IPv6 Readiness Report

mmu.edu.my — mmu.edu.my

Scan to verify

Category: Education • Generated: 02 Nov 2026, 02:48 MYT • Last Checked: 08 Aug 2026, 18:31 MYT • Verification ID: bcfc2ed1-fa24-41e6-82fc-f3a1ec25f047
Report generated from National IPv6 Readiness Monitor — https://ipv6.my6.my
Audit trail: https://ipv6.my6.my/audit/bcfc2ed1-fa24-41e6-82fc-f3a1ec25f047

⚠

Partially Compliant

MGv6C-1.0

73%

Partial Support

IPV6-ONLY READINESS

Website: ✓ **Ready**

DNS: ✓ **Ready**

Email: ✗ **Not Ready**

IPV6 ADDRESSES

2a02:e980:b5::dc
2a02:e980:b3::dc

IPV4 ADDRESSES

45.60.13.220
45.60.15.220

Network Information (WHOIS / RDAP)

	IPv6 Network	IPv4 Network
Organization	IMPERVA-MNT	Incapsula Inc
Country	US	US
ASN	AS19551	AS19551
ASN Name	INCAPSULA - Incapsula Inc, US	INCAPSULA - Incapsula Inc, US
Network (CIDR)	2a02:e980::/32	45.60.0.0/16

Web Services (35%) — 7 / 8

#	CHECK	RESULT	DETAIL
1	**AAAA Record**	PASS	2a02:e980:b5::dc, 2a02:e980:b3::dc
2	**Globally Routable IPv6**	PASS	All addresses are globally routable.
3	**HTTP over IPv6**	PASS	HTTP (port 80) responds over IPv6 — 21ms TTFB.
4	**HTTPS over IPv6**	PASS	HTTPS (port 443) responds over IPv6 — 74ms TTFB.
5	**IPv6-Only Reachability**	PASS	Site is fully reachable via IPv6-only.
6	**TLS Certificate Valid (IPv6)**	PASS	Certificate valid — issued by C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2, expires Oct 1 20:47:34 2026 GMT
7	**Dual-Stack (IPv4 + IPv6)**	PASS	Domain has both A and AAAA records.
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**	PASS	DNS queries answered 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.

#	CHECK	RESULT	DETAIL
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**	FAIL	MX server has no IPv6 address.
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	45.60.13.220, 45.60.15.220
2	**HTTP over IPv4**	PASS	HTTP (port 80) responds over IPv4 — 750ms TTFB.
3	**HTTPS over IPv4**	PASS	HTTPS (port 443) responds over IPv4 — 1099ms TTFB.

Audit Trail & Evidence Record

Verification ID	bcfc2ed1-fa24-41e6-82fc-f3a1ec25f047
Domain	mmu.edu.my
Check Mode	Manual
Status	Completed
Started	08 Aug 2026, 18:31:28 MYT
Finished	08 Aug 2026, 18:31:37 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/bcfc2ed1-fa24-41e6-82fc-f3a1ec25f047

Integrity Verification

✓ **INTEGRITY VERIFIED**

Algorithm	hmac-sha256-v1
Root Hash	2d13fd66929f2d161b29fd935385bc97cc53f4a6281ac1020b0ae027e6e9bda2
http_headers	e7fc2d3e93c7435445069bdec58a972512e34c748bc93a6280dab3986d1a7302
dns_responses	d3b14b71df41c1f7166e1729dea283e6bebf74facbec63438a77f8b9c4fc13c4
tls_handshake	197cd009577a2c641769db609ade0f03d3c1a551fb2b3f861236216f16c500c8
connectivity_log	f8d556ce521befa0edc239369fad3ff77b78b54e5f20d114f799a0dc72d2a0b9
dns_resolution_times	c73e683a7441a0314d6c348f6402f543371e3eea720607e9f4ccc08866fe45a6

