



YADIFA

RIPE 66

Dublin – 15/05/2013

Peter Janssen
EURid vzw/asbl

Y:A:D:I:F:A



2

WHAT IS YADIFA

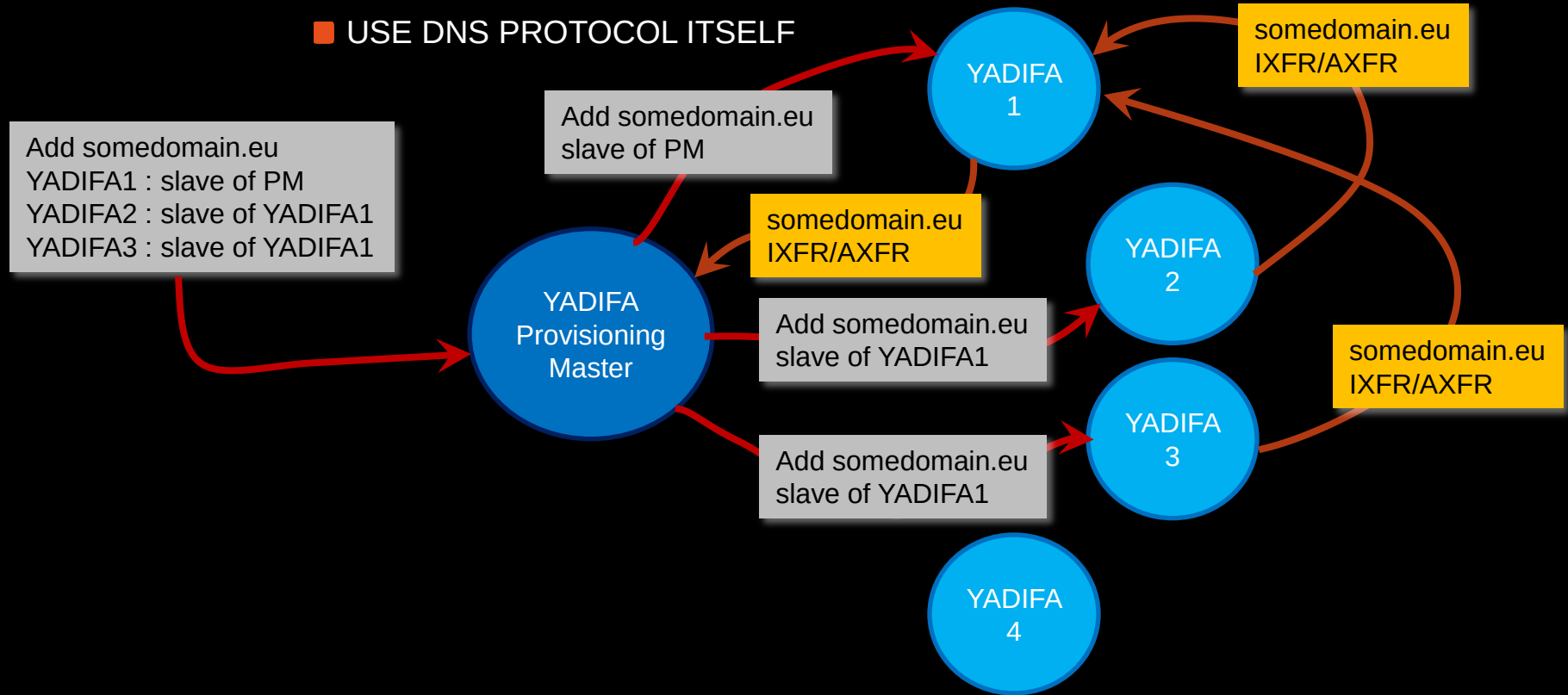
- A CLEAN NAME SERVER IMPLEMENTATION
- RFC COMPLIANT
 - Resource records (A, AAAA, NS, CNAME, ..., SPF, SRV, NAPTR, ...)
 - Zone transfers
 - DNSSEC
 - Dynamic updates
- SECURE
 - TSIG
 - ACLs
- MULTI PLATFORM
- BSD OPEN SOURCE LICENSE
- SOLUTION FOR SEVERAL “USE CASES”

