

# Setting up ENUM for outbound calls on Asterisk at Home

Contributed by Kevan

Simply put ENUM is a way for those of us that utilize VOIP to avoid using the PSTN to establish a call between to VOIP systems with out using the PSTN. Think of it as a true Internet Phone - no phone company of any kind needed. Your probably asking "Don't I do this already?". Well if both you and the person your calling are using the same VOIP provider you are doing the next closest thing but still using a third party to complete your call. Imagine being able to call from one \* box to another \* box directly over the internet without involving a third party.

What is ENUM and why whould I want to set it up in Asterisk?

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UPDATED: [Click here for an ENUM HOWTO for Trixbox](#)

[Click here for a HOWTO for inbound calls via ENUM and SIP on AAH](#)

[Click here for a HOWTO for inbound calls via ENUM and IAX2 on AAH](#) For help setting up your ENUM account at [e164.org](http://e164.org)

Your phone number and server information are stored in a special DNS zone (very similar to a reverse lookup zone). When an ENUM enabled \* box calls your phone number, it will first attempt to find your phone number in the ENUM DNS zone. If it finds your phone number it will use the infomation to setup a call directly between their \* box and yours. Here is a sample call flow: Caller Dials Phone #

|  
Calling \* Box checks ENUM DNS Zone

|  
# is found and results are resturned

|  
Calling \* Box calls your server via SIP or IAX2 (eg. sip://1222333444@asteriskbox.dnsserver.com) | Your \* box answers and forwards the call to your extension|You answer the phone

Think about the potential... you can contact someone via VOIP with no prior knowledge or configuration. Remeber, ENUM has no effect on how traditional PSTN users or VOIP users who are not using ENUM contact you. ENUM only adds another option for other ENUM connected VOIP users.

The benefits of ENUM really ring true when working with a per minute VOIP provider or when you make a lot of International calls.

Setting up Asterisk at Home/Trixbox with ENUM for outbound calls

- 1) Connect to the web interface on your AAH (Asterisk at Home) server.
- 2) Click on Asterisk Management Portal and login.
- 3) Click on the Maintanance link and then click the Config Edit link on the left hand side.
- 4) Find and click on the Extensions.conf link on the left hand side of the page.
- 5) Scroll down through the page until your find the section labeled [macro-dialout-enum].
- 6a) On AAH servers version 1.x the ENumLook line should read -- exten => s,12,EnumLookup(\${DIAL\_NUMBER}) If not change your system to match and click Update at the bottom of the screen.
- 6b) On AAH servers version 2.x the ENumLook line should read -- exten => s,9,EnumLookup(+\${DIAL\_NUMBER}) If not change your system to match and click Update at the bottom of the screen. (Notice the + before the \$)

- 7) Click the Update button at the bottom of the page.
- 8) Now click the /etc/asterisk link at the top of the page.
- 9) Find and click on the enum.conf link on the left hand side of the page.
- 10) Under the [general] section there should be a statement that reads:  

```
search => e164.org
```

If this entry does not exist create it.

There will probably be an entry that reads search => e164.arpa.

It can stay and will allow for support of the official e164.arpa when it is operational.
- 11) Click the Update button at the bottom of the page.
- 12) Click the Reload Configs link at the top of the page to read in your settings.
- 13) Close the phpconfig window and return to the Asterisk@Home window.
- 14) Click on the Setup link and then click the Trunks link on the left hand side.
- 15) Click the Add Enum Trunk link.
- 16) In the Outbound Caller ID field enter your callerid information in the format of "John Doe" <1112223333> (Include the quotes)
- 17) To support 7 digit dialing via ENUM, in the Dial Rules field enter 1555+NXXXXXX (1 followed by your area code and then +NXXXXXX) Replace 555 with your areacode.
- 18) On the next line enter 011|. (include the .)
- 19) Click the Submit Changes button at the bottom of the page.
- 20) Click the Outbound Routing link on the left hand side.
- 21) In the routes window on the right-hand side, click the route you would like to enable with ENUM. (You may need to do steps 21, 22 and 23 for each outbound route)
- 22) Make the ENUM trunk the first route in your Trunk Sequence. Drop your existing outboard providers down one.
- 23) Click the Submit Changes button at the bottom of the page.
- 24) Click the red You have made changes - when finished, click here to APPLY them at the top of the page to load your changes.
- 25) Try calling the Geek-Pages.Com e164.org ENUM test number 631-240-5061. Listen to the announcement to find out if your call completed via ENUM or the PSTN.

For help setting up your Asterisk at Home box for inbound ENUM calls via SIP click [here](#)

For help setting up your Asterisk at Home box for inbound ENUM calls via IAX2 click [here](#)

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