

# IPv6 Readiness Report

## komunikasi.gov.my — komunikasi.gov.my

Category: Government • Generated: 21 Apr 2026, 19:13 MYT • Last Checked: 07 Mar 2026, 01:07 MYT • Verification ID: a73d46df-4047-4d4f-a015-984fd7003ff3

Report generated from National IPv6 Readiness Monitor — <https://ipv6.my6.my>Audit trail: <https://ipv6.my6.my/audit/a73d46df-4047-4d4f-a015-984fd7003ff3>

<b>X</b> <b>Non-Compliant</b> MGv6C-1.0	<b>32%</b> <b>Partial 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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**IPv4 ADDRESSES**

203.217.179.111

**Network Information (WHOIS / RDAP)**

IPv4 Network	
Organization	KPKK
Country	MY
ASN	AS17564
ASN Name	GITN-PCN-AS-AP GITN M Sdn. Bhd., MY
Network (CIDR)	203.217.179.110/31

**Web Services** (35%)

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#	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%)

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#	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>PASS</b>	DS record found at parent zone.
7	<b>RRSIG Valid</b>	<b>PASS</b>	RRSIG signatures are current and valid.
8	<b>Signing Algorithm</b>	<b>INFO</b>	RSASHA256

**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>	No common DKIM selector found.
7	<b>DMARC Record</b>	<b>PASS</b>	DMARC record found.

**IPv4 Baseline** (15%) 2 / 3

#	CHECK	RESULT	DETAIL
1	<b>A Record</b>	<b>PASS</b>	203.217.179.111
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 — 39ms TTFB.

### Audit Trail & Evidence Record

Verification ID	a73d46df-4047-4d4f-a015-984fd7003ff3
Domain	komunikasi.gov.my
Check Mode	Manual
Status	Completed
Started	07 Mar 2026, 01:06:41 MYT
Finished	07 Mar 2026, 01:07:39 MYT
Test Node Profile	dual stack
Engine Version	2.0.0
MGv6C Version	1.0.0
Audit URL	https://ipv6.my6.my/audit/a73d46df-4047-4d4f-a015-984fd7003ff3

### Integrity Verification

<p><b>✓ INTEGRITY VERIFIED</b></p>	
Algorithm	hmac-sha256-v1
Root Hash	d8cb0dcad0df93c4ef3cf8c7b209d6a8ffc70ad5bd992ed4dbeebc6526766bd9
http_headers	974ba57e0bbb4ffb18312fc5ee349aea0686b7bf1f97462540f14b2fa0ae5969
dns_responses	bdb103baee90725068807178a12918074d7f9a4d002394812d97487c4d35775e
tls_handshake	1c7f2aae9e054efc3634bc99ee44552068e53bd9f49f3ce0d29ed5fb1a93ad27
connectivity_log	0a470234db0ad7a259b602c08a1181120f30bbc8c65991ac5401796fb5dd8640
dns_resolution_times	0f140894d3cb2c22703eef4d211e7e715ff2ee0e53c08baaa7ce09797e607486

### 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	6.95	18.52	6.98	7.98	0
Google	IPv4	17.16	35.06	32.79	34.06	+15.6
Google	IPv6	29.94	33.96	28.07	29.99	-1.9
Cloudflare	IPv4	18.01	27.61	10.65	29	-7.4
Cloudflare	IPv6	48.62	59.35	46.91	59.47	-1.7



**DNS Evidence**

**A**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 11650
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 300 IN A 203.217.179.111
```

**DS**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 40819
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 21600 IN DS 57364 8 1 E190672E67D9CD9179DC33AE549A1232B2512175
komunikasi.gov.my. 21600 IN DS 57364 8 2 A68C80771110D67A2557FA23906BBC44956B974E9E361EF48F9D8AD0 4727FA67
```

**MX**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 42764
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 300 IN MX 5 ALT2.ASPMX.L.GOOGLE.COM.
komunikasi.gov.my. 300 IN MX 5 ALT1.ASPMX.L.GOOGLE.COM.
komunikasi.gov.my. 300 IN MX 10 ALT3.ASPMX.L.GOOGLE.COM.
komunikasi.gov.my. 300 IN MX 1 ASPMX.L.GOOGLE.COM.
komunikasi.gov.my. 300 IN MX 10 ALT4.ASPMX.L.GOOGLE.COM.
```

**NS**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 30867
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 299 IN NS prime.komunikasi.gov.my.
komunikasi.gov.my. 299 IN NS orion.komunikasi.gov.my.
```

