



3DEXPERIENCE platform Installation Essentials R2019x



3DEXPERIENCE



About this course

► Course objectives

- Familiarize with the **3DEXPERIENCE** platform
- Understand the **3DEXPERIENCE** platform architecture with regards for Installation
- Learn about pre-requisite configurations
- Learn about installing **3DEXPERIENCE** platform services
- Learn the steps required to validate an installation
- Learn about **3DEXPERIENCE** native client
- Prepare for the **3DEXPERIENCE** platform Installation Essentials exam

► Target audience

Infrastructure Architect

► Prerequisites

The participant must have good knowledge of operating system and database.



6 hours

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CAUTION / WARNING

This document is based on various internal DS content for **3DEXPERIENCE** platform R2019x.

In some cases, this document may contain forward looking statements based on current expectations, forecasts and assumptions that involve risks and uncertainties.

Upon further communication this document is classified to be DS Confidential. It should not be distributed without DS authorization.

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 - Database
- ▶ List of On-Premise mandatory core components:
 - 3DPassport
 - 3DDashboard
 - 3DSearch
 - 3DSpace
 - 3DNotification
 - 3DComment
 - 3DSwym
 - FCS
- ▶ Optional component - 3DIndexing server
- ▶ About the Fix Pack (FP) installations
- ▶ About the mid-market modules
- ▶ About the **3DEXPERIENCE** CATIA client
- ▶ Connection between the platform and client

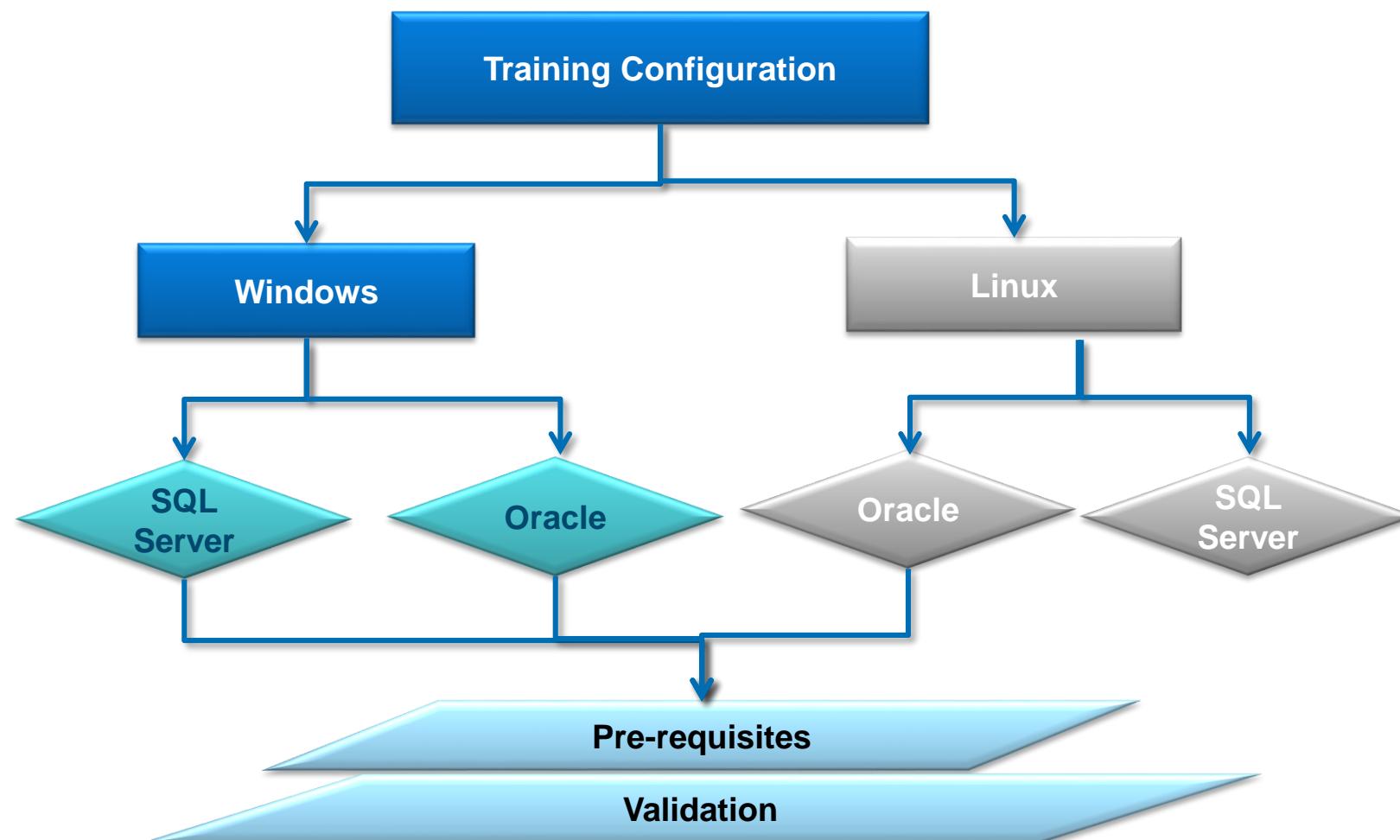
Introduction to Training

You may have your own personal installation preferences and tools, but for this training it is recommended to perform the installation as instructed. Later, if you choose, you may adapt these steps for your own specific needs.

These following components must be decided upon prior to beginning the 3DS software selection:

- ▶ Operating system
- ▶ Database

These decisions will drive your prerequisites and validation steps as listed below:



Conventions (1/2)

The following typographic conventions are used in this course:

- ▶ **Bold text** within a sentence denotes the name of a tool, icon, window, dialog box, button or option.
- ▶ *Italic text* within a sentence is used to denote the name of a tree item or a data file, or to apply emphasis on a key word.
- ▶ Numerical lists are used in sequential lists, such as the steps of an exercise procedure.
- ▶ Lower-case alphabetical sub-lists are typically used in the sub-steps of an exercise procedure.
- ▶ Text enclosed in these < > brackets represents the name of the keyboard key and syntax.
- ▶ Text enclosed in these [] brackets corresponds to the text that must be typed into the text field of a dialog box or prompt.

Conventions (2/2)

Courier New identifies the commands that are typed in the command prompt for a user.

Navy blue identifies the folder or file paths.

Underline identifies the website address.

- ▶  identifies the areas in an image that are associated with the corresponding text in a sequential list or an exercise procedure.
- ▶ Upper-case alphabetical lists are used for items that are non-sequential, such as options or definitions.
- ▶  at the top right corner of a slide indicates that the slide contains animations. Click anywhere in the contents area of the slide to view the animations.

Lesson 1: Architecture Overview

Architecture overview topics:

- ▶ **3DEXPERIENCE** platform – Services
- ▶ **3DEXPERIENCE** platform n-Tier Web Logical Architecture
- ▶ **3DEXPERIENCE** platform R2019x GA Logical Architecture On Premise



15 minutes

On-Premises Architecture: Platform apps and Services



3DPassport

Identity and authentication management.



3DCompass

One-click access to Service, Roles & Apps.



3DSwym

Share expertise, knowledge and skills in communities.



3DMessaging

Connect instantly in context and share designs with 3D snapshot.



3DComment

Share your thoughts, engage in discussion with peers.



3DNotification

Update users about any activity on the platform.



3DPlay

Visualize and review 3D designs in real-time.



3DEXPERIENCE®

3DDashboard

Aggregate all the information that matters to your business.



3DSearch & 6WTags

Search and discover content. Tag content along 6 dimensions (Who–What–When–How–Where–Why)



Platform Manager

Enterprise Modeling & Control Centers

Apps licensed by IFW for Admins only

3DOrchestrate

Distribute and parallelize the execution of simulation process



3DSpace

Manage and share structure contents as data, documents and related information.

3DEXPERIENCE versus V6

V6 intended at leveraging product and project information collaboration. It aimed to work synchronously with ERP, SCM and CRM using technologies like SOA, SaaS and Web 2.0. It is operated with cross functional and inter-company silos.

3DEXPERIENCE platform offers an intuitive interface to experience PLM with:

- ▶ 3DPassport for authentication.
- ▶ 3DDashboard for creating widgets.
- ▶ 3DSpace for authorization and working on the 3D geometries across different industry verticals.
- ▶ 3DSwym, 3DComment, 3DNotification for collaboration and networking within communities.

3DEXPERIENCE platform provides improved installation experience.

- ▶ Consistent installation on Linux and Windows with one installation script per service.
- ▶ Support on Oracle / Microsoft SQL Server. Migration tool to switch to Oracle.
- ▶ Offers three ways to execute installation: Interactive, Command and Silent.
- ▶ Install multiple services faster on the same machine with one installer.

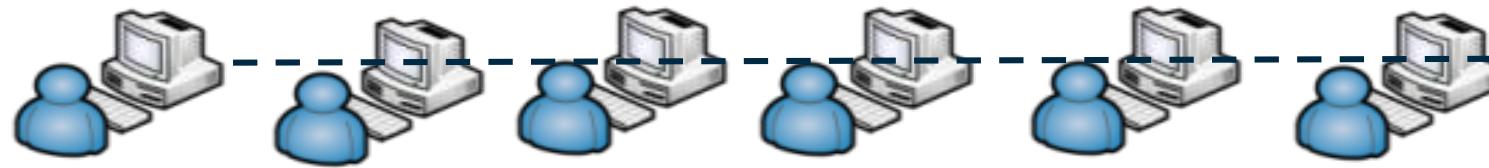
Refer the <https://www.3ds.com/> and click the **Real time 3DEXPERIENCE**, that will walk you through the glimpse of the **3DEXPERIENCE** platform.



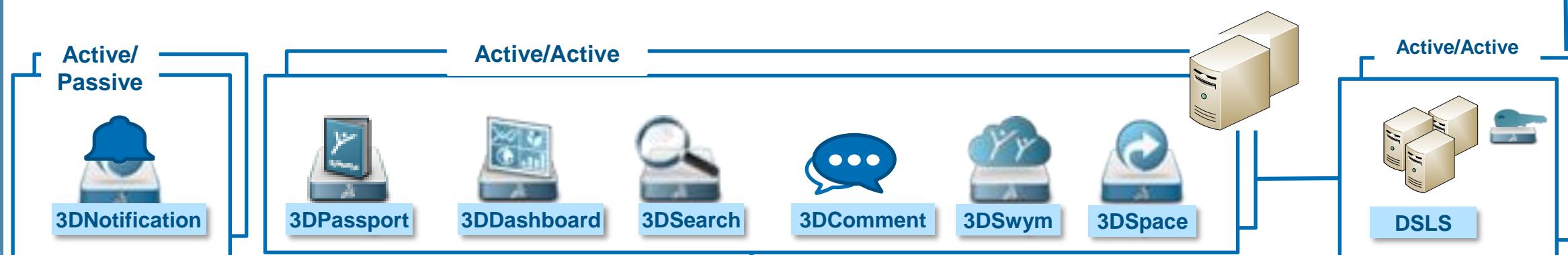
On-Premises Architecture



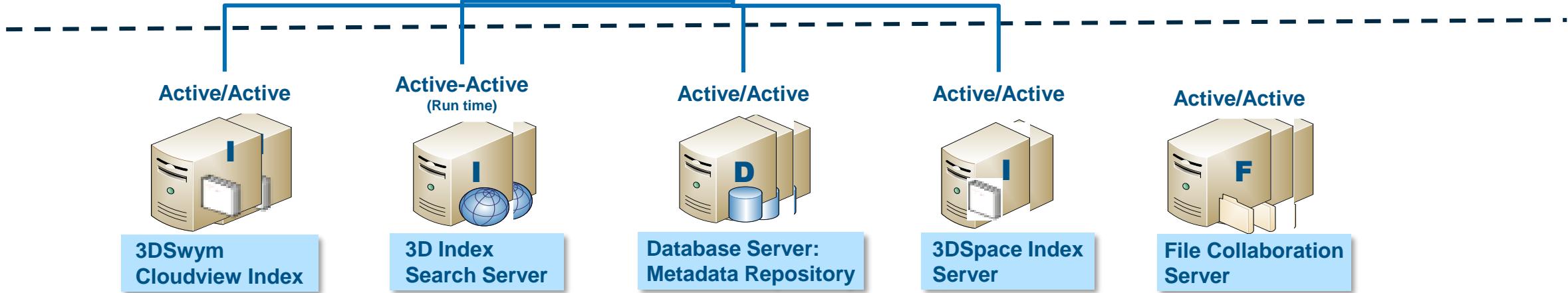
Presentation



Logic and Access



Data



Modularity: Is the degree to which a system's components may be separated and recombined.

Fail-over: In case of failure of an application server transaction is dispatched on another application server.

Load balancing: Ability to dispatch load on different Application servers or File servers.

3DEXPERIENCE platform R2019x Supported Architecture on Premises

	3DPassport	3DDashboard	3DSearch	3DComment	3DSpace	3DSwym	3DNotification	DSLS			
Load balancing	Load Balancing ^{1) 2)}										
Application Servers	TomEE+ Java8				NodeJS						
Infrastructure Services and Indexing					3DIndex (Volumetric Search)/3DX	3DSwym Media Converter		License Control			
					3DSpace Index	3DSwym Index					
File Storage					3DSpace Store (FCS)	3DSwym Media Store					
Metadata Storage	Oracle 12c on RHEL, SUSE, Windows Microsoft SQL Server on RHEL, SUSE, Windows										
Operating System(s)	RHEL, SUSE, Windows										

1) 3DNotification is only Active-Passive, HA compliant but not load balanced.

2) DSLS is load balanced using the internal mechanism of three server cluster.

SQL Server client driver is supported on Windows only. This implies that all components with communications to the database have to run on a Windows.

<http://www.3ds.com/support/documentation/program-directories>

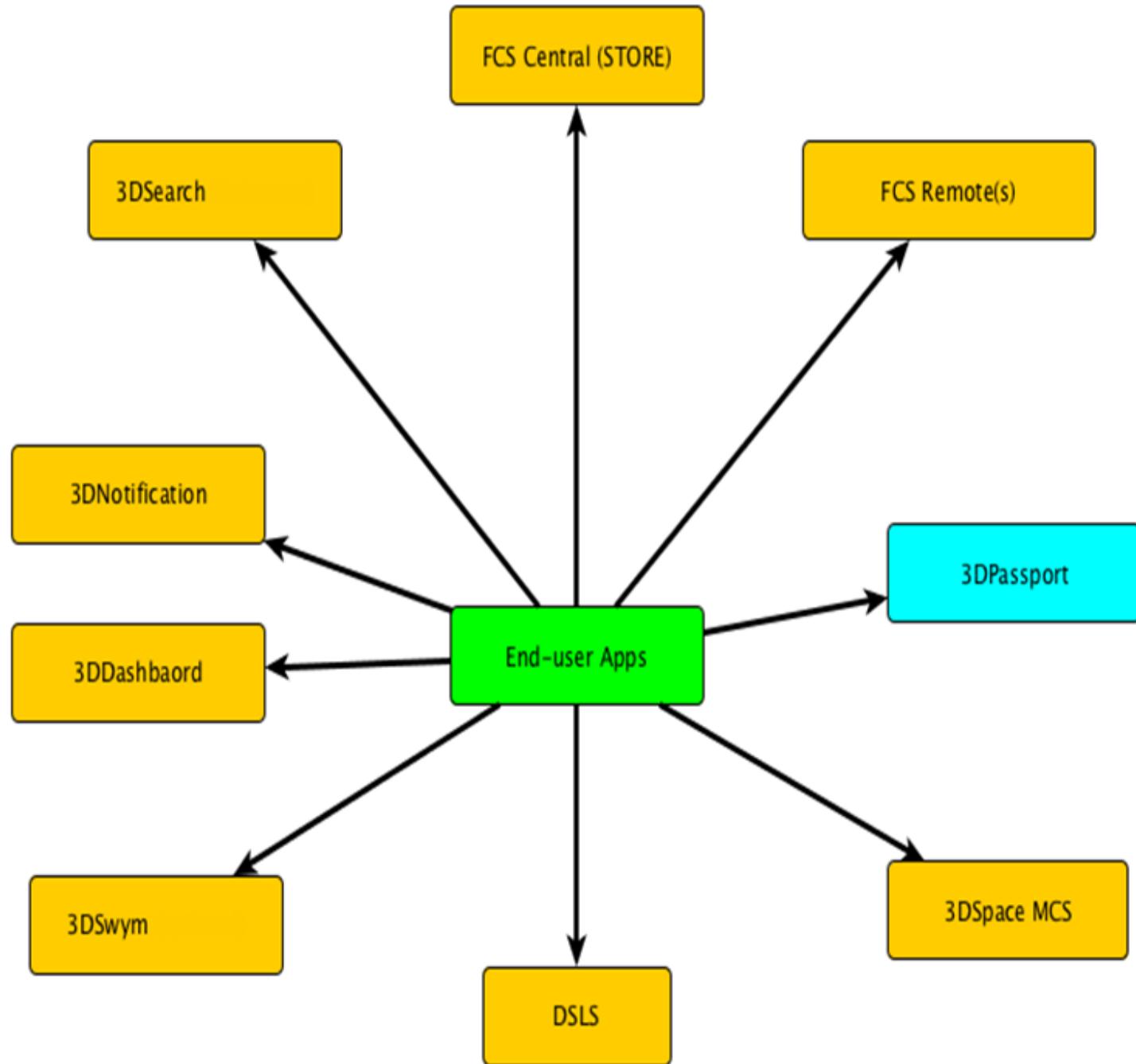
End-User Data Flow in 3DEXPERIENCE R2019x (1/2)

3DEXPERIENCE requires SSL/TLS support for secure communication for HTTP protocol and web sockets protocol. The web socket support is for 3DNotification communication with the client browser.

3DEXPERIENCE requires two distinct 3DDashboard FQDN as listener, prior to installation:

- ▶ the **trusted** FQDN authenticated services of the 3DEXPERIENCE platform and
- ▶ the **not trusted** FQDN which prevents by design a widget to use the authenticated services of the 3DEXPERIENCE platform.

Trusted domain cannot be a sub-domain of untrusted domain.



End-User Data Flow in 3DEXPERIENCE R2019x (2/2)

Service	Deployment	End-user Apps	End-point VIP	Data connection
3DSwym	Mandatory	Yes	One per service Else	https
3DNotification	Mandatory	Yes		https, websockets
3DComment	Mandatory	No		https
3DSpace MCS	Mandatory	Yes		https
FCS	Mandatory	Yes	Two required for 3DDashboard	https
3DPassport	Mandatory	Yes		https
3DDashboard	Mandatory	Yes		https
3DSearch	Mandatory	Yes		https
Licensing	Mandatory	Yes	Embedded end-to-end	https
3DSpace Index	Mandatory	No	Optional	http by default
Volumetric Search	Optional	No		

3DEXPERIENCE R2019x FD01 Strategic platform Prerequisites On Premises

	Native OS Client			Browser Client									
Stack	Windows - 64-bit			LINUX-64bit	MacOS								
Operating Systems	Windows 10 + Office 2010, 2013, 2016			SLES 12, RHEL 7	MacOS 10.13								
Browser	Internet Explorer 11			Firefox ESR 60	Safari 11								
	Firefox ESR 60, Chrome				Firefox ESR 60								
Processor	X86 (Intel, AMD)												
Server													
	LINUX - 64bit			Windows Server- 64bit									
Stack	3DSpace / 3DDashboard / 3DSwym 3DComment / 3DPassport / 3DSearch		3DNotification	License Control	3DSpace / 3DDashboard / 3DSwym 3DComment / 3DPassport / 3DSearch	3DNotification	License Control						
Apps Server	Apache TomEE+ 7.0.5		NodeJS	Not Applicable	Apache TomEE+ 7.0.5		NodeJS						
Database	Oracle DB 12c R2* (including RAC)	ORACLE EXADATA			Oracle DB 12c R2 (including RAC)	ORACLE EXADATA							
	Microsoft SQL Server 2017				Microsoft SQL Server 2016 & 2017								
Language	Java 8 (>=152)				Java 8								
Operating Systems	RHEL 7 & SLES 12				Windows Server 2012 R2 & 2016								
Virtualization	VMware ESXi 6.0, Microsoft Hyper-V, KVM, XEN												
Processor	X86_64 (Intel, AMD)												
Hardware	Server Class												

For details refer <http://www.3ds.com/support/documentation/program-directories>

Lesson 2: Middleware Configuration

- ▶ Introduction
- ▶ Operating System
 - Java Configuration
 - Apache Configuration
 - TomEE+ Configuration
 - SSL: Generation and Deployment of SSL certificates



1 hour

Introduction

Topics to be covered:

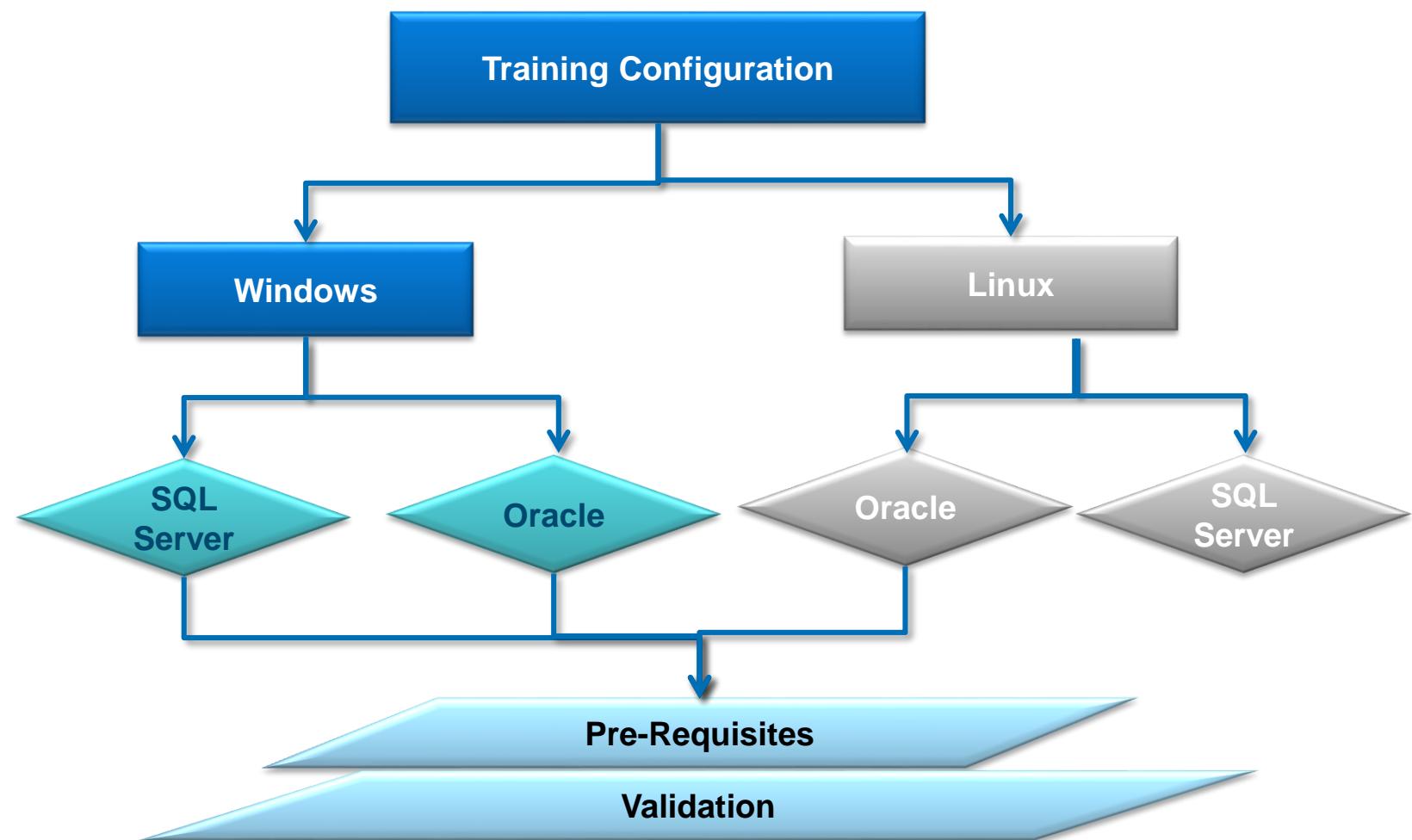
1. **Introduction**
2. Java Configuration
3. Apache Configuration
4. TomEE+ Configuration
5. SSL Certificates

Introduction

Regardless of the selected option, you are going to perform the following tasks on your **3DEXPERIENCE Server**.

This sequence ensures that all dependencies are achieved and tested prior to the next steps.

- ▶ Java Configuration
- ▶ Apache Configuration
- ▶ TomEE+ Configuration
- ▶ SSL Generation and Deployment of SSL certificates



Java Configuration

Topics to be covered:

- ✓ 1. *Introduction*
- 2. **Java Configuration**
- 3. Apache Configuration
- 4. TomEE+ Configuration
- 5. SSL

Java configuration is a corner stone of the **3DEXPERIENCE** software dependencies.

- ▶ The **3DEXPERIENCE** platform software is an *Enterprise* wide application, like a:
 - A database or
 - The SSO/LDAP enterprise wide user/password management
- ▶ Ensure the following:
 - Do not auto update the java version
 - Java is for this application only
 - Any update needs to be managed as a minor code revision and tested thoroughly
- ▶ Notice that there are two architectures: 32 & 64 bits:
 - **64bits: For server needs exclusively**
Java 8 Update 152 is a Qualified Platform
 - **32bits: For Internet Explorer**
Java1.8.0_152 is a Qualified Platform

Java Key parameters

- ▶ Managing the java is always a topic of conversation! Here are a few options that may be encountered:
 - IT option : Java was pre-installed and is controlled by the local IT team
 - 3DS option : Use the internal provided Java from the 3DS installer
 - Your own : You control totally this java and understand the maintenance responsibility
- ▶ All have the pro and cons and mostly determined by
 - Personal preference
 - Area of responsibility

Apache Configuration

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *Java Configuration*
- ✓ 3. **Apache Configuration**
- 4. TomEE+ Configuration
- 5. SSL

Apache Configuration

- ▶ Connection to all **3DEXPERIENCE** platform services is done via https protocol for security reasons. In order for the application to be contacted by its clients, a set comprising reverse proxy (for ending https calls) and load balancer (for high availability) should be cascaded between the client and the application server for the service. These two functions may be achieved by the same component
- ▶ Apache HTTP Server 2.4.29 is a Validated Platform as a reverse proxy and load balancer (Apache will require Microsoft Visual C++ (VC15) to create the Windows service.)
- ▶ Check the 3DS program directory in order to check that the version is supported:
 - <http://www.3ds.com/support/documentation/program-directories/>

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *Java Configuration*
- ✓ 3. *Apache Configuration*
- 4. TomEE+ Configuration**
- 5. SSL

TomEE+ Configuration

- ▶ TomEE+ is application server.
- ▶ TomEE+ provides a way to define resources that can be injected into managed components inside an application. Each service is associated with a separate TomEE+.
- ▶ TomEE+ 7.0.5 with JDK 8 is a Compatible Platform for 3DPassport, 3DDashboard, 3DSwym, 3DComment, Federated Search Foundation and File Collaboration Server and 3DSpace
- ▶ Check the 3DS program directory in order to check that the version is supported:
 - <http://www.3ds.com/support/documentation/program-directories/>

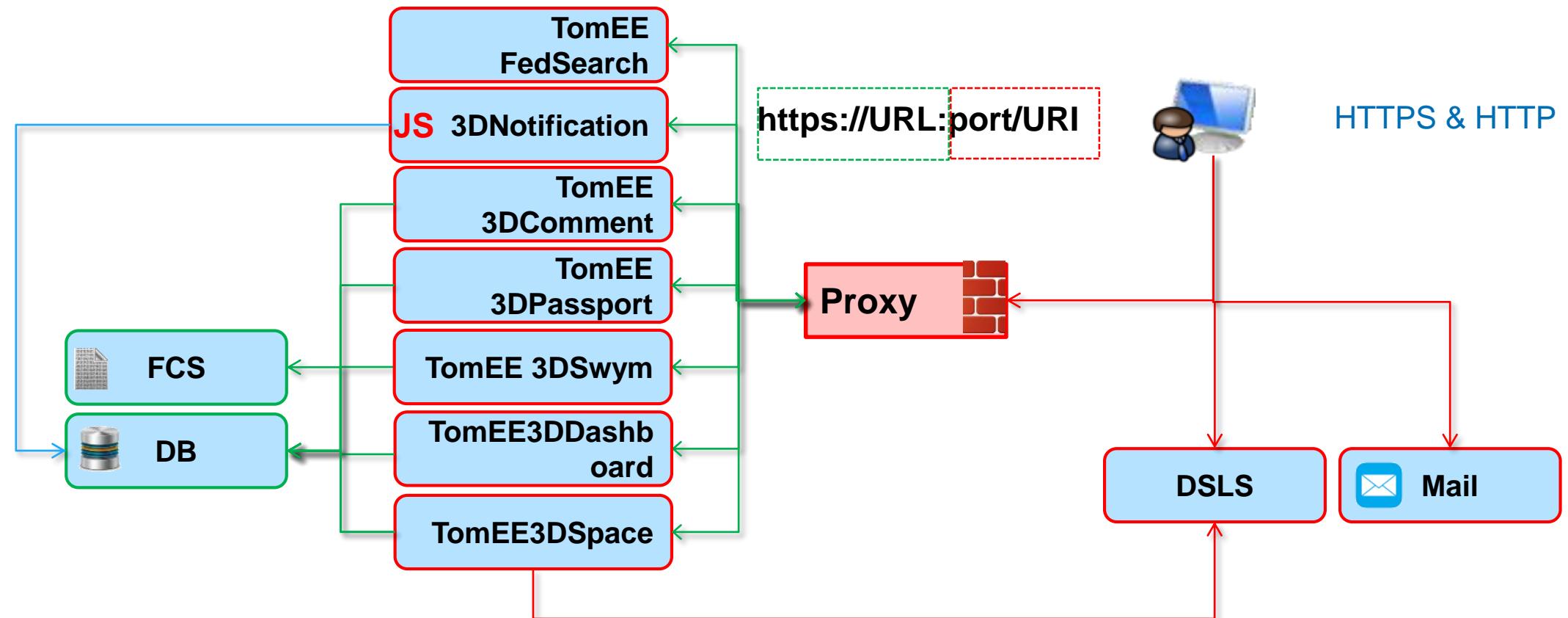
Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *Java Configuration*
- ✓ 3. *Apache Configuration*
- ✓ 4. *TomEE Configuration*
- ✓ 5. **SSL**

Secured Server Login (SSL)

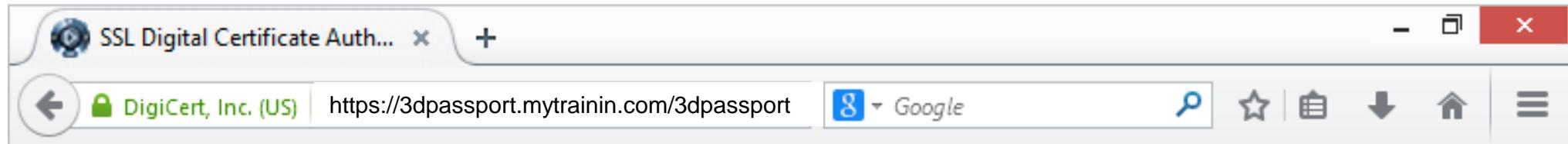
Create a certificate that will be used by Apache. The TomEE+ applications do not use this certificate. Below is a simplified view of the service security communications.

- ▶ Customer certificates should always be provided, although it's very common that you need them prior for validation. At the end of the day, the final Apache configuration will be executed by the customer:
 - CA certificate
 - Key file
 - Signing certificate
 - Server certificate
 - Keystore



SSL

- ▶ Some general SSL information, general keywords: SSL, TLS, Certificate, HTTPS, key, keystore, Certificate Authority, VPN
- ▶ Those are the technologies used to encrypt your internet traffic. Understanding the **Certification Chain** and the **physical location** of these certificates is important.
- ▶ Each certificate contains <Subject + Validity + Issuer> and is stored in the keystore.
- ▶ For the training avoid wildcard Server Name certificate, they are not bad but can be confusing during the Apache configuration. The FQDN definition must include at least 1 sub domain.
 - Valid: *.mytraining.localdomain Invalid: *.mytraining
 - Valid: server.mytraining.localdomain Invalid: server.mytraining
- ▶ At the end of the day this is what you need to achieve:



SSL Generation Process

The OpenSSL is a software library to be used in applications that need to secure communications over network.

1. Create CA certificate and CA private key.
2. Send Server certificate signing request and server private key to the respective authority.
3. Verify Server certificate signing request.
4. Create and sign Server certificate and server private key.
5. Verify Server certificate.
6. Copy server key and certificate.
7. Install CA certificate.

This process is followed on both the server and client end to secure the communication.

Microsoft SQL Server Database Configuration

Topics to be covered:

1. Microsoft SQL Server Database Configuration
2. Oracle Database Configuration

Database

Oracle and Microsoft SQL Server are RDBMS.

During the installation of a service, a connection is established with the database and its corresponding database object.

They are used to store metadata. The physical data is stored in the FCS.

Microsoft SQL Server Database Configuration

SQL Server 2017 Enterprise is a compatible Platform

- ▶ Configuration includes the following actions
 - DB creation
 - Table space creation
 - Default profile updates
 - Schema creation (user)
 - Schema permission (roles and privileges)
- ▶ Check the 3DS program directory in order to check that the version is supported:
 - <http://www.3ds.com/support/documentation/program-directories/>

Oracle Database Configuration

Topics to be covered:

- ✓ 1. *Microsoft SQL Server Database Configuration*
- 2. **Oracle Database Configuration**

Oracle Database Configuration

Oracle Database 12c Release 1 (12.1.0.2) Enterprise Edition is a validated Platform. Oracle 12c Release 2 is also supported

- ▶ Configuration includes the following actions
 - DB creation
 - Table space creation
 - Default profile updates
 - Schema creation (user)
 - Schema permission (roles and privileges)
- ▶ Check the 3DS program directory in order to check that the version is supported:
 - <http://www.3ds.com/support/documentation/program-directories/>
- ▶ Code being used and user during *this* training:
 - Oracle 12c, version 12.2.0.2.0
 - Enterprise Edition

Summary

Database

- ▶ Microsoft SQL Server
- ▶ Oracle

Lesson 4: Core Configuration

- ▶ Introduction
- ▶ DSLS
- ▶ Global 3DEXPERIENCE platform installer
- ▶ 3DPassport
- ▶ 3DDashboard
- ▶ 3DSearch
 - Federated Search
 - 3DSpace Index
- ▶ 3DSpace
- ▶ 3DNotification
- ▶ 3DComment
- ▶ 3DSwym
- ▶ FCS
 - FCS Central
 - FCS Remote



480 minutes

Introduction

Topics to be covered:

1. Introduction
2. DSLS
3. Global **3DEXPERIENCE** platform installer
4. 3DPassport
5. 3DDashboard
6. 3DSearch
7. 3DSpace
8. 3DNotification
9. 3DComment
10. 3DSwym
11. FCS
12. Reconfiguration

Introduction

This chapter will introduce the core components and will discuss configuration options and key parameters you need to manage for the installation.

- Server Core components :

- 3DPassport
- 3DDashboard
- 3DSearch
- 3DSpace
- 3DNotification
- 3DComment
- 3DSwym
- FCS

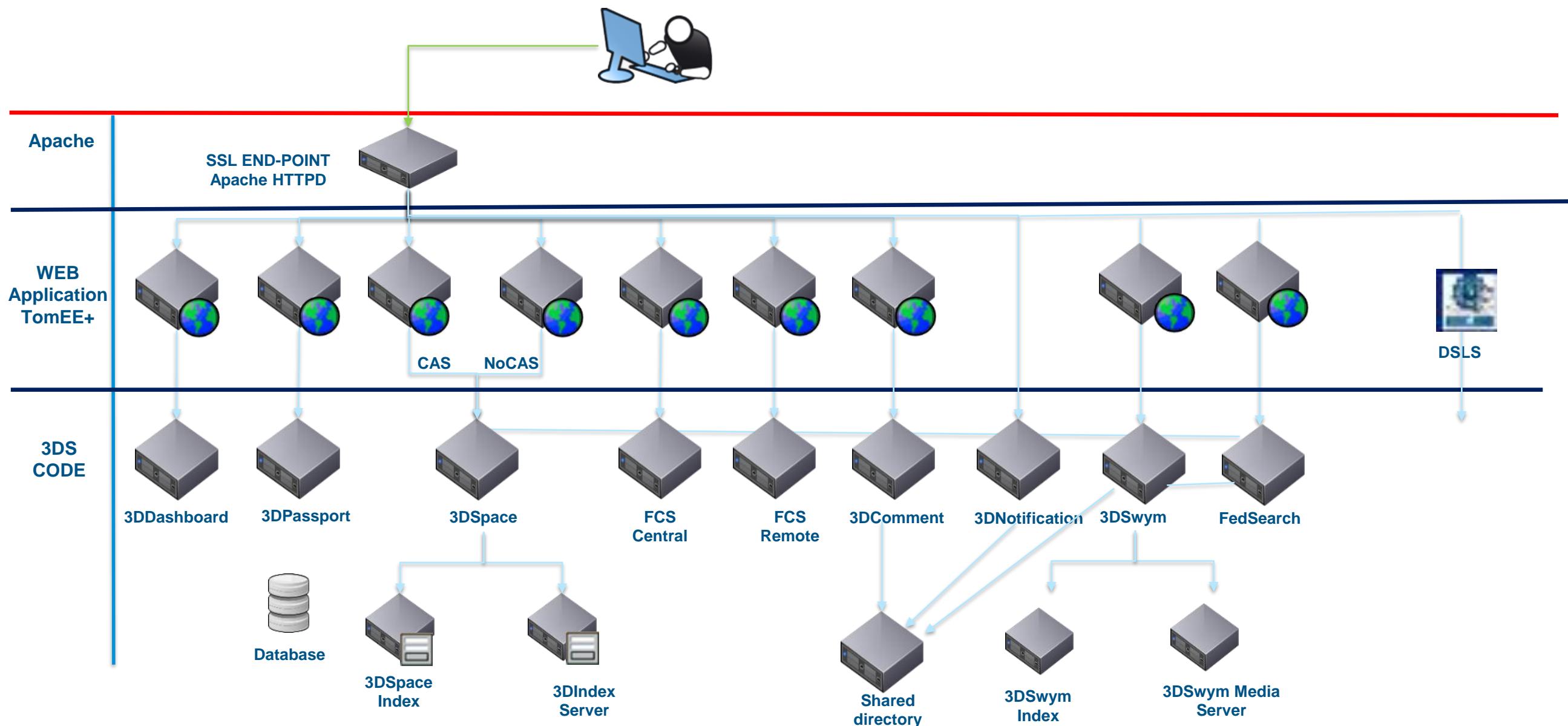
- Client Core components :

- Native Client
- Integration Clients

3DEXPERIENCE platform: Deployment Overview

This is a practical high level view of the platform, showing the services based on the deployment, that is, installation and configuration of code.

