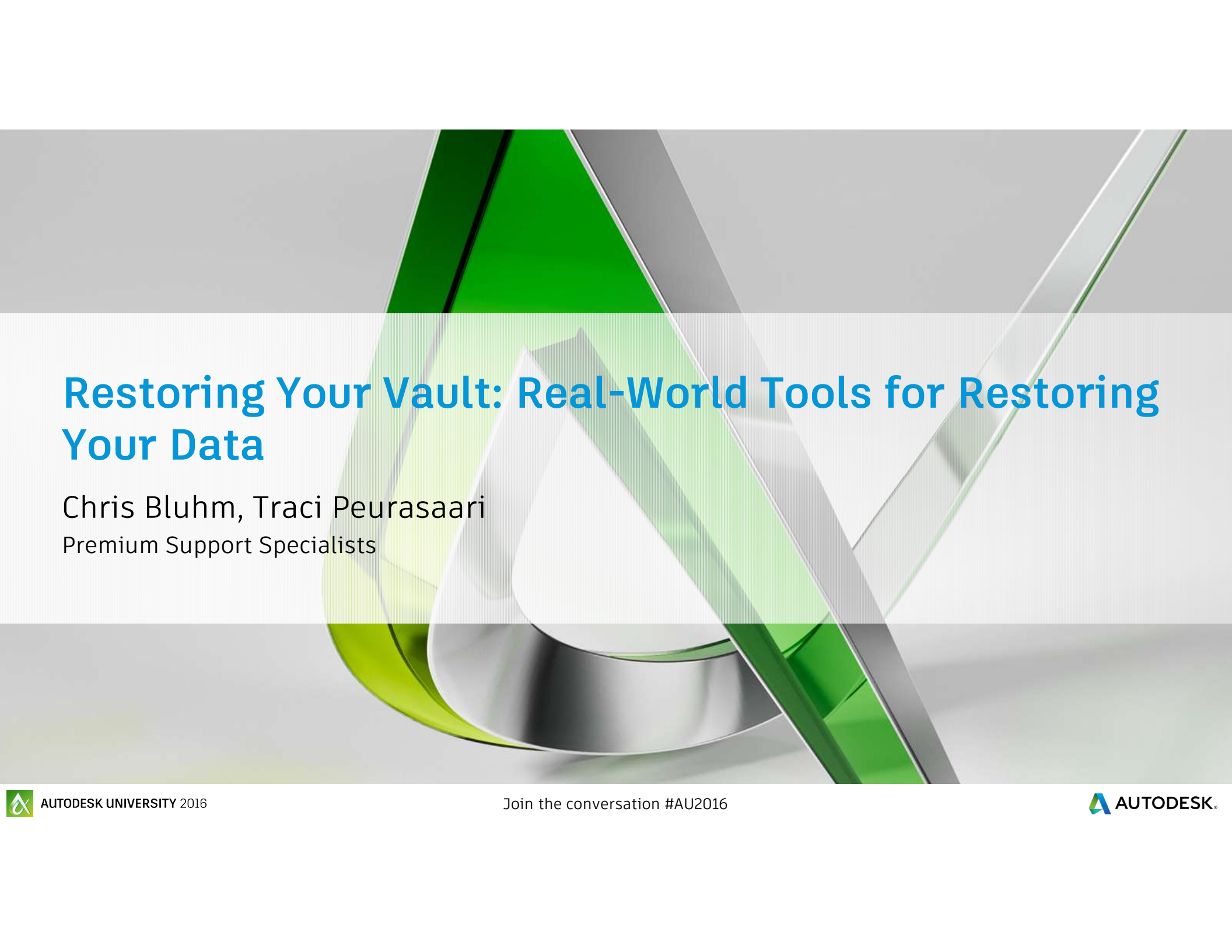




Restoring Your Vault: Real-World Tools for Restoring Your Data

Chris Bluhm, Traci Peurasaari
Premium Support Specialists

Almost done, this class is the last mile!



