

# pbx\_lua: Taking Asterisk Applications to the Next Level



Matthew Nicholson  
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# So, what is pbx\_lua?

PBX\_lua is an Asterisk module and a pbx switch that enables you to write and run dialplan code in Lua.



# What is Lua?

Lua is a small, fast, lightweight, embeddable scripting language.



# A Little History

- Started as an idea
- Became an experiment
- Grew into a pbx switch



# What can I use pbx\_lua for?

- Configuring PBX systems
- Database integration
- Fancy call scripts
- Web service integration
- Almost everything you use pbx\_config (dialplan/extensions.conf) for



# How do I get it?

- Included in Asterisk 1.6.0 and later
- Apply patch from bug #12961 (optional)
- Install Lua headers and libraries (liblua5.1-0-dev on Debian and Ubuntu)
- Run ./configure
- Run make install



# Basic Syntax

```
[default]  
exten => s,1,Dial(SIP/100)
```

```
extensions = {  
    default = {  
        s = function()  
            app.dial("SIP/100")  
        end;  
    };  
}
```



# Basic Syntax

```
[default]  
exten => s,1,Dial(SIP/100)
```

```
extensions = {  
    default = {  
        s = dial_sip;  
    };  
}
```

```
function dial_sip()  
    app.dial("SIP/100")  
end
```



# Channel Variables and Functions

[default]

```
exten => 100,1,Noop
```

```
exten => 100,n,Set(channel_name=${CHANNEL})
```

```
exten => 100,n,Set(unique_id=${UNIQUEID})
```

```
exten => 100,n,Set(callerid_name=${CALLERID(name)})
```

```
exten => 100,n,Set(callerid_num=${CALLERID(num)})
```

```
exten => 100,n,Set(CALLERID(name)=Matt)
```

```
exten => 100,n,Set(random_var=random value)
```

```
exten => 100,n,Dial(SIP/${EXTEN})
```



# Channel Variables and Functions

```
extensions = {  
    default = {  
        [100] = dial_sip;  
    };  
}
```

```
function dial_sip(context, exten)  
    channel_name = channel.CHANNEL:get()  
    unique_id = channel.UNIQUEID:get()  
  
    callerid = {}  
    callerid.name = channel.CALLERID("name"):get()  
    callerid.num = channel.CALLERID("num"):get()  
  
    channel.CALLERID("name"):set("Matt")  
    channel.random_var = "random value"  
    app.dial("SIP/" .. exten)  
end
```



# One Problem

Goto does not work the same (but you probably won't need it)

Why should I use pbx\_lua for my next project?



# Dialplan is Hard

- Limited control structures
- No real functions
- No data types
- No data structures



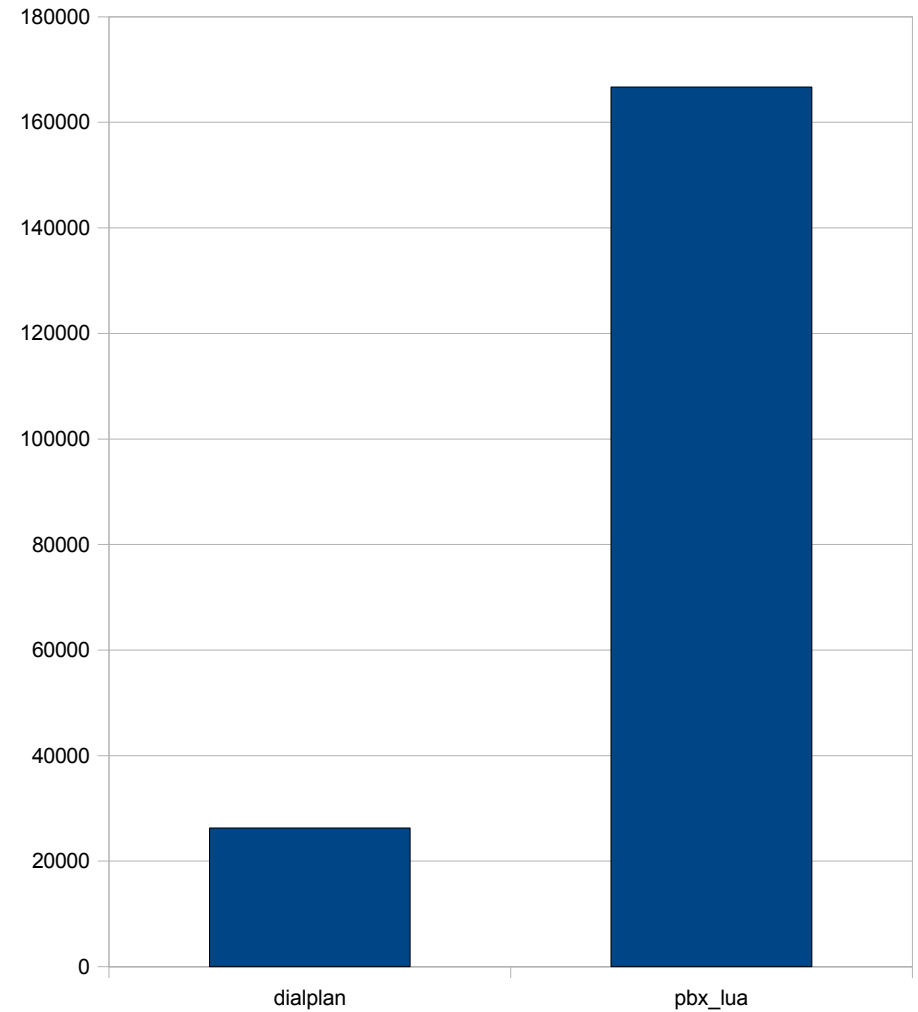
# Lua is Easy

- Real control structures
- Real functions
- Real data types
- Real data structures



# Raw Speed

- Dialplan is slow
- Lua is fast



# Other Reasons

- Maintainability
- Extendability
- Code Reuse



# The Coolness Factor

Lua is cool. Asterisk is cool.



# Questions?

