

Privileged Access Management for Small and Medium-Sized Businesses

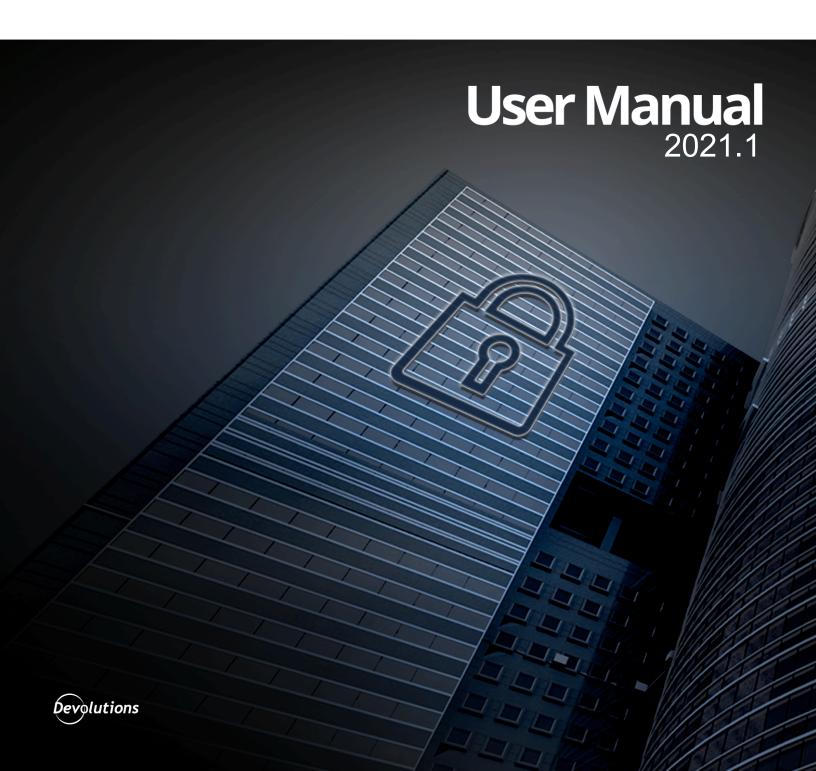


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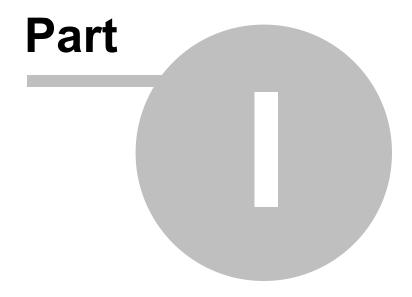
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Overview



1 Overview

1.1 What is Devolutions Server?

DESCRIPTION

This documentation is valid for version 2021.1.0. Previous Versions



Devolutions Server is an **on-premise** vault for storing and **sharing** information across your whole organization. Manage remote connections, credentials, and sensitive information with ease.

Use our **User Groups Based Access Control** to grant
permissions in a granular fashion.
Advanced logging of all user
activity is included to offer visibility
in all aspects of the solution.

Because of its Web Architecture you have the possibility to offer it only from your intranet or publish it on the Internet.

There are two ways of using Devolutions Server:



Web browser access and Using a client application (desktop or **Devolutions Web Login** mobile) Access vaulted resources from a Access vaulted resources using our web browser using a Client Access client applications License (CAL). Credentials are communicate with Devolutions managed directly from the web Server web services. A local interface and no client application is installation of a client application required. such as Remote Desktop Manager is required to manage the data source and its resources. Note that we offer Windows, macOS, Android and iOS With the Devolutions Web Login editions. browser extension, credentials can be automatically submitted when connecting to a website. Use any type of entry, manage all aspects of the data source and monitor user activity all in the same application. Remote technologies Unlike with web browser access, access (RDP, VNC, etc) are not supported Remote Desktop Manager can within a web browser. launch sessions using remote access technologies.

HIGHLIGHTS



Installed on-premise on an application server. Store entries in an unlimited number of vaults and manage access to these entries with our User Groups Based Access Control. Users accessing the system will be granted permissions based on their membership in specific AD groups, making user management almost seamless for organizations that use AD to manage teams.

Implemented using a Web architecture so it can exposed publicly on the **Internet** or only to your **Intranet** or **private cloud**.



TWO-FACTOR AUTHENTICATION



EMAIL NOTIFICATIONS



IP RESTRICTIONS

Widest choice of Twofactor authentication (2FA) providers. Many providers can be enabled concurrently. They can selectively be enforced per user. Optionally receive email notifications for various events on sessions, users, user groups, etc.

Controlling access to
Devolutions Server from IP
addresses / ranges,
including GeoIP restriction
and IP whitelisting /
blacklisting.

1.2 System Requirements

MINIMUM REQUIREMENTS



Devolutions Server needs Microsoft .NET Framework 4.7.2 to function. Please adapt your environment depending on which version you are running.

DEPENDENCIES

- Microsoft SQL Server 2012/2014/2016/2017/2019 (including Express editions).
- Azure SQL database is supported with SQL login accounts only. Azure Active Directory accounts are not supported.
- Windows 10, Windows Server 2012R2, 2016 and 2019.
- Windows Server 2012R2 domain functional level or higher.
- Microsoft .NET Framework 4.7.2 (Please refer to the <u>requirements for the .Net Framework</u> for operating systems).
- Internet Information Services (IIS) 7.0 or better.
- Devolutions Server Console must be installed on the server to manage the Devolutions Server instance(s).

SERVER SIZING

Many customers often ask how to properly customize their servers for various topologies. This is essentially unreliable because the way the system is used has a significant impact on the resource usage of each node within the chosen <u>Topology</u>.

The great majority of setups that we have observed work well with nodes of 4GB RAM and a dual CPU. Most of these are virtualized environments, so granting more resources is relatively simple.

For a proper estimate, the following aspects must be considered:

- Number of entries stored in your instance (server details, credentials, etc.).
- Churn of these entries; do you create entries daily or are they quite static?

- Number of concurrent users that connect to the Devolutions Server instance during peak times.
- Usage of information by the users. Are they launching 10 sessions at a time, doing a batch operation that takes a few minutes and then repeating the cycle, or are they opening only a few sessions but working within them all day long. This results in write operations to our logs, therefore the former case is more intensive then the latter.

64-BIT SUPPORT

Devolutions Server is compatible with all 64-bit versions of Windows.

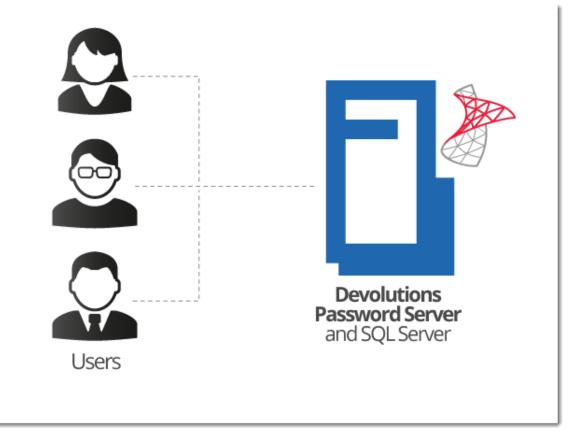
1.3 Topologies

DESCRIPTION

Devolutions Server instances can be installed through different topologies. The following are examples of different topologies serving various purposes.

SINGLE SERVER TOPOLOGY

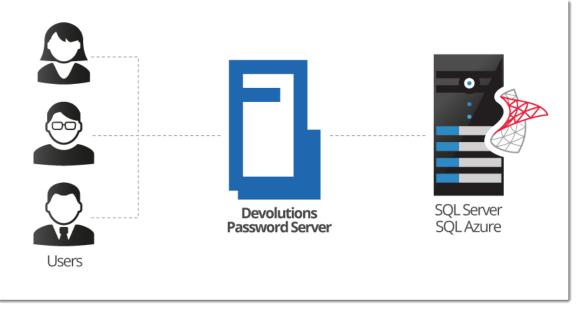
The Devolutions Server and the SQL Server can be installed on the same machine for a small team up to 20 users. Having Devolutions Server and SQL Server on the same machine could result in certain performance issues if you attempt to serve more than 20 users.



Single Server Installation

RECOMMENDED BASIC TOPOLOGY

A recommended basic topology consists of two servers, one for the Devolutions Server and one for the SQL Database. By doing so, all queries are made by the SQL server and performance is less affected on the application server.

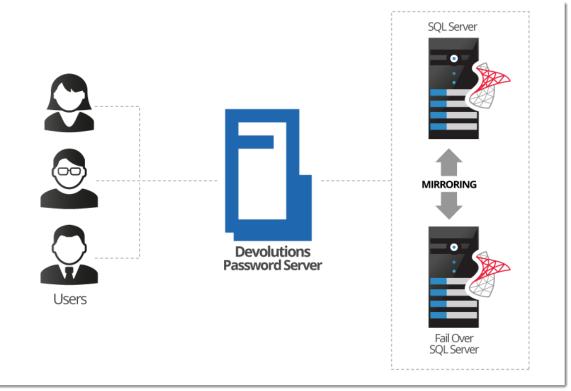


Basic Topology

HIGH AVAILABILITY TOPOLOGY

DATABASE LAYER ONLY

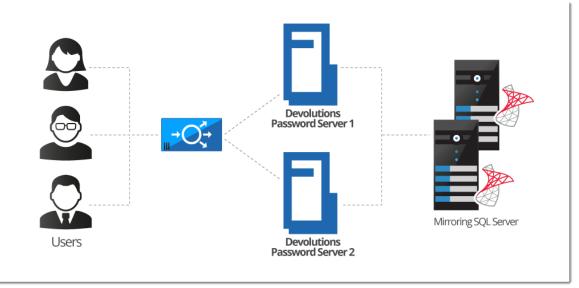
For a high availability of the database, Database Mirroring can be used which replicates data to a partner server. The failover partner server will be ready at anytime when the main server becomes unavailable. This ensures that the Devolutions Server is still accessing the data source and is transparent for Remote Desktop Manager users.