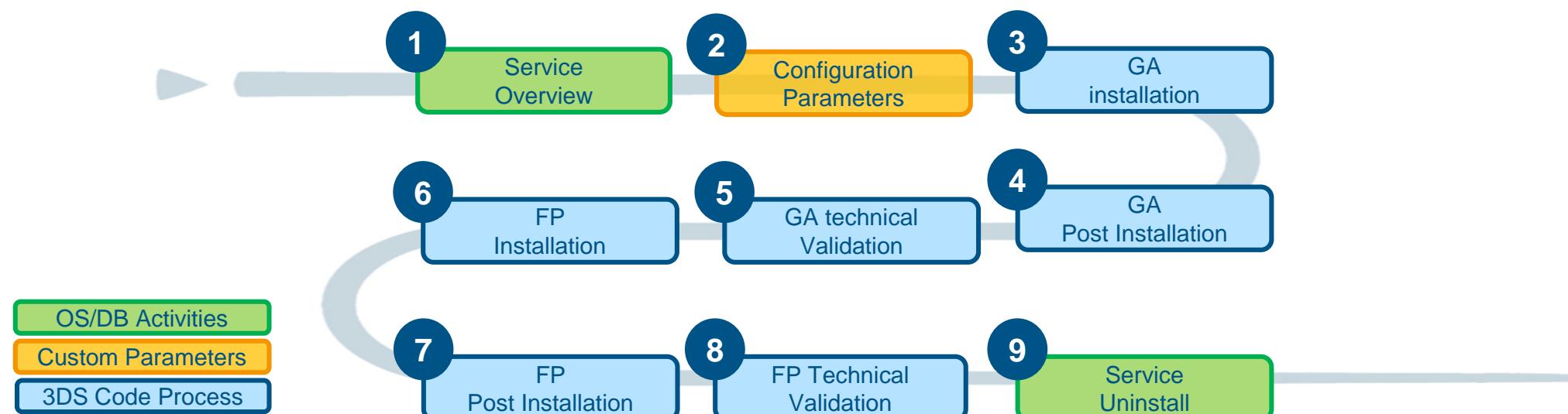
Each element in this schema is an installation and configuration activity.



3DEXPERIENCE platform: Core Installation

As a general rule you will find that all 3DS installations will follow these steps:

- ▶ Service Overview : Service Description, Architecture & Requirement
- ▶ Service Key Parameters : Service Options and Key Parameters
- ▶ Service GA Installation : Service GA Installation
- ▶ Service GA Post Installation : Service GA Post Installation Activities
- ▶ Service GA Technical Validation : Service GA Technical Validation of the Installation
- ▶ Service FP Installation : Service FP Installation
- ▶ Service FP Post Installation : Service FP Post Installation Activities
- ▶ Service FP Technical Validation : Service FP Technical Validation of the Installation
- ▶ Service Uninstallation : Service Standard Uninstallation



Topics to be covered:

- ✓ 1. *Introduction*
- 2. DSLS
- 3. Global 3DEXPERIENCE platform installer
- 4. 3DPassport
- 5. 3DDashboard
- 6. 3DSearch
- 7. 3DSpace
- 8. 3DNotification
- 9. 3DComment
- 10. 3DSwym
- 11. FCS
- 12. Reconfiguration

Introduction

This DSLS is often overlooked at the beginning of a deployment. It is a critical component because you will not be able to functionally validate the rest of the platform if you cannot reach a valid DS license server.

This chapter will introduce the “DS License server” components as well as discuss configuration options and key parameters you will need to manage for your installation.

The DS License server is not dependent on the platform for installation and can be installed at any point in time. It can only be installed on a physical machine and it should be the first component you install after the documentation. This component is required to license users’ roles in the **3DEXPERIENCE** platform.

This installation is mandatory if you are building your own **3DEXPERIENCE** platform on your laptop. For those who will be using the provided 3DS laptop you can proceed with the installation if you wish but it will not be used during the training. The 3DS laptop will access an internal DS License server.

If you were planning on using your own laptop you should have requested and received your licenses prior to your arrival to the class. If you have not received your licenses, the **3DEXPERIENCE** platform will not work on your laptop. It will not be possible to connect your laptop to the DS network in order to access the DS License Server.

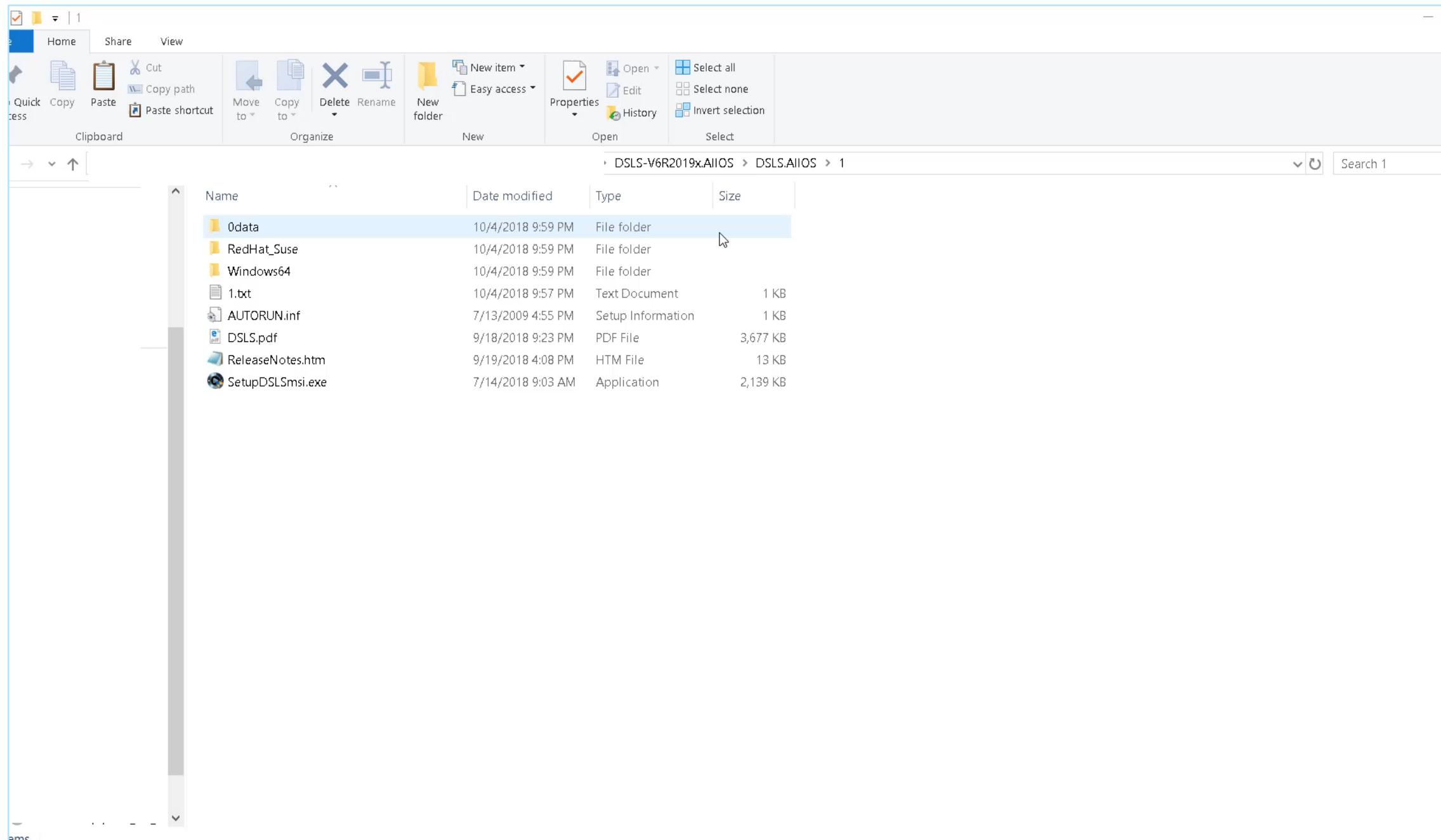
DSLS: Key Parameters

Installation Cook-book: Installation key parameters explained.

- ▶ Installing from scratch: A risky operation usually only done if your DSLS database is corrupted and you have requested a new set of licenses. This will leave the server in a standby mode. Note: when uninstalling during a FP upgrade the DSLS database is not actually deleted (it's a set of files). Those files remain on the system, this is why it is not recommended to use special uninstallers (like Regclean) that also clean/delete registry entries and files that the normal uninstaller would leave on the system.
- ▶ Ports: The standard DSLS ports should be available on a standard OS. You will need to ensure that all platform servers can communicate with the Licensing port. The Admin port only needs to be accessible by the platform administrator, the platform servers will not use the Admin port.
- ▶ Keywords: Licensing, DSLS, 4085/4084/4086, Cluster.

DSLS Video

This video presents the DSLS installation in the Windows environment.



Global 3DEXPERIENCE platform installer

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- 3. **Global 3DEXPERIENCE platform installer**
- 4. *3DPassport*
- 5. *3DDashboard*
- 6. *3DSearch*
- 7. *3DSpace*
- 8. *3DNotification*
- 9. *3DComment*
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

3DEXPERIENCE platform: Global 3DEXPERIENCE platform Installer

The global 3DEXPERIENCE platform installer software is located in the following media:

- AM_3DEXP_Platform.Allos under sub folder \1\
- ▶ The folder structure of the media is as follows: 1, 2, 3, 4, 5, 6, 7 and 8
- ▶ In general there will be two interactive installation executables:
 - Graphical User Interface (GUI)
 - Text User Interface (TUI)
- ▶ It will be up to you to select the services that you wish to install on the current server. In the training you will proceed with the GUI installer and you will install each component individually. Even though it is possible to do a big bang installation by selecting all the services at the same time, we will not be covering this type of installation during the training.

3DEXPERIENCE platform: Global 3DEXPERIENCE platform Installer

- ▶ The installer is not a silent installer, it is only a broker simplifying the sequence of the normal installers. It will not store responses nor allow you to batch install the modules.
- ▶ The global installer is only available for GA core modules. It is not used for fix packs, 3DSpace centrals, integrations, or client components.
- ▶ In this training you will be guided through the process using key values, there won't be step-by-step screen shots. This will drive you to capture the information and make the process your own.



The choice to use the embedded JRE and TomEE+ and a few other options are asked for each component because the installation of the **3DEXPERIENCE** platform is performed module by module. If you perform a big-bang installation by selecting all services, the installer will ask the questions for the first service and use those answers for the remaining services. This information was provided for education purposes, you will not be installing all services at the same time.

3DEXPERIENCE platform: Media Installer Introduction

The global 3DEXPERIENCE platform installer:

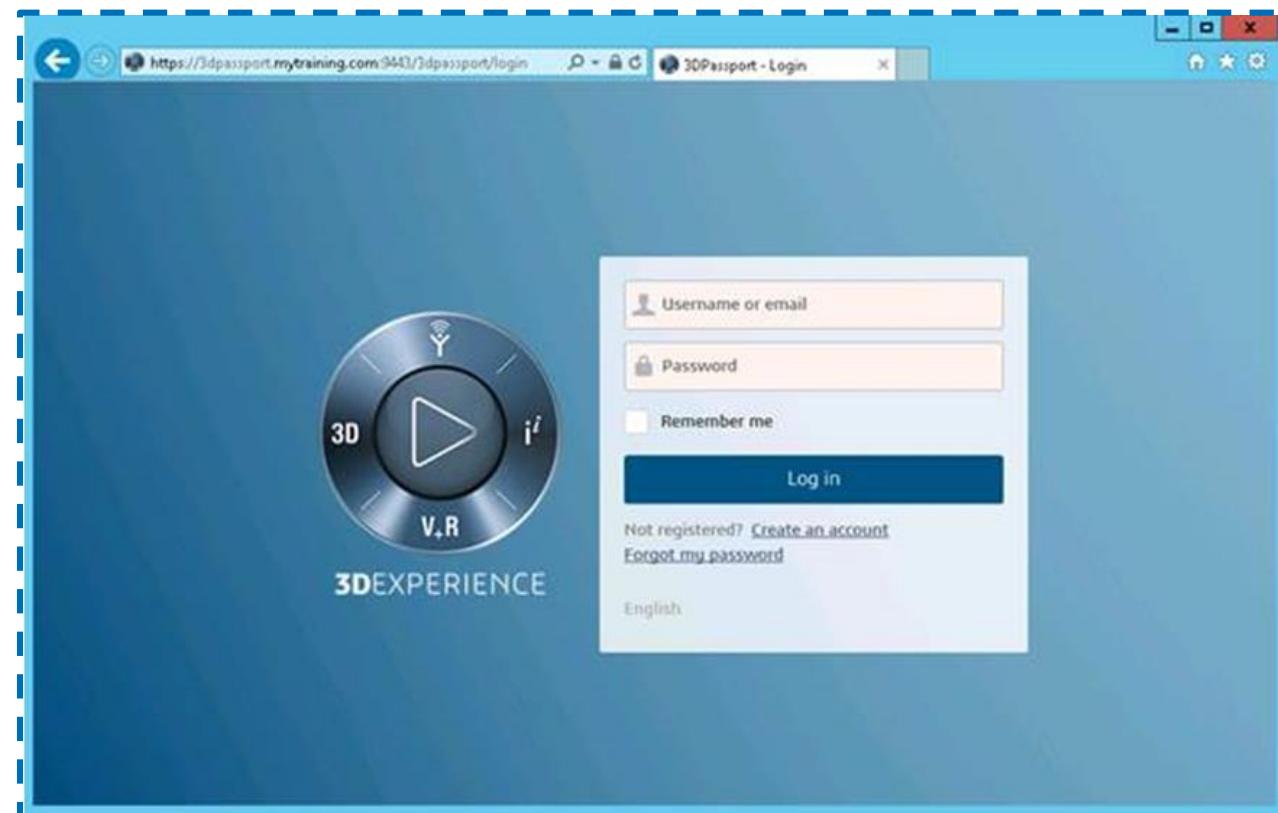
Installation Choice	Service	Documentation
Install the services one-by-one (using the individual service installation media)	3DPassport	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DPassport Installation You MUST install 3DPassport before installing the other services, since it must be up and running prior to installing some of the other services.
	3DDashboard	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DDashboard Installation
	3DSearch	<ul style="list-style-type: none">● Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DSearch Installation - Federated Search Installation● Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DSearch Installation - Full-Text Search Server Installation● Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DSearch Installation - 3D Index Server Installation
	3DSpace	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - Install - 3DSpace - 3DSpace Installation
	3DComment	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DComment Installation
	3DSwym	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DSwym Installation
	3DNotification	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Installing Services One-by-One - 3DNotification Installation
	All services	Installation and Setup - Install - 3DEXPERIENCE platform - Installing 3DEXPERIENCE platform Services - Using the Global 3DEXPERIENCE platform Installer

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- 4. **3DPassport**
- 5. 3DDashboard
- 6. 3DSearch
- 7. 3DSpace
- 8. 3DNotification
- 9. 3DComment
- 10. 3DSwym
- 11. FCS
- 12. Reconfiguration

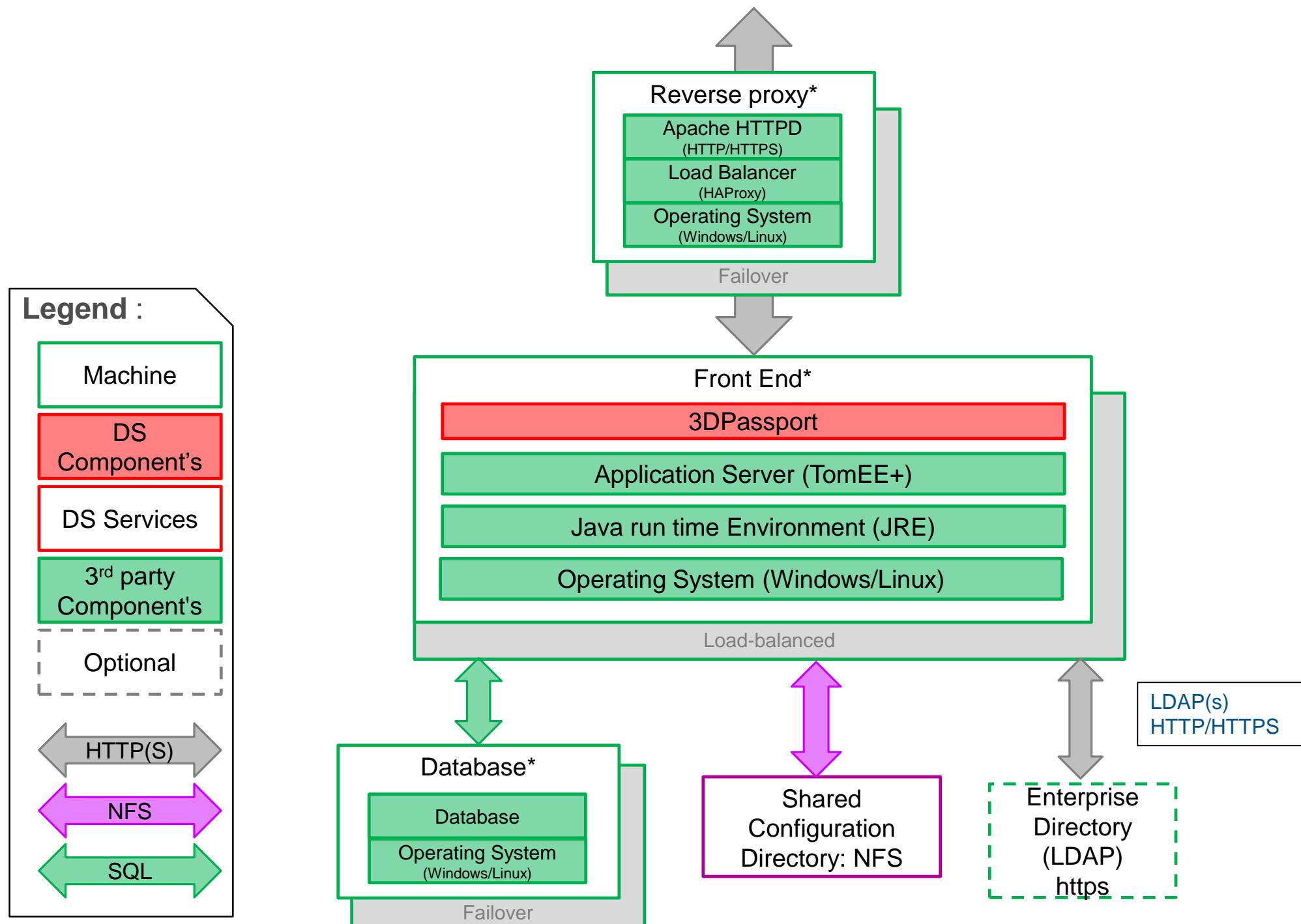
About 3DPassport

- ▶ The 3DPassport service provides authentication and Single Sign-On (SSO) services for the whole **3DEXPERIENCE** platform.
- ▶ If your company already has an SSO system, 3DPassport can be configured as a slave to your enterprise solution, thus enabling SSO between your enterprise solution and the **3DEXPERIENCE** platform.
- ▶ There is no case in which an enterprise SSO solution can replace 3DPassport.





3DPassport Architecture



* Always consult the “Program Directory” for version and latest news.

3DPassport: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

- ▶ Database objects (up and running)
- ▶ TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
 - Java



You will not be able to proceed if any of these are missing.

- ▶ Main Configuration requirements:
 - Database objects : Yes
 - TomEE+ needed : Yes
 - Java dependent : Yes

3DPassport: Key Parameters

Installation Cook-book: Installation key parameters explained.

- ▶ Installation Directory: This is the location where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the *C:* \ drive. The *C:* \drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Installing Embedded Server JRE & Installing Embedded Apache TomEE+: 3DS service installer comes with java JRE and TomEE+. This can be practical for small businesses and if you don not want to manage “other” software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ Database selection: This component is supported on both Oracle and Microsoft SQL Server. The database recommendation is often based on 2 critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
The data repository is divided in 2 schemas / databases: 3Dpassport and Token. 3DPassport contains the admin objects and user information while Token contains the volatile session data. It's not recommended to touch any of these tables without R&D support.
- ▶ Mail options: This service is essential for password reset, there is no admin page allowing you to force a new password, this would be a very big no-no in security. It is critical to be able to send mail, receiving replies is not required.
- ▶ Application ports & Instance options: For the external TomEE+ instance be sure that you have the proper OS permissions as the application may need to add, alter or update binaries, libraries or configuration files.
- ▶ Forcing lowercase: This is up to the customer, it will make the platform user name mimic LDAP behavior which is usually case insensitive. By Default **3DEXPERIENCE** is case sensitive, it's important to understand the customer requirements.
- ▶ Keywords : Security, User, Password, LDAP & Single Point of Authentication.

3DPassport: GA Media Installer

GA core components have two different installation methodologies:

- ▶ The global **3DEXPERIENCE** platform Installer found in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\
 - Navigate to this path and find:

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh



You will not be able to proceed if any of these are missing.

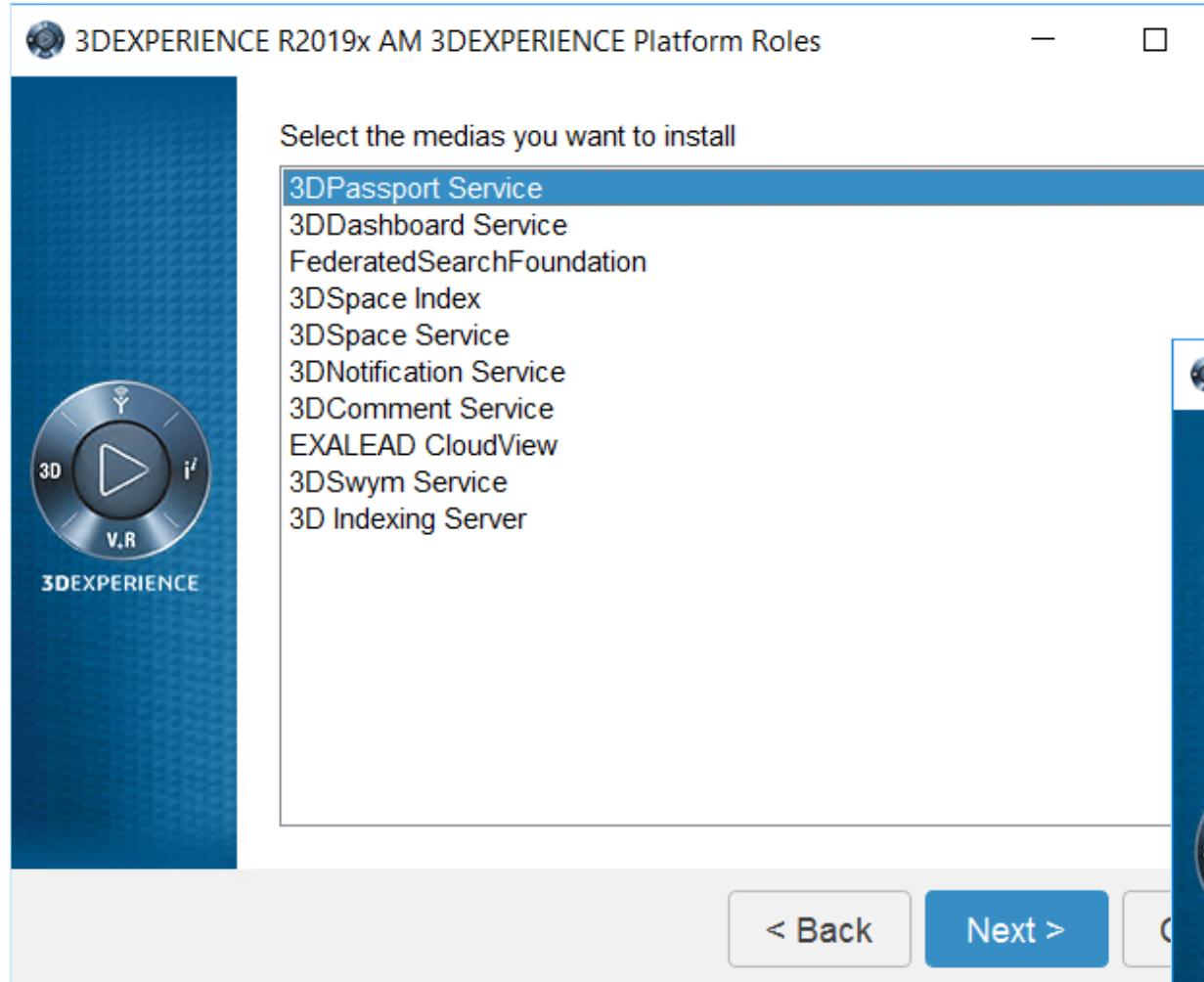
- Graphical User Interface (GUI) : GUI is recommended for new releases, friendlier in general.
- Text User Interface (TUI): This installer is primarily used when you want to deploy all the services on one machine

- ▶ Classic Service Installer are available in :
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\3DPassport\Windows64\1
 - <Your Media PATH>/AM_3DEXP_platform.AILOS/2/3DPassport/Linux/1
- Traditional method used to deploy the services on different machines
- ▶ Start the "global 3DEXPERIENCE platform Installer" installer
 - Fields to complete are identical for the two installers
 - Some of the parameters chosen with the initial service installer are presented in the subsequent installers as read-only
 - This installer is useful when you deploy many services on one machine

3DPassport: Key Parameters

- ▶ Available 3DS Installation Options are:

Training Path: More flexibility, control and post installation options.



3DEXPERIENCE R2019x AM 3DEXPERIENCE Platform Roles

Select the medias you want to install

- 3DPassport Service
- 3DDashboard Service
- FederatedSearchFoundation
- 3DSpace Index
- 3DSpace Service
- 3DNotification Service
- 3DComment Service
- EXALEAD CloudView
- 3DSwym Service
- 3D Indexing Server

< Back Next >

3DEXPERIENCE R2019x - 3DPassport

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DPassport
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DPassport
Force lowercase users' login: No
Database Type: Oracle
Directory of tnsnames.ora: C:\app\dbadmin\product\12.2.0\dbhome_1\network\admin
Net service name or database URL for 3DPassport application: X3DEXP
Database URL for the tokens database: X3DEXP
Database username: X3DPASSADMIN
Tokens database username: X3DPASSTOKENS
Database connection OK
Administrator email: admin_platform@smtp.mytraining.com

3DPassport service URL: https://3dpassport.mytraining:443/3dpassport
3DCompass service URL: https://3dspace.mytraining:443/3dspace
Mail server name: smtp.mytraining.com

Mail sender name: admin_platform@smtp.mytraining.com

< Back Install > Cancel

3DPassport: Key Parameters

Microsoft SQL Server

3DEXPERIENCE R2019x - 3DPassport

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DPassport
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DPassport
Force lowercase users' login: No
Database Type: SQL Server
Database host: 3DEXPERIENCE-31X3DEXP
Database name: passdb
Database administrator username: x3dpassadmin
Database username: x3dpass
Tokens database host: 3DEXPERIENCE-31X3DEXP
Tokens database name: passtkdb
Tokens database username: x3dpasstokens
Database connection OK
Administrator email: admin_platform@smtp.mytraining.com

3DPassport service URL: https://3dpassport.mytraining.com
3DCompass service URL: https://3dspace.mytraining.com
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.mytraining.com

< Back

3DEXPERIENCE R2019x AM 3DEXPERIENCE Platform Roles

The installation program has enough information to start.

Selected Components:
3DPassport Service

< Back Install > Cancel



3DPassport: Validation

In this section you will validate the service functionality and part of the infrastructure deployment

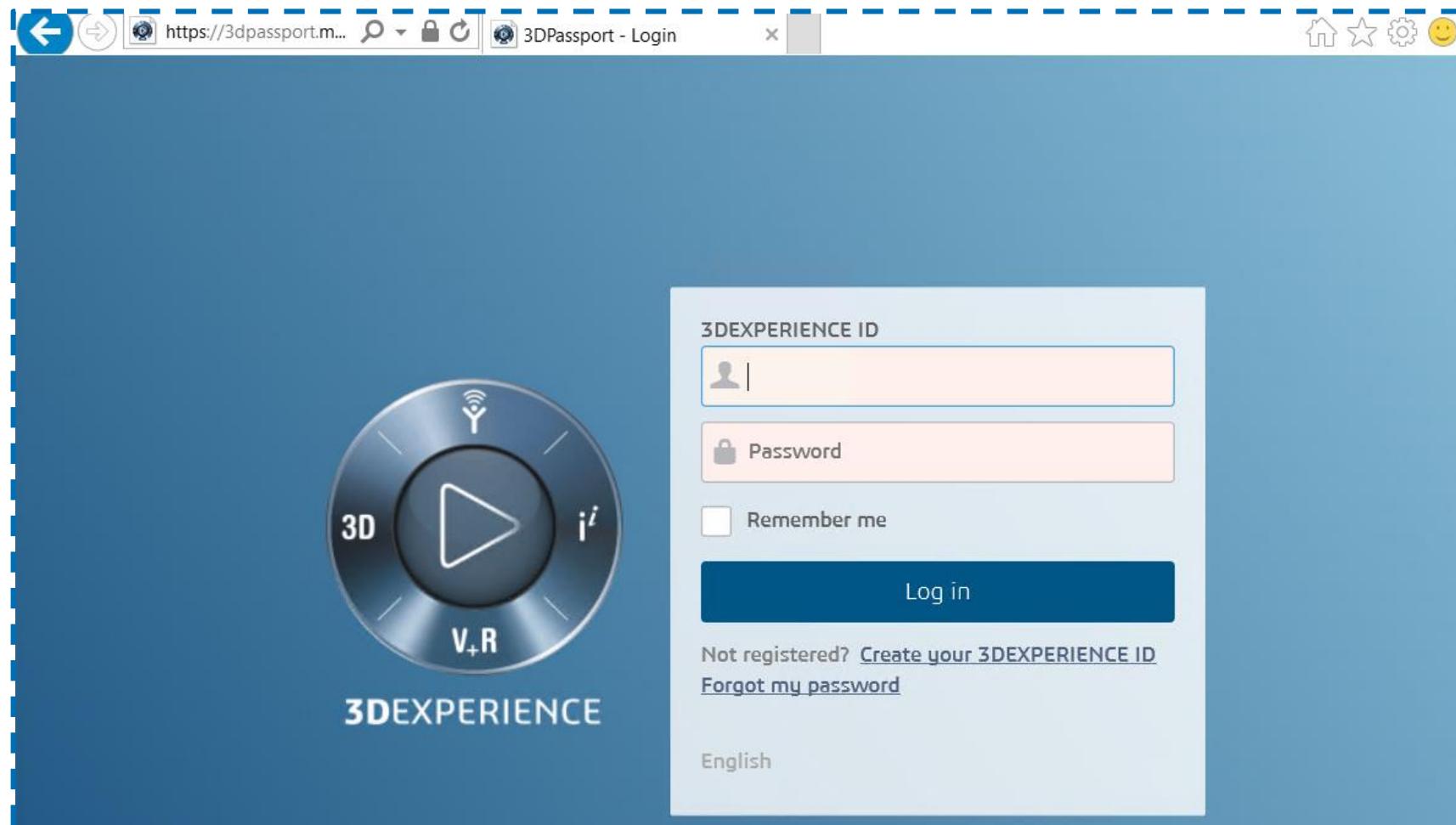
- a. Apache
 - b. Redirect to 3DPassport TomEE+
1. Start the Apache service if not started
 - a. Open service manager
 2. Start TomEE+

- a. <TomEE+ 3DPassport Path>\bin\startup.bat

Wait for it to finish deploying the application.

Access the URL:

<https://3dpassport.mytraining.com:443/3dpassport>



Each time you check a new URL, it's recommended to add it to the IE "Favorites bar" (rename it for ease).

3DPassport: Validation

- ▶ Perform the following actions: **Connect to 3Dpassport**

- Connect with user `admin_platform` and password `<Your Password>`.

The screenshot shows a user profile interface. At the top left is the title "My Profile". On the right side is a "Log out" button with an orange border. Below the title, there are two input fields: "Email" containing "admin_platform@smtp.mytraining.com" with a red asterisk (*) indicating it is required, and "Login" containing "admin_platform" with a red asterisk (*) indicating it is required. At the bottom left is a "Update my password" button.

- Click **Log out**.

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- 5. 3DDashboard**
- 6. *3DSearch*
- 7. *3DSpace*
- 8. *3DNotification*
- 9. *3DComment*
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

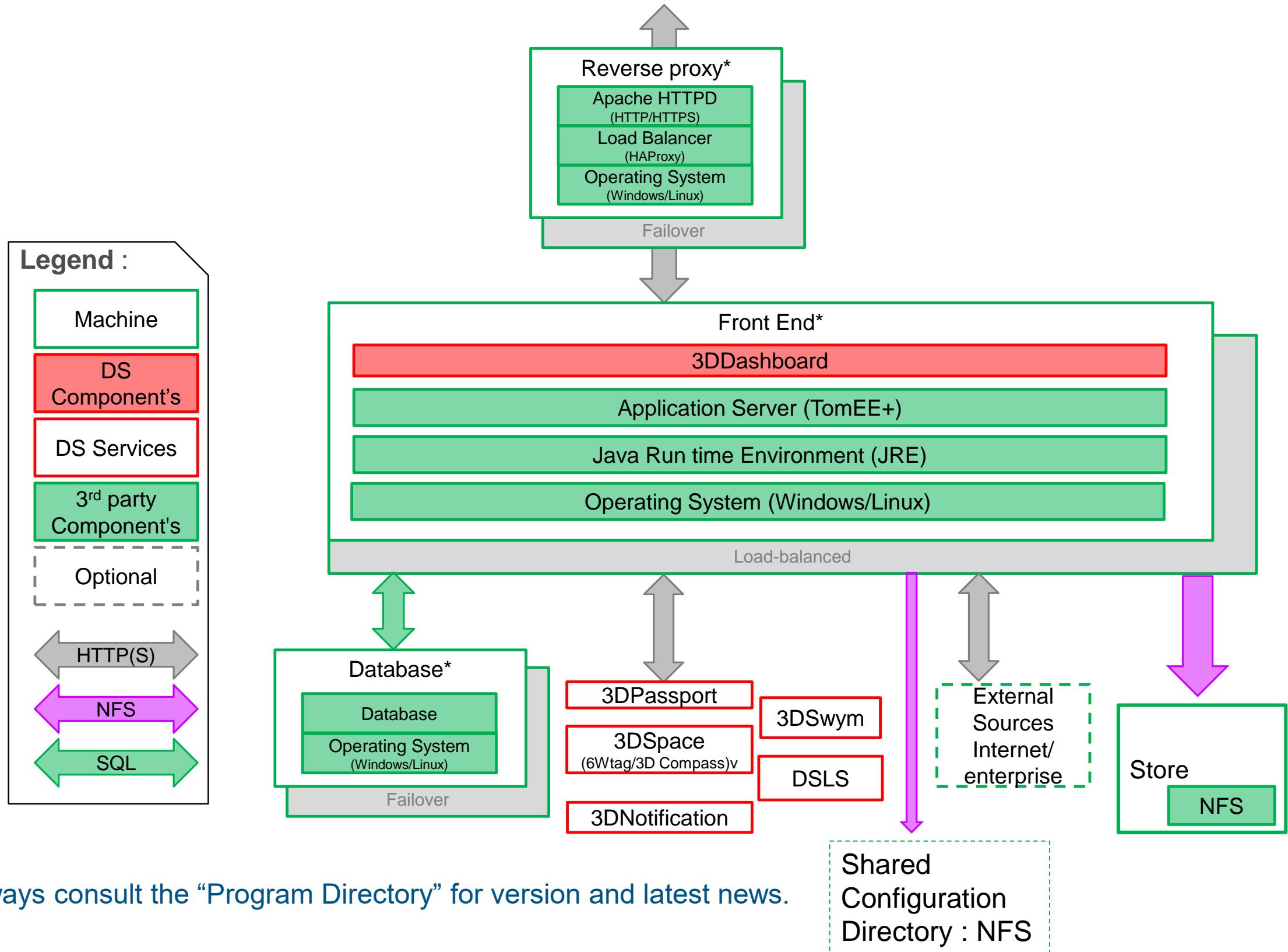
About 3DDashboard

- ▶ The 3DDashboard service brings information from diverse sources into one customizable web page.
- ▶ It provides a simple, unified dashboard view of business processes and objectives for any discipline in the company (sales, marketing, R&D, HR, finance,... or yourself as an individual).
- ▶ It provides an extensive collection of ready-to-use 3DDashboard widgets across all brands so that it is even easier for users to create a personal dashboard of all the information that matters to them and get a simple unified view of business processes.

The screenshot shows the 3DEXPERIENCE | 3DDashboard Members Management interface. At the top, there is a navigation bar with tabs for 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. Below the navigation bar is a header with the 3DEXPERIENCE logo, the title '3DEXPERIENCE | 3DDashboard Members Management', and a search bar. The main content area has a title 'My Platform Control Center - onPremises' and a welcome message: 'Welcome to your platform onPremises'. It also contains a note: 'You have been selected as an administrator to manage users & roles,' followed by the instruction 'To do that, go to the next Tab: "Members".' To the right, there is a 'Members' section with a summary: '7 Members (2 Administrators)' and '0 Pending Invitations'.



3DDashboard Architecture



3DDashboard: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

- Database objects (up and running)
- TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
- Java

Note: You will not be able to proceed if any of these are missing.

- Main Configuration requirement:
 - Database objects : Yes
 - TomEE+ needed : Yes
 - Java dependent : Yes

3DDashboard: Key Parameters

Installation Cook-book : Installation key parameters explained.

- ▶ Installation Directory: This is the location where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the `C:\` drive. The `C:\` drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Installing Embedded Server JRE & Installing Embedded Apache TomEE+: 3DS service installer comes with java “JRE” and TomEE+. This can be practical for small businesses and if you do not want to manage “other” software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ Database selection: This component is supported on both Oracle and Microsoft SQL Server. The database recommendation is often based on 2 critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
- ▶ Mail options: Not as critical as the 3Dpassport one but very important, it's from the 3DDashboard you can invite user to the platform and it's from here the platform admin will receive mail of user requesting roles and access.
- ▶ Application ports & Instance options: For the external TomEE+ instance be sure that you have the proper OS permissions as the application may need to add, alter or update binaries, libraries or configuration files.
- ▶ Keywords: User administration for `admin_platform`.

