Client Virtualisierung

SPICE

L4rs, Jaun1011

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Was ist Spice

- Simple Protocol for Independent Computing Environments
- Dient zur Anzeige von Virtuellen Desktop Umgebungen
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Bandbreite

i) Basic office work - should be **150Kbps** and up to **200msec** latency.

ii) Video/multimedia work - should be **500Kbps-1Mbps** and up to **100msec** latency.

→ WAN fähigkeit ist gegeben.

https://access.redhat.com/solutions/284013

Kompression

- Spice offers several image compression algorithms, which can be chosen on server initiation, and dynamically at run-time. Quic is Spice proprietary image compression utility which is based on the SFALIC algorithm [3]. The LZ (LZSS) [4] algorithm, adjusted to images, is another option. Both Quic and LZ are local algorithms, i.e., they encode each image independently. Global LZ (GLZ) is another Spice proprietary, that uses LZ with an history-based global dictionary. GLZ takes advantage of repeating patterns among images for shrinking the traffic and save bandwidth, which is critical in a WAN environment. Spice also offers an automatic mode for compression selection per-image, where the choice between LZ/GLZ and Quic is heuristically based on the image properties. Conceptually, artificial images are compressed better by LZ/GLZ, and real images are compressed better by Quic.

https://www.spice-space.org/static/docs/spice_for_newbies.pdf “3.3 Image Compression”

Grafikbeschleunigung

Unterstützt SSH und RDP VNC

QEMU emuliert eine Grafikkarte

- Cirrus
- Vga
- Vmvga
- qx

Unterstützte Platformen Server

- QEMU / KVM: https://www.spice-space.org/spice-user-manual.html#spice-server
- Als Gast (VDI): SPICE Agent für Linux / Windows

Unterstützte Platformen Client

- Spice-gtk

Windows

- Virt-viewer
- UsbDK
- aSpice -> android Client

Linux

- SPICE vdagent

Zeroclients

- Jeder Client mit virt-viewer
  - Windows
  - Linux (z.B. Raspberry)
- HTML 5 Client
  - https://www.spice-space.org/spice-html5.html

Sound / USB / Zwischenablage

- USB redirection von Client zu VDI möglich
  - https://www.spice-space.org/spice-html5.html
- Sound redirection möglich
- Zwischenablage mit vdagent möglich

Lizenzierung

- GPL LGPL und BSD Lizenzsiert

https://github.com/SPICE

Maintenance & Zukunftssicherheit

Bedingt aktive Contributors auf github

Red Hat Enterprise Virtualization und SPICE: https://www.redhat.com/en/resources/red-hat-enterprise-virtualization-and-spice-protocol

Quellen

https://de.wikipedia.org/wiki/SPICE_(Protokoll)
https://www.spice-space.org/

https://www.spice-space.org/static/docs/spice_for_newbies.pdf