**TXT**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 409
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 3600 IN TXT "google-site-verification=EGgvvdVsAu-SN6tAt7qhjtbqmYH0RQhKsZISYn2m0v8"
komunikasi.gov.my. 3600 IN TXT "v=spf1 ip4:103.8.147.12/30 ip4:219.92.54.177/32 ip4:103.156.82.32/29 ip4:103.156.83.32/29 include:_spf.google.com ~all"
komunikasi.gov.my. 3600 IN TXT "MS=ms21610124"
```

**AAAA**

```
;; Got answer:
;; -->HEADER<<- opcode: QUERY, status: NOERROR, id: 48428
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 0, AUTHORITY: 1, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; AUTHORITY SECTION:
komunikasi.gov.my. 300 IN SOA prime.komunikasi.gov.my. rangkai.komunikasi.gov.my. 2026022702 1200 7200 1209600 300
```

**RRSIG**

```
prime.komunikasi.gov.my. rangkai.komunikasi.gov.my. 2026022702 1200 7200 1209600 300
```

```
SOA 8 3 300 20260329062152 20260227062152 50656 komunikasi.gov.my. SG/zXW3KMo6isjV6XvsYvsGAmGo81nrs5Ay6k9w2r5ubowUsMkK3kAw+
XeN6uUsD99zxlzGjjFpcIG3vuww8qKMrhLlnuLB4Zr/VnIh7jHRVp8Rb pLbDH4i8Av+0GT0RGS+XXr73pVubbbZfz5yWpU1m+JPRGchsMgjJsQ6x 0Ak=
```

DNSKEY

```
;; communications error to 8.8.8.8#53: timed out
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: NOERROR, id: 3190
;; flags: qr rd ra ad; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; ANSWER SECTION:
komunikasi.gov.my. 300 IN DNSKEY 256 3 8 AwEAAZrIHxbFRs2rJ7gpB07M5R6HNGsj//8N5t60F0i0rr3JqxHczMEI uqxbjyz1XKBexv0m85k26KDDMyd4iGuDGrWntLdxvN850sRFJcmCHLg
h9/CWAw4XFsvpYe1gSSuKasdOC/2150nhkcrZJkkenvD8T99GYxskd6p YoN8LmWx
komunikasi.gov.my. 300 IN DNSKEY 257 3 8 AwEAApeWacQukcguGo1vLnEdd4N72+ZY1Lv91Rx5cTaYaIpPrQ0wzsb TkV2leW3EDVim6efmJmYuCc1PeuXbbdMgMBZ6eyhIKf77KNkMBOfCHh
pUKdGNisDLw0BSnq573gs0ZY81RNGJOAEVmxodQo60ILQBr0INy+DeS2 vLJUo3Sphiq9KYDbvY1v0sMBZF0RlpyFkg6QfvCr6/CDzhLuj8MrwTEm
x0DYbyilSNKDG3JKKtpabYTGmZ6vL8nbU02nyRbvgC3wYBt766YND1s XGUnlua5STauP0CbAjqszMCLQ5fljB+jvC8lFc4ArZRx0kWhY72h+WJJ 8YU3a0s+jNs=
```

DNSSEC\_VALIDATION

```
; fully validated
komunikasi.gov.my. 300 IN SOA prime.komunikasi.gov.my. rangkaian.komunikasi.gov.my. 2026022702 1200 7200 1209600 300
komunikasi.gov.my. 300 IN RRSIG SOA 8 3 300 20260329062152 20260227062152 50656 komunikasi.gov.my. SG/zXW3KMo6isjV6XvsYvsGAmGo81nrs5Ay6k9w2r5ubowUsMkK3kAw+
XeN6uUsD99zxlzGjjFpcIG3vuww8qKMrhLlnuLB4Zr/VnIh7jHRVp8Rb pLbDH4i8Av+0GT0RGS+XXr73pVubbbZfz5yWpU1m+JPRGchsMgjJsQ6x 0Ak=
```



TLS Handshake Evidence

IPV4 Connection

IP Used	203.217.179.111
IP Version	4

