

在 SUSE Linux Enterprise Server for SAP Applications 16.0 上配置远程桌面服务器

内容

本文介绍如何在 SUSE Linux Enterprise Server for SAP Applications 上设置 GNOME 远程登录桌面服务器。

原因

远程桌面服务器即使没有专用图形硬件，也能承载多个用户的访问。

工作量

配置过程需要 5 分钟时间。

目标

学习如何设置支持多用户访问的远程登录桌面服务器。

要求

- 已安装 GNOME 且用作远程桌面服务器的系统
- 一个或多个可通过 RDP 查看器访问服务器的客户端

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1 GNOME 远程桌面是什么？

GNOME 远程桌面支持三种运行模式：远程协助远程桌面服务器、单用户远程桌面服务器和远程登录桌面服务器。该功能甚至支持无外设运行模式，即服务器无需配备图形处理器 (GPU)。这一特性对服务器而言尤为实用 - 性能强大的系统无需图形硬件即可为多个用户提供服务。

GNOME 远程桌面包含两种协议后端：RDP 和 VNC。并非所有运行模式都支持所有协议后端。

2 配置 GNOME 远程桌面

本章介绍如何配置 GNOME 远程桌面，使其与 GNOME 显示管理器 (GDM) 集成。

2.1 简介

GNOME 远程桌面支持与 GNOME 显示管理器集成，以实现远程登录功能。其工作原理为：远程用户首先通过系统级身份凭证进行身份验证，访问图形登录界面，随后使用个人用户身份凭证登录系统。

2.2 要求

- 安装了 GNOME 桌面环境且用作服务器的 SUSE Linux Enterprise 系统。在安装系统时，您可以通过软件 > 修改选择 > GNOME 桌面环境 (Wayland) 选择 GNOME。对于已运行的系统，可通过命令 **`zypper in -t pattern gnome`** 安装 GNOME。
- 一个或多个客户端，客户端需安装 **`gnome-connections`**、**`remmina`** 或其他支持 RDP 协议的查看器。

2.3 配置

以下过程介绍如何配置 GNOME 远程桌面，使其与 GNOME 显示管理器集成。

过程 1：配置 GNOME 远程桌面

1. 创建用于存储 TLS 加密密钥和证书的目录：

```
> sudo -u gnome-remote-desktop mkdir -p ~/.local/share/gnome-remote-  
desktop/
```

安装 `gnome-remote-desktop` 软件包时，会自动创建 `gnome-remote-desktop` 用户。其 `home` 目录为 `/var/lib/gnome-remote-desktop`。

2. 生成用于加密的 TLS 密钥和证书，具体有以下两种方式：

- 通过 **openssl** 生成。要生成一个 4096 位且有效期为 365 天的 RSA 密钥，请运行以下命令：

```
> sudo -u gnome-remote-desktop openssl req -new -newkey rsa:4096 -days  
365 -nodes -x509 -subj \  
/C=COUNTRY_CODE/ST=STATE/L=LOCALITY/O=ORGANIZATION/CN=example.net \  
-out ~/.local/share/gnome-remote-desktop/tls.crt \  
-keyout ~/.local/share/gnome-remote-desktop/tls.key
```

请替换命令中的国家代码、州省、城市、组织和通用名称，或省略不需要的参数。国家代码需使用 ISO 3166-1 alpha-2 两位代码，相关信息可从 <https://www.iso.org/obp/ui/#search/code/> 上查询。

- 如果希望通过交互式命令引导证书生成流程，可使用 `gnutls` 软件包中的 **certtool** 工具：

```
> sudo zypper in gnutls  
> sudo -u gnome-remote-desktop certtool --generate-privkey --  
outfile ~/.local/share/gnome-remote-desktop/tls.key> sudo -u gnome-  
remote-desktop certtool --generate-self-signed --load-privkey  
~/.local/share/gnome-remote-desktop/tls.key
```

