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-logindctl
Session monitoring and management

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

  2 - fcrozet (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

- loginctl 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

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

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?

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