

# Authentication, Authorisation and Windows Integration using SSSD

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# What is the SSSD?

## SSSD package description:

Provides a set of daemons to manage access to remote directories and authentication mechanisms.

Provides an NSS and PAM interface toward the system and a pluggable back end system to connect to multiple different account sources.



# Moving on

(There is lab work to do...)

## What need is the SSSD addressing?

- Legacy PAM and NSS frameworks have scaling caveats
- Specialised directory stores are proliferating
- Linux platforms as viable federation candidates
- Better Active Directory® integration is more mission critical



# SSSD advantages

## Authentication service enhancements

- Greater extensibility
- **Multiple concurrently available identity stores**
- ID collision management features
- SSL/TLS or SASL/GSSAPI is required
- **Single configuration file**
- Reduced server loads
- **Offline authentication**



# SSSD Providers

Local	Accounts are kept in a local database
LDAP	Relies on installed extensions of target directory
Kerberos	Relies on installed extensions of target directory
AD	Supports many native Active Directory® features
IPA	Supports trusts with Active Directory® domains
IdM	Integrates tightly with IdM® implementations
Proxy	Permits integration of other provider modules
autofs	Supports integration using <b>LDAP</b>
sudo	Supports integration using <b>LDAP</b>



# The SSSD configuration file

**SSSD Domain = Identity Provider + Authentication provider**

[sssd]                                      Global parameters  
services =  
domains =

[nss], [pam], [sudo]                    Service parameters  
reconnection\_retries =  
filter\_users =

[domain/NAME]                            SSSD domain parameters  
id\_provider =  
auth\_provider =  
chpass\_provider =  
access\_provider =



# SSSD processes

SSSD uses a parent/child process monitoring model

[sssd] Parent process, Monitor

[nss] Child process, Responder

[domain/ad.dom] Child process, Provider



# SSSD processes

## SSSD process example:

### **ps -eaf | grep sssd**

```
root 1476      1          0   /usr/sbin/sss  
root 1478      1476       0   /usr/libexec/sss/sss_nss  
root 41279     1476       0   /usr/libexec/sss/sss_be --domain ad.dom.com
```

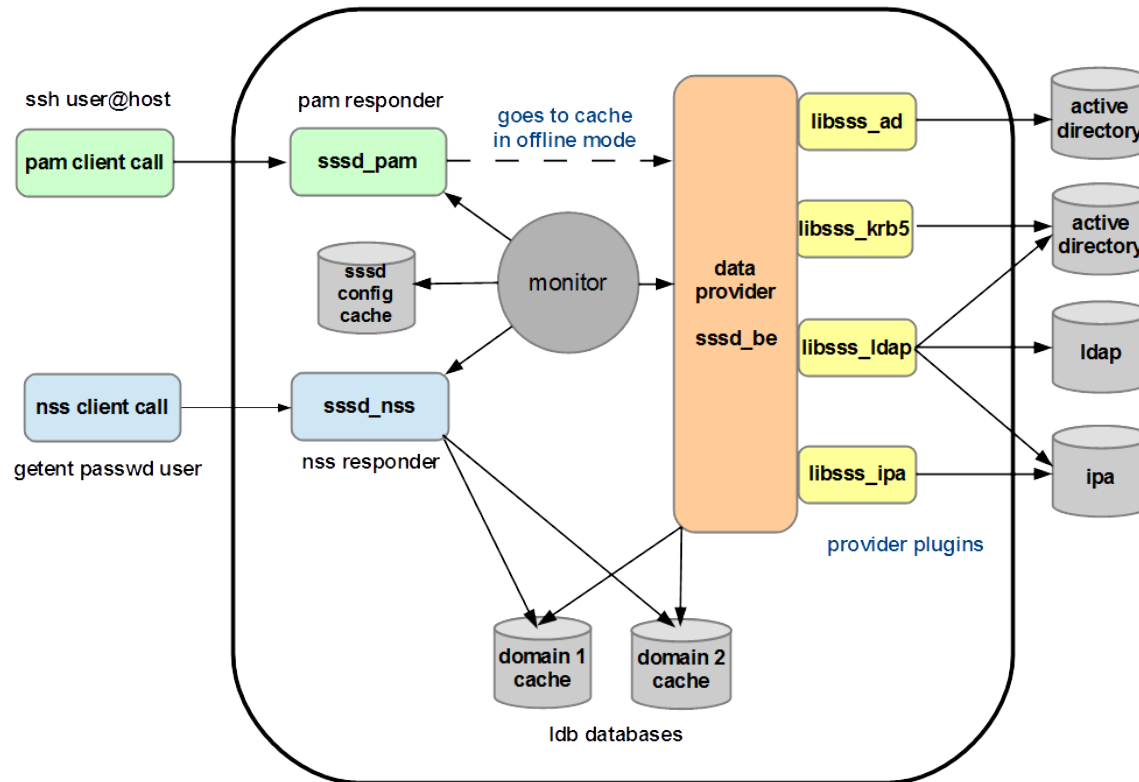
### **pstree -A -p 1476**

```
sss (1476) - + - sss_be (41279)  
           | - sss_nss (1478)
```

