

IPv6 Readiness Report

youtube.com — youtube.com




Scan to verify

Category: Streaming • Generated: 13 Jun 2026, 18:37 MYT • Last Checked: 13 Jun 2026, 01:04 MYT • Verification ID: 3c65cbc8-43bf-44b1-89d7-75251f03579c

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

Audit trail: <https://ipv6.my6.my/audit/3c65cbc8-43bf-44b1-89d7-75251f03579c>



Partially Compliant
MGv6C-1.0

87%
Partial Support

IPv6-ONLY READINESS

Website: ✓ Ready

DNS: ✓ Ready

Email: ✗ Not Ready

<p>IPv6 ADDRESSES</p> <p>2404:6800:4001:816::200e</p>	<p>IPv4 ADDRESSES</p> <p>172.217.26.142</p>
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Network Information (WHOIS / RDAP)

	IPv6 Network	IPv4 Network
Organization	Google International, LLC	Google LLC
Country	AU	US
ASN	AS15169	AS15169
ASN Name	GOOGLE - Google LLC, US	GOOGLE - Google LLC, US
Network (CIDR)	2404:6800::/32	172.217.0.0/16

Web Services (35%)				8 / 8
#	CHECK	RESULT	DETAIL	
1	AAAA Record	PASS	2404:6800:4001:816::200e	
2	Globally Routable IPv6	PASS	All addresses are globally routable.	
3	HTTP over IPv6	PASS	HTTP (port 80) responds over IPv6 — 367ms TTFB.	
4	HTTPS over IPv6	PASS	HTTPS (port 443) responds over IPv6 — 324ms TTFB.	
5	IPv6-Only Reachability	PASS	Site is fully reachable via IPv6-only.	
6	TLS Certificate Valid (IPv6)	PASS	Certificate valid — issued by C = US, O = Google Trust Services, CN = WR2, expires Aug 17 08:36:18 2026 GMT	
7	Dual-Stack (IPv4 + IPv6)	PASS	Domain has both A and AAAA records.	
8	HTTP/3 (QUIC)	PASS	Alt-Svc: h3 header 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	FAIL	DNSSEC validation failed or zone is unsigned.	
5	Reverse DNS (PTR)	PASS	PTR record found in ip6.arpa.	
6	DS Record at Parent	FAIL	No DS record at parent.	
7	RRSIG Valid	FAIL	No valid RRSIG found.	

#	CHECK	RESULT	DETAIL
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	DKIM selector found: selector1_domainkey
7	DMARC Record	PASS	DMARC record found.

IPv4 Baseline (15%) 3 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	172.217.26.142
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4 — 315ms TTFB.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 362ms TTFB.

Audit Trail & Evidence Record

Verification ID	3c65cbc8-43bf-44b1-89d7-75251f03579c
Domain	youtube.com
Check Mode	Scheduled
Status	Completed
Started	13 Jun 2026, 01:04:22 MYT
Finished	13 Jun 2026, 01:04:49 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/3c65cbc8-43bf-44b1-89d7-75251f03579c

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	605043a2684264a160187ac9d5846fde88ebf036b48582a9c9ff5da14698cfcfb
http_headers	cb2c54dec013ec9dab21e84bfb39e63d7cd7c61017adaa8ce79c5ae76915e27d
dns_responses	949bf4d361d7834cc410245f32f999623b59c9306c39c5bcb8a0542385d30a8d
tls_handshake	cf4098256c640de49d36f0a61150988781fed745ef678e6f1a6e131d9cf60252
connectivity_log	5912d77db032212095e91e87c764ec2cc5ba418beed932ee29a38b72cb02e7b0
dns_resolution_times	ccd638ae2caddffc9f751fb1a83c679bbf4979fea6683dfc4722a63a76a47505

Test Node Identity

Os	Linux srv1440888 6.8.0-124-generic #124-Ubuntu SMP PREEMPT_DYNAMIC Tue May 26 13:00:45 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.31
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	17.92	21.37	6.88	18.4	-11
Google	IPv4	27.9	30.62	39.21	39.68	+11.3
Google	IPv6	28.64	40.9	30.27	31.81	+1.6
Cloudflare	IPv4	8.88	9.41	8.02	19.96	-0.9
Cloudflare	IPv6	31.89	32.36	27.16	33.87	-4.7

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 10156
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
youtube.com. 300 IN A 142.250.193.238
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4320
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
com. 883 IN SOA a.gtld-servers.net. nstld.verisign-grs.com. 1781283853 1800 900 604800 900
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 19169
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
youtube.com. 300 IN MX 0 smtp.google.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 2965
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
youtube.com. 86400 IN NS ns4.google.com.
youtube.com. 86400 IN NS ns3.google.com.
youtube.com. 86400 IN NS ns2.google.com.
youtube.com. 86400 IN NS ns1.google.com.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 60476
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
youtube.com. 3600 IN TXT "v=spf1 include:google.com mx -all"
youtube.com. 3600 IN TXT "facebook-domain-verification=64jdes7le4h7e7lfp122rijygx58j1"
youtube.com. 3600 IN TXT "google-site-verification=QtQWEwHWM8tHiJ4s-jJWzEQrD_ff3luPnpzNDH-Nw-w"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 12348
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
youtube.com. 300 IN AAAA 2404:6800:4001:804::200e
```

RRSIG

