IPv6 Readiness Report

um.edu.my — um.edu.my

Scan to verify

Category: Education • Generated: 02 Nov 2026, 03:08 MYT • Last Checked: 09 Aug 2026, 23:16 MYT • Verification ID: c488a612-c8d4-4058-a17d-175466b94a1b
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/c488a612-c8d4-4058-a17d-175466b94a1b

⚠
Partially Compliant
MGv6C-1.0

60%
Partial Support

IPV6-ONLY READINESS
Website: ✗ **Not Ready**
DNS: ✓ **Ready**
Email: ✓ **Ready**

IPV4 ADDRESSES
`20.212.19.176`

Network Information (WHOIS / RDAP)

	IPv4 Network
Organization	Microsoft Corporation
Country	US
ASN	AS8075
ASN Name	MICROSOFT-CORP-MSN-AS-BLOCK - Microsoft Corporation, US
Network (CIDR)	20.192.0.0/10

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%) — 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**	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.

#	CHECK	RESULT	DETAIL
8	**Signing Algorithm**	INFO	RSASHA256

Email Services (25%) — 6 / 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**	PASS	SMTP port 25 responds over IPv6.
4	**STARTTLS over IPv6**	PASS	STARTTLS supported over IPv6.
5	**SPF Record**	PASS	SPF record found.
6	**DKIM Selector**	INFO	DKIM selector found: google._domainkey
7	**DMARC Record**	PASS	DMARC record found.

IPv4 Baseline (15%) — 3 / 3

#	CHECK	RESULT	DETAIL
1	**A Record**	PASS	20.212.19.176
2	**HTTP over IPv4**	PASS	HTTP (port 80) responds over IPv4 — 136ms TTFB.
3	**HTTPS over IPv4**	PASS	HTTPS (port 443) responds over IPv4 — 55ms TTFB.

Audit Trail & Evidence Record

Verification ID	c488a612-c8d4-4058-a17d-175466b94a1b
Domain	um.edu.my
Check Mode	Manual
Status	Completed
Started	09 Aug 2026, 23:16:34 MYT
Finished	09 Aug 2026, 23:16:38 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/c488a612-c8d4-4058-a17d-175466b94a1b

Integrity Verification

✓ **INTEGRITY VERIFIED**

Algorithm	hmac-sha256-v1
Root Hash	4e862fc08f30c8b00fa1c91de3923e8daf4788de55b3efc60ddd59bd38b20102
http_headers	22374fc1fabb973218d0669f7be240ad11acb326d640f608dffc9c031d86eea7
dns_responses	b102890c1b3c51ebc37ec31b6cc80500fb20c06a5059973e5ea8df681d4207b7
tls_handshake	6dd36de553cc5c9a460ccb10dad4d7995eee58cb4a41e52d17e8bf9d75b78432
connectivity_log	20759a4c8ea38faff4b2e0b0ebcb658961dccd1100aa3ab9dbf4d2c660c8160d
dns_resolution_times	a469f9a4a199d4b359018849b478a88384683484e91d03b330d82ff5790a71d2

Test Node Identity

Os	Linux srv1440888 6.8.0-136-generic #136-Ubuntu SMP PREEMPT_DYNAMIC Wed Jul 1 21:53:05 UTC 2026 x86_64
Hostname	srv1440888
Php Version	8.3.33
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	20.67	21.6	22.62	25.99	+2
Google	IPv4	34.49	34.83	34.37	34.75	-0.1
Google	IPv6	37.22	42.16	37.62	98.35	+0.4
Cloudflare	IPv4	25.41	32.14	23.31	24.66	-2.1
Cloudflare	IPv6	36.5	39.36	24.99	27.41	-11.5

DNS Evidence

A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 28076
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.□□60□IN□A□20.212.19.176
```

DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 50129
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.□□86397□IN□DS□64186 8 2 13131E661822FD18C5DCF784645DB367A44682CB42FB5ECAB78D9B95 09F48C0F
```

MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 21465
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.□□38400□IN□MX□30 ASPMX3.GOOGLEMAIL.COM.
um.edu.my.□□38400□IN□MX□30 ASPMX2.GOOGLEMAIL.COM.
um.edu.my.□□38400□IN□MX□20 ALT2.ASPMX.L.GOOGLE.COM.
um.edu.my.□□38400□IN□MX□10 ASPMX.L.GOOGLE.COM.
um.edu.my.□□38400□IN□MX□20 ALT1.ASPMX.L.GOOGLE.COM.
```

NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 18544
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 5

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.□□86400□IN□NS□ns7.um.edu.my.
um.edu.my.□□86400□IN□NS□ns6.um.edu.my.
um.edu.my.□□86400□IN□NS□ns2.um.edu.my.
um.edu.my.□□86400□IN□NS□ns1.um.edu.my.
```

TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 29074
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.□□3600□IN□TXT□"v=spf1 mx a:smtp1.um.edu.my a:smtp10.um.edu.my include:_spf.google.com ~all"
um.edu.my.□□3600□IN□TXT□"workplace-domain-verification=3unoXNdw3zdwijFhz2c2to1jrbaRJw"
um.edu.my.□□3600□IN□TXT□"MS=ms24629987"
um.edu.my.□□3600□IN□TXT□"google-site-verification=O1CnYgh0YeyxctIl4_mpq31IiElXyUIoCAIQ8TFg_qA"
um.edu.my.□□3600□IN□TXT□"google-site-verification=G67JdMhJO_M1mzWloei8A7sEl7SFbNIoLe0eo62Deuw"
```

AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 43743
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
um.edu.my.  3598 IN SOA ns1.um.edu.my. faudzy.um.edu.my. 2026080602 10800 3600 604800 86400
```

RRSIG

```
ns1.um.edu.my. faudzy.um.edu.my. 2026080602 10800 3600 604800 86400
SOA 8 3 38400 20260908122649 20260809112649 53883 um.edu.my. RZfGjMP4K775FCsMAhvmeFXieqF2LjPmmLAi8uwMqbzAn+qhwhzv4Wsm
BqLG1K6ZgKxmk0HfTOyIvZ20hNrnYcKj3nn63E4LF787CKbqHn8KYD+o 1n4rQdjIAPoQLJ40mXg7EfmFB/aMCLc+OdqVUqVc4TnUDHqssl3eAem8 FOs=
```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 13439
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
um.edu.my.  38397 IN DNSKEY 257 3 8 AwEAAdDK3hHZTNDnRGt5Ay7XtMd6rV6F8a5SlPEa6kYm/5kvnPmAy9HK uq41rCw8//yoiCeJCSkowSbOgai0hpp1x0gkZkJlmGrs6NQeGgS9lpD8
esxv3RR7HZ0cwm++2IHIi0feoCwT4v3eM6ZEpLkIbapIlYJ6vJBPt/yn +HKszfR2lYOdB1iGtWJtxVJAES/M07LOpw7m32XUzjvJ4rqCXRqkyTIS
t0e5NqWBZflPQl6Hunz03mwXmMUMmJPQ1yOu85k/7wgU8ARDXGlydN/K dLHKAmIm6eaXTCOmMFMyju9ijEAOwPDAHb5S9SgLUs9o49xGqc9mH4jE hYuCb0nNWtM=
um.edu.my.  38397 IN DNSKEY 256 3 8 AwEAAazIvZ1qTWgIaiqRXicS8LJzIre+hAEWPKRjzjYZSQaSqsx8DOjK JnVl8zZgXGXKDorePkxHn8jizI7bmfRgDAnGQ7tMoRfo+AO7kYK6zyE0
c5VbWnQvzqr9wqWTvMJb52I1hraaROEQKOl8NiCt1onMriqZXH4lEGnI Koj8VlPv
```

DNSSEC_VALIDATION