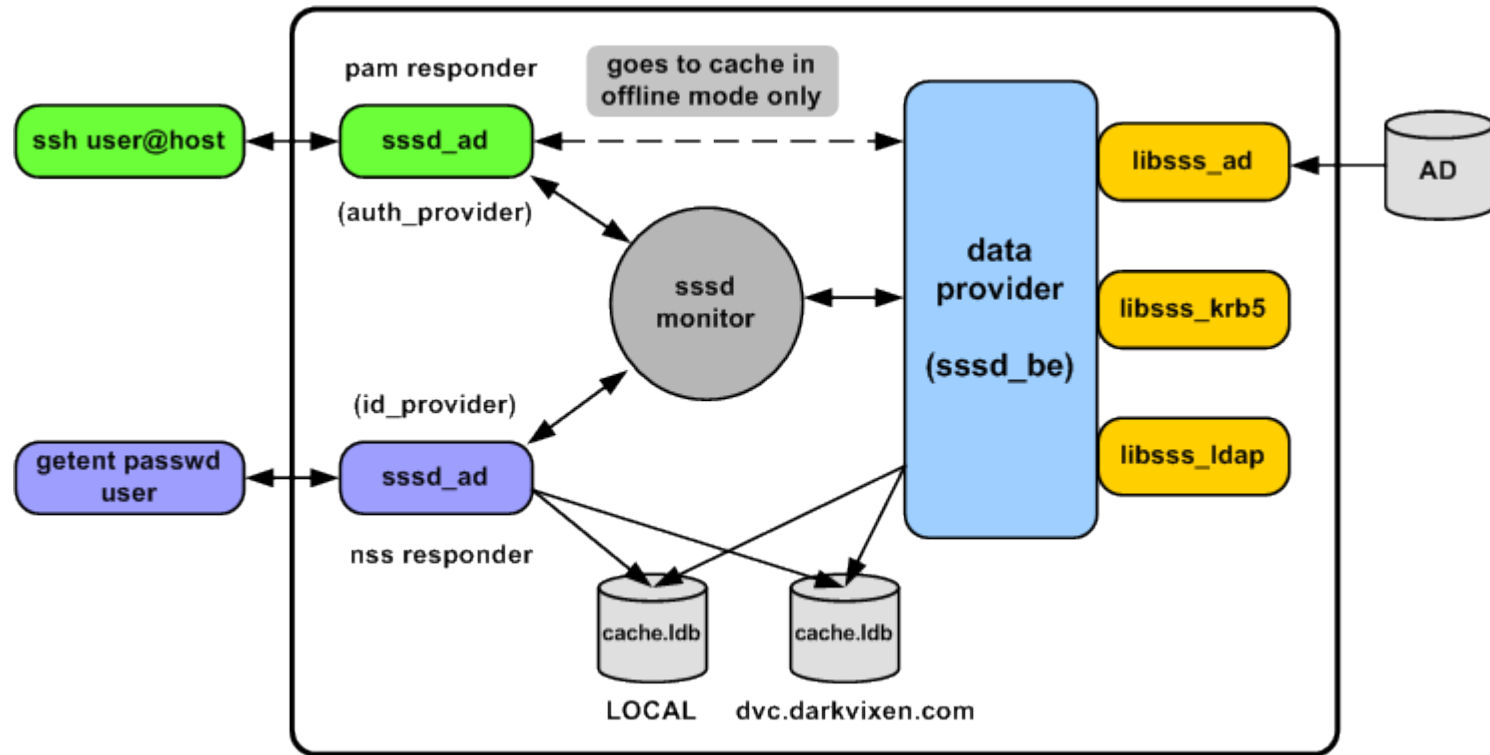




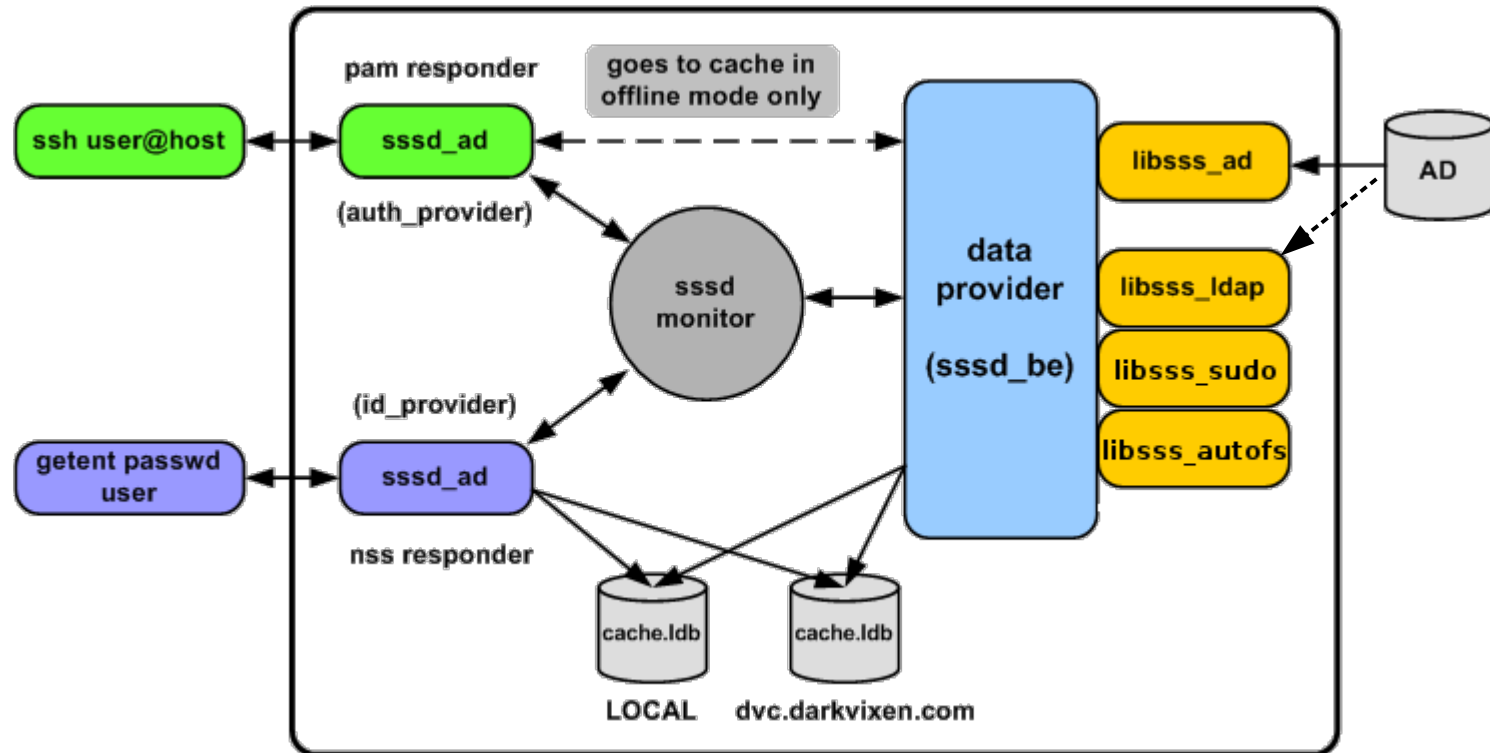
# SSSD architecture



# Active Directory providers



# LDAP, sudo and autofs providers



# SUSE Linux Enterprise 12 lab

## SSSD Active Directory, autofs and sudo providers



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