

# Credns

formally known  
as dnssexy

credence /'krēdnz/

noun

**1** belief in or acceptance of something as true: *psychoanalysis finds little credence among laymen.*

• the likelihood of something being true; plausibility: *being called upon by the media as an expert lends credence to one's opinions.*

**2** [ usu. as modifier ] a small side table, shelf, or niche in a church for holding the elements of the Eucharist before they are consecrated: *a credence table.*

htt  
©20

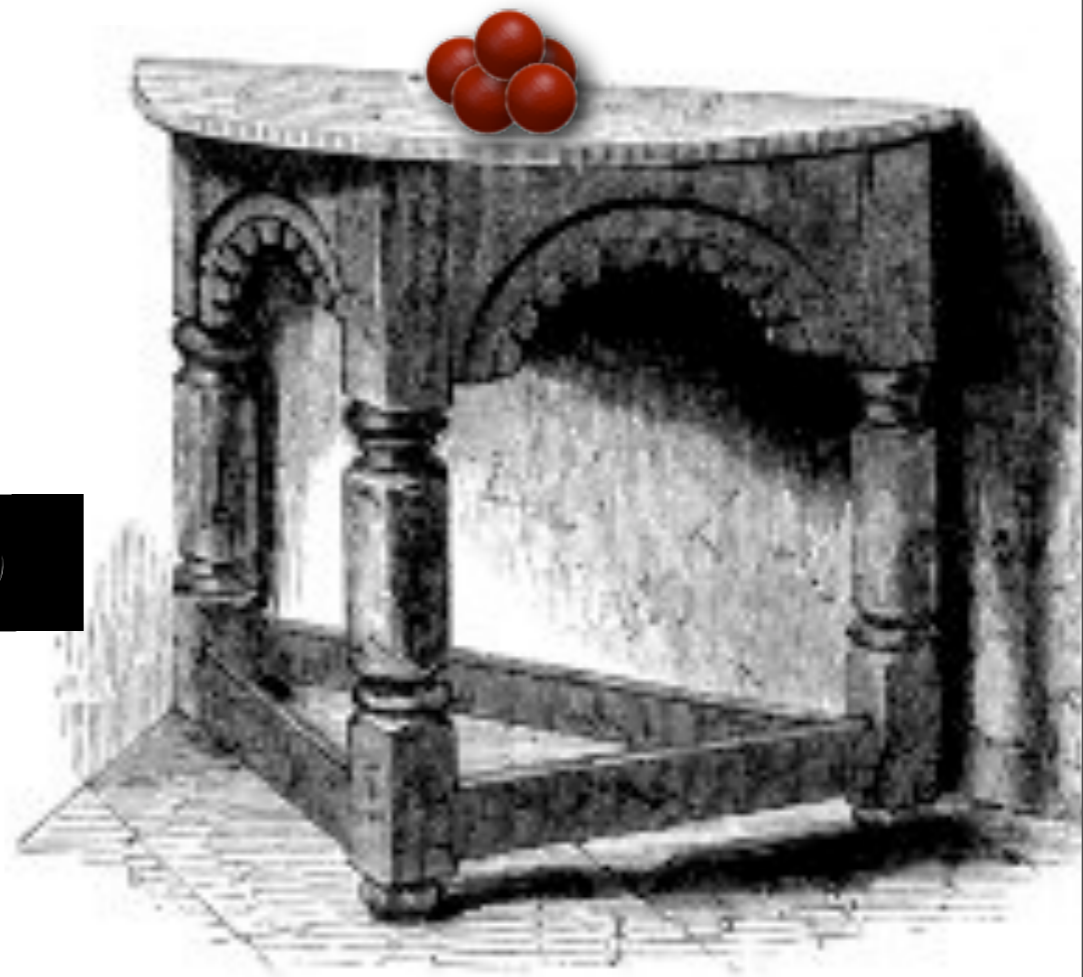
Simple  
Architectural  
element

Within the  
DNS

Put aside the zone  
and test it, before  
further distribution.