Class summary

This class will cover the strategies, possible pitfalls, and best practices for restoring a vault.

Your experts

- Traci Peurasaari is a SQL/DBA specialist within Enterprise Priority Support. She has over 25 years of relational database experience in Microsoft SQL Server and Oracle. She is proficient in Database performance and tuning, backup and restore and replication.



The Brains behind this operation

Your experts

- Chris Bluhm is a Premium Support Specialist for the Data Management team. Prior to joining Autodesk in 2014, he spent 10 years working as an IT administrator. During this time, he was responsible for creating and testing Disaster Recovery Plans for multi-million Dollar Firms.



Wishes he had Morgan Freeman's voice

Key learning objectives

At the end of this class, you will be able to:

- Understand issues that need to be addressed in your recovery plans
- Learn how to plan a restore of your own servers
- Understand what components are needed in a restore
- Also, based on your feedback
 - Replication!
 - More replication!
 - Even More replication!

First things first: Backup!

What do you need to backup

- Knowledge Vault Master(KVM) database
- Vault database
- Content Center Databases
- SQL Server system Databases
 - Master and MSDB
- Web.config file
- Filestore

How to backup

- Use the built in ADMS tool
 - This backups your vault databases and file store
- Or Use a 3rd party tool to:
 - Backup All SQL databases
 - Backup your filestore
- **PLUS!**
 - Backup your SQL system databases
 - Backup your web.config file

The job said it worked, computers never lie!

- Schedule frequent full backups(weekly, bi-weekly) with incrementals occurring between fulls.
- Most importantly frequently test those backups! (at least once a quarter!!)

Time to restore!

Things to think about for your environment:

The servers

- Are your replacement servers powerful enough?
- Is the new server the same OS and service pack level as before?
- Are you able to name the new server the same as the old server?
 - (for upgrades and DR)

Things to think about your environment: SQL

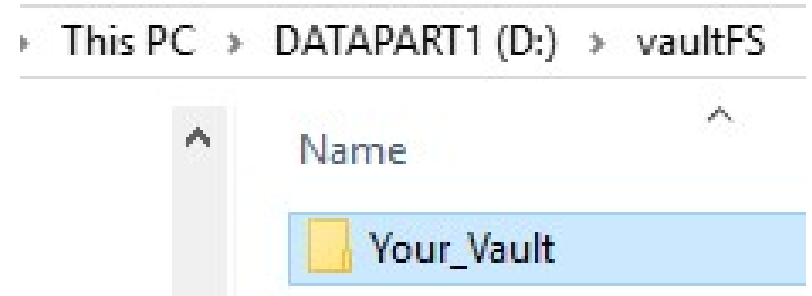
- Is the SQL installation the same edition, version, and service pack level as before?
 - SQL can only restore from versions at or before its current level.
- If you are using an existing database make sure owner for the Vault Databases is vaultSys.

The order and importance of your restore

- Make sure to follow the readme's to make sure no steps are missed and no special actions are required between service packs.
- Its all about the KVM
 - Keeps track of file/item ownership and users
 - All other restores must match the date of the KVM restore

