

Python + LDAP

Demystifying LDAP and
putting it to good
use for configuration data

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Nationwide Insurance



What is LDAP?

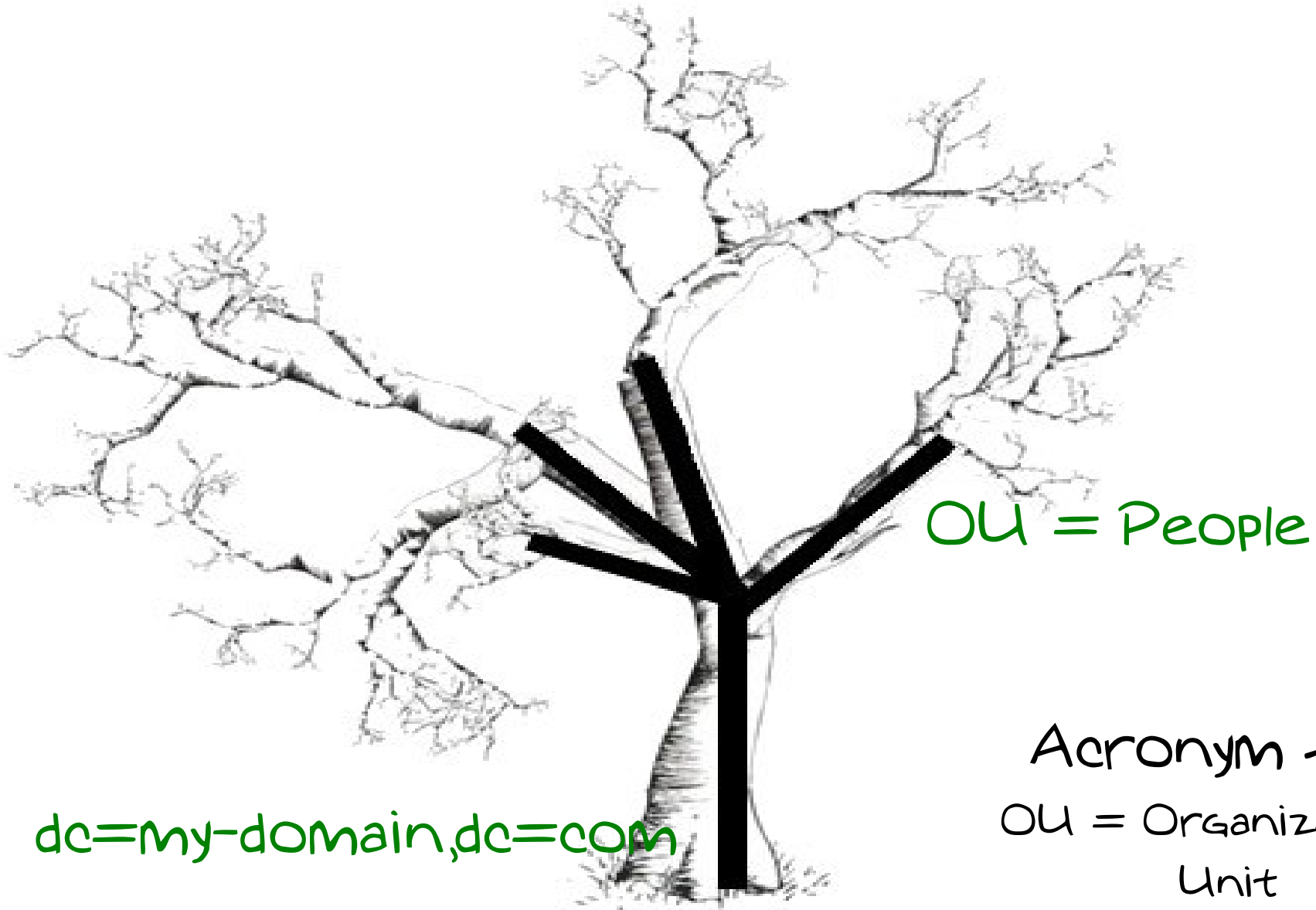


dc=my-domain,dc=com

