

Enabling Single-Signon Using External Authentication

Main Topics



01

What and Why

03

**LDAP ACME Agent
Configuration**

02

Setup

04

Operation

Part I - What and Why?



Single-signon? External Authentication?

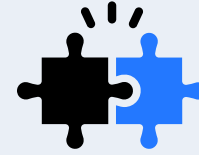
Who Benefits...and How?

ACME Agents?

Login Types Supported?

OpenVMS User Accounts?

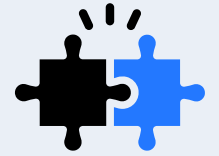
Part II – Setup



Initial Setup

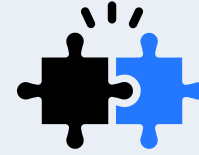
1. Create domain user account for the agent.
2. Install required kits.
3. Update System Images file (and Memory Disk on x86).
4. Switch LOGINOUT.EXE (and SETP0.EXE)
5. Reboot.

Setup - Updating the System Images File



```
$ MC SYSMAN
SYSMAN> SYS_LOADABLE ADD LDAPACME LDAPACME2$EXT      ! V2
SYSMAN> SYS_LOADABLE ADD LDAPACME LDAPACME$EXT      ! V1 (optional)
SYSMAN> EXIT
$
$ @SYS$UPDATE:VMS$SYSTEM_IMAGES.COM
$
$ @SYS$UPDATE:SYS$MD.COM                               ! x86 ONLY
```

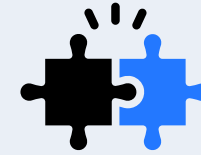
Part II – Setup



Initial Setup

1. Create domain user account for the agent.
2. Install required kits.
3. Update System Images file (and Memory Disk on x86).
4. **Switch LOGINOUT.EXE (and SETP0.EXE)**
5. Reboot.

Setup – Switching to ACME LOGIN



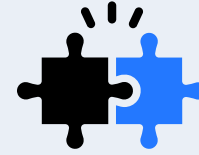
```
$ @SYS$MANAGER:SYS$LOGIN_SWITCH
You are currently using UAF LOGIN.
This procedure will switch to using ACME LOGIN
Do you want to continue? (YES or NO): YES
The replacement procedure is complete.  You must issue
the commands
```

```
$INSTALL REPLACE LOGINOUT
$INSTALL REPLACE SETP0
```

on any other cluster members using a common system
disk with SAREK.

```
$ 
```

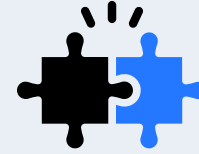
Part II – Setup



Initial Setup

1. Create domain user account for the agent.
2. Install required kits.
3. Update System Images file (and Memory Disk on x86).
4. Swap LOGINOUT.EXE (and SETP0.EXE)
5. **Reboot.**

Part II – Setup (cont)



Post-Reboot Setup

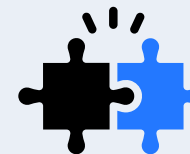
6. Verify agent executive is loaded.

7. Create agent configuration file (in Part III).

8. Define the LDAPACME\$INIT logical name.

9. Update SYS\$MANAGER:ACME\$START.COM.

10. Restart ACME Server (\$ SET SERVER ACME/RESTART)



Setup – Verifying Agent Executive is Loaded

```
SDA> SHOW EXECUTIVE LDAPACME2$EXT
```

```
VMS Executive layout
```

Image	Base	End	Length	Image Offset	SymVec
LDAPACME2\$EXT					
Code	FFFFFFFF.8023BE00	FFFFFFFF.8023DB8F	00000000.00001D90	00000000.00010000	
Data (read only)	FFFFFFFF.88180800	FFFFFFFF.881809A7	00000000.000001A8	00000000.00014000	
Data (read/write)	FFFFFFFF.88180A00	FFFFFFFF.88180A47	00000000.00000048	00000000.00018000	
Short data (read only)	FFFFFFFF.88180C00	FFFFFFFF.88180E67	00000000.00000268	00000000.00024000	
Linked 2-JUL-2025 12:29	LDRIMG = 8966AE80	SeqNum = 00000072	GP = FFFFFFFF.88380C00		