3DDashboard: GA media installer

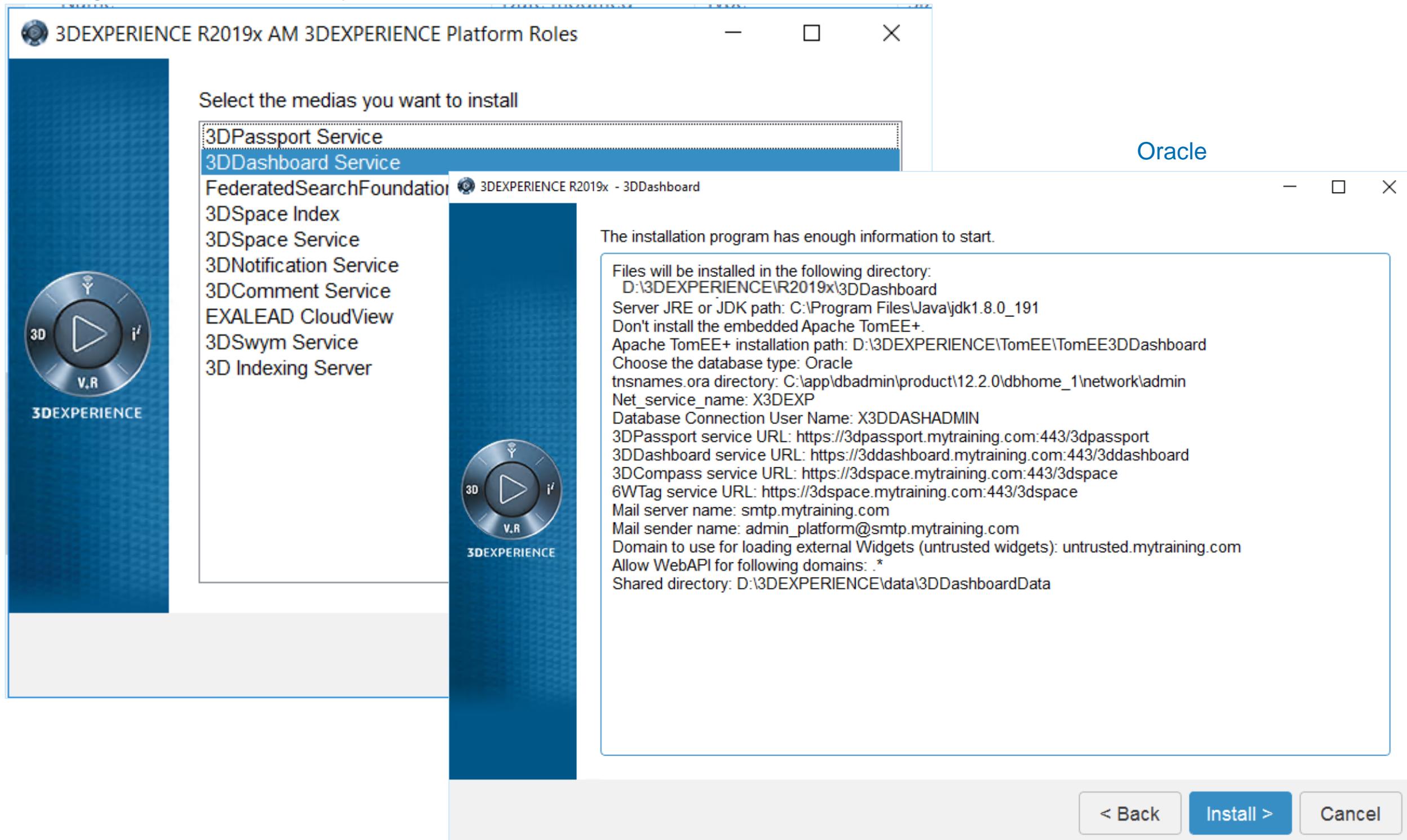
- ▶ GA core components have two different installation methodologies:
 - The "global 3DEXPERIENCE platform Installer" found in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\
 - Navigate to this path and find:

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh
 - This installer is primarily used when you want to deploy all the services on one machine
 - Classic "Service Installer" are available in :
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\3DDashboard\Windows64\1
 - <Your Media PATH>/AM_3DEXP_Platform.AILOS/2/3DDashboard/Linux64/
 - Traditional method used to deploy the services on different machines
- Start the "global 3DEXPERIENCE platform Installer" installer
 - Fields to complete are identical for the two installers
 - Some of the parameters chosen with the initial service installer are presented in the subsequent installers as read-only
 - This installer is useful when you deploy many services on one machine

3DDashboard: Key Parameters

► Available Installation Options:

Training Path: More flexibility, control and post installation options.



3DDashboard: Key Parameters

3DEXPERIENCE R2019x - 3DDashboard

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DDashboard
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DDashboard
Choose the database type: SQL server
SQLServer Server Name Host[Instance][:Port]: database.mytraining.com\X3DEXP:1433
SQL Server Database name: dashdb
Database Administrator User Name: x3ddash
Database User Name: x3ddash
3DPassport service URL: https://3dpassport.
3DDashboard service URL: https://3ddashboard.
3DCompass service URL: https://3dspace.m
6WTag service URL: https://3dspace.mytrain
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.m
Domain to use for loading external Widgets (i
Allow WebAPI for following domains: *
Shared directory: D:\3DEXPERIENCE\data\3

3DEXPERIENCE R2019x AM 3DEXPERIENCE Platform Roles

The installation program has enough information to start.

Selected Components:
3DDashboard Service

Microsoft SQL Server

< Back Install > Cancel

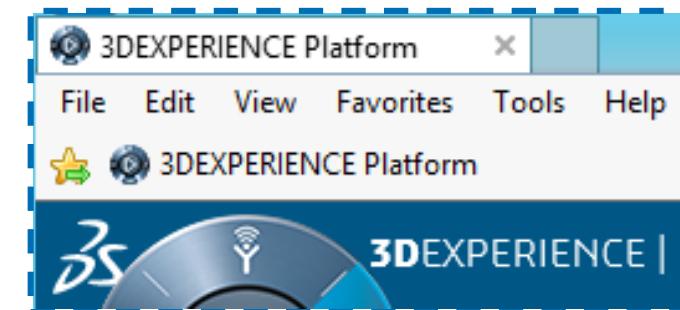
3DDashboard: Validation

- ▶ In this section you will validate the service functionality and part of the infrastructure deployment
 - Apache
 - Redirect to 3DDashboard TomEE+'s
- ▶ Start the Apache service if not started
 - Open service manager



Each time you test a new URL it is recommended that you add it to the IE "Favorites bar" (rename it for ease).

- ▶ Start TomEE+
 - <TomEE+ 3DDashboard Path>\bin\startup.bat
 - Wait for it to finish deploying the application.
 - Access the URL:
 - <https://3ddashboard.mytraining.com:443/3ddashboard>
 - 3DDashboard depends on 3DSpace which is not yet active, the expected behavior is:
 - i. HTTPS URL access
 - Apache Found the URL
 - ii. Redirected by 3DDashboard to 3DPassport via Apache
 - 3DDashboard App found and proper redirection to 3DPassport
 - iii. Redirected back by 3DPassport to "3DDashboard" via Apache resulting in page not found (404 error).
 - Proper redirection from 3DPassport back to the Application



Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- 6. **3DSearch**
- 7. *3DSpace*
- 8. *3DNotification*
- 9. *3DComment*
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

3DSearch : Table of Content

- ▶ Federated Search
 - Federated Search : Architecture
 - Federated Search: Pre-Check
 - Federated Search: Key Parameters
 - Federated Search: GA media installer

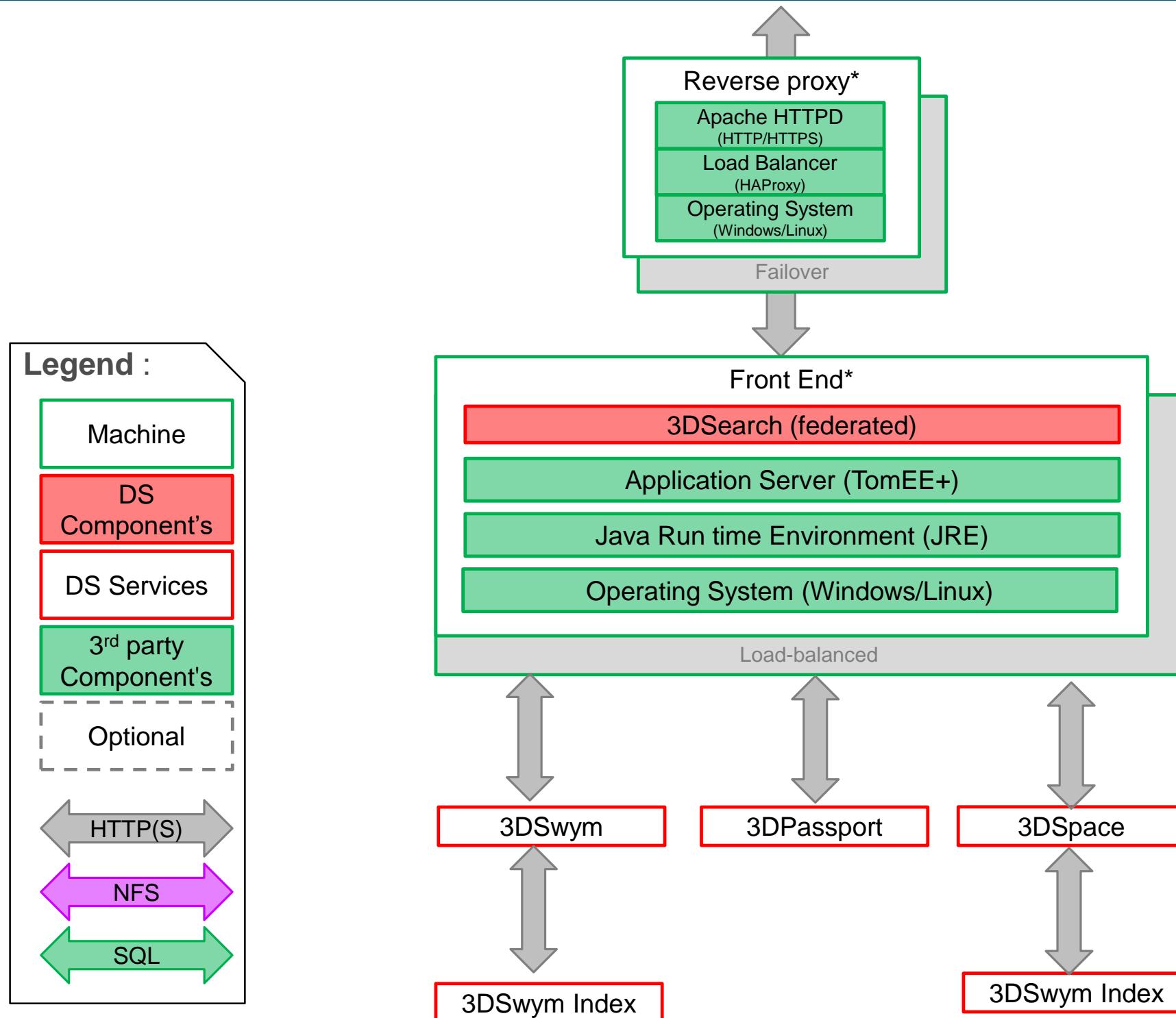
- ▶ 3DSpace Index
 - 3DSpace Index: Pre-Check
 - 3DSpace Index: Key Parameters
 - 3DSpace Index : GA media installer
 - 3DSpace Index : GA Post Installation Installation

About Federated Search

- ▶ FedSearch is the search service used by the apps in the **3DEXPERIENCE** platform to federate search results from 3DSpace and 3DSwym.
- ▶ Dispatch the FedSearch requests to the Different Data Sources requested.
- ▶ Merge the results in a single message while keeping the security of individual sources.



Federated Search : Architecture



* Always consult the “Program Directory” for version and latest news.

Federated Search: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

- TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
- Java

Note: You will not be able to proceed if any of these are missing.

- Main Configuration requirement:
 - TomEE+ needed : Yes
 - Java dependent : Yes

Federated Search: Key Parameters

Installation Cook-book: Installation key parameters explained.

- ▶ Installation Directory: This is the location where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the C: drive. The C: drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Installing Embedded Server JRE & Installing Embedded Apache TomEE+: 3DS service installer comes with java JRE and TomEE+. This can be practical for small businesses and if you do not want to manage other software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ Application server path option: For the external TomEE+ instance be sure that you have the proper OS permissions as the application may need to add, alter or update binaries, libraries or configuration files.
- ▶ Keywords: Federated Search for 3DSwym and 3DSpace.

Federated Search: GA media installer

GA core components have two different installation methodologies:

- The global **3DEXPERIENCE** platform Installer found in:
`<Your Media PATH>\AM_3DEXP_Platform.AILOS\1\`
Navigate to this path and find

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

This installer is primarily used when you want to deploy all the services on one machine

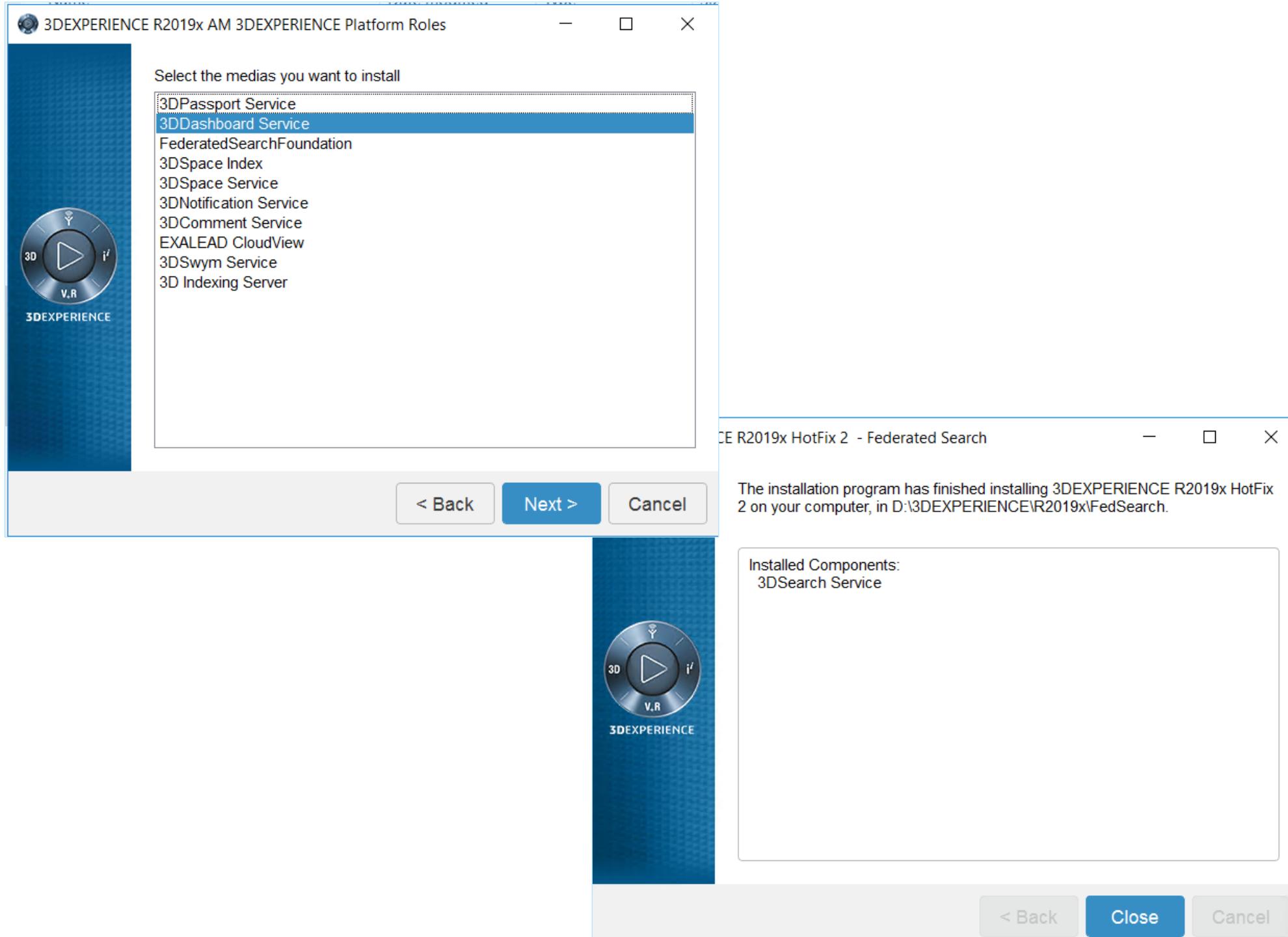
- Classic "Service Installer" are available in :
`<Your MediaPATH>\AM_3DEXP_platform.AILOS\1\FederatedSearchFoundation\Windows64\1`
`<Your MediaPATH>/AM_3DEXP_Platform.AILOS/2/FederatedSearchFoundation/Linux64/1`

Traditional method used to deploy the services on different machines

- Start the GUI installer

Federated Search: Key Parameters

► Available Installation Options :



Federated Search: Validation

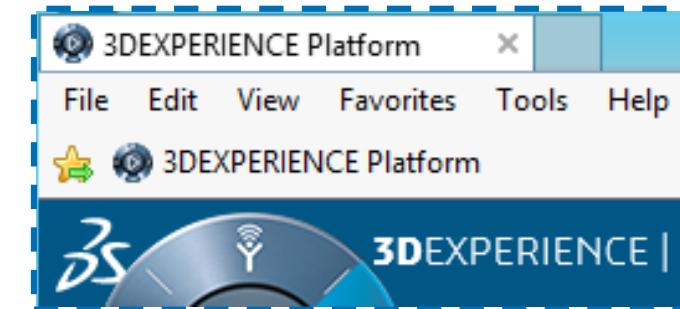
In this section you will validate the service functionality and part of the infrastructure deployment

- a. Apache
 - b. Redirect to Federated TomEE+
1. Start the Apache service if not started
 - a. Open service manager



Each time you test a new URL it is recommended that you add it to the IE "Favorites bar" (rename it for ease).

2. Start TomEE+
 - a. <TomEE+ FedSearch Path>\bin\startup.bat
- Wait for it to finish deploying the application.
Access the URL:
<https://fedsearch.mytraining.com:443/federated>

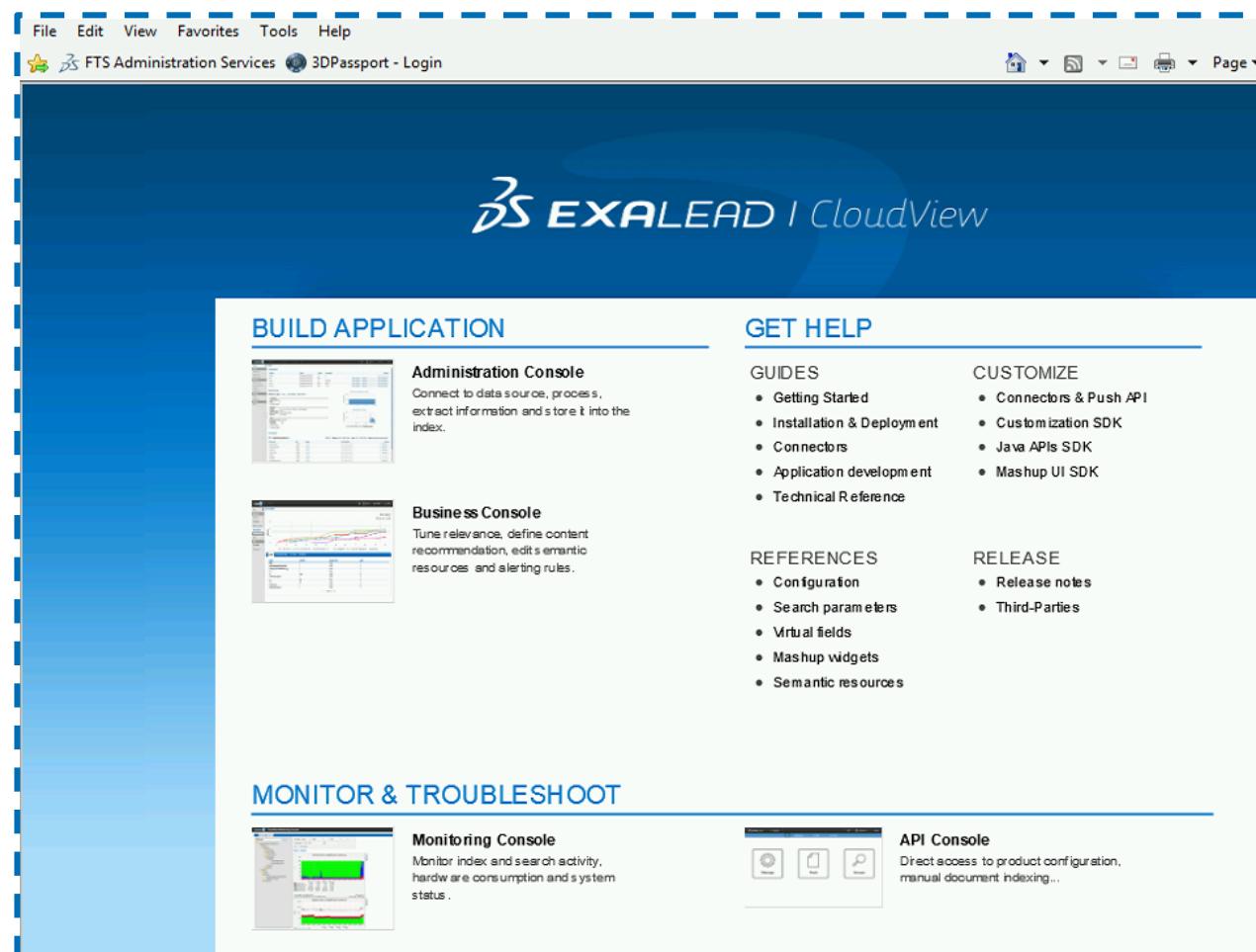


Federated Search has no user interface, the expected behavior is:

- ▶ HTTPS URL access
- ▶ Apache Found the URL
- ▶ Redirected by Federated to 3DPassport via Apache
- ▶ Federated App found and proper redirection to 3DPassport
- ▶ Redirected back by 3DPassport to “federated” via Apache resulting in page not found (404 error).
- ▶ Proper redirection from 3DPassport back to the Application

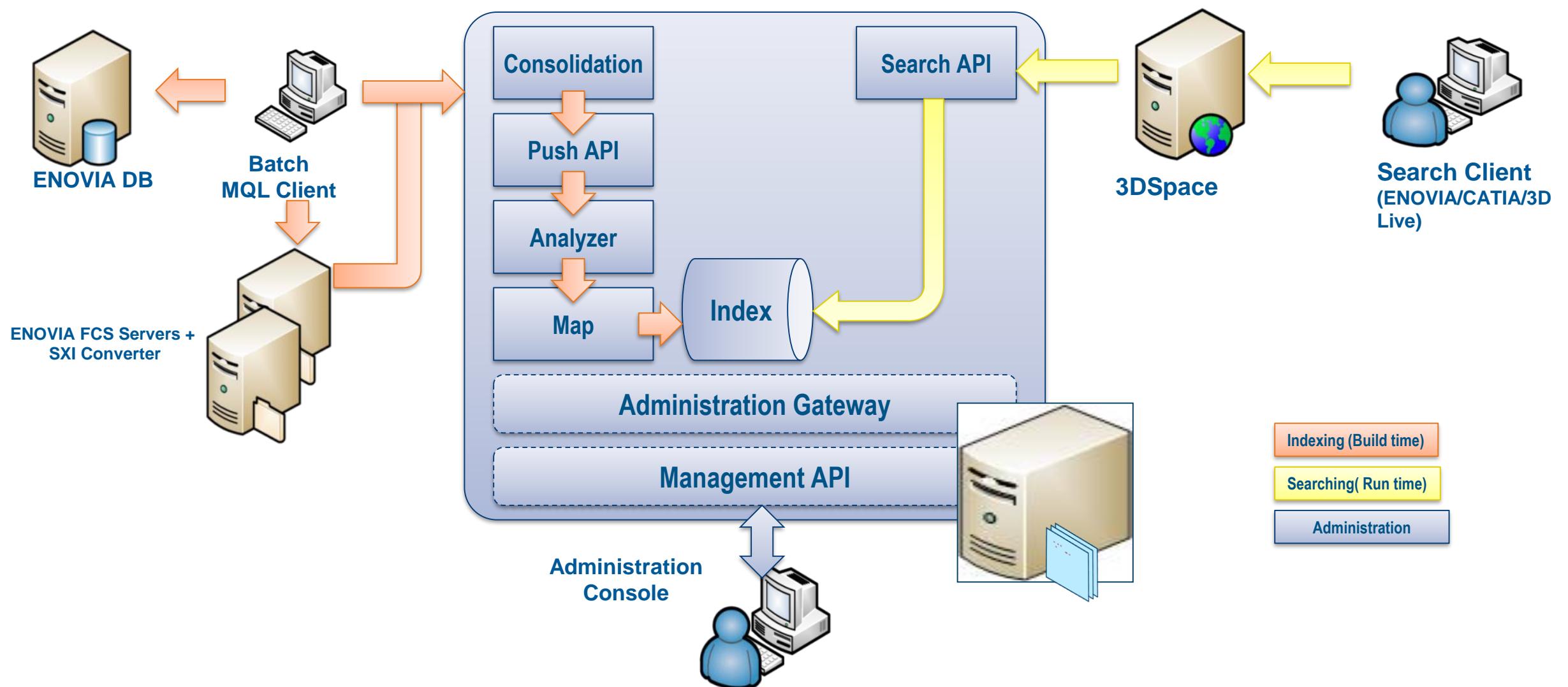
About 3DSpace Index

- ▶ 3DSpace Index Server is used as the search engine for all products.
- ▶ 3DSpace Index (Previously known as Full text Search - 3DSpace Index) is based on EXALEAD CloudView technology, it is an independent server with specific Program Directory requirements. The server needs a continuous range of 100 TCP ports to operate correctly. By default, 3DSpace Index Server executes on a port range of 19000-19100. If any other applications are using any of the ports between 19000 and 19100 it will result in the server being unable to start/restart.
- ▶ 3DSpace Index Search server handles its own stored and indexed data, and can only be used by **3DEXPERIENCE** platform apps or developed using **3DEXPERIENCE** platform public APIs. It should not be confused with other EXALEAD CloudView products.



3DSpace Index: Architecture

- The end users never access the 3DSpace Index server directly. Only the Administrator will need access to the server backend. The administration URL should be protected via firewall rules.



3DSpace Index: Pre-Check

3DSpace Index is not a “typical” DS core component installation, this requires you to pay particular attention to the “Program Directory” and documentation.

■ "Program Directory"

The screenshot shows the '3DEXPERIENCE Platform Installation' interface. A vertical 'Sample' label is on the left. The main area has a dashed border and contains the 'Full-Text Search' section. It includes a link to more information, a 'Detailed List of Existing Installations Displayed by Installer' section with a note about detecting existing installations, and a 'Warning Message: OS Mesa is not available on the machine. 2D Thumbnails are not built.' section with instructions to create a symbolic link.

Full-Text Search

Click [here](#) for more information about Full-Text Server installation enhancements.

Detailed List of Existing Installations Displayed by Installer

When choosing the installation directory, the installer detects existing installations and lists the following:

- Installation paths
- Identifiers
- App or hot fix media versions.

Warning Message: OS Mesa is not available on the machine. 2D Thumbnails are not built.

If the following error message is displayed in the Advanced Report tab of the 3D Index Web Admin Console:

Warning: OS Mesa is not available on the machine. 2D Thumbnails are not built.

to avoid this issue, create a symbolic link manually as follows:

```
ln -s libOSMesa16.so.6 libOSMesa.so
```

■ "Documentation"

The screenshot shows a documentation page titled 'Installing Full-text Search Server with EXALEAD'. A vertical 'Sample' label is on the left. The page includes a navigation bar at the top and a sidebar with links for 3DSearch Installation, Federated Search Installation, and Full-Text Search Server Installation, with 'Installing Full-text Search Server with EXALEAD' being the selected item. The main content area describes the installation process, options for Single Search Server, High Availability Master Server, High Availability Slave Server, and File Converter Only, and notes about the File Converter and CloudView consolidation server.

Installation and Setup | Install | 3DEXPERIENCE Platform | 3DSearch Installation | Full-Text Search Server Installation | Installing Full-text Search

Installing Full-text Search Server with EXALEAD

This topic describes how to install Full-text Search Server (SXI). During installation, you are presented with options to install:

- Single Search Server
- High Availability Master Server
- High Availability Slave Server
- File Converter Only

The File Converter handles file indexing and should be installed at every File Collaboration Server (FCS). If the FCS lives on the same machine as the CloudView server, there is no need to install the File Converter.

A plugin called `ConsolidationServerRules` will be installed during setup to manage CloudView consolidation server.

Important: Full-text Search Server runs on 64-bit Windows, RHEL and SUSE. There is no support for 32-bit platforms.

Note: The `ACI` entry is no longer valid and the `SERVER` entry should be used instead.

This task shows you how to:

- Install Full-text Search Server with EXALEAD software
- Check Installation Log Files
- Complete Post-installation Tasks

3DSpace Index: Key Parameters

Installation Cook-book: Installation key parameter explained.

- Installation Directory: This is Where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the C: drive. The C: drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
 - Search service URL: It is very important to validate that the “search” ports are free, these ports need to be reached by the 3DEXPERIENCE platform administrator and 3DSpace server.
 - Number of Slices & Number of Analyzers: These are performance parameters specific to the size of the data and hardware. If your implementation is “3DSpace Index” heavy, it’s recommended to consult the documentation and potentially an 3DSpace Index specialist. 3DSpace Index server performs a lot of functions, it is an index, an application server, a data builder, a file scanner and handles user requests for data.
 - Search Server Data Path: Is the location where the 3DSpace Index will store all its indexes, it is important that this location execute on fast, secure disk (SSD or RAID). If using external storage, be sure that it’s fast and extremely low latency. Fast Network cards (NICs) are also recommended as the 3DSpace Index will transfer a lot of data between the database and 3DSpace!
- Keywords: Metadata and text file indexation.

3DSpace Index : Key Parameters

About:

- Single server Option:
 - Single Search Server, this is the most common option for small business, development and OOTB environments.
- High Availability option:
 - Advanced configuration and systems that require High Availability.
 - HA Master Server
 - HA Slave Server
- FCS Option:
 - File Converter Only
 - Essential component that needs to be installed with each FCS host.
 - In a production situation when installing additional remote FCSs, you would install the File Converter option on each remote machine.

Typically you would install the File Converter component on any machine running FCS. In the training we will have two FCSs installed, a **Central** and a **Remote** FCS. Since we are doing an all-in-one install you will not need to install the File Converter component because the Single Search Server option already has the File Converter code built into it. This is a special case because of the training format.

3DSpace Index: GA media installer

- ▶ GA core components have two different installation methodologies:

- The "global 3DEXPERIENCE platform Installer" found in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\
 - Navigate to this path and find:

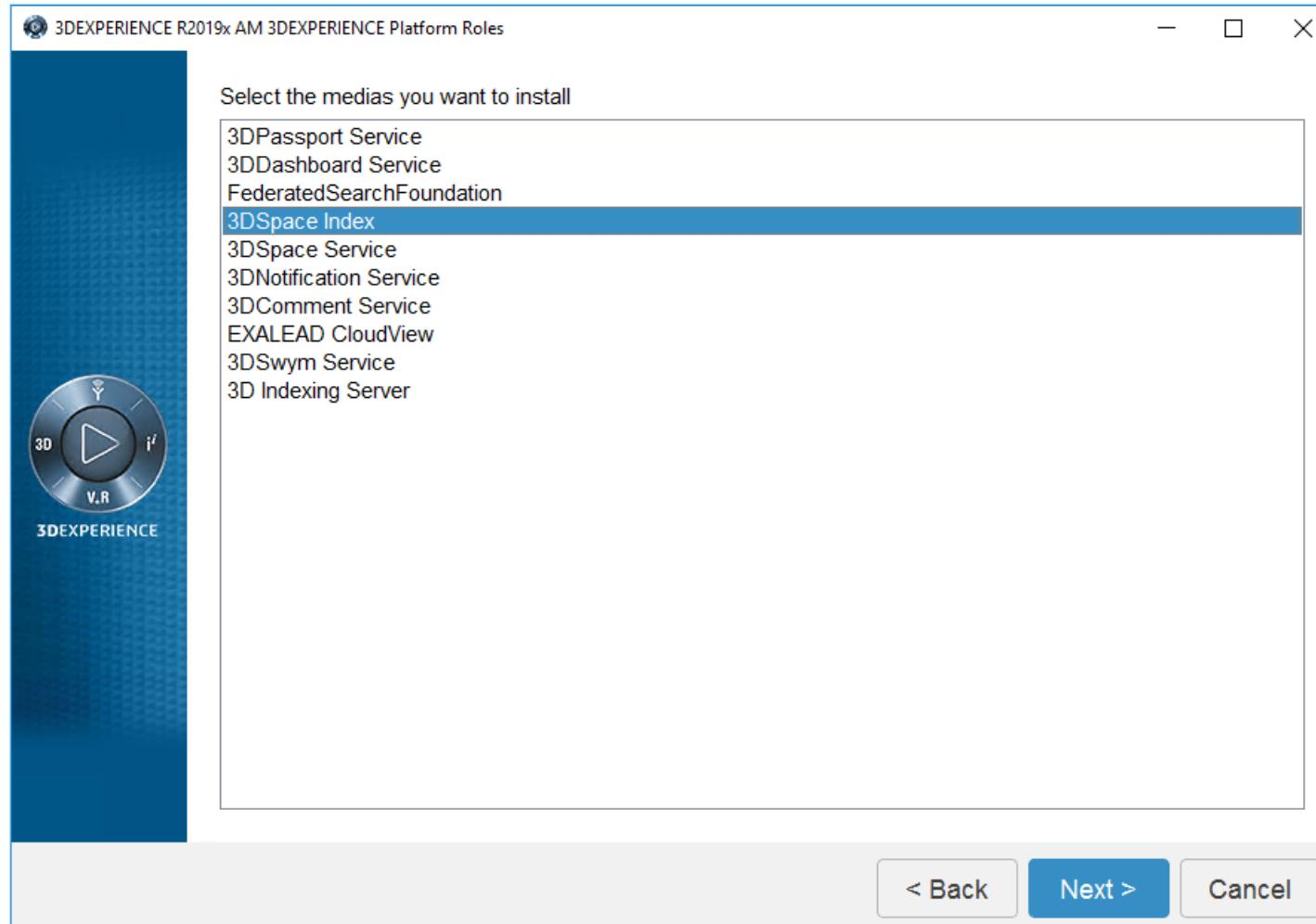
Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

- Classic Service Installer are available in :
 - <Your Media PATH>\AM_3DEXP_Platform.AILOS\1\3DSpaceIndex\Windows64\1
 - <Your GA Media PATH>/AM_3DEXP_Platform.AILOS/1/3DSpaceIndex/Linux64/1/
- Start the GUI installer according to your preference

3DSpace Index : Key Parameters

► Main Configuration requirement:

- Database objects : No
- TomEE+ needed : No
- Java dependent : No

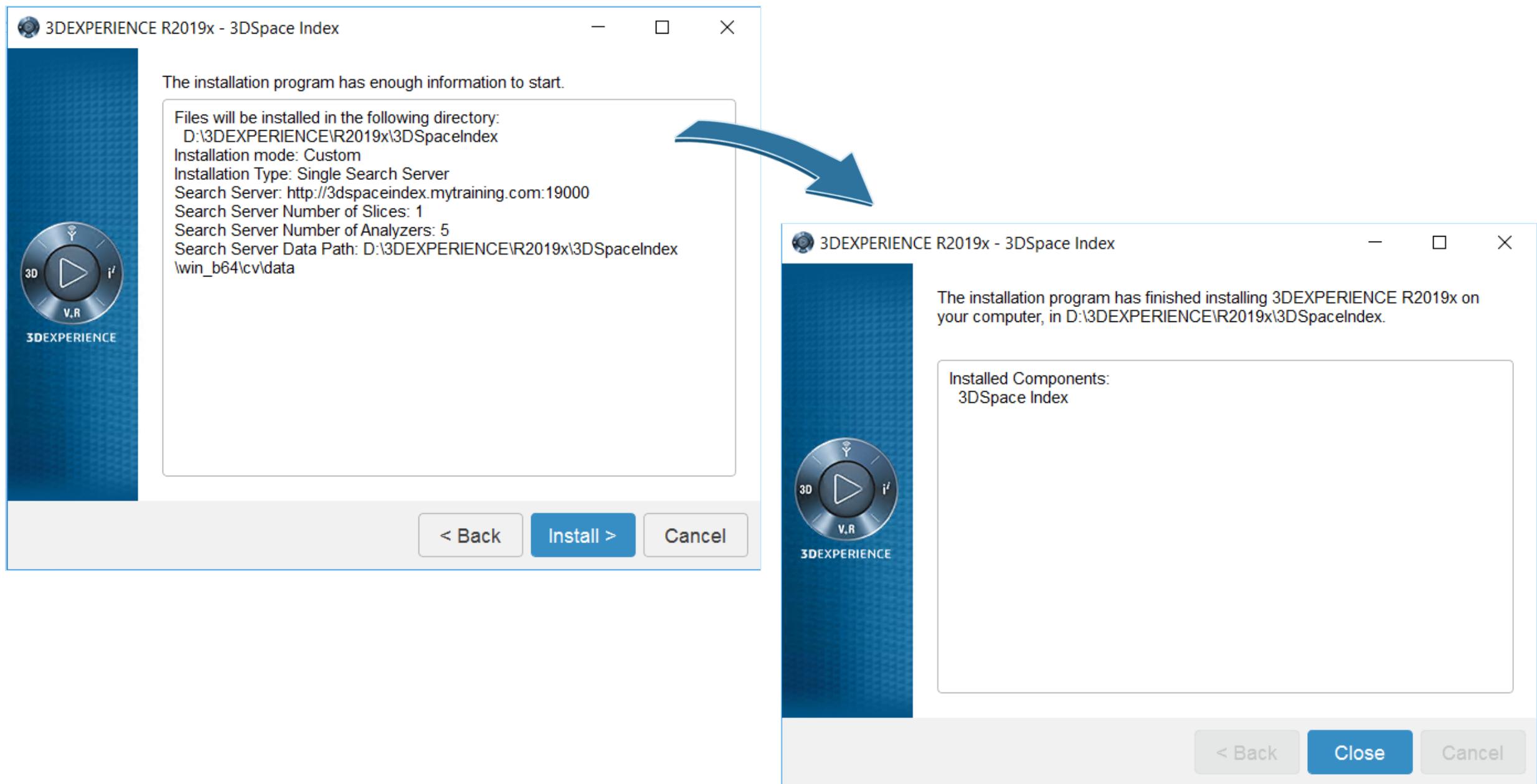


3DSpace Index : Key Parameters

- ▶ 3DSpace Index installation "custom options" are based on the target server:

- Single Search Server
- HA Master Server
- HA Slave Server
- File Converter Only

Simple installations assume a “master” configuration only



3DSpace Index: Validation

In this section you will validate the service functionality and part of the infrastructure deployment

- ▶ Service
- ▶ Access to the Administration page

1. Start the 3DSpaceIndex service if not already running



Each time you test a new URL it is recommended that you add it to the IE "Favorites bar" (rename it for ease).