DYNAMIC ZONE MANAGEMENT

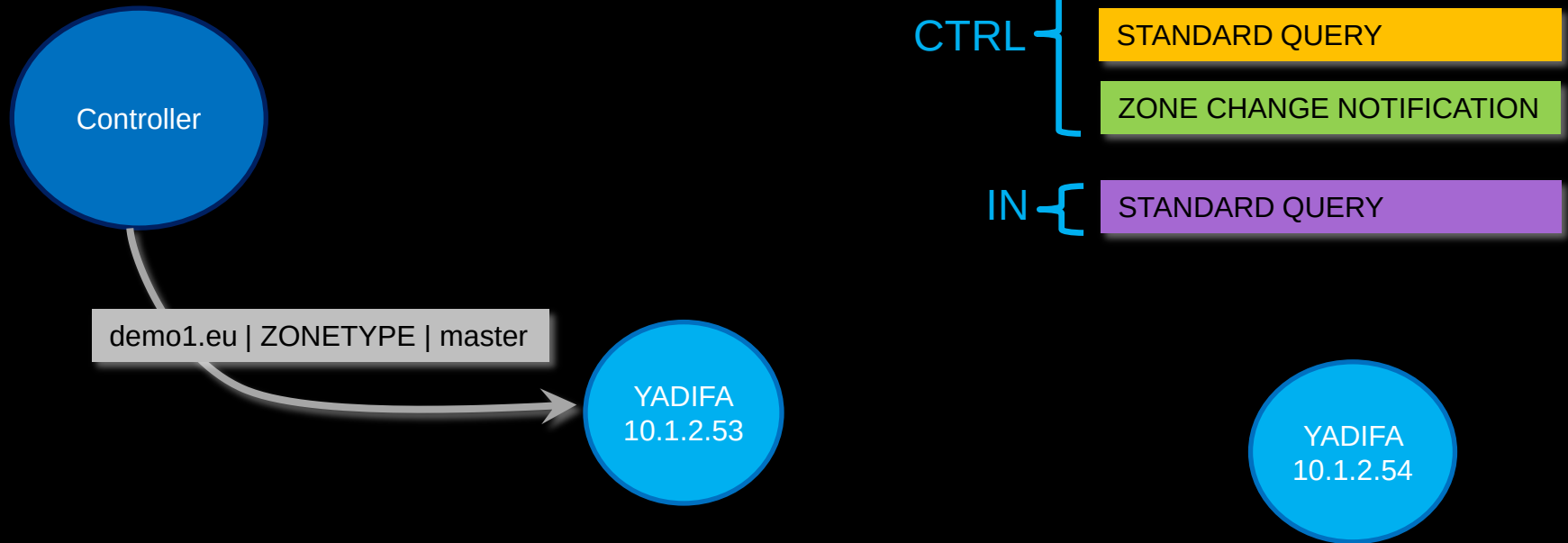
- ADDING AND REMOVING ZONES (DOMAIN NAMES)
 - Without stopping and restarting the name server
 - Without interruption in answering queries or (major) performance drop
 - Maintaining high levels of security
 - Compatible with DNSSEC
 - Both as Master as well as Slave name server
 - Configure access and security rules
 - IP address filters
 - Encryption keys

DYNAMIC ZONE MANAGEMENT

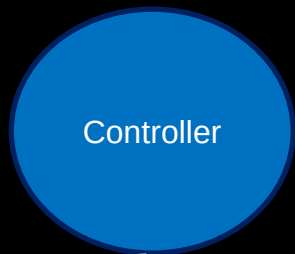
■ USE DNS PROTOCOL ITSELF



DYNAMIC ZONE MANAGEMENT



DYNAMIC ZONE MANAGEMENT



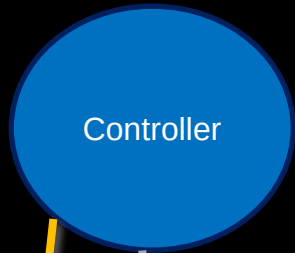
demo1.eu | ZONETYPE |

+-----+-----+		
	Header	
+-----+-----+		
	Zone	
+-----+-----+		
	Prerequisite	
+-----+-----+		
	Update	
+-----+-----+		
	Additional Data	
+-----+-----+		

```

▼ Domain Name System (query)
  Length: 39
  Transaction ID: 0x6745
  ▼ Flags: 0x2800 Dynamic update
    0... .. = Response: Message is a query
    .010 1... .. = Opcode: Dynamic update (5)
    .... ..0. .... = Truncated: Message is not truncated
    .... ..0 .... = Recursion desired: Don't do query recursively
    .... ..0.. .... = Z: reserved (0)
    .... ..0 .... = Non-authenticated data: Unacceptable
  Zones: 1
  Prerequisites: 0
  Updates: 1
  Additional RRs: 0
  ▼ Zone
    ▼ demol.eu: type SOA, class Unknown (42)
      Name: demol.eu
      Type: SOA (Start of zone of authority)
      Class: Unknown (0x002a)
  ▼ Updates
    ▼ demol.eu: type Unknown (10753), class Unknown (42)
      Name: demol.eu
      Type: Unknown (10753)
      Class: Unknown (0x002a)
      Time to live: 0 seconds
      Data length: 1
      Data
  
