


# IPv6 Readiness Report

kemasukan.upsi.edu.my — kemasukan.upsi.edu.my

Category: Education • Generated: 25 Apr 2026, 18:18 MYT • Last Checked: 07 Mar 2026, 01:12 MYT • Verification ID: 4e8a6064-b72e-450a-9c34-61087bd7ed68  
 Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>  
 Audit trail: <https://ipv6.my6.my/audit/4e8a6064-b72e-450a-9c34-61087bd7ed68>

 <b>Non-Compliant</b> <small>MGv6C-1.0</small>	<b>15%</b> <b>No IPv6 Support</b>	<b>IPv6-ONLY READINESS</b> Website: <b>X Not Ready</b> DNS: <b>X Not Ready</b> Email: <b>X Not Ready</b>
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<b>IPv4 ADDRESSES</b> 202.45.132.87
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## Network Information (WHOIS / RDAP)

IPv4 Network	
Organization	UPSI
Country	MY
ASN	AS24314
ASN Name	UPSI-AS-AP University Pendidikan Sultan Idris, MY
Network (CIDR)	202.45.132.0/22

Web Services (35%) <span style="float: right;">0 / 8</span>			
#	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%) <span style="float: right;">1 / 5</span>			
#	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>PASS</b>	DNSSEC fully validated.
5	<b>Reverse DNS (PTR)</b>	<b>FAIL</b>	No PTR record found.
6	<b>DS Record at Parent</b>	<b>FAIL</b>	No DS record at parent.
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%) 2 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	202.45.132.87
2	<b>HTTP over IPv4</b>	<b>FAIL</b>	HTTP is not accessible over IPv4.
3	<b>HTTPS over IPv4</b>	<b>PASS</b>	HTTPS (port 443) responds over IPv4 — 865ms TTFB.

### Audit Trail & Evidence Record

Verification ID	4e8a6064-b72e-450a-9c34-61087bd7ed68
Domain	kemasukan.upsi.edu.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:12:05 MYT
Finished	07 Mar 2026, 01:12:37 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/4e8a6064-b72e-450a-9c34-61087bd7ed68

### Integrity Verification

<b>✓ INTEGRITY VERIFIED</b>	
Algorithm	hmac-sha256-v1
Root Hash	9d6595066436459efa092080b880c53829e2336cc4b3d1decb48853e328a8be2
http_headers	4a2d526a676aad3590e1e8bebf82f8fff4a104e7d15903c7e78d0fe2d7cee04a
dns_responses	6c943ef6260f3875a529dc0c784b8f31646d3f9e6d3169480256366583f52795
tls_handshake	f79f21367003f663b800a293b9b8e55e11a898bb20bd8a7ade0c9f6446cbe5d5
connectivity_log	71d7121ad4a0469e554f1313644ecc08a1a2517544fd338d04263dabeb1a7e7f
dns_resolution_times	e0bdb9a527ea89a0fff918dbd0bc4cd646debbabeb6335d29e937903d6f49501a

### 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	7.84	17.92	18.11	18.5	+10.3
Google	IPv4	42.12	42.65	26.73	36.05	-15.4
Google	IPv6	35.9	44.21	16.59	25.2	-19.3
Cloudflare	IPv4	22.23	29.58	21	26.83	-1.2
Cloudflare	IPv6	20.15	43.25	20.47	53.86	+0.3



## DNS Evidence

### A

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 40622
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kemasukan.upsi.edu.my. 21600 IN CNAME cpweb.upsi.edu.my.
cpweb.upsi.edu.my. 21600 IN A 202.45.132.87
```

### DS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: SERVFAIL, id: 43013
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
; EDE: 12 (NSEC Missing): (Invalid denial of existence of cpweb.upsi.edu.my/ds)
```

### MX

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 7654
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kemasukan.upsi.edu.my. 21600 IN CNAME cpweb.upsi.edu.my.

;; AUTHORITY SECTION:
upsi.edu.my. 1385 IN SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200
```

### NS

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 23485
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kemasukan.upsi.edu.my. 21600 IN CNAME cpweb.upsi.edu.my.

;; AUTHORITY SECTION:
upsi.edu.my. 1162 IN SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200
```

### TXT

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 22937
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kemasukan.upsi.edu.my. 21600 IN CNAME cpweb.upsi.edu.my.

;; AUTHORITY SECTION:
upsi.edu.my. 1565 IN SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200
```

### AAAA

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 35203
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
kemasukan.upsi.edu.my. 20822 IN CNAME cpweb.upsi.edu.my.

;; AUTHORITY SECTION:
```

```
upsi.edu.my. 1800 IN SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200
```

**RRSIG**

```
cpweb.upsi.edu.my.  

    CNAME 13 4 43200 20260313114349 20260227105442 10293 upsi.edu.my. jLRiYj6cHvuGuV9yPPcsaTNXtT3bgYffoMQggCkeYVWuxCRYcfcw3iy0 QzHHHuHG5lWrnz8dtldwRA+//DE4Yg==
```

**DNSKEY**

```
;; Got answer:  

;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 34915  

;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 1, ADDITIONAL: 1  
  

;; OPT PSEUDOSECTION:  

; EDNS: version: 0, flags:; udp: 512  

;; ANSWER SECTION:  

kemasukan.upsi.edu.my. 20822 IN CNAME cpweb.upsi.edu.my.  
  

;; AUTHORITY SECTION:  

upsi.edu.my. 1789 IN SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200
```

**DNSSEC\_VALIDATION**

```
;; resolution failed: ncache nxrrset  

; fully validated  

kemasukan.upsi.edu.my. 20822 IN CNAME cpweb.upsi.edu.my.  

kemasukan.upsi.edu.my. 20822 IN RRSIG CNAME 13 4 43200 20260313114349 20260227105442 10293 upsi.edu.my. jLRiYj6cHvuGuV9yPPcsaTNXtT3bgYffoMQggCkeYVWuxCRYcfcw3iy0 QzHHHuHG5lWrnz8dtldwRA+//DE4Yg==  

; cpweb.upsi.edu.my. 1790 IN \-SOA; -NXRRSET  

; upsi.edu.my. SOA zaaba.upsi.edu.my. zaimi.upsi.edu.my. 2025045347 3600 3600 1209600 7200  

; upsi.edu.my. RRSIG SOA ...  

; cpweb.upsi.edu.my. RRSIG NSEC ...  

; cpweb.upsi.edu.my. NSEC csc2024.upsi.edu.my. A RRSIG NSEC
```







## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	
Connect Time	0 ms
TTFB	0 ms
Total Time	8002.53 ms
Error	Failed to connect to kemasukan.upsi.edu.my port 80 after 8002 ms: Timeout was reached

### IPv4 HTTPS (port 443)

HTTP Status	200
Connected IP	202.45.132.87
Connect Time	8.74 ms
TTFB	39.07 ms
Total Time	39.11 ms

#### Response Headers:

```
[
  "HTTP/1.1 200 OK",
  "Server: nginx",
  "Date: Fri, 06 Mar 2026 09:12:32 GMT",
  "Content-Type: text/html; charset=UTF-8",
  "Connection: keep-alive",
  "Link: <https://kemasukan.upsi.edu.my/index.php?rest_route=/>; rel=\"https://api.w.org/\", <https://kemasukan.upsi.edu.my/index.php?rest_route=/wp/v2/pages/2>; rel=\"alternate\"; title=\"JSON\"; type=\"application/json\", <https://kemasukan.upsi.edu.my/>; rel=shortlink"
]
```

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	000 0.000000 0.000000
TCP Connect IPv4 → port 443	200 0.008694 0.054014

## 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
```