High Availability Topology

LOAD BALANCING TOPOLOGY

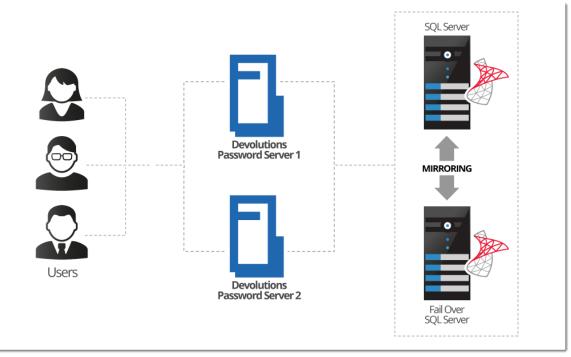
To ensure maximum performance of the Devolutions Server, it can be deployed as a load balancing Devolutions Server topology as illustrated in the image below. It can either be a physical or software load balancing system.



Load Balancing Devolutions Server Topology

DEVOLUTIONS SERVER INSTANCE MANUAL FAILOVER

For customers that do not wish to purchase a load balancer or are seeking a more simplified topology for their system, you can simply utilize two Devolutions Server instances on two different web servers and direct them to the same SQL Server database. By registering both instances as separate data sources in the client applications, users can manually toggle between servers in the scenario that one becomes unresponsive.



Manual Failover with Two Devolutions Servers

1.4 Fault Tolerance

DESCRIPTION

The Devolutions platform follows certain design guidelines to preserve full version history of your data, be it modifications or deletions. It also has an extensive logging layer to provide full visibility on the activity carried out while using the system. These design choices impact the choices offered to you when you wish to provide fault tolerance at the database level.

IMPACT ON TECHNOLOGICAL CHOICES

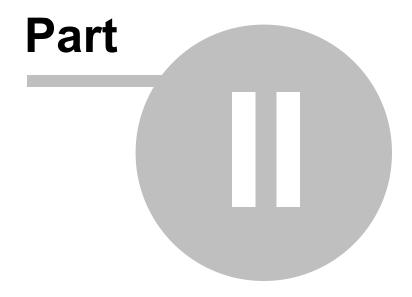
Because of all of the write operations that occur behind the scenes, you cannot have a topology other than ACTIVE/PASSIVE. The standby replica must be kept in sync at all times, but left untouched. There can be only ONE database in use at any one time. You can use both Microsoft technologies of mirroring or clustering, but it is key is that the replicated content is only accessed when the master content is unavailable.

MIRRORING AS A WAY TO SHARE WITH DISTANT TEAMS

The consequence of keeping replicated data untouched means that replication is NOT the proper solution to use whenever you have multiple teams and you wish to share a set of master data across them. For this scenario it is best to use a mix of:

- Synchronizers, particularly the one for RDM data.
- PowerShell scripting (to export a specific branch of your tree).

Getting Started



2 Getting Started

DESCRIPTION



This topic is for <u>Devolutions Server - Corporate Edition</u>. If you have purchased <u>Devolutions Server - Team Edition</u> instead, please consult <u>Getting Started - Team Edition</u>.

After completing your purchase of Devolutions Server - Corporate Edition, you will receive an email with **three** license serials. Each license serial allows for running a Devolutions Server instance. An instance is in itself a web server application which acts as a back-end for our client applications. You can think of it as a specialized database for your data. All instances can be installed on the same physical server or spread across many.

Devolutions Server can be installed through different topologies.

DOMAIN REQUIREMENTS

These requirements apply especially if you intend to use Automatic User Account Creation (see <u>Authentication</u>) and/or User Groups to manage your instance.

~	Create Active Directory groups to manage your instance. Typical examples are: RDM Admins, RDM Operators, RDM Users.
✓	Add domain users to the Active Directory groups.
✓	Create a VaultOwner account that will be the owner of the database. Performing upgrades with this account will ensure the proper rights are held.
~	Create a VaultRunner account that will be used as the identity of the website. This will allow you to harden the permissions to what is minimally required.

CHECKLIST FOR INSTALLING AND RUNNING DEVOLUTIONS SERVER

SOFTWARE REQUIREMENTS ON THE SERVER HOSTING THE INSTANCE

~	Microsoft .NET Framework 4.7.2 (can be installed using the Microsoft Web Platform Installer).
~	Microsoft SQL Server (see <u>Database Instance</u>) if you intend to host the solution on a single server (see <u>Topologies</u>).
~	Internet Information Services (IIS) 7.0 or better (see https://technet.microsoft.com/en-ca/library/hh831475.aspx#InstalIIIS).

INSTALLATION STEPS

•	Create a new instance of Devolutions Server (see <u>Create Devolutions</u> <u>Server instance</u>).
~	Create a Devolutions Server administrator account in the <u>User Management</u> .
✓	Create user groups.
~	Add domain users or built-in users (see <u>User Management</u>).

2.1 Security Checklist

DESCRIPTION

To achieve the highest level of security, you should adhere to the following guidelines.



These recommendations are valid ONLY if the Devolutions Server instance is hosted on an **intranet** EXCLUSIVELY. You must involve a person with knowledge of Internet security to safely host any application on the Internet. You need to protect the site from **Denial of Service** attacks using an appliance or a security module that is external to Devolutions Server.

GENERAL

- Use Windows Authentication exclusively.
- Ensure all LDAP communication uses LDAP over SSL.

SQL SERVER

- Enable only the Windows Authentication Mode.
- Create a domain account that will be used to create the database (VaultOwner), as well as another account that will be used by the web server to connect to the database (VaultRunner). The latter must have only the minimal set of permissions to perform its tasks.
- Communicate **ONLY** through an encrypted connection, please see <u>Encrypting</u> Connections to SQL Server.

WEB SERVER

- Configure the application pool to use domain credentials. This account will be added to the SQL Server as a login and be granted only the permissions that are needed (VaultRunner).
- Serve content through SSL (https). See Configure SSL.

2.1.1 LDAP over SSL

DESCRIPTION

The LDAP over SSL (LDAPS) is a method to secure LDAP communications.

By default, LDAP communications between client and server are not encrypted. In some organizations, this could lead to a security breach.

Follow this link for further information http://social.technet.microsoft.com/wiki/contents/articles/2980.ldap-over-ssl-ldaps-certificate.aspx.

2.1.2 Encrypting Connections to SQL Server

DESCRIPTION

To ensure that the communication between the Devolutions Server instance and the SQL Server database is encrypted, an extensive procedure must be followed on the SQL Server instance.

Please consult this technet article that provides detailed instructions <u>Encrypting</u> Connections to SQL Server (technet).

After proper configuration, the only modification required in Devolutions Server is to enable the **Use SQL Server encrypted connection** in the <u>Database</u> tab of the instance settings.

2.2 Team Edition

DESCRIPTION

After the purchase of the **Devolutions Server - Team Edition**, an email is sent with the license serial. This key allows you to create a new instance of Devolutions Server.

The installation procedure is available at <u>Devolutions Server Installation</u>



Please check your junk/spam mail folder if you do not see the email in your inbox.

DOMAIN REQUIREMENTS

These requirements apply only if you intend to use Automatic User Account Creation (see <u>Authentication</u>) and/or User Groups to manage your instance.

~	Create Active Directory groups to manage your instance. Typical examples are: RDM Admins, RDM Operators, RDM Users.
~	Add domain users to the Active Directory groups.

CHECK LIST FOR INSTALLING AND RUNNING <%TITLEBE%>

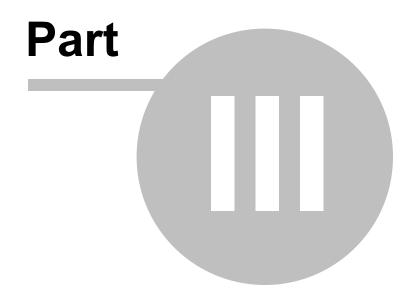
SOFTWARE REQUIREMENTS ON THE SERVER HOSTING THE INSTANCE

~	Microsoft .NET Framework 4.7.2 (It can be installed through the Microsoft Web Platform Installer).
~	Microsoft SQL Server database (see <u>Database Instance</u>).
~	Information Services (IIS) 7.0 or better (see https://technet.microsoft.com/en-ca/library/hh831475.aspx#InstallIIS).

INSTALLATION STEPS

~	Create a new instance of Devolutions Server (see Create Devolutions Server Instance).
~	Create a Devolutions Server administrator account in the <u>User Management</u> .
~	Create User Groups.
~	Add domain users or built-in users (see <u>User Management</u>).

Installation



3 Installation

TOPOLOGY



If you just have received your license serials, please refer to the <u>Getting</u> <u>Started</u> topic.

A Devolutions Server instance is actually a web application. This allows for exposing its services on the Internet or an Intranet.

The recommended <u>topology</u> is the use of two servers: a Database server and a Web server. For smaller installations, a single server can be used, but resources will be shared between the two user groups, thereby minimizing performance.



The Devolutions Server Console is now offered as a stand alone application. It is available on the <u>Download page</u>.



Please ensure before starting the installation that you have .NET 4.7.2 installed on your machine. You can download it on the following page. https://dotnet.microsoft.com/download/dotnet-framework-runtime/net472



It's highly recommended to enable SSL Encryption in order to protect communication with the instance of the SQL Server. Please follow the instructions on http://support.microsoft.com/kb/316898. Note that we recommend this be done **after** the initial setup is complete.



For full Active Directory integration, the application pool uses a domain identity. Both servers need to be joined to the domain.

INSTALL DEVOLUTIONS SERVER

WEB SERVER PREREQUISITES

Please refer to the appropriate topic depending on the operating system of the web server.

INSTALLING WEB USER GROUPS

Please refer to the <u>Installing Web User Groups Prerequisites</u> topic.



After you have installed the pre-requisites, test the IIS installation by navigating to http://localhost. **Do not proceed further** if you do not see the IIS welcome screen. There are issues that must be resolved.

DATABASE SERVER PRE-REQUISITES

Please refer to the Database Instance topic.