2. Open the URL: <http://3dspaceindex.mytraining.com:19001/index.html>

The screenshot shows the EXALEAD CloudView interface. At the top, there's a blue header with the EXALEAD logo and 'CloudView'. Below the header, the main content area is divided into two main sections: 'BUILD APPLICATION' on the left and 'GET HELP' on the right.

BUILD APPLICATION

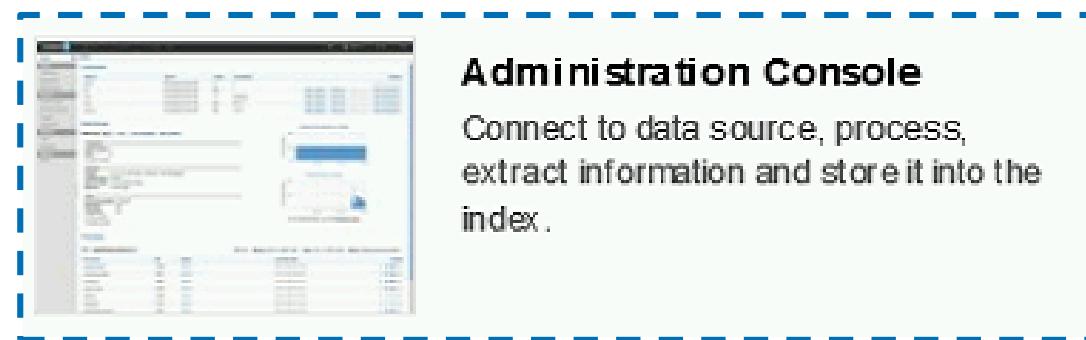
- Administration Console**: Connect to data source, process, extract information and store it into the index. (with a screenshot of the console interface)
- Business Console**: Tune relevance, define content recommendation, edit semantic resources and alerting rules. (with a screenshot of the console interface)

GET HELP

- GUIDES**:
 - Getting Started
 - Installation & Deployment
 - Connectors
 - Application development
 - Technical Reference
- CUSTOMIZE**:
 - Connectors & Push API
 - Customization SDK
 - Java APIs SDK
 - Mashup UI SDK
- REFERENCES**:
 - Configuration
 - Search parameters
- RELEASE**:
 - Release notes
 - Third-Parties

3DSpace Index: Validation

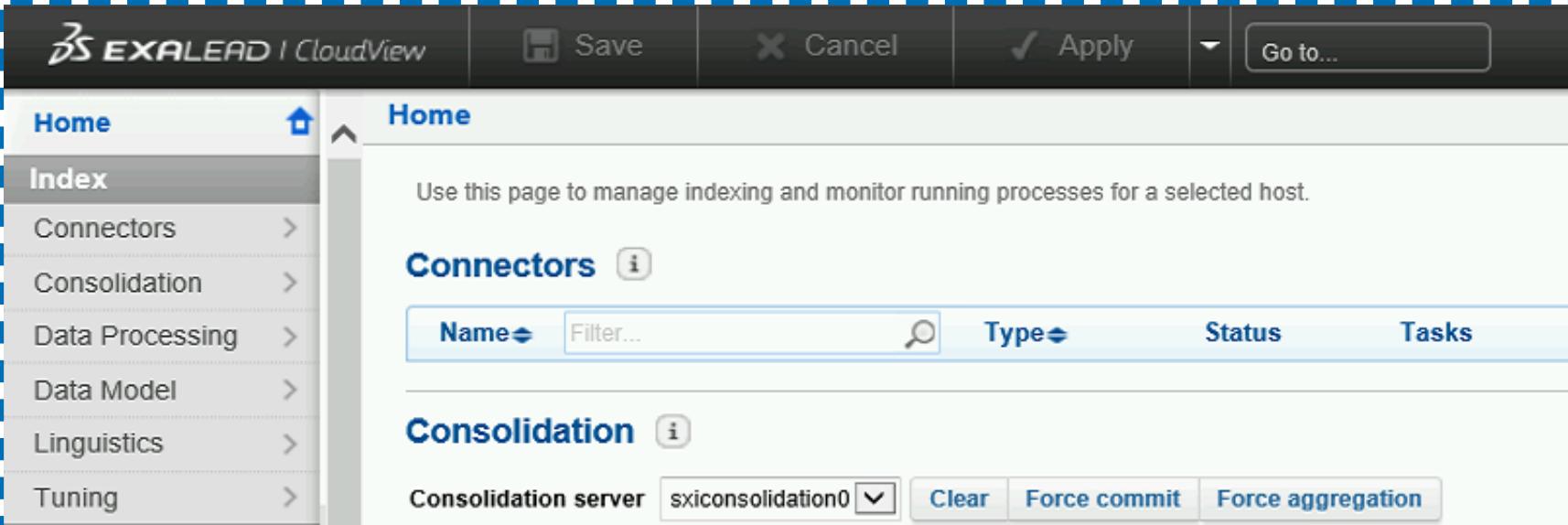
3. In the web page select the **Administration** console.



4. Connect with user "admin", password: <Your Password>



You should see:



DS EXALEAD | CloudView

Home

Index

- Connectors >
- Consolidation >
- Data Processing >
- Data Model >
- Linguistics >
- Tuning >

Home

Use this page to manage indexing and monitor running processes for a selected host.

Connectors i

Name	Filter...	Type	Status	Tasks
------	-----------	------	--------	-------

Consolidation i

Consolidation server: sxiconsolidation0 ▼

Clear Force commit Force aggregation

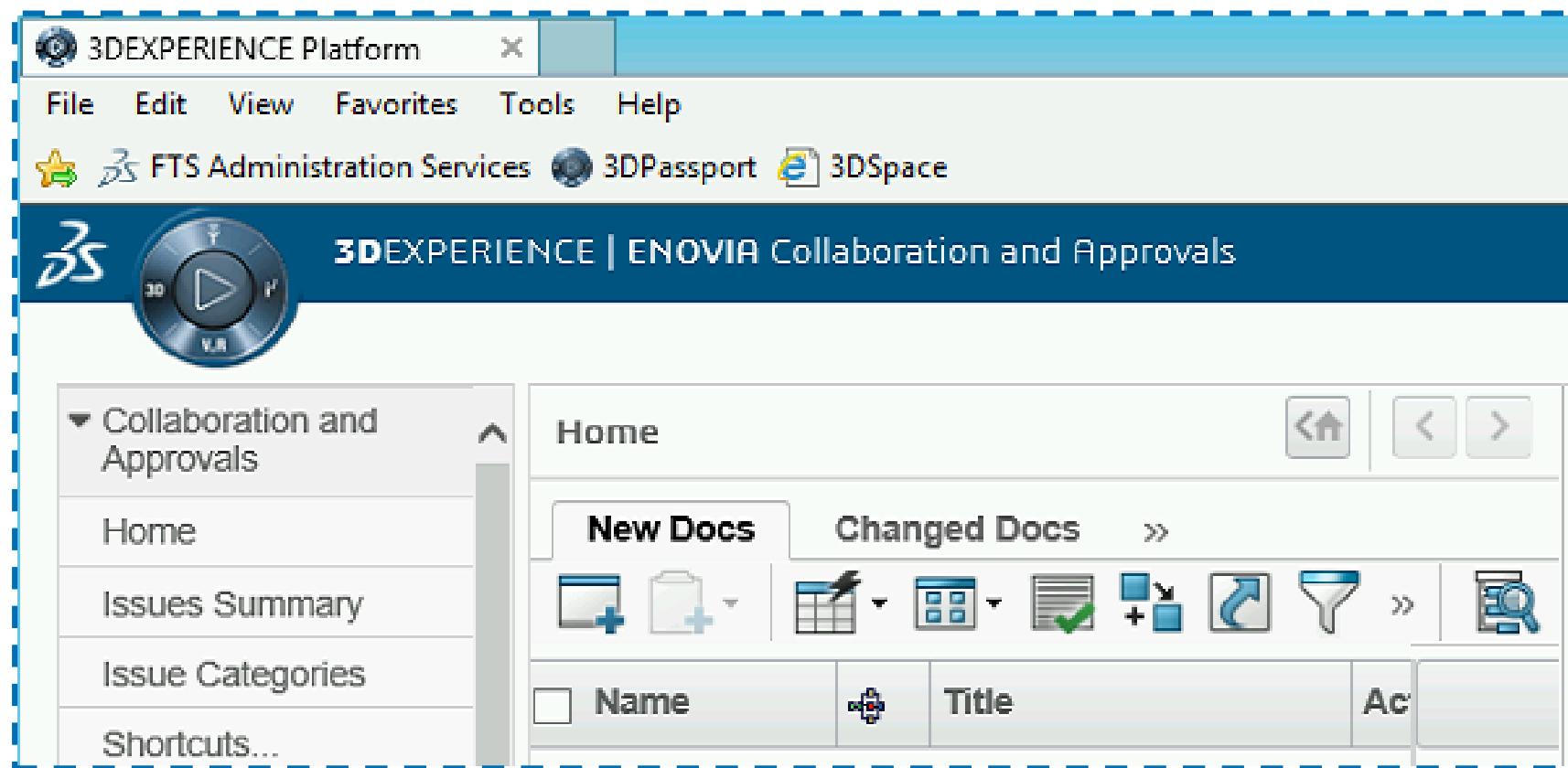
Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. **3DSpace**
- 8. *3DNotification*
- 9. *3DComment*
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

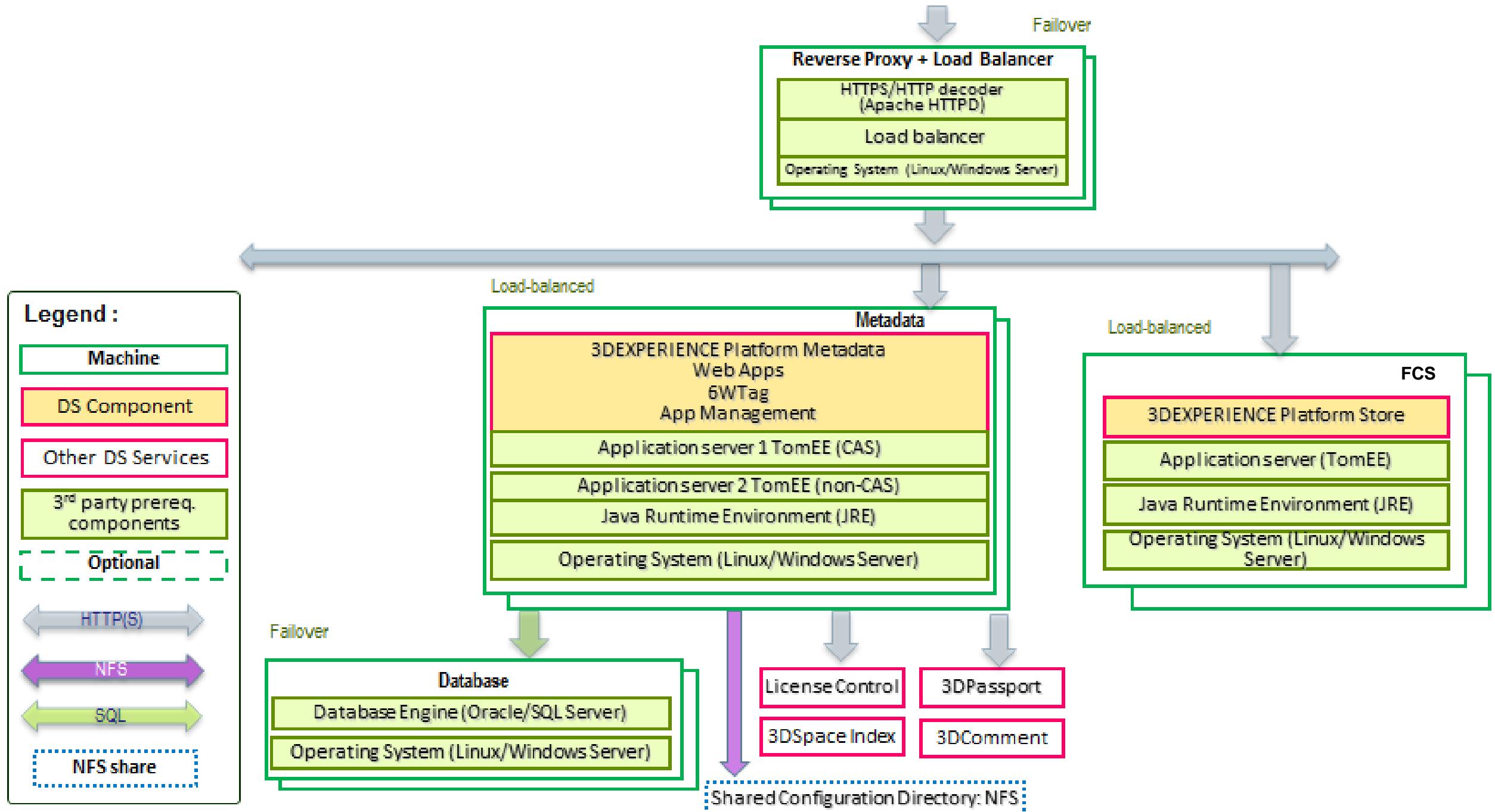
About 3DSpace

3DSpace is the core of the **3DEXPERIENCE** platform.

The 3DSpace installer allows you to install all 3DSpace component and deploy the server or upgrade an existing installation.



3DSpace : Architecture



* Always consult the “Program Directory” for version and latest news.

3DSpace: Pre-Check

- ▶ You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:
 - Database objects (up and running)
 - TomEE+ (stopped)
 - 2 TomEE+ are dedicated for this service
 - 1 SSL certificate
 - Java
- ▶ Note: You will not be able to proceed if any of these are missing.
 - Main Configuration requirement:
 - Database objects : Yes
 - TomEE+ needed : Yes
 - Java dependent : Yes

3DSpace: Key Parameters

Installation Cook-book: Installation key parameter explained.

- ▶ Installation Directory: This is where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the **C:** drive. The **C:** drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Installing Embedded Server JRE & Installing Embedded Apache TomEE+: 3DS service installer comes with java JRE and TomEE+. This can be practical for small businesses and if you do not want to manage other software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ Database selection: This component supports both Oracle and Microsoft SQL Server. The database recommendation is often based on 2 critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
 - The database data repository has 1 schema/database that will hold the metadata. Inside the database you will find two repositories; tables and Indexes. The tables are further split into 3 ENOVIA constructs called Vaults:
 - Admin Vault : Contains the admin objects related to the **3DEXPERIENCE** platform
 - Production Vault : Contains the structured data related to 3DSpace
 - VPLM Vault : Contains the structured data related to 3DSpace Native applications
- ▶ Configure and launch Full Text Search: This process registers the config.xml file and requests the execution of a Full index. It also creates a task in the task scheduler of the Operating system for partial indexation.

3DSpace: Key Parameters

- ▶ Business & Administrator password: The Business user refers to the creator user, by default the creator user password is blank at the end of the installation process it is recommended to set the creator password to a strong value. The admin_platform user password has to match the one set in 3DPassport, otherwise you will have issues.
- ▶ Mail options: Of much lower importance but recommended for **3DEXPERIENCE** platform administrator messages.
- ▶ Application ports & Instance options: For the external TomEE+ instance be sure that you have the proper OS permissions as the application may need to add, alter or update binaries, libraries or configuration files.
- ▶ Certificate Location options: All certificates related to the **3DEXPERIENCE** platform should readily available. 3DSpace requires these certificates in its local security repository. These certificates are required for 3DSpace to execute certain batch jobs and special administrative tasks. This is in addition to the certificates required in the Apache security store.
- ▶ Note: The 3DSpace service is the only one that has 2 WAR files which need to be deployed in two distinct application servers. The **3dspace .war** file, which is the normal CAS security dependent file and the **internal .war** file which is the NoCAS file.
 - A Central Authentication Service application depends on 3DPassport and through 3DPassport an optional LDAP service. It is important that normal user do not have access to the NoCAS application because it bypasses the secure CAS environment.
- ▶ Keywords: Local 3DSpace user password, Central repository of the metadata, platform management service.

3DSpace: Key Parameters

- ▶ Available Installation Options :
 - Install the embedded Server JRE
 - Install the embedded TomEE+
 - Building the application (.war file)

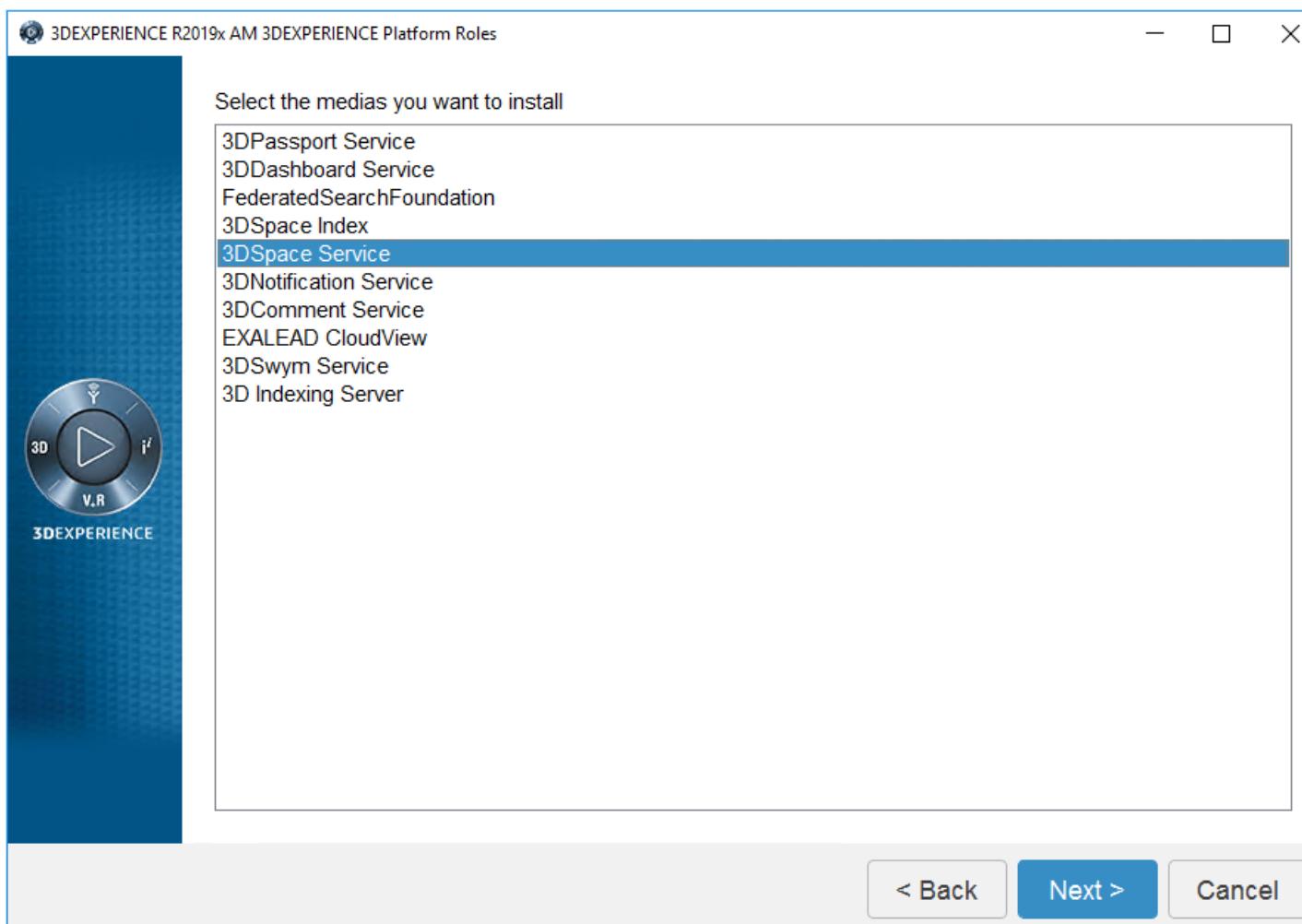
Training Path: More flexibility, control and post installation options.

3DSpace: GA media installer

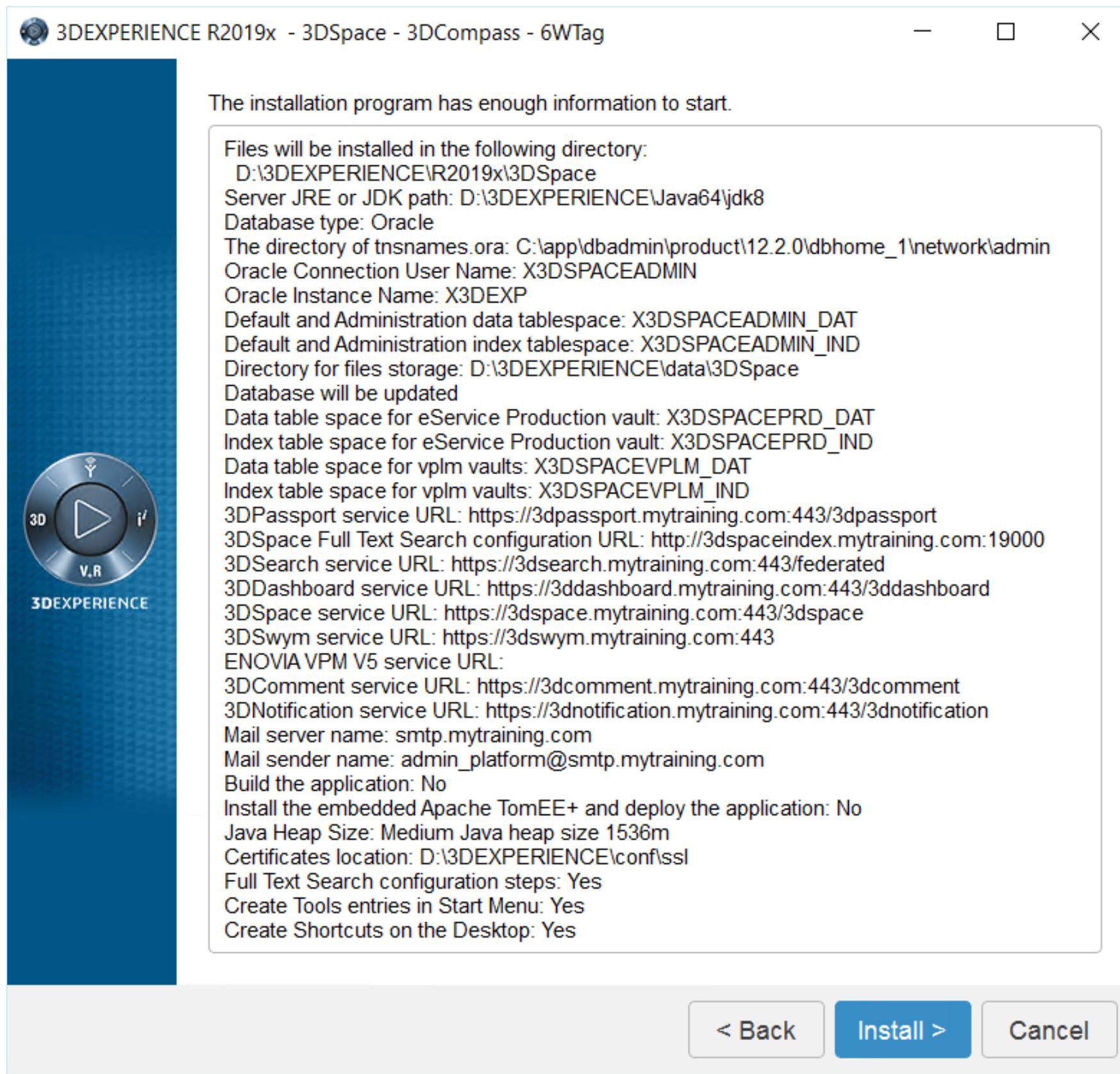
GA core components have two different installation methodologies:

- The global **3DEXPERIENCE** platform Installer found in:
`<Your Media PATH>\AM_3DEXP_Platform.AILOS\1\`
 - This installer is primarily used when you want to deploy multiple services on one machine
- Classic "Service Installer" are available in :
 - `<Your Media PATH>\AM_3DEXP_Platform.AILOS\1\3DSpace\Windows64\1`
 - `<Your GA Media PATH>/AM_3DEXP_Platform.AILOS/3/3DSpace/Linux64/1`
- Start the GUI installer corresponding to your preference.

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh



3DSpace: GA media installer



3DSpace: GA media installer

3DEXPERIENCE R2019x - 3DSpace - 3DCompass - 6WTag

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DSpace
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Database type: SQL Server
SQL Server Connection User Name: x3dspace
SQL Server Database Name: x3dspace
SQL Server Server Name: 3DEXPERIENCE-YY\X3DEXP
Create a new SQL Server database: No
MSSQL files location: C:\DassaultSystemes\3DEXP_DB
Default and Administration data Filegroup: M1_DAT
Default and Administration index Filegroup: M1_IND
Directory for files storage: D:\3DEXPERIENCE\data\3DSpace
Database will be updated
Data table space for eService Production vault: I1_DAT
Index table space for eService Production vault: I1_IND
Data table space for vplm vaults: V1_DAT
Index table space for vplm vaults: V1_IND
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DSpace Full Text Search configuration URL: http://3dspaceindex.mytraining.com:19000
3DSearch service URL: https://3dsearch.mytraining.com:443/federated
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DSpace service URL: https://3dspace.mytraining.com:443/3dspace
3DSwym service URL: https://3dswym.mytraining.com:443
ENOVIA VPM V5 service URL:
3DComment service URL: https://3dcomment.mytraining.com:443/3dcomment
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.mytraining.com
Build the application: No
Install the embedded Apache TomEE+ and deploy the application: No
Java Heap Size: Medium Java heap size 1536m
Certificates location: D:\3DEXPERIENCE\conf\ssl
Full Text Search configuration steps: Yes
Create Tools entries in Start Menu: Yes
Create Shortcuts on the Desktop: Yes

< Back Install > Cancel

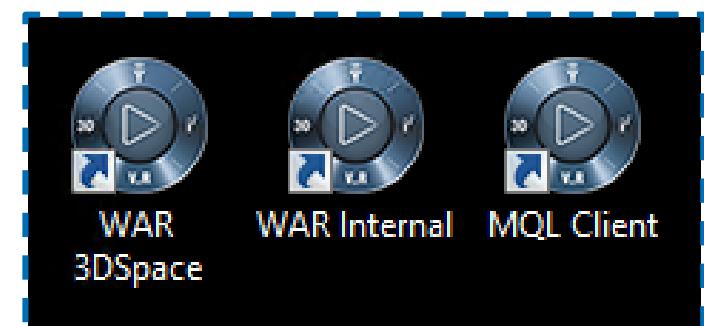
3DSpace: GA Technical Validation

3. Expected file and/or folder creation: (Internal)
 - a. <TomEE+ 3DSpaceInternal Path>\bin\setenv.bat

```
REM Start Default 3DXEP TomEE+ Configuration
set JAVA_HOME=D:\3DEXPERIENCE\Java64\jdk8
set JRE_HOME=%JAVA_HOME%\jre
set CATALINA_HOME=D:\3DEXPERIENCE\TomEE\TomEE3DSpaceInternal
```

4. Check that you have 3 new icons on your desktop (rename them for visibility):

- a. BuildDeploy3DSpace_CAS → WAR 3DSpace
- b. BuildDeploy3DSpace_NoCAS → WAR Internal
- c. MQL → MQL Client



You need to be familiar with these tools as they will be used after Central installation, FP installation or code deployment.

3DSpace – GA Application

1. At this point in time, you could technically deploy the 3DSpace Service with TomEE+. However, we want to enrich 3DSpace services with additional applications. Currently you have the option of deploying the following modules:

2. Mid-Market Solution:
 1. ENOVIA IP Classification Foundation
 2. ENOVIA Collaborative Tasks Foundation
 3. ENOVIA X-CAD Design Foundation
 4. ENOVIA Collaboration for Microsoft Server
 5. ConnectorforCATIAV5Server
 6. ENOVIA Enterprise Change Management
 7. ENOVIA Project Management Foundation
 8. ENOVIA Program Change Control Foundation
 9. ENOVIA Project Execution Foundation
 10. ENOVIA Engineering BOM Management Foundation

3. If you are not interested in this solution or have fallen too far behind this step can be skipped by jumping directly to the next chapter 3DSpace – FP Installer. The impact of skipping this step is you will not be able to execute the functional tests related to the Client connectors, such as Microsoft Office and CATIA V5.

Mid-Market: Table of Contents

- ▶ Introduction
- ▶ 3DSpace Preparation
 - Mid-Market Applications
 1. ENOVIAIPClassificationFoundation
 2. ENOVIACollaborativeTasksFoundation
 3. ENOVIAX-CADDDesignFoundation
 4. ENOVIACollaborationforMicrosoftServer
 5. ConnectorforCATIATV5Server
 6. ENOVIAEnterpriseChangeManagement
 7. ENOVIAProjectExecutionFoundation
 8. ENOVIAEngineeringBOMManagementFoundation
 9. ENOVIAEBOMAVLManagement
 10. ENOVIAEnterpriseAVLManagement
 - 3DSpace FP
 - Fix Pack of Mid-Market



90 minutes

Introduction

1. You have just finished installing the 3DSpace GA components for the **3DEXPERIENCE** platform, at this point the **3DEXPERIENCE** platform will be functional but additional products are required for the Mid-Market functionality.

2. The following is the list of products that will be added to the base 3DSpace installation:
 1. ENOVIAIPClassificationFoundation
 2. ENOVIACollaborativeTasksFoundation
 3. ENOVIAX-CADDDesignFoundation
 4. ENOVIACollaborationforMicrosoftServer
 5. ConnectorforCATIAV5Server
 6. ENOVIAEnterpriseChangeManagement
 7. ENOVIAProjectManagementFoundation
 8. ENOVIAProgramChangeControlFoundation
 9. ENOVIAProjectExecutionFoundation
 10. ENOVIAEngineeringBOMManagementFoundation

3DEXPERIENCE platform: 3DSpace Enhancement

Before proceeding there are a few steps to take due to the fact that 3DSpace is currently online.

- Stop the 2 TomEE+ related to 3DSpace:
 - D:\3DEXPERIENCE\TomEE\TomEE3DSpaceInternal
 - D:\3DEXPERIENCE\TomEE\TomEE3DSpace
- Under the 3DSpace TomEE's, delete the files from the following directories:
 - logs
 - work
 - temp
 - webapps
- Delete the files under the following 3Dspace installation folders if available:
 - D:\3DEXPERIENCE\R2019x\3DSpace\distrib_CAS
 - D:\3DEXPERIENCE\R2019x\3DSpace\distrib_NoCAS

Note— Delete the files and folders incase they are created

You are now ready to proceed.

If you do not want to install the applications in this document, or do not have time, please go back to the Server core document and continue applying the FP for 3DSpace. When instructed to refer back to this doc for installation of the Mid-Market FP you may ignore that as well.

About Mid-Market

- ▶ It is the only offering on the market that provides 3D design capabilities for both styling and engineering in one integrated platform – the **3DEXPERIENCE** platform.
- ▶ Brands can implement effective design-for-cost product development and manufacturing strategies, using the most efficient product management tools, while managing their product and project information throughout the development process. As a result, their products are launched to market faster and in compliance with sustainability and safety norms.



Mid-Market: Pre-Check

You should have previously completed the 3DSpace preparation, the following prerequisite is required:

- Completed the 3DSpace Server GA Core deployment

You will not be able to proceed if this is missing.

Mid-Market: Configuration & Key Parameters

In the training context we have already provided the installation sequence so there is no need for a backup prior to installing the apps.

Some products have dependencies on other products before they can be installed. For example in this stack, ENOVIA Engineering BOM Management Foundation must be installed before ENOVIA EBOM AVL Management.

- ▶ Configuration impacts:
 - Database objects : Updated
 - TomEE+ needed : Updated
- ▶ Installing applications involves updating the 3DSpace component. The information requested for installation is usually minimal:
 - Path of 3DSpace installation
 - Business and system user id, i.e. creator
The password is also required.

Mid-Market: GA Installers

There is no global **3DEXPERIENCE** platform Installer for the 3DDSpace app add-ons but the installation process is quite simple. The most difficult challenge is figuring out where the installers are on the DVD's:

- Installers will be compressed, available in the following generic PATH:
`<Your Media PATH>\AM_3DEXP_<DVD Media>.AIIOS\<The Installer>`
- You will need to copy the file to `<Your Installer PATH>` folder and extract it.
- You will find the normal executable `<Your Installer PATH>\<Extracted Code>\1:`

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

- For each installer the media location will be provided:
 - `<DVD Media>.Windows64` ↪ The DVD name
 - `<The Installer>` ↪ The Path and File name

Mid-Market: GA Installers

- All mid market applications will get installed under:
`D:\3DEXPERIENCE\R2019x\3DSpace\Apps\<Application>`
- You should keep an eye on this folder during the installations. In some cases an installer may create more than one folder under the Apps folder. This is important to know if you want to properly technically validate the installer's log files.
- Finally when installing from <Your Installer PATH>, keep track of what you have installed. A good suggestion is to number the installer folders in sequence.



In both Media and Installer folders:

- <Your Installer PATH>
- <Your Media PATH>

avoid spaces and long names.

Mid-Market: GA Installers

- ▶ Following table illustrates the mid-market installed:

Mid-Market Name	Description
ENOVIAIPClassificationFoundation	It helps in creating different types of libraries and their related hierarchies. You can also create and manage documents and parts.
ENOVIACollaborativeTasksFoundation	It consolidates the features (configurable user interface and schema) that helps to interact with the user interface and objects for all apps. You can collaborate with other members while maintaining access controls to the content.
ENOVIAX-CADDDesignFoundation	It allows to integrate CAD tools with ENOVIA apps.
ENOVIACollaborationforMicrosoftServer	It allows to access and manage documents with tin the Microsoft applications. You can perform product search, standardize documents.
ConnectorforCATIAV5Server	It helps in data migration.
ENOVIAEnterpriseChangeManagement	It provides a specific process for an organization to request changes to objects, manage the changes, and track the changes to completion. Each person can be assigned a role that determines what they are allowed to do in the process. Some users may review and approve changes while others may only view submitted changes. Each step in the change process can be communicated, as required, throughout the organization.

Mid-Market: GA Installers

- ▶ Following table illustrates the mid-market installed (continued):

Mid-Market Name	Description
ENOVIAProjectManagementFoundation	It is a powerful project management tool that allows to create programs and projects and store them in a database.
ENOVIAProgramChangeControlFoundation	It helps to manage changes to products that are complicated and often decomposed into a series of sub changes to make the work more manageable and traceable.
ENOVIAProjectExecutionFoundation	It provides a collaborative environment for global project team members to access, manage and report on their task assignments.
ENOVIAEngineeringBOMManagementFoundation	It helps to consolidate the part design and technical content from various engineering applications. You can also manage part structure.

3DSpace - WAR Build

The “WAR” build process is the act of merging the 3DSpace GA+FP code and any creating a J2EE applications.

- The applications are normally installed under the folder:
D:\3DEXPERIENCE\R2019x\3DSpace\Apps
- They also have code integrated to the stack under the folder:
D:\3DEXPERIENCE\R2019x\3DSpace\STAGING
- The “WAR” will be created under:
D:\3DEXPERIENCE\R2019x\3DSpace\distrib

The WAR builder batch file are [BuildDeploy3DSpace_NoCAS.bat](#) and [BuildDeploy3DSpace_CAS.bat](#) under D:\3DEXPERIENCE\R2019x\3DSpace\win_b64\code\command

The STAGING folder is where the 3DSpace service will build the WAR file from. It will then copy the war file to the distrib folder which can then be deployed to the 3DSpace TomEE+ instance. This process is why you need to rebuild the “WAR” file after installing any new application into 3DSpace.

The WAR file build can be take a long time, it will depend on the stack of applications that were installed and the speed of the disk. It's possible to cut the time if you don't need the EAR file and/or the ZIP file. This can be done by editing the two batch files and adding the proper flags in the command (for the training we recommend to do this, for real production you must make sure you don't need them, they can be removed and any time):

For CAS

```
105      rem build J2EE archives
106      call %server%\tost\code\command\war_setup.bat -Z -E %server%\tost\code\command\war_setup.input
107
```

For no-CAS

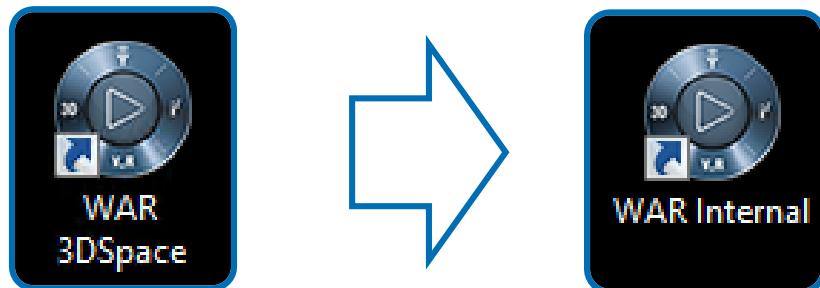
```
44      echo Updating Java application...> %server%\tost\code\command\war_setup.input
45
46      rem build J2EE archives
47      call %server%\%os%\code\command\war_setup.bat -Z -E %server%\%os%\code\command\war_setup.input
48 )
```

3DSpace - WAR Build

Time to rebuild the web application to be deployed in:

- 3DSpace TomEE+ code PATH :
D:\3DEXPERIENCE\TomEE\TomEE3DSpace\webapps
- 3DSpace Internal TomEE+ code PATH : D:\3DEXPERIENCE\TomEE\TomEE3DSpaceInternal\webapps

- Make sure that Both TomEE are stopped
- Use the two shortcuts on your desktop, launch them one after the other:



3Dspace does not automatically copy the WAR file to the application server, find the two folders containing the WAR files for TomEE3DSpace and TomEE3DSpaceInternal

- a. Copy only the .war file from the distrib folder to the webapps folder of each TomEE:
- b. TomEE3DSpace : D:\3DEXPERIENCE\R2019x\3DSpace\distrib_CAS
- c. TomEE3DSpaceInternal : D:\3DEXPERIENCE\R2019x\3DSpace\distrib_NoCAS

- In the distrib folder the other files and folders are not needed and should not be copied, to save space you can delete them.

