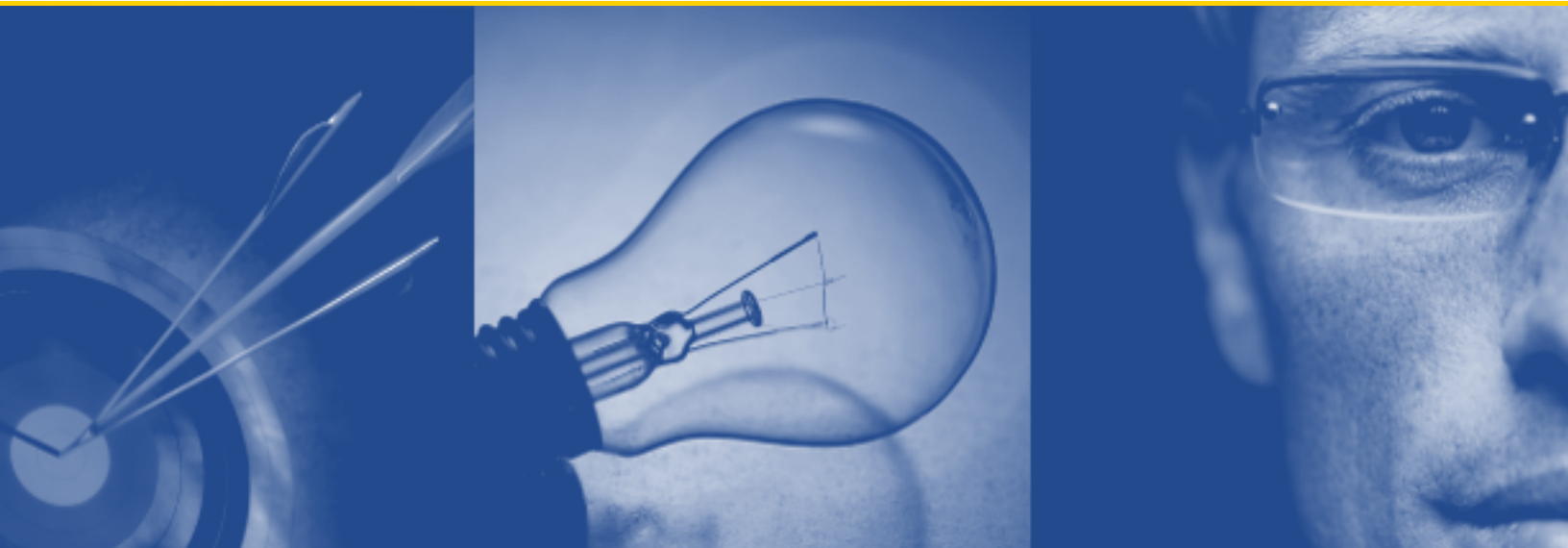


# Sybase Adaptive Server Enterprise Configuration Guidance

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**for Vintela Authentication Services**

*Written by  
Quest Software, Inc.*



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World Headquarters  
5 Polaris Way  
Aliso Viejo, CA 92656  
[www.quest.com](http://www.quest.com)  
e-mail: [info@quest.com](mailto:info@quest.com)  
U.S. and Canada: 949.754.8000

Please refer to our Web site for regional and international office information.

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# INTRODUCTION

This document provides basic guidance on the configuration of Sybase Adaptive Server Enterprise (ASE) to enable Active Directory (AD) authentication through Vintela Authentication Services to achieve centralized authentication and transparent single sign-on for Sybase ASE accounts. Benefits of this approach include:

- Native Active Directory authentication (Kerberos) for Sybase ASE
- Access control and password management based on existing AD groups and security policy
- Centralized deprovisioning/removal of access to Sybase
- Simultaneous implementation of both centralized authentication and transparent single sign-on (SSO) for Sybase ASE accounts with corresponding Active Directory accounts
- Increased user productivity and reduced TCO through transparent SSO and password consolidation

## PREREQUISITES

Requirements for configuring Sybase ASE for single sign-on through Vintela Authentication Services include: Vintela Authentication Services installed on the Sybase ASE clients and server, which must be joined to the Active Directory domain. See the *Vintela Authentication Services Solutions Guide* for installation and join instructions.



Error message “fatal: gss\_nt\_krb5\_name: can't find symbol” is a non-fatal error caused by the Sybase GSSAPI implementation expecting symbol gss\_nt\_krb5\_name. This non-standard symbol was not defined in the Vintela Authentication Services gssapi library. The error message can be safely ignored. Upgrading to Vintela Authentication Services 3.5 when available will resolve the error message.

This guidance uses “sybaseserver” as the Sybase server name, and \$SYBASE—the Sybase install root—which by default is /opt/sybase. Please correct these values for your environment.

Sybase 15.0.2 was used for the validation of this configuration.

The following configuration can be used independently or simultaneously.

# SYBASE CONFIGURATION FOR USERNAME/PASSWORD BASED ACTIVE DIRECTORY AUTHENTICATION

This configuration provides user and password based authentication of Active Directory users with corresponding Sybase accounts.

Sybase includes an example PAM configuration for each platform in `$SYBASE/UA/2_0/utility/<platform>`. Install the configuration as appropriate for your platform. Some configurations will require changes, for instance this example is for a RedHat-style PAM configuration and will need various changes for SuSE. Compare PAM configurations of Sybase provided `sybase-ua` and SuSE provided `sshd` as an example. On platforms that use `pam.conf` instead of `pam.d`, after creating the configuration, run `"/opt/quest/bin/vastool configure pam ase"` to add the Vintela Authentication Services configuration to the newly added "ase" configuration.