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	21.84	29.14	11.69	24.33	-10.2
Google	IPv4	64.72	90.12	89.99	160.17	+25.3
Google	IPv6	33.82	90.06	91.61	100.64	+57.8
Cloudflare	IPv4	23.99	24.8	22.13	25.79	-1.9
Cloudflare	IPv6	22.91	47.61	40.05	41.03	+17.1

DNS Evidence

A

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 54328
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
mmu.edu.my.□□3600□IN□A□45.60.13.220
mmu.edu.my.□□3600□IN□A□45.60.15.220
```

DS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 3851
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
edu.my.□□□3596□IN□SOA□e.nic.my. hostmaster.nic.my. 2026062863 1800 900 604800 3600
```

MX

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 34409
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
mmu.edu.my.□□3600□IN□MX□10 ext-mail-2.mmu.edu.my.
mmu.edu.my.□□3600□IN□MX□20 ext-mail-3.mmu.edu.my.
mmu.edu.my.□□3600□IN□MX□20 ext-mail-4.mmu.edu.my.
mmu.edu.my.□□3600□IN□MX□10 ext-mail-1.mmu.edu.my.
```

NS

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 40513
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
mmu.edu.my.□□3600□IN□NS□ns1.a0.impervasecuredns.net.
mmu.edu.my.□□3600□IN□NS□ns1.a2.impervasecuredns.net.
mmu.edu.my.□□3600□IN□NS□ns1.a1.impervasecuredns.net.
```

TXT

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 26006
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
mmu.edu.my.□□3600□IN□TXT□"globalsign-domain-verification=A4747BBDADA8198FD217FDCCF0F90C29"
mmu.edu.my.□□3600□IN□TXT□"_globalsign-domain-verification=0cHR2oEfzwiTfjQtJ3jn4WrkNEnDJhyXYk_iDMRscd"
mmu.edu.my.□□3600□IN□TXT□"globalsign-domain-verification=4EF9CC38CBA8724615D4907A5F316AC2"
mmu.edu.my.□□3600□IN□TXT□"v=spf1 include:spf.protection.outlook.com include:one.zoho.com ip4:203.106.60.32/28 ip4:203.106.61.32/28 ip4:203.106.62.32/28
ip4:203.106.63.32/28 -all"
mmu.edu.my.□□3600□IN□TXT□"rovag_verification_token=68B2530FEA434E38AB72A93A484425BD"
```

AAAA

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 64204
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
mmu.edu.my.□□3600□IN□AAAA□2a02:e980:b3::dc
```

```
mmu.edu.my.□□3600□IN□AAAA□2a02:e980:b5::dc
```

RRSIG

```
ns1.a0.impervasecuredns.net. hostmaster.mmu.edu.my. 2026072201 14400 3600 1209600 86400
```

DNSKEY

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 23171
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
mmu.edu.my.□□3596□IN□SOA□ns1.a0.impervasecuredns.net. hostmaster.mmu.edu.my. 2026072201 14400 3600 1209600 86400
```

DNSSEC_VALIDATION

```
; unsigned answer
mmu.edu.my.□□3596□IN□SOA□ns1.a0.impervasecuredns.net. hostmaster.mmu.edu.my. 2026072201 14400 3600 1209600 86400
```

TLS Handshake Evidence

IPV4 Connection

IP Used	45.60.13.220
IP Version	4

