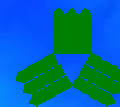


# DNS recommendations and procedure during IP migrations

**Fernando García Fernández**

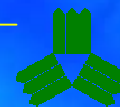


Eurocomercial  
Informática y Comunicaciones

# What is (will be..)

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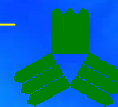
- **A guide for network administrators with little DNS knowledge**
- **A proposed Best practice**



# Goals

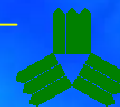
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- **Define a method to migrate a domain from one IP address to other**
- **Avoid the shutdown of the domain**
- **Reduce or avoid the shutdown of the services**



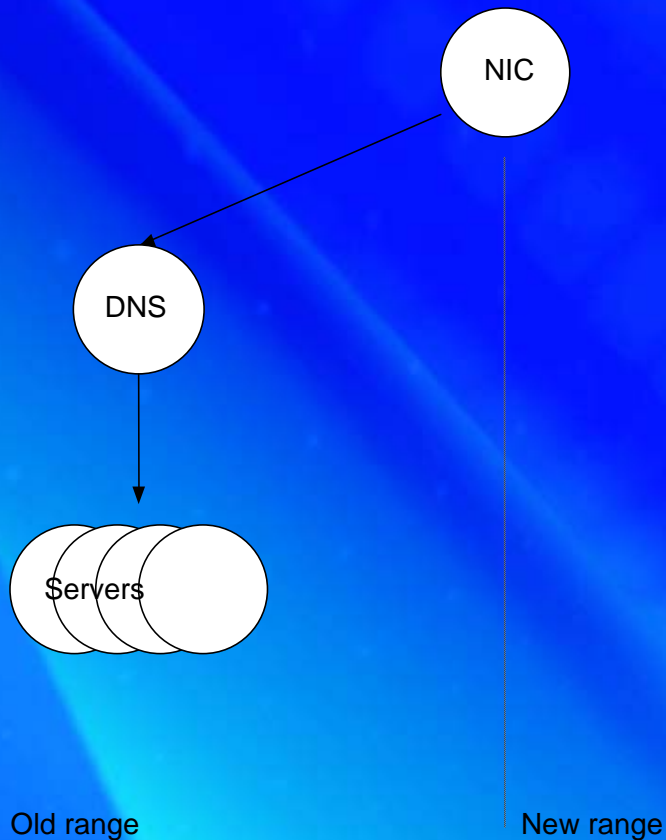
# Prerequisites

- **Control over the new DNS server**
- **Guarantee authority with the NIC**
- **Plan in advance**
- **Duplicate DNS servers**
- **Recommended**
  - **Duplicate other services' servers**
  - **ISP coordination (and cooperation)**



