflare	IPv4	19.94	29.44	20.77	21.2	+0.8
Cloudflare	IPv6	48.24	53.38	37.08	54.82	-11.2

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 62043
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kbs.gov.my. 00180000IN 50A dns1.gitn.net.my. root.dns1.gitn.net.my. 2025103239 3600 900 3600000 3600
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 24273
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kbs.gov.my. 00216000IN 0DS 35704 8 2 EFC0896BCA7730AF2FFABE58D0C1E7D2990AB94DAE4269AC84B7AE24 6D45531B
kbs.gov.my. 00216000IN 0DS 35704 8 1 C53E39ECA042F572904E06C2DEB67B7F0951B50D
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 64854
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kbs.gov.my. 00162000IN 0MX 10 alt4.aspmx.l.google.com.
kbs.gov.my. 00162000IN 0MX 1 aspmx.l.google.com.
kbs.gov.my. 00162000IN 0MX 5 alt1.aspmx.l.google.com.
kbs.gov.my. 00162000IN 0MX 10 alt3.aspmx.l.google.com.
kbs.gov.my. 00162000IN 0MX 5 alt2.aspmx.l.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 1843
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kbs.gov.my. 00360000IN 0NS dns2.gitn.net.my.
kbs.gov.my. 00360000IN 0NS dns1.gitn.net.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 32944
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kbs.gov.my. 00300000IN 0TXT "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"
kbs.gov.my. 00300000IN 0TXT "MS=E24042AAA3B136D5C11F7E39C30D5AC0224D28F4"
kbs.gov.my. 00300000IN 0TXT "google-site-verification=ijt89L0ft-PhNeBtZVfkyD4rdU85XxeAni8fqx__Cus"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 5149
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kbs.gov.my. 00904000IN 0S0A dns1.gitn.net.my. root.dns1.gitn.net.my. 2025103239 3600 900 3600000 3600
```

RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2025103239 3600 900 3600000 3600
```

```
SOA 8 3 3600 20260405065840 20260306055840 1416 kbs.gov.my. XGjw70Ktv4vavh6LY8Qgse0eJdK34HSsQb9BX9KzaEBwIPHLjMbWaRzY
jTT8ZJpZG3LI69R2HLZWBDFPFRy/+UtaI9o/b3UY7aNVONWMyz5Uifv UajrXba99YEeRKD6uKhI2u+VjqiqdaEQC+HZGaphW4I54bSjXkmHUoRN K8g=
```

DNSKEY

```
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 28192
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kbs.gov.my. 3600 IN DNSKEY 256 3 8 AwEAAbmXYtKf8YiZBTuo1yD9XtGcEi4P37A3jaXq160nv5bQWZ9E4Cqg NIrPWSRsAIN1tFKy4nwadchU0Ds0tjCnlsKbJxDMqkSAD9B7Hf4UjByM
2koKp6TjRmQXlfNwXPSQDXBnKzs3VHfVsprVbisWfYgqMumuLJaoR9yk epkKGhA1
kbs.gov.my. 3600 IN DNSKEY 257 3 8 AwEAAbMEcIMJAC331NDM8i5YpHrcd2c2INnAjdIHLgS+/M4BDa31s6uv wmsxe7+Bk0IilZRIICMTXrrA56JYqZYnHg43JyGovHk6383S+EZ9rMva
y60V01JUfMvXAf3RotnBKu5idLci0x2TH3KfxjC2eoU99H2E+HNLlDsC /KX2ku4PYApsRvUsMVD3CdtXxeqU0tv5c5XLjIX+cwqV3v3F+uyVAVd5
Kt7V7CF8pyVVAiixY5+uuVokya/cQ/iegFyc6Xki4oWlsZIJ8RZDBZ2Y kokJqH5ep5LC3q483bo2kPnIZg7kEcVdoE5cfy9gAjwCzcD03QnoN6G0 Pr6RRq0E9G0=
```

DNSSEC_VALIDATION

```
; fully validated
kbs.gov.my. 2629 IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2025103239 3600 900 3600000 3600
kbs.gov.my. 2629 IN RRSIG SOA 8 3 3600 20260405065840 20260306055840 1416 kbs.gov.my. XGjw70Ktv4vavh6LY8Qgse0eJdK34HSsQb9BX9KzaEBwIPHLjMbWaRzY
jTT8ZJpZG3LI69R2HLZWBDFPFRy/+UtaI9o/b3UY7aNVONWMyz5Uifv UajrXba99YEeRKD6uKhI2u+VjqiqdaEQC+HZGaphW4I54bSjXkmHUoRN K8g=
```


