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information

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ACADEMIC PACKAGE -

GETTING STARTED GUIDE

SETUP THE AUTODESK VAULT FOR ACADEMIC PURPOSES

Icon made by from

Content

Overview

The academic package for Autodesk Vault provides you everything you need to setup the Vault for your CAD course or Tutorial. If you are missing something or enhance the package, please let me know.

BASIC FUNCTIONS

The idea behind the academic package is to stay as close to the "out-of-the-box" setup of the Vault and at the same time avoid some shortcoming of it.

- You will be able to create users, groups, group folders and subgroup folders according to your participants list.
- The access to these folders well be set at the same time according to academic needs.
- A Lifecycle definition will support your assessment workflow.
- Give you a guideline and best practice how to use the Autodesk Vault in a CAD course.
- Provide you a basic set of slides for your lecture to explain the usage to your students.

CONTENT

This Academic Package contains:

- This getting started guide for you (GettingStarted.pdf)

- Presentation for the students (AcademicPackageforAutodeskVault.pptx, pdf)

- Extension for Autodesk Vault to mass import student user information, groups and folders (folders MEIstudentSetup20xx)

- Installation script (setup.cmd)

- Configuration File which contains

    - Lifecycle definition

    - Properties

Documentation

SHORT WALKTHROUGH

In order to set up your students, you have to do the following steps, which are described in detail in the section, which follow.

- Install the extension
- Open the Student List with the "Setup Studens" command
- Check the user information and groups in the dialog
- Start the automated user, groups and folders generation
- Assign Roles and Vaults (and eventually additional grous) to the toplevel group
- Test your setup with a student account

GENERAL HELP

The general documentation of Vault 2018 is located on the Autodesk website

The material you find within the package is for academic and personal use only. You can distribute it among your students. When you want to share the material with an academic college, then rather point him to the original location of the Academic Package. For a company or industrial use get in touch with me.

When you read this document, you have successfully downloaded the Academic Package. You have accessed the zip file and opened the getting started guide. Very good.

- If you have not yet created a Vault Instance for your CAD course, you can do that with the configuration file, which comes with the package.
- You should check out the additional documentation that comes with the Academic Package, since it contains basic a workflow.
- If you have already an instance of Autodesk Vault up and running, you can directly try out the SetupStudent extension. Follow the installation procedure as follows
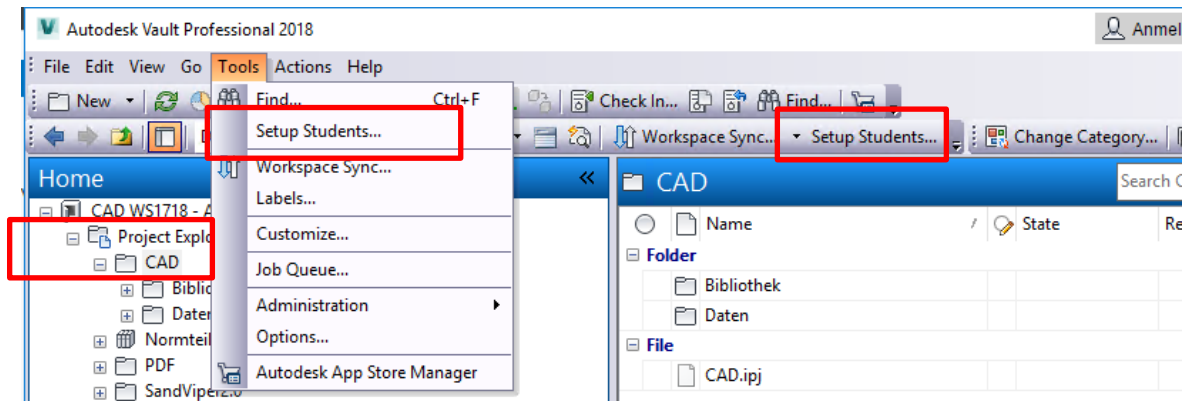
INSTALLATION

The installation of the extension on the Vault Client starts with executing the setup.cmd script. It looks for supported Vault clients and their extension folder at the default location. If an extension folder exists, then the appropriate MEIstudentSetup extension will be copied into the folder. If you are not using default locations you have to copy the right folder at the extensions location (its easy). Don't forget to remove the Vault version number. The default folder for extensions is

C:\ProgramData\Autodesk\Vault 2018\Extensions

To load the extension, you have to restart your Vault client. Login with your favorite administrative account.

