

afnic

Test Requirements Task Force (TRTF)
- *Sandoche Balakrichenan (Afnic)*

afnic

Outline

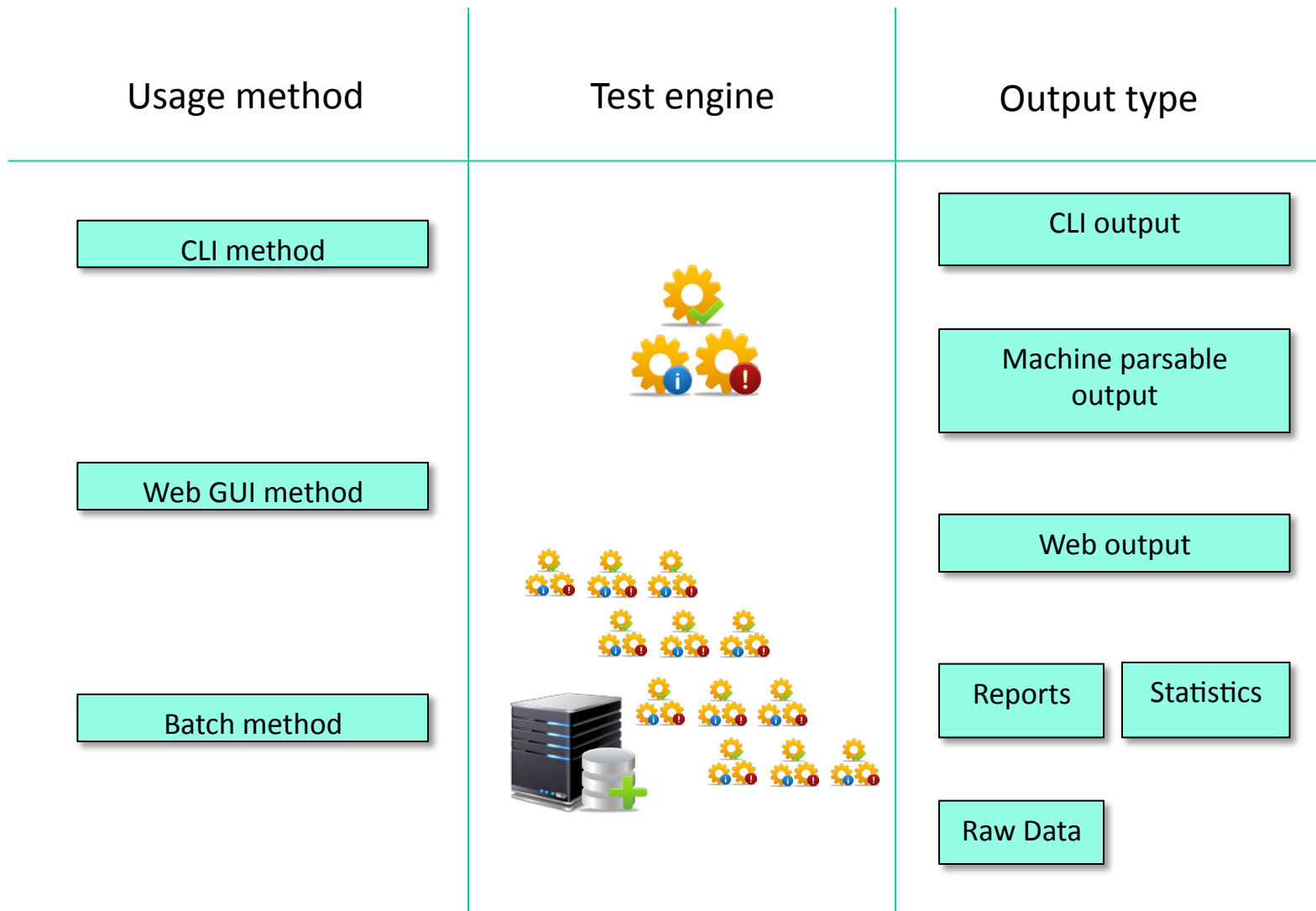
- Zonemaster
- TRTF
 - What & Why
 - Your feedback

Why a new tool?

- Zonecheck
 - Ruby
 - Legacy code
- DNScheck
 - Does not provide deterministic results
- Decision
 - Upgrade existing tools ?
 - Start from the scratch ?



High level architecture



Useful Information

- All documentation are in github (CC 4.0 License)
- All source codes are in github (BSD License)
- Zonemaster
 - Zonemaster-Engine
 - Zonemaster-GUI
 - Zonemaster-CLI
 - Zonemaster-Backend
- Stable Release
- Maintenance until 2016
- We need your inputs for new features
- zonemaster-users@iis.se, zonemaster-devel@iis.se

