

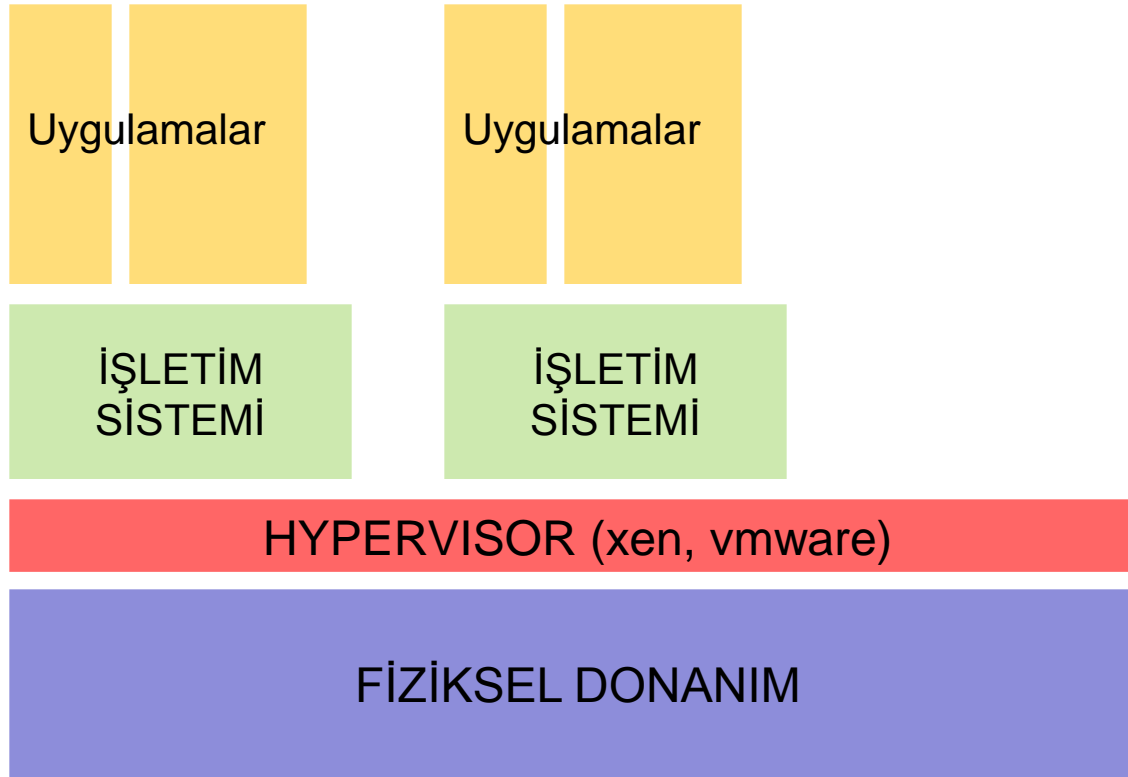
FreeBSD ve OpenSolaris ile Sanallaştırma Uygulaması