TLS Handshake Evidence

IPV4 Connection

IP Used	202.75.6.253
IP Version	4

```

depth=0 C = MY, L = Putrajaya, O = KEMENTERIAN BELIA DAN SUKAN, CN = www.kbs.gov.my
verify error:num=20:unable to get local issuer certificate
verify return:1
depth=0 C = MY, L = Putrajaya, O = KEMENTERIAN BELIA DAN SUKAN, CN = www.kbs.gov.my
verify error:num=21:unable to verify the first certificate
verify return:1
depth=0 C = MY, L = Putrajaya, O = KEMENTERIAN BELIA DAN SUKAN, CN = www.kbs.gov.my
verify return:1
CONNECTED(0000010)
---
Certificate chain
0 s:C = MY, L = Putrajaya, O = KEMENTERIAN BELIA DAN SUKAN, CN = www.kbs.gov.my
i:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = GeoTrust TLS RSA CA G1
a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
v:NotBefore: Sep 29 00:00:00 2025 GMT; NotAfter: Aug 29 23:59:59 2026 GMT
-----BEGIN CERTIFICATE-----
MIIGnTCCBYWgAwIBAgIQCLTR2enEdq4L+nEi2F3NcTANBgkqhkiG9w0BAQsFADBg
MQswCQYDVQGEwJVUzEVMBMGA1UEChMMRGLnaUNlcnQgSW5jMRkwFwYDVoLQExB3
d3cuZGlnaWNLcnQyY29tMR8wHQYDVoLQExB3d3cuZGlnaWNLcnQyY29tMR8w
MB4XDTI1MDkyOTAwMDAwMFoXDTI1MDgyOTIzNTk1OVowYDELMAKGA1UEBhMCTVxk
EjAQBGNVBACTCVB1dHJhamF5YTEkMCIgA1UEChM5OVNURU5URVJQU4gQkVMSUJl
REF0IFN5b0F0MRCwFQYDVoLQExB3d3cuZGlnaWNLcnQyY29tMR8wHQYDVoLQ
A0EBBQADggEPADCCAQoCggEBAMK+EnWKO+8KsvK4x5oCd8WgS0Chv09rklwiFVVI
Vnof8AQf9dQCiwPcBF6SKpGDok5Afb6qaOPKbH0a6PT87MYIL2K9+XIfrE3LZGXx
0do7+fMwbW1F4nVx5PPiQsge1lKM9mHj4t5gGF3en33rf5gZq91R9bRLKIWE0kXl
iuLUXg0lHR8h5dCK2b8lswTyb4CeNs0HobMeunRjkeVofuL+H8qbod0xGMROULL
mq7jMMWb1Lm3ybAfuR7ujqz5i8osCptGfGayd/JgWjQZsep9FYWIn/QKnXQIXKds
USIKhg70lGpaQufCE+CTWbu9DwSXIME3V39iJ5JUi4L5RoECAwEAAoCA1EwggNN
MB8GA1udIwQYMBaAFJRP1F2L5KT1poD+/dj5A0+jvgJXMB0GA1udGQWBBCWdF/
iwhNkPawV1uGoB2bgjodB5B8GNVHREESzBJgg53d3cua2JzLmdvdi5teYIXbWFS
YXlzaWZzcG9ydHNSZWFndWUubXmCDNBwcy5rYnMuZ292Lm15gg5yb3kua2JzLmdv
di5teTA+BgNVHSAENzA1MDMGMmeBDAECAjApMCCGCCsGAQUFBwIBFhtodHRwOi8v
d3d3LmRwZ2JzLXJ0LmNvbS9DUmFmDGYDVR0PAQH/BAQDAgWgMB0GA1udJQWMBBQ
CCsGAQUFBwMBBggrBgEFBQcDAjA/BgNVHR8EODAzMD5SgMqAwhi5odHRwOi8vY2Rw
Lmd1b3RydXN0LmNvbS9HZW9UcnVzdFRMUjJ1TQUNBRzEuY3J5dXN0LmNvbS9HZW9U
cnVzdFRMUjJ1TQUNBRzEuY3J0MAwGA1UdEwEB/wQCMAAwggF/BgorBgEEAdZ5AgQCBII
BbwSCAwBaQB2ANDtFRDRp/V3wspX9cAv/mCyTNaZeHQswFzF8DIXwL3AAABmZn6mIcA
AAQDAEcuRQIhAP2iFoMQvt8WqzPSnPa53zCnZhoVGEc7nTdnQhyz6YsAiBSsGDD
0r4E5G0qsZxv24nrFb7N0wts2qjHa4RjLYXuLQB3AMIxflDFGaNf7n843rKQ0evH
wiFaIr9/1bWtdprZDLNAAABmZn6mIAAAQDAEgwRgIhALMLpRwEL/88+eUoLUms
VA5hBZoBeF5M0jvwLdBUU3BPAIEA7AFtYx0ulzDTIIUwIagWFIN2NBeB1b3QZeb+J
LEAXhPAAdgCUTkOH+uzB74HzGSQmQhLAcfTXzgcAT9yZ31Vny4Z2AAAAZmTepJq
AAAEAwBHMEUCIQCPcVnVd7XJoLGLas/St0SoUuS4pWALUQFNjblfZ5wg3AIgWrd
R/8ZouPMu+Dr300bFMGj5l6FxCbyG0jwHTSZA2iWdQYJKoZIhvcNAQELBQADggEB
ABwlbqLXTz1VM+R5JqzgnMwVImEVuXNGs+xtT5kxqWmRSm123w1uU30jzNeXjCJ
MX1XsBFFK05d2BhoKVjpkW1pVrHbU76gmXOBG6TtrMkn8BKZ3WA2Mz4FvMawLAvmB
w2io0NmXf69/4MVFz6VzhvLkRBCzXWBarsYXvYFX5Bj0wVTv2LCfYqnVJabWFOh
FbIFLqzbBUuL/nr4Dy24tPsr73EjJpLbfJn05RU9J0kE9gidTVNn8XdNPRzQcSq
y27hL3NqbADch9HL+VAK57ouOG2ce7F9/PC2tqH4Lq+stjBPrILNhyumzdr8id/z
V6ZXRMsV1fc1lTQYo0lJZag=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, L = Putrajaya, O = KEMENTERIAN BELIA DAN SUKAN, CN = www.kbs.gov.my
issuer=C = US, O = DigiCert Inc, OU = www.digicert.com, CN = GeoTrust TLS RSA CA G1
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA-PSS
Server Temp Key: X25519, 253 bits
---
SSL handshake has read 2257 bytes and written 392 bytes
Verification error: unable to verify the first certificate
---
New, TLSv1.3, Cipher is TLS_AES_256_GCM_SHA384
Server public key is 2048 bit
Secure Renegotiation IS NOT supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
Early data was not sent

