Name Server Control Protocol
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We want to be able to

• Deploy multiple different name server implementations
• Control them all via a standard common interface
• Access all the features of modern servers
• Have access to
  - Control (rndc, pdns_control, nsdc)
  - Configuration (named.conf, nsd.conf)
  - Monitoring
We want the protocol to

- be extensible to allow implementers to add new objects and methods
- enable the operation of all major production name server implementations
  - authoritative and recursive
- be able to signal which operations are supported by the implementation being controlled
The requirements of this protocol

• do not require support for specific function in a name server implementation

• do not dictate what data can be returned by the name server especially in response to a command, but should flexible to allow any appropriate results
Design choices were

- **Format** - SNMP, DNS, XML
  - Prefer XML as we are already working on a dns xml schema

- **Transport** - TCP, SOAP, XMLRPC ...
  - Don’t think we need much complexity

- **Security**
  - Secure the channel
  - Authenticate the user
Aims

- One day we hope this will be integrated into name servers
- For now use an agent on each server to wrap the name server implementation
  - As a side effect this would allow the emulation of features that are not currently implemented.
  - For example
    - zone creation in BIND
Example structure

- Control
  - Server
    - Start, stop, flush, set debug level
  - Zones
    - Refresh, Stop updates, send notifies
Example structure

- **Configuration**
  - Server
    - PID file, Enable recursion, Enable DNSSEC ...
  - Zone
    - Create and remove, Add and remove RR, Assign ACL ...
  - Log
    - Create, format, define events ...
  - Security
    - Create ACL, Generate DNSSEC Key, TSIG ...

NSCP

Examples

nominet
NSCP status

• We are currently writing the requirements based on.
  – A review of the capabilities of current implementations
  – Operational experience
  – A wish list of (good) ideas

• We will have an initial requirements and protocol draft ready for IETF 70.

• We are keen to work with others in this group and produce a control protocol that everyone can use.
  – Please let us know what you think.