Your filestore location

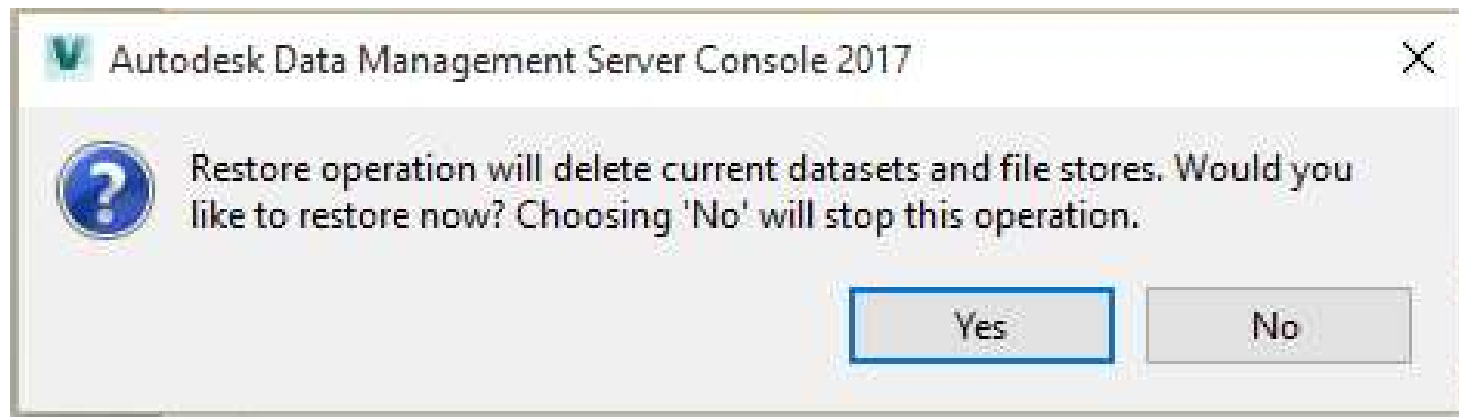
- Make sure the Vault filestore location is empty and you have enough space
- If you are creating a new restore location avoid naming it the name of the vault.



The restore wizard will create a subfolder with the name of the Vault in the filestore location

Things to think about for your environment: The Vault

- You CANNOT restore a single vault. You must restore all or none.



Things to think about for your environment:

The Vault

- Are you using the same version of vault as your backup?
- You can find the version that created the backup I the backupcontents.xml file

Backupcontents.xml

This PC > DATAPART1 (D:) > work > 2016-04-04 Backups > VaultBackup_2016_04_04_12_39_40_PM

Name	Date modified	Type	Size
databases	4/6/2016 2:33 PM	File folder	
FileStores	4/6/2016 2:33 PM	File folder	
BackupContents.xml	4/6/2016 2:33 PM	XML Document	1 KB
BackupHistory.txt	4/6/2016 2:33 PM	Text Document	1 KB

*D:\work\2016-04-04 Backups\VaultBackup_2016_04_04_12_39_40_PM\BackupContents.xml - Notepad++ [Administrator]

```
<BackupContents BackupDate="Monday, April 4, 2016 12:39:40 PM" SchemaVersion="21.0.2" KVM="KnowledgeVaultMaster">
  <ReplicationState Publisher="Yourpub\AUTODESKVAULT" DistributionDB="AutodeskReplication" />
  <KnowledgeVaults>
    <Vault Name="Yourvault" Filestore="E:\Vault_FileStore\yourvault" />
  </KnowledgeVaults>
  <KnowledgeLibraries />
  <Products>
    <Product Name="Autodesk.Productstream" Version="21.1.4.0" />
    <Product Name="Autodesk.Vault" Version="21.1.4.0" />
    <Product Name="Autodesk.VaultCollaboration" Version="21.1.4.0" />
    <Product Name="Autodesk.VaultPro" Version="21.1.4.0" />
  </Products>
```

Vault version numbers

- <https://knowledge.autodesk.com/support/vault-products/troubleshooting/caas/sfdcarticles/sfdcarticles/Vault-Build-Numbers.html>

Solution:

Vault Version	Build Number
AVFS 2017	22.0.56.0
Vault Professional Server 2017 (RTM)	22.0.56.0
Vault Professional Client 2017 (RTM)	22.0.56.0
Vault Workgroup Server 2017 (RTM)	22.0.56a.0
Vault Workgroup Client 2017 (RTM)	22.0.56.0
Vault Basic Server 2017 (RTM)	22.0.48.0a
Vault Basic Client 2017 (RTM)	22.0.48.0a
Vault 2016 (SP1)	21.1.4.0
Vault 2016 (RTM) Cumulative Hotfix 1	21.0.59.10
Vault 2016 (RTM)	21.0.59.0