The name of the PAM service "sybase-ua" provided by Sybase is wrong. The proper PAM service name is "ase". This will need to be corrected in the PAM configuration if the PAM "other" stack does not allow authentication by default.

Example `/etc/pam.d/ase` file:

```
Auth      include    common-auth
Account   include    common-account
Password  include    common-password
Session   include    common-session
```

## As root from the Sybase Vintela Authentication Services host:

1. Initialize the Sybase environment and connect to the instance. Replace `/opt/sybase` with your Sybase install root.

```
. /opt/sybase/SYBASE.sh
isql -Usa -Ssybaseserver
```

If your shell is `csch`, try:

```
source /opt/sybase/SYBASE.csh
isql -Usa -Ssybaseserver
```

2. Configure Sybase Adaptive Server for PAM authentication.

```
sp_configure 'enable pam user auth', 1
go
shutdown
go
exit
```

3. Start Sybase.

```
$$SYBASE/$SYBASE_ASE/install/startserver -f \  
$$SYBASE/$SYBASE_ASE/install/RUN_sybaseserver
```

4. Test AD password authentication to Sybase using a Vintela Authentication Services user. Replace "myvasuser" with a Sybase username that is also an Active Directory user.

```
isql -Umyvasuser -Ssybaseserver
```



If a Sybase account's "authenticate with" option is set to ANY, it may get changed to PAM after a successful PAM authentication, invalidating the Sybase password for further authentication unless reconfigured.

For more options and detailed configuration instructions on Sybase support, please see the *Sybase Adaptive Server Enterprise Configuration Guide*.

# SYBASE CONFIGURATION FOR ACTIVE DIRECTORY BASED TRANSPARENT SINGLE SIGN-ON (SSO).

This configuration provides transparent SSO of Active Directory users by configuring Sybase to use GSSAPI/Kerberos and the Vintela Authentication Services GSSAPI/Kerberos library.

## As root from the Sybase Vintela Authentication Services host:

1. Create a service account in AD for Sybase. Replace "administrator" in the following commands with an Active Directory account with administrative user creation privileges.

```
/opt/quest/bin/vastool -u administrator create -x user \
sybaseserver
```

2. Create a keytab for the service account with a random password.

```
/opt/quest/bin/vastool -u administrator passwd -r -k \
/etc/opt/quest/vas/sybaseserver.keytab sybaseserver
```

3. Set password to "never expires" and "can not be changed".

```
/opt/quest/bin/vastool -u administrator setattrs sybaseserver \
userAccountControl 66048
```

4. Test the account and keytab. This command also provides very useful output for debugging.

```
/opt/quest/bin/vastool -u host/ auth -S sybaseserver
```

5. Change ownership of the keytab to the Sybase account so the Sybase server can read the file.

```
chown sybase /etc/opt/quest/vas/sybaseserver.keytab
```

6. Edit the sybase RUN file to include the KRB5\_KTNAME environment and path to the keytab.

```
vi $SYBASE/$SYBASE_ASE/install/RUN_sybaseserver
```

7. Below the commented lines (#) but above the commands, add the following:

```
KRB5_KTNAME=/etc/opt/quest/vas/sybaseserver.keytab
export KRB5_KTNAME
```

8. Initialize the Sybase environment and connect to the instance.

```
. /opt/sybase/SYBASE.sh
isql -Usa -Ssybaseserver
```

If your shell is csh, try:

```
source /opt/sybase/SYBASE.csh
isql -Usa -Ssybaseserver
```

9. Enabled security services.

```
sp_configure 'use security services', 1
go
```

### 10. Shutdown Sybase.

```
shutdown
go
```

### 11. Edit the \$SYBASE/interfaces file and add this line to the instance:

```
secmech 1.3.6.1.4.1.897.4.6.6
```

### 12. Edit libtcl.cfg and libtcl64.cfg in the \$SYBASE/\$SYBASE\_OCS/config directory. Point these to the appropriate .so/.sl for your platform (determine which is appropriate by running "ls /opt/quest/lib/libvas-gssapi.\*"). Edit the secbase=DOMAIN to match the AD domain/REALM.

```
libtcl.cfg:
[SECURITY]
csfkrb5=libsybskrb.so secbase=@AD.EXAMPLE.COM
libgss=/opt/quest/lib/libvas-gssapi.so
libtcl64.cfg:
[SECURITY]
csfkrb5=libsybskrb64.so secbase=@AD.EXAMPLE.COM
libgss=/opt/quest/lib/<64bit path for platform>/libvas-gssapi.so
```

### 13. Start Sybase.

```
$SYBASE/$SYBASE_ASE/install/startserver -f \
$SYBASE/$SYBASE_ASE/install/RUN_sybaseserver
```

## As a Vintela Authentication Services user:

### 1. Log in as a Vintela Authentication Services user, initialize sybase environment, and log in to Sybase using gssapi/Kerberos.

```
. /opt/sybase/SYBASE.sh
isql -V -Ssybaseserver
```

If your shell is csh, try:

```
source /opt/sybase/SYBASE.csh
isql -V -Ssybaseserver
```



For more detailed configuration instructions, see the *Sybase Adaptive Server Enterprise Configuration Guide*.

## GETTING HELP/TROUBLESHOOTING

To get assistance with this configuration or to suggest changes and additions, please join or start a discussion on the Vintela Community Forums, <http://vintela.inside.quest.com>.

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## Contacting Quest Software

Phone:	949.754.8000 (United States and Canada)
Email:	<a href="mailto:info@quest.com">info@quest.com</a>
Mail:	Quest Software, Inc. World Headquarters 5 Polaris Way Aliso Viejo, CA 92656 USA
Web site:	<a href="http://www.quest.com">www.quest.com</a>

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