

# IPv6 Readiness Report

nottingham.edu.my — nottingham.edu.my



Scan to verify

Category: Education • Generated: 04 Jul 2026, 22:12 MYT • Last Checked: 04 Jul 2026, 03:53 MYT • Verification ID: 92f17013-679b-4c10-aaa6-0f18bf2638fa

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

Audit trail: <https://ipv6.my6.my/audit/92f17013-679b-4c10-aaa6-0f18bf2638fa>

<p><b>X</b></p> <p><b>Non-Compliant</b></p> <p>MGv6C-1.0</p>	<p><b>47%</b></p> <p><b>No IPv6 Support</b></p>	<p><b>IPv6-ONLY READINESS</b></p> <p>Website: <b>X Not Ready</b></p> <p>DNS: <b>✓ Ready</b></p> <p>Email: <b>X Not Ready</b></p>
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<p><b>IPv4 ADDRESSES</b></p> <p>54.169.224.24</p>
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## Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	Amazon Technologies Inc.
Country	US
ASN	AS16509
ASN Name	AMAZON-02 - Amazon.com, Inc., US
Network (CIDR)	54.144.0.0/12

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%)				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.	
7	RRSIG Valid	FAIL	No valid RRSIG found.	

#	CHECK	RESULT	DETAIL
8	<b>Signing Algorithm</b>	<b>INFO</b>	No DNSKEY record found.

**Email Services** (25%) 4 / 6

#	CHECK	RESULT	DETAIL
1	<b>MX Record Exists</b>	<b>PASS</b>	MX record found.
2	<b>MX Server Has IPv6</b>	<b>PASS</b>	MX server has AAAA record.
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>PASS</b>	SPF record found.
6	<b>DKIM Selector</b>	<b>INFO</b>	DKIM selector found: selector1_domainkey
7	<b>DMARC Record</b>	<b>PASS</b>	DMARC record found.

**IPv4 Baseline** (15%) 3 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	54.169.224.24
2	<b>HTTP over IPv4</b>	<b>PASS</b>	HTTP (port 80) responds over IPv4 — 63ms TTFB.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 95ms TTFB.

### Audit Trail & Evidence Record

Verification ID	92f17013-679b-4c10-aaa6-0f18bf2638fa
Domain	nottingham.edu.my
Check Mode	Manual
Status	Completed
Started	04 Jul 2026, 03:52:55 MYT
Finished	04 Jul 2026, 03:53:19 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/92f17013-679b-4c10-aaa6-0f18bf2638fa

### Integrity Verification

<p><b>✓ INTEGRITY VERIFIED</b></p>	
Algorithm	hmac-sha256-v1
Root Hash	0c75748ea957ee63bcb026047e270d4fde29127a1b01a675c719fdc88bc0953a
http_headers	106fbab48b6718999a2b503d639da3eb2a3cb424a80cda4d59693f1fca0ac9f9
dns_responses	2426249bb5ed6ed8b49394bcf5436c4ee599b65e15b6083941a44222b0dae443
tls_handshake	53cf8de1ddb6fd03b2759d38d0bc73f362a64ad5a22a8450be9ba9d5b985f85
connectivity_log	006b5a043947963afd384fa1299024f450807fd18c4e07aadbf19ee0d6ea8c48
dns_resolution_times	bc8bf4ec47ce45fcd03b740b497347221b4b267ca4c6d4dfae5954ec7c72f591

### 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	8.3.32
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	23.04	25.98	10.33	21.12	-12.7
Google	IPv4	28.95	37.15	19.99	21.19	-9
Google	IPv6	37.99	54	29.12	42.81	-8.9
Cloudflare	IPv4	22.63	22.75	20.17	20.62	-2.5
Cloudflare	IPv6	26.05	32.77	13.45	23.61	-12.6



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 46213
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
nottingham.edu.my. 3600 IN A 54.169.224.24
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 11613
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
edu.my. 2802 IN SOA e.nic.my. hostmaster.nic.my. 2026052757 1800 900 604800 3600
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 57399
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
nottingham.edu.my. 3600 IN MX 0 nottingham-edu-my.mail.protection.outlook.com.
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 20095
;; flags: qr rd ra; QUERY: 1, ANSWER: 4, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
nottingham.edu.my. 86400 IN NS ns-1194.awsdns-21.org.
nottingham.edu.my. 86400 IN NS ns-1605.awsdns-08.co.uk.
nottingham.edu.my. 86400 IN NS ns-270.awsdns-33.com.
nottingham.edu.my. 86400 IN NS ns-728.awsdns-27.net.
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 44710
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; ANSWER SECTION:
nottingham.edu.my. 300 IN TXT "v=spf1 ip4:203.217.128.25 ip4:203.217.128.2 ip4:128.243.0.0/16 ip4:117.20.42.12 ip4:54.206.1.219 include:_spf.google.com include:tlcloud.com include:spf.protection.outlook.com include:aspmx.pardot.com include:_spf0000000.nottingham.ac.uk -all"
nottingham.edu.my. 300 IN TXT "e47m0d931vrqt3d5v8oh9cjgk2"
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 47564
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
nottingham.edu.my. 878 IN SOA ns-270.awsdns-33.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
```

### RRSIG

