


IPv6 Readiness Report

upnm.edu.my — upnm.edu.my

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Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>
Audit trail: <https://ipv6.my6.my/audit/d0b45e5f-bd78-4453-97e1-7576dff90af>

 Non-Compliant <small>MGv6C-1.0</small>	28% No IPv6 Support	IPv6-ONLY READINESS Website: X Not Ready DNS: X Not Ready Email: X Not Ready
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IPv4 ADDRESSES 103.127.50.50
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Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	Universiti Pertahanan Nasional Malaysia
Country	MY
ASN	AS138504
ASN Name	UNIVERSITIPERTAHANANNASIONALMALAYSIAUPNM-AS-AP Universiti Pertahanan Nasional Malaysia, MY
Network (CIDR)	103.127.50.0/23

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%) 0 / 5			
#	CHECK	RESULT	DETAIL
1	NS Has AAAA Record	FAIL	No nameserver has an AAAA record.
2	NS Reachable via IPv6	FAIL	No nameserver is reachable over IPv6.
3	NS Answers Queries via IPv6	FAIL	Nameserver does not answer queries over IPv6.
4	DNSSEC Validated	FAIL	DNSSEC validation failed or zone is unsigned.
5	Reverse DNS (PTR)	FAIL	No PTR record found.
6	DS Record at Parent	FAIL	No DS record at parent.
7	RRSIG Valid	FAIL	No valid RRSIG found.
8	Signing Algorithm	INFO	No DNSKEY record found.

Email Services (25%) 3 / 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	FAIL	No DMARC record found.

IPv4 Baseline (15%) 3 / 3

#	CHECK	RESULT	DETAIL
1	A Record	PASS	103.127.50.50
2	HTTP over IPv4	PASS	HTTP (port 80) responds over IPv4 — 80ms TTFB.
3	HTTPS over IPv4	PASS	HTTPS (port 443) responds over IPv4 — 60ms TTFB.

Audit Trail & Evidence Record

Verification ID	d0b45e5f-bd78-4453-97e1-7576dfffb90af
Domain	upnm.edu.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:12:35 MYT
Finished	07 Mar 2026, 01:13:43 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/d0b45e5f-bd78-4453-97e1-7576dfffb90af

Integrity Verification

✓ INTEGRITY VERIFIED	
Algorithm	hmac-sha256-v1
Root Hash	faad705a809eea439e7f2838a2fe190500959689bdefb5a014a071afbc65fd6a
http_headers	b463a48fffb086459dca656382f5c475e8e45a7033c2cc950a1f62b2a4331d0d
dns_responses	3f9916ec0c4a327606532bcfa4215ba394efed4f678f7f7413d1e89398f5c3ba
tls_handshake	2fbf83ed0d0df902b428ca2a38b5736d40f33f62646d82ee6d8a1de9f332f972
connectivity_log	be74750ecb97f0f29330ffa60c6fc389afcd046fa9f6ae631c0ff65b69155f94
dns_resolution_times	27baf0b6a446c606ca53c175232cbe81fd835f39c5f51a858c0b4db3c7d813e9

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	8.92	18.11	17.83	18.43	+8.9
Google	IPv4	27.59	31.12	41.62	50.16	+14
Google	IPv6	27.24	36.29	32.56	39.77	+5.3
Cloudflare	IPv4	31.94	32.74	27.41	34.73	-4.5
Cloudflare	IPv6	10.15	19.04	27.99	4033.16	+17.8

DNS Evidence

A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 34294
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
upnm.edu.my. 000283600IN A 103.127.50.50
```

DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 26767
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
edu.my. 000175300IN SOA b.nic.my. hostmaster.nic.my. 2026018482 1800 900 604800 3600
```

MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 21464
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
upnm.edu.my. 00049000IN MX 0 upnm-edu-my.mail.protection.outlook.com.
```

NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 46687
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
upnm.edu.my. 00036000IN NS ns4.upnm.edu.my.
upnm.edu.my. 00036000IN NS ns1.upnm.edu.my.
upnm.edu.my. 00036000IN NS ns2.upnm.edu.my.
```

TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 55820
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
upnm.edu.my. 00036000IN TXT "google-site-verification=uPgLWD3yWU_4aylvsF0GzRxeL-97n8mEq1X6ZFHUw5s"
upnm.edu.my. 00036000IN TXT "v=spf1 include:spf.protection.outlook.com -all"
upnm.edu.my. 00036000IN TXT "MS=ms66463812"
upnm.edu.my. 00036000IN TXT "google-gws-recovery-domain-verification=49828750"
```

AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 51681
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
upnm.edu.my. 00040400IN SOA ns1.upnm.edu.my. root.upnm.edu.my. 2020102537 1200 600 1209600 3600
```

RRSIG

```
ns1.upnm.edu.my. root.upnm.edu.my. 2020102537 1200 600 1209600 3600
```

