

Number Location with ENUM

◀ DNS Configuration

- DNS Basics
- SRV Records
- ENUM
- NAPTR Records
- Testing

SRV Records

✦ RFC2782

"_Service._Proto.Name TTL Class SRV Priority Weight Port Target"

_sip._udp.bigu.edu 43200 IN SRV 10 10 5060 sipr.bigu.edu.

- ✦ Service is SIP.
- ✦ Transport is UDP. Other values could be TCP, SCTP or TLS.
- ✦ Cache lifetime is 12 hours (43,200 seconds.)
- ✦ Class is IN.
- ✦ Record type is SRV.
- ✦ Priority is 10. Lower values are queried first.
- ✦ weight is 10. (for load sharing of equal priorities)
- ✦ Sip port is 5060.
- ✦ The proxy server FQDN is sipserver.bigu.edu.

SRV

- ◀ A call to sip:BabsJensen@sunyt.edu
- ◀ Caller's service asks where is the server for sunyt.edu??
 - DNS Lookup for SRV record `_udp._sip.sunyt.edu`
 - Answer: `ipbx.sunyt.edu` port 5060
 - Call is Routed to `ipbx.sunyt.edu`
- ◀ # dig `_sip._udp.pulver.com` SRV
;; ANSWER SECTION:
`_sip._udp.pulver.com. 3600 IN`
`SRV 10 1 5062 redirect.SipEduEnum.pulver.com.`
- ◀ `_sip._udp.bigu.edu. 43200 IN SRV 0 0 5060 sipserver1.bigu.edu.`

Number Location with ENUM

- ◀ Joe Dials +1(631)961.8934
 - Implied or explicit Country Code.
 - Area/City Code
 - Exchange
 - Number
- ◀ Convert to form suitable for our favorite distributed data base: DNS
- ◀ Lookup 4.3.9.8.1.6.9.1.3.6.1.sipEduEnum.pulver.com
- ◀ DNS Naming Authority Pointer– sip:1234@cs.sunyit.edu

BIND Directory

◀ Host your own..

- Send Us your name servers

```
$ORIGIN 4.6.6.0.1.5.1.SipEduEnum.Pulver.COM.
```

```
IN NS adns1.berkeley.edu.
```

```
IN NS adns2.berkeley.edu.
```

- Or send us your Zone File..

```
$ORIGIN .
```

```
$TTL 1200 ; 2 minutes
```

```
1.6.9.1.3.6.1.SipEduEnum.pulver.com. IN SOA
```

```
SipEduEnum.pulver.com. edguy.pulver.com. (...)
```

```
$ORIGIN 1.6.9.1.3.6.1.SipEduEnum.pulver.com.
```

```
NS ns1.pulver.com.
```

```
*.9.8 NAPTR 100 10 "u" "E2U+sip"
```

```
"!(^.*$)sip:\\1@demo.bluelavasoftware.com!" .
```

```
*.0.1 NAPTR 100 10 "u" "E2U+sip"
```

```
"!(^.*$)!sip:\\1@demo.bluelavasoftware.com" .
```

DIG NAPTR Example

- ⦿ dig 4.3.9.8.1.6.9.1.3.6.1.sipEduEnum.pulver.com NAPTR
- ⦿ ;; ANSWER SECTION:
4.3.9.8.1.6.9.1.3.6.1.sipEduEnum.pulver.com.
1200 IN NAPTR 100 10 "u"
"E2U+sip" "!(^.*\$)!sip:\\1@demo.bluelavasoftware.com:5078!" .

SER config for enum

◀ loadmodule "/usr/lib/ser/modules/enum.so" #ENUM

◀ #old style...

```
#modparam("enum", "domain_suffix", "SipEduEnum.pulver.com.")
```

```
# is this an ENUM destination (leading +?)
```

```
if (method=="INVITE" && uri=~"sip:\+[0-9]+@.*") {
```

```
    enum_query("voice");
```

```
    if (uri=~"sip:\+[0-9]+@.*") { # if still in e164 mode
```

```
        enum_query("SipEduEnum.pulver.com", "voice");
```

```
    };
```

```
};
```