Replicated Environments

Multisite AVFS environments

- The filestore:
 - Can be restored from any backup, it will be validated/updated as part of the AVFS install
- Only 1 AVFS can validate its filestore at a time
 - If you have 1 ADMS and 4 AVFS' you have to wait for them all to validate sequentially, NOT in parallel

Multisite SQL environment

- Biggest challenge for multisite environments is transferring data over the WAN.
- Two core components in this, both with their own workarounds
 - SQL database replication
 - Filestore replication

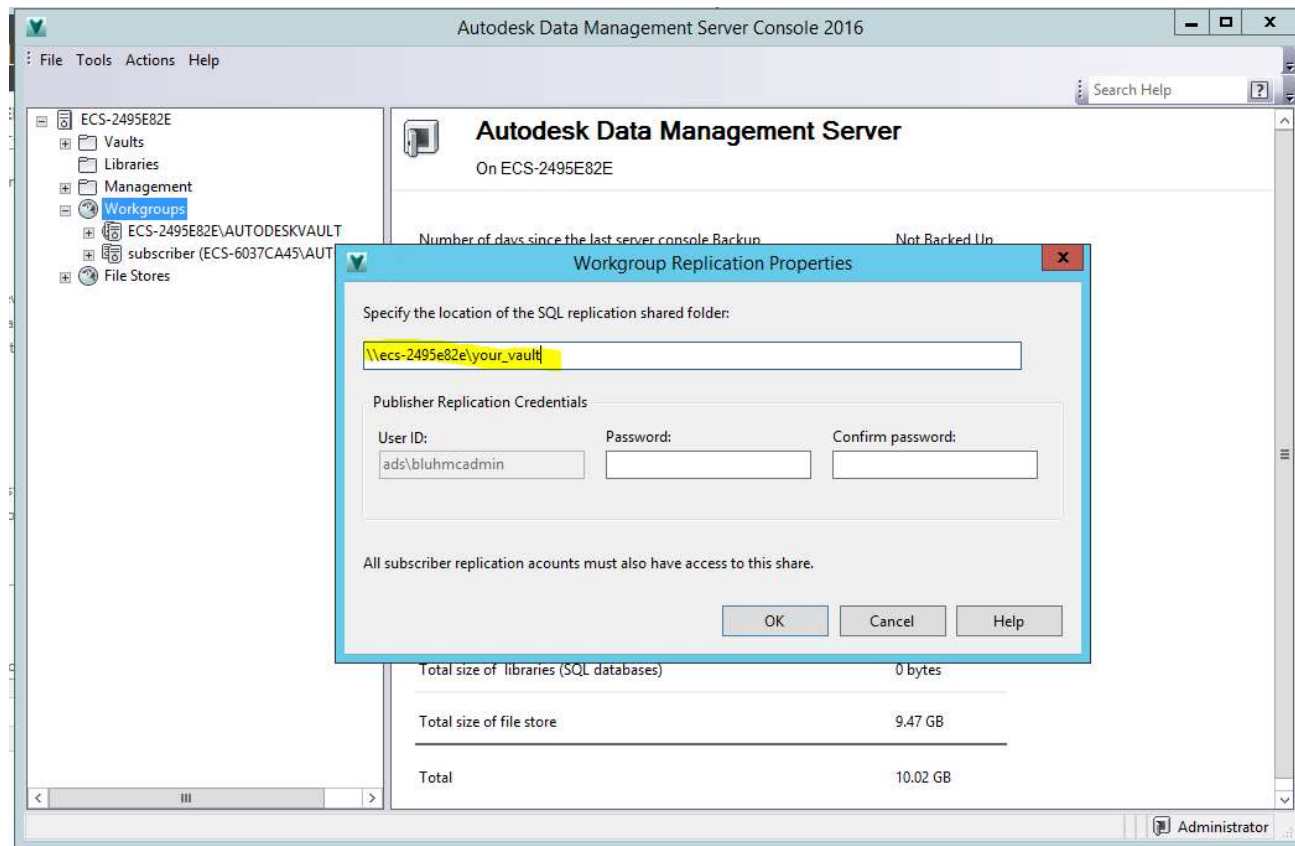
Multisite filestore replication

- By default the ADMS will replicate the entire filestore between sites. This can be very slow. Your two options to get around this is.
 - Limit what folders are sync'd
 - Copy all files to a hard drive and fly it to the remote site(hope its arms don't get tired☺)

Multisite SQL replication: The Publisher Snapshot