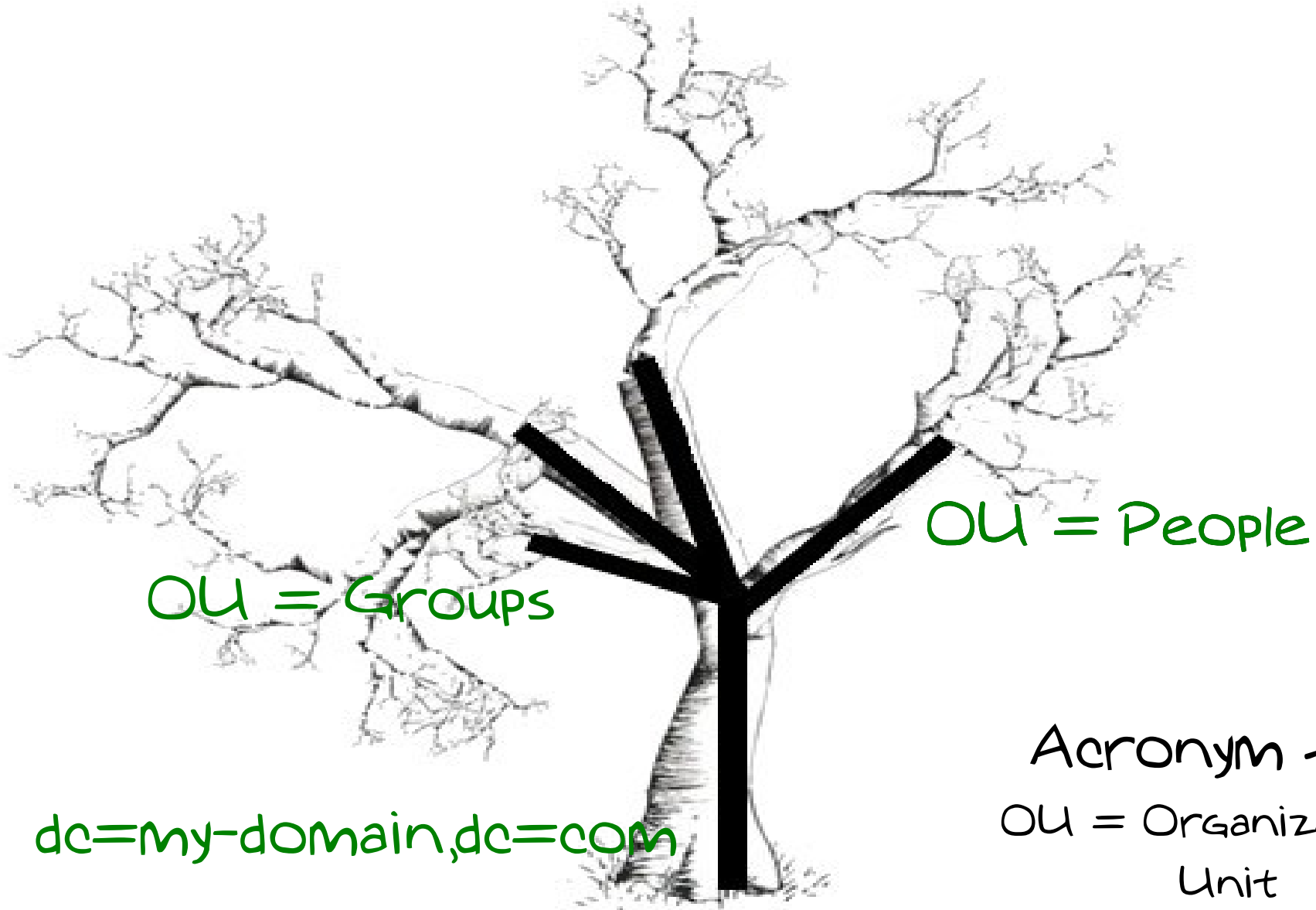
Acronym Help

DC = Domain
Component

What is LDAP?



What is LDAP?



What is LDAP?

cn=myapp,ou=apps



OU = Groups

OU = People

Acronym Help

CN = Common
Name

dc=my-domain,dc=com

What is LDAP?