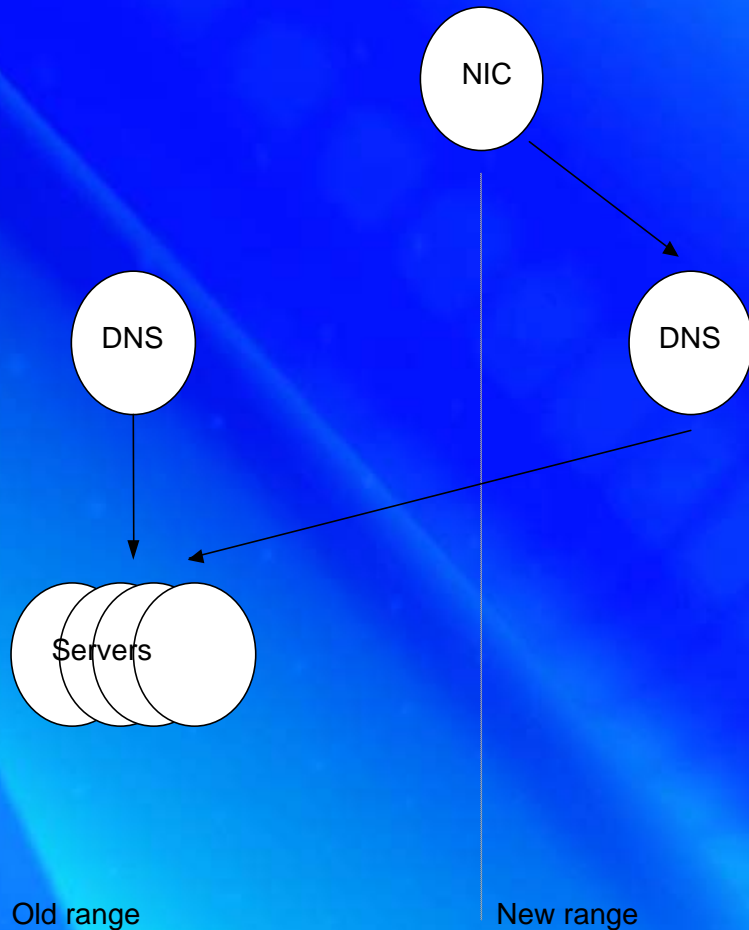
# Starting situation

- DNS server in old address
- Other servers in old address
- NIC glue records pointing to old address





# New DNS Server

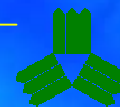


- Install a DNS Server the new IP range
- Duplicate existing information
- Modify SOA values (lower timers)

# New reverse resolution

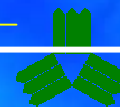
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- **Create the zone for the reverse resolution of new address range**
- **Delegate it from your RIR/LIR**
- **Not time critical, keep standard SOA values**



# Temporary SOA values

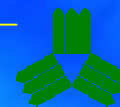
Field	Old value	New value (no duplicate servers)	New value (duplicate servers)
Serial	X	X+1	X+1
Refresh	86400	300	14400
Retry	7200	150	(=)7200
Expire	2592000	(=)2592000	(=)2592000
TTL	172800	300	14400



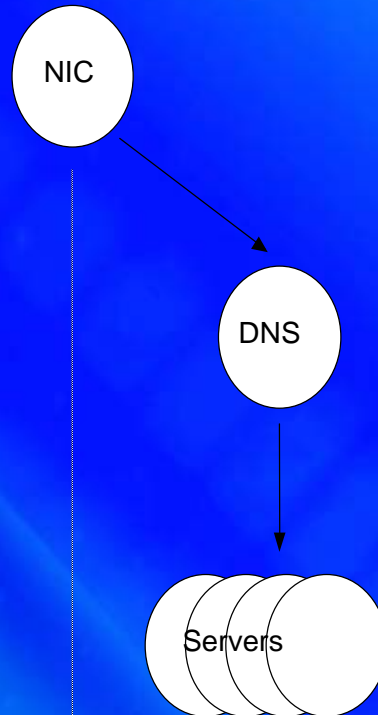


# Update NIC

- **Update glue records in the NIC**
  - **Delay for a “.es”**
    - 172.800 seconds
  - **Delay for “.com”, “.net”**
    - 86.400 seconds
- **Update secondary information**
- **Wait for propagation**



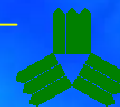
# Migrate other services



- Duplicate them if possible
- Modify IP address of server AND A record in zone file

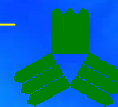
Old range

New range



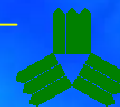
# Clean Up

- **Return SOA to it's standard values**
- **Verify the changes get propagated**
- **Shutdown servers in old range**



# Traumatic change

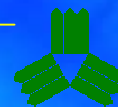
- **Unable to keep both IP ranges simultaneously**
- **Goal: To have always a valid DNS for the domain**
- **Blackout of the services**
- **Simply stated:**
  - **Use a third party network to host a temporary DNS Server for the zone**



# Upgrades

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- **Examples with other DNS servers**
  - Djbdns
  - Windows NT
- **Other NICs information**
- **IPv6 information**

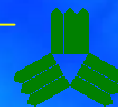




# Discussion

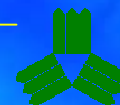
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- **Duplicate DNS servers VS Single DNS server with dual IP address**
- **Need a traumatic procedure?**



# From here on...

- **Today: agree in the technical content of the document (if possible)**
- **Jim proposal: create a group of 4 people, “Design Team”, to teach me english... ooops, to work on the document (any volunteer?)**



# Questions , Comments & Flames