- As part of enabling an ADMS for workgroup replication the SQL server creates a snapshot of the current databases.
 - This is stored in the replication folder you set within the ADMS workgroup replication

Replication Folder

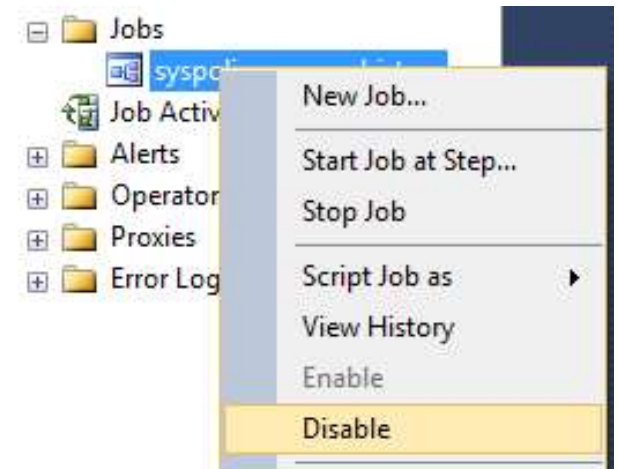


Multisite SQL replication: The Publisher Snapshot

- After you enable workgroup replication you need setup a subscriber in ADMS.
- After the subscriber server has been created inside of ADMS the SQL servers now have both create SQL Agent jobs and created a snapshot.

Pause the SQL Jobs

- Before you apply the snapshot you need to pause 2 jobs(right click, disable job)
 - The snapshot creation job on the publisher
 - The replication job on the subscriber

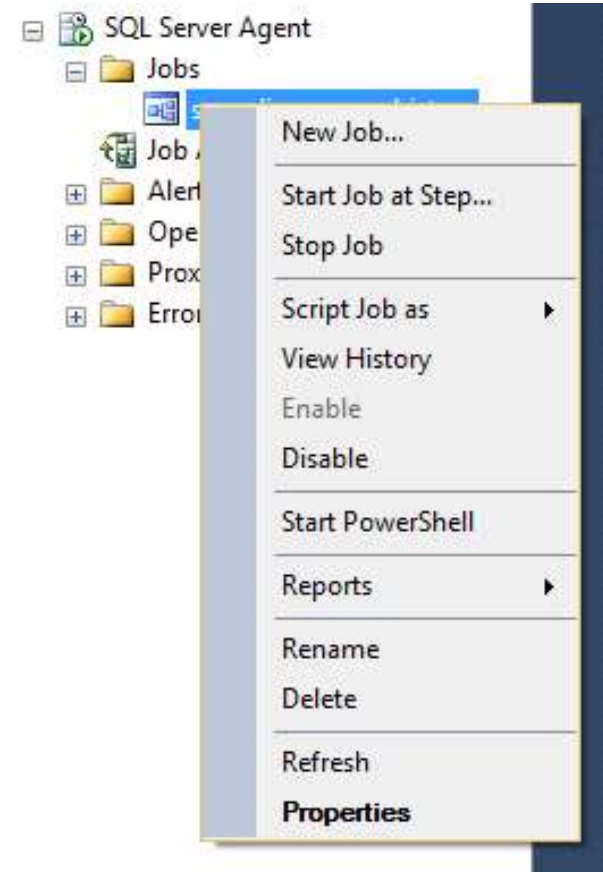


Snapshot

- The snapshot is created in a "unc" folder within the replication folder. Here are the snapshots that SQL transfers to create a subscriber database.
- To increase transfer time you can send it through the faster windows file copy method or as a compressed folder.