```

depth=2 OU = GlobalSign ECC Root CA - R5, O = GlobalSign, CN = GlobalSign
verify return:1
depth=1 C = BE, O = GlobalSign nv-sa, CN = GlobalSign ECC OV SSL CA 2018
verify return:1
depth=0 C = MY, ST = Putrajaya, L = Putrajaya, O = Kementerian Komunikasi, CN = *.komunikasi.gov.my
verify return:1
CONNECTED(00000010)
...
Certificate chain
 0 s:C = MY, ST = Putrajaya, L = Putrajaya, O = Kementerian Komunikasi, CN = *.komunikasi.gov.my
  i:C = BE, O = GlobalSign nv-sa, CN = GlobalSign ECC OV SSL CA 2018
  a:PKEY: id-ecPublicKey, 384 (bit); sigalg: ecdsa-with-SHA384
  v:NotBefore: Jan 29 08:05:28 2026 GMT; NotAfter: Mar 2 08:05:27 2027 GMT
-----BEGIN CERTIFICATE-----
MIIFZTCB0ugAwIBAgIMbkZwCZoUx2kMYfCAoGCCqGSM49BAMDFAXCzAJBgNV
BAYTAKJFRMRkwFwYDQKExBHBG9iYXwTaWduIG52LXNhMSYwJAYDVQQDEEx1HbG9i
YXwTaWduIEVDOyBPVjBtU0g0EgMjAODAEFw0YnJhXmJjkwODA1MjhaFw0yNzAz
MDIwODA1MjhaMHQxCzAJBgNVBAYTAKJFRMRwEAYDQKExLQdXRyYWhpeWExEjAQ
BgNVBACTCVB1dHJhamF5YTEfMB0GA1UEChMMS2VtZW50ZXJpYwY4S29tdW5pa2Fz
aTEcMBoGA1UEAwTKi5rb211bmlrYXNpLmdvdi5teTB2MBAGByqGSM49AgEGBSuB
BAAiA2IABLKJufLg+a8IZPn2tU0UiomhvJbhZPWxf02UjLsoIBweq31MoJpt4h0k
Tgm9VJyJligSALVZk8qiGvuFnuAU0eU0ThnCiqoDFEwU/v2Bev+H4fycrgviMcVn4j
LcxYMSa6kaOCA2gwggnkMA4GA1UdDwEB/wQEAwIHgDAMBgNVHRMBAf8EAjAAMIIGo
BggrBgEFBQcBAQSBGTB/MEQGCCsGAQUFBzAChjodHRwOi8vc2VjZjJlLmdsb2Jh
bHhNpZ24uY29tL2NhY2VydC9nc2VjY292c3NsY2EYMDIwODA1MjhaMjhaMjhaMjha
AYYraHR0cDovL29jZ3AuZ2xvYmFsc2lnbi5jb20vZ3NlY2NvdnNzbG9iYXw0ODBw
BgNVHSAETzBNMEEGCcsGAQQBoDIBFDAQMDIGCCsGAQUFBwIBFiZodHRwczovL3d3
dy5nbG9iYXwzaWduLmNvbS9yZXBvc2l0b3J3L2AIBGZngQwBAGIwPwYDVR0fBDgw
NjA0b0KtYUaHR0cDovL2NhY2VydC9nc2VjY292c3NsY2EYMDIwODA1MjhaMjhaMjha
MDE4LmNybDAXBgNVHREEKjAoghMqLmtvbXVuaWthc2kuZ292Lm15ghFrb211bmlr
YXNpLmdvdi5teTAdBgNVHSEUfjAUBggrBgEFBQcDAQYIKwYBBQUHAwIwHwYDVR0j
BBgwFoAUMHU0dSr+YYCqkEABrtboB0ZuP0gwhQYDVR0BBEYFJwr0PKFj4pCSVcM
mkH4Y0578iWMIIBhYKkYBBAHwEIEAgSCAXYeggyFyAXAAAdAcn2gs6frrwRLQ
+BuWiofdzIQ2EzmyLLjgkXm9ZnwAAAZwIyUJGAAAEAwBHMEUCIQD64BBE60Eg
3/D45FI5ImHhbJ915Kt0n5bE06csgBwXwIgcXn5AxxKB5t0D0McMknz/vCsgpvr
axtmA0hSo5+dmKAAfWc0yKcLnR5q86IGsKR6hLdG/h/Gv5U+JeabTuQCSPPG6AAA
AZwIyUGBAAgAAUUAguZ7wQDAEgRgIhA0cygH4miekeZerMzxxvHhtrk47A3wZRM0
qYRaytwtHxzuAiEAsCimkRgdPhI06+8v6ArvI+N28jHx3tgjfmC0mF87jJEAQ0MT
Y9yY5Zwdq4j2Hoo93q6Pq0SjN3tFm5TD+6Gc/MG+JgAAAzwIyT9JAAAEAwBGMEQC
IbhXqza+7kbaCNAZ32k/Ra2SRdLJI+DVY8s3/kiWYyAiBDHerz6TS5Hvc2Avd2
htpGmjEwhbXpXfE8gnvpgPAUDAKBgghkjOP0QDAwNoADBLajEA1Yv7GvjRzi/9
9w7IXG4Voc0tLRKPhwtmPbrB2xgHTjyq4R5VGRMjIMT3g4ZgAjBFNAkLbWyi
b+TyOfvOYwPMu/hSndogKlSxkP6xrzW2fnFR4A1ct3zsM6azndYYfg=
-----END CERTIFICATE-----
 1 s:C = BE, O = GlobalSign nv-sa, CN = GlobalSign ECC OV SSL CA 2018
  i:OU = GlobalSign ECC Root CA - R5, O = GlobalSign, CN = GlobalSign
  a:PKEY: id-ecPublicKey, 384 (bit); sigalg: ecdsa-with-SHA384
  v:NotBefore: Nov 21 00:00:00 2018 GMT; NotAfter: Nov 21 00:00:00 2028 GMT
-----BEGIN CERTIFICATE-----
MIIDAJCCaomgAwIBAgINAe5fIvVCSQX5AZGo3DAKBggqhkJOPQ0DAzBQMS0wIgdY
VQQLExthbG9iYXwTaWduIEVDOyBSb290IENBIC0gUjUxZzARBGNVBAOTCkdsb2Jh
bFhpZ24uEzARBGNVBAOTCkdsb2JhbFhpZ24uHhcnMTg0MTIwMDAwMDAwWhcNMjg0
MTIwMDAwMDAwWjBQM0swCQYDQKExJCRTEZMBcGA1UEChMQR29yYmF5U2lnbiBu
di1zYTEtEmMCQGA1UEAxMdr2xvYmF5U2lnbiBFQ0MgT1YUjMIENBIDwMTGdwdjAQ
BgqchqjOPQIBBjUrgQQAiGniAATDoRGNZSPhLug7q6bQA11Pte0ZD/xx44QlFam1
BM4eLeN+fwgwalSbkjzARCM9si/fnOeKntKALgNmNOHTmV3VfwGboCj6+22HVWZu
VeX/VeIgoWh1u7Lja/NDE7RsXaCjggEpMIIBJTAOBGNVHQ8BAf8EBAMCAYYwEgYD
VR0TAQH/BAgwBgEB/wIBADAdBgNVHQ4EFgQUWu0dSr+YYCqkEABrtboB0ZuP0gwh
HwYDVR0jBBgwFoAUPeYpSjVqB8ohReom3m7e0oPQn1kwPgYIKwYBBQUHAQEEMjAw
MC4GCCsGAQUFBzABhijodHRwOi8vb2NzcDIuZ2xvYmFsc2lnbi5jb20vcmlvdHl1
MDYGA1UdHwQK6ApoCeGJWh0dHA6Ly9jcmwwZ2xvYmF5U2lnbi5jb20vcmlvdHl1
dC1yNS5jcmwwRwYDVR0fBEAwPjA8BGRVHSAAMDQwMgYIKwYBBQUHAGEWJmh0dHBz
O18vd3d3Lmdsb2JhbHhNpZ24uY29tL2NhY2VydC9nc2VjY292c3NsY2EYMDIwODA1
MGQCMC4LzZGQw5mpNZBmztq8huxKf9/tRUJ5yLl4q6YU+i2fjF2FRBNA64EBmljA
7dk50wIwL9qYB0AphsLmV0LhknrzHZVvtqz7N0aIV18BEIDZQgK3jxyZADjHSH
Suk4mCdw
-----END CERTIFICATE-----
...
Server certificate
subject=C = MY, ST = Putrajaya, L = Putrajaya, O = Kementerian Komunikasi, CN = *.komunikasi.gov.my
issuer=C = BE, O = GlobalSign nv-sa, CN = GlobalSign ECC OV SSL CA 2018
...
No client certificate CA names sent

```