PREVENT BOGUS ZONES

GETTING OUT IN THE WORLD



Not the only tool around

OpenDNSSEC Auditor

jdnssec-tools

navgal

validns

.SE  
dnssec-monitor

SurfNET  
DNSSEC  
Checker

vantages D-  
Sync

Keychecker

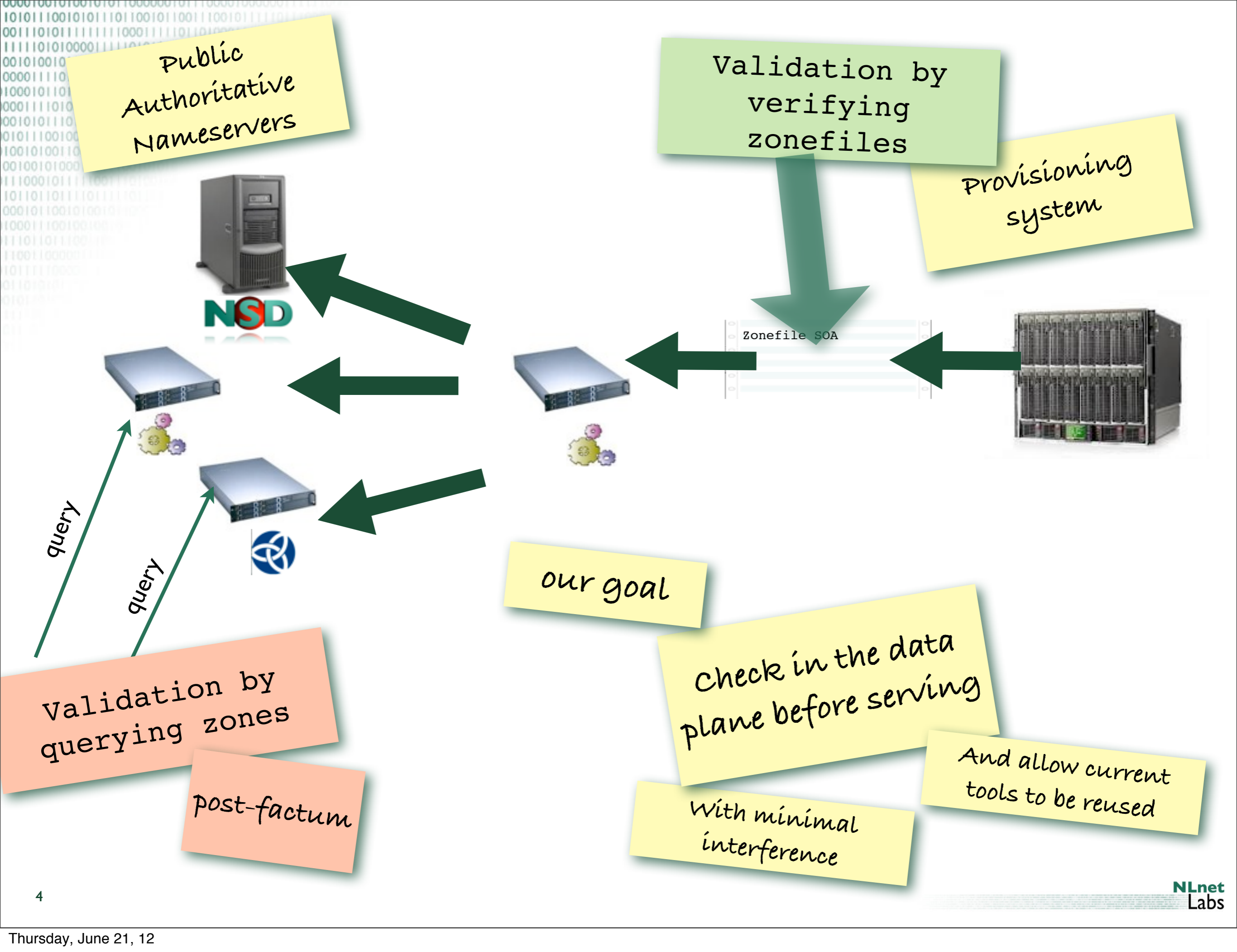
AFNIC Zonecheck

YAZVS

ldns-verify-zone

Validation by  
querying zones

Validation by  
verifying  
zonefiles



Public  
Authoritative  
Nameservers

Hidden Master

Provisioning  
system

Credns



NSD

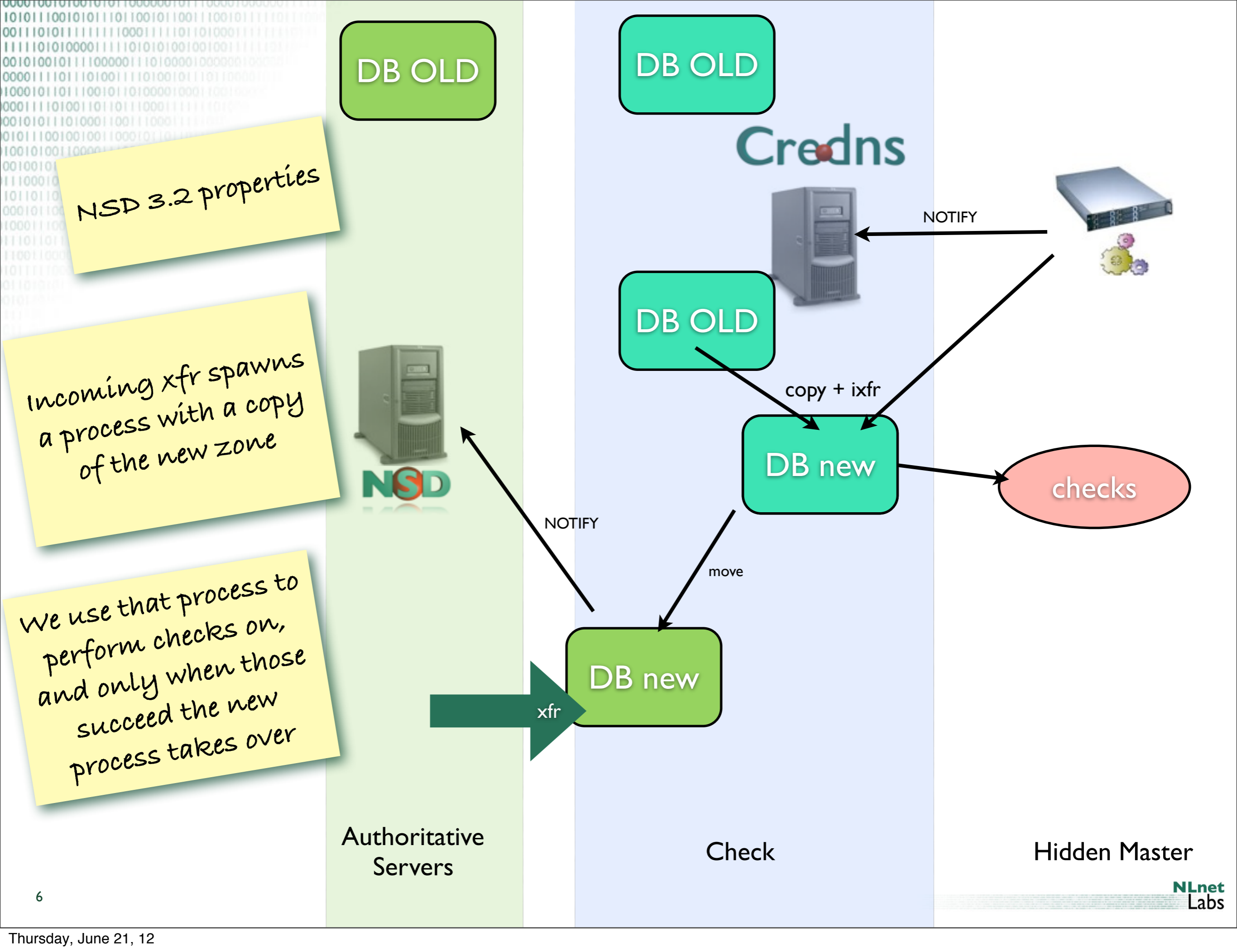


Hidden Master

Credns is just  
another nameserver

In fact it is an  
NSD3.2 fork

Proven code



NSD 3.2 properties

Incoming xfr spawns a process with a copy of the new zone

We use that process to perform checks on, and only when those succeed the new process takes over

Authoritative Servers

Check

Hidden Master

Checks,  
What checks?

```
server:  
    verifier-ip-address: 127.0.0.1  
    verifier-port: 5347  
  
zone:  
    name: example.com  
    [...]  
verifier: drill -S -k example.com.ds @localhost -p 5347 example.com SOA
```

Validation by  
querying zones

All controlled by  
one process and  
pre-publication

```
zone:  
    name: example.com  
    [...]  
    verifier: ldns-verify-zone -V2  
    # alternative  
    # verifier: validns -
```

Validation by  
verifying  
zonefiles

Credns  
as NSD fork

## Credns is not NSD

=====

**WARNING!** Because credns is implemented as a fork of NSD3, it currently functions as a complete authoritative DNS nameserver and will actually answer queries for zones that were deemed correct by a verifier. However, this functionality is not necessary for credns type operation and should disappear in future releases. It is recommended not to rely on credns's ability to answer queries to the public. In future releases credns might well be answering queries to verifiers only. Credns has a different orientation as NSD and might develop into an entirely different direction.



Alternative configuration

Provisioning system

Hidden Master

PULL ON SIGNAL



Credns

notify

notify

Credns performs checks without becoming part of the datapath

Prevent pulling zone after failure by tweaking SOA

For the future

Wishlist

Framework  
Improvements



Checks on IXFR  
fragments (specialize  
on only diffs)

More reporting options  
e.g. Nagios, Mail,  
flashing lights

User contributed plugin  
directory

For now

We want you to share  
your needs and  
experiences



*That's it folks*

Questions to:  
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If you use our software then consider to support  
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