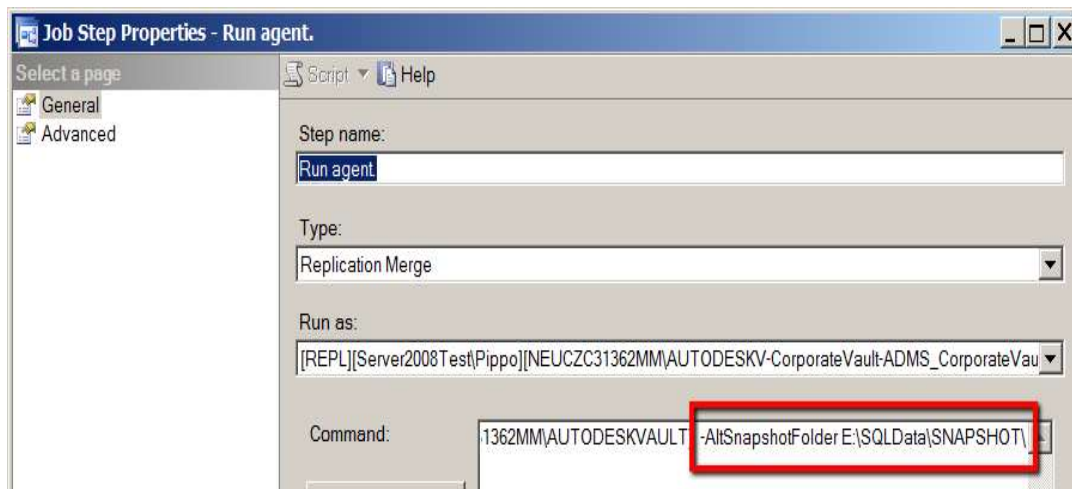
Edit the SQL Agent Jobs

- Open SQL Management Studio and go down to the SQL Agent and under the Jobs Folder



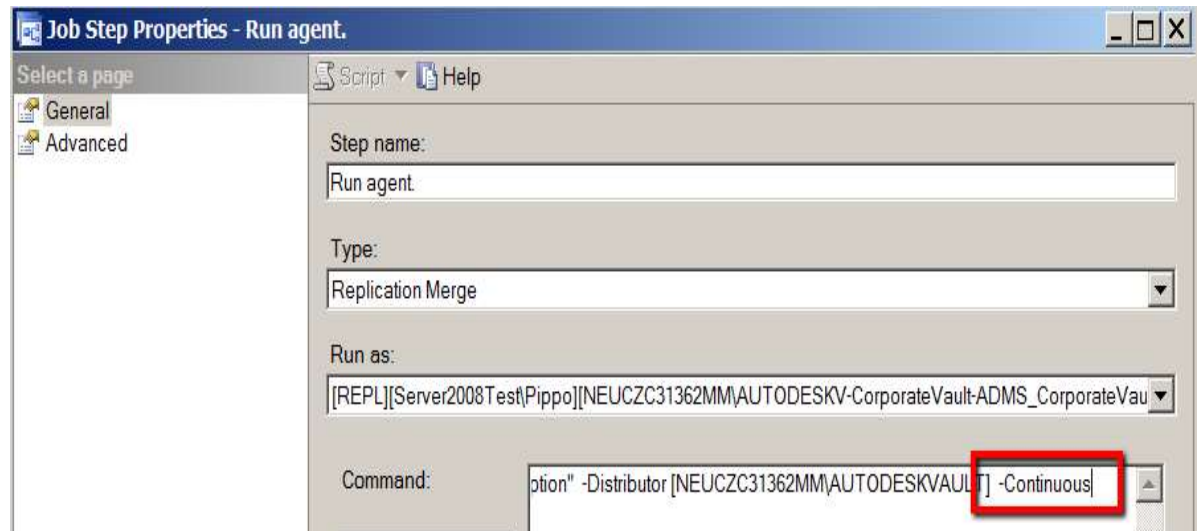
Switch to the Alternate Snapshot location in SQL