```
Peer signing digest: SHA384
Peer signature type: ECDSA
Server Temp Key: X25519, 253 bits
---
SSL handshake has read 2571 bytes and written 399 bytes
Verification: OK
---
New, TLSv1.3, Cipher is TLS_AES_256_GCM_SHA384
Server public key is 384 bit
Secure Renegotiation IS NOT supported
Compression: NONE
Expansion: NONE
No ALPN negotiated
Early data was not sent
Verify return code: 0 (ok)
---
DONE
```

## HTTP Response Evidence

### IPv4 HTTP (port 80)

HTTP Status	0
Connected IP	203.217.179.111
Connect Time	6.11 ms
TTFB	0 ms
Total Time	10002.87 ms
Error	Operation timed out after 10002 milliseconds with 0 bytes received

### IPv4 HTTPS (port 443)

HTTP Status	400
Connected IP	203.217.179.111
Connect Time	4.97 ms
TTFB	29.85 ms
Total Time	29.92 ms

#### Response Headers:

```
[
  "HTTP/1.1 400 Bad Request",
  "Date: Fri, 06 Mar 2026 09:08:50 GMT",
  "Connection: close",
  "Content-Length: 1414",
  "Content-Type: text/html; charset=UTF-8"
]
```

## Connectivity Test Evidence

Test	Result
TCP Connect IPv4 → port 80	301 0.005123 0.011962
TCP Connect IPv4 → port 443	301 0.006555 0.042019

## 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
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
```