CREATE DEVOLUTIONS SERVER INSTANCE

Please refer to the Create Devolutions Server instance topic.

3.1 Installing Web User Groups Prerequisites

DESCRIPTION

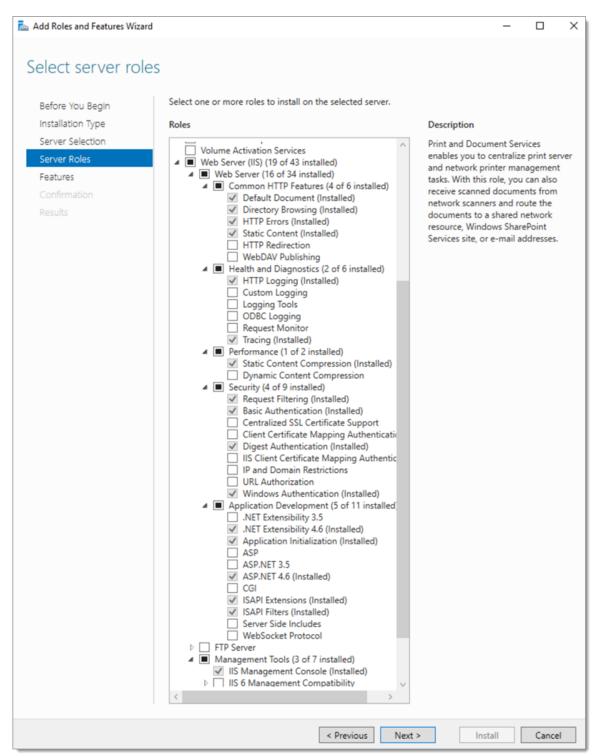


The installation of the Devolutions Server is supported by Windows 10, Windows Server 2012R2, 2016 and 2019. For previous Windows Server versions, please consult the PDF documentation of previous Devolutions Server.



As a web application, Devolutions Server requires the IIS Manager, the URL Rewrite Module and specific Web User Groups on the machine on which it will be hosted.

It is possible to install these prerequisites, IIS Manager and URL Rewrite Module included, from the Devolutions Server Console or through an existing PowerShell scripts provided with Remote Desktop Manager Enterprise Edition for Windows.



Web Roles needed for Devolutions Server



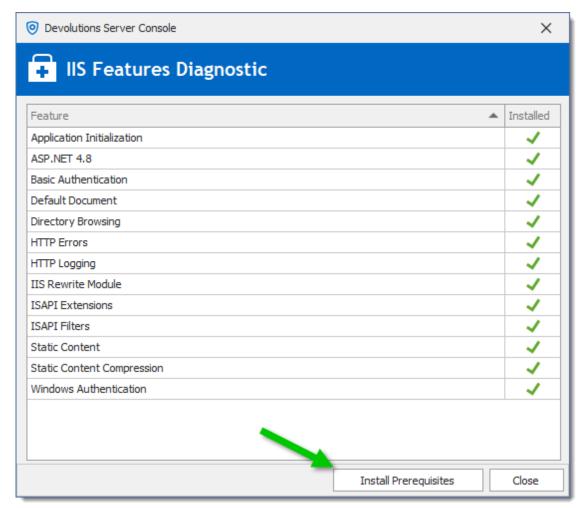
Installing prerequisites from <u>Devolutions Server Console</u> or from the PowerShell script require internet access to download <u>Web Platform Installer</u> and <u>URL Rewrite Module</u>.

STEPS

Here are the two different methods available to install the prerequisites:

1. Devolutions Server Console

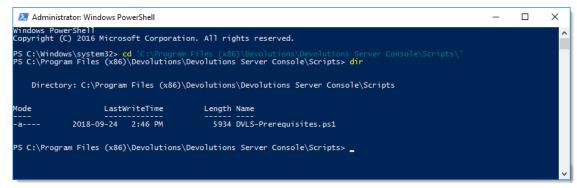
- **a.** Open the <u>Devolutions Server Console</u>.
- **b.** Click on the New button.
- c. Click on the Install Prerequisites button to run the PowerShell script.



IIS Features Diagnostic Dialog

2. PowerShell command line

- a. Run Windows PowerShell with elevated privileges.
- **b.** Change the current path to the sub-folder Scripts that is located in the current installation folder of Devolutions Server Console.
 - (C:\Program Files (x86)\Devolutions\Devolutions Server Console\Scripts)



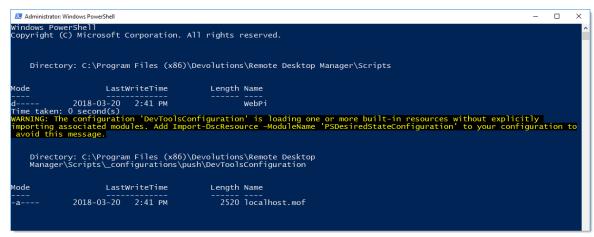
Location of DVLS-Prerequisites PowerShell script

c. Run the script DVLS-Prerequisites.ps1.

RESULTS

Here is what the installation of these prerequisites through the PowerShell script should display.

1. On the beginning of the PowerShell script, it will install Microsoft Web Platform Installer if it is not already installed.



PowerShell Window

2. Next, the Command windows is displayed and will install the IIS Manager, ASP .Net 4.5, some specific Web User Groups and the URL Rewrite Module.

```
The software that you obtain using the Web Platform Installer Command Line Tool is licensed to you by its owner. Micros oft grants you no rights for third party software.

Successfully loaded primary feed: https://go.microsoft.com/?linkid=9842185
The following software is going to be installed:

EULA: 'IIS: WAS Process Model', which is owned by 'Microsoft' will be turned on EULA: 'IIS: WAS Configuration API', which is owned by 'Microsoft' will be installed The license agreement to '.NET 4.5 Extended with ASP.NET for Windows 8' may be included with the software. You are responsible for and must separately locate, read and accept these license terms.

EULA: 'IIS: Static Content', which is owned by 'Microsoft' will be turned on EULA: 'IIS: Management Console', which is owned by 'Microsoft' will be turned on EULA: 'IIS: Management Console', which is owned by 'Microsoft' will be turned on EULA: 'IIS: Management Console', which is owned by 'Microsoft' will be turned on EULA: 'IIS Management Console', which is owned by 'Microsoft' will be turned on EULA: 'IIS Management Console', which is owned by 'Microsoft' will be turned on EULA: 'IIS Rewrite 2.1', which is owned by 'Microsoft' will be downloaded from 'http://download.microsoft.com/download/D/D/P/DDE57C26-C62C-4C59-A18B-31D58836ADA2/rewrite_amd64_en-US.msi'.

The license agreement to 'URL Rewrite 2.1' is available at 'http://download.microsoft.com/download/D/D/E/DDE57C26-C62C-4
C59-A18B-31D58836ADA2/URL%20REWRITE%20MODULE-Final-EN.rtf'.

**Accepted EULA.**

Started downloading products...

Started downloading: 'URL Rewrite 2.1'

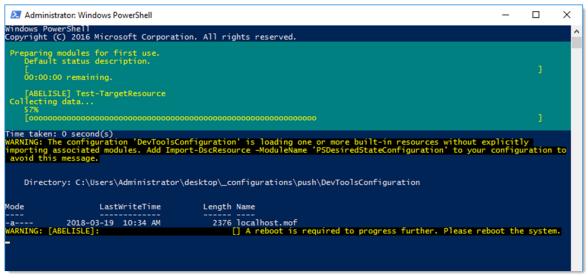
Downloaded: 'URL Rewrite 2.1'

Downloaded: 'URL Rewrite 2.1'

Downloaded: 'URL Rewrite 2.1'
```

IIS Installation

3. Then, the PowerShell script will install all missing Web User Groups.



Web Roles Installation

3.2 Database Instance

DESCRIPTION

Devolutions Server has no requirements that would dictate which communication protocol is used, as well as many of the options offered to you by the chosen SQL Server instance. As long as the client workstation can connect to the SQL instance, Devolutions Server will run effectively. Please refer to the Microsoft Documentation in order to allow connectivity to the instance.

With Windows authentication, you must set the Application Pool identity to an account from the domain. We recommend creating a dedicated account for this purpose. Please refer to Configure Devolutions Server to use integrated security for instructions that need to be performed **after** creating the Devolutions Server instance.

3.2.1 On-Premise

DESCRIPTION

Install any edition of **Microsoft SQL Server**. Many of our customers with less than 30 users run successfully with the free edition called **SQL Server Express**. <u>Download SQL Server 2017 Express from Microsoft's site</u>.

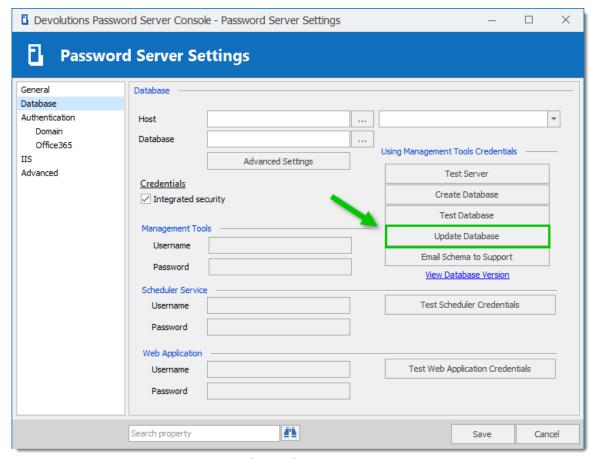
If full integration with Active Directory is required, you can decide to activate Windows Authentication solely. Please refer to the MSDN online help for full details.

3.2.2 Microsoft Azure SQL

DESCRIPTION

Create an empty SQL database on your Microsoft Azure SQL portal. Provide enough privileged to an account you will use to update the database schema from the Devolutions Server Console.

Once all fields are properly configured, click on the **Update database** button to update the database schema.



Devolutions Server Console - Database Tab

3.3 Create Devolutions Server instance

DESCRIPTION



If you have recently received your serial licenses keys, please refer to the <u>Getting Started</u> topic.



For more information about any of the features in the deploy wizard, please consult their respective topic under the <u>Server Settings</u> chapter.