```
depth=2 C = BE, O = GlobalSign nv-sa, CN = GlobalSign Root R46
verify return:1
depth=1 C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
verify return:1
depth=0 CN = imperva.com
verify return:1
CONNECTED(00000010)
---
Certificate chain
 0 s:CN = imperva.com
   i:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Jul  3 20:47:34 2026 GMT; NotAfter: Oct  1 20:47:34 2026 GMT
-----BEGIN CERTIFICATE-----
MIIIuzCCBqOgAwIBAgIQAWyNjR/OZZh2hUS2r14atDANBgkqhkiG9w0BAQsFADBZ
MQswCQYDVQQGEwJCRTEZMBcGA1UEChMQR2xvYmFsU2lnbiBudi1zYTEvMC0GA1UE
AxMmR2xvYmFsU2lnbiBBdGxhcyBSNDYgRFYgVExTIENBIDIwMjYgUTIwHhcNMjYw
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4sfZFaN/EeRtXNCauS9Z/11PvaeSUpjxYA9UJJIakNfj1/KczQWVEr0yoMEc0e1B
BOhyysD3NuYpLfA28tiMiwhhND/7+nPwNBuTkIoK/AzVaUtt402O+0EquPV30/Uf
vpj8zlanBx25tfqjRW1XtRi4sW/HgprWUoy/DipQlr9fJ4Oi9nJQbBRtpXzyXvwL
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bmQuY29tLm15ggtnaXRuLmNvbS5teYITKi5hZHN0b3JlLnRtLmNvbS5teYIOKi5t
bXVwcmVzcy5jb22CESoubXlnb3ZuZXQuZ292Lm15gg0qLnRtY2EuY29tLm15ghIq
LmZpYnJlY29tbS5uZXQubXmCCm1tdS5lZHUubXmCD3RtZ2xvYmFsLmNvbS5teYIL
aW1wZXJ2YS5jb22CDCoubW1LmVkdS5teYIKKi51bmlmaS5teYIUKi5zZXJ2aWNl
cy5wMS5jb20ubXmCEyouYXBpZ2F0ZS50bS5jb20ubXmCDioudW5pZmkuY29tLm15
gg0qLmdpdG4uY29tLm15ggxtbXVwcmVzcy5jb22CCSouaHlwcC50doIPbXlnb3Zu
ZXQuZ292Lm15ghEqLnRtZ2xvYmFsLmNvbS5teYIMKi50YWIuY29tLm15gg9maWJl
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ZXB0dy50bS5jb20ubXmCDioudG1vbmUuY29tLm15ggoqLnZhZHMuY29tMA4GA1Ud
DwEB/wQEAwIFoDATBgNVHSUEDDAKBggrBgEFBQcDATAdBgNVHQ4EFgQU88AAzFLA
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AzA0MDIGCCsGAQUFBwIBFiZodHRwczovL3d3dy5nbG9iYWxzaWduLmNvbS9yZXBv
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BQcwAYY1aHR0cDovL29jc3AuZ2xvYmFsc2lnbi5jb20vY2EvZ3NhdGxhc3I0NmR2
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LmNybDCCAQMGCisGAQQB1nkCBAIEgfQEgfEA7wB2AJROQ4f67MHvgfMZJCaoGGUB
x9NfOAIBP3JnfVU3LhnYAAABnym8rPcAAAQDAEcwRQIhAI8OtAhUEFz6OmHk3rUy
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yZ+3WgB1ANdtfRDRp/V3wsfpX9cAv/mCyTNaZeHQswFzF8DIxWl3AAABnym8rQ4A
AAQDAEYwRAIgTjvLg56iLpQCAu1Qo0NvFTHypwKo8TnC5z8YbpOxKucCIFbzVEOp
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69EsdngaC1wio6HU+ojKMnYWFWOSZExUfSBptOGxmhSNnZvbH9cV48WXtf8axOsO
M6nwtjNMsFXIrrKklfLPqG+pmzRBHshUn/lGqX/AQ6qe3u8OHCbGqx7FFedCpwm6
kJ20bat+8OeQiS3HTPQw6tGhibz0TooxtyZ6hiIwAJB+1sv+s3CjM1KloceIPHCh
ZIabYdX2q5EvSDIUroUngjTN9qITOHMjfcR9I6Eb58qIgBRFCu67GuAUok6A5SuH
a087RdJVnB8f9xEUn8nyb0xgkZegcaFMKAYZYUIFQRjRbt26VOmfFsvo/P++texp
SeYRmvBpDiteSo90EX90MnNuG0Q5Ynkpvjru Ys8np61hh9/T3ZHPBIjqRWRc5SGv
p+Df0CMTFw4ys+StVc6o412AtMHjJf23fa+RwhspLocvlvLymVEKTps0NqC9nzh1
MnEIGSpGJCQYDVMRAf+RhMwRdcQYKr5exn85ablJJEb2qpq1c9036W+XCkuGrD6S
PFOS8L8hvYclU0nxDpXbYh07vtJfNl9gSVxmoibp+5GEX49XJZLFcWIRoVIBE++5
JN5ymg0cKt2gyoJR//JZWkVq95umdtFcKErKgUJ+mda9ScaTJdJ09StZUsTWUWAv
U+1QkOalGHcmF+PTANxoLsssEFHjkCFlEZsIKVxXVQ==
-----END CERTIFICATE-----
 1 s:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
   i:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Root R46
   a:PKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA384
   v:NotBefore: Jan 21 02:59:58 2026 GMT; NotAfter: Jan 21 00:00:00 2028 GMT
-----BEGIN CERTIFICATE-----
MIIGgTCCBGmgAwIBAgIRAIUVA9p8GXzCwsWrxGtXKxEwDQYJKoZIhvcNAQEMBQAw