Check if you find buttons in the Advanced Toolbar and in the Tools menu. Note that it only activates when you select a folder (see screenshot below)

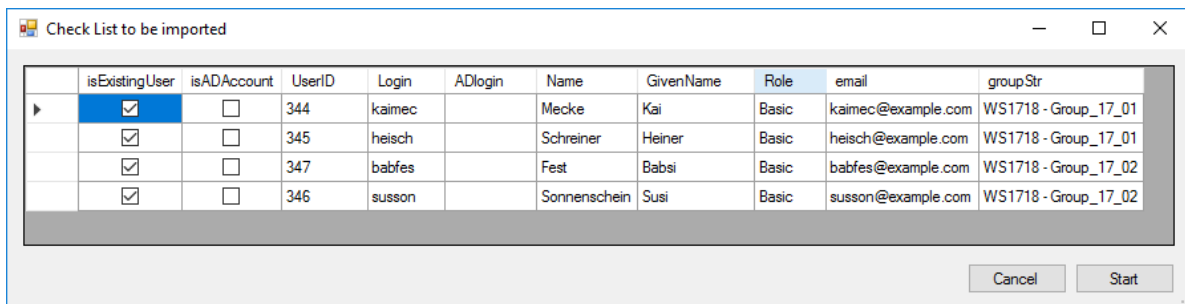**Where do you find the MEIstudentSetup extension command**

STUDENT LIST

The following example shows an example of the student list how it can be imported into the Autodesk Vault.

FIRST NAME	SURNAME	ADORVAULT USERNAME	EMAIL	TEAM NAME	SUB TEAM	ROLE
Kai	Mecke	kaimec	kaimec@example.com	WS1718	G17_01	Basic
Heiner	Schreiner	heisch	heisch@example.com	WS1718	G17_01	Basic
Susi	Sonnenschein	susson	susson@example.com	WS1718	G17_02	Basic
Babsi	Fest	babfes	babfes@example.com	WS1718	G17_02	Basic

Note the following remarks, so that the list actually works:

- Do not add, rearrange or delete the columns, since the extension depends on this specific definition
- The first row is omitted, because it contains the column headers
- To start the import, you have to select the parent folder where the CAD course structure will be created.
- When you select the list, then you get a dialog, which shows you the interpretation of your list (see screenshot below). If everything looks good you can hit the Start button and the changes are applied.
- Beware: You cannot delete users in Vault. Therefore make sure you get it right at the first shot in the productive system. Test your approach in a test system first.
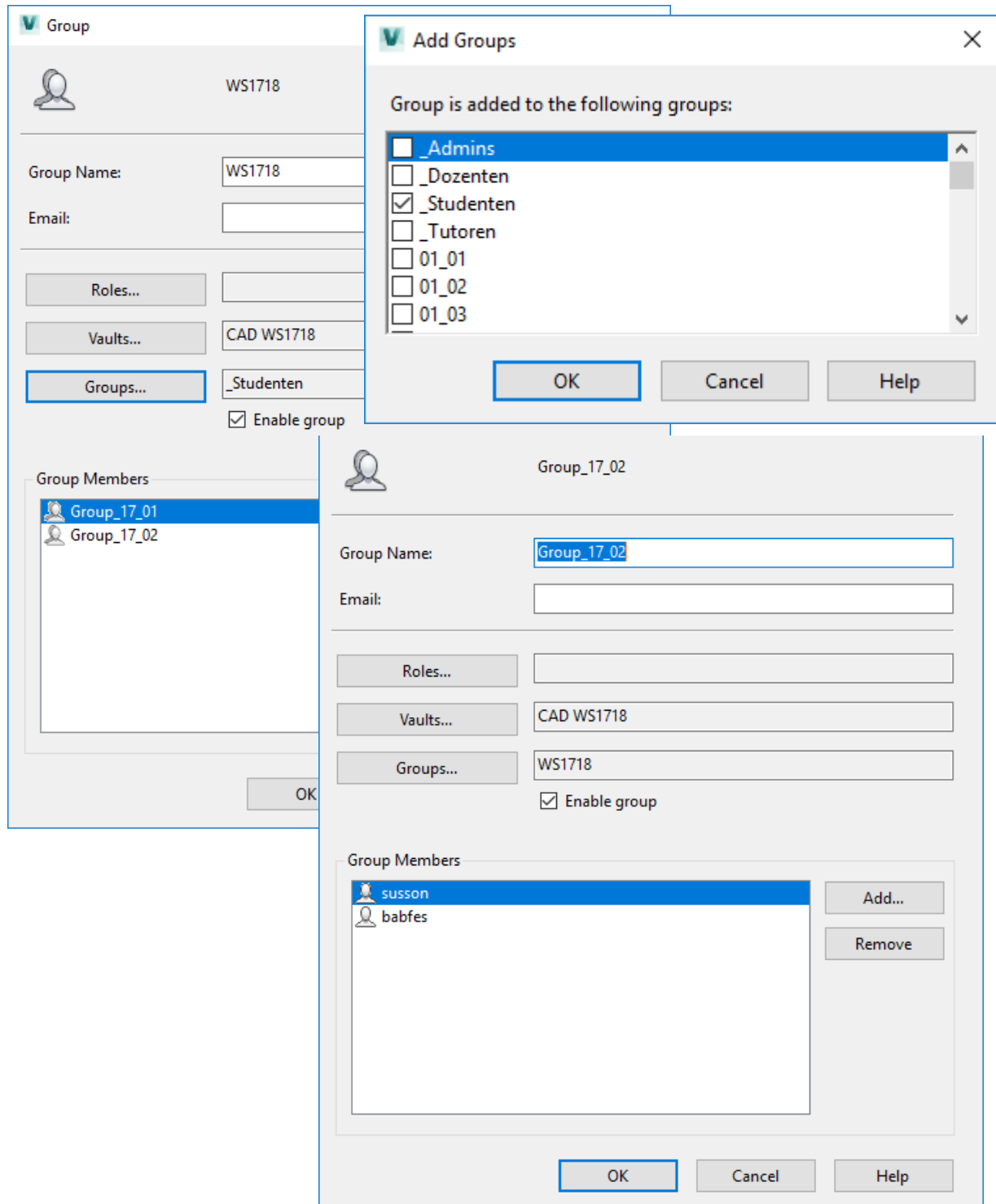
	isExistingUser	isADAccount	UserID	Login	ADlogin	Name	GivenName	Role	email	groupStr
▶	☑	☐	344	kaimec		Mecke	Kai	Basic	kaimec@example.com	WS1718 - Group_17_01
	☑	☐	345	heisch		Schreiner	Heiner	Basic	heisch@example.com	WS1718 - Group_17_01
	☑	☐	347	babfes		Fest	Babsi	Basic	babfes@example.com	WS1718 - Group_17_02
	☑	☐	346	susson		Sonnenschein	Susi	Basic	susson@example.com	WS1718 - Group_17_02