```

7 DYNAMIC ZONE MANAGEMENT



demo1.eu | ZONETYPE | m

demo1.eu | CFGMERGE

Header
Zone
Prerequisite
Update
Additional Data

CTRL

DYNAMIC UPDATE

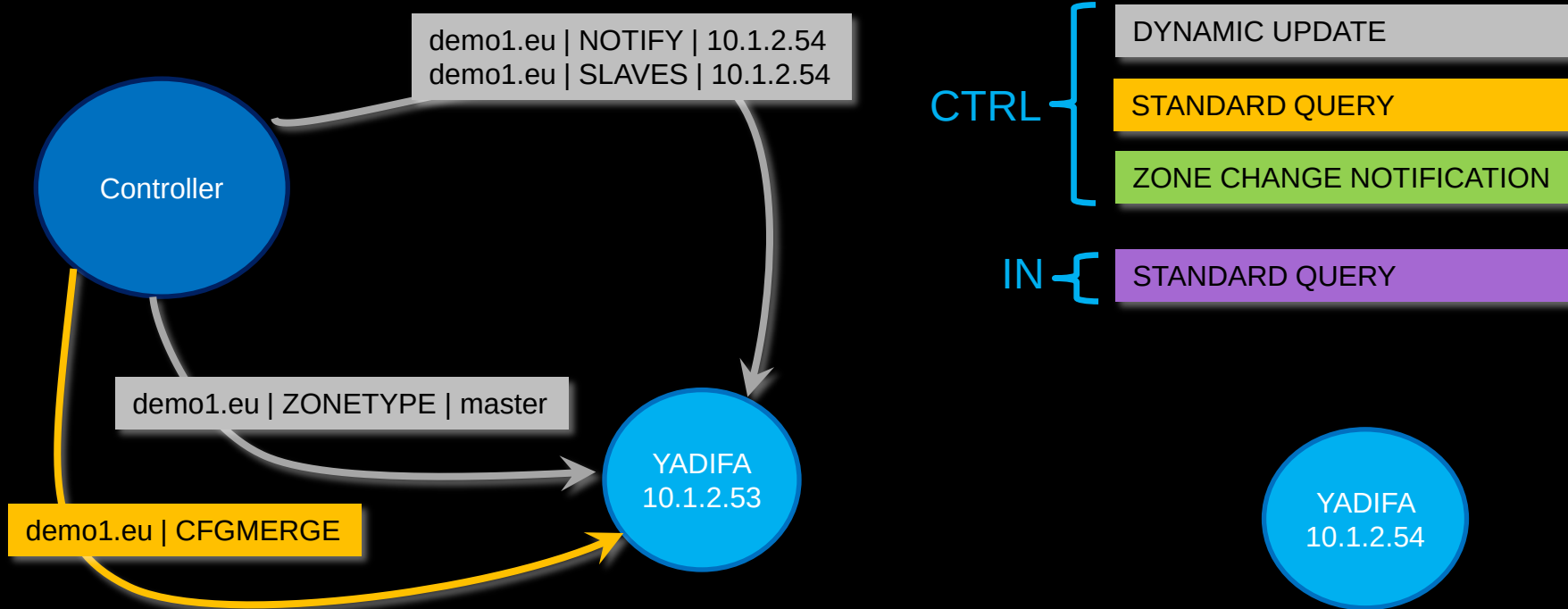
STANDARD QUERY

ZONE CHANGE NOTIFICATION

```

Domain Name System (query)
  [Response In: 60847]
  Length: 26
  Transaction ID: 0x0100
  ▼ Flags: 0x0000 Standard query
    0... .. = Response: Message is a query
    .000 0... .. = Opcode: Standard query (0)
    .... ..0. .... = Truncated: Message is not truncated
    .... ..0 .... = Recursion desired: Don't do query recursively
    .... ..0... .. = Z: reserved (0)
    .... ..0 .... = Non-authenticated data: Unacceptable
  Questions: 1
  Answer RRs: 0
  Authority RRs: 0
  Additional RRs: 0
  ▼ Queries
    ▼ demo1.eu: type Unknown (11013), class Unknown (42)
      Name: demo1.eu
      Type: Unknown (11013)
      Class: Unknown (0x002a)
  
```

DYNAMIC ZONE MANAGEMENT



demo1.eu
demo1.eu

Controller

demo1.eu | ZONETYPE | master

demo1.eu | CFGMERGE

Domain Name System (query)