```
ns-270.awsdns-33.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
```

---

**DNSKEY**

```
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 55649
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; AUTHORITY SECTION:
nottingham.edu.my. 877 IN SOA ns-270.awsdns-33.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
```

**DNSSEC\_VALIDATION**

```
; unsigned answer
nottingham.edu.my. 877 IN SOA ns-270.awsdns-33.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400
```





```

Q2VydGlmawNhdGUGuQXV0aG9yaXR5IC0gRzIwggE1MA0GCSqGSIb3DQEBAQUAA4IB
DwAwggEKAoIBAQDLKGZL7P1Gcakgg77pbL9KyUhpqXV0bST2yxct+LBxwYR6ayuF
pD51FuXLz0lBcCkLtb6Mn3hqN6UEKwxcDYav9ZJ6t21vwlDGu4p64/xFT0DFE
3ZNWjKRMXpuJyySDm+JXfbfYEh/Jhw300YDXUJuHrtQLEAX7J7oobRfpDtZnuTLV
Bv8KJAV+L8YdcmzUiyMV33a2etmGtNpp99/UsQwxaXJDgLFU7930GgJMMnyDd+
MB5FcSM1/5DYKp2N57CSTTx/KgqT3M0WRmX3YISLdkuRJ3MUkuDq7o8W6o00PnYX
v32JgIBEQ+ct4EMJddo26K3biTr1XRK0IwSDAgMBAAGjggEsMIIbKDPBgNVHRMB
Af8EBTADAQH/MA4GA1UdDwEB/wQEAWIBBjAdBgNVHQ4EFgQUJUWBAFamOD07LSy+
zWrZtj2zZmMwHwYDVR0jBBgwFoAUFawyH6fZMH/EfWiJYqihzqsHwycw0gYIKwYB
BOUHAQEELjAsMCoGCCsGAQUFBzABhh5odHRw018vb2NzcC5zdGFyZmllbGR0ZWNo
LmNvbS8wOwYDVR0fBDQwMjAwO6G6LIYqaHR0cDovL2Nybc5zdGFyZmllbGR0ZWNo
LmNvbS8zZnJvb3QtZzIuY3J3sMEwGA1UdIARFMEMwQ0YEVROgADA5MDCGCCsGAQUF
BwIBF1todHRwczovL2N1cnRzLnN0YXJmaWVsZHRlY2guY29tL3JlCG9zaXRvcnkx
MA0GCSqGSIb3DQEBCwUAA4IBAQBWZcr+8z8KqJOLGMfeQ2kTNCC+Tl94qGuc22pN
QdvBE+zcMQAiXvcAngzngNU0+bE6TkjIEoGIXFs+CFN69xp37hQYcxTUUApS8L0
rjpf5MqtJsxOYUPL/VemN3D0QyuwLM0S6eFfqhBJt2nk4NAfZKQrzR9voPiEJBj0
eT2pkb9UGB0JmVQRDVXFJgt5T1ocbvLj2x5ApAer+rKLuYjdkf5L06Sjeb6JTeHQ
sPTIFwKlhR8Cbds4cLYVdYoKpBaXako7nv6VrcPuuUSvC33l80dvr7+2kDRUBQ
7nImPBKGGc0T0U7EPMp0DdIm8QC3tKai4W56gf0wrHofxl17
-----END CERTIFICATE-----
---
Server certificate
subject=CN = www.nottingham.edu.my
issuer=C = US, ST = Arizona, L = Scottsdale, O = "Starfield Technologies, Inc.", OU = http://certs.starfieldtech.com/repository/, CN = Starfield Secure Certificate
Authority - G2
---
No client certificate CA names sent
Peer signing digest: SHA256
Peer signature type: RSA
Server Temp Key: ECDH, prime256v1, 256 bits
---
```



## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	200
Connected IP	54.169.224.24
Connect Time	17.27 ms
TTFB	62.3 ms
Total Time	62.42 ms

#### Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "content-length: 0",
  "2": "location: https://www.nottingham.edu.my/",
  "3": "Date: Fri, 03 Jul 2026 19:47:41 GMT",
  "4": "x-url: /",
  "5": "x-host: nottingham.edu.my",
  "6": "x-grace: 24h",
  "7": "X-TTL: 28800.000",
  "8": "X-Cacheable: YES",
  "9": "X-Varnish: 33138 229402",
  "10": "Age: 1007",
  "11": "Via: 1.1 varnish-v4",
  "12": "x-edge-age: 1007",
  "13": "Cache-Control: no-cache",
  "14": "Pragma: no-cache",
  "15": "X-Cache-ASPX: true",
  "16": "Expires: -1",
  "18": "HTTP/1.1 200 OK",
  "19": "content-type: text/html; charset=utf-8",
  "20": "x-contensis-viewer-groups: 0",
  "21": "x-node: 9692839",
  "22": "surrogate-control: max-age=3601",
  "23": "date: Fri, 03 Jul 2026 19:05:21 GMT",
  "24": "x-origin-server: z-uon-WEB2",
  "25": "x-backend-ttl: 3601.000",
  "26": "x-varnish: 594944419 593450001",
  "27": "x-varnish-authentication: skip",
  "28": "x-age: 1807",
  "29": "x-server-name: z-uon-CACHE1",
  "30": "strict-transport-security: max-age=15768000",
  "31": "x-geoip-country-code: SG",
  "32": "x-url: /",
  "33": "x-host: www.nottingham.edu.my",
  "34": "x-grace: 24h",
  "35": "X-TTL: 3601.000",
  "36": "X-Cacheable: Refetch forced by user",
  "37": "Vary: Accept-Encoding",
  "38": "X-Varnish: 622813 6",
  "39": "Age: 1068",
  "40": "Via: 1.1 varnish-v4",
  "41": "x-edge-age: 1068",
  "42": "Cache-Control: no-cache",
  "43": "Pragma: no-cache",
  "44": "X-Cache-ASPX: true",
  "45": "Expires: -1",
  "46": "Accept-Ranges: bytes"
}
```

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	54.169.224.24
Connect Time	18.46 ms
TTFB	94.08 ms
Total Time	94.19 ms

#### Response Headers:

```
{
  "0": "HTTP/1.1 301 Moved Permanently",
  "1": "content-length: 0",
}
```

```

"2": "location: https://www.nottingham.edu.my/",
"3": "Date: Fri, 03 Jul 2026 19:47:41 GMT",
"4": "x-url: /",
"5": "x-host: nottingham.edu.my",
"6": "x-grace: 24h",
"7": "X-TTL: 28800.000",
"8": "X-Cacheable: YES",
"9": "X-Varnish: 33140 229402",
"10": "Age: 1007",
"11": "Via: 1.1 varnish-v4",
"12": "x-edge-age: 1007",
"13": "Cache-Control: no-cache",
"14": "Pragma: no-cache",
"15": "X-Cache-ASPX: true",
"16": "Expires: -1",
"18": "HTTP/1.1 200 OK",
"19": "content-type: text/html; charset=utf-8",
"20": "x-contensis-viewer-groups: 0",
"21": "x-node: 9692839",
"22": "surrogate-control: max-age=3601",
"23": "date: Fri, 03 Jul 2026 19:05:21 GMT",
"24": "x-origin-server: z-uon-WEB2",
"25": "x-backend-ttl: 3601.000",
"26": "x-varnish: 594944419 593450001",
"27": "x-varnish-authentication: skip",
"28": "x-age: 1807",
"29": "x-server-name: z-uon-CACHE1",
"30": "strict-transport-security: max-age=15768000",
"31": "x-geoup-country-code: SG",
"32": "x-url: /",
"33": "x-host: www.nottingham.edu.my",
"34": "x-grace: 24h",
"35": "X-TTL: 3601.000",
"36": "X-Cacheable: Refetch forced by user",
"37": "Vary: Accept-Encoding",
"38": "X-Varnish: 622815 6",
"39": "Age: 1068",
"40": "Via: 1.1 varnish-v4",
"41": "x-edge-age: 1068",
"42": "Cache-Control: no-cache",
"43": "Pragma: no-cache",
"44": "X-Cache-ASPX: true",
"45": "Expires: -1",
"46": "Accept-Ranges: bytes"
}

```

Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.009141 0.018422
TCP Connect IPv4 → port 443	301 0.008140 0.046405

**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
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
```