```
; fully validated
um.edu.my.  38397 IN SOA ns1.um.edu.my. faudzy.um.edu.my. 2026080602 10800 3600 604800 86400
um.edu.my.  38397 IN RRSIG SOA 8 3 38400 20260908122649 20260809112649 53883 um.edu.my. RZfGjMP4K775FCsMAhvmeFXieqF2LjPmmLAi8uwMqbzAn+qhwhzv4Wsm
BqLG1K6ZgKxmk0HfTOyIvZ20hNrnYcKj3nn63E4LF787CKbqHn8KYD+o 1n4rQdjIAPoQLJ40mXg7EfmFB/aMCLc+OdqVUqVc4TnUDHqssl3eAem8 FOs=
```

TLS Handshake Evidence

IPV4 Connection

IP Used	20.212.19.176
IP Version	4

```
depth=2 C = US, O = DigiCert Inc, OU = www.digicert.com, CN = DigiCert Global Root G2
verify return:1
depth=1 C = US, O = DigiCert Inc, OU = www.digicert.com, CN = Thawte TLS RSA CA G1
verify return:1
depth=0 C = MY, ST = Wilayah Persekutuan Kuala Lumpur, L = Kuala Lumpur, O = Universiti Malaya, CN = *.um.edu.my
verify return:1
CONNECTED(00000008)
---
Certificate chain
 0 s:C = MY, ST = Wilayah Persekutuan Kuala Lumpur, L = Kuala Lumpur, O = Universiti Malaya, CN = *.um.edu.my
   i:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = Thawte TLS RSA CA G1
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Jan 28 00:00:00 2026 GMT; NotAfter: Feb 25 23:59:59 2027 GMT
-----BEGIN CERTIFICATE-----
MIIGgDCCBWigAwIBAgIQAlt3FYRyHrC75ONKr/MeUjANBgkqhkiG9w0BAQsFADBe
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYDVQQLExB3
d3cuZGlnaWNlcnQuY29tMR0wGwYDVQQDExRUaGF3dGUgVExTIFJTQSBDQSBHMTAe
Fw0yNjAxMjgwMDAwMDBaFw0yNzAyMjUyMzU5NTlaMIGBMQswCQYDVQQGEwJNWTEp
MCcGA1UECBMgV2lsYXlhaCBQZXJzZWt1dHVhbiBLdWFsYSBMdW1wdXIxFTATBgNV
BAcTDEt1YWxhIEx1bXB1cjEaMBgGA1UEChMRVW5pdmVyc2l0aSBNYWxheWExFDAS
BgNVBAMMCyoudW0uZWR1Lm15MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKC
AQEAxgRfHDrLNda2tYkVBFrm7TfNyDNugzQ8nIt7vJVrKYrr62Rh1ElUagpwHJ1u
GJq5LZdlx2AQ0h3nK91HHEUiCNzPaxby9VygC6ru0d64Nt6xo0eQMM0KXBSxjZ7I
MrzXDy15n8HtDajql8Yr/mPdpAqeHaE4gUQOlv5AQ4bVM/TH2gdtHdZdne8+j0gr
xiIbf7Y13vxpupMZuWlr7jjFHnmYAUiufP6+3eweNddTqJ4j7fe1yNpXrv4Tp1g8
5ZjG251AR6m6uqKZPcd/8KH162wb4IjqTd/Q0tsMB5Lr/TpcaMJGalIEKieMDD/w
bg/7vSQ0zybvfpVDC+NPnpuSkwIDAQABo4IDFDCCAxAwHwYDVR0jBBgwFoAUpYz+
MszrDyzUGcYIuAAkiF3DxbcwHQYDVR0OBBYEFK7CdK77rGY6oFgHjU3nk9k4/LV4
MCEGA1UdEQQaMBiCCyoudW0uZWR1Lm15ggl1bS5lZHUubXkwPgYDVR0gBDcwNTAz
BgZngQwBAgIwKTAnBggrBgEFBQcCARYbaHR0cDovL3d3dy5kaWdpY2VydC5jb20v
Q1BTMA4GA1UdDwEB/wQEAwIFoDAdBgNVHSUEFjAUBggrBgEFBQcDAQYIKwYBBQUH
AwIwOwYDVR0fBDQwMjAwoC6gLIYqaHR0cDovL2NkcC50aGF3dGUuY29tL1RoYXd0
ZVRMU1JTQUNBRzEuY3JsMHAGCCsGAQUFBwEBBGQwYjAkBggrBgEFBQcwAYYYaHR0
cDovL3N0YXR1cy50aGF3dGUuY29tMDoGCCsGAQUFBzAChi5odHRwOi8vY2FjZXJ0