```
ns1.google.com. dns-admin.google.com. 930418080 900 900 1800 60
```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 5650
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
youtube.com. IN SOA ns1.google.com. dns-admin.google.com. 930418080 900 900 1800 60
```

DNSSEC_VALIDATION

```
; unsigned answer
youtube.com. IN SOA ns1.google.com. dns-admin.google.com. 930418080 900 900 1800 60
```


TLS Handshake Evidence

IPV4 Connection

IP Used	172.217.26.142
IP Version	4

```

depth=2 C = US, O = Google Trust Services LLC, CN = GTS Root R1
verify return:1
depth=1 C = US, O = Google Trust Services, CN = WR2
verify return:1
depth=0 CN = *.google.com
verify return:1
CONNECTED(00000010)
...
Certificate chain
0 s:CN = *.google.com
i:C = US, O = Google Trust Services, CN = WR2
a:PKEY: id-ecPublicKey, 256 (bit); sigalg: RSA-SHA256
v:NotBefore: May 25 08:36:19 2026 GMT; NotAfter: Aug 17 08:36:18 2026 GMT
-----BEGIN CERTIFICATE-----
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nt6Qw787D5w=
-----END CERTIFICATE-----
1 s:C = US, O = Google Trust Services, CN = WR2
i:C = US, O = Google Trust Services LLC, CN = GTS Root R1
a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
v:NotBefore: Dec 13 09:00:00 2023 GMT; NotAfter: Feb 20 14:00:00 2029 GMT
-----BEGIN CERTIFICATE-----
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```

```
+MGr+XgvSszYhaLYWtW00xj7sFUKDSbutltkdnwUxy96zqhMt/TZCPzfhyM1IKji
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/oTxUFq0L2stKnn7QGTq8z29W+GgBLCSXbXc9epaHM0myFH/FJlniXJfHeytWt0=
-----END CERTIFICATE-----
2 s:C = US, 0 = Google Trust Services LLC, CN = GTS Root R1
i:C = BE, 0 = GlobalSign nv-sa, OU = Root CA, CN = GlobalSign Root CA
a:PKKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA256
v:NotBefore: Jun 19 00:00:42 2020 GMT; NotAfter: Jan 28 00:00:42 2028 GMT
-----BEGIN CERTIFICATE-----
MIIFYjCBEqAwIBAgIQd70NbNs2+RrQIQ/E8fJTDtANBgkqhkiG9w0BAQsFADBX
```

IPv6 Connection

IP Used	2404:6800:4001:816::200e
IP Version	6

```
depth=2 C = US, 0 = Google Trust Services LLC, CN = GTS Root R1
verify return:1
depth=1 C = US, 0 = Google Trust Services, CN = WR2
verify return:1
depth=0 CN = *.google.com
verify return:1
CONNECTED(00000010)
---
Certificate chain
0 s:CN = *.google.com
i:C = US, 0 = Google Trust Services, CN = WR2
a:PKKEY: id-ecPublicKey, 256 (bit); sigalg: RSA-SHA256
v:NotBefore: May 25 08:36:19 2026 GMT; NotAfter: Aug 17 08:36:18 2026 GMT
-----BEGIN CERTIFICATE-----
MIIDdCCB1ygAwIBAgIQE5zfkAulvFIS0T7ur9GMVjANBgkqhkiG9w0BAQsFADA7
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```

```

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-----END CERTIFICATE-----
1 s:C = US, 0 = Google Trust Services, CN = WR2
i:C = US, 0 = Google Trust Services LLC, CN = GTS Root R1
a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
v:NotBefore: Dec 13 09:00:00 2023 GMT; NotAfter: Feb 20 14:00:00 2029 GMT
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-----END CERTIFICATE-----
2 s:C = US, 0 = Google Trust Services LLC, CN = GTS Root R1
i:C = BE, 0 = GlobalSign nv-sa, OU = Root CA, CN = GlobalSign Root CA
a:PKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA256
v:NotBefore: Jun 19 00:00:42 2020 GMT; NotAfter: Jan 28 00:00:42 2028 GMT
-----BEGIN CERTIFICATE-----
MIIFYjCCBEqgAwIBAgIQd70NbNs2+RrqIQ/E8fJTDANBgkqhkiG9w0BAQsFADBX

```



```
"56": {"alt-svc: h3="\":443\"; ma=2592000,h3-29="\":443\"; ma=2592000"
}
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.001705 0.015919
TCP Connect IPv6 → port 80	301 0.001225 0.014762
TCP Connect IPv4 → port 443	301 0.001790 0.042756
TCP Connect IPv6 → port 443	301 0.001233 0.044103

Test Node Network Evidence

Node Profile	dual stack
--------------	------------

Egress Connectivity

IPv4 Egress	unreachable
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
```