

# IPv6 Readiness Report

admission.utm.my — admission.utm.my

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Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/f7aa4d4f-91fa-46d9-a95c-e466610df514>**Non-Compliant**

MGv6C-1.0

**15%****No IPv6 Support****IPv6-ONLY READINESS**Website: **X Not Ready**DNS: **X Not Ready**Email: **X Not Ready****IPv4 ADDRESSES**

161.139.22.87

**Network Information (WHOIS / RDAP)**

IPv4 Network	
Organization	Universiti Teknologi Malaysia
Country	MY
ASN	AS133014
ASN Name	UTM-AS-AP Universiti Teknologi Malaysia, MY
Network (CIDR)	161.139.0.0/16

**Web Services** (35%)

0 / 8

#	CHECK	RESULT	DETAIL
1	<b>AAAA Record</b>	<b>FAIL</b>	No AAAA record found in DNS.
2	<b>Globally Routable IPv6</b>	<b>FAIL</b>	IPv6 address is not globally routable.
3	<b>HTTP over IPv6</b>	<b>FAIL</b>	HTTP is not accessible over IPv6.
4	<b>HTTPS over IPv6</b>	<b>FAIL</b>	HTTPS is not accessible over IPv6.
5	<b>IPv6-Only Reachability</b>	<b>FAIL</b>	Site is not reachable when limited to IPv6-only.
6	<b>TLS Certificate Valid (IPv6)</b>	<b>FAIL</b>	TLS certificate is invalid, expired, or hostname mismatch over IPv6.
7	<b>Dual-Stack (IPv4 + IPv6)</b>	<b>FAIL</b>	Domain is IPv6-only or IPv4-only.
8	<b>HTTP/3 (QUIC)</b>	<b>FAIL</b>	No HTTP/3 support detected.

**DNS & DNSSEC** (25%)

0 / 5

#	CHECK	RESULT	DETAIL
1	<b>NS Has AAAA Record</b>	<b>FAIL</b>	No nameserver has an AAAA record.
2	<b>NS Reachable via IPv6</b>	<b>FAIL</b>	No nameserver is reachable over IPv6.
3	<b>NS Answers Queries via IPv6</b>	<b>FAIL</b>	Nameserver does not answer queries over IPv6.
4	<b>DNSSEC Validated</b>	<b>FAIL</b>	DNSSEC validation failed or zone is unsigned.
5	<b>Reverse DNS (PTR)</b>	<b>FAIL</b>	No PTR record found.
6	<b>DS Record at Parent</b>	<b>PASS</b>	DS record found at parent zone.
7	<b>RRSIG Valid</b>	<b>FAIL</b>	No valid RRSIG found.
8	<b>Signing Algorithm</b>	<b>INFO</b>	No DNSKEY record found.

Email Services (25%)				0 / 6
#	CHECK	RESULT	DETAIL	
1	<b>MX Record Exists</b>	<b>FAIL</b>	No MX record found in DNS.	
2	<b>MX Server Has IPv6</b>	<b>FAIL</b>	MX server has no IPv6 address.	
3	<b>SMTP Reachable via IPv6</b>	<b>FAIL</b>	SMTP is not reachable over IPv6.	
4	<b>STARTTLS over IPv6</b>	<b>FAIL</b>	STARTTLS not available over IPv6.	
5	<b>SPF Record</b>	<b>FAIL</b>	No SPF record found.	
6	<b>DKIM Selector</b>	<b>INFO</b>	No common DKIM selector found.	
7	<b>DMARC Record</b>	<b>FAIL</b>	No DMARC record found.	

  

IPv4 Baseline (15%)				3 / 3
#	CHECK	RESULT	DETAIL	
1	<b>A Record</b>	<b>PASS</b>	161.139.22.87	
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4 — 78ms TTFB.	
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 41ms TTFB.	

