

SUSE[®] Linux Enterprise

Setup and Optimization for Remote Graphical Access

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Agenda

- Remote Desktop Methods
- Demo
- Other Remote Access Methods
- Session monitoring and Management
- Additional settings

Remote Desktop Server: XDMCP

- Highly discouraged by SUSE
 - Not secure: traffic is not encrypted
 - Not adapted to modern desktops, causing huge latency
- But still available



Remote Desktop server: VNC

- Recommended protocol (security, caching)
- Available through several means:
 - Independent session with XVNC (configured through YaST Remote Administration module)
 - Sharing existing GNOME session, through vino (GNOME Control Center / Sharing)



Remote Desktop Server: RDP

- Microsoft protocol, always available on Windows products (both as client and server)
- xrdp is providing independent graphical sessions support



Remote Desktop Clients

- Vinagre
 - Connect to VNC / SSH / Spice / RDP sessions
- Vncviewer
- Browser
 - Java
 - HTML5
- Security
 - TLS support
- Situations for alternative display and window managers



Demo

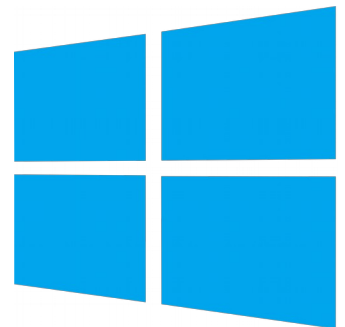
Other Remote Access Methods

- Connection via ssh
 - Only for applications
 - not full desktop
 - Can't attach to running applications
- Graphical apps in containers
 - Can be done but not supported
- Beware, X11 socket is NOT secure
 - In the future, xdg-app and wayland will help



Accessing SUSE Linux Enterprise systems from Windows

- For RDP: built-in
- For X11:
 - Micro Focus Reflection X 2014:
 - Standalone X server or Domain mode (distributes workload and connectivity across multiple tiers)
 - Xming (Free X server for Windows)
 - Exceed
 - Cygwin X server
- For VNC:
 - Vncviewer
 - Libvirt Virt-viewer (TLS support)



Session monitoring and management

- Systemd-loginctl

Session monitoring and management

- systemd-logind is replacing ConsoleKit
- logind [list-sessions]: output all sessions
- logind session-status <session-number>:

```
2 - fcrozat (1000)
    Since: lun. 2013-07-29 11:58:41 CEST; 4h 13min ago
    Leader: 1550 (gdm-session-wor)
    Seat: seat0; vc7
    Display: :0
    Service: gdm-password; type x11; class user
    State: active
    CGroup: systemd:/user/1000.user/2.session
           └─ 1560 /usr/bin/gnome-session
```

- logind kill-session|kill-user|
terminate-seat <name>

Tips for debugging / optimising

- GDM
 - Enable debug in `/etc/gdm/custom.conf` and check the logs in `/var/log/gdm`
- Switch to `xdm` / `icewm` for specific use-cases
 - `/etc/sysconfig/displaymanager` and `/etc/sysconfig/windowmanager` for system-wide changes
- Beware of performance and limitations for multiple simultaneous graphical user sessions and user session switching

Additional Settings

Desktop Configuration in GNOME

- GNOME uses gsettings API (and dconf as backend) to store configuration
- This allows :
 - inheritance (merging system wide and user configuration)
 - lockdown (including UI feedback)



Configuration: Defaults

dconf system database files in `/etc/dconf/db` (GVDB format), profiles in `/etc/dconf/profiles`

Example: setting different background by default

```
/etc/dconf/profile/user: #user is "default value" if $DCONF_PROFILE not set
```

```
user-db:user
```

```
system-db:local # local is the name of a db, could be any name
```

Defaults stored in `/etc/dconf/db/local.d/`

```
/etc/dconf/db/local.d/01-background:
```

```
[org/gnome/desktop/background]
```

```
picture-uri='file:///usr/local/share/backgrounds/wallpaper.jpg'
```

```
picture-options='scaled'
```

dconf update: regenerates db file and notifies system dbus

<https://help.gnome.org/admin/system-admin-guide/3.10/dconf-custom-default-values.html.en>

Configuration: Lockdown

lock down stored in `/etc/dconf/db/local.d/locks/` (if defaults were stored in a db called `local`)

Example (one key per line):

```
/etc/dconf/db/local.d/locks/00_default-wallpaper:  
# prevent changes to the background  
/org/gnome/desktop/background/picture-uri  
/org/gnome/desktop/background/picture-options
```

dconf update

Notice GUI shows grayed (disabled) elements for lockdown settings

<https://help.gnome.org/admin/system-admin-guide/3.10/dconf-lockdown.html.en>



Giving privileges to users

- Polkit allows to give selective administrative privileges to users for tasks like:
 - Allow to modify some network settings
 - Allow to update existing packages but not install new ones
 - Handle prints jobs
- Defaults are stored in `/etc/polkit-default-privs.standard` (or restrictive on sles)
- Changes can be added to `/etc/polkit-default-privs.local` (and run `/sbin/set_polkit_default_privs` to apply)
- Granularity can be all users / inactive logged user / active logged user

Demo

Questions ?

Thank you.





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