DN=cn=myapp,ou=apps,dc=my-domain,dc=com

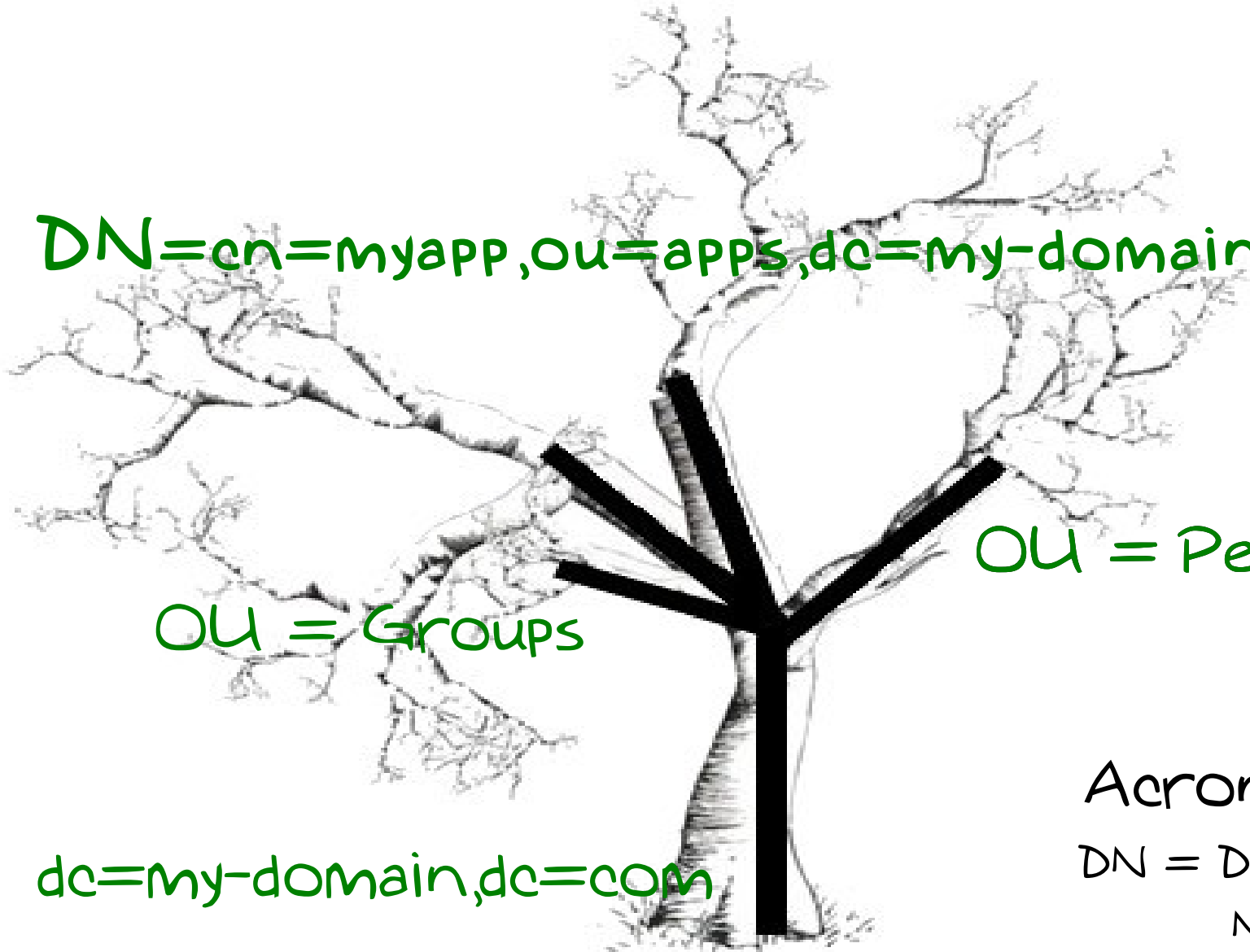
OU = Groups

OU = People

dc=my-domain,dc=com

Acronym Help

DN = Distinguished
Name



Basic LDAP Administration

- Openldap-clients

Generate LDIF "-L", BindDN "-D"

- LDAP Data Interchange Format (LDIF)

- PhpLDAPadmin

<http://phpldapadmin.sourceforge.net>



Python LDAP Module

Initializing

```
import ldap
l = ldap.open(host)
l.protocol_version = ldap.VERSION3
id = l.simple_bind(username, password)
```



Python LDAP Module

Searching

```
[ (DN, {k1: [v1], k2: [v2]}), ... ]
```

```
for resultDN, ldif in \
    l.search_s(baseDN, ldap.SCOPE_SUBTREE, 'cn=*'):
    print '\nFound: %s' % (resultDN)
    for k, v in ldif.iteritems():
        print '%s: %s' % (k, ".join(v))
```



Extending your Schema

Get your own OID!

projectname ↔ ou=project name

projectname, configfile ↔ objectclass name

configfile, section, option ↔ attribute name

<http://www.openldap.org/doc/admin24/schema.html>

Demo

Demonstrating centralized configuration data

- Leveraging fail2Ban
Authored by Cyril Jaquier
- configparser2ldap.py
Generate schema & LDIF



Questions & Resources

For these slides and scripts used in demo:

<http://joneBird.com/pyworks/>

Additional Resources:

<http://www.openldap.org/doc/admin24/schema.html>

<http://fail2Ban.sourceforge.net/>

<http://python-ldap.sourceforge.net/>

<http://phpldapadmin.sourceforge.net>

Me?

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