[\[Response In: 67802\]](#)

Length: 92

Transaction ID: 0x6745

Flags: 0x2800 Dynamic update

0... .. = Response: Message is a query
 .010 1... .. = Opcode: Dynamic update (5)
0. = Truncated: Message is not truncated
0 = Recursion desired: Don't do query recursively
0... .. = Z: reserved (0)
0 = Non-authenticated data: Unacceptable

Zones: 1

Prerequisites: 0

Updates: 2

Additional RRs: 0

Zone

demo1.eu: type SOA, class Unknown (42)

Name: demo1.eu

Type: SOA (Start of zone of authority)

Class: Unknown (0x002a)

Updates

demo1.eu: type Unknown (10755), class Unknown (42)

Name: demo1.eu

Type: Unknown (10755)

Class: Unknown (0x002a)

Time to live: 0 seconds

Data length: 21

Data

demo1.eu: type Unknown (10758), class Unknown (42)

Name: demo1.eu

Type: Unknown (10758)

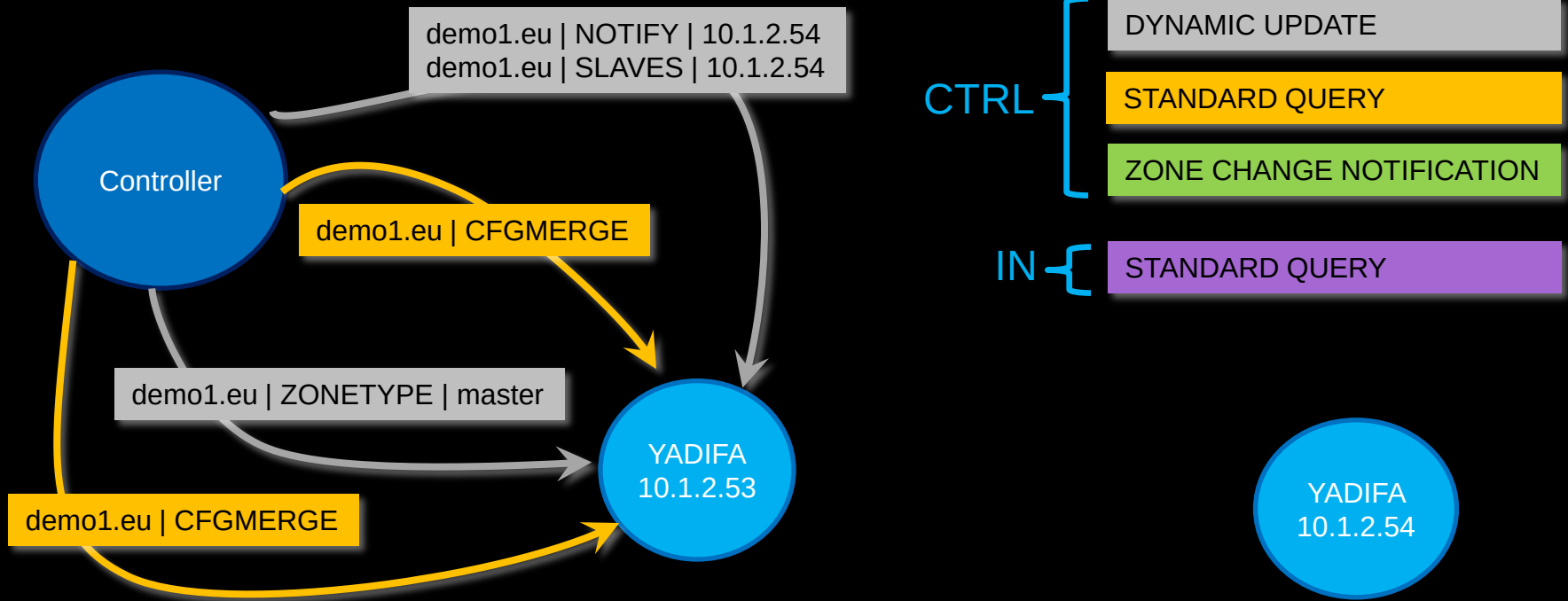
Class: Unknown (0x002a)