```

```
Verify return code: 21 (unable to verify the first certificate)
---
DONE
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8003.01 ms
Error	Failed to connect to kbs.gov.my port 80 after 8002 ms: Timeout was reached

IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	202.75.6.253
Connect Time	4.66 ms
TTFB	199.92 ms
Total Time	199.96 ms

Response Headers:

```
[
  "HTTP/2 200",
  "server: nginx",
  "date: Fri, 06 Mar 2026 09:23:16 GMT",
  "content-type: text/html; charset=utf-8",
  "vary: Accept-Encoding",
  "set-cookie: 3d5c4c221af1b313e88fb01053fc4cda=lehpvk07db3g52je92d1od7253; path=/; secure; HttpOnly",
  "x-xss-protection: 1; mode=block",
  "x-content-type-options: nosniff",
  "strict-transport-security: max-age=31536000",
  "content-security-policy: ; frame-ancestors 'self'",
  "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 09:23:16 GMT",
  "cache-control: no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
  "pragma: no-cache",
  "content-security-policy: default-src 'self' https: data: 'unsafe-inline' 'unsafe-eval'; frame-ancestors *;",
  "x-content-type-options: nosniff",
  "x-frame-options: ALLOW-FROM *",
  "x-xss-protection: 1; mode=block",
  "referrer-policy: no-referrer-when-downgrade",
  "permissions-policy: geolocation=(), camera=(), microphone=()",
  "strict-transport-security: max-age=31536000; includeSubDomains; preload",
  "permissions-policy: geolocation=(self)"
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	000 0.000000 0.000000
TCP Connect IPv4 → port 443	000 0.004319 0.000000

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
```