## Audit Trail & Evidence Record

Verification ID	f7aa4d4f-91fa-46d9-a95c-e466610df514
Domain	admission.utm.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:10:47 MYT
Finished	07 Mar 2026, 01:10:51 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/f7aa4d4f-91fa-46d9-a95c-e466610df514

## Integrity Verification

✓ <b>INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	b77c7f3bfb31634c387da4f9266dbaffd750b6aced0b8fafb4a7ec4eebaefca8
http_headers	536891f6fd091403ed8652f1719252ff541bbc5582644dc2d73ac5f1d733d6e2
dns_responses	23712edbaa9914b456da19f8b9ee31ced6416c4d93602be1da370e6b8993b8de
tls_handshake	69c8ec852ab1996ca692889671991a8a612b7e5f5896fec93f56080487753247
connectivity_log	dc6eed5bc40a87200b170f1769ac667456e2e12b4f3703e9cc8b3942ff982817
dns_resolution_times	3feeeacaa328b9545009623eafa074f878873eef19df1507ed7e6ca40a9cf846

## 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	16.93	17.96	6.95	15.91	-10
Google	IPv4	14.98	22.05	40.41	71.91	+25.4
Google	IPv6	45.2	47.94	38.91	67.24	-6.3
Cloudflare	IPv4	18.93	18.93	22.94	42.23	+4
Cloudflare	IPv6	10.25	53.47	54.69	61.81	+44.4



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 4740
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 1965 IN CNAME www3.utm.my.
www3.utm.my. 3600 IN A 161.139.22.87
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 1359
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 698 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 1800 IN SOA ns1.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 7213
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 1965 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 1800 IN SOA ns1.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 56481
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 791 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 1800 IN SOA ns3.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 62023
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 1125 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 1800 IN SOA ns1.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 33346
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
```

```
;; ANSWER SECTION:
admission.utm.my. 1126 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 529 IN SOA ns3.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

**RRSIG**

```
www3.utm.my.
```

**DNSKEY**

```
;; Got answer:
;; ->HEADER<- opcode: QUERY, status: NOERROR, id: 33529
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
admission.utm.my. 1964 IN CNAME www3.utm.my.

;; AUTHORITY SECTION:
utm.my. 1800 IN SOA ns3.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```

**DNSSEC\_VALIDATION**

```
;; resolution failed: ncache nxrrset
; unsigned answer
admission.utm.my. 3600 IN CNAME www3.utm.my.
; www3.utm.my. 1800 IN \-SOA; -NXRRSET
; utm.my. SOA ns3.utm.my. root.utm.my. 2020107476 1200 600 1209600 3600
```