cy50aGF3dGUuY29tL1RoYXd0ZVRMU1JTQUNBRzEuY3J0MAwGA1UdEwEB/wQCMAAw
ggF9BgorBgEEAdZ5AgQCBIIBbQSCAWkBZwB1AExj3JjlnB2riPYeij3ero+rRKM3
e1+blMP7oZz8wb4mAAABnAPrWd0AAAQDAEYwRAIga3iMzCs5hDLAegD1BH2Wt+Aq
qmw64985z848giNFbq0CICSgdnjHs6tVerJn8P0dRbRUQ0HSilWzO64nqatjnt2G
AHYAHJ9oLOn68EVpUPgbloqH3dsyENhM5siy44JSSsTPWZ8AAAGcA+tZtQAABAMA
RzBFAiEAxC0ZFYP7r51XTGggRvTwLgY0NNX24b/S9cj2dOwDTrQCIDf5Bbdn/1ji
g6MBTWt39a9S4ecQ4u9IMpGy/B763EfyAHYAYEyar3p/d18B1Ab8kg3ImesLHH34
yVIb+voXdzuXi8kAAAGcA+tatwAABAMARzBFAiEAujDiENoivU/IK9DaTsrHo17u
CQicrVIDEm3RbAtPemkCIH3lWr1oMKjLJhyXiSA5myJ1r2Dka2ozFUo+3rHNhapX
MA0GCSqGSIb3DQEBCwUAA4IBAQAF4ckd1toQ0T+4u3uXr2/YjzpqeJAoNR2pW/xG
hBj0FeSXiRdHfzXtKpOwjWPIetgqBe33HwMkDFCCypS4U49HGe7W7HvMLCc4B42j
l2cdPbmgVAYCIcRoLZ6xByZxfY/SKU+CA3c//zkNKmV4D1j7vUcTPAuxYrD8XNm9
6Ey5HOYlZjcU6gtIYcVMZby/WL0xqdpsRndC8KDe4s/iHoSszdOI04Q2JmkA5J0c
+ZTtqRzRQgJOGyV2HScj32ZXi7EEA/Tpza7V9ggNrS9Q8HrnXvEZi6CWAH+r5N8U
jCd7GMOTYgbwjmt+xdI+XiqF5cYqtkpU25fGV5tQd00xQqyB
-----END CERTIFICATE-----
 1 s:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = Thawte TLS RSA CA G1
   i:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = DigiCert Global Root G2
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Nov  2 12:24:25 2017 GMT; NotAfter: Nov  2 12:24:25 2027 GMT
-----BEGIN CERTIFICATE-----
MIIEizCCA3OgAwIBAgIQCQ7oxd5b+mLSri/3CXxIVzANBgkqhkiG9w0BAQsFADBh
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYDVQQLExB3
d3cuZGlnaWNlcnQuY29tMSAwHgYDVQQDExdEaWdpQ2VydCBHbG9iYWwgUm9vdCBH
MjAeFw0xNzExMDIxMjI0MjVaFw0yNzExMDIxMjI0MjVaMF4xCzAJBgNVBAYTAlVT
MRUwEwYDVQQKEwxEaWdpQ2VydCBJbmMxGTAXBgNVBAsTEHd3dy5kaWdpY2VydC5j
b20xHTAbBgNVBAMTFFRoYXd0ZSBUTFMgUlNBIENBIEcxMIIBIjANBgkqhkiG9w0B
AQEFAAOCAQ8AMIIBCgKCAQEAxjngmPhVetC0b/ozbYJdzOBUA1sMog47030cAP+P
23ANUN8grXECL8NhDEF4F1R9tL0wY0mczHaR0a7lYanlxtwWo1s2uGnnyDs6mOCs
66ew2w3YETr6Tb14xgjpu1gGFtAeewaikO9Fud8hxGJTSwn8xeNkfKVWpD2L4vFN
36FNgxeilK6aE4ykgGAzNlokTp6hNOLAYpDySdLAPKzuJSQ7JCEZ6O+SDKywIdXL
oMTnpxuBKGSG88NWTo3CHCOGmQECia2yqdPDjgLqnEiYNjwQL8uMqj8rOvlMgviB
cHA7xty+7/uYLN6ZS7Vq1/F/lVhVOf5ej6jZdmB85szFbQIDAQABo4IBQDCCATww
HQYDVR0OBBYEFKWM/jLM6w8s1BnGCLgAJIhdw8W3MB8GA1UdIwQYMBaAFE4iVCAY
lebjbuYP+vq5Eu0GF485MA4GA1UdDwEB/wQEAwIBhjAdBgNVHSUEFjAUBggrBgEF
BQcDAQYIKwYBBQUHAwIwEgYDVR0TAQH/BAgwBgEB/wIBADA0BggrBgEFBQcBAQQo
MCYwJAYIKwYBBQUHMAGGGGh0dHA6Ly9vY3NwLmRpZ2ljZXJ0LmNvbTBCBgNVHR8E
OzA5MDegNaAzhjFodHRwOi8vY3JsMy5kaWdpY2VydC5jb20vRGlnaUNlcnRHbG9i
YWxSb290RzIuY3JsMD0GA1UdIAQ2MDQwMgYEVR0gADAqMCgGCCsGAQUFBwIBFhxo
```