Interpretation of the list to be imported

GROUP STRUCTURE

With the execution of „Setup Students" the first thing that happens is that it creates user account, or imports the users from the existing domain. (isADaccount). The subgroup for the "Subteam" will contain the users. The top level group "Teamname" will contain the subgroups.
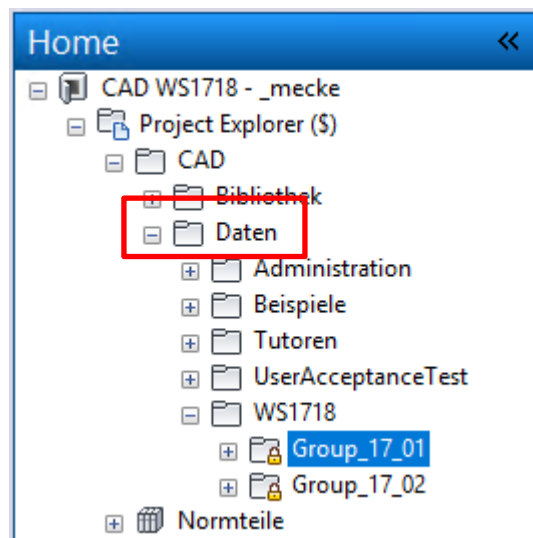
Note that this top level group still does not assign any Vaults or Roles to the users. So you probably want to assign this top level group to a General Group, which assigns Roles and Vaults (in this case below this is "_Student") or you can add those Roles and Vaults to

Group assignments
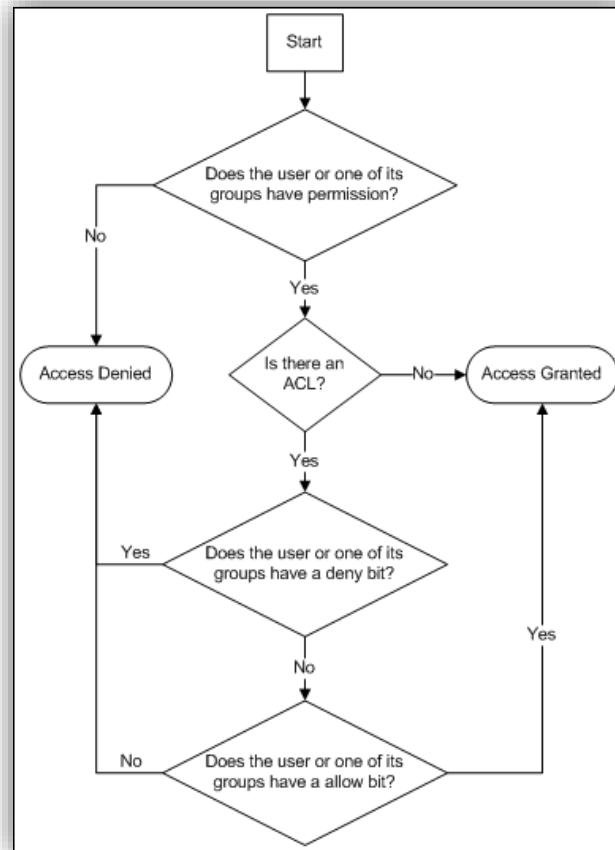
FOLDER STRUCTURE

You select the folder in which the SetupStudent extension will create the folder structure. In the screenshot below the Folder "Daten" was selected. Then the Toplevel Group (WS1718) gets its folder and underneath you find the subgroup folders (Group_17_01 …).

Created Folder structure

You find additional information regarding the assignment of <u>File, Folder, Items, and Custom Object Security</u> online. In addition it is good to be aware of the algorithm of the access control illustrated below.

Note that users have to navigate through the folder structure to the folders which they work in. Even if you check the effective folder access via the "details" you can lock them out on an upper level in the folder structure.

DOCUMENTATION

Access Control Algorithms [source: justonesandzeros]

CHECK THE LOGFILE

All interesting steps are documented in the log file. If something went wrong, you will find the error messages in this log file as well. To get support the first thing I will ask for is this log file.

"C:\Temp_mei\MEIstudentSetup.log"

Videos are in the making.

ACHITECTURE OF THE SYSTEM

The following illustration shows an example for a system architecture setup. The illustration shows the access of a client (e.g. from a computer pool) to the Vault server.

System architecture

The Clients (maybe virtual ones) access the Vault Server. The connections from Inventor via the Vault Addin and the Vault Client are different independent connections. The ADMS console is the central part of the Vault server. It combines the Database and the Filestore. All datasets, metadata and Vault specific behavior is stored in the database, while the actual binary CAD geometry files are located in the Filestore. The location of the SQL Database can be localhost or an external one in a datacenter (setup can be tricky due to exchange network shares and firewall settings). There are several options for external users to use the environment from remote.

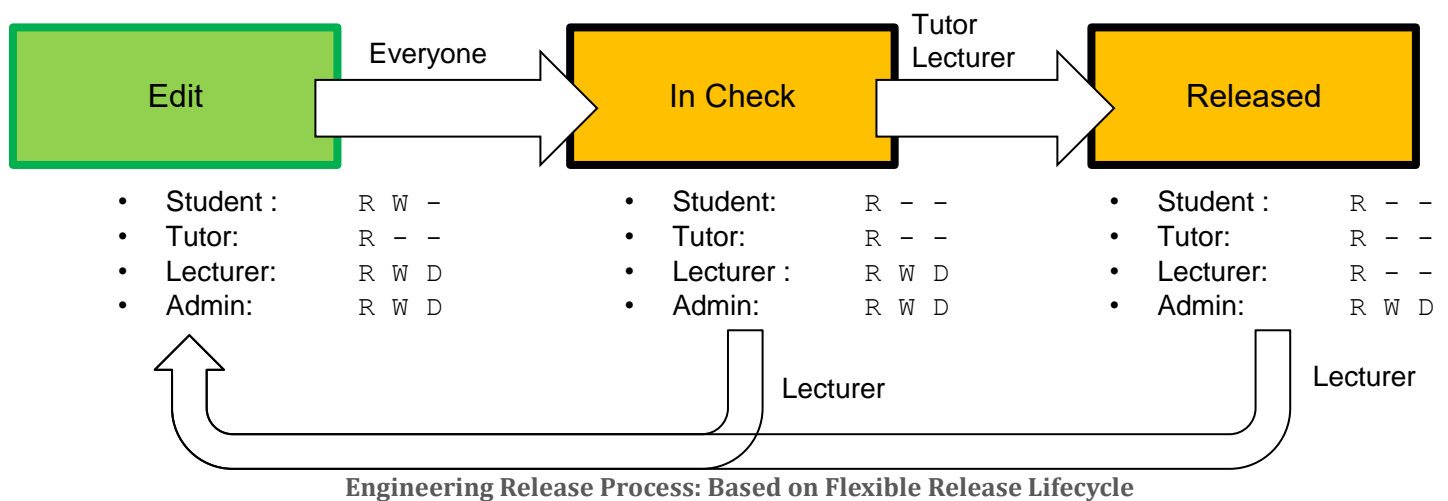Note that a test system is highly recommended.

CONFIGURATION OF THE BEHAVIOR OF AUTODESK VAULT

For the productive use of your Vault, you have to define the behavior of it. Therefore you have to create a set of categories, which then define rules, lifecycles, properties and revision schemas of the vault. When you chose to create the Vault from the configuration file, which comes with the package, then you did not have the basic groups available (e.g. _Student, _Tutor, _Lecturer). Therefore you have to manually update the lifecycle state security and transitions.

- Engineering (Category)

    - Rules: Inventor Files

    - Lifecycle: Academic Engineering Release Process

    - Properties: None

    - Revision Schema: Standard Alphabetic Format

- ▪ Basic

- ▪ Rules: Documents (doc, txt, etc.)

- ▪ Lifecycle: Academic Simple Release Process

- ▪ Properties: None

- ▪ Revision schema: None

Edit	→ Everyone →	In Check	→ Tutor Lecturer →	Released
• Student : R W – • Tutor: R – – • Lecturer: R W D • Admin: R W D		• Student: R – – • Tutor: R – – • Lecturer : R W D • Admin: R W D		• Student : R – – • Tutor: R – – • Lecturer: R – – • Admin: R W D

Lecturer   Lecturer

Engineering Release Process: Based on Flexible Release Lifecycle

FURTHER ACTIONS NOT COVERED IN THIS GUIDE

To get your CAD course up and running, you have to consider the following tasks, which this guide does not cover.

- Define a Naming convention and enforce unique filenames in your Vault
- Decide if the children of your objects in the Vault have to be released first
  (release the parts of an assembly before or together with the assembly)
- Create a single project file (ipj) of the type vault and enforce it in your Vault settings
- Define a concept for the handling of standard part and the use of Content Centers

ToDos

These list should give you a guideline what you have to think of when setting up a CAD course based on Autodesk Vault

PREREQUISITE ACTIONS

Action	Who	Remark
Create (virtual) server	IT	Check System requirements (e.g. here) Especially the MS SQL server should not be too new.
Create (virtual) Testserver	IT	Identical to Productive System Here you should do your first student imports and system checks
Enable Remote Connection	IT	RDP connection or Access via Client software (e.g. Citrix receiver, Horizon)
Integration into Windows domain (active directory)	IT	To avoid password handling with all student accounts, you should try to use the hopefully existing AD login information. The student list should contain the AD user name for the account creation.
Create installation image for CAD Clients	IT	There are many ways to give the students access to the CAD software. (On premise, Horizon…) choose your poison.

ADMINISTRATIVE ACTIONS

Action	Who	Remark
Download educational licenses	Vault Admin	Via your academic Autodesk Account you get a License file, which contains several thousands of
Install MS SQL server	Vault Admin	With the Vault Installation package, you get a free MS SQL Express which is limited in database size to 10GB. That should be enough for a one semester course. Follow the Vault Installation Guide – the license server installation is included as well
Install ADMS Server	Vault Admin	Follow the Vault Installation Guide
Backup	Vault Admin / IT	Think about a backup strategy for your system. I recommend the Vault Backup to eventually find corrupted data.

TODOS

Student List	Central Student office?	Create a student list based on the template csv file. All participants will be added via the "Import students"
Create basic folder structure	Vault Admin	Test your mode of operation and models with tutors and with student rights
Read the student list with the "Setup Students" button	Vault Admin	This Academic Package contains the extensions which reads the student list. Try this on the test system first, since you cannot delete user accounts in Vault.
Optional tasks	???	- Prepare presentations - Prepare script - Add project file - Design Data & Templates for Inventor - Distribute Application Options for Inventor - Content Center part usage - Identify a suitable model for the students (Autodesk has some sample files)

Final remarks

ENJOY!

I hope you can successfully apply the Academic Package and benefit from it for your educational needs. Please contact me in case you have remarks concerning the

CONTACT INFORMATION

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FINAL REMARKS

Change log

WHEN	WHO	WHAT
2017 Nov 4	Mecke	Initial Creation