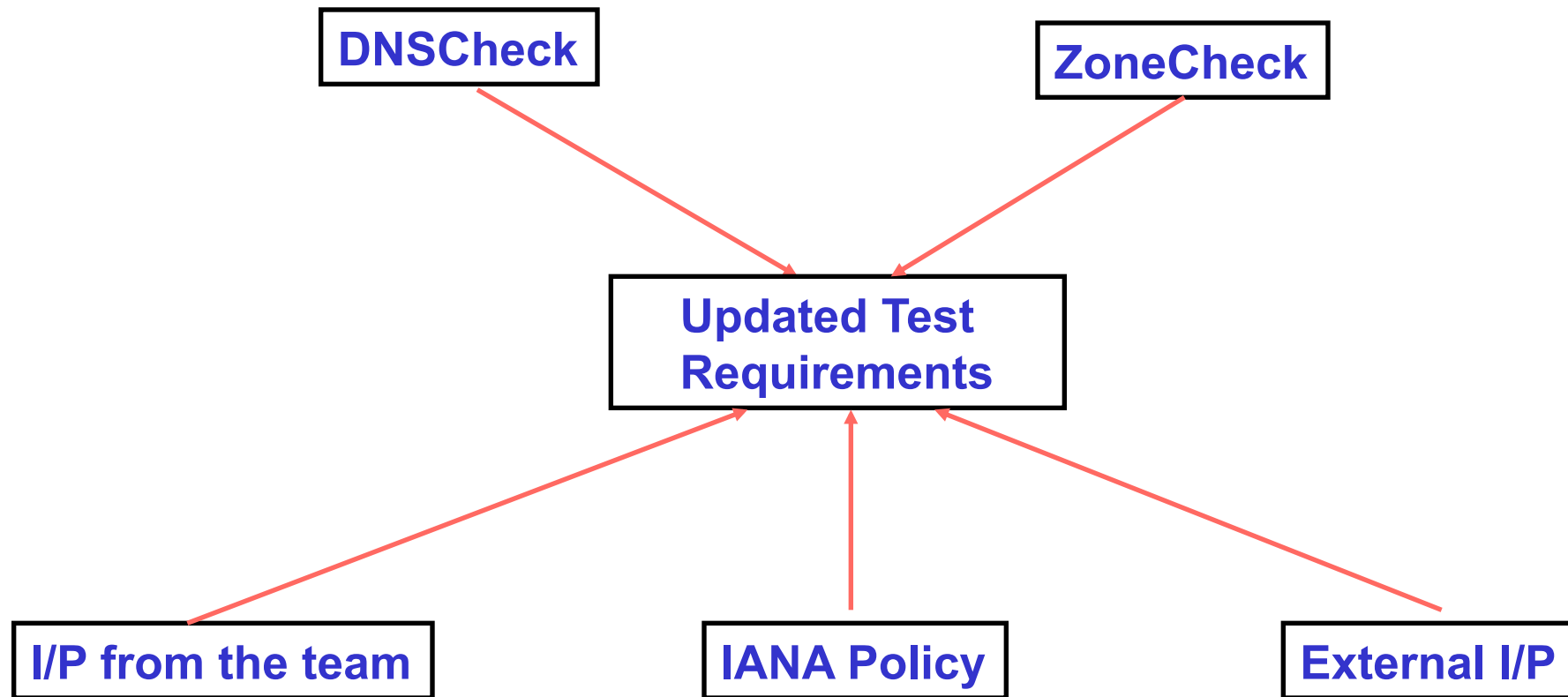
Dilemma before implementing ZM



Test requirements

Req	Requirement description
R01	UDP connectivity
R02	TCP connectivity
R03	Address in a private network
R04	Address should not be part of a bogon prefix
R05	Illegal symbols in domain name
R06	Dash ('-') at start or beginning of domain name
R07	Double dash in domain name
R09	At least two nameservers for the domain
R10	Identical addresses
R11	Nameserver addresses on same subnet
R12	Nameserver addresses are all on the same subnet
R13	Delegation response fit in a 512 byte UDP packet
R14	Delegation response with additional fit in a 512 byte UDP packet
R15	NS record present
R16	NS authoritative answer
R17	NS name has a valid domain/hostname syntax
R18	NS is not an alias
R19	NS can be resolved

Test requirements



Test classification

Level and Test Case
CONNECTIVITY
CONNECTIVITY
ADDRESS
ADDRESS
SYNTAX
SYNTAX
SYNTAX
DELEGATION
DELEGATION
CONNECTIVITY
CONNECTIVITY
DELEGATION
DELEGATION
BASIC

Test specification

② **BASIC00: Domain name must be valid**

Test case identifier

BASIC00 Domain name must be valid

Objective

In order to begin testing the domain name from the input must be a valid domain name. The domain name must follow the rules defined in section 2.3.1 of [RFC 1123](#). The objective of this test is to see if it is possible to have the domain name mapped into a DNS packet in order to proceed with further testing.

Inputs

The label of the domain name to be tested.

Test specification

Ordered description of steps to be taken to execute the test case

1. Remove any trailing dot from the input domain name.
2. If the total length of the input is more than 253 octets, this test case fails.
3. Separate the input by the dividing it into labels separated by the "." character.
4. If any of the labels from step 3 is more than 63 octets, this test case fails.
5. If any of the labels from step 3 is zero octets in length, this test case fails.

Outcome(s)

If the total length of the input is more than 253 octets or any label is longer than 63 octets, this test case fails.

Special procedural requirements

If this test fails, it's impossible to continue and the whole testing process is aborted.

TRTF

- The idea originated from CENTR Jamboree and DNS-OARC to create a TRTF
- TRTF is currently under the scope of CENTR (<https://github.com/CENTRccTLDs/TRTF>)
- Objective
 - BCP
 - Informational RFC

Issues

- Tried number of times but did not materialise
- Different people have different requirement
- The TRTF mailing list is getting lukewarm response
- Volume of the work involved

Why this presentation?

- Is this the right approach?
- Is it possible to define generally accepted requirements? Can we reach a best practice for testing a delegation of a domain?
- Can we reach the point where different tools test the same thing? – If two come to different conclusion, one is probably wrong?
- Your thoughts?

Merci !

afnic

www.afnic.fr
contact@afnic.fr
Twitter : @AFNIC
Facebook : afnic.fr

afnic