3DSpace - WAR Build

- Start and stop both TomEE+
 - i. <TomEE+ 3DSpace Path>\bin\startup.bat
 - ii. <TomEE+ 3DSpace Internal Path>\bin\startup.bat
 - iii. Wait for it to finish deploying the application.
 - Sample

```
Jan 25, 2017 12:00:03 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-bio-8180"]
Jan 25, 2017 12:00:03 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["ajp-bio-8109"]
Jan 25, 2017 12:00:03 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in 561 ms
```
 - iv. <TomEE+ 3DSpace Path>\bin\shutdown.bat
 - v. <TomEE+ 3DSpace Internal Path>\bin\shutdown.bat
 - vi. Wait for it to finish properly closing the application before closing the terminal.
- Check for errors and clean the log folder afterward
 - i. <TomEE+ 3DSpace Path>\logs*.log
 - ii. <TomEE+ 3DSpace Internal Path>\logs*.log

3DSpace: Validation

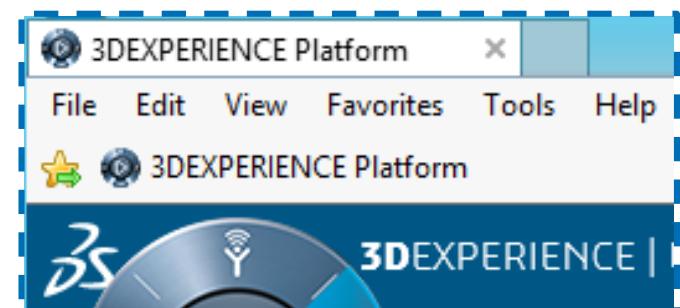
1. In this section you will validate the service functionality and part of the infrastructure deployment
 - a. Apache
 - b. Redirect to 3DSpace TomEE+'s



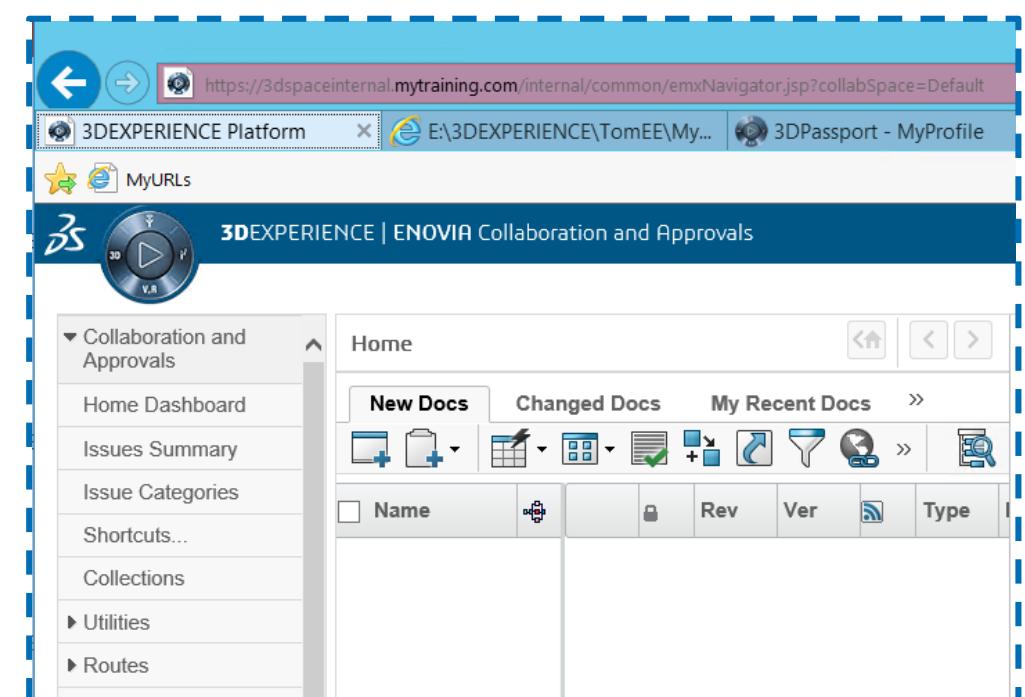
Each time you test a new URL it is recommended that you add it to the IE Favorites bar (rename it for ease).

2. Start the Apache service if not started
 - a. Open service manager

3. Start both TomEE+'s if not started
 - a. <TomEE+ 3DSpace Path>\bin\startup.bat
 - b. <TomEE+ 3DSpace Internal Path>\bin\startup.bat
 - c. <TomEE+ 3DPassport Path>\bin\startup.bat
 - d. Wait for each to finish deploying the application.



4. Access the URLs:
 - a. <https://3dspace.mytraining.com:443/3dspace>
 - b. <https://internal.mytraining.com:443/internal>



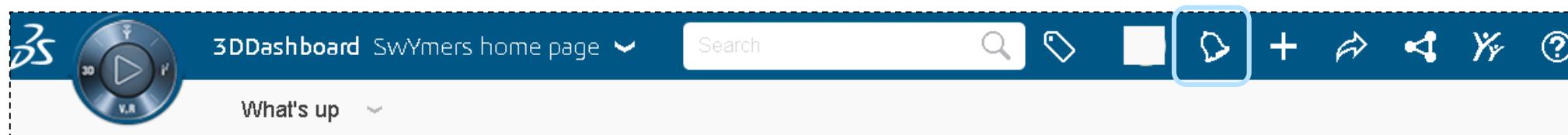
Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. *3DSpace*
- 8. 3DNotification**
- 9. *3DComment*
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

About 3DNotification

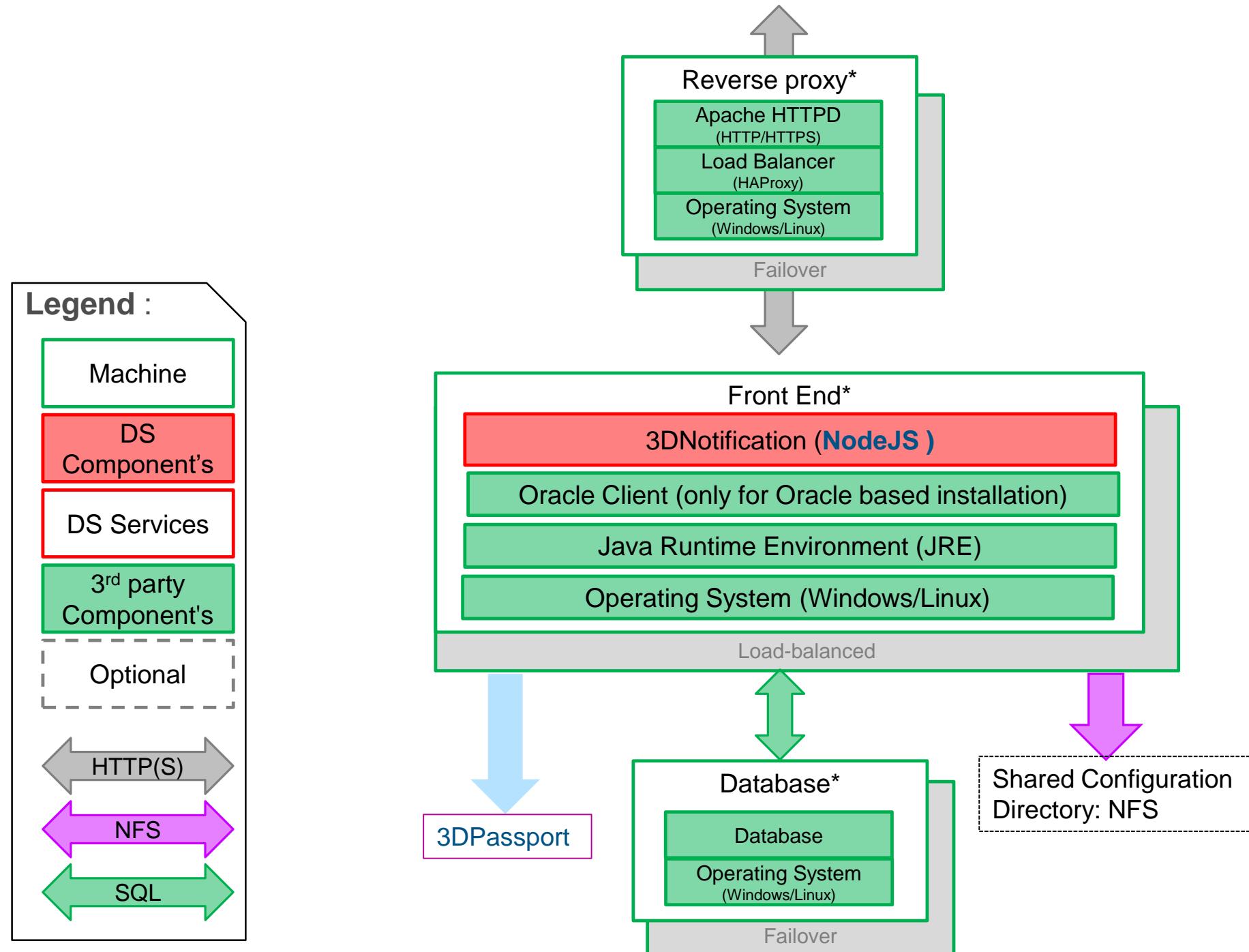
3DNotification gives **3DEXPERIENCE** platform users timely updates about activities going on in the system. 3DNotification is the service used to send push notification messages to **3DEXPERIENCE** platform users.

- ▶ A source app or service sends a notification request to the 3DNotification service.
- ▶ The 3DNotification service processes the request.
- ▶ The 3DNotification service sends a notification message to the **3DEXPERIENCE** platform users via different channels (the notification center, alerts and emails).





3DNotification: Architecture



* Always consult the “Program Directory” for version and latest news.

3DNotification: Pre-Check

- ▶ You should have previously prepared the groundwork to proceed with this service installation, you will require the following prerequisites:
 - Database objects (up and running)
 - 1 SSL certificate
 - Java
- ▶ Note: You will not be able to proceed if any of these are missing.
 - Main Configuration requirement:
 - Database objects : Yes
 - Java dependent : Yes

3DNotification: Key Parameters

Installation Cook-book : Installation key parameter explained.

- ▶ Installation Directory: This is where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the **c:** drive. The **c:** drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Install the embedded Server JRE: The JRE is required for certificate importation using the java keytool utility, the application will not use the JRE at execution time. You may choose to use the embedded release provided by the **3DEXPERIENCE** platform or an external one. This second option will be used during the training.
- ▶ Database selection: This component supports both Oracle and Microsoft SQL Server. The database recommendation is often based on two critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
 - The database has 1 schema/database.
- ▶ 3DNotification Repository: 3DNotification requires a special foot print on the disk for its logs, temporary transactions and data. This should be treated similarly to an FCS, the data is not re-buildable like the 3DSpace Index server.
- ▶ Mail options: Low importance but recommended for **3DEXPERIENCE** platform administrator messages.

Keywords: application for 3DSwym.

3DNotification: GA media installer

GA core components have 2 different installation methodologies:

- The "global 3DEXPERIENCE platform Installer" found in:

- <Your Media PATH>\AM_3DEXP_platform.AILOS\1\
 - Navigate to this path and find:

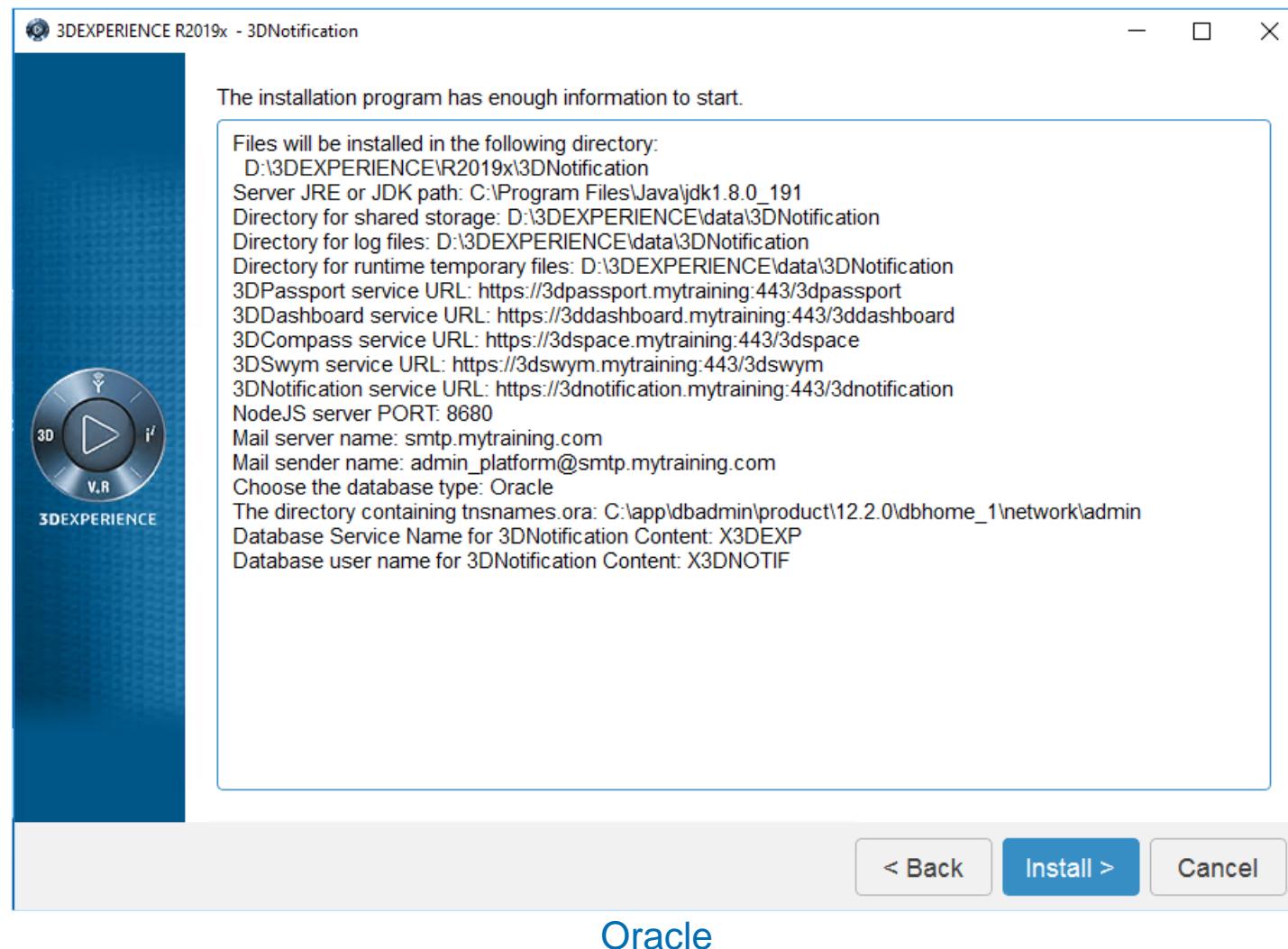
Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

- This installer is primarily used when you want to deploy multiple services on one machine
- Classic "Service Installer" is available in:
 - <Your Media PATH>\AM_3DEXP_Platform.AILOS\2\3DNotification\Windows64\1
 - <Your GA Media PATH>/AM_3DEXP_Platform.AILOS/3/3DNotification/Linux64/1
- Start the GUI installer corresponding to your preference.

3DNotification: GA Media Installer

- ▶ Available Installation Options :
 - No Options

It is important to note that 3DNotification is its “own” Application server, therefore it does not need a TomEE+ application server, it will still be accessed via Apache https security.



3DNotification: GA Media Installer

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DNotification
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Directory for shared storage: C:\DassaultSystemes\3DNotificationData
Directory for log files: D:\3DEXPERIENCE\R2019x\3DNotification\3DNotificationLogs
Directory for runtime temporary files: C:\Users\dsadmin\AppData\Local\Temp\3Dassault Systemes\3DNotification
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DCompass service URL: https://3dspace.mytraining.com:443/3dspace
3DSwym service URL: https://3dszym.mytraining.com:443
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
NodeJS server PORT: 8680
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.mytraining.com
Choose the database type: SQL server
SQL Server Server Name: database.mytraining.com\X3DEXP:1433
SQL Server Database Name for 3DNotification Content: x3dnotification
Database administrator user name: x3ds_admin
Database user name for 3DNotification: x3ds

< Back Install >

The installation program has finished installing 3DEXPERIENCE R2019x on your computer, in D:\3DEXPERIENCE\R2019x\3DNotification.

Installed Components:
3DNotification Foundation

< Back Close Cancel

3DNotification: GA Post Installation

3DNotification installer is pretty simple, it installs a windows service.

- a. The default service name is “3DEXPERIENCE R2019x 3DNotification Node”
- b. To start and stop the node on Windows: start and stop the service:
- c. 3DEXPERIENCE R2019x 3DNotification Node

Name	Description	Status
3DEXPERIENCE R2019x 3DNotification Node	3DEXPERIENCE R2019x 3DNotificati...	Running
3DEXPERIENCE R2019x 3DSpace Index		
3DEXPERIENCE R2019x 3DSpace TomEE	3DEXPERIENCE R2019x 3DSpace To...	Running
3DEXPERIENCE R2019x 3DSpaceNoCAS TomEE	3DEXPERIENCE R2019x 3DSpaceNo...	Running
3DEXPERIENCE R2019x 3DSwym ExternalConverterSvc	3DEXPERIENCE R2019x 3DSwym Ext...	Running

3DNotification service is deployed automatically after installation.

3DNotification: Validation

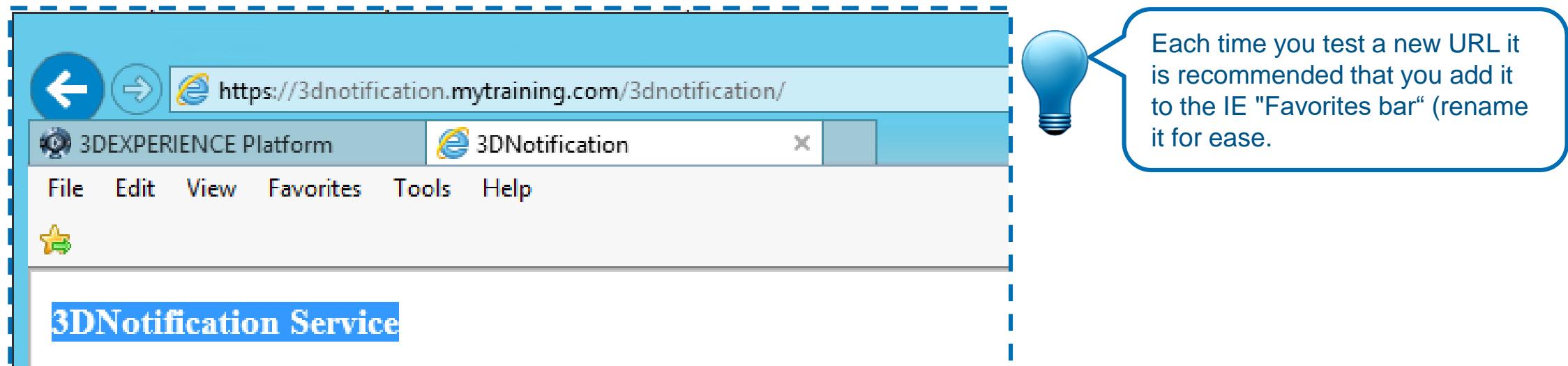
In this section you will validate the service functionality and part of the infrastructure deployment

- a. Apache
 - b. Redirect to 3DNotification NodeJS
1. Restart the Apache service
 - a. Open service manager

2. Start 3DNotification Node
 - Start the 3DNotification service
 - Access the URL:

<https://3dnotification.mytraining.com:443/3dnotification/>

3Dnotification will be redirected by Apache to a “**3DNotification Service**” page.



Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. *3DSpace*
- ✓ 8. *3DNotification*
- 9. 3DComment**
- 10. *3DSwym*
- 11. *FCS*
- 12. *Reconfiguration*

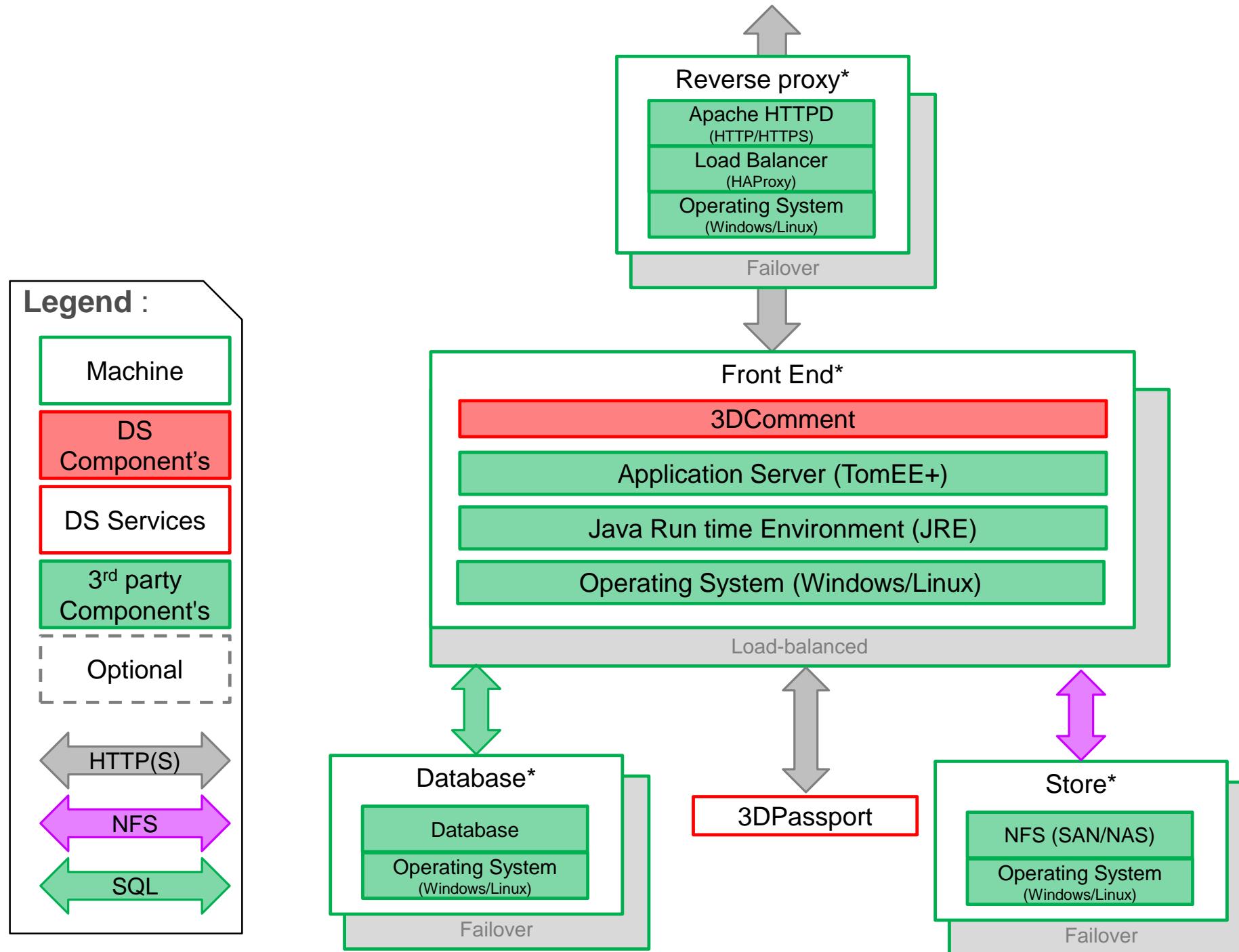
About 3DComment

3DComment is new service for the **3DEXPERIENCE** platform R2019x, it provides the ability to interact with other **3DEXPERIENCE** platform members by liking content, adding comments to any item and adding media such as video content.





3DComment: Architecture



* Always consult the “Program Directory” for version and latest news.

3DComment: Pre-Check

You should have previously prepared the groundwork to proceed with this service installation, you will require the following prerequisites:

- Database objects (up and running)
- TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
- Java

You will not be able to proceed if any of these are missing.

- Main Configuration requirement:
 - Database objects : Yes
 - TomEE+ needed : Yes
 - Java dependent : Yes

3DComment: Key Parameters

Installation “Cook-book” : Installation key parameter explained.

- ▶ “Installation Directory”: This is where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the “C: \” drive. The “C: \” drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ “Installing Embedded Server JRE” & “Installing Embedded Apache TomEE+”: 3DS service installer comes with java “JRE” and TomEE+. This can be practical for small businesses and if you do not want to manage “other” software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ “Database selection”: This component supports both Oracle and Microsoft SQL Server. The database recommendation is often based on 2 critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
 - The database data repository has 1 schema/database.
- ▶ “3DComment Repository”: 3DComment requires a special foot print on the disk for its logs, temporary transactions and data. This should be treated similarly to an FCS, the data is not “re-buildable” like the 3DSpace Index server.
- ▶ Keywords: Notification broker for 3DSwym.

3DComment: GA media installer

GA core components have two different installation methodologies:

- The "global 3DEXPERIENCE platform Installer" found in:
 - <Your Media PATH>\AM_3DEXP_platform.AllOS\1\

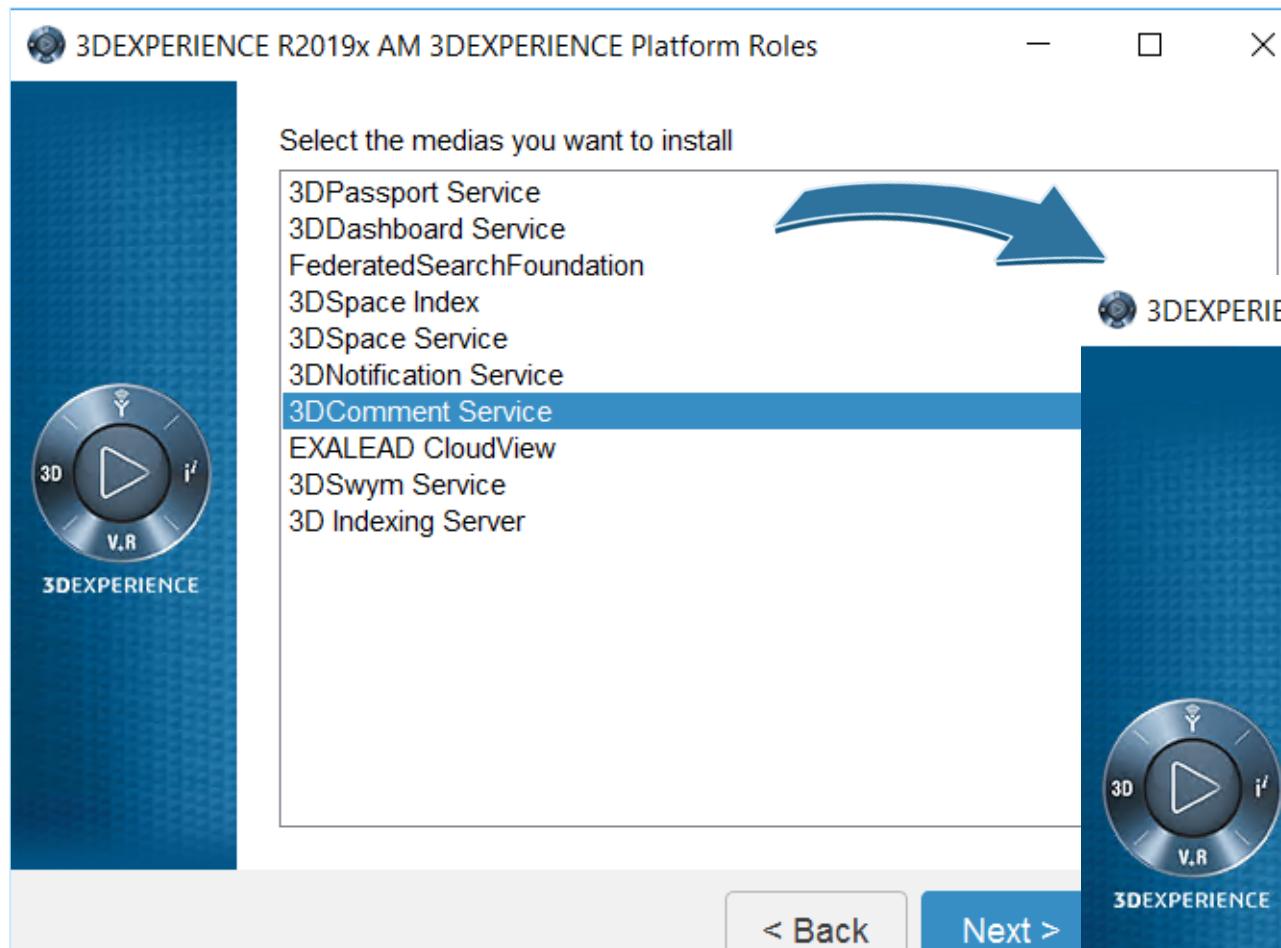
Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

- Classic "Service Installer" is available in:
 - <Your Media PATH>\R2019x.GA\AM_3DEXP_Platform.AllOS\2\3DComment\Windows64\1
 - <Your Media PATH>/AM_3DEXP_Platform.AllOS/3/3DComment/Linux64/
- Start the GUI installer corresponding to your preference.

3DComment: Key Parameters

- ▶ Available Installation Options :
 - Install the embedded Server JRE
 - Install the embedded TomEE+

Training Path: More flexibility, control and post installation options.



3DEXPERIENCE R2019x AM 3DEXPERIENCE Platform Roles

Select the medias you want to install

- 3DPassport Service
- 3DDashboard Service
- FederatedSearchFoundation
- 3DSpace Index
- 3DSpace Service
- 3DNotification Service
- 3DComment Service**
- EXALEAD CloudView
- 3DSwym Service
- 3D Indexing Server

< Back Next >

3DEXPERIENCE R2019x - 3DComment

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DComment
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Directory for shared storage: D:\3DEXPERIENCE\data\3DComment
Directory for log files: D:\3DEXPERIENCE\R2019x\3DComment\3DCommentLog
Directory for runtime temporary files: C:\Users\ADMINI~1\AppData\Local\Temp\2\Dassault Systemes\3DComment
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DCompass service URL: https://3dspace.mytraining.com:443/3dcomment
3DComment service URL: https://3dcomment.mytraining.com:443/3dcomment
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DComment
Choose the database type: Oracle
The directory containing tnsnames.ora: C:\app\dbadmin\product\12.2.0\dbhome_1\network\admin
Database Service Name for 3DComment: X3DEXP
Database user name for 3DComment: X3DCOMMENT
Use as batch server

< Back Install > Cancel

3DComment: Key Parameters

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DComment
Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Directory for shared storage: D:\3DEXPERIENCE\data\3DComment\data
Directory for log files: D:\3DEXPERIENCE\data\3DComment\logs
Directory for runtime temporary files: D:\3DEXPERIENCE\data\3DComment\tmp
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DCompass service URL: https://3dspace.mytraining.com:443/3dspace
3DComment service URL: https://3dcomment.mytraining.com:443/3dcomment
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE
Choose the database type: SQL server
SQL Server Server Name: database.mytraining.com\X3DE
SQL Server Database Name for 3DComment: x3dcomment
Database administrator user name: x3ds_admin
Database user name for 3DComment: x3ds
Use as batch server

The installation program has finished installing 3DEXPERIENCE R2019x on your computer, in D:\3DEXPERIENCE\R2019x\3DComment.

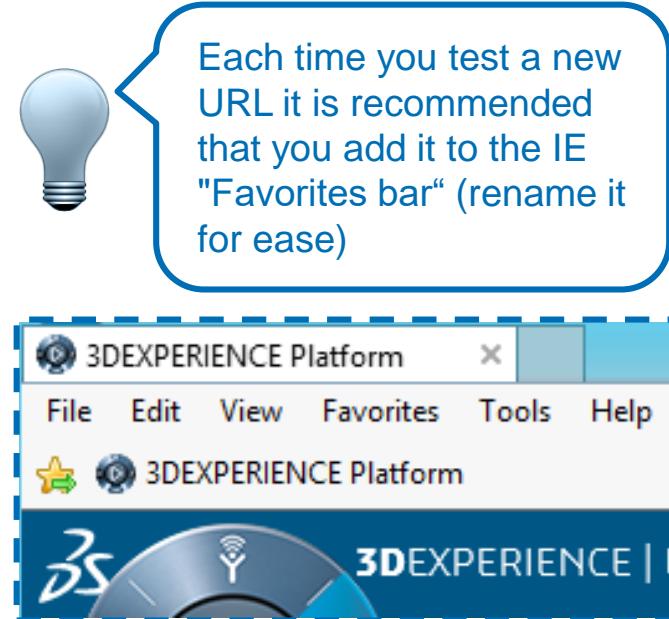
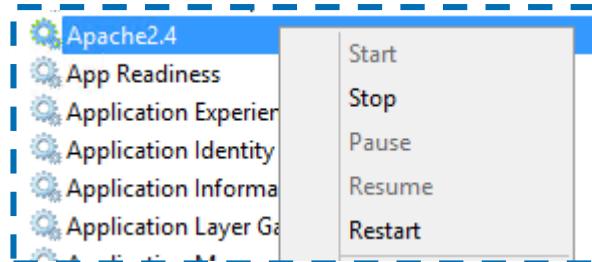
Installed Components:
3DComment Foundation

< Back Close Cancel

3DComment: Validation

In this section you will validate the service functionality and part of the infrastructure deployment

- a. Apache
- b. Redirect to 3DComment TomEE+'s
3. Start the Apache service if not started
 - a. Open service manager



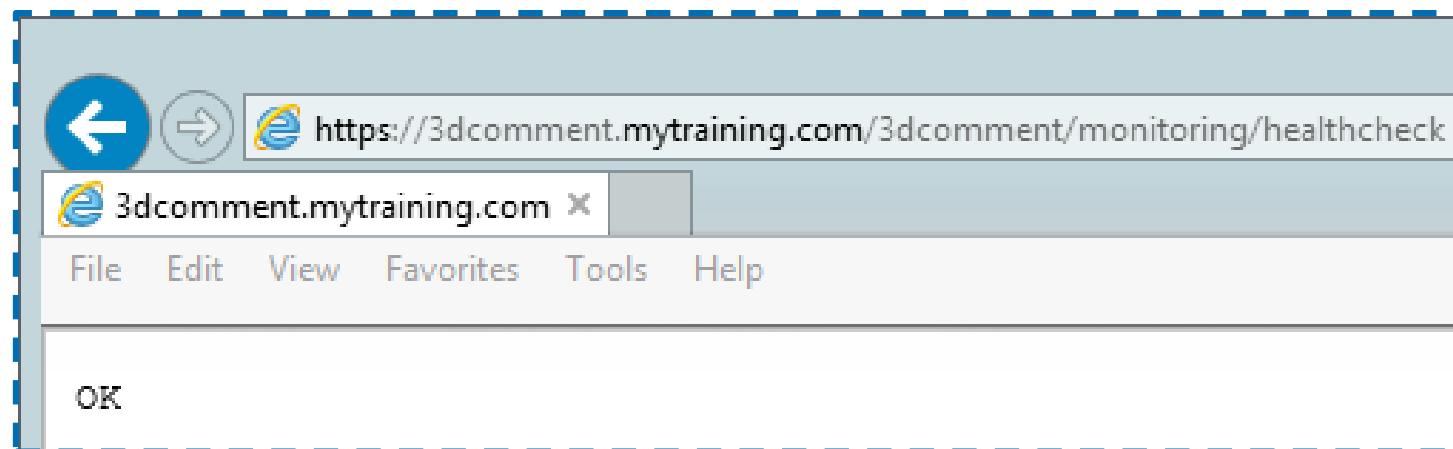
4. Start TomEE+
 - a. <TomEE+ 3DComment Path>\bin\startup.bat

Wait for it to finish deploying the application.

Access the URL:

<https://3dcomment.mytraining.com:443/3dcomment/monitoring/healthcheck>

3DComment will respond with the following page.



Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. *3DSpace*
- ✓ 8. *3DNotification*
- ✓ 9. *3DComment*
- 10. 3DSwym**
- 11. FCS
- 12. Reconfiguration

EXALEAD CloudView - GA Media Installer

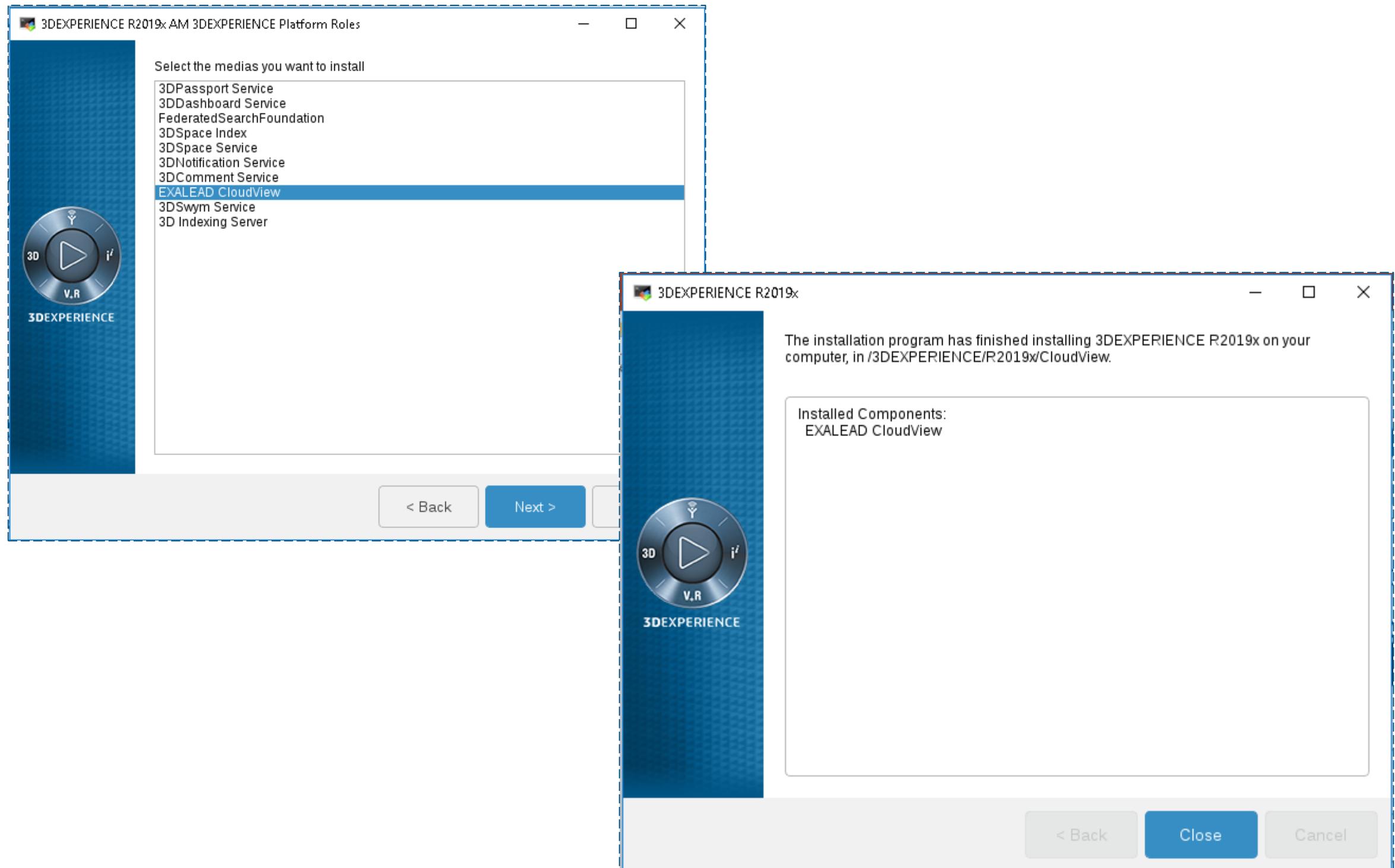
GA core components have two different installation methodologies:

- The "global 3DEXPERIENCE platform Installer" found in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

 - This installer is primarily used when you want to deploy all the services on one machine
- Classic Service Installer are available in :
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\2\EXALEAD_CloudView\Windows64\1
 - <Your Media PATH>\Part_3DEXP_Platform.Linux64\2\Software\EXALEAD_CloudView.Linux64\1
 - Traditional method used to deploy the services on different machines
- Start the global 3DEXPERIENCE platform Installer installer for the training
 - Fields to complete are identical for the two installers
 - Some of the parameters chosen with the initial service installer are presented in the subsequent installers as read-only

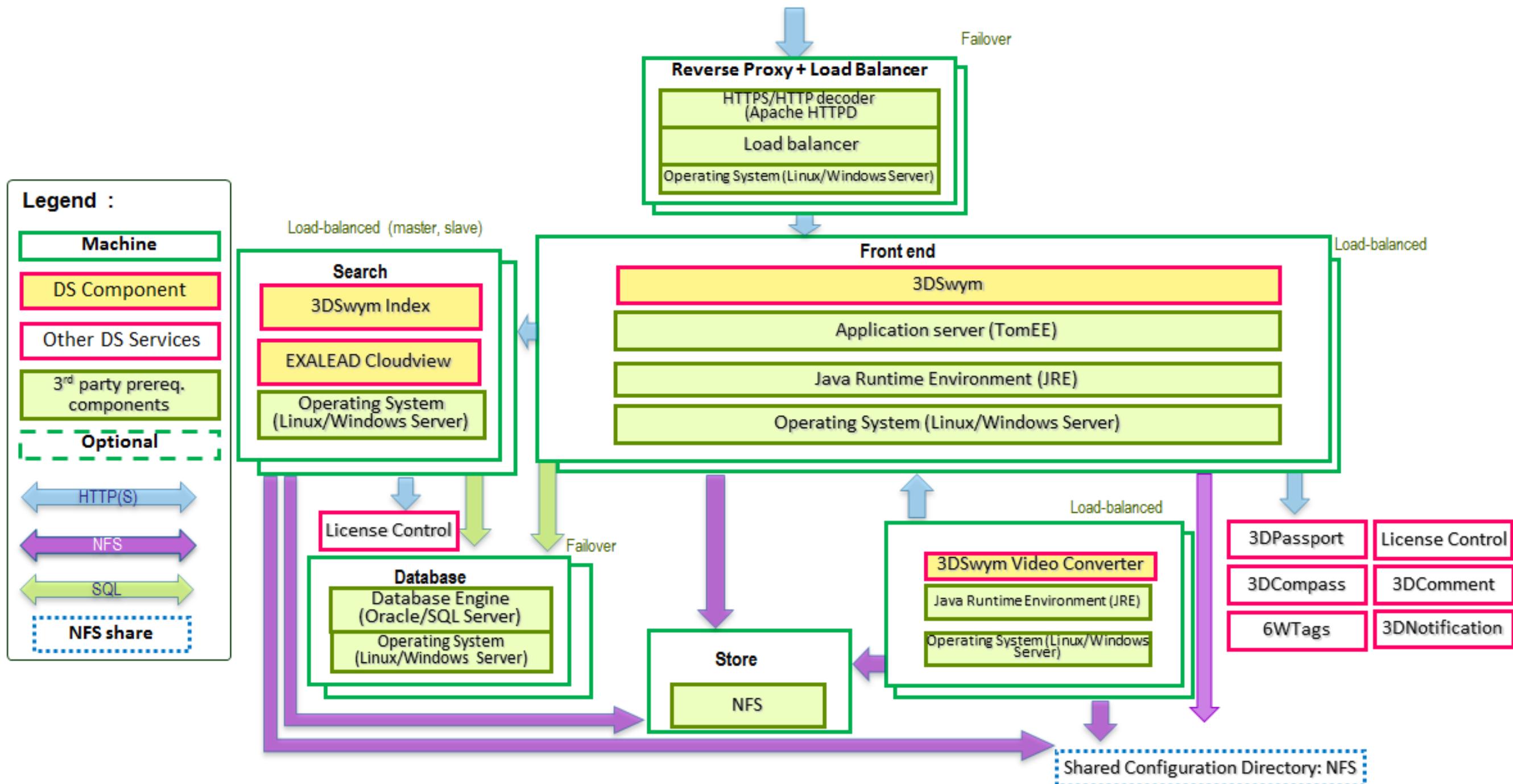
EXALEAD CloudView GA : Key Parameters



About 3DSwym

- ▶ The 3DSwym service provides social networking and community facilities, enabling cross-discipline collaboration of users anywhere in the enterprise, and comprises three components:
 - 3DSwym Foundation
 - 3DSwym Video Converter
 - 3DSwym Index
- ▶ It is recommended that you install each of the above components on a different machine.

3DSwym : Architecture



* Always consult the “Program Directory” for version and latest news.

3DSwym: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

- Database objects (up and running)
- TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
- Java

You will not be able to proceed if any of these are missing.

- Main Configuration requirements:
 - Database objects : Yes
 - TomEE+ needed : Yes
 - Java dependent : Yes

3DSwym: Key Parameters

Installation Cook-book: Installation key parameters explained.

- ▶ Installation Directory: This is the location where the service code will be installed. Do not use blanks in the installation, try if you can avoid it. It is also recommended not to install on the “C: \” drive. The “C: \” drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ Installing Embedded Server JRE & Installing Embedded Apache TomEE+: 3DS service installer comes with java JRE and TomEE+. This can be practical for small businesses and if you don not want to manage other software installations. The disadvantages are that it is harder to upgrade and maintain Java security release and it cannot be easily implemented with load balancing.
- ▶ Database selection: This component is supported on both Oracle and Microsoft SQL Server. The database recommendation is often based on 2 critical customer requirements, support and cost. It is important to note that the support costs can sometimes be higher than the actual license costs.
- ▶ Mail options: This service is essential for password reset, there is no admin page allowing you to force a new password, this would be a very big no-no in security. It is critical to be able to “send” mail, receiving replies is not required.
- ▶ Application ports & Instance options: For the external TomEE+ instance be sure that you have the proper OS permissions as the application may need to add, alter or update binaries, libraries or configuration files.

3DSwym : GA Media Installer

- ▶ The “Global 3DEXPERIENCE platform Installer” is not available for the 3DSwym

- "Service Installer" will be used for this service :

- <Your Media PATH>\AM_3DEXP_Platform.AILOS\1\

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

The classic installer is at <Your Media PATH>\AM_3DEXP_Platform.AILOS\2\3DSwym\Windows64\1
<Your Media PATH>/AM_3DEXP_platform.AILOS/4/3DSwym/Linux64/1

3DSwym: Installation

► 3DSWYM

- [Installing 3DSwym Foundation](#)
- [Installing 3DSwym Video Converter](#)
- [Installing 3DSwym Index](#)



3DEXPERIENCE R2019x - 3DSwym

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DSWYM

Selected Components:

- 3DSwym Foundation
- 3DSwym Video Converter
- 3DSwym Index

Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Directory for shared storage: D:\3DEXPERIENCE\data\3DSwym\data
Directory for log files: D:\3DEXPERIENCE\data\3DSwym\logs
Directory for runtime temporary files: D:\3DEXPERIENCE\data\3DSwym\temp
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DSwym Full Text Search configuration URL: http://3dszymindex.mytraining.com:29000
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DCompass service URL: https://3dspace.mytraining.com:443/3dspace
6WTag service URL: https://3dspace.mytraining.com:443/3dspace
3DSwym service URL: https://3dszym.mytraining.com:443
3DComment service URL: https://3dcomment.mytraining.com:443/3dcomment
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
Choose the database type: Oracle
The directory containing tnsnames.ora: C:\app\dbadmin\product\12.2.0\dbhome_1\network\ADMIN
Database Service Name for 3DSwym Content: X3DEXP
Database Service Name for 3DSwym Rich Media: X3DEXP
Database Service Name for 3DSwym Widgets: X3DEXP
Database user name for 3DSwym Content: X3DSWYM
Database user name for 3DSwym Rich Media: X3DSWYM_MEDIA
Database user name for 3DSwym Widgets: X3DSWYM_WIDGET
Use as batch server
6WTag administrator user name: admin_platform
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.mytraining.com
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DSwym
Setup will create the following shortcuts:
Tools entries in the Start Menu

< Back Install > Cancel

Close Cancel

Oracle

3DSwym: Installation

3DEXPERIENCE R2019x - 3DSwym

The installation program has enough information to start.

Files will be installed in the following directory:
D:\3DEXPERIENCE\R2019x\3DSWYM

Selected Components:

- 3DSwym Foundation
- 3DSwym Video Converter
- 3DSwym Index

Server JRE or JDK path: D:\3DEXPERIENCE\Java64\jdk8
Directory for shared storage: D:\3DEXPERIENCE\data\3DSwym\data
Directory for log files: D:\3DEXPERIENCE\data\3DSwym\logs
Directory for runtime temporary files: D:\3DEXPERIENCE\data\3DSwym\temp
3DPassport service URL: https://3dpassport.mytraining.com:443/3dpassport
3DSwym Full Text Search configuration URL: http://3dszymindex.mytraining.com:29000
3DDashboard service URL: https://3ddashboard.mytraining.com:443/3ddashboard
3DCompass service URL: https://3dspace.mytraining.com:443/3dspace
6WTag service URL: https://3dspace.mytraining.com:443/3dspace
3DSwym service URL: https://3dszym.mytraining.com:443
3DComment service URL: https://3dcomment.mytraining.com:443/3dcomment
3DNotification service URL: https://3dnotification.mytraining.com:443/3dnotification
Choose the database type: SQL server
SQL Server Server Name: database.mytraining.com\X3DEXP:1433
SQL Server Database Name for 3DSwym Content: x3dszym_social
SQL Server Database Name for 3DSwym Rich Media: x3dszym_media
SQL Server Database Name for 3DSwym Widgets: x3dszym_widget
Database administrator user name: x3ds_admin
Database user name for 3DSwym: x3ds
Use as batch server
6WTag administrator user name: admin_platform
Mail server name: smtp.mytraining.com
Mail sender name: admin_platform@smtp.mytraining.com
Don't install the embedded Apache TomEE+.
Apache TomEE+ installation path: D:\3DEXPERIENCE\TomEE\TomEE3DSwym
Setup will create the following shortcuts:
Tools entries in the Start Menu

Certificates location: D:\3DEXPERIENCE\confssl
Data directory that will be used for CloudView: D:\3DEXPERIENCE\R2019x\3DSWYM\win_b64\datadir

Microsoft SQL Server

Name	Description	Status
3DEXPERIENCE R2019x 3DSwym ExternalConverterSvc	3DEXPERIENCE R2019x 3DNotification Node	3DEXPERIENCE R2019x 3DNotification Node
Stop the service	3DEXPERIENCE R2019x 3DSpace Index	3DEXPERIENCE R2019x 3DSpace Index
Restart the service	3DEXPERIENCE R2019x 3DSpace TomEE	3DEXPERIENCE R2019x 3DSpace TomEE
	3DEXPERIENCE R2019x 3DSpaceNoCAS TomEE	3DEXPERIENCE R2019x 3DSpaceNoCAS TomEE
	3DEXPERIENCE R2019x 3DSwym ExternalConverterSvc	3DEXPERIENCE R2019x 3DSwym ExternalConverterSvc

3DSwym: Validation

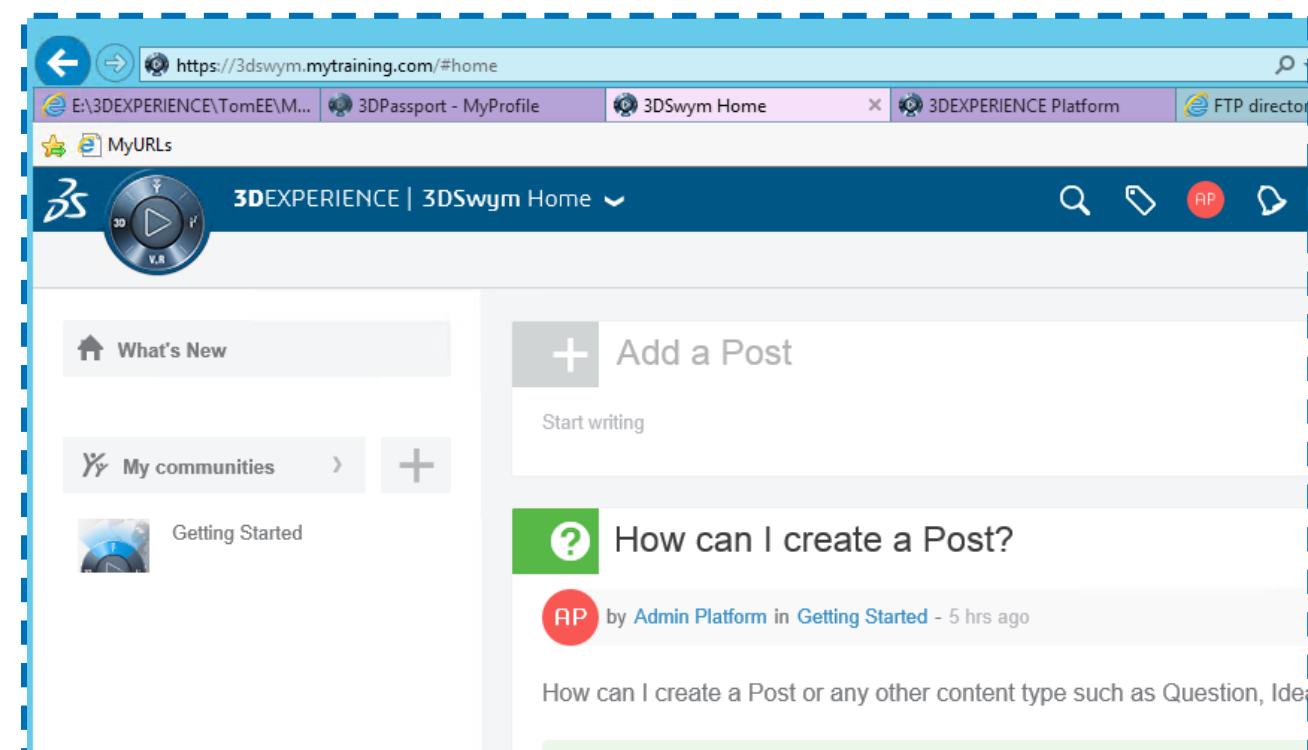
In this section you will validate the service functionality and part of the infrastructure deployment

- Apache
- Redirect to 3dswym TomEE+

- ▶ Start the Apache service if not started
 - Open service manager
- ▶ Start TomEE+ (3DSwym + 3Dpassport)
 - <TomEE+ 3dswym Path>\bin\startup.batWait for it to finish deploying the application.
Access the URL:
<https://3dswym.mytraining.com/>



Each time you check a new URL, it's recommended to add it to the IE "Favorites bar" (rename it for ease)



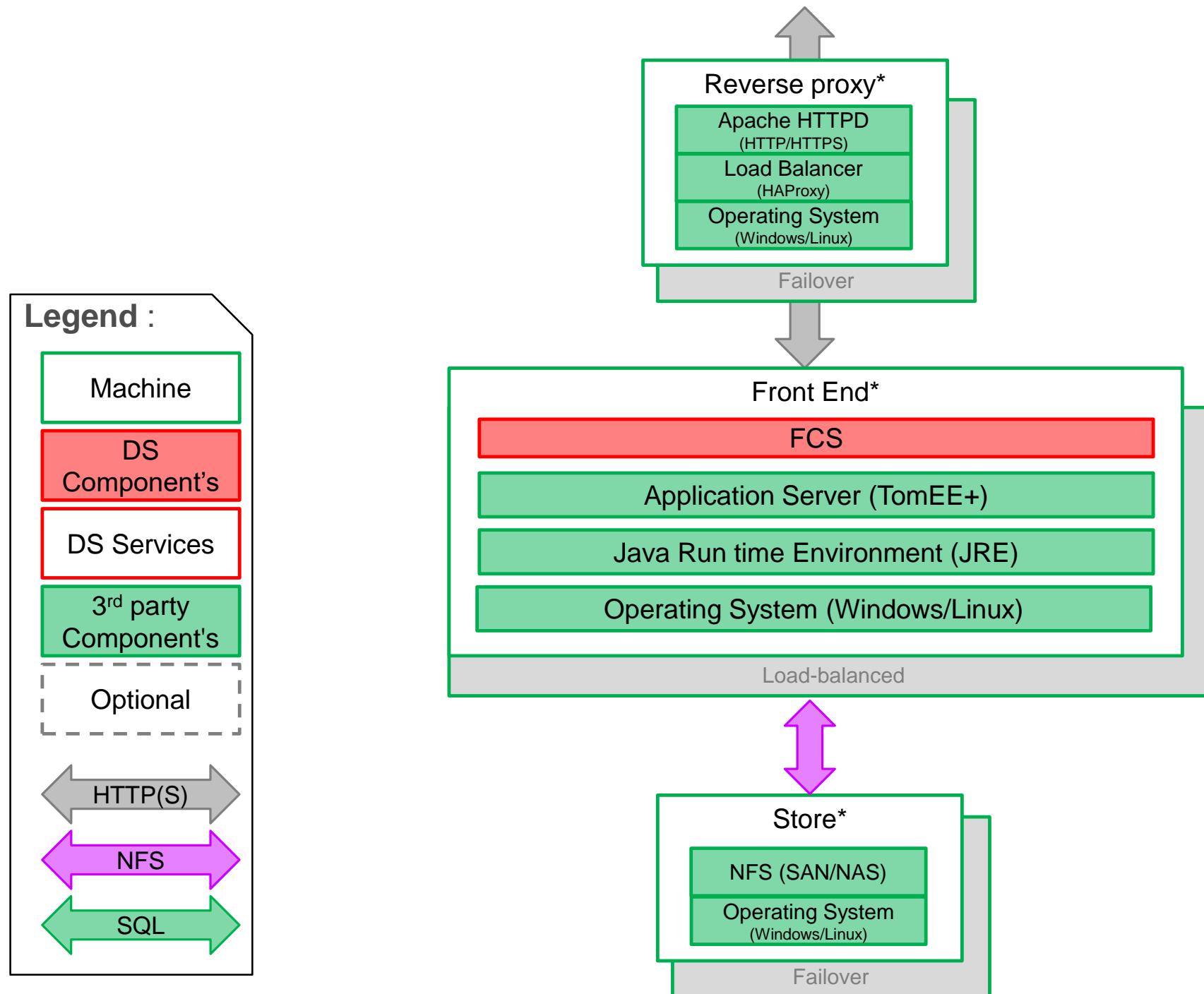
Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. *3DSpace*
- ✓ 8. *3DNotification*
- ✓ 9. *3DComment*
- ✓ 10. *3DSwym*
- 11. FCS**
- 12. *Reconfiguration*

About FCS Central

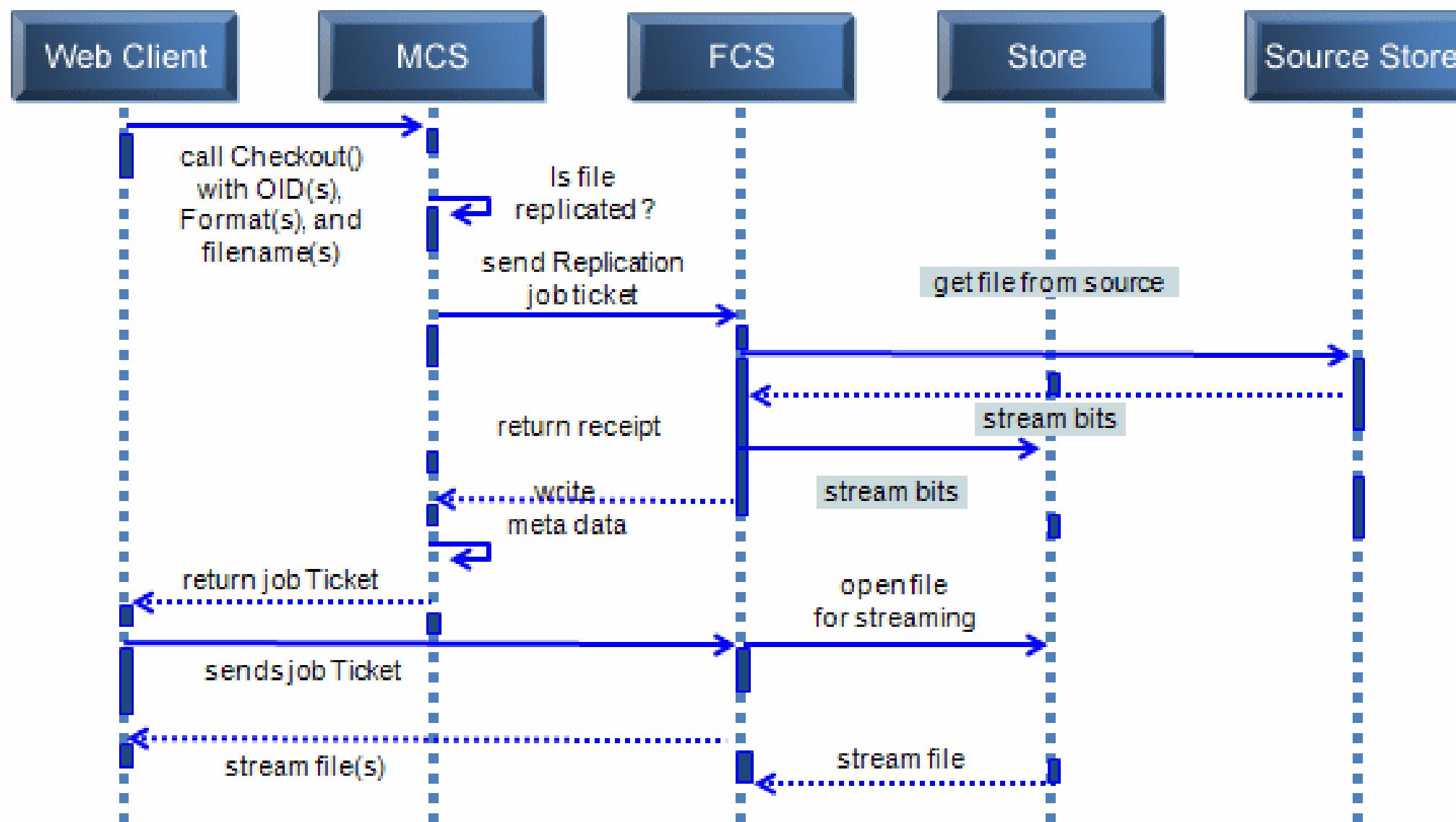
- ▶ The File Collaboration Server (FCS) enables administrators to distribute file data across the enterprise for optimal upload and download performance. It provides location, checkout, and copy operations for the data managed by the 3DSpace Service.
- ▶ The "central" FCS replaces the embedded FCS in the 3DSpace installation. It is recommended to offload the FCS functionality to a dedicated server allow 3DSpace to concentrate on serving the application pages rather than delivering files. This standalone "FCS" is referred as the "Central FCS".

FCS Central: Architecture



* Always consult the “Program Directory” for version and latest news.

Checkout with Replication Sequence



FCS Central: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

- TomEE+ (stopped)
 - 1 TomEE+ is dedicated for the service
 - 1 SSL certificate
- Java

You will not be able to proceed if any of these are missing.

- Main Configuration requirement:
 - Database objects : No
 - TomEE+ needed : Yes
 - Java dependent : Yes

FCS: Key Parameters

Installation “Cook-book” : Installation key parameter explained.

- ▶ “Installation Directory”: This is location where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the “C:\” drive. The “C:\” drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ “Append service binary to PATH”: This allows the OS and users “easier” access to the FCS binaries but it is not recommended because it may interfere with other applications. The preferred solution is to set the PATH variable in the TomEE environment variables and to set it in any batch that you would like to execute.
- ▶ “Web Application name”: Name of the war file that will be created, it is recommended to keep the default value, “fcs”. Typically SSL terminates at the F5 or apache which sends the requests to the backend FCS JVM host name and ports like so:
 - Endpoint URL
 - <https://fcs.mytraining.com/fcs>
 - Backend JVMs
 - <http://realhostname.domain.com:8081/fcs>
 - <http://realhostname.domain.com:8082/fcs>
- ▶ Keywords: FCS file repository, crawler, user: locations & site.

FCS Central : GA Media Installer

- ▶ The “Global 3DEXPERIENCE platform Installer” is not available for the FCS.
 - As with the global 3DEXPERIENCE platform installer, you have the GUI and TUI options
 - <Your Media PATH>\AM_3DEXP_platform.AllOS\1\

Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

- Select the media and extract it into a temporary location:
[AM_3DEXP_Platform.AllOS\1\FileCollaborationServer](#)
Extract [FileCollaborationServer-V6R2019x.Windows64.zip](#)

<Your Installer PATH>/FileCollaborationServer.Linux64/1

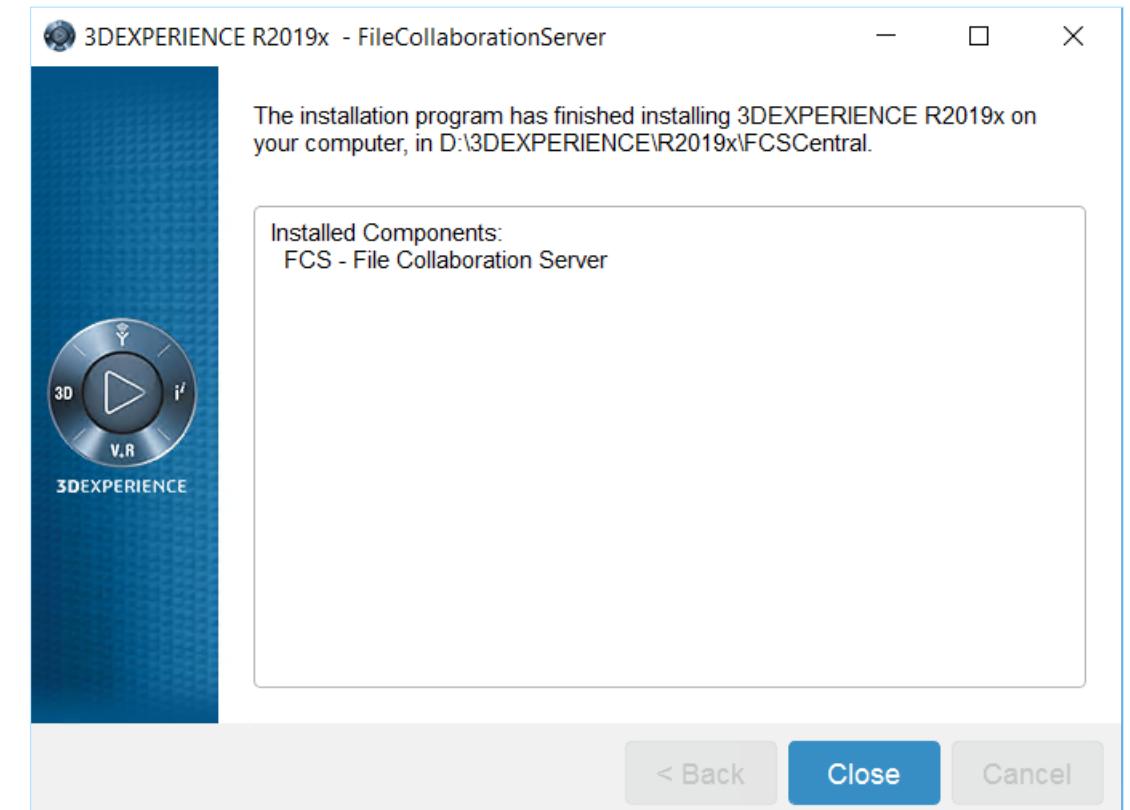
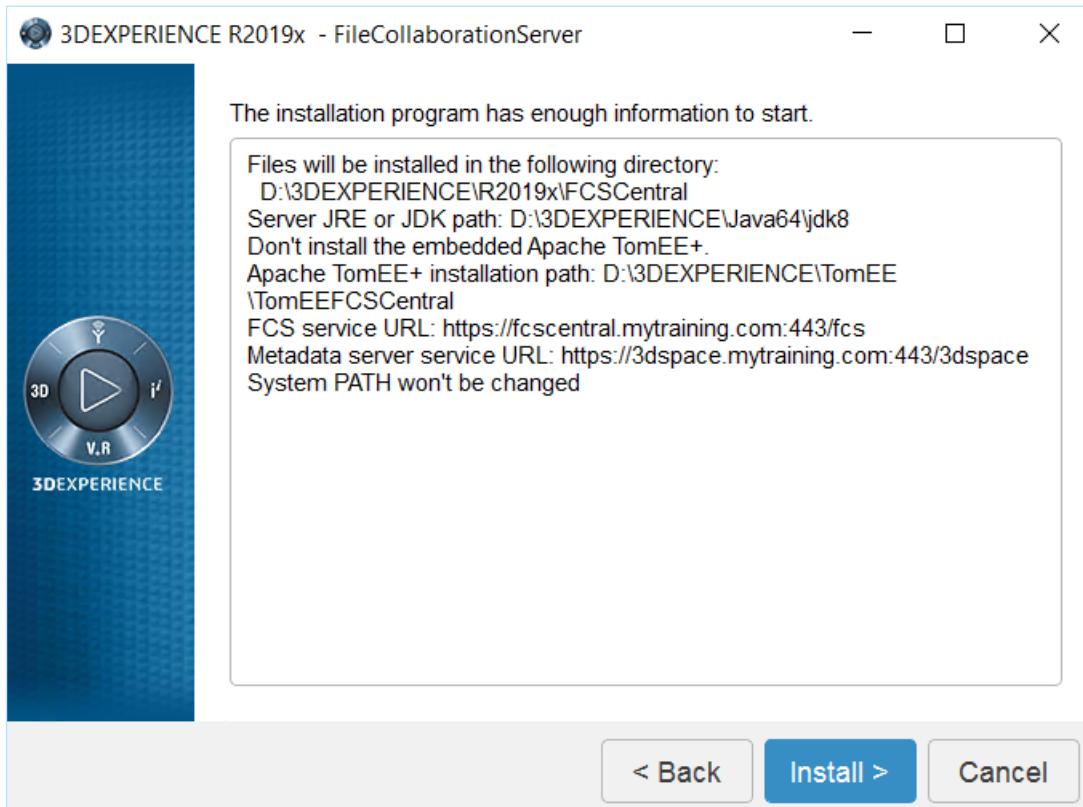
- Based on your preference, start the installer

FCS Central: Key Parameters

FCS installation is quite simple. If multiple FCSs are needed they can be installed in parallel or even prior to any other server core component. FCS installation is easy to replicate, using the user intention file.

- ▶ Available Installation Options :
 - Appending the code to the Path → "No"

It is preferred that the **3DEXPERIENCE** installations do not affect the general OS environment.

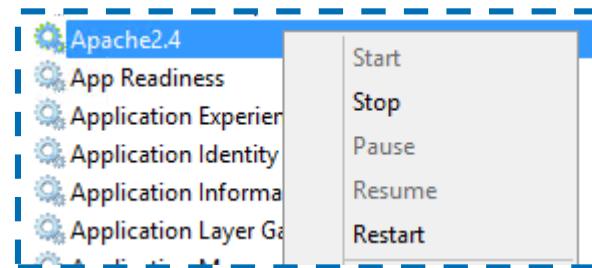


FCS Central : Validation

In this section you will validate the service functionality and part of the infrastructure deployment

- a. Apache
- b. Redirect to FCS Central TomEE+'s

1. Start the Apache service if not started
 - a. Open service manager



Each time you test a new URL it is recommended that you add it to the IE "Favorites bar" (rename it for ease).

2. Start TomEE+
 - a. <TomEE+ FCSCentral Path>\bin\startup.bat

Wait for it to finish deploying the application...

Access the URL:

<https://fcscentral.mytraining.com:443/fcs/servlet/fcs/about>

fcscentral.mytraining.com/fcs/servle X +

Getting Started file:///D:/3DEXPERIEN...

MatrixOne EFCS About Page

Total Tickets Processed 0

eMatrixServletRMI V6R2019x.HF2

Version

Agents

System Current Time 1553237112659

System Properties

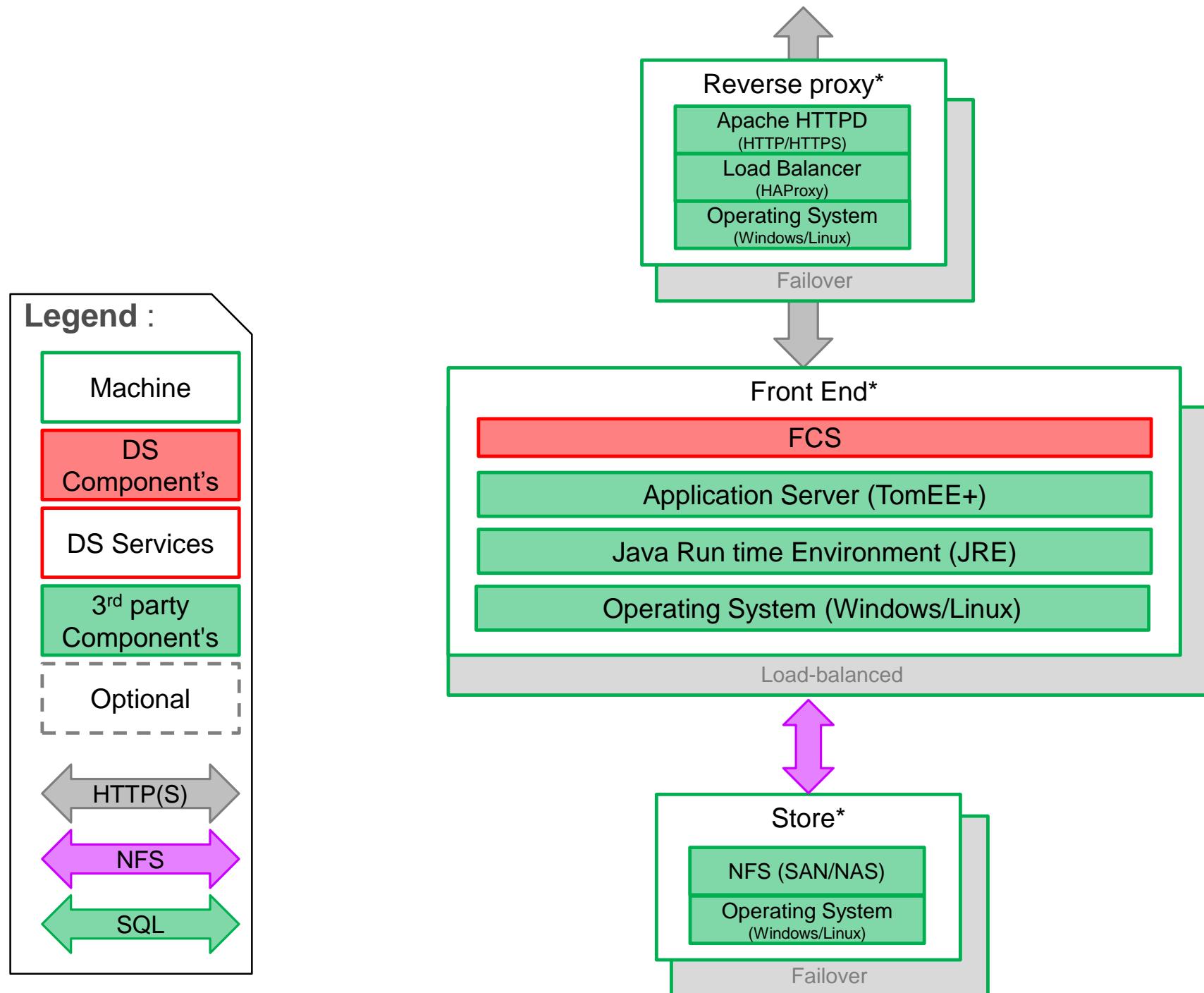
org.apache.myfaces.EXPRESSION_FACTORY	org.apache.el.ExpressionFactoryImpl
org.apache.myfaces.EL_RESOLVER_COMPARATOR	org.apache.myfaces.el.unified.OpenWebBeansELResolverComparator
org.apache.myfaces.LOG_WEB_CONTEXT_PARAMS	false
ematrix server host	

About FCS Remote

- ▶ The File Collaboration Server (FCS) enables administrators to distribute file data across the enterprise for optimal upload and download performance. It provides location, checkout, and copy operations on the data managed by the 3DSpace Service.
- ▶ The Remote FCS is designed for remote users. A remote user is a user that access the application from a location separated by a significant difference from the data center hosting the **3DEXPERIENCE** platform. Having an FCS near the end user allows for faster access to files when compared to pulling them across large distances over slow network links. It is usually recommended to have an FCS at a remote location if file access or the network is slow.