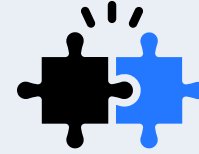
```
SDA> SHOW EXECUTIVE LDAPACME$EXT
```

```
VMS Executive layout
```

Image	Base	End	Length	Image Offset	SymVec
LDAPACME\$EXT					
Code	FFFFFFFF.80239E00	FFFFFFFF.8023BD0F	00000000.00001F10	00000000.00010000	
Data (read only)	FFFFFFFF.88180200	FFFFFFFF.881803A7	00000000.000001A8	00000000.00014000	
Data (read/write)	FFFFFFFF.88180400	FFFFFFFF.8818043F	00000000.00000040	00000000.00018000	
Short data (read/write)	FFFFFFFF.88180600	FFFFFFFF.88180607	00000000.00000008	00000000.00024000	
Short data (read only)	FFFFFFFF.88184600	FFFFFFFF.8818485F	00000000.00000260	00000000.00028000	
Linked 9-MAR-2021 22:45	LDRIMG = 8966A740	SeqNum = 00000070	GP = FFFFFFFF.88380600		

```
SDA> █
```

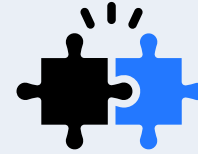
Part II – Setup (cont)



Post-Reboot Setup

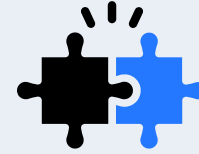
6. Verify agent executive is loaded.
7. **Create and edit agent configuration file.**
8. **Define the LDAPACME\$INIT logical name.**
9. **Update SYS\$MANAGER:ACME\$START.COM.**
10. **Restart ACME Server** (\$ SET SERVER ACME/RESTART)

Setup – Steps 7 - 10



```
$ COPY SYS$STARTUP:LDAPACME$CONFIG-STD.INI_TEMPLATE -
_$ SYS$COMMON:[SYS$STARTUP]*.INI /LOG
%COPY-S-COPIED, SYS$COMMON:[SYS$STARTUP]LDAPACME$CONFIG-STD.INI_TEMPLATE;1 copie
d to SYS$COMMON:[SYS$STARTUP]LDAPACME$CONFIG-STD.INI;1 (17 blocks)
$
$ !EDIT SYS$STARTUP:LDAPACME$CONFIG-STD.INI      !See Part III
$
$ DEFINE/SYSTEM/EXECUTIVE_MODE LDAPACME$INIT -
_$ SYS$COMMON:[SYS$STARTUP]LDAPACME$CONFIG-STD.INI
$
$ !EDIT SYS$MANAGER:ACME$START.COM
$
$ SEARCH SYS$MANAGER:ACME$START.COM LDAPACME2 /WINDOW=(1,0)/NUMBER
    41  $! @SYS$STARTUP:LDAPACME$STARTUP-STD          ! LDAP-STD
    42  $ @SYS$STARTUP:LDAPACME2$STARTUP-STD          ! V2 LDAP ACME agent
$
$ !SET SERVER ACME/RESTART
```

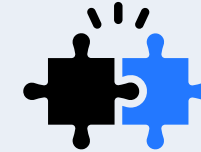
Part II – Setup (cont)



Complete the Rollout

11. Check agent status.
12. Update SYSTARTUP_VMS.COM.
13. Modify user account flags.
14. Update username mapping (optional).
15. Test.