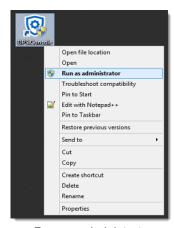
Multiple Devolutions Server instances can be hosted on the same server. Each instance resides in its own Web Application within IIS. The following steps are carried out using the **Devolutions Server Console**.

PROCEDURE

- Install **Devolutions Server Console** on the web server. It is available from the <u>Download</u> page
- Execute **Devolutions Server Console** with elevated privileges (run as administrator). This is performed by right-clicking on the application, and selecting **Run as administrator**.

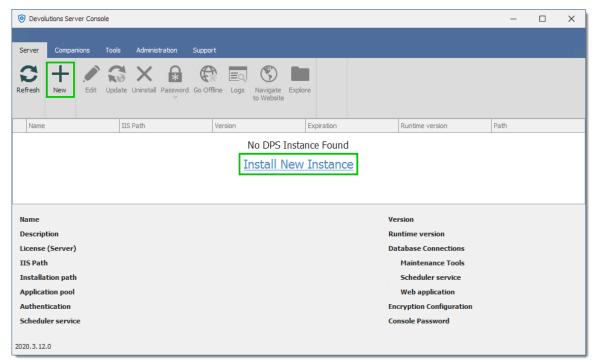


All operations performed through the console are done with the credentials used to launch **Devolutions Server Console**. If you must use other credentials, you will need to launch another Windows session. The RunAs command does not offer the option of starting a process with elevated privileges.



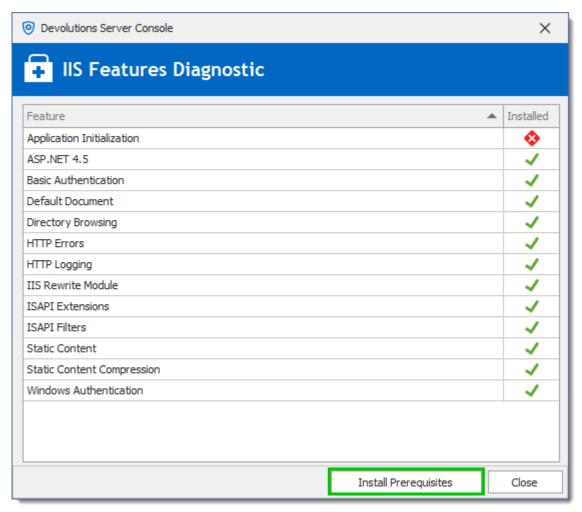
Run as administrator

3. In the **Devolutions Server Console**, click on the **New** button or the **Install New Instance** blue link to deploy a new server instance.



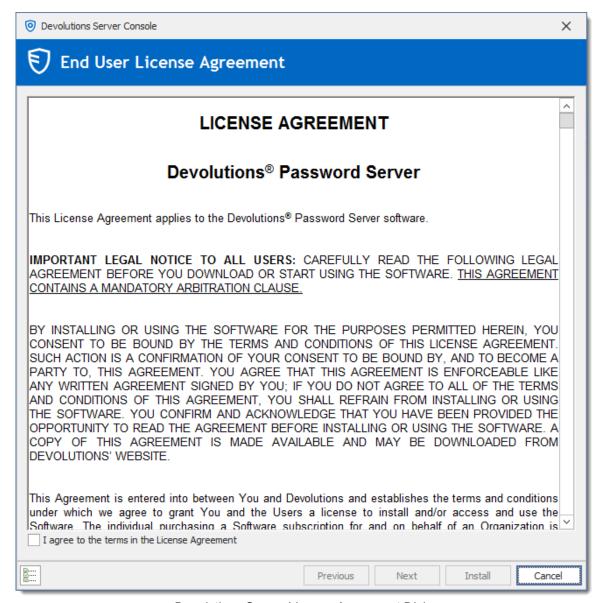
Deploy a new Devolutions Server

4. The first dialog will run diagnostics on the server to verify if the IIS Server has all the necessary Web User Groups prerequisites installed and is ready to run Devolutions Server. Missing features are marked with an ❖. The Install Prerequisites button will install all missing features using a PowerShell script.Click on Close to continue.



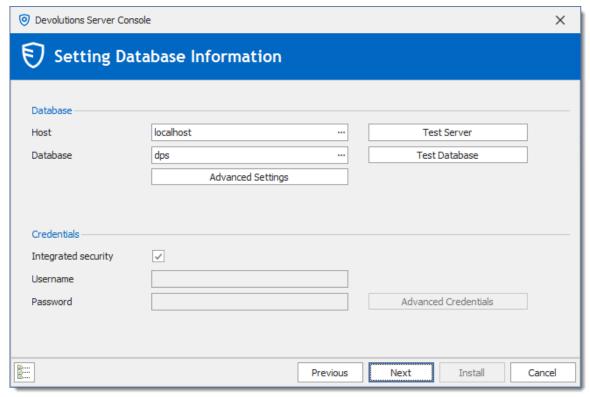
IIS Features Diagnostic Dialog

5. The License Agreement needs to be accepted to proceed.



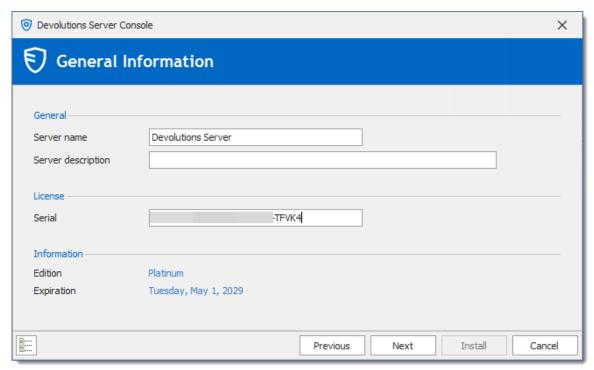
Devolutions Server License Agreement Dialog

6. Under **Database**, enter the server and database information. The user account used to create the database must have sysadmin privileges in the SQL Server instance. Consult the <u>Database</u> topic for more information. To use **Integrated Security** to connect to the database, it is important to change the Application Pool Identity in the IIS Manager and set the proper permission of the service account on the SQL database. Please consult <u>How to Configure Devolutions Server to use integrated security</u>.



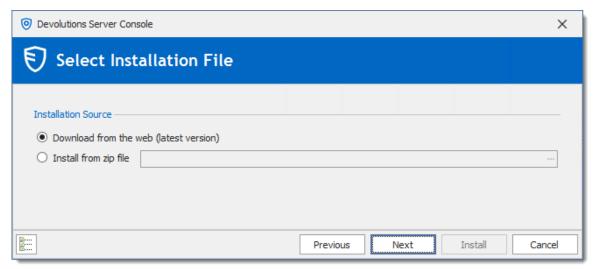
Database Dialog

Under General, enter a custom Name and Description. Under Serial, provide a license serial that has been received by email upon buying the product.
 If you did not buy any Devolutions Server license yet, you may Request a 30-days trial.



General and Registration Dialog

8. Under Installation Source, select to either *Download from the web (latest version)*, or *Install from zip file*.

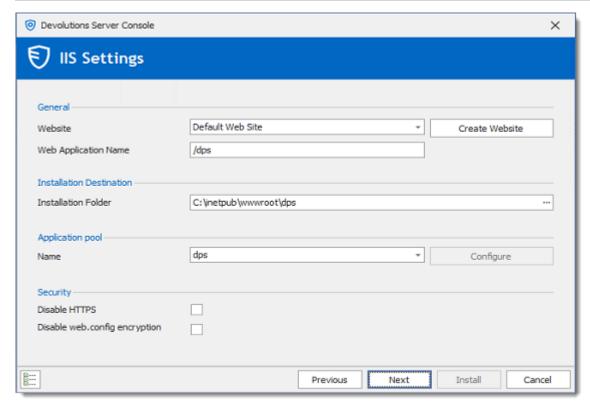


Source Dialog

9. Under General, select the Website and Web Application Name. Under Installation Destination, set the Installation Folder where the instance's files will be located. The process to run Web sites has been granted the proper permissions under c:\inetpub\wwwroot. We recommend to create a new folder beneath it and create the Devolutions Server instance within this folder. Under Application Pool, set the Application Pool Name.

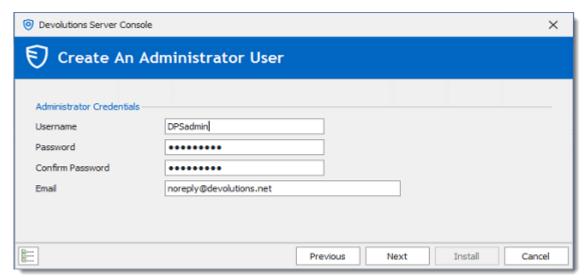


We do not recommend to set the installation folder to *C:\Program Files* or *C:\Program Files* (x86). Devolutions Server is a web application and this could result in unwanted behavior and issues because IIS do not have enough permissions to run web applications that are located under those folders.



Destination dialog

10. Under *Administration Credentials*, fill in the information to create a Devolutions Server Custom administrator account. All fields are required.



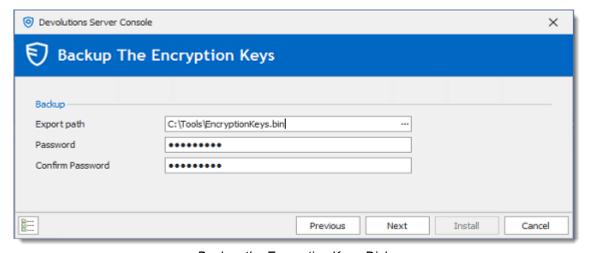
Create An Administrator User

11.Under *Backup*, select the destination folder and file name of the Devolutions Server Encryption Keys file.

And set a password to protect that file.