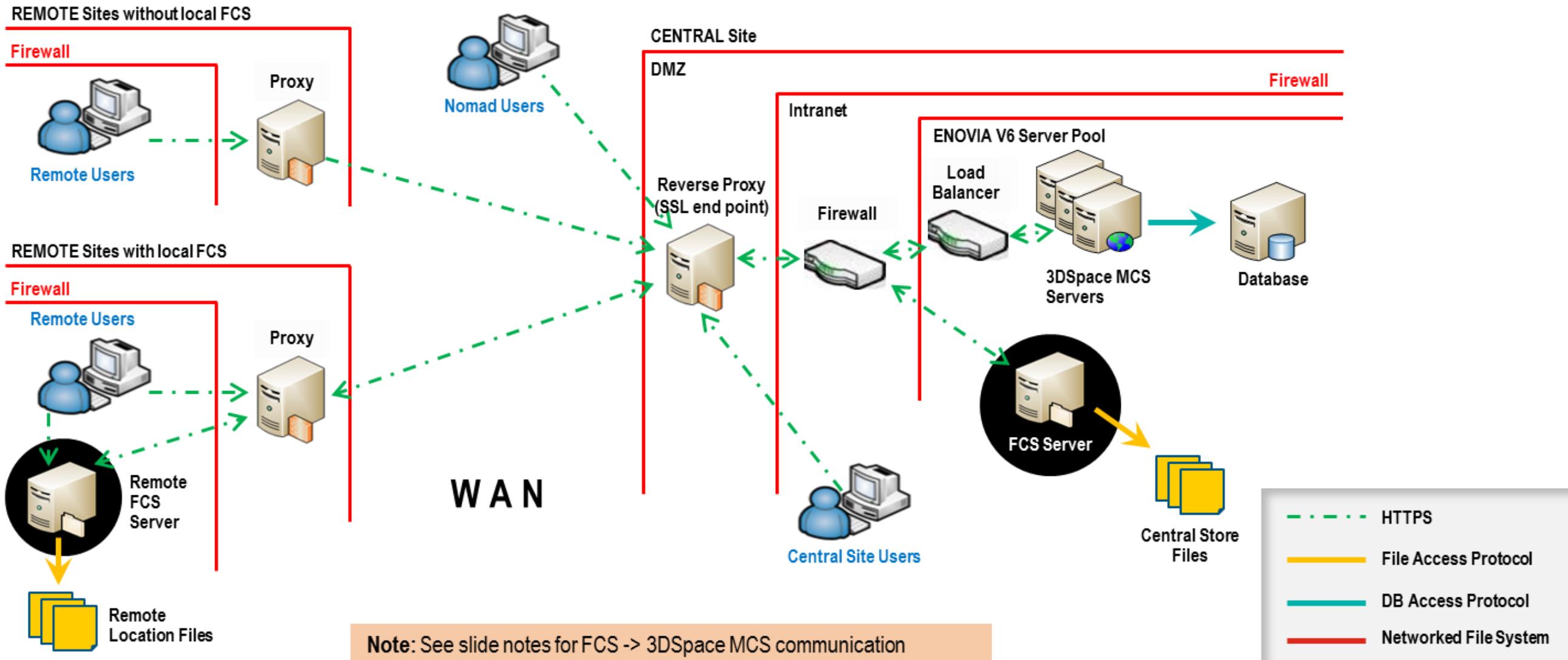


FCS Remote: Architecture



* Always consult the “Program Directory” for version and latest news.

FCS Architecture



Reconfiguration

Topics to be covered:

- ✓ 1. *Introduction*
- ✓ 2. *DSLS*
- ✓ 3. *Global 3DEXPERIENCE platform installer*
- ✓ 4. *3DPassport*
- ✓ 5. *3DDashboard*
- ✓ 6. *3DSearch*
- ✓ 7. *3DSpace*
- ✓ 8. *3DNotification*
- ✓ 9. *3DComment*
- ✓ 10. *3DSwym*
- ✓ 11. *FCS*
- 12. Reconfiguration**

About Reconfiguration

- ▶ The reconfiguration tool allows you to tweak certain service installation and deployment parameters, avoiding the need to reinstall the platform.
- ▶ Administrators often need to change certain values, for example passwords and URLs, after the installation is finished. Reconfigure mode allows you to make these changes without having to re-install platform services from scratch. This mode starts the installation procedure again, allowing you to reconfigure inputs for the supported parameters. If a parameter is not reconfigurable, it is either hidden or greyed out.
- ▶ You can change values even after installing the latest hot fixes. In this case, you must use the hot fix media to reconfigure the service.
- ▶ The following services can be reconfigured:
 - 3DPassport.
 - 3DDashboard
 - 3DSearch
 - 3DSpace
 - 3DComment
 - 3DNotification
 - 3DSwym
 - File Collaboration Server

- ▶ Reconfiguring does not allow you to switch Java and/or external TomEE+ to embedded mode, between external or vice versa, or to change the installation path.
- ▶ To save time, you can also manually stop the TomEE+ server before starting the reconfiguration.

Core Configuration

In this lesson, you have installed the core components:

- ▶ 3DPassport
- ▶ 3DDashboard
- ▶ 3DSearch
- ▶ 3DSpace
- ▶ 3DNotification
- ▶ 3DComment
- ▶ 3DSwym
- ▶ FCS

Lesson 4: 3DIndex and Post Installation Operations

In this lesson, you will install 3DIndex and perform post operations.



30 minutes

Topics to be covered:

1. **3DIndexing**
2. Fix Pack Installation
3. Platform Services Validation
4. **3DEXPERIENCE Native Apps Testing**

Introduction

At this point you should now have installed all the server core elements and validated them.

This chapter will introduce the 3DIndexing Server component and discuss configuration options and key parameters you need to manage for your installation.

About 3DIndexing Server

- ▶ The purpose of the 3DIndexing Server is to generate 3D thumbnails to allow 3D searching from a native Client such as CATIA, DELMIA or SIMULIA.
- ▶ For production environments you would typically install 3DSpace and 3DIndexing Server on different machines.
- ▶ For best performance, the generated index files should be located on the same machine as the 3DIndexing Server.

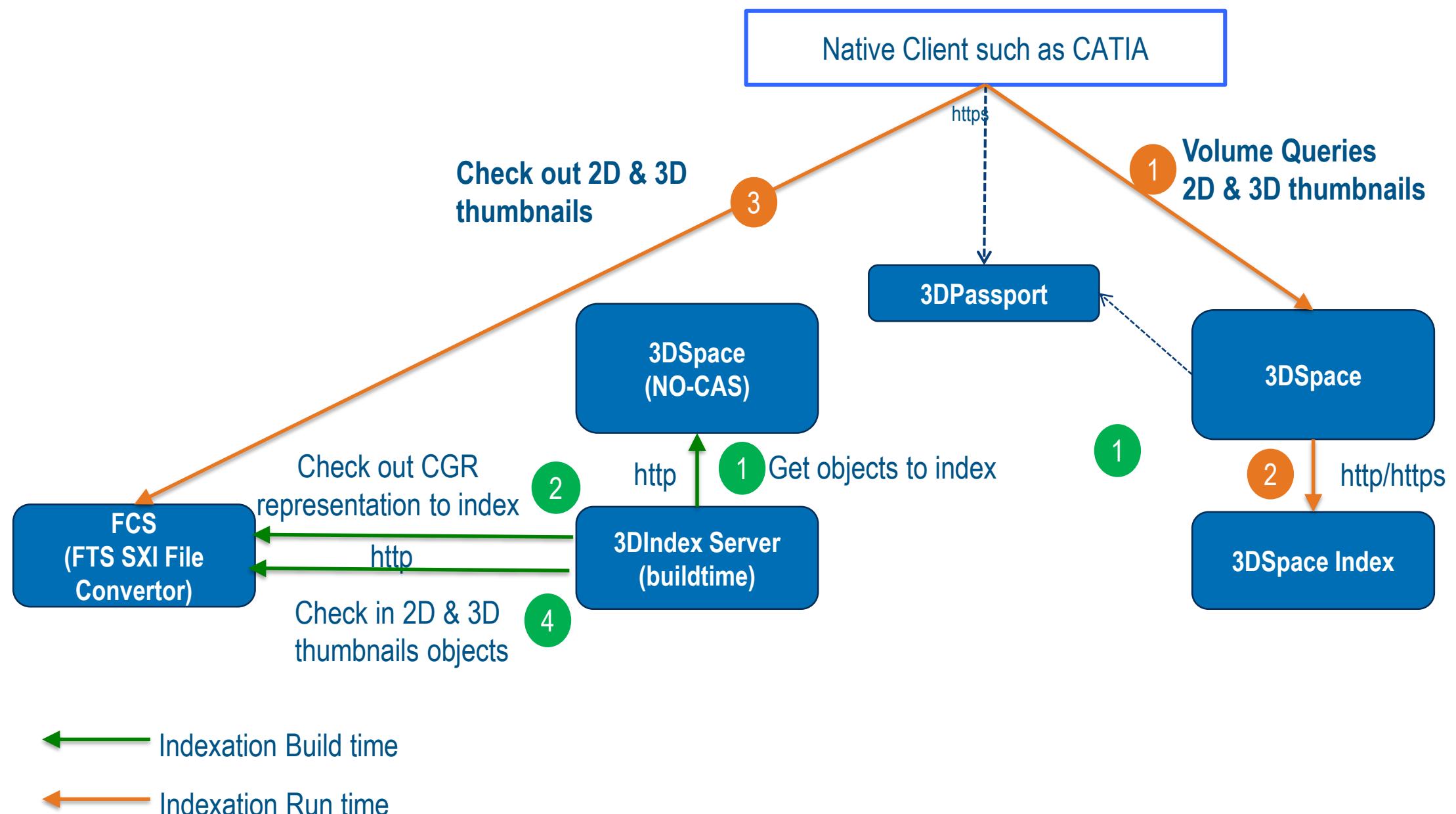


Installing the 3DIndexing Server will include the 3DIndex Engine (3DSpace side).

About Indexing Content

- ▶ When you are navigating and exploring the structure of your objects, the 2D thumbnails will help you quickly locate the content you are searching for. 3D thumbnails are visible in the **Preview** window when you consult the properties of the content.
- ▶ For intermediate nodes, you have two options: either you use the Dynamic 3D Thumbnail feature from the Native App or you can generate static 2D and 3D Thumbnails using the Thumbnail builder.

3DIndex Data Flow



3DIndexing Server: Pre-Check

You should have already prepared the groundwork required to proceed with this service installation, you will need the following pre-requisites:

3DEXPERIENCE platform:-3DSpace- CAS,3DSpace Internal-NOCAS should be installed and running.



You will not be able to proceed if this is missing.

3DEXPERIENCE platform: Global 3DXPERIENCE platform Installer

You will use the "Global 3DEXPERIENCE platform Installer" located on the following media:
AM_3DEXP_platform.AILOS

- ▶ The folder structure of the media is as follows: 1, 2, 3, 4, 5, 6, 7, 8 and 9
 - The "global 3DEXPERIENCE platform installer" is present under folder "1"
- ▶ Two interactive installations are available:
 - Graphical User Interface (GUI)
 - Text User Interface (TUI)
- ▶ It will be up to you to select the services that you will install in the current server. In the training you are proceeding one by one.

3DIndexing Server : Key Parameters

Installation Cook-book: Installation key parameter explained.

- ▶ Installation Directory: This is Where the service code will be installed. Do not use blanks in the installation path if you can avoid it. It is also recommended not to install on the *C:* drive. The *C:* drive is the system drive, if it gets corrupted or becomes full it could bring the service down. By selecting another drive you will have better control and stability for the platform.
- ▶ 3DSpace server path: The 3DIndex installer assumes you are installing the component on the same server as 3DSpace. If that is the case then no additional changes are required.
- ▶ Temporary Settings Path for Remote 3DSpace Server: If you are installing 3DIndex on a different server from 3DSpace you will need to create an empty folder structure that mimics 3DSpace. You do not need all the folders in 3DSpace, the installer will throw an error if something is missing. After the installer completes you will have to copy the created files in the temporary 3dspace folders to the real 3DSpace server. You will have to make sure you update all the files in 3DSpace including the webapp and STAGING directories otherwise your updates may “disappear” when you rebuild the WAR files.
- ▶ 3DSpace connection parameters: Since 3D Indexer is a batch tool it is recommended to use the 3DSpace internal webapp (NoCAS). Normally you can use HTTP instead of HTTPS for the NoCAS Server.
- ▶ 3DIndexAdminUser: A 3D Indexer admin user is required, be aware that this user will consume a platform License. This built in user has special privileges, do not use the `admin_platform` user for 3DIndex administration as they have different purposes and roles. It is recommended to use a strong password for the 3DIndexAdminUser since it is not typically controlled by 3DPassport or LDAP.

Keywords : VPLM 3D indexer, volume search, 2D/3D thumbnails & dynamic thumbnail builder.

3DIndexing Server : GA media installer

GA core components have two different installation methodologies:

- Navigate to the "global 3DEXPERIENCE platform Installer" found in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\1\
GUI: setup.exe
TUI: StartTUI.exe
- Classic "Service Installer" are available in:
 - <Your Media PATH>\AM_3DEXP_platform.AILOS\3\3DIndexingServer\Windows64\1
- Based on your preference:
 - Start the installer

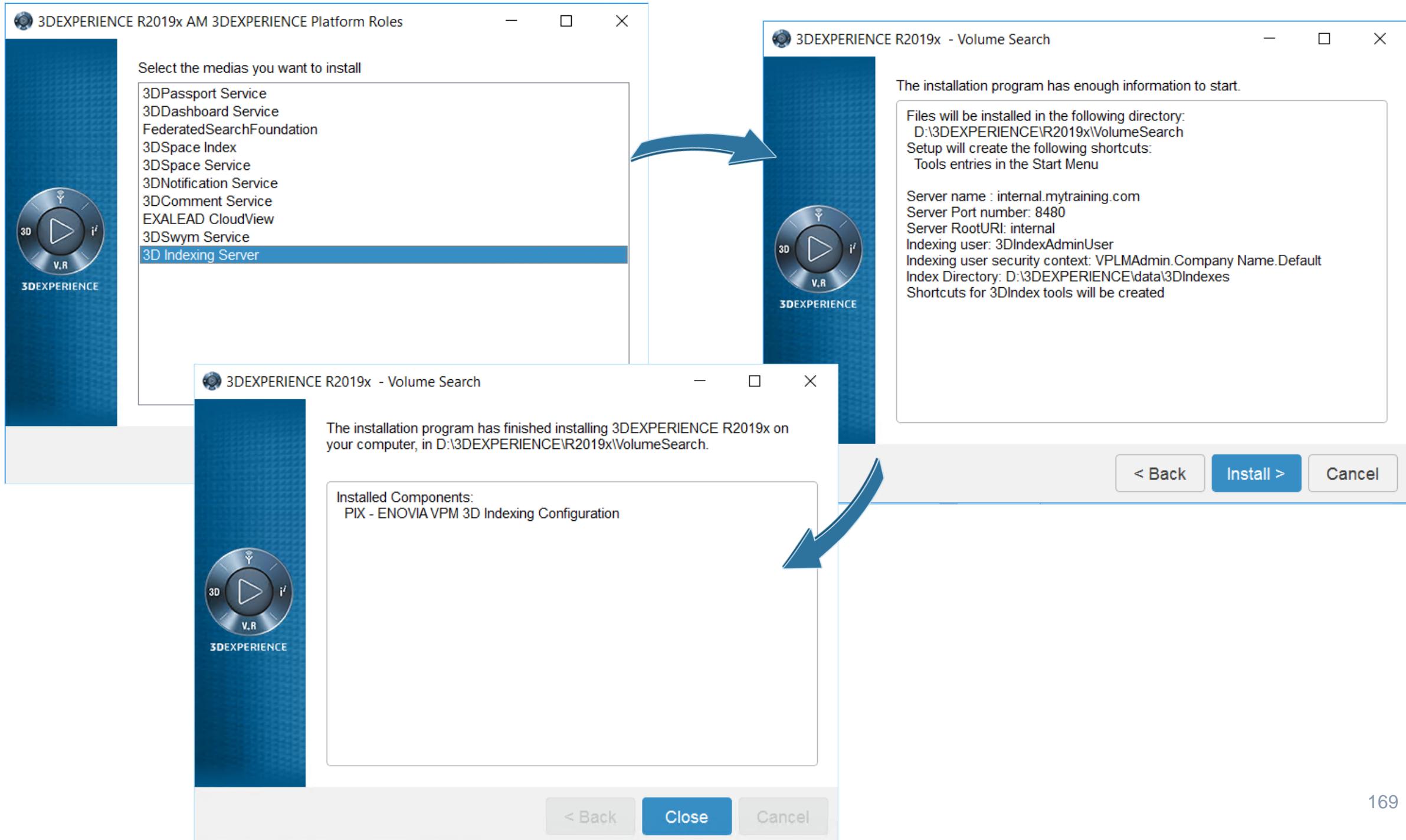
3DIndexing Server: Configuration & Key Parameters

► Main Configuration requirements:

- Database objects :No
- TomEE+ needed :No
- Java dependent :No

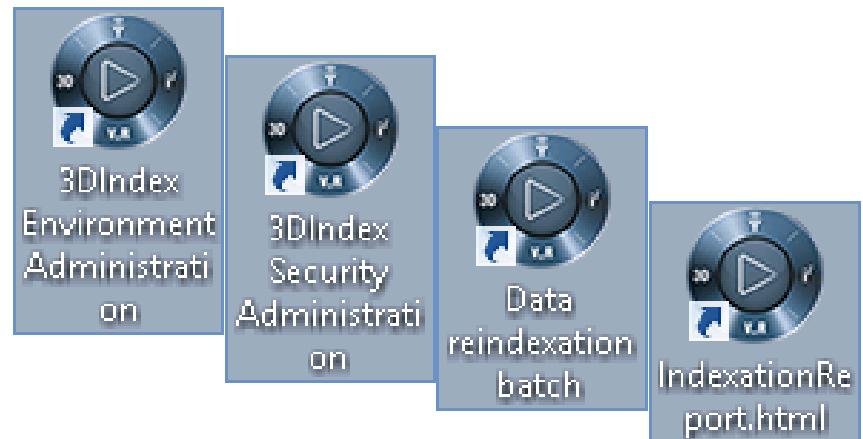
► Available 3DS Installation Options are:

- Typical or Custom, you will use typical



3DIndexing Server: GA Technical Validation

1. Four icons will be created on your desktop:
 - a. 3DIndex Environment Administration
 - b. 3D Index Security Administration
 - c. Data re-indexation batch
 - d. IndexationReport.html



2. The following entries will be added to the **Start > All Programs** menu:
 - a. Dassault Systemes **3DEXPERIENCE R2019x 3D Index Server > Tools**
 - i. 3D Index Environment Administration
 - ii. 3D Index Security Administration
 - iii. Data Re-indexation batch
 - iv. Environment Editor
 - v. Settings Management
3. We often refer to “desktop shortcuts” during this training, some are created by the installers and some are created by you. The shortcuts we are creating are relative to the “dbadmin” user, this means that if you connect with another user you will likely not see or these shortcuts.
4. Logging in with another user not only affects the visibility of shortcuts and menu items but it may also prevent you from running **3DEXPERIENCE** programs because of the following.
 - a. Security :The ownership of the files and folder (editing, visibility).
 - b. Scheduler Task : running job like (start/stop/modify); Indexer backup, clean, optimization, etc...
 - c. For the purposes of training, all of these components need to be under one Authority.

3DIndexing Server: Validation

Target installation PATH: D:\3DEXPERIENCE\R2019x\VolumeSearch

1. Installer error log should be 0 bytes and can be found at:
 - a. <Code Path>\InstallData\log\CODE\win_b64\.....media-<Latest timestamp>\Errors.log
Size should be 0 **bytes**
2. In Windows Services manager, verify that the new service running.

Topics to be covered:

- ✓ 1. *3DIndexing*
- 2. **Fix Pack Installation**
- 3. Platform Services Validation
- 4. **3DEXPERIENCE Native Apps Testing**

FP Service Installer

There is no “Global 3DEXPERIENCE platform installer” for FP you must each service individually.

- a. Ensure that all "**TomEE+**" is stopped

If you do not stop TomEE+, the installer will not be able to replace certain files automatically, this can result in errors in the log or unexpected behavior.

- b. Use the normal “HOT FIX Installer”, with the appropriate FixPack of DSInstaller component for 3DSpace apps

Example:

<Your Media PATH>\Part_3DEXP_platform.Windows64\1\Software\

<Your Media PATH>/Part_3DEXP_Platform.Linux64/2/Software/3DPassport.Linux64/1/

- c. Unzip the proper OS version to <Your Installer PATH>

- d. Navigate to this path and find:

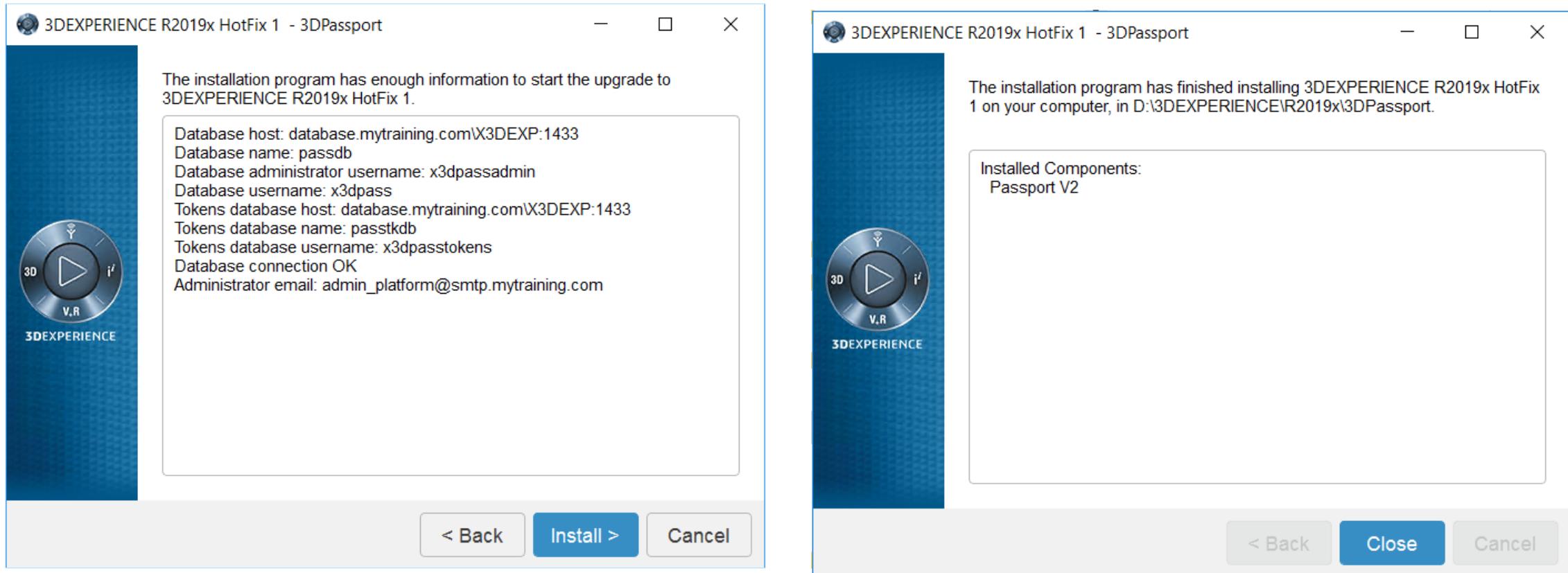
Interface	Windows	RHEL
GUI	setup.exe	StartGUI.sh
TUI	StartTUI.exe	StartTUI.sh

Important note:

You need to install ALL the GA components before doing any FixPack unless directed otherwise!

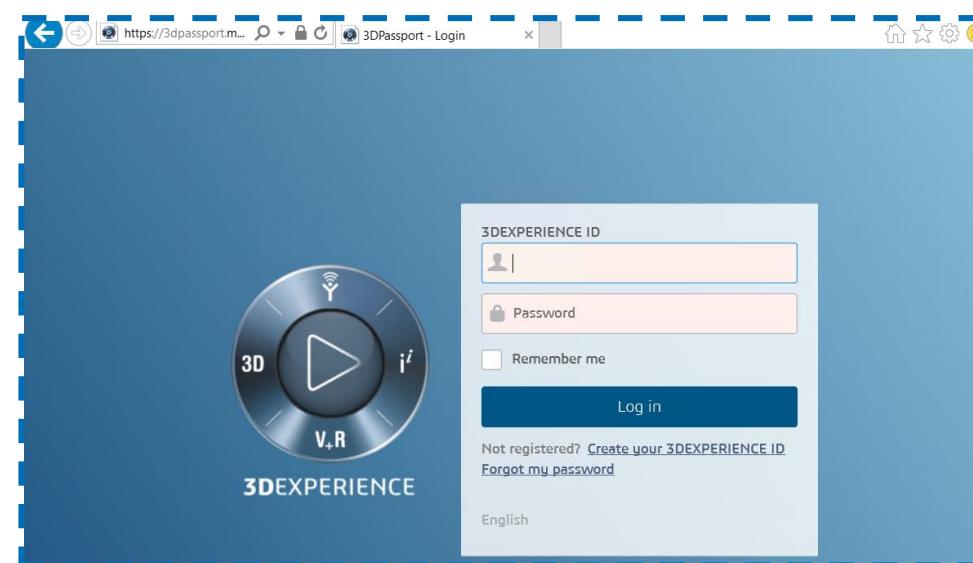
FP Service Installer

Example – 3DPassport FP service Installer



VALIDATION -

- ▶ Start the Apache service if not started
 - ▣ Open service manager
 - ▶ Start TomEE+
 - ▣ <TomEE+ 3DPassport Path>\bin\startup.batWait for it to finish deploying the application.
- Access the URL:
- <https://3dpassport.mytraining.com:443/3dpassport>



Similarly, you can install FP for all services.

Platform Services Validation

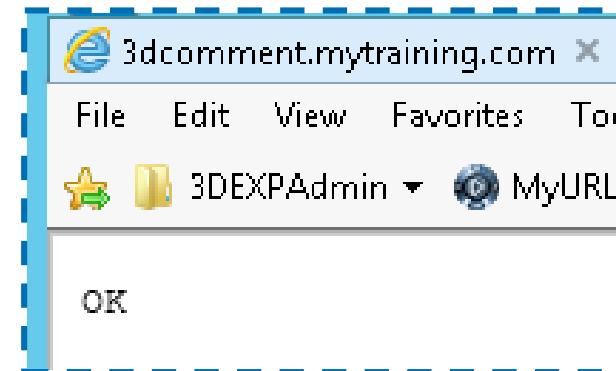
Topics to be covered:

- ✓ 1. *3DIndexing*
- ✓ 2. *Fix Pack Installation*
- 3. **Platform Services Validation**
- 4. **3DEXPERIENCE Native Apps Testing**

First Level Validation

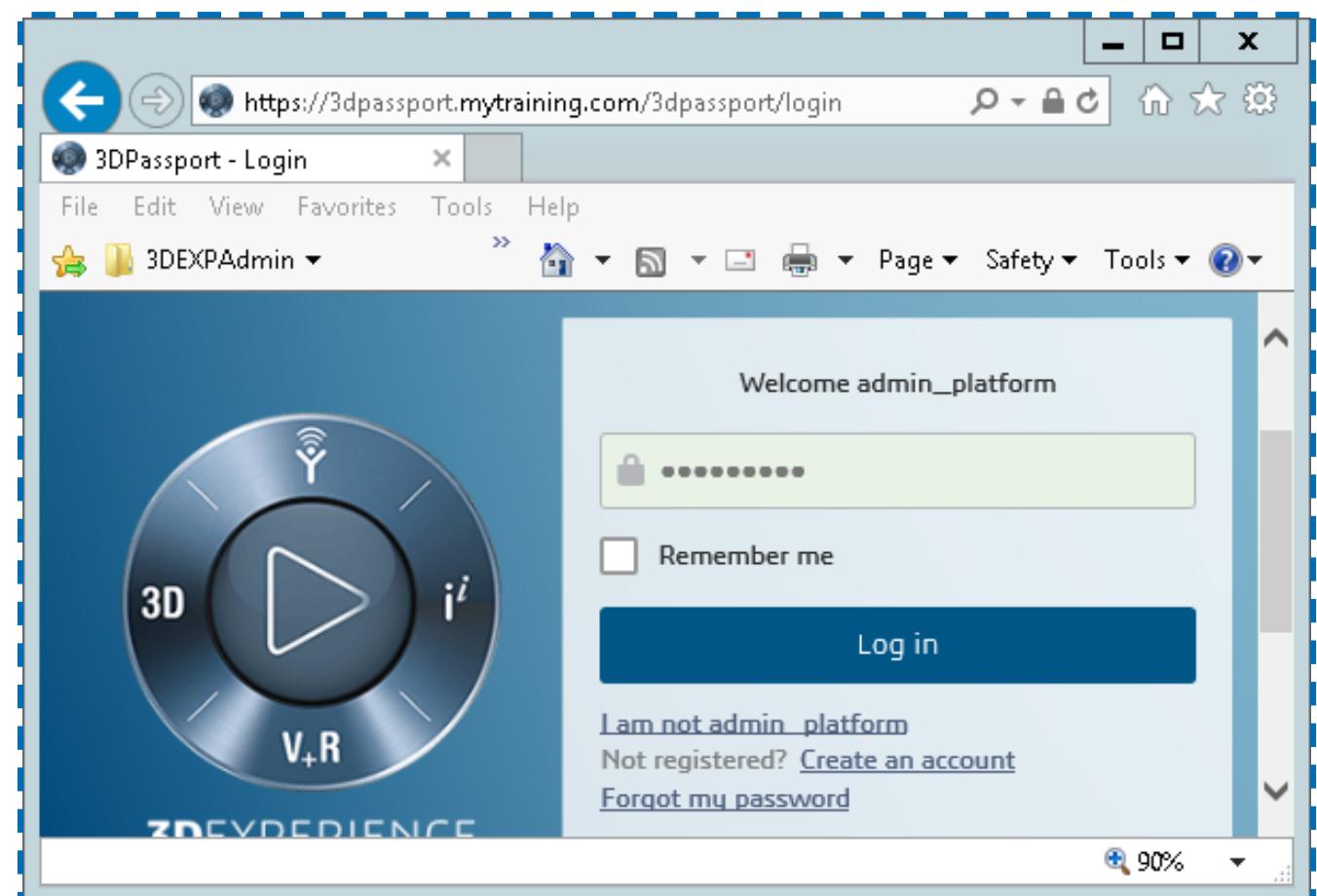
The first level validation steps are to ensure that you can access the URLs and login with the platform admin user: admin_platform.

- ▶ First we will check the URLs that have an information page but no login page:
 - ▶ 3DComment
 - ▶ FCS Central
 - ▶ FCS Remote



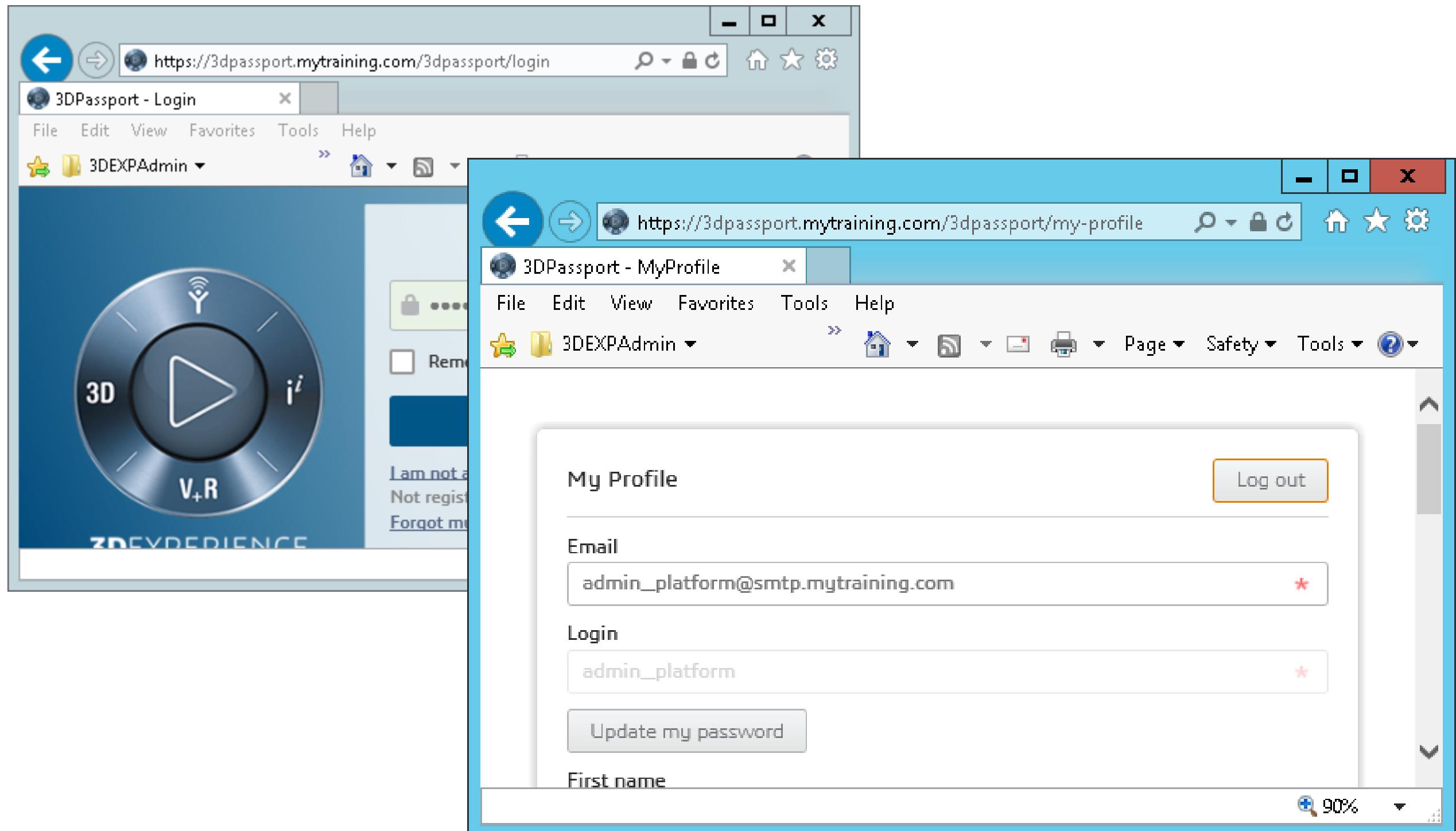
- ▶ Second set of URLs with Login for each link close the IE that pops up and then go to the next Link:
 - ▶ 3DPassport
 - ▶ 3DDashboard
 - ▶ 3DSpace
 - ▶ 3DSpace Internal
 - ▶ 3DSpace Index

User is “admin”
and <Your 3DSpace Index password>



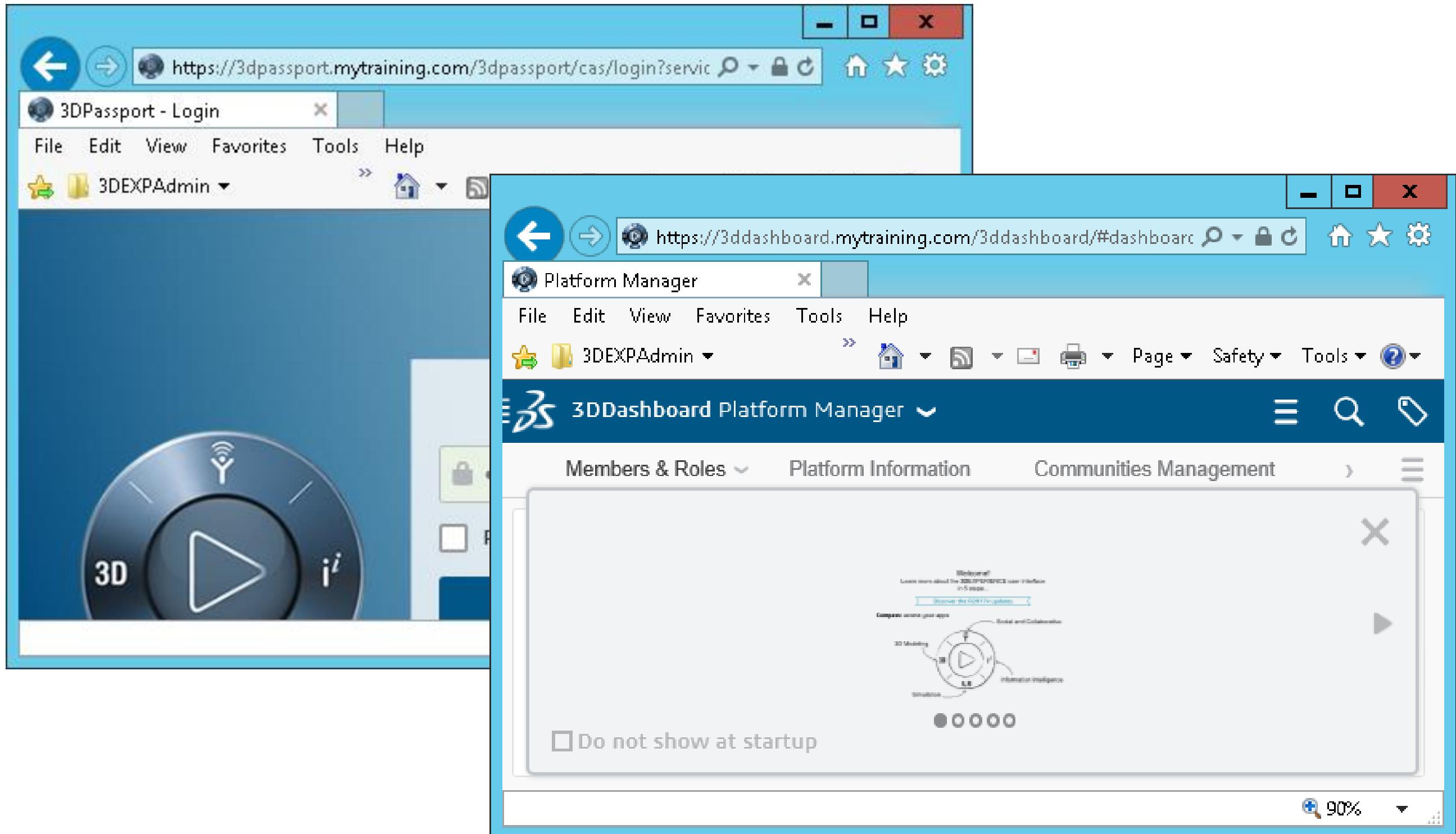
First Level Validation

► 3DPassport



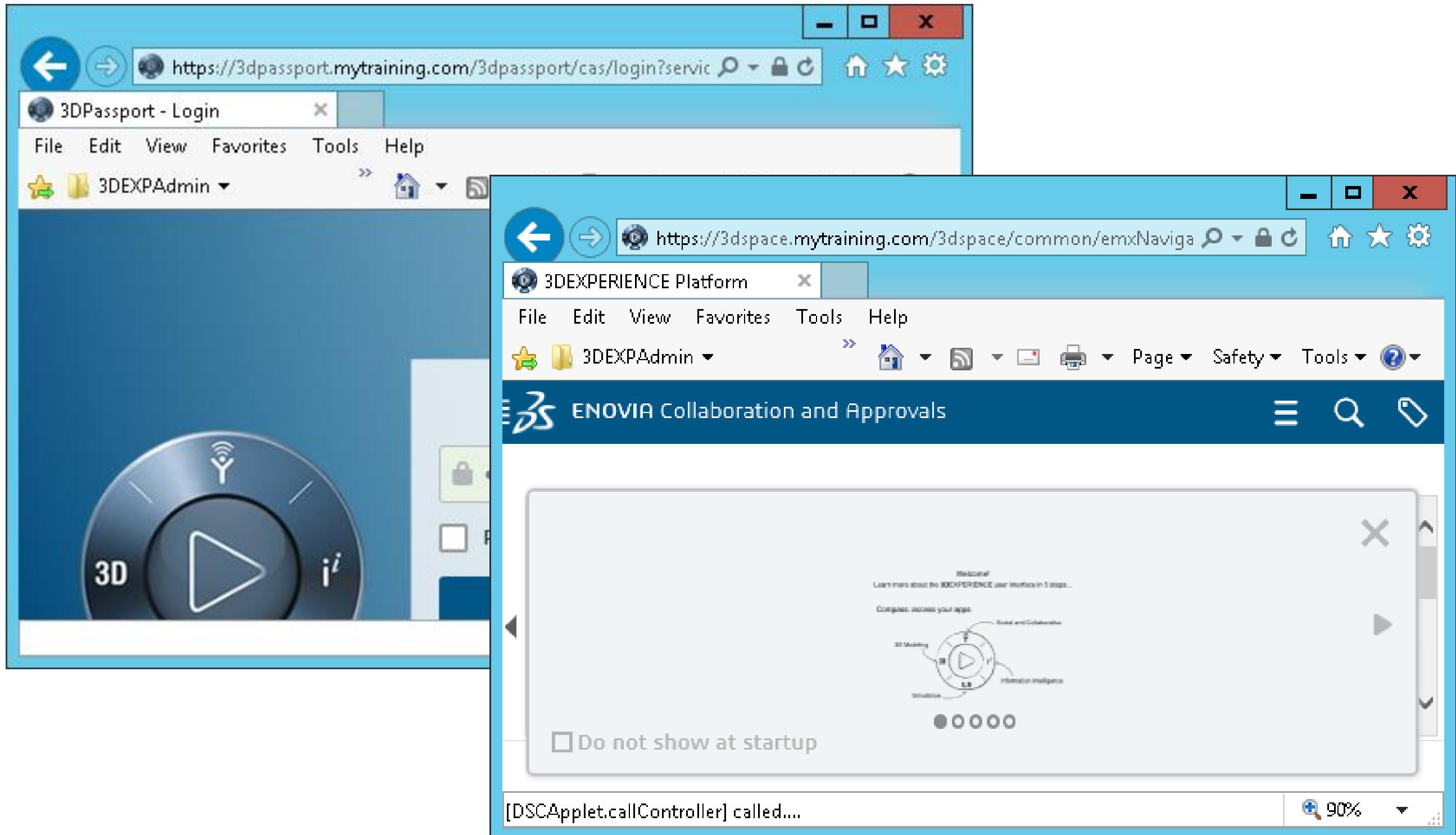
First Level Validation

► 3DDashboard



First Level Validation

► 3DSpace

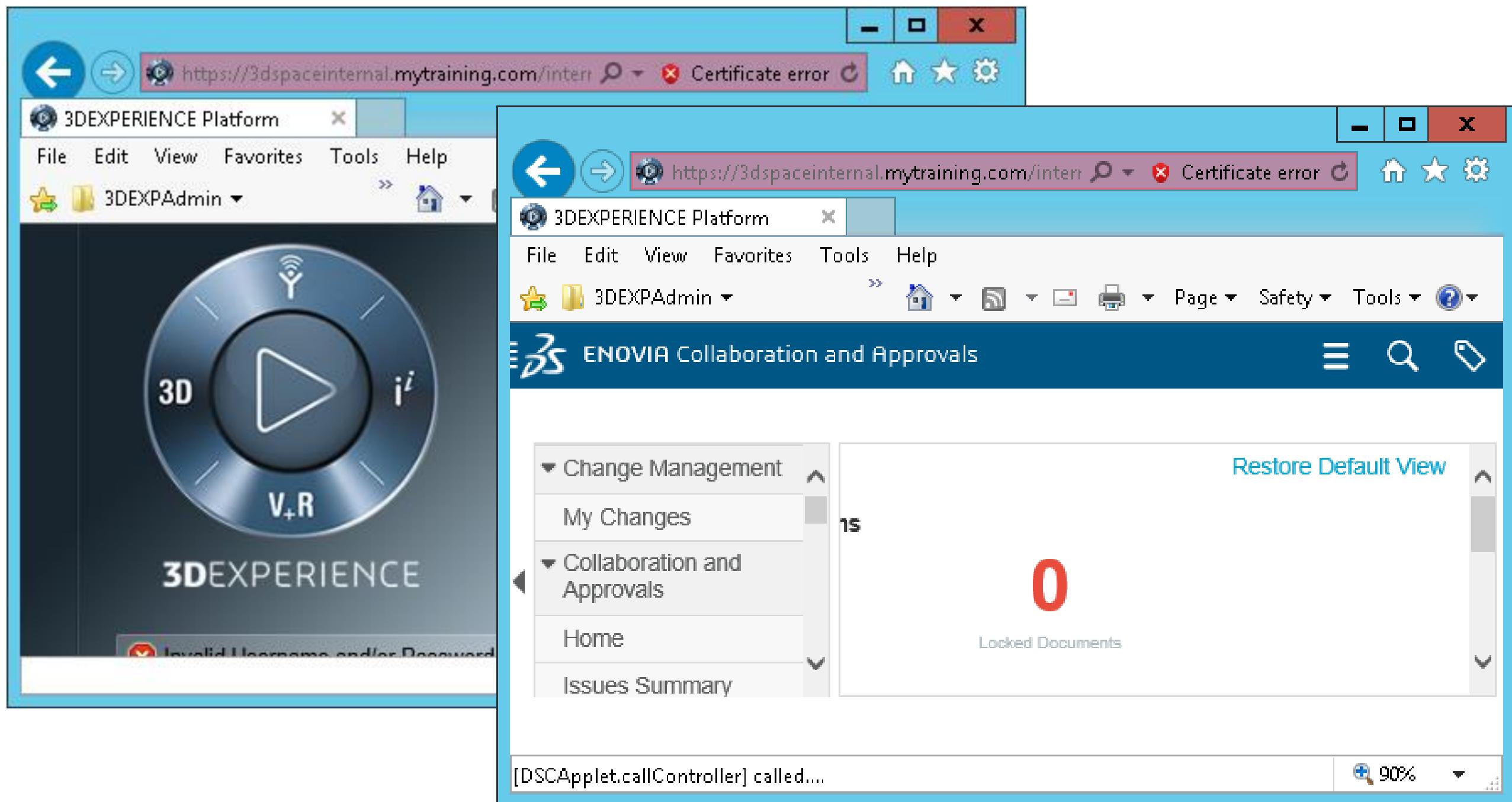


First Level Validation

► 3DSpace Internal

You did not get redirected to the 3DPassport and you will see the old style login.

You have the option of removing 3DSpace Internal from HTTPS and Apache redirect. You can leave it as a backend service accessed via HTTP and port number for simple batch usage.



First Level Validation

- ▶ 3DSpace Index
- ▶ Click on the **Administration Console**
- ▶ Do not logout yet, in the next page you are going to do some minor configuration.



User is “admin” and <Your 3DSpace Index password>

The screenshot shows a web browser window with the URL <http://fulltextsearchserver.mytraining.com:19001/index.html>. The title bar says "CloudView Administration ...". The menu bar includes File, Edit, View, Favorites, Tools, Help, and a user dropdown for "3DEXPAdmin". Below the menu is a toolbar with icons for "MyURLs" and "3DEXPUrls".

The main content area has a blue header "CloudView" and a sidebar titled "BUILD APPLICATION" with a screenshot of the interface. The main panel contains an "Administration Console" section with a "Login" field and a "Password" field. At the bottom is a toolbar with "Save", "Cancel", "Apply", and "Go to..." buttons.

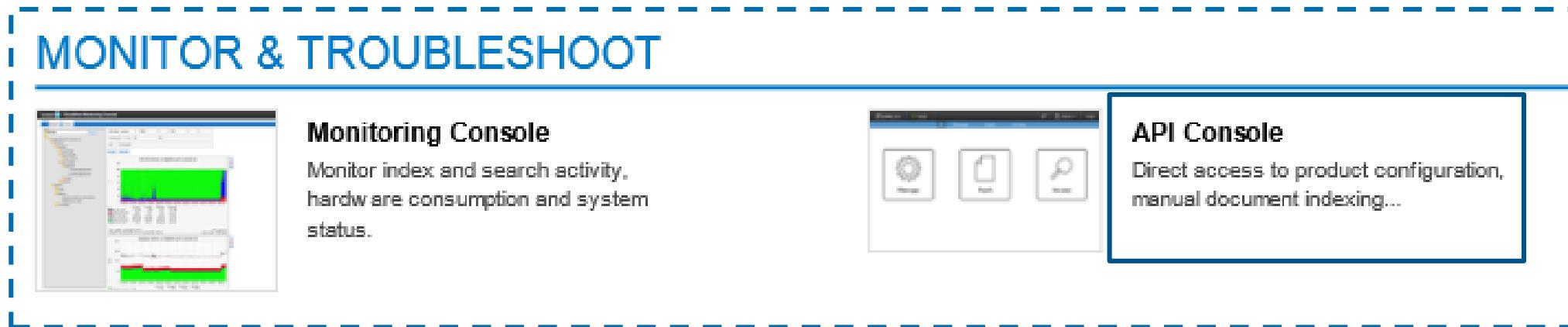
A navigation menu on the right lists: Home, Index (selected), Connectors, Consolidation, Data Processing, Data Model, Linguistics, Tuning, and Search. The "Index" item is highlighted in blue. The "Connectors" section shows a table:

Name	Type	Status
consolidation-sxiconsolidation0	Unmanaged (Push API)	n/a
default	Unmanaged (Push API)	n/a

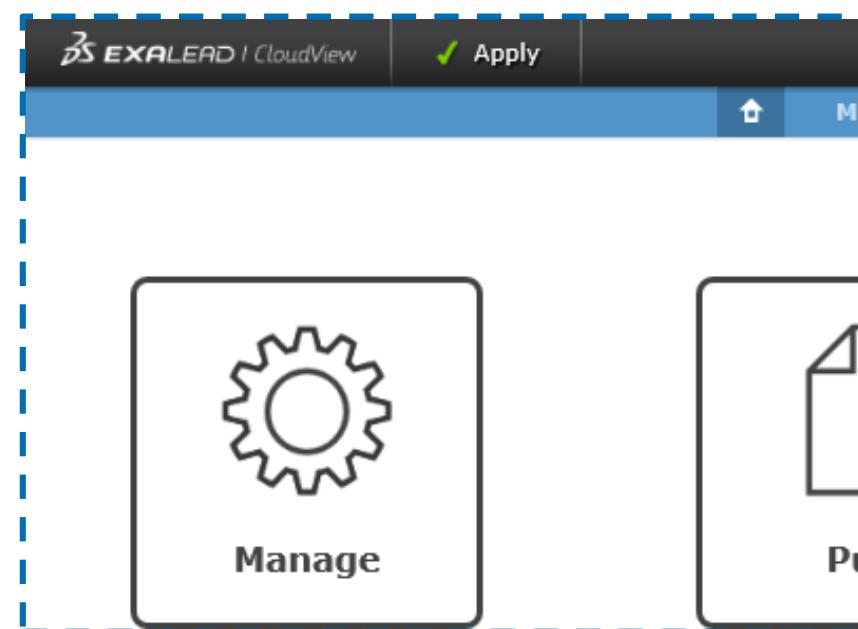
First Level Validation

You will now configure the log file mechanism in order to prevent excessive file growth.

Go back to the main page, on the bottom right you will see “API Console”.

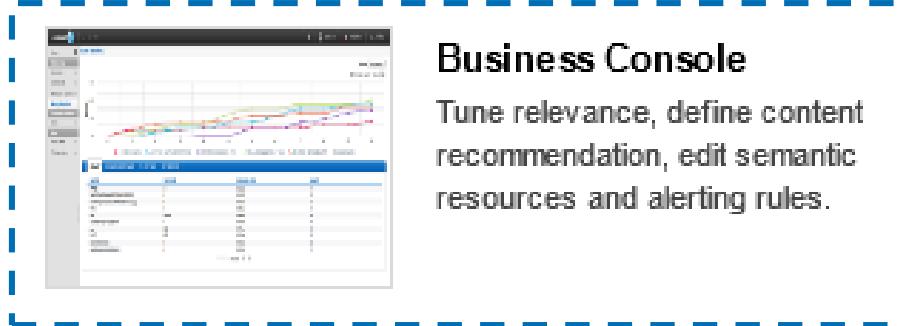


Then click on the “BIG” manage button:



First Level Validation

- ▶ Go back to the main page and click on “Business Console”



- ▶ Then click on “Test Search” in the search page, search for “#all”

The image shows a screenshot of the EXALEAD CloudView search interface. The top navigation bar includes the EXALEAD logo, a 'Go Live' button, user profile, language selection (English), and a 'Default' dropdown. The left sidebar has a navigation menu with items like Home, Relevance, Semantic, Notification, Misc, Test Search (which is currently selected and highlighted in blue), and Configuration. The main content area is titled 'Test Search' and displays the EXALEAD logo prominently. Below the logo is a search bar with a placeholder 'Search' and a 'Search' button, along with a link to 'Advanced Search'.

First Level Validation

- ▶ The search result should be similar to this:

The screenshot shows the Exalead search interface. At the top, there is a search bar with the query "#all" and a "Search" button. To the right of the search bar is a link to "Advanced Search". Below the search bar, the page title is "Results, 1-10 of 642". On the left, there is a navigation menu with the Exalead logo. On the right, there is a "Refinements" sidebar.

Results, 1-10 of 642

Sort by Relevance Date Size

eno:bo:560A1C520000013458AF03AA00000903_global

policy_95_tag	Person	latestrevision	TRUE
reserved	FALSE	policy	Person
vault	eService Production	prg_95_people_95_compan	Company Name
		y	

Refinements

- policy_95_tag
 - Country 246
 - Business Role 96
 - Security Context 94
 - VPLM_SMB_Definition 21
 - VPLM_PosResourceRef 15
 - Person 7

3DEXPERIENCE Native Apps Testing

Topics to be covered:

- ✓ 1. *3DIndexing*
- ✓ 2. *Fix Pack Installation*
- ✓ 3. *Platform Services Validation*
- 4. **3DEXPERIENCE Native Apps Testing**

3DEXPERIENCE Native Apps Overview

- ▶ CATIA delivers the unique ability not only to model any product, but to do so in the context of its real-life behavior: design in the age of experience. Systems architects, engineers, designers and all contributors can define, imagine and shape the connected world.
- ▶ CATIA, powered by Dassault Systèmes' 3DEXPERIENCE platform, delivers:
 - A Social design environment built on a single source of truth and accessed through powerful 3D dashboards that drive business intelligence, real-time concurrent design and collaboration across all stakeholders including mobile workers.
 - An Instinctive 3DEXPERIENCE, for both experienced and occasional users with world-class 3D modeling and simulation capabilities that optimize the effectiveness of every user.
 - An Inclusive product development platform that is easily integrated with existing processes & tools. This enables multiple disciplines to leverage powerful and integrated specialist applications across all phases of the product development process.
- ▶ CATIA's Design, Engineering and Systems Engineering applications are the heart of Industry Solution Experiences from Dassault Systèmes to address specific industry needs. This revolutionizes the way organizations conceive, develop and realize new products, delivering competitive edge through innovative customer experiences.

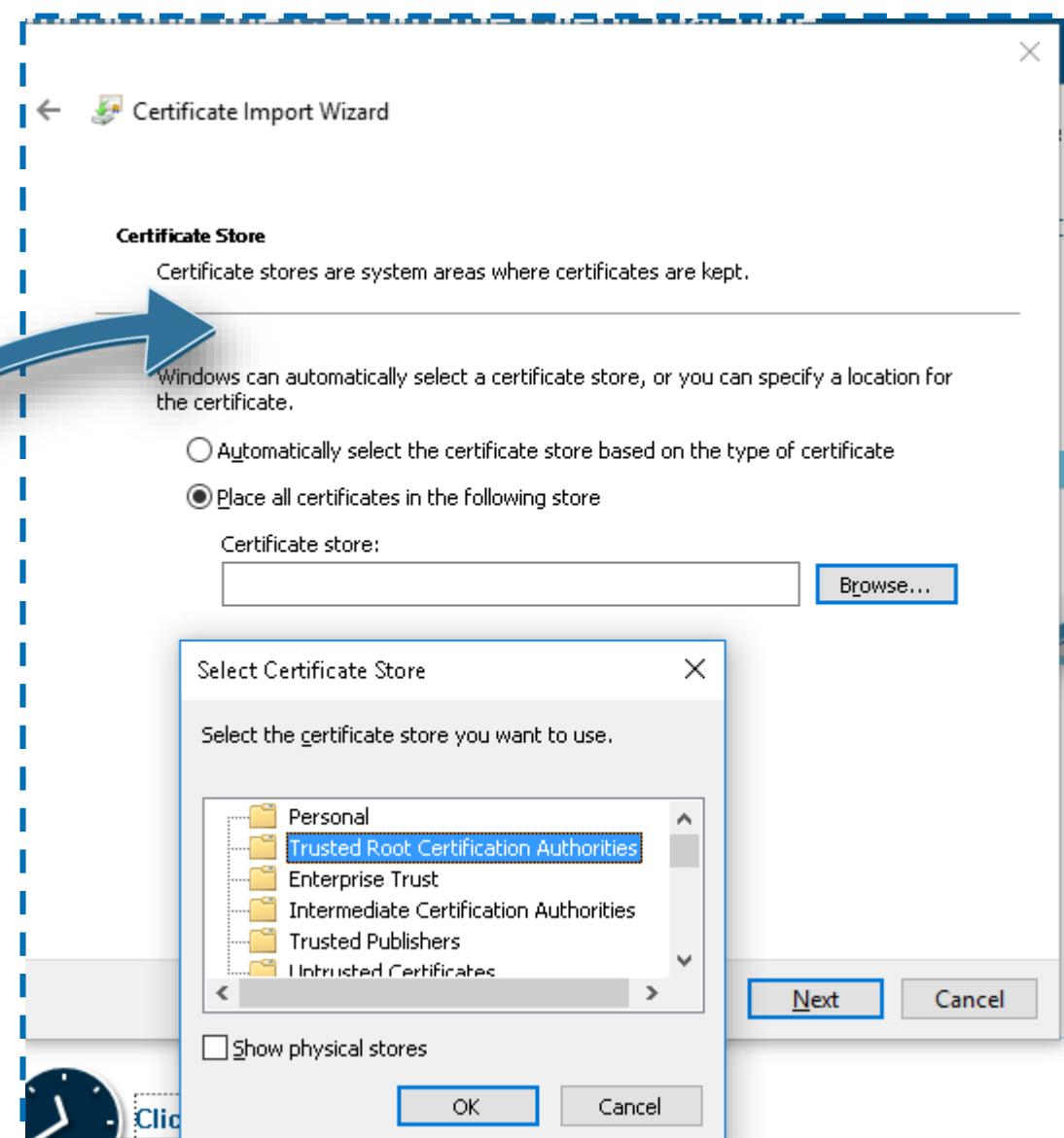
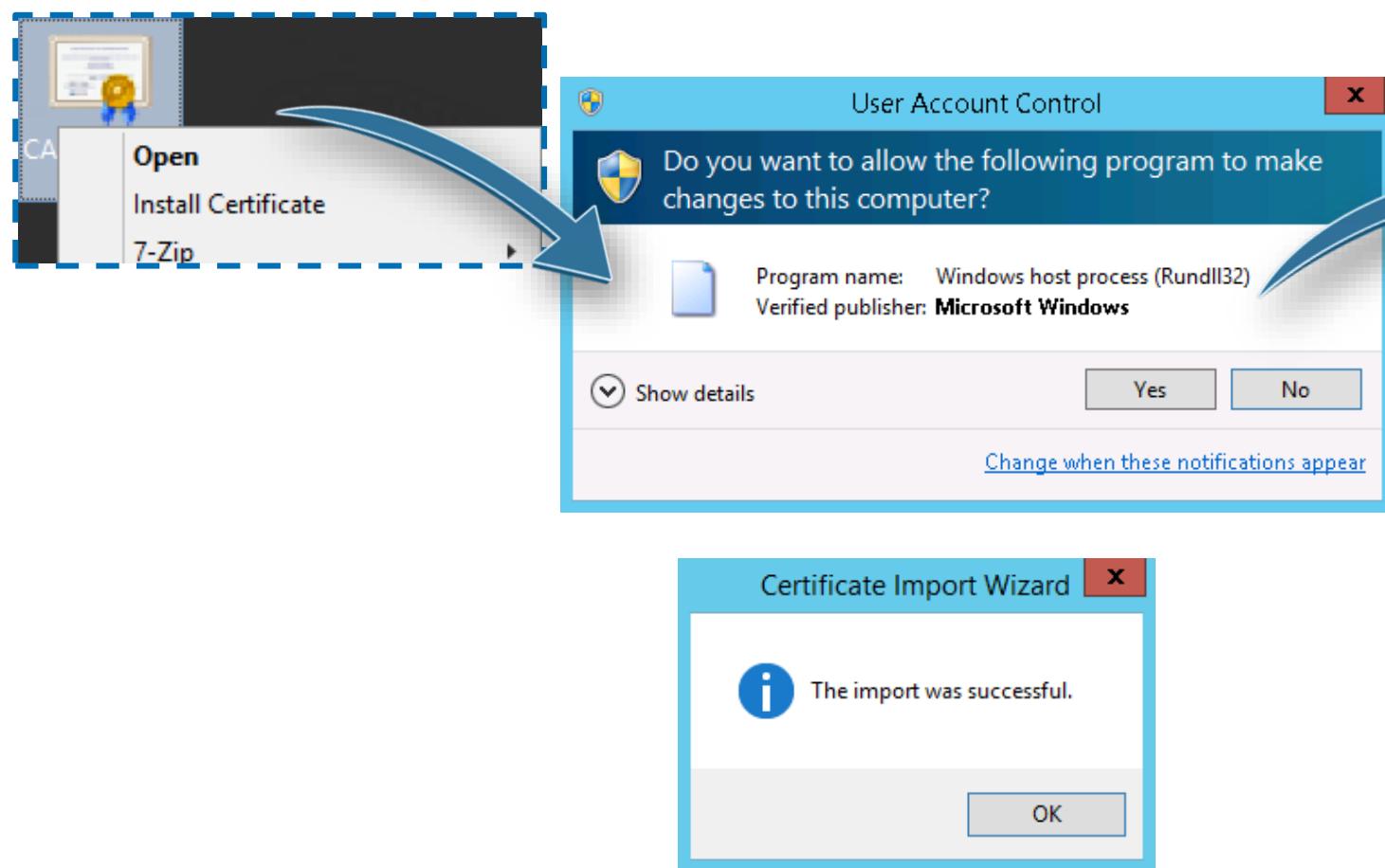
Importing the CA into the Client Machine

Importing the CA into the Client Machine

From the server copy the file D:\3DEXPERIENCE\conf\ssl\cacert.crt into your client machine desktop.

1. “Right Mouse Button” the cacert.crt and select “Install Certificate”, with these options:

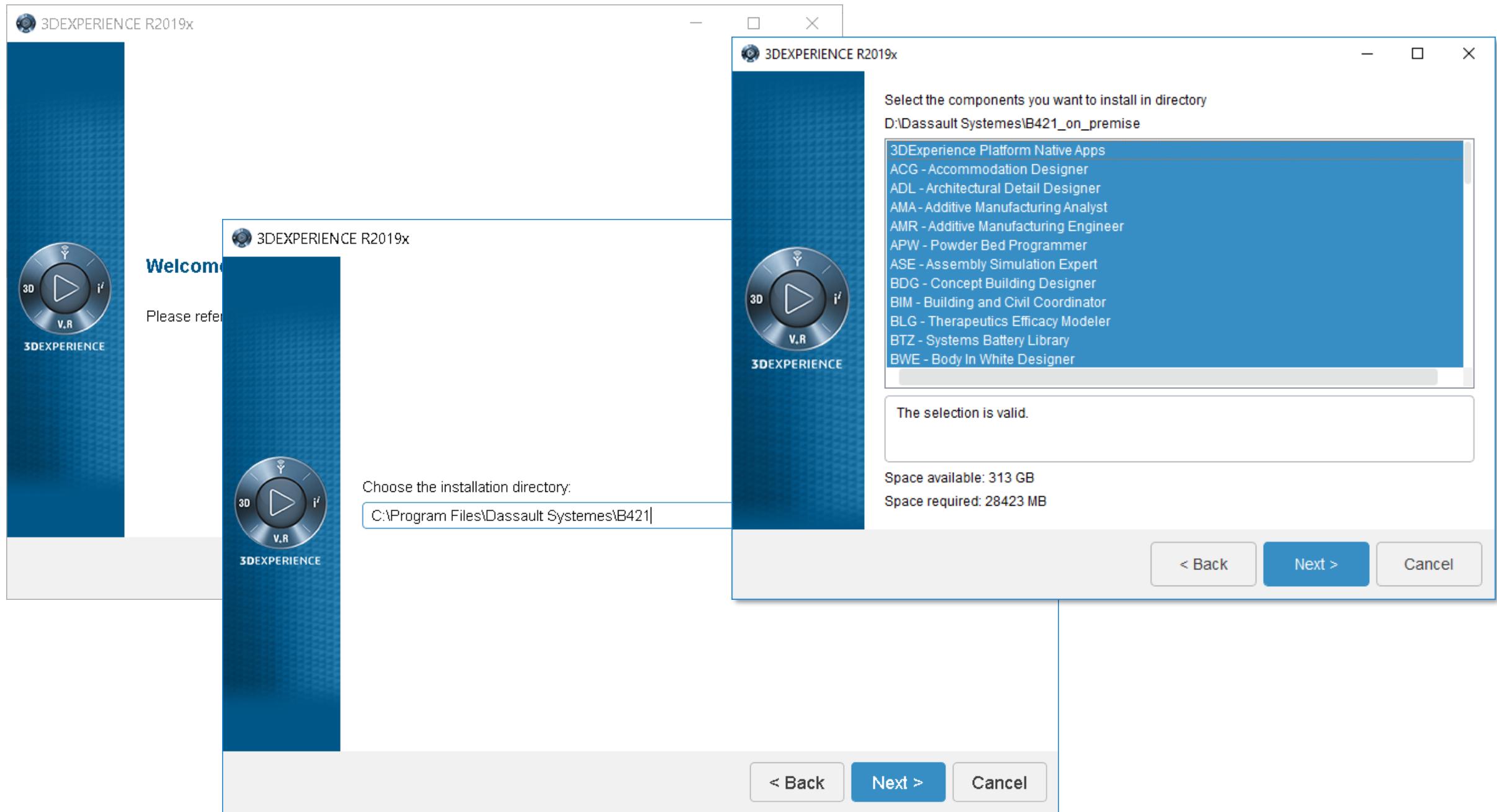
1. Place all certificates in the following store
2. Select "Trusted Root Certification Authorities"



3DEXPERIENCE Native Client Installation

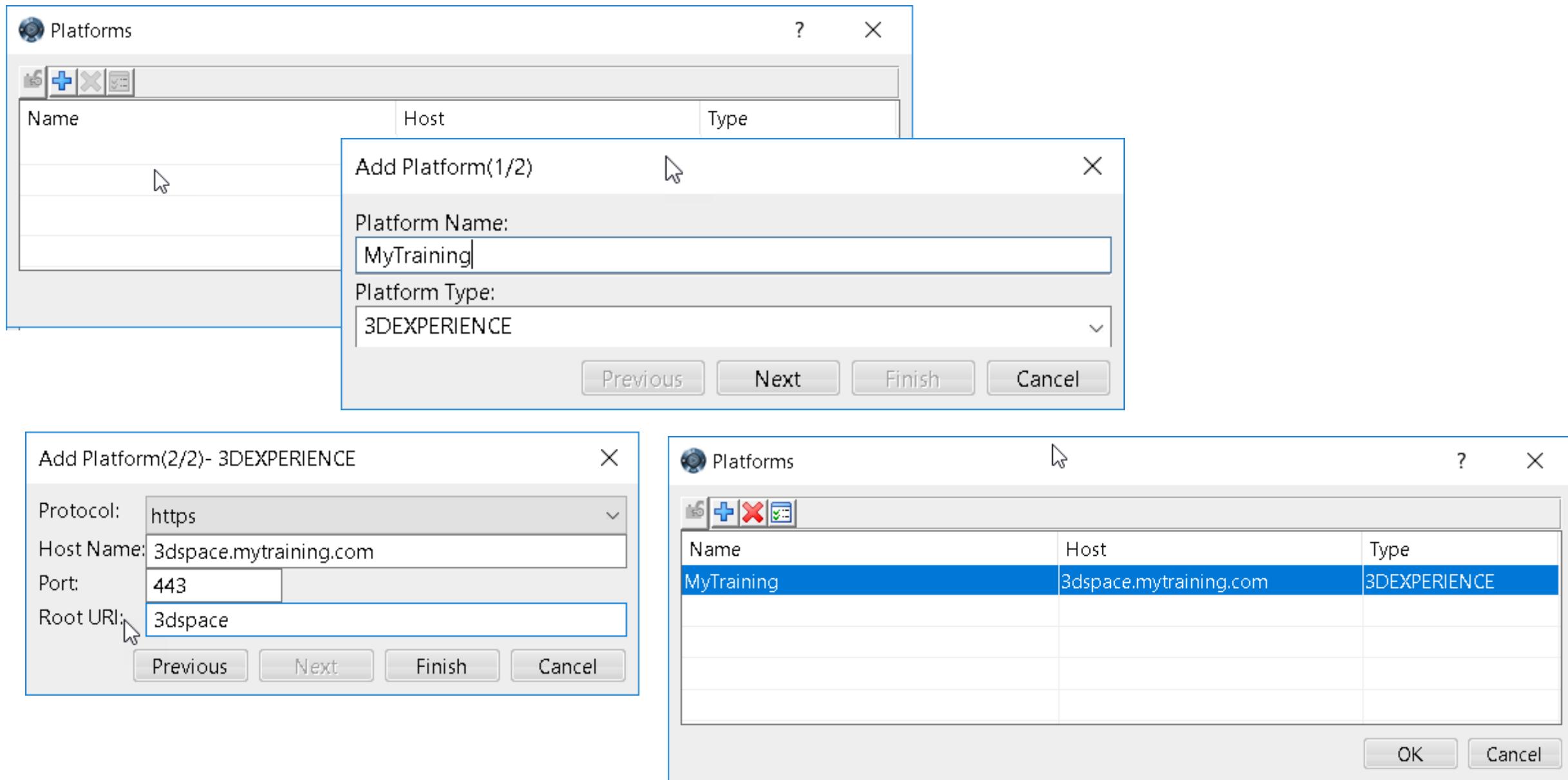
Native client installation on your host media:

1. Navigate to your:
2. <Your Media PATH>\AM_3DEXP_NativeApps.AILOS\5\3DEXPERIENCE_NativeApps\1
3. Execute the setup.exe or TUI
4. Using the Cheat-sheet on the previous page, proceed to the installation.



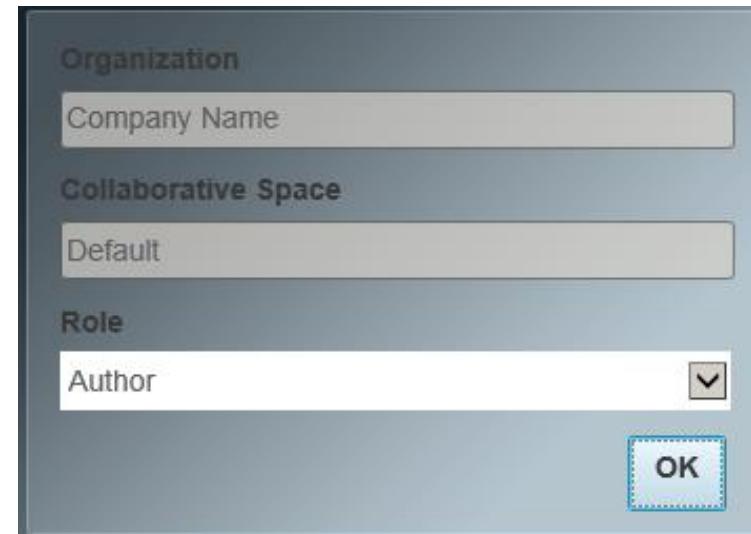
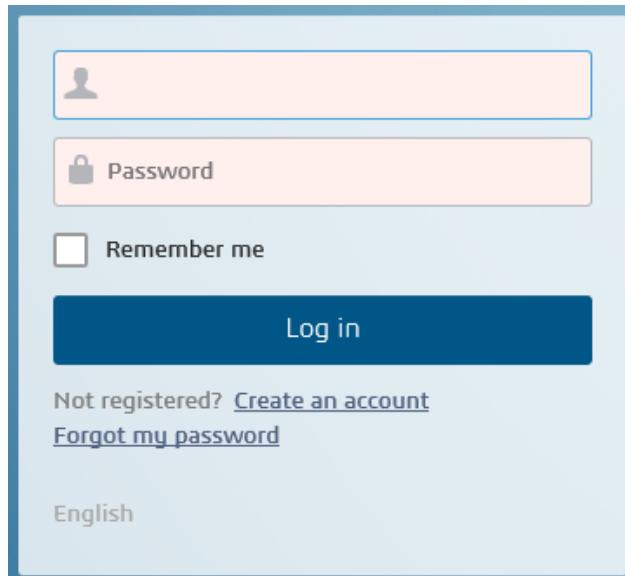
3DEXPERIENCE Native Post Installation Configuration

1. The Post Installation configuration task consists of creating the connector information to allow you to connect to the platform later.
2. The **3DEXPERIENCE Native Client**, you need to define the connection parameters:
 - a. In your desktop open “3DEXPERIENCE R2019x”, the platform panel will automatically open allowing you to add “+” a connection to the platform.

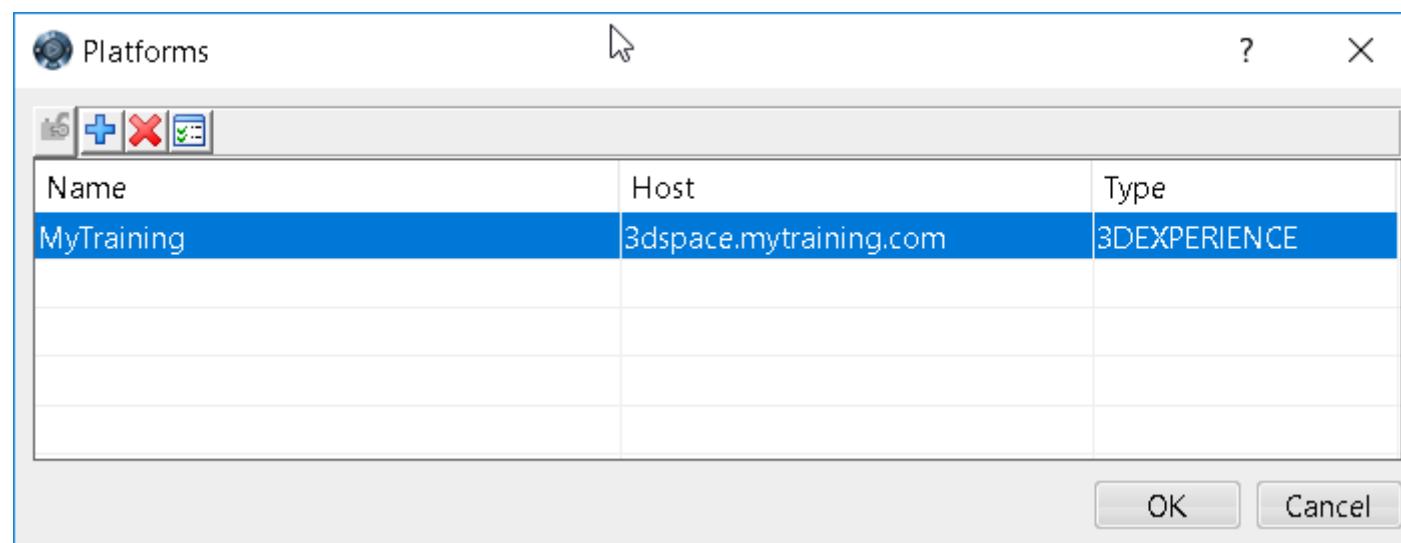


First Level Validation – Native Client

1. Using your desktop icon “3DEXPERIENCE R2019x” you can start the Native client.
2. Connect with user “3dexpcentral” and role “Author” (do not select “Remember me”)



3. If you have a connectivity issue, you will receive a warning and the “platforms” panel will appear allowing you to check connection values.



3DEXPERIENCE Native Client

- ▶ The Native application interface:

