

## Protecting Resource Records in APNIC Whois Database

Database SIG  
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### Overview

- Motivation
- Background
- Proposal
- Other RIRs
- Test Result
- Case Study
- Implementation

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### Motivation

- Correctness of resource records in APNIC whois database (inetnum, inet6num, autnum) is becoming critical in internet operations
- Unprotected resource records are subject to misuse
- Unmaintained resources have actually been used by parties other than the original custodians

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## Background

- During whois v3 migration, all unprotected resource objects were temporarily maintained by MAINT-NULL
- Proposal in APNIC-14 to replace MAINT-NULL with parent object maintainer did not receive consensus, but a test project was approved
- A test has been conducted on IPv4 202/8 range and APNIC secretariat is ready to go ahead with the proposal

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## Example

Unprotected Object:

```
inetnum: 210.54.50.0 - 210.54.50.255
netname: SAMPLE-NETWORK
descr: SampleNet Holdings Ltd
country: AU
admin-c: XA1-AP
tech-c: ZY2-AP
rev-srv: alien.sample.net.au
rev-srv: terminator.sample.net.au
notify: roswell@sample.net.au
mnt-by: MAINT-NULL
changed: roswell@sample.net.au 20030714
status: ASSIGNED NON-PORTABLE
source: APNIC
```

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## Example

Parent Object:

```
inetnum: 210.54.0.0 - 210.54.63.255
netname: UPSTREAM-SAMPLE-NETWORK
descr: Upstream Sample ISP
descr: Brisbane
country: AU
admin-c: XX3-AP
tech-c: ZZ3-AP
notify: ipadmin@upstream.net.au
mnt-by: MAINT-AP-UPSTREAM
changed: ipadmin@upstream.net.au 20000919
changed: hm-changed@apnic.net 20030122
status: ALLOCATED NON-PORTABLE
source: APNIC
```

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### Proposal

- Protect all internet resource objects (inetnum, inet6num and aut-num) with proper maintainers. An unprotected object mnt-by attribute (currently has 'MAINT-NULL' value) will be filled with its parent's mnt-by value.
- Deprecate NONE value in maintainer object's auth: attribute

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### Example

Unprotected Maintainer:

```
mntner: MAINT-AU-UPSTREAM
descr: Upstream Sample ISP
descr: Level 20
descr: 40 Waterloo Road
descr: Milton QLD
country: AU
admin-c: XX3-AP
tech-c: ZZ3-AP
upd-to: ipadmin@upstream.net.au
auth: NONE
remarks: One of the Maintainer for Upstream Sample
mnt-by: MAINT-AU-UPSTREAM
referral-by: APNIC-HM
changed: ipadmin@upstream.net.au 20010910
source: APNIC
```

101 unprotected maintainers found in APNIC whois

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### Other RIR

- RIPE
  - A proposal has been put forward to deprecate auth: NONE
- ARIN
  - ARIN database does not allow unprotected record
- LACNIC
  - LACNIC database does not allow unprotected record

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### Test Result

- On 15 July 2003, we run a MAINT-NULL replacement script on IPv4 202/8 range
  - Total objects found: 2,889
  - Total objects successfully converted: 2,419
  - Total failed to convert: 470
- Failure reasons:
  - Parent object is also protected by MAINT-NULL: 324
  - Object contains other error (e.g. invalid nic-handle etc.)

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### Test Result

Objects found by geography:

CN	813
NZ	684
AU	318
TW	313
HK	200
IN	117
TH	112
Others	332

As of the time this report is written, we have not received any complaint about the MAINT-NULL replacement from affected members

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### Implementation

- 30 days after approval APNIC secretariat will remove MAINT-NULL from:
  - APNIC IPv4 address range delegated from IANA
  - APNIC ASN range delegated from IANA
  - APNIC IPv6 address range delegated from IANA
  - ASN range received by APNIC from ERX project
  - IPv4 address range received from AUNIC
- IPv4 address range received by APNIC from ERX project will always be protected

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### Implementation

- Proposed auth: NONE deprecation schedule:
  - Send email notifications to the contact persons of maintainer objects currently protected by auth: NONE, requesting them to change the authentication method.
  - 60 days after notification is sent, if auth: NONE has not been changed, APNIC secretariat will replace it with auth: CRYPT-PW.

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### Implementation

- Any error will be corrected within 2 APNIC secretariat business days (must have supporting documents)
- APNIC secretariat will present the implementation project report in:
  - sig-db@apnic.net mailing list
  - APNIC-17 Database SIG meeting

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### Questions & Answers



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