Setup – Checking ACME Agents Status



```
$ SHOW SERVER ACME
ACME Information on node SAREK   3-OCT-2025 10:18:29.62   Uptime 0 21:03:17

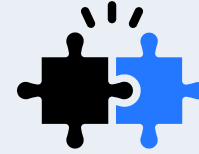
ACME Server id: 2   State: Processing New Requests
  Agents Loaded:      2   Active:      2
  Thread Maximum:    1   Count:      1
  Request Maximum: 1038   Count:      0

ACME Agent id: 1   State: Active
  Name: "VMS"
  Image: "DISK$I64V842L1SYS:[VMS$COMMON.SYSLIB]VMS$VMS_ACMESHR.EXE;2"
  Identification: "VMS ACME built 20-SEP-2006"
  Information: "Unused max 4: 3u 3r 3a 4a 3w 3m 4o 3c 4h 4d"
  Domain of Interpretation: Yes
  Execution Order:    1

ACME Agent id: 2   State: Active
  Name: "LDAP-STD"
  Image: "DISK$I64V842L1SYS:[VMS$COMMON.SYSLIB]LDAPACME2$LDAP-STD_ACMESHR.EXE;1"
  Identification: "LDAP ACME Standard V2.00"
  Information: "ACME_LDAP_DOI Agent is initialized"
  Domain of Interpretation: Yes
  Execution Order:    2

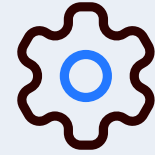
$ █
```

Part II – Setup (cont)



Complete the Rollout

11. Check agent status.
12. Update SYSTARTUP_VMS.COM.
13. Modify user account flags.
14. Update username mapping (optional).
15. Test.



Options

- The Configuration File
- Directives and Values
- Sample Configuration

Directives



server *	bind_timeout	filter	mapping
port	search_timeout	password_type *	mapping_attribute
port_security	base_dn *	password_update	mapping_target
bind_dn *	login_attribute *	ca_file	mapping_file
bind_password *	scope *		domain

Sample Configuration



```
server = 10.10.164.11 10.10.200.1  
port = 389  
port_security = starttls  
bind_dn = CN=LDAP AUTH,CN=Users,DC=contoso,DC=com  
bind_password = OpenVMS4ever!  
bind_timeout = 3  
base_dn = DC=contoso,DC=com  
scope = sub  
login_attribute = samaccountname  
password_type = active-directory  
mapping = local  
mapping_file = SYS$STARTUP:LDAP_LOCALUSER_DATABASE.TXT
```



How Does it Work?

- The ACME Server
- The LDAP ACME Agent
- Password Changes
- Troubleshooting

External Authentication Operation

Username

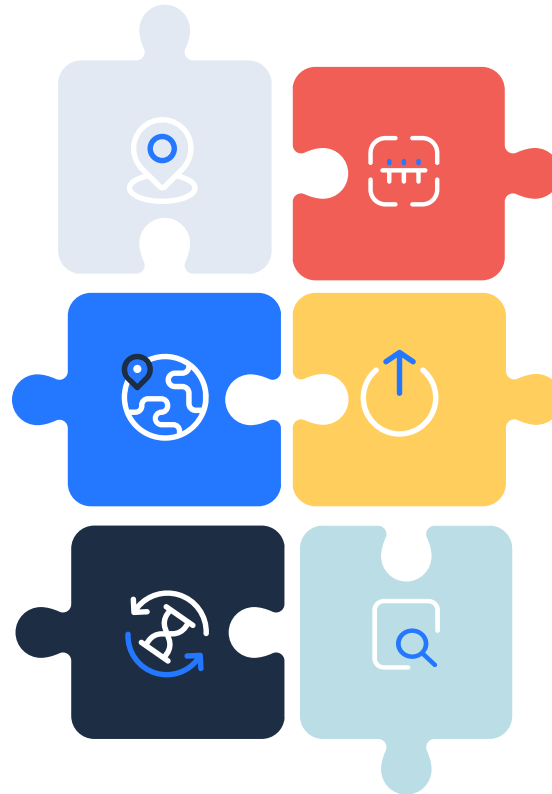
loginout.exe

ACME Server

Select
agent

LDAP ACME Agent

Search for Username



Password

Prompt for Password

LDAP ACME Agent

Bind with user
credentials

Complete Logon

Username mapping,
password sync,
access checks...

Thanks!

Email: paul.nunez@vmssoftware.com