

Lanka Education and Research Network

ENUM

SANOG XXV

Kandy, Sri Lanka

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LEARN

National Research and Education Network of Sri Lanka

ENUM

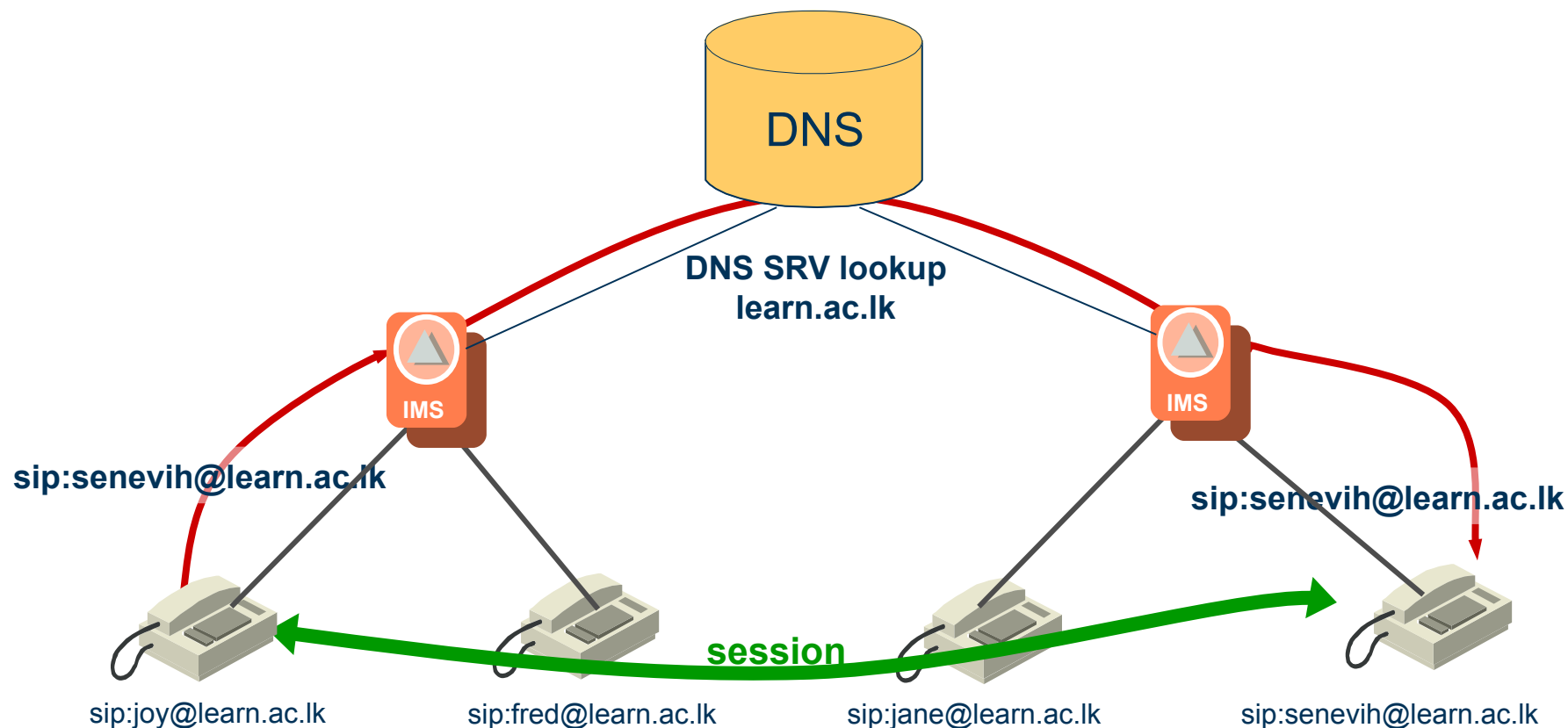
- What is ENUM
 - The process of mapping **Telephone Numbers** to Uniform Resource Identifiers (URIs)
 - **E.164 NUM**ber to URI mapping
 - **E.164 NUM**ber translation
 - **TE**lephone **NU**mber **M**apping
 - **ENUM**eration

ENUM

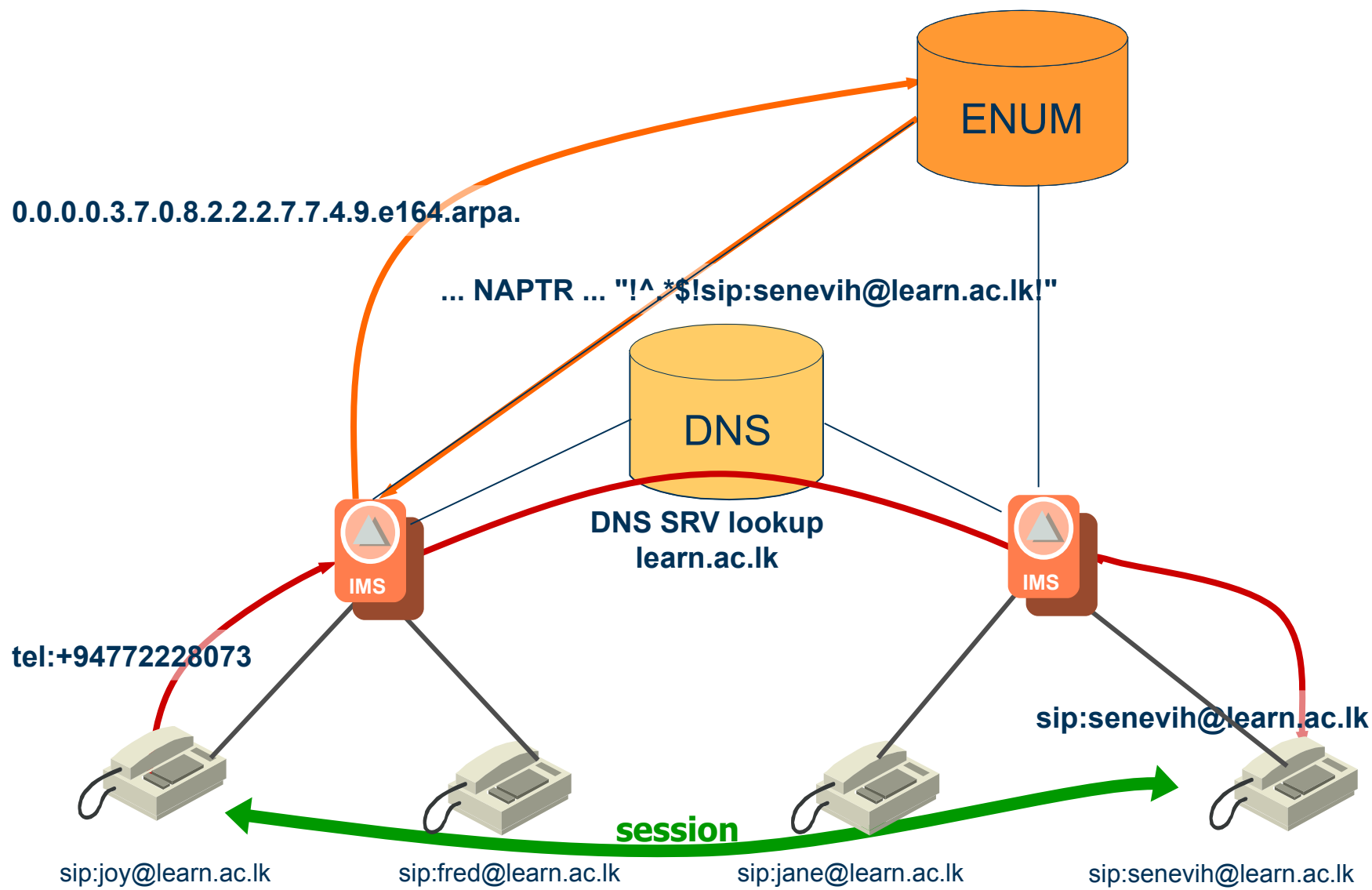
- How ENUM works?
 - your E.164 phone number - +94 777 222 8073
 - make a FQDN – 3.7.0.8.2.2.2.7.7.7.4.9.e164.arpa.
 - query the ENUM for NAPTR
 - returns list of URIs
 - *sip:senevih@learn.ac.lk*

IN NAPTR 100 100 “u” ``E2U+sip`` ! ^.*\$!SIP:senevih@learn.ac.lk! .

SIP Session Establishment



E.164 Session Establishments



ENUM Example

- Example

- +94 81 200 3031

- 1.3.0.3.0.0.2.1.8.4.9.e164.arpa

\$TTL 3600000

@ IN SOA learn.ac.lk. root.learn.pdn.ac.lk. (

2011052401 ; Serial

3600 ; Refresh

3600 ; Retry

3600000 ; Expire

86400) ; Minimum

IN NS ns1.ac.lk.

IN NS ns2.ac.lk.

IN NS ns3.ac.lk.

\$ORIGIN 0.0.2.1.8.4.9.e164.arpa.

0.3.0.3 IN NAPTR 100 10 "u" "sip+E2U" "!^.*\$!sip:dinesh@learn.ac.lk!i" .

IN NAPTR 102 10 "u" "mailto+E2U" "!^.*\$!mailto:dinesh@learn.ac.lk!i" .

1.3.0.3 IN NAPTR 100 10 "u" "sip+E2U" "!^.*\$!sip:ceo@learn.ac.lk!i" .

IN NAPTR 102 10 "u" "mailto+E2U" "!^.*\$!mailto:ceo@learn.ac.lk!i" .

ENUM lookup

dig -t naptr 1.3.0.3.0.0.2.1.8.4.9.e164.arpa

Asterisk ENUM lookup

exten=> _0[1-9]XXX.,2,EnumLookup(+431\${EXTEN:1})

Benefits and Limitation of ENUM

- Benefits
 - Potable telephone numbers
 - Centralized database for E.164 numbers allows easier management
 - Allows fragmentation of numbers plan across many soft-switches
 - Can be used to support numbers translation services
- Limitations
 - ENUM provides a translation from the dialed E.164 number to URIs
 - It does not take account of point of origin
 - routing of emergency call
 - routing to an appropriate point of interconnect

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Thank You

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