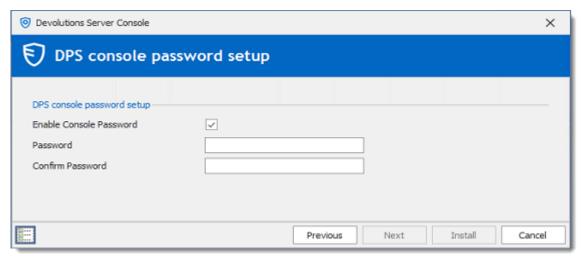


We recommend to protect the Encryption Keys in a safe to avoid data loss if Devolutions Server has to be restored.



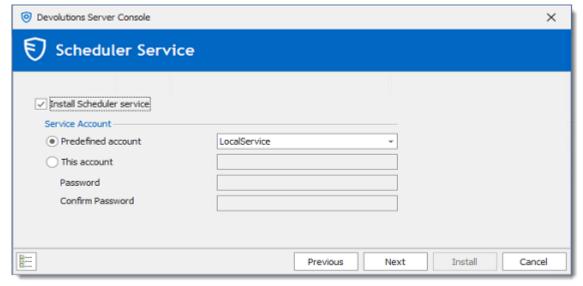
Backup the Encryption Keys Dialog

12.Under **DVLS console password setup**, when configuring a password, the Devolutions Server instance will be protected by a password that will be saved in the database.



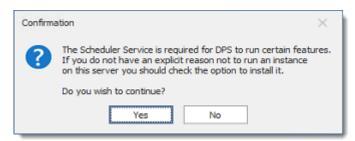
Devolutions Server password protected console

13.Under **Scheduler Service**, when enabling the **Install Scheduler service** option, please set the proper Service Account. The following features depend on the Scheduler: <u>Backup manager</u>, <u>Domain Users and Users Groups cache</u>, <u>Office365 Users and User Groups cache</u>, <u>Email notifications</u> and <u>Privileged Access Management</u>.



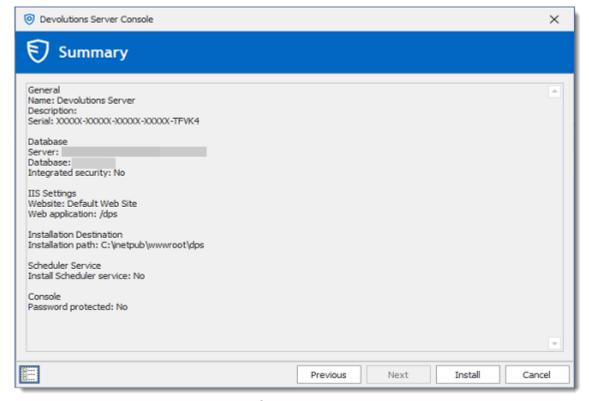
Scheduler Dialog

14. Choosing to not install the Scheduler, you will get the following warning message.



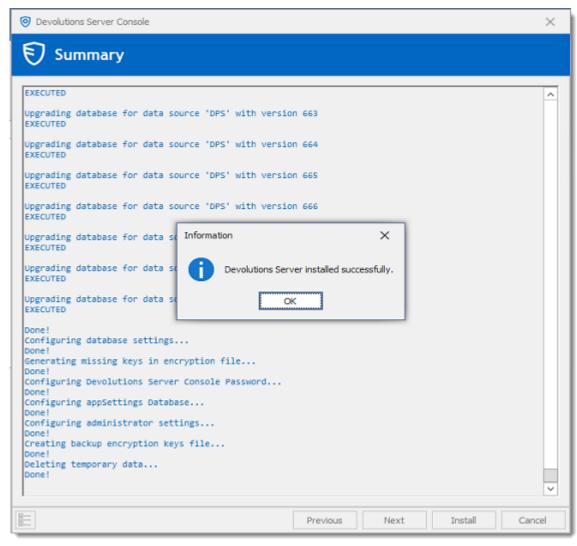
Scheduler Warning

15.Under **Settings**, validate the configuration and click **Install**.



Settings Dialog

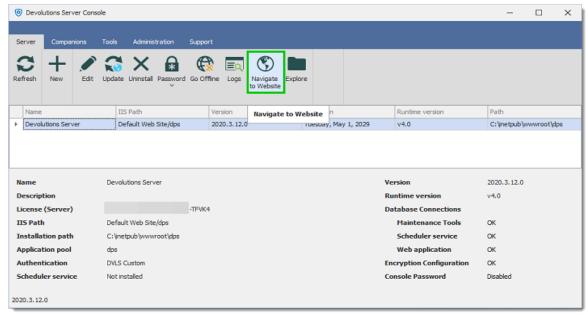
Once the installation is complete, a summary indicates if the Devolutions Server has been deployed correctly.



Progress Installation Dialog

TEST THE INSTALLATION

To test the server installation, click on navigate to the instance URL (e.g.: http://<Machine_Name>/<InstanceName>) with any web browser or click on the *Navigate to Website* button in the Devolutions Server Console.



Devolutions Server Console

To test the connection from a client by creating a data source in Remote Desktop Manager. Please consult the <u>How to Configure Client Data Source</u> for more information.

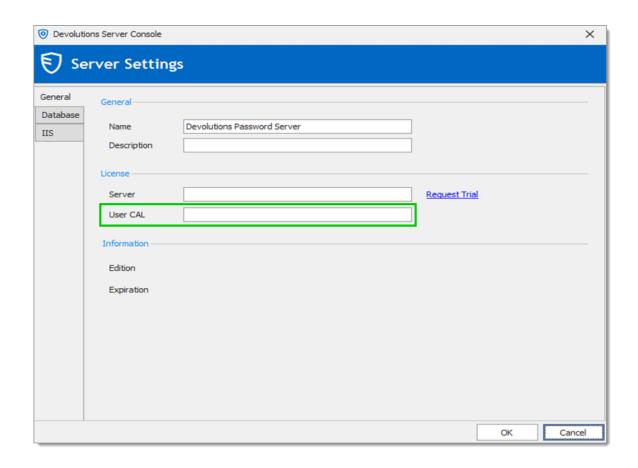
3.4 Register a User CAL License

DESCRIPTION

There are two methods for you to register your User CAL license, with the <u>Devolutions</u> <u>Server console</u> or through the <u>web interface</u>.

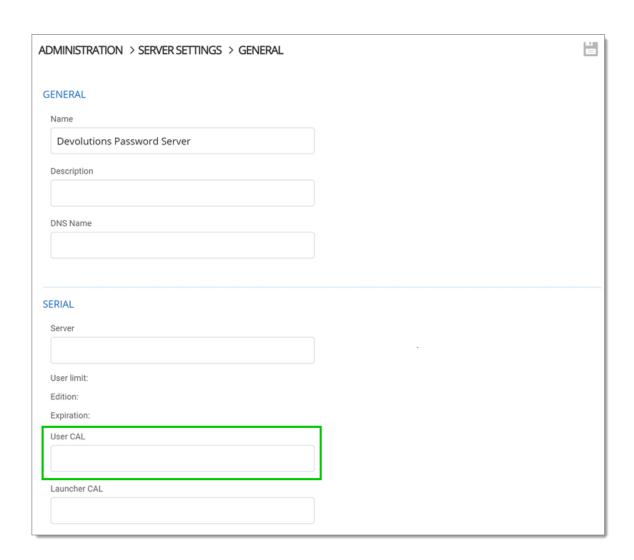
DEVOLUTIONS SERVER CONSOLE

Register your User CAL license in Server - Edit - General - License.



DEVOLUTIONS SERVER WEB INTERFACE

Save your User CAL License in Administration - Server Settings - General - Serial.



3.5 Upgrading Devolutions Server

UPGRADE



Install the proper version of Devolutions Server Console before upgrading the Devolutions Server web application. It is available on the Download page.



Since Devolutions Server 2019.x, most administrative features can only be managed from the web interface. Please see <u>Administration</u> <u>Devolutions Server Settings</u>.

It is highly recommended as a best practice to first deploy the new version of Devolutions Server to a staging instance and verify its stability before deploying it to your whole organization. If you do not have a staging instance we then recommend a limited roll-out to ensure the work flow is supported to your satisfaction prior to impacting your whole team.



These steps are intended to be achieved on a single server or a basic topology. If your environment differs from these topologies, please contact us and we will guide you on how to upgrade Devolutions Server.

WORKFLOW



We highly recommend to test the upgrade process in a staging/test environment before upgrading your production instance.



The upgrade steps will be performed with Devolutions Server Console. You will need to upgrade your copy to the latest version that is matched with the target version of Devolutions Server that you are preparing to install. Please follow the steps carefully.



If you have elected to use **Integrated Security** for connecting to the database, you must perform the upgrade using a Windows user account that has full rights on the database. Ensure that the IIS Application Pool Identity and Scheduler accounts have enough privileges on the database. After an upgrading to a new version, new permissions are possibly required. Please contact us about the new permissions list.



If you have set the <u>Security Provider</u> on your current Devolutions Server, specific operations will need to be done before the upgrade. Please contact us for further details.



We recommend doing a backup of the Encryption Keys before any operation that could modify the information of the database or before the upgrade of Devolutions Server. Protect the Encryption Key file in a safe to avoid data loss if Devolutions Server has to be restored.

PREPARATION PHASE

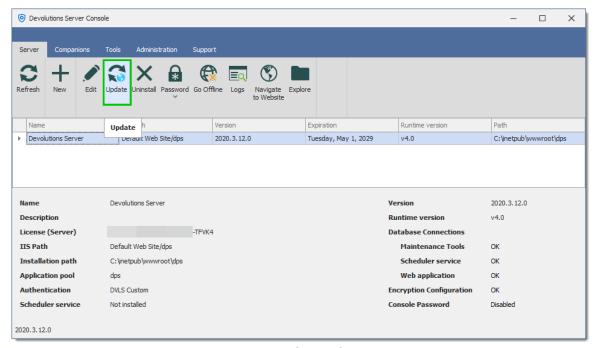
- Ensure that the instance users have the offline mode enabled and that they all perform a full refresh of the cache (CTRL+F5).
- Have your team switch to the offline mode in Remote Desktop Manager, allowing them to work while the system is down.
- Update the Maximal version of Remote Desktop Manager in Administration -System Settings - Version Management - Maximal version, if this option was set before the upgrade.