```

c6wj0y0AvzVVdALJ2ELYGn+SNUZRkg7zJn0cTRe8yexDJtC/QV9AqURE9JnnV4ee
UB9XVKg+/XRjL7FQZQnmWEIuQxpMtPALR1n6BB6T1CZGS1CBst+eLf8ZxXhyVeE
Hg9j1uLiutZfV57qXMYoCAQ10bgOK6nyTJccBz8NUvXt7y+CDwIDAQABo0IwQDAd
BgNVHQ4EFgQUU3m/WqorSs9UgOHYm8Cd8rIDZsSwDgYDVR0PAQH/BAQDAgEGMA8G
A1UdEwEB/wQFMAMBAf8wDQYJKoZIhvcNAQEMBOADggIBAFzUfA3P9wF9QZ1LDHPF
Up/L+M+ZBn8b2kMVn54CVVeWFFSPCeHLcjthzoBN6J2/FNQwISbxmt0uowhT6K0
VMKR82kV2LyI485qC/3vq0LLVSoGIG1VeCkZ7l8wXEsKvX/JJpuXior7gtNn3/3
ATiUfJVDBwn7YKnuHks5jKCaXqeYalltiz8I+8jRRa8YFWSQEG9zKC7F4iR0/Fjs
8PRF/iKz6y+00tLFYQXB12+odnKPi4w2r78NBc5xjeambx9spnFixdjQg3IM8WcR
iQycE0xyMN+81XHfqHd4bLsjDwSXWxavVcStkNr/+XeTWYRUc+ZruxTuhxkYze
Sf7dNXGiFSuHM9h4ya7b6NnJSF5t0dCy5oGzuCr+yDZ4XUMFF0sbmZgIn/f3gZ
XHLKYC65QK5MMyosycdiyA5d9zZbyuALJQG03RoHhHcAP9Dc1ew91Pq7P8yF1m9/
qS3fuQL39ZeatTXaw2ewh0qpKJ4jjv9cJ2vhsE/zB+4ALtRZ8t5QZq9eFX7mRB
VXyNWQK3VKdwrnuWih0hKwb5DHDAff9Yk2dDLWKMgWsvgnEzDHNb842m1R0aB
L6KcQ9NjRHDEjf8tM7qtj3u1cIiuPhnPQCjY/MiQu12ZiV55lJFH4gxQ+6IHdFG
jjxDah2nGn59PRbxYvnKkKj9
-----END CERTIFICATE-----
2 s:C = GB, O = Sectigo Limited, CN = Sectigo Public Server Authentication Root R46
i:C = US, ST = New Jersey, L = Jersey City, O = The USERTRUST Network, CN = USERTrust RSA Certification Authority
a:PKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA384
v:NotBefore: Mar 22 00:00:00 2021 GMT; NotAfter: Jan 18 23:59:59 2038 GMT
-----BEGIN CERTIFICATE-----
MIIGLTCCBH2gAwIBAgIRANJ/u8HeNZ55Fq1hSVhgmcQwDQYJKoZIhvcNAQEMBOAw
gYgxCzAJBgNVBAYTALVTMRMwEQYDVQIEwP0ZXcgSmVyc2V5MRQwEgYDVQQHEWtK
ZXJzZXkgQ2l0eTEeMBwGA1UEChMvVGVhZlVTRVJUUlVTVCB0ZXR3b3JrMS4wLWYw
VQ0DEyVU0VSVHJ1c3Q0U1NBIElnLnRpb2lYXRpb24gQXV0aG9yaXR5X5MB4XDITX
MDMyMjYwMDAwMFoXDITM4MDExODIzNTk1OVowXzELMAKGA1UEBhMCR0IeGDABgNV

```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	161.139.22.87
Connect Time	26.22 ms
TTFB	69.42 ms
Total Time	69.48 ms

#### Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "Server: nginx",
  "2": "Date: Fri, 06 Mar 2026 09:10:48 GMT",
  "3": "Content-Type: text/html",
  "4": "Content-Length: 162",
  "5": "Connection: keep-alive",
  "6": "Location: https://admission.utm.my/",
  "8": "HTTP/2 200",
  "9": "server: nginx",
  "10": "date: Fri, 06 Mar 2026 09:10:48 GMT",
  "11": "content-type: text/html; charset=UTF-8",
  "12": "x-powered-by: PHP/8.3.30",
  "13": "link: <https://admission.utm.my/wp-json/>; rel=\"https://api.w.org/\"",
  "14": "link: <https://admission.utm.my/wp-json/wp/v2/pages/39987>; rel=\"alternate\"; title=\"JSON\"; type=\"application/json\"",
  "15": "link: <https://admission.utm.my/>; rel=shortlink",
  "16": "x-cache-status: HIT",
  "17": "x-powered-by: PleskLin"
}
```

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	161.139.22.87
Connect Time	12.41 ms
TTFB	41.64 ms
Total Time	41.67 ms

#### Response Headers:

```
[
  "HTTP/2 200",
  "server: nginx",
  "date: Fri, 06 Mar 2026 09:10:48 GMT",
  "content-type: text/html; charset=UTF-8",
  "x-powered-by: PHP/8.3.30",
  "link: <https://admission.utm.my/wp-json/>; rel=\"https://api.w.org/\"",
  "link: <https://admission.utm.my/wp-json/wp/v2/pages/39987>; rel=\"alternate\"; title=\"JSON\"; type=\"application/json\"",
  "link: <https://admission.utm.my/>; rel=shortlink",
  "x-cache-status: HIT",
  "x-powered-by: PleskLin"
]
```

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.012750 0.027083
TCP Connect IPv4 → port 443	200 0.014113 0.053808

**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
```