3. 使用 **grdctl** 配置 GNOME 远程桌面。

a. 为 GNOME 远程桌面配置加密：

```
> sudo grdctl --system rdp set-tls-key ~gnome-remote-desktop/.local/  
share/gnome-remote-desktop/tls.key> sudo grdctl --system rdp set-tls-  
cert ~gnome-remote-desktop/.local/share/gnome-remote-desktop/tls.crt
```

b. 设置用于通过 RDP 访问登录管理器的系统身份凭证：

```
> sudo grdctl --system rdp set-credentials
```

此处的用户名和口令组合与个人用户身份凭证不同。所有用户均需使用此 RDP 系统身份凭证访问 GNOME 显示管理器，再通过个人用户身份凭证登录。

c. 启用 RDP 协议：

```
> sudo grdctl --system rdp enable
```

4. 启用并启动 GNOME 远程桌面服务：

```
> sudo systemctl enable --now gnome-remote-desktop.service
```

5. 开放防火墙默认 RDP 端口的连接权限：

```
> sudo firewall-cmd --permanent --add-service=rdp
> sudo firewall-cmd --reload
```

2.4 总结

至此，GNOME 远程桌面服务器已配置完毕。可通过 **gnome-connections**、**remmina** 或其他支持 RDP 协议的查看器连接该系统。

2.5 查错

如果连接远程桌面服务器时遇到问题，可按以下步骤进行查错。

1. 如果能连接到 GNOME 显示管理器，但无法以用户身份登录，可尝试通过 **ssh** 连接以验证用户口令是否正确。
2. 如果能连接到远程桌面服务器，但 GNOME 远程桌面不接受 RDP 连接的系统身份凭证，则可能是因为在服务已运行时配置了身份凭证。需重启服务以应用更改：

```
> sudo systemctl restart gnome-remote-desktop.service
```

3. 如果 RDP 系统身份凭证仍不被接受，可重置身份凭证：

```
> sudo grdctl --system rdp clear-credentials  
> sudo grdctl --system rdp set-credentials  
> sudo systemctl restart gnome-remote-desktop.service
```

4. 如果使用 RDP 查看器无法连接到远程桌面服务器，请检查 `gnome-remote-desktop` 服务是否正在运行：

```
> sudo systemctl status gnome-remote-desktop
```

- 如果服务未运行，则启动该服务：

```
> sudo systemctl start gnome-remote-desktop.service
```

- 如果 `systemd` 提示 `gnome-remote-desktop.service` 的配置已更改，需让 `systemd` 重新加载配置并重启服务：

```
> sudo systemctl daemon-reload  
> sudo systemctl restart gnome-remote-desktop.service
```

5. 检查 GNOME 显示管理器是否正在运行：

```
> sudo systemctl status display-manager.service
```

如果出现警告信息，则重启显示管理器：

```
> sudo systemctl restart display-manager.service
```

6. 检查 `gnome-remote-desktop` 是否在默认 RDP 端口 3389 上侦听：

```
> sudo ss -tulnp | grep :3389
```

7. 检查防火墙端口是否已开放：

```
> sudo firewall-cmd --query-service=rdp
```

8. 检查客户端是否能连接到远程桌面服务器。

- a. 如果通过主机名连接服务器，检查客户端是否能正确解析该主机名：

```
> host SERVER_HOST_NAME
```

如果无法解析服务器主机名，尝试通过 IP 地址连接。

- b. 如果 RDP 查看器无法通过 IP 地址连接远程桌面服务器，尝试 ping 服务器：

```
> ping -c 5 SERVER_IP
```

如果能 ping 通 IP 地址，尝试通过该 IP 地址连接远程桌面服务器。如果无法 ping 通，则检查网络设置。


3 更多信息

- 更多配置示例可参考 GNOME 远程桌面的 README 文件。安装 `gnome-remote-desktop` 软件包后，该文件位于 `/usr/share/doc/packages/gnome-remote-desktop/README.md`。也可通过以下链接在线访问该文件：<https://github.com/GNOME/gnome-remote-desktop/blob/master/README.md> .
- `grdctl` 的完整选项列表可通过 `man 1 grdctl` 命令查看。

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