RjELMAkGA1UEBhMCQkUxGTAXBgNVBAoTEEdsb2JhbFNpZ24gbnYtc2ExHDAaBgNV
BAMTE0dsb2JhbFNpZ24gUm9vdCBSNDYwHhcNMjYwMTIxMDI1OTU4WhcNMjgwMTIx
MDAwMDAwWjBZMQswCQYDVQQGEwJCRTEZMBcGA1UEChMQR2xvYmFsU2lnbiBudi1z
YTEvMC0GA1UEAxMmR2xvYmFsU2lnbiBBdGxhcyBSNDYgRFYgVExTIENBIDIwMjYg
```

UTIwggIiMA0GCSqGSIb3DQEBAQUAA4ICDwAwggIKAoICAQCgp2+oBJ9nuYrgewFQ
v240b2FhmGK0AK0+0LzWmJf2xNXyVzBDQFdzoM0/GKEA1xXNlCZJFdFk/8XvGPBe
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TpibELyxYpp1nKWr1XbaxCaHZu6bE+/oSmmgWvqU4XgUwaiOpiSd8tAmGYWlSr0O
1VENr0ILQnwQie5Gfwm9jFHuXQ8+dNMR6qzi0VYP0QARliCiBtl0HmsGi6TTZ43E
4ZMUz23u3IPnSs/NXDH1jYgfx4hRsM6upM06t83V5lmcBcZk2ZSAGk+/MvSFB5P3
nKqH2/8WBwwU0Jq80owYWwdZJGOlliXVvafHEDId2jpWiWKzJ4EuBilm8wkoVzSZ
xjHzTRzaJOwnQpS1pfA+LLVZ/t8vT7FKFqu4RJNf7hnjiSTsHIvhnUSHFjLSBdAv
wB5qgfWZugii+zTj8B/xOtvedsiJvCtFJobFJwSsaBIlle2n2KrA2C0KXVHkg2aq
jBpijMJ7Ju00f5bxjCuO6epllwIDAQABo4IBVTCCAVEwDgYDVR0PAQH/BAQDAgGG
MBMGA1UdJQQMMAoGCCsGAQUFBwMBMBIGA1UdEwEB/wQIMAYBAf8CAQAwHQYDVR0O
BBYEFHkfQ+deh84+16zXRFVgF0rv5QhFMB8GA1UdIwQYMBaAFANcq3OBh6jMsKbV
lOI2lkn/BZksMHsGCCsGAQUFBwEBBG8wbTAuBggrBgEFBQcwAYYiaHR0cDovL29j
c3AuZ2xvYmFsc2lnbi5jb20vcm9vdHI0NjA7BggrBgEFBQcwAoYvaHR0cDovL3Nl
Y3VyZS5nbG9iYWxzaWduLmNvbS9jYWNlcnQvcm9vdHI0Ni5jcnQwNgYDVR0fBC8w
LTAroCmgJ4YlaHR0cDovL2NybC5nbG9iYWxzaWduLmNvbS9yb290cjQ2LmNybDAh
BgNVHSAEGjAYMAgGBmeBDAECATAMBgorBgEEAaAyCgEDMA0GCSqGSIb3DQEBDAUA
A4ICAQBkNmxsz7DAkdPyAOcuhir1CooxdI6bT0Q5fOfHxAl3t6LOsxCmMOI0gwOZ
8B3IUM1yRkzgkpqzYCmYW7BuNM4q5EF1rUnuI4JrcjgbA6NtaMCo4ikpdwYtHMDt
ogJjnNjqPsVaIxzk6rgRRw6n3Am6WtDKvA/w3dFa2PI7QgXDYynVc8wSqhx7VQUe
OUwbKaIkEH3DsJS/swcLiUs24SdzswKhXB47woAk9eqg7emr+n8m3U7shp2oA0Dz
6nSBfRr7M8+l+Ni+rl9Nq4l0GKFPFS4prNGpzn04eOACRHIqR184m4AISIf5Gvb5
IVsLokuf+n4VZtKkS5/zTqCzjIocv3Kt+gKK7SofZXh/MdiT+LAJFmVQfs2zLD7X
bO1s00eduII1UOUKLfQUWMU9x4hNJPTTRm8Ln5xrdCqg+ftgAWYxPp//xTQQzJg2
nzY7YPDVhA4x5pjdOZKmS5bBQl/f+Ypg2RjqGiq6bNOo4XmMoRmixiNonoM0km/U
ngz5USDc+3btW9z/OIiSYRUb5WBvsd6XtykVlCmVZDhyijVMFK8WCzzYGG4ubu2B

IPV6 Connection

IP Used	2a02:e980:b5::dc
IP Version	6

depth=2 C = BE, O = GlobalSign nv-sa, CN = GlobalSign Root R46
verify return:1
depth=1 C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
verify return:1
depth=0 CN = imperva.com
verify return:1
CONNECTED(00000010)

Certificate chain
 0 s:CN = imperva.com
   i:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
   a:PKEY: rsaEncryption, 2048 (bit); sigalg: RSA-SHA256
   v:NotBefore: Jul 3 20:47:34 2026 GMT; NotAfter: Oct 1 20:47:34 2026 GMT
-----BEGIN CERTIFICATE-----
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```
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U+1QkOalGHcmF+PTANxoLsssEFHjkCFlEZsIKVxXVQ==
-----END CERTIFICATE-----
 1 s:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Atlas R46 DV TLS CA 2026 Q2
   i:C = BE, O = GlobalSign nv-sa, CN = GlobalSign Root R46
   a:PKEY: rsaEncryption, 4096 (bit); sigalg: RSA-SHA384
   v:NotBefore: Jan 21 02:59:58 2026 GMT; NotAfter: Jan 21 00:00:00 2028 GMT
-----BEGIN CERTIFICATE-----
MIIGgTCCBGmgAwIBAgIRAIUVA9p8GXzCwsWrxGtXKxEwDQYJKoZIhvcNAQEMBQAw
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```

HTTP Response Evidence

IPv4 HTTP (port 80)

HTTP Status	400
Connected IP	45.60.13.220
Connect Time	158.51 ms
TTFB	493.27 ms
Total Time	493.32 ms

Response Headers:


```
[
    "HTTP/1.1 400 Bad Request",
    "Content-Type: text/html",
    "Cache-Control: no-cache, no-store",
    "Connection: close",
    "Content-Length: 868",
    "X-Iinfo: 39-75471847-0 NNNY RT(1786185095162 0) q(0 0 0 -1) r(1 -1) b3 U6",
    "Set-Cookie: visid_incap_2990630=l6D8Zj29QzKT7I6fml+P34YFd2oAAAAAQUIPAAAAAAB/RXf8+mg4V/HoQi3v74n4; expires=Sat, 07 Aug 2027 22:37:10 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my",
    "Set-Cookie: incap_ses_657_2990630=xR5WazSfEjKGEU+BIyIeCYYFd2oAAAAA0fNOvhmpVLoP3MOShaftTQ==; path=/; Domain=.mmu.edu.my"
]
```


IPv6 HTTP (port 80)

HTTP Status	400
Connected IP	2a02:e980:b5::dc
Connect Time	1.54 ms
TTFB	10.41 ms
Total Time	10.45 ms

Response Headers:


```
[
    "HTTP/1.1 400 Bad Request",
    "Content-Type: text/html",
    "Cache-Control: no-cache, no-store",
    "Connection: close",
    "Content-Length: 877",
    "X-Iinfo: 12-48852495-0 NNNY RT(1786185094866 0) q(0 0 0 -1) r(0 -1) b3 U6",
    "Set-Cookie: visid_incap_2990630=byFkFf+RR1+TIA2Qghcp0YYFd2oAAAAAQUIPAAAAAADZay9qhw0PJKHSpe6m0KLg; expires=Sat, 07 Aug 2027 16:23:39 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my",
    "Set-Cookie: incap_ses_1132_2990630=zYg5e/3DTxLVSimfo6y1D4YFd2oAAAAAl7b7CbfxOMpCdV3MjAdnBw==; path=/; Domain=.mmu.edu.my"
]
```


IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	45.60.15.220
Connect Time	162.23 ms
TTFB	691.08 ms
Total Time	691.16 ms

Response Headers:


```
{
    "0": "HTTP/2 301",
    "1": "date: Sat, 08 Aug 2026 10:31:35 GMT",
    "2": "server: Apache",
    "3": "x-frame-options: SAMEORIGIN",
    "4": "content-security-policy: frame-ancestors 'self';",
    "5": "location: https://www.mmu.edu.my/",
    "6": "content-type: text/html; charset=iso-8859-1",
    "7": "set-cookie: visid_incap_2990630=/BzQqHGgS5OG6h4c+wpB8YcFd2oAAAAAQUIPAAAAAAB5R9U2CeN4nvEluuz6T0Lo; expires=Sat, 07 Aug 2027 22:17:38 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my; Secure; SameSite=None",
    "8": "set-cookie: nlbi_2990630=T5v6Kdseinx2wJu7FJgT7gAAAABiIe29ak3SGqpGTl1X4lkD; HttpOnly; path=/; Domain=.mmu.edu.my; Secure; SameSite=None",
    "9": "set-cookie: incap_ses_657_2990630=arSODEyGyAz0FU+BIyIeCYcFd2oAAAAAezjL2kXpYFH5lU/OIcDl4Q==; path=/; Domain=.mmu.edu.my; Secure; SameSite=None",
    "10": "strict-transport-security: max-age=31536000",
    "11": "x-cdn: Imperva",
```

```
    "12": "x-iinfo: 53-289832505-289832552 NNNY CT(175 180 0) RT(1786185095656 161) q(0 0 0 -1) r(0 2) U6",
    "14": "HTTP/2 200",
    "15": "date: Sat, 08 Aug 2026 10:31:36 GMT",
    "16": "server: Apache",
    "17": "x-frame-options: SAMEORIGIN",
    "18": "content-security-policy: frame-ancestors 'self';",
    "19": "last-modified: Fri, 07 Aug 2026 07:00:34 GMT",
    "20": "accept-ranges: bytes",
    "21": "content-length: 90236",
    "22": "vary: Accept-Encoding",
    "23": "cache-control: max-age=0, no-cache, no-store, must-revalidate",
    "24": "pragma: no-cache",
    "25": "expires: Mon, 29 Oct 1923 20:30:00 GMT",
    "26": "content-type: text/html; charset=UTF-8",
    "27": "set-cookie: visid_incap_2990630=1Vg/0cVcRTmWrxAktOtesoIFd2oAAAAAQUIPAAAAAAAuU6WqFf7/joYmuaxTjv1k; expires=Sat, 07 Aug 2027 16:04:40 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my; Secure; SameSite=None",
    "28": "set-cookie: incap_ses_1671_2990630=NnsEPSoAjBycxDmUSJYwF4cFd2oAAAAAk5rJRIZUumz8Dv8/N+CbYg==; path=/; Domain=.mmu.edu.my; Secure; SameSite=None",
    "29": "strict-transport-security: max-age=31536000",
    "30": "x-cdn: Imperva",
    "31": "x-iinfo: 14-102967238-102967240 NNNY CT(6 9 0) RT(1786185096088 6) q(0 0 0 0) r(0 0) U6"
}
```


IPv6 HTTPS (port 443)

HTTP Status	200
Connected IP	2a02:e980:b5::dc
Connect Time	4.79 ms
TTFB	50.54 ms
Total Time	50.63 ms

Response Headers:


```
{
    "0": "HTTP/2 301",
    "1": "date: Sat, 08 Aug 2026 10:31:34 GMT",
    "2": "server: Apache",
    "3": "x-frame-options: SAMEORIGIN",
    "4": "content-security-policy: frame-ancestors 'self';",
    "5": "location: https://www.mmu.edu.my/",
    "6": "content-type: text/html; charset=iso-8859-1",
    "7": "set-cookie: visid_incap_2990630=mruG+XP7QPayt6+BEIn124YFd2oAAAAAQUIPAAAAAACofzDS2B8l9ESz1eHnB9xS; expires=Sat, 07 Aug 2027 16:23:49 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my; Secure; SameSite=None",
    "8": "set-cookie: incap_ses_1132_2990630=p+L8DurB+SnYSimfo6y1D4YFd2oAAAAAkbOMeFC4VvIBD9m/MKEAEA==; path=/; Domain=.mmu.edu.my; Secure; SameSite=None",
    "9": "strict-transport-security: max-age=31536000",
    "10": "x-cdn: Imperva",
    "11": "x-iinfo: 7-64719221-64719223 NNNY CT(5 8 0) RT(1786185094876 7) q(0 0 0 -1) r(0 0) U6",
    "13": "HTTP/2 200",
    "14": "date: Sat, 08 Aug 2026 10:31:34 GMT",
    "15": "server: Apache",
    "16": "x-frame-options: SAMEORIGIN",
    "17": "content-security-policy: frame-ancestors 'self';",
    "18": "last-modified: Fri, 07 Aug 2026 07:00:34 GMT",
    "19": "accept-ranges: bytes",
    "20": "content-length: 90236",
    "21": "vary: Accept-Encoding",
    "22": "cache-control: max-age=0, no-cache, no-store, must-revalidate",
    "23": "pragma: no-cache",
    "24": "expires: Mon, 29 Oct 1923 20:30:00 GMT",
    "25": "content-type: text/html; charset=UTF-8",
    "26": "set-cookie: visid_incap_2990630=2SNwCfv9QMKDmOiDvwp8on8Fd2oAAAAAQUIPAAAAAADrRcCsZZzLUNjkhObM8+c7; expires=Sat, 07 Aug 2027 16:23:50 GMT; HttpOnly; path=/;
Domain=.mmu.edu.my; Secure; SameSite=None",
    "27": "set-cookie: incap_ses_1132_2990630=M7hJDJM6VB7nRimfo6y1D4YFd2oAAAAAEap0CCDt5fBtEr8bWQhU2A==; path=/; Domain=.mmu.edu.my; Secure; SameSite=None",
    "28": "strict-transport-security: max-age=31536000",
    "29": "x-cdn: Imperva",
    "30": "x-iinfo: 11-33389851-33389853 NNNY CT(4 9 0) RT(1786185094901 7) q(0 0 0 0) r(0 1) U6"
}
```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	400 0.158560 0.493121
TCP Connect IPv6 → port 80	400 0.001564 0.009742
TCP Connect IPv4 → port 443	301 0.158680 0.685052
TCP Connect IPv6 → port 443	301 0.001606 0.095173

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
```