Manually edit the SQL AGENT JOB on the subscriber



After the snapshot has applied

- Switch the Agent Job back to continuous reinitiate communication between the publisher and subscriber



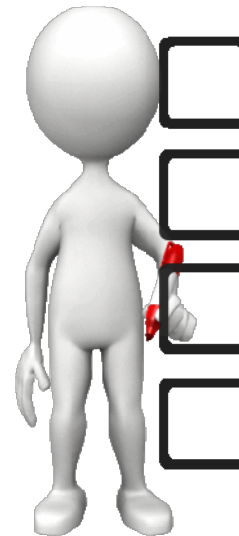
DEMO

- Restoring a subscriber after a server loss or disaster



Please Fill Out Your Surveys

- Your class feedback is critical. Fill out a **class survey** now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- **Your feedback results in better classes and a better AU experience.**
- **If you are not sure, the answer is 5 ;)**



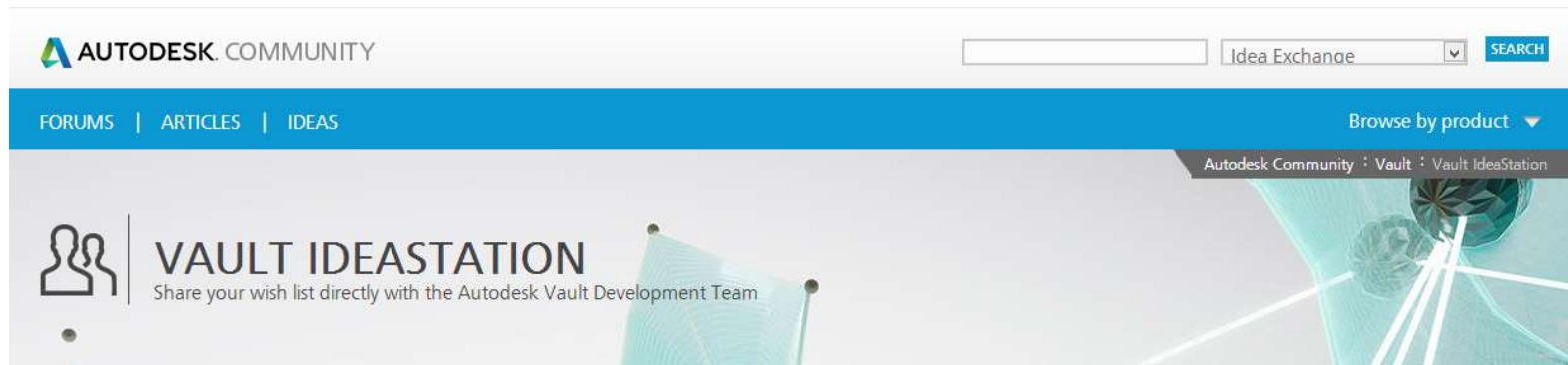
Resources – Under the Hood

- Fusion Lifecycle and Autodesk Vault
- Brian Schanen, Tyler Beck, Irvin Hayes and Michelle Stone
- Great source of tips and tricks for Vault and Fusion Lifecycle
- <http://underthehood-autodesk.typepad.com/blog/>



Got An Idea? Share it!

- Share your idea directly with the Vault Development Team
- Community can support ideas to surface the most relevant



Free Toys!





Autodesk is a registered trademark of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document. © 2016 Autodesk, Inc. All rights reserved.