Time to live: 0 seconds

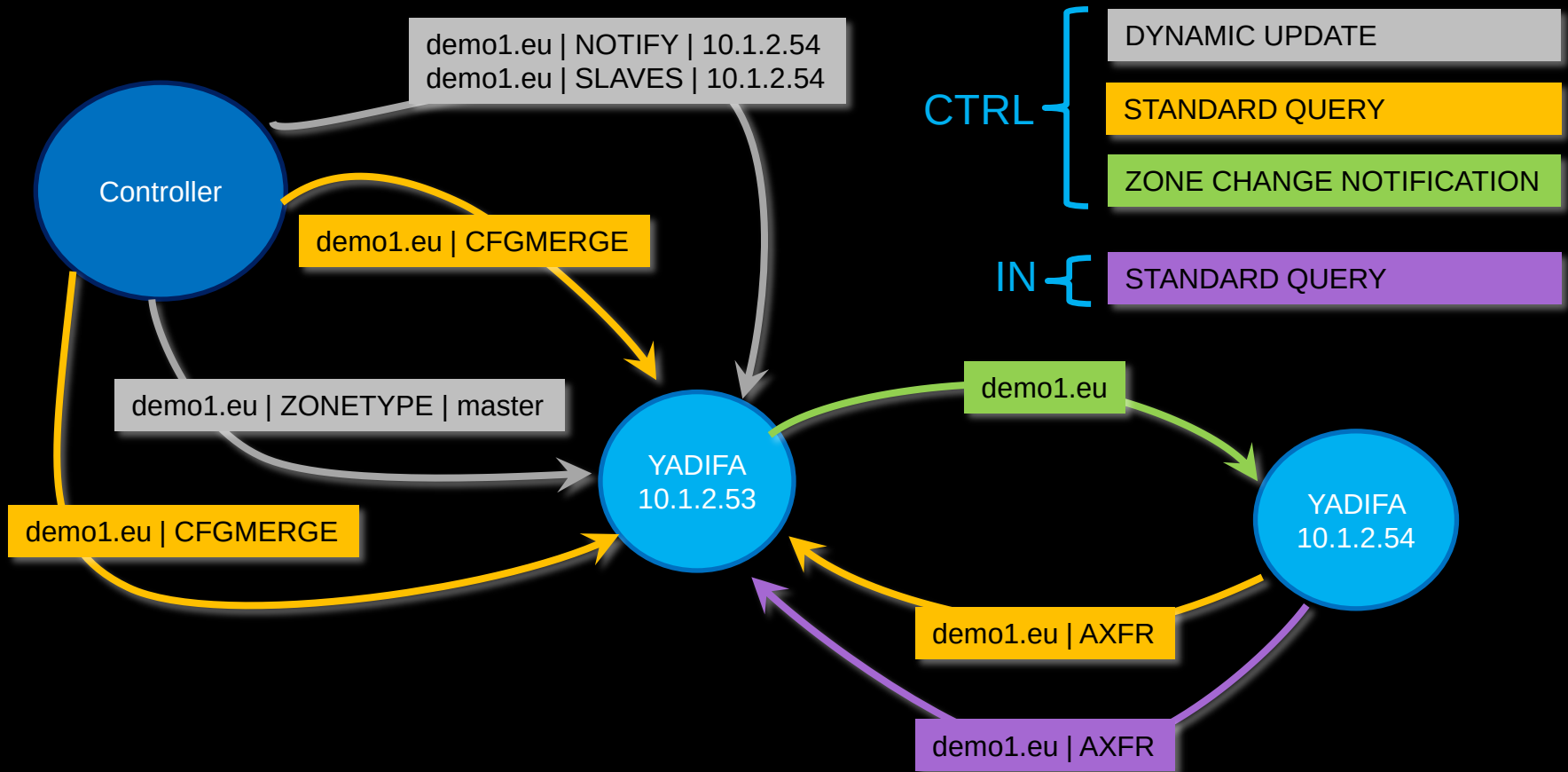
Data length: 21

Data

DYNAMIC ZONE MANAGEMENT



DYNAMIC ZONE MANAGEMENT



DYNAMIC ZONE MANAGEMENT

Dynamic update TYPES :

ZONETYPE
ZONEFILE
ZONENOTIFY
MASTER
SLAVES
DNSSEC
COMMENT
SIGINTV
SIGJTR
NTFRC
NTFRP
NTFRPI
ACLQUERY

Query TYPES :

SHUTDOWN
RELOAD
LOGREOPEN
FREEZE
UNFREEZE
FREEZEALL
UNFREEZEALL
CFGMERGE
CFGSAVE
CFGDROP
CFGMERGEALL
CFGSAVEALL
CFGDROPALL
CFGLOAD



13

 [HTTP://YADIFA.EU](http://YADIFA.EU)

 INFO@YADIFA.EU

 YADIFA-ANNOUNCE

 YADIFA-USERS

 YADIFADNS

 @YADIFAdns

Y:A:D:I:F:A

EURid vzw - Peter Janssen
RIPE (2⁶+2) – 15/05/2013

EURid
www.eurid.eu