```
dHRwczovL3d3dy5kaWdpY2VydC5jb20vQ1BTMA0GCSqGSIb3DQEBCwUAA4IBAQC6
km0KA4sTb2VYpEBm/uL2HL/pZX9B7L/hbJ4NcoBe7V56oCnt7aeIo8sMjCRWTCWZ
D1dY0+2KZOC1dKj8d1VXXAtnjytDDuPPf6/iow0mYQTO/GAg/MLyL6CDm3FzDB8V
tsH/aeMgP6pgD1XQqz+haDnfnJTKBuxhcpnx3Adbleue/QnPf1hHYa8L+Rv8Pi5U
h4V9FwHOfphdMXOxi14OqmsiTbc5cOs9/uukH+YVsuFdWTna6IVw1qh+tEtyH16R
vmi7pkqyZYULOPMIE7avrljVVBZuikwARtY8tCVV6Pp9l3VeagBqb2ffgqNJt3C0
TYNYQI+BXGlR1cABlold
-----END CERTIFICATE-----
 2 s:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = DigiCert Global Root G2
   i:C = US, O = DigiCert Inc, OU = www.digicert.com, CN = DigiCert Global Root G2
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Aug  1 12:00:00 2013 GMT; NotAfter: Jan 15 12:00:00 2038 GMT
-----BEGIN CERTIFICATE-----
MIIDjjCCAnagAwIBAgIQAzrx5qcRqaC7KGSxHQn65TANBgkqhkiG9w0BAQsFADBh
MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYDVQQLExB3
d3cuZGlnaWNlcnQuY29tMSAwHgYDVQQDExdEaWdpQ2VydCBHbG9iYWwgUm9vdCBH
MjAeFw0xMzA4MDExMjAwMDBaFw0zODAxMTUxMjAwMDBaMGExCzAJBgNVBAYTAlVT
MRUwEwYDVQQKEwxEaWdpQ2VydCBJbmMxGTAXBgNVBAsTEHd3dy5kaWdpY2VydC5j
b20xIDAeBgNVBAMTF0RpZ2lDZXJ0IEdsb2JhbCBSb290IEcyMIIBIjANBgkqhkiG
9w0BAQEFAAOCAQ8AMIIBCgKCAQEAuzfNNNx7a8myaJCtSnX/RrohCgiN9RlUyfuI
2/Ou8jqJkTx65qsGGmvPrC3oXgkkRLpimn7Wo6h+4FR1IAWsULecYxpsMNzaHxmx
1x7e/dfgy5SDN67sH0NO3Xss0r0upS/kqbitOtSZpLYl6ZtrAGCSYP9PIUkY92eQ
q2EGnI/yuum06ZIya7XzV+hdG82MHauVBJVJ8zUtluNJbd134/tJS7SsVQepj5Wz
tCO7TG1F8PapspUwtP1MVYwnSlcUfIKdzXOS0xZKBgyMUNGPHgm+F6HmIcr9g+UQ
vIOlCsRnKPZzFBQ9RnbDhxSJITRNrw9FDKZJobq7nMWxM4MphQIDAQABo0IwQDAP
BgNVHRMBAf8EBTADAQH/MA4GA1UdDwEB/wQEAwIBhjAdBgNVHQ4EFgQUTiJUIBiV
5uNu5g/6+rkS7QYXjzkwDQYJKoZIhvcNAQELBQADggEBAGBnKJRvDkhj6zHd6mcY
```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	20.212.19.176
Connect Time	16.59 ms
TTFB	95.39 ms
Total Time	95.49 ms

Response Headers:


```
{
    "0": "HTTP/1.1 301 Moved Permanently",
    "1": "Server: nginx/1.20.1",
    "2": "Date: Sun, 09 Aug 2026 15:16:38 GMT",
    "3": "Content-Type: text/html",
    "4": "Content-Length: 169",
    "5": "Connection: keep-alive",
    "6": "Location: https://um.edu.my",
    "8": "HTTP/1.1 200 OK",
    "9": "Server: nginx/1.20.1",
    "10": "Date: Sun, 09 Aug 2026 15:16:38 GMT",
    "11": "Content-Type: text/html; charset=UTF-8",
    "12": "Content-Length: 90716",
    "13": "Connection: keep-alive",
    "14": "Last-Modified: Thu, 06 Aug 2026 02:23:30 GMT",
    "15": "ETag: \"1625c-6585792ee3f93\"",
    "16": "Accept-Ranges: bytes",
    "17": "Cache-Control: max-age=2592000",
    "18": "Expires: Tue, 08 Sep 2026 15:16:38 GMT",
    "19": "Strict-Transport-Security: max-age=63072000; includeSubdomains;",
    "20": "Public-Key-Pins: pin-sha256=\"klO23nT2ehFDXCfx3eHTDRESMz3asj1muO+4aIdjiuY=\"; pin-sha256=\"633lt352PKRXbOwf4xSEa1M517scpD3l5f79xMD9r9Q=\"; max-
age=2592000; includeSubDomains",
    "21": "X-Frame-Options: SAMEORIGIN"
}
```


IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	20.212.19.176
Connect Time	7.12 ms
TTFB	93.76 ms
Total Time	93.81 ms

Response Headers:


```
[
    "HTTP/1.1 200 OK",
    "Server: nginx/1.20.1",
    "Date: Sun, 09 Aug 2026 15:16:38 GMT",
    "Content-Type: text/html; charset=UTF-8",
    "Content-Length: 90716",
    "Connection: keep-alive",
    "Last-Modified: Thu, 06 Aug 2026 02:23:30 GMT",
    "ETag: \"1625c-6585792ee3f93\"",
    "Accept-Ranges: bytes",
    "Cache-Control: max-age=2592000",
    "Expires: Tue, 08 Sep 2026 15:16:38 GMT",
    "Strict-Transport-Security: max-age=63072000; includeSubdomains;",
    "Public-Key-Pins: pin-sha256=\"klO23nT2ehFDXCfx3eHTDRESMz3asj1muO+4aIdjiuY=\"; pin-sha256=\"633lt352PKRXbOwf4xSEa1M517scpD3l5f79xMD9r9Q=\"; max-age=2592000;
includeSubDomains",
    "X-Frame-Options: SAMEORIGIN"
]
```


Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.007495 0.015194
TCP Connect IPv4 → port 443	200 0.007677 0.099020

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
fd7a:115c:a1e0::1136:5807 dev tailscale0 proto kernel metric 256 pref medium
fe80::/64 dev eth0 proto kernel metric 256 pref medium
fe80::/64 dev tailscale0 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
10.6.101.0/24 dev wg0 scope link
10.6.102.0/24 dev wg0 scope link
76.13.221.0/24 dev eth0 proto kernel scope link src 76.13.221.142
172.29.0.0/24 dev wg0 scope link
```