checkmk

Calling up graphic programs in a chroot environment

Sep 8, 2020 timo

Your requirement

You have installed a Linux system under the `/test` subdirectory, or mounted the root partition of another Linux system. With the `chroot /test` command you can 'switch in' as usual and call programs. But the start of graphical programs fails, even when you set `DISPLAY` to `:0`.

The problem

Local programs communicate with your computer's X server via a Unix socket in the `/tmp/.X11-unix` directory. In your `chroot` environment there is no access to this socket.

The solution

With a `mount` command you show the of the 'outer' computer's `/tmp/.X11-unix` directory in the `chroot` cage:

```
root@linux# mkdir -p /test/tmp/.X11-unix
root@linux# mount --bind /tmp/.X11-unix /test/tmp/.X11-unix
```

They also allow access to the display for all local processes:

```
user@linux> xhost + local:
```

After calling `chroot /test`, set the `DISPLAY` variable in the inner system to

`:0`, and you can then start graphical programs:

```
root@linux# chroot /test
root@linux# export DISPLAY=:0
root@linux# xterm
```

By the way: for security reasons a TCP connection via `localhost` is switched off by default in most distributions, otherwise instead of the above trick you could take the route via `localhost`. Enter `xhost + localhost` outside, and `export DISPLAY=localhost:0` inside.

Linux knowledge

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They are still valid though and thus we keep them on our website.
Mathias has since then developed a monitoring software called Checkmk

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