DNSKEY

```
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 62425  
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1  
  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 512  
;; AUTHORITY SECTION:  
upnm.edu.my. 1800 IN SOA ns1.upnm.edu.my. root.upnm.edu.my. 2020102537 1200 600 1209600 3600
```

DNSSEC_VALIDATION

```
; unsigned answer  
upnm.edu.my. 3553 IN SOA ns1.upnm.edu.my. root.upnm.edu.my. 2020102537 1200 600 1209600 3600
```



```

bt47u68ZFCd/ac55I0DNHkCpaPruj6e9Rmr7K46wZDAYXuEAQB7tGG/jd6JAA+H2
044CV98NRsU213f1kScIzntNagMBAAGjggGMIIBfTAFBgNVHSMGDAWgBRWc1hk
lfm5GrASkGRieaFAFYghSTAdBgNVHQ4EFgQU42Z0u3BojSxdTg6mSo+bNyKcgpIw
DgYDVR0PAQH/BAQDAgGGMBIGA1UdEwEB/wQIMAYBAf8CAQAwHQYDVR0LBBYwFAYI
KwYBBQUHAwEGCCsGAQUFBwMCMBSGA1UdIAQUMBIwBgYEVROgADAIBgZngQwBAGIw
VAYDVR0fBE0wSzBjOeEgRYZDaHR0cDovL2NybC5zZWNoawdvLmNvbS9TZWNoawdv
UHVibGljU2V2dmVvQXV0aGVudGllYXRpb255b290UjQ2LmNybDcBhAYIKwYBBQUH
AQEEeDB2ME8GCCsGAQUFBzAChkNodHRwOi8vY3J0LnNlY3RpZ28uY29tL1NlY3Rp
Z290dWJsaWNTZXJ2ZXJDbdR0Zw50awNhdGlvb1Jvb3R5NDYucDdjMCMGCCsGAQUF
BzABhhddHRwOi8vb2Nzc5zZWNoawdvLmNvbTANBgkqhkiG9w0BAQwFAAOCAGEA
BZXWdHWC3cubb/e1I1kzi8LPF1K/ZUoH09ufmV0rc50bYH/XKkUwexSPqRkwKFKr
7r80uG+p7VNB8rifX6uopqKAgsvZtZsq7iAFw04To6vNcxeBt1Eush3cQ4b8nbQR
MQLChgEAqwhuXp9P48T4QEBSksYav7+aFjNySsLYLPzNqVM3RNwvBdvp6vgDtGwc
xLKQZVuuNVIAoYyls8swxDeSHKpRdxRauTLZ+pl+wGvy0pnrLEJGSz9m0Emfbod
e/XopR2NGqaHJ6bIjyxPu6UtyQGI26En7UAEozACrHz06Nx2jTAY9E6NeB6XuobE
wLK025ZRMvgLcURGIbrV24tGHHTgxCe8M3oGlpUSMTKQ2dkgljZVYt+gKdFtWELZ
MuRdi+X3XsrR8LFz+alUiDRfQqhmw3RrxjIyVkvuu9UPYY1nsvxYmFnUseM+2q1z/
iPUry+xDY9MC6+IhLeKT094VKdFVp7LXH42+vvU+17lRo1Q2mK2N/nBLVBwaIhib
QXw4VYKwB86Bc6e56iqsc94KEgD/U4VsjmgfhK+Xp4NM+VYZTtA3QeV3p8x0M0cw
q1p8oZFA+0Bcz3FYWpDIe5j0NNKlw9hXsTyPY/HeZUV59akskS0SR5mdfe8WJDPX
58uB9/7lud0G3x0pxQAcffP0ayKavNwDTw4UfJ34cEw=
-----END CERTIFICATE-----
2 s:c = GB, 0 = 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:PKKEY: 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-----

```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	400
Connected IP	103.127.50.50
Connect Time	7.88 ms
TTFB	80.03 ms
Total Time	80.11 ms

Response Headers:

```
{
  "0": "HTTP/1.1 302 Found",
  "1": "Server: Apache",
  "2": "Date: Fri, 06 Mar 2026 09:13:39 GMT",
  "3": "Content-Type: text/html; charset=iso-8859-1",
  "4": "Connection: keep-alive",
  "5": "Location: https://www.upnm.edu.my",
  "7": "HTTP/1.1 400 Bad Request",
  "8": "Date: Fri, 06 Mar 2026 09:13:39 GMT",
  "9": "Content-Type: text/html",
  "10": "Content-Length: 0",
  "11": "Connection: keep-alive"
}
```

IPv4 HTTPS (port 443)

HTTP Status	400
Connected IP	103.127.50.50
Connect Time	4.49 ms
TTFB	60.13 ms
Total Time	60.16 ms

Response Headers:

```
[
  "HTTP/1.1 400 Bad Request",
  "Date: Fri, 06 Mar 2026 09:13:39 GMT",
  "Content-Type: text/html",
  "Content-Length: 0",
  "Connection: keep-alive"
]
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	302 0.003352 0.008337
TCP Connect IPv4 → port 443	200 0.003958 3.839016

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
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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
```