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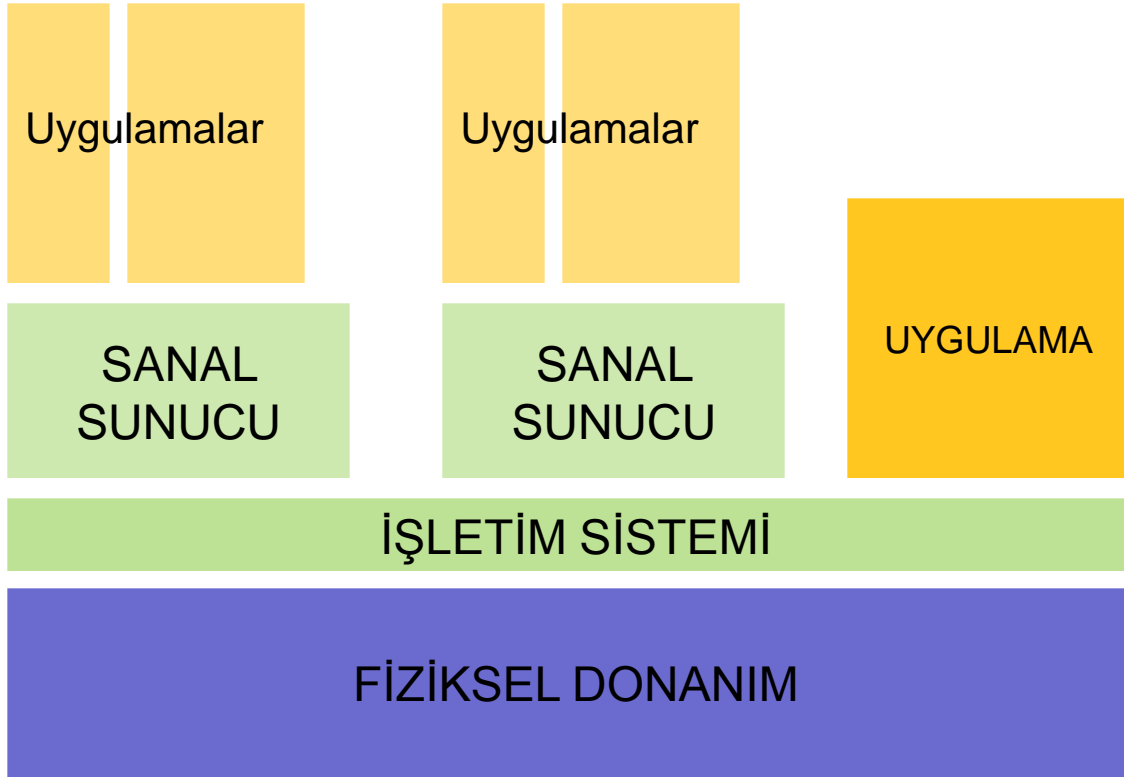
İçerik

- FreeBSD Jail ile Sanallaştırma
- OpenSolaris Zone ile Sanallaştırma

HYPERVERSOR



İşletim Sistemi Seviyesinde Sanallaştırma



FreeBSD Jail

- Etkin kaynak kullanımı
- Güvenli ortam
- Servis , uygulama ayırma
- Ortak çekirdek (kernel)
- Ayrık /etc /usr/bin /usr/lib /usr/etc

man jail (8)

FreeBSD Jail Kurulumu

```
# mkdir /usr/local/jail
# cd /usr/src
# make -j3 world DESTDIR=/usr/local/jail
# make distribution DESTDIR=/usr/local/jail
# mount -t devfs devfs /usr/local/jail
```

- */etc/rc.conf* içine ;
ifconfig_bce0_alias0="inet 192.168.100.1 netmask 255.255.255.0"
jail_enable="YES"
jail_interface="bce0"
jail_devfs_enable="YES"
jail_procfs_enable="YES"
jail_list="ulakvm"
jail_ulakvm_rootdir="/usr/local/jail"
jail_ulakvm_hostname="testsrv.ulakbim.gov.tr"
jail_ulakvm_ip="192.168.100.1"

FreeBSD Jail Kurulumu



```
# /etc/rc.d/jail start ulakvm
```

```
# jls
```

```
# jexec 1 tcsh
```

- EZJAIL ile kurulum

```
# cd /usr/ports/sysutils/ezjail && make install clean
```

- /usr/local/etc/ezjail.conf.sample -> ezjail.conf olarak düzenlenir.

```
# ezjail-admin install
```

```
# ezjail-admin create -r /usr/local/ulakvm ULAKVM 192.168.100.1
```

```
# /usr/local/etc/rc.d/ezjail.sh forcestart ULAKVM
```

```
# jls
```

```
# jexec 1 tcsh
```

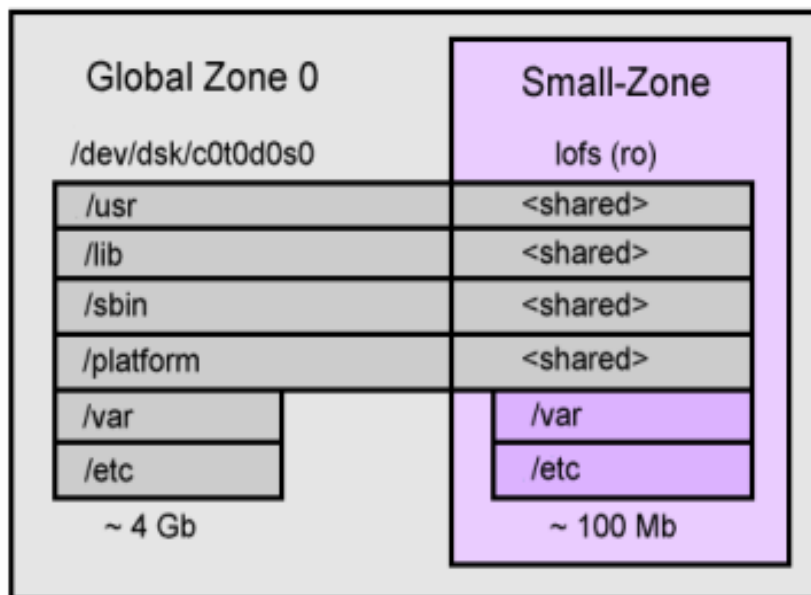
FreeBSD Jail Artılar Eksiler



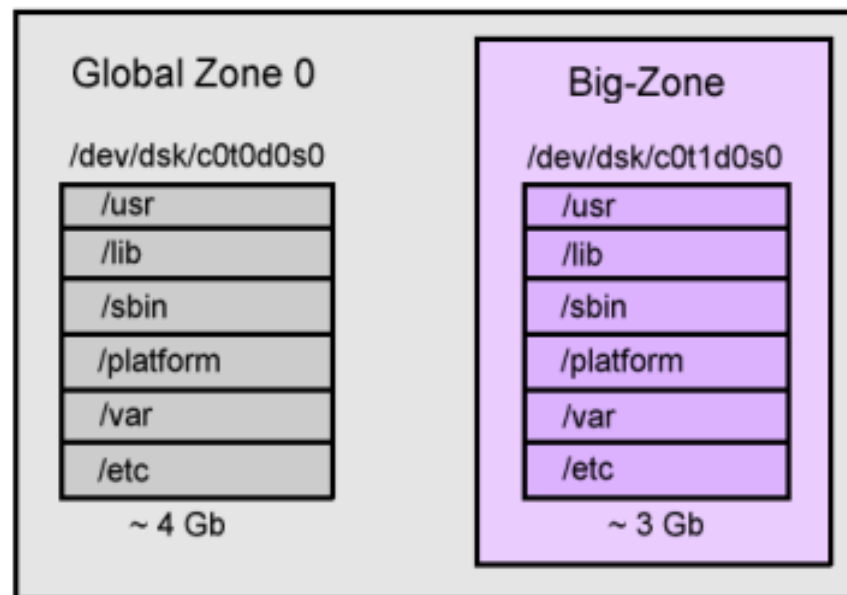
- + FreeBSD 7.2 ile birlikte birden fazla IP ve IPv6 desteği
- + Kolay yedekleme
- + 32bit Jailler 64bit sistemde çalışır
- + cpuset (1)
- Kendine ait ağ yığını (network stack) yok
- Kaynak yönetimi

OpenSolaris Zones

Sparse Root Zone



Whole Root Zone



OpenSolaris Zones Kurulumu

```
# zonecfg -z ulakvm
```

```
zonecfg:ulakvm> create
```

```
zonecfg:ulakvm> set autoboot=true
```

```
zonecfg:ulakvm> set zonepath=/export/ulakvm
```

```
zonecfg:ulakvm> add net
```

```
zonecfg:ulakvm:net> set address=192.168.100.1
```

```
zonecfg:ulakvm:net> set physical=hme0
```

```
zonecfg:ulakvm:net> end
```

```
zonecfg:ulakvm> info
```

```
zonecfg:ulakvm> verify
```

```
zonecfg:ulakvm> commit
```

```
zonecfg:ulakvm> exit
```

OpenSolaris Zones Kurulumu

```
# zoneadm list -cv
```

```
ID NAME STATUS PATH
```

```
0 global running /
```

```
-small-zone configured /export/ulakvm
```

```
# mkdir /export/ulakvm ; chmod 700 /export/ulakvm
```

```
# zoneadm -z ulakvm verify
```

```
# zoneadm -z ulakvm install
```

```
# zlogin ulakvm
```

OpenSolaris Zones

Artılar Eksiler



- + Gelişmiş kaynak yönetimi (cpu,mem, vs)
- + ZFS sayesinde kolay yedekleme
- + Zone clone
- pkg.opensolaris.org hızınıza yetişemeyebilir 😊

Sorular

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