PHASE 1

- Perform a full backup of the database, take precautions against that backup file being deleted by a maintenance plan.
- Archive the content of the web application folder containing the Devolutions Server instance, move to a safe place.
- Install the proper version of Devolutions Server Console. In each of the sub-topics related to a specific version of Devolutions Server you will find the version of the client that you need.
- Devolutions Server Console must be run with elevated privileges.

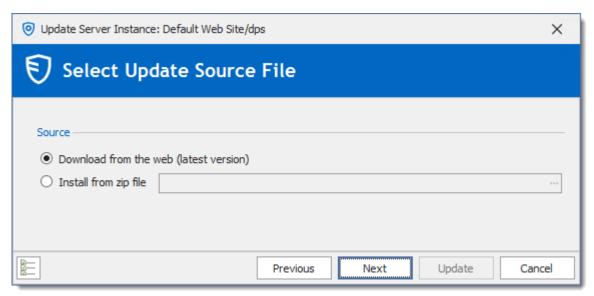
PHASE 2

- 1. Open the <u>Devolutions Server Console</u>.
- 2. Select the instance that you wish to upgrade.
- Set the instance in Offline Mode with the Go Offline button. On a High Availability/Load Balancing topology, all instances must be set to Offline mode before starting the upgrade process.
- 4. Click the **Upgrade Server** button.



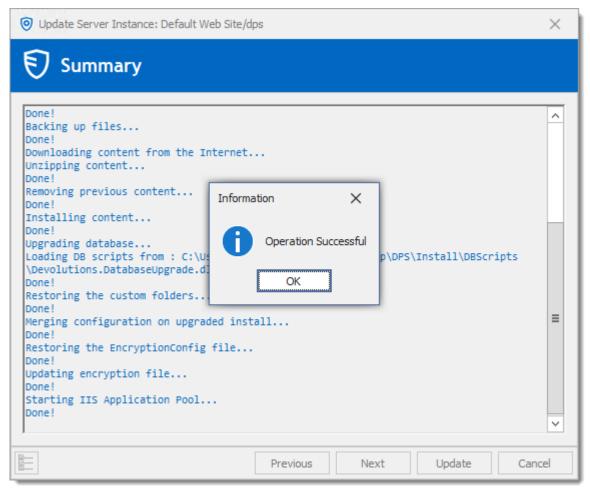
Devolutions Server Console

5. Select the **Upgrade Source**. You can either use the latest General Availability release that is available online automatically or specify the path to a zip file that you have downloaded yourself. Use this for beta releases or for earlier versions.



Devolutions Server Upgrade Wizard

- 6. Press Next.
- 7. Review the summary and press **Upgrade** if you are satisfied.



Upgrade completed

FINAL PHASE



The **Backup Folder** contains information about the configuration of the Devolutions Server instance prior to the upgrade. After a successful upgrade, you must ensure the content is either moved to a safe place, or deleted.



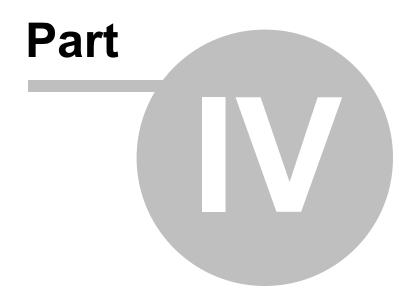
Our support department gets more and more urgent requests for assistance because of a rogue admin upgrading his own copy of Remote Desktop Manager and introducing a schema update for some new feature. This may prevent other users from using the system. We strongly recommend setting both the Maximal and Minimal versions allowed to connect to your instance.



If you have elected to use the Integrated Security for connecting to the database in the <u>Database</u> tab, ensure that the IIS Application Pool Identity and Scheduler accounts have enough privileges on the database. After an upgrading to a new version, new permissions are possibly required. Please contact us about the new permissions list.

- Have a user upgrade his workstation with the version of Remote Desktop Manager supported by the Devolutions Server version and test connectivity with the server instance.
- When you are satisfied with your tests, have the rest of the staff upgrade to the same version of Remote Desktop Manager.
- Update the Maximal/Minimal version of Remote Desktop Manager in **Administration - System Settings - Version Management*
- Move or delete the Backup Folder, it is located in the %TMP%\DVLS folder of the current user profile. Newer versions of Remote Desktop Manager add a suffix to indicate a sequence.

Management



4 Management

4.1 Devolutions Server Console

DESCRIPTION

Because Devolutions Server is in fact a web application, the management interface is provided by the Devolutions Server Console.

USAGE



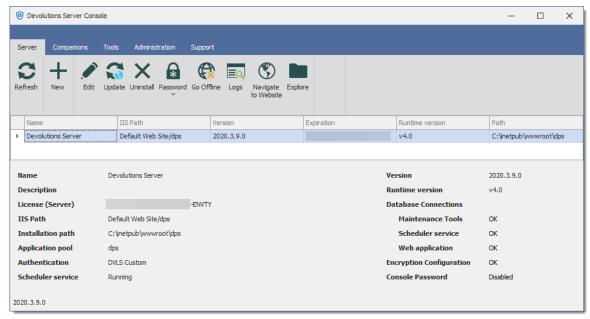
The Devolutions Server Console is now offered as a stand alone application. It is now available on the <u>Download page</u>.



Since Devolutions Server 2019.x, many features can only be managed from the web interface. Please see <u>Administration - Devolutions</u> Server Settings.

The Devolutions Server Console manages the IIS metabase, it must be started with elevated privileges when the console needs to be used. Elevated privileges are granted when you use "Run as administrator" to launch the application. You can modify the shortcut to always start it in this manner.

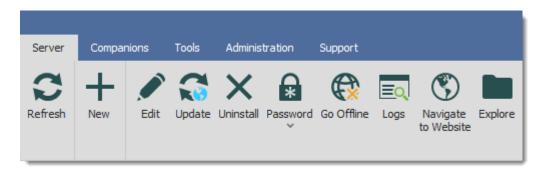
CONSOLE



Devolutions Server Console

SETTINGS

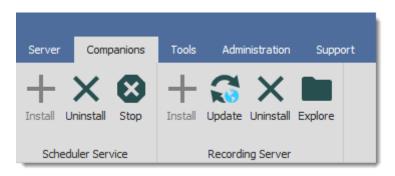
SERVER



Option	Description
Refresh	Refresh the list of Devolutions Server instances in the Devolutions Server Console.
New	Create a new Devolutions Server instance.

Edit	Edit the selected Devolutions Server instance's properties.
Update	Update the selected Devolutions Server instance.
Uninstall	Uninstall the selected Devolutions Server instance.
Password	Set, Change or Disable the Devolutions Server instance password.
Go Offline	Toggle the selected Devolutions Server instance to offline/online mode.
Logs	View the Data Source Logs of the selected Devolutions Server instance.
Navigate to Website	Open the web interface in the default browser.
Explore	Open the file explorer and points it to the Devolutions Server instance installation folder.

- COMPANIONS



Scheduler Service	Description
Install	Install the Scheduler Service.

Uninstall	Uninstall the Scheduler Service.
Start/Stop	Start or stop the Scheduler Service.
Recording Server	Description
Install	Install the Recording Service.
Update	Update the Recording Service.
Uninstall	Uninstall the Recording Service.
Browse Directory	Browse the folder where the recording files are stored.

▼ TOOLS



Keys Management	Description
Import	Import the encryption keys.
Export	Export the encryption keys.
Regenerate	Regenerate the encryption keys.

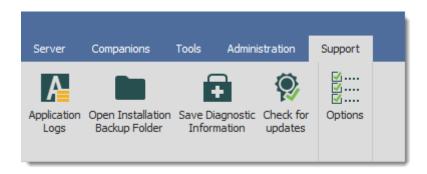
Database	Description
Rebuild Index	Rebuild indexes of the SQL database tables.

ADMINISTRATION



Option	Description
Users	Will open the <u>Users management</u> page on the Devolutions Server web interface.
User Groups	Will open the User Groups management page on the Devolutions Server web interface.
Vaults	Will open the Vaults management page on the Devolutions Server web interface.
System Settings	Will open the <u>System Settings</u> page on the Devolutions Server web interface.
System Permissions	Will open the <u>System Permissions</u> page on the Devolutions Server web interface.
Backup manager	Will open the <u>Backup Manager</u> page on the Devolutions Server web interface.

▼ SUPPORT



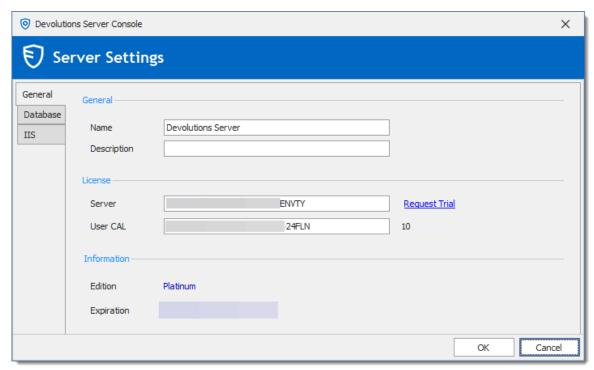
Option	Description
Application Logs	Open the Devolutions Server Console Application Logs dialog.
Open Installation Backup Folder	Open the Installation Backup Folder in the Windows File Explorer.
Save Diagnostic Information	Save the Diagnostic report in a text file.
Check For Update	Check for updating the Devolutions Server Console.
Options	Language setting and Update type options.

4.1.1 Devolutions Server Settings

4.1.1.1 General

DESCRIPTION

The General tab contains the basics information of the Devolutions Server instance such as the Name, Description, Serial Keys, etc.



General Tab

SETTINGS

GENERAL

Name	Enter the name for your server, it will be displayed in the Content area.
Description	Enter a short description or additional information.

SERIAL

Server	Insert your serial registration number.
Request trial	This will redirect you to our Devolutions Server page to request a free 30 days trial.
User CAL	Insert your Client Access License key.

