LAX

A toolset for network administration

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LAX

is a collection of scripts for administrators

uses a network directory, (still) a KDE3 portal
and openssh autologin channels to remote hosts

Is in development, growing, moving

*Revite on the network*
Say you are an IT administrator of a midsize company. You probably need LAX because you should

- know (and remember) **what** you have
- know if **it** works
- be able to control **it**

*Overpower entropy!*
Use LAX to

collect: directory of network objects
monitor: grab state of network objects
alert: notification, reaction, escalation
visualize: show network objects
control: manage network objects
the LAX server

is an administration machine only

LAXdb: Openldap using a special scheme

Network operations start here (openssh)
Information is collected here (postgres)

Administrator desktops (KDE / NX / RDP)
special accounts reflection areas of interest

Do not run production services here
scripting

is a administrators automation technology

The administrator puts its know how to the script

realize a single administration task per script

Systematically develop and organize scripts

create an administration library
Example:
```
vx-start dicl mserver
```
We prefer this name scheme
```
Module-function-subfunc  option parameter
```
Simple „development“ tool
Groups of network objects
eumerated or built by a script at runtime
a group can contain other groups

Transactions
repeat operations on / with multiple hosts
parallel | sequential

modules
structure: modules

LAX-DB

- instance
- dhcp
- dns
- certs
- openvpn
- ipsec
- greylist
- mail
- clam
- frox
- havp
- alarm
- monitor
- devel
- squid
- user
- ha
- vx
- san
structure: filesystem

/opt/lax  all the software, scripts delivered
    modules
        <module>
            api  here are the scripts
            gui  mostly kommander scripts
            templates

/var/lib/lax  the local configurations
    modules
        <module>
            api
...
Openldap, hierarchical structure

ou=lax
    o=organization_name
    laxnet=networkname
    host=hostname
    laxservice=servicename
    laxdevice=hostname
    laxservice=servicename
    ou=administrators
    ou=laxgroups
    ou=transactions

Scripts and a gui to manage your network objects

laxdb-host-add pc34 192.168.30.77 Windows

GUUG LK2009 Dresden
One (lax's) openssh public key for all administrators connections as root@<ip>

Operations on hosts

lax-run "df \-h" intraweb
lax-login intraweb
lax-scp intraweb:/srv(www/htdocs/index.html .
konsole \-e lax-run "\textit{yast2 network}" intraweb

Network transactions

laxs "ipconfig \ /all \ | \ grep Suffix" xp-clients
laxta-run RP 2 "df \-h \ | \ grep \-w '/'" linuxe
x.509 certificate management for openvpn, apache2, and racoon (ipsec).
Install certs and revocation list at servers.
Distribute certs to users by eMail.

aide host based intrusion detection

Control of online virus scanners (squid/havp) and ftp (frox) by clamav.
Control of mailserver **postfix** including greylisting, clamav virus scanner spamassassin Spamfilter (soon) automatic mail attention (soon)

Local installation and **update server** for openSUSE
lowest interval: 1 minute

every network object can have its individual value

an **alarm script** can be assigned to each object
Individual alarm scripts are possible

runs the alarm script if the object's checks fails

base for HA features at virtualization cluster
Control of Xen based virtualisation systems
install from templates
manage virtual machines
save and restore virtual machines
for

single virtualisation server
2-node active-active cluster
HA cluster

based on iSCSI, DRBD, LVM, Xen
LAX clustermanager

Cluster-Raum (Doppelklick)
- dial
  - cs1
  - cs2
- infra

Eigenschaften Clusterserver:
- freier Speicher (MB)
- CPU
- Eigenschaften
- Disk: sand: 193.75 G

virtuelle Maschinen
- Stop
- Kill
- Move
- Defs
- New
- vm
- det
- Con
- SSH
- RDP
- VNC

AKTIVE virtuelle Maschinen

<table>
<thead>
<tr>
<th>Maschine</th>
<th>Server</th>
<th>Speicher</th>
<th>vCPU</th>
<th>Status</th>
<th>Zeit</th>
<th>Pro</th>
<th>Disk</th>
<th>MAC</th>
<th>IP</th>
<th>Template</th>
<th>OS</th>
<th>Info</th>
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<td>Linux</td>
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</table>
design virtual networks

deeper development of existing modules

Available at

source.net/projects/lax

www.teegee.de/lax

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