



IPv6 Readiness Report

kk.gov.my — kkr.gov.my

Category: Government • Generated: 20 Apr 2026, 21:24 MYT • Last Checked: 07 Mar 2026, 01:05 MYT • Verification ID: c6e4c657-b15f-4f36-943f-a65079f75f74

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

Audit trail: <https://ipv6.my6.my/audit/c6e4c657-b15f-4f36-943f-a65079f75f74>

 Non-Compliant <small>MGv6C-1.0</small>	 47% Partial Support	IPV6-ONLY READINESS Website: X Not Ready DNS: X Not Ready Email: X Not Ready
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IPV4 ADDRESSES 110.159.226.22

Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	UNIFI-HOME
Country	MY
ASN	AS4788
ASN Name	TTSSB-MY TM TECHNOLOGY SERVICES SDN. BHD., MY
Network (CIDR)	110.159.224.0/19

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%) 3 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	110.159.226.22
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4 — 25ms TTFB.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 53ms TTFB.

Audit Trail & Evidence Record

Verification ID	c6e4c657-b15f-4f36-943f-a65079f75f74
Domain	kkf.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:05:30 MYT
Finished	07 Mar 2026, 01:05:54 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/c6e4c657-b15f-4f36-943f-a65079f75f74

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	d07ad26e46ce143d83347db32ef6fef3a7d6a43168dbe3d9c596fd4c12d809af
http_headers	3c79cb411a24982e8a0773f762e191c994c67d358edc5b46c45291a87cec7c39
dns_responses	b9cb0abd8b75c2583a01e16053029d364d5f77adcb3b4282e9faca6584b82c49
tls_handshake	aed45408c2611cb9cdf3218149eb2e8ef79dafc7a3423a02d26862fcd833aca
connectivity_log	5dfbf00473cce23076ab45adddfc04eadcf5567e1b3339e5d7efed0f22306f0c
dns_resolution_times	83966fac8146ed65e0e83920fd2fea07374bc0c38f6c324eab6f883a71bf996c

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	8.6	17.81	6.07	7.98	-2.5
Google	IPv4	25.66	35.68	29.54	36.57	+3.9
Google	IPv6	27.96	32.37	29.93	42.1	+2
Cloudflare	IPv4	13.8	18.96	18.87	23.19	+5.1
Cloudflare	IPv6	17.99	44.06	45.92	46.07	+27.9

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 41296
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kk.gov.my. 00018000IN050A0dns1.gitn.net.my. root.dns1.gitn.net.my. 2025122827 10800 3600 172800 38400
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 50139
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kk.gov.my. 00021600IN0DS016051 8 1 8D267BB2C1D7C38F0A089A42885A57AC10E9C827
kk.gov.my. 00021600IN0DS016051 8 2 5E64474DA2326D534F1D46DCD6120A9DB84DF554C9A979F3A7FD474A 1CF2B728
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 54949
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kk.gov.my. 000300IN0MX05 alt1.aspmx.l.google.com.
kk.gov.my. 000300IN0MX05 alt2.aspmx.l.google.com.
kk.gov.my. 000300IN0MX010 alt4.aspmx.l.google.com.
kk.gov.my. 000300IN0MX010 alt3.aspmx.l.google.com.
kk.gov.my. 000300IN0MX01 aspmx.l.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 54044
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kk.gov.my. 00021600IN0NS0dns2.gitn.net.my.
kk.gov.my. 00021600IN0NS0dns1.gitn.net.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 40369
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kk.gov.my. 0003600IN0TXT0"MS=ms58191056"
kk.gov.my. 0003600IN0TXT0"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"
kk.gov.my. 0003600IN0TXT0"google-site-verification=G-NR6IT-I4jFeBjH0p7Zhq8IIT1tK3sgklgJb5Ns_oc"
kk.gov.my. 0003600IN0TXT0"_globalsign-domain-verification=ol-tF44wYbYYvNcetsK_OCEusDH0hCLFAPaKuVQFf"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 10081
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
kk.gov.my. 00018000IN050A0dns1.gitn.net.my. root.dns1.gitn.net.my. 2025122827 10800 3600 172800 38400
```

RRSIG

```
dns1.gitn.net.my. root.dns1.gitn.net.my. 2025122827 10800 3600 172800 38400
SOA 8 3 38400 20260405085516 20260306075516 52179 kkr.gov.my. nY9SUJ0Gk1mgtS1HB6qxuftmnW28u356vuMGMPFEJh048ES075qhjWQ4
Cx Dh0BCd0GdeWrg0Z87cy15AE9bQUP+FNIFTNXH3NFD/mBDSmRGFP37r sTf4xzdCRACJm1PjYx+9egMJQ0xxmLtbo19tARKRJ98S00Mn8gjVZFry ybg=
```

DNSKEY

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 51903
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kk.gov.my. 21577 IN DNSKEY 256 3 8 AwEAAAGqwbWFAAPXLINNFN/uNu0x6PomvYrMJuZxJohV1DreZhYSV3T WNWlLleyKHVzVCyEPFfGj/09ner9Yo4wr6QCtLl96guBUFRtQstJRNKW
wBh0e09N5wFKCzLNXDZSy7+q6pavrp75c182wXWCiYT4ynhPK/G3coVW /7vWtVir
kk.gov.my. 21577 IN DNSKEY 257 3 8 AwEAAABQiytYzsf8VeB7e+eah0WAAhMVHW0rcY/LwcEbaq0QWTFfag3C x4hha2vd87MSIVp3uQGUG0SxmfGwxRm5ut8Ev7j1240H/h8+0EfXqtYb
vRxKUIe5rr/ImTI+bCVR0en3tm9y/dqCqm0+t5vGF9F3EfRtgbz0Dt0h xo/Jr2i+YPmxLBVe6B40+wLHHyzcUYpASv+D7fTHs+iR+GM5oDzyd5R1
VkJy0rotew3lM8ae8jBgBR1NE3bxaLxRTcVuaFAaVuU2hTHiBNWgiyqm sypvnM0APTUJ0ni/28RVRo+asYnyovB9gz/jIJb0qv+qtV12PsY3Mey zCJ6FNLDwa0=
```

DNSSEC_VALIDATION

```
; fully validated
kk.gov.my. 21600 IN SOA dns1.gitn.net.my. root.dns1.gitn.net.my. 2025122827 10800 3600 172800 38400
kk.gov.my. 21600 IN RRSIG SOA 8 3 38400 20260405085516 20260306075516 52179 kkr.gov.my. nY9SUJ0Gk1mgtS1HB6qxuftmnW28u356vuMGMPFEJh048ES075qhjWQ4
Cx Dh0BCd0GdeWrg0Z87cy15AE9bQUP+FNIFTNXH3NFD/mBDSmRGFP37r sTf4xzdCRACJm1PjYx+9egMJQ0xxmLtbo19tARKRJ98S00Mn8gjVZFry ybg=
```



```
b20vcmVwb3NpdG9yeS8wDQYJKoZIhvcNAQELBQADggEBAJmQyC1fQorUC2bbmANz
EdSIhLIoU4r7rd/9c446ZwTbw1MUcBQJfMPg+NccmBqixD7b6QDjynCy8SIwIVbb
0615XoFYC20UgDX1b10d65pHBf9ZjQCxQNqQmJYaumxtf4z1s4dfjGRzNpZ5eWl0
6r/4ngGPoJVpjemEuunl1Ig423g7mNA2eymw0LIYkN5S0wCuaiFIFJ6GLazhgDEw
fpoLu4usBC0mmQDo8dIm7A9+04orkjgTHY+GzYZSR+Y0fFukAj6KYXwidlNaLFMz
hriSqHkvoFlShx8xpfywgVcvzft03PYkz6fiNJBonf6q8amaEsybwMbdqKwIX7e
SPY=
-----END CERTIFICATE-----
---
Server certificate
subject=C = MY, ST = KUALA LUMPUR, L = KUALA LUMPUR, O = KEMENTERIAN KERJA RAYA, CN = *.kk.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: X25519, 253 bits
---
SSL handshake has read 3451 bytes and written 405 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	400
Connected IP	110.159.226.22
Connect Time	9.87 ms
TTFB	25.93 ms
Total Time	25.96 ms

Response Headers:

```
[
  "HTTP/1.1 400 Bad Request",
  "Date: Fri, 06 Mar 2026 09:05:54 GMT",
  "Server: Apache",
  "X-Powered-By: NasRule",
  "Cache-Control: no-cache, private",
  "X-Generator: NasRule",
  "X-Content-Type-Options: nosniff",
  "Connection: close",
  "Content-Type: text/plain; charset=UTF-8",
  "Set-Cookie: cookiesession1=678A8C319E20CD0F01B0732B51D247D4;Expires=Sat, 06 Mar 2027 09:10:49 GMT;Path=/;HttpOnly"
]
```

IPv4 HTTPS (port 443)

HTTP Status	400
Connected IP	110.159.226.22
Connect Time	10.81 ms
TTFB	49.41 ms
Total Time	49.44 ms

Response Headers:

```
[
  "HTTP/1.1 400 Bad Request",
  "Date: Fri, 06 Mar 2026 09:05:54 GMT",
  "Server: Apache",
  "X-Powered-By: NasRule",
  "Cache-Control: no-cache, private",
  "X-Generator: NasRule",
  "X-Content-Type-Options: nosniff",
  "Connection: close",
  "Content-Type: text/plain; charset=UTF-8",
  "Set-Cookie: cookiesession1=678A8C329A1F131405A54F184807D35A;Expires=Sat, 06 Mar 2027 09:10:49 GMT;Path=/;HttpOnly"
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	400 0.009184 0.031499
TCP Connect IPv4 → port 443	400 0.009487 0.054944

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
```