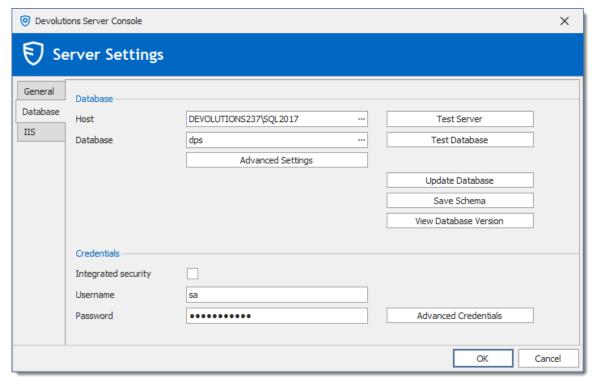
INFORMATION

Edition	Display the Devolutions Server Edition according to your Server license key.
Expiration	Expiration date of the product.

4.1.1.2 Database

DESCRIPTION

The Database tab contains the information of the SQL Server, the SQL credentials information and the database name used by Devolutions Server.



Database Tab

SETTINGS

DATABASE

Host	Name of the host where the database will be stored.
Database	Name of the database on the server.
Advanced Settings	Access the Advanced Settings.
Test Server	Test the connection with the server to validate if the proper information has been provided.

Test Database	Test the connection with the database to validate if the proper information has been provided.
Update Database	Update the database on the server.
Save Schema	Save the database schema in a file to allow to send it the Devolutions Support team.
View database version	View what is the current database version.

CREDENTIALS

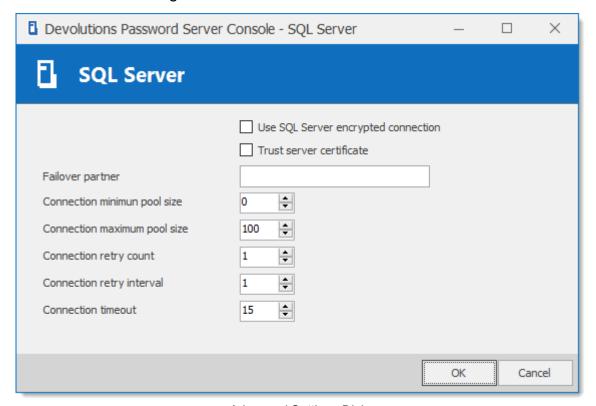
Note that the Integrated Security or Credentials settings affect how the Devolutions Server communicates with the SQL database. These options do not have any impact on how users will authenticate on the Devolutions Server instance.

	DESCRIPTION
Integrated security	Specify to use Windows Integrated Authentication for authenticating to the database. In order for integrated security to be used to connect to the database, you must set a domain account as the Application Pool identity in the IIS Manager.
Username	SQL login account username.
Password	SQL login account password.
Advanced Credentials	Access the Advanced Credentials that allows the Devolutions Server Console to communicate with the SQL database.

4.1.1.2.1 Advanced Settings

DESCRIPTION

The Advanced Settings contains advanced parameters that are used for the SQL database connection string.



Advanced Settings Dialog

SETTINGS

Use SQL Server encrypted connection	Use SSL to encrypt communication with the database.
Trust server certificate	Always trust the server certificate.

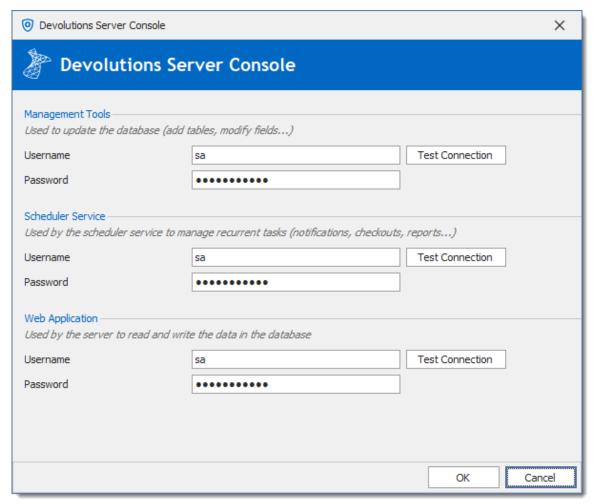
Failover partner	The name of the failover partner server if database mirroring is configured. This is used only for the initial connection as the principal server will return a name which will replace the configured value when different.
Connection minimum pool size	The minimum number of connections that are allowed in the pool.
Connection Maximum pool size	The maximum number of connections that are allowed in the pool.
Connection retry count	Controls the number of reconnection attempts after the client identifies an idle connection failure. Valid values are 0 to 255. The default is 1. 0 means do not attempt to reconnect.
Connection retry interval	Specifies the time between each connection retry attempt (ConnectRetryCount). Valid values are 1 to 60 seconds (default=10), applied after the first reconnection attempt. When a broken connection is detected, the client immediately attempts to reconnect; this is the first reconnection attempt and only occurs if ConnectRetryCount is greater than 0. If the first reconnection attempt fails and ConnectRetryCount is greater than 1, the client waits ConnectRetryInterval to try the second and subsequent reconnection attempts.
Connection timeout	The length of time (in seconds) to wait for a connection to the server before terminating the attempt and generating an error.

4.1.1.2.2 Advanced Credentials

DESCRIPTION

The following credentials are used to allow Devolutions Server to communicate with the SQL database. Only SQL login accounts can be used.

For further information about these accounts, please see <u>Pre-Deployment Account Survey</u>.



Advanced Credentials dialog

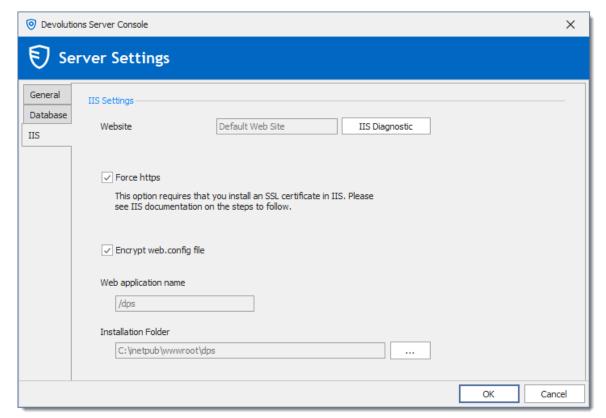
Management Tools	Credentials that allows the Devolutions Server Console to communicate with the SQL database. Must be a SQL account.
Scheduler Service	Credentials used for the Scheduler features (Backup manager, Email Notifications, Secure Messaging, Domain Users and User groups cache, Azure AD cache). Must be a SQL account.

Web Application	Credentials used for the Web Application to communicate with the SQL database. Must be a SQL account.
Test Connection	Test against the SQL server the credentials set in the Username/Password fields.

4.1.1.3 IIS

DESCRIPTION

The IIS settings are part of your prerequisite at the installation level. Most of what is found in this tab is automatically filled in by the information given while setting up your Devolutions Server, the IIS Settings tab is used more as an informative source rather than configuration.

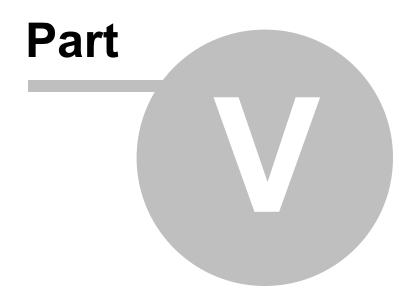


IIS Tab

SETTINGS

Force https	Force the use of the https instead of the http.
Encrypt web.config file	Activate this option if you wish to add an extra layer of security to your configuration by encrypting your file.

Web Interface



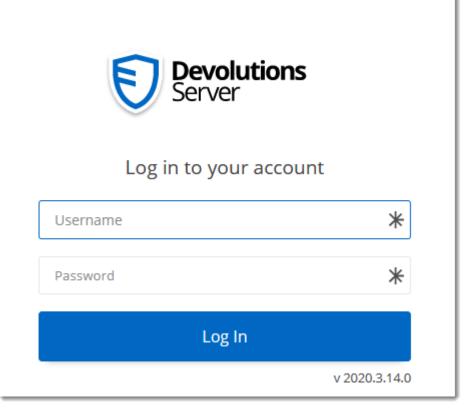
5 Web Interface

DESCRIPTION

The Devolutions Server web interface offers a simplified interface for end-users to use and manage passwords from any web browser.

LOGIN PAGE

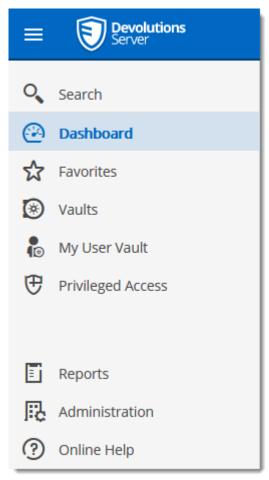
Open a web browser and navigate to the URL of the Devolutions Server instance. If the instance has been created with the default URL, it would be available at http://<ServerName>/dps. Simply enter the username and password of a Devolutions Server account to connect.



Devolutions Server - Login Page

MENU

The **Menu** allows the user to navigate through the different sections. It can be expanded or collapsed to hide the labels by clicking on the Devolutions Server icon the the top-left corner.

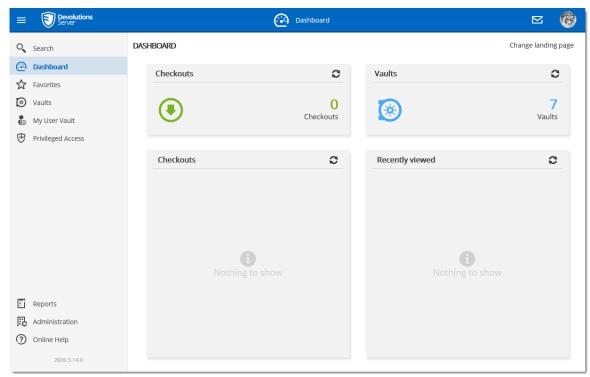


Menu

5.1 Dashboard

DESCRIPTION

The **Dashboard** section provides an overview of the available **Check Outs**, **Number of vaults**, **Recently viewed items**



Dashboard

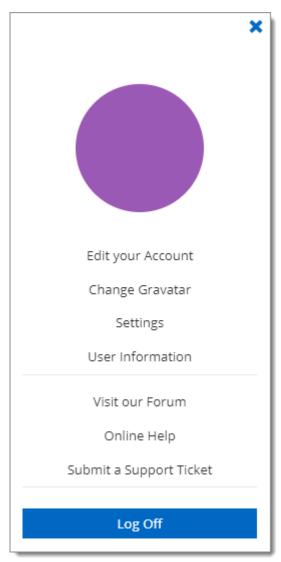
5.2 Account Menu

DESCRIPTION

Users manage their account: language preferences, personal information, Gravatar, as well as limited configuration of the web interface. The menu includes links to Devolutions Online Help and forum. Users log out of Devolutions Server from the **Account Menu**.

SETTINGS

Click the Gravatar or initials to access the **Account Menu**.

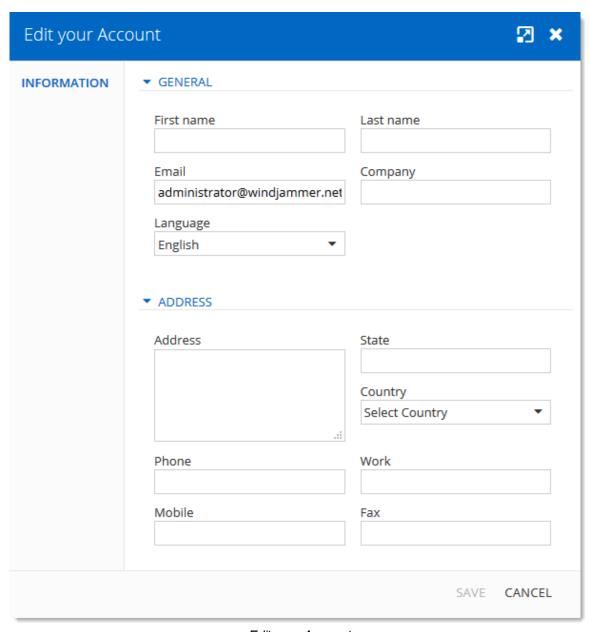


Account Menu

EDIT YOUR ACCOUNT

Set the language of the web interface.

Add or modify personal information.



Edit your Account

CHANGE GRAVATAR

The default user avatar is the user initials. Users can use an image uploaded at Gravatar.com.

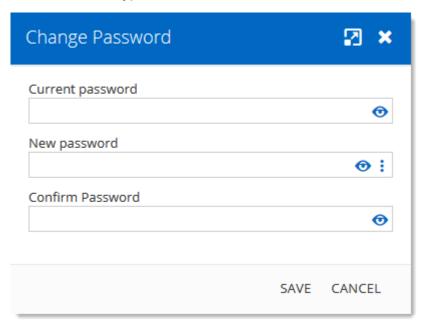
Enter the email associated with your Gravatar account.



Change your Avatar

CHANGE PASSWORD

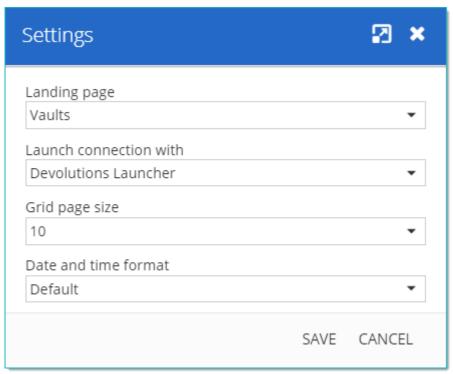
Allow the user to modify his password. Only available for Devolutions Server Custom or Database account type. Please see <u>Authentication</u> for more information.



Change Password

SETTINGS

Modify **User Interface** elements.



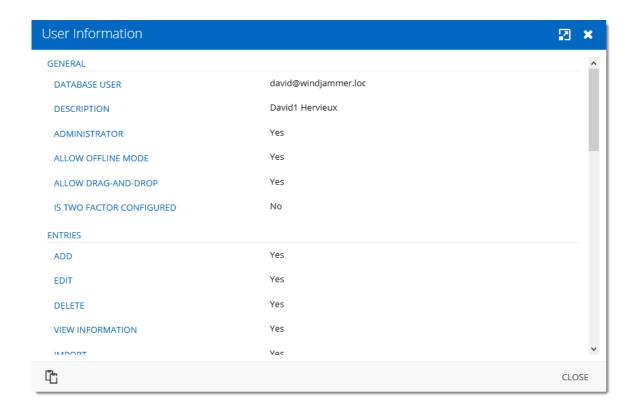
User Interface Settings

Landing page	Choose the home page that opens when you sign on: Dashboard Vaults My User Vault Reports Administration
Launch connection with	Choose the application that opens remote connections: • Default: refers to Devolutions Launcher • Remote Desktop Manager • Devolutions Launcher

	DESCRIPTION
Grid page size	Choose the number of rows displayed in lists (e.g. reports) • 10
	• 20
	• 30
Date and time	Choose a format:
	Default: month/day/year
	• US
	Custom

USER INFORMATION

Display the User Information report that contains the user account configuration.



VISIT OUR FORUM

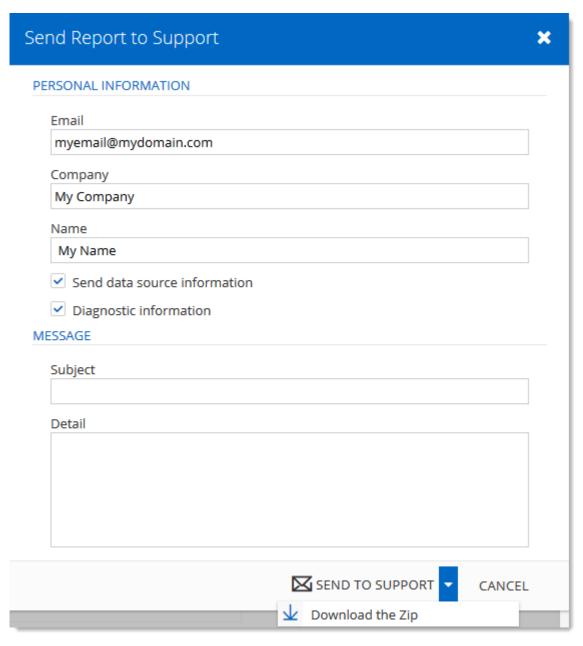
A link to our forum for support and feature requests.

ONLINE HELP

A link to our online user guides.

SUBMIT A SUPPORT TICKET

Submit the **Data Source Information** and **Diagnostic Report** to the Devolutions Support team.



Email	Provide your email address.
Company	Provide your company name.
Name	Provide your name.

Send data source information	When enabled, the Data Source Information report will be attached to the email.
Diagnostic information	When enabled, the Diagnostic report will be attached to the email.
Subject	Subject of the message.
Detail	Additional information or detail can be enter in the Detail section.
Send to Support	Will send this Report to Devolutions Support team.
Download the Zip	Allows to download the Report into a Zip file that can be saved on your local computer.
Cancel	Cancel the operation.

LOG OFF

Sign off from your account.

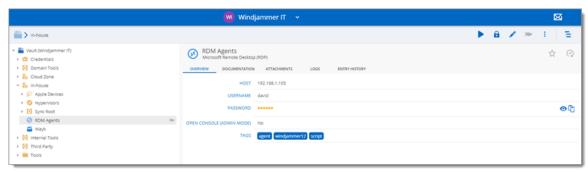
5.3 Vaults

DESCRIPTION

The **Vaults** allows the users to <u>create entries</u> and manage the content of the data source. Vaults are divided in two parts:

• The **Navigation Pane** (left) lists the entries available in the data source (current Vault).

• The Content Area (right) displays information regarding the selected entry.

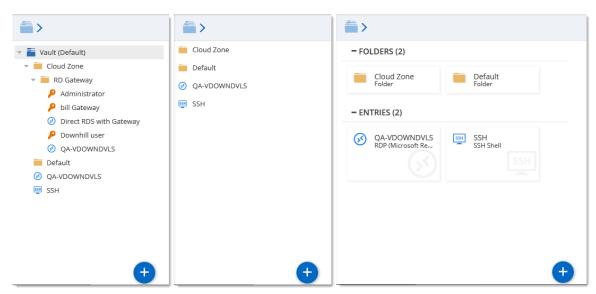


Vaults

NAVIGATION PANE

The **Navigation Pane** displays the entries available to the user. The **Navigation Pane** can display entries in three different manners:

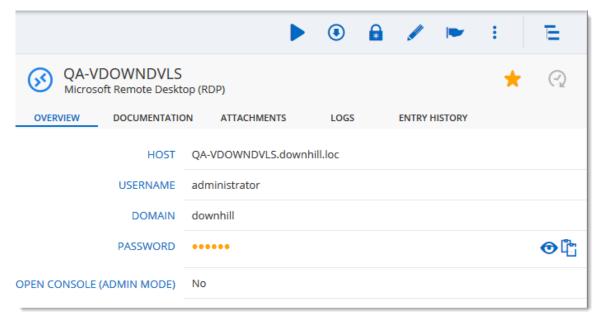
- Tree View
- List View
- Grid View



Navigation Pane - Tree View (left), List View (center) and Grid View (right)

DASHBOARD

The Content Area displays various information regarding the selected entry.



Entry Overview

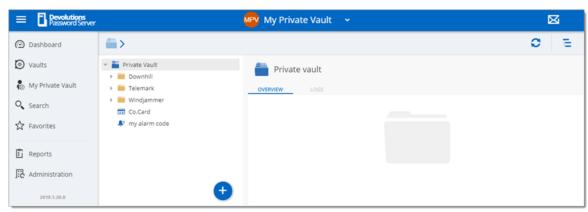
	DESCRIPTION
Open	Open the session (Devolutions Launcher required).
Check Out	Check Out the session.
View Password □	View the password of the selected entry.
Properties /	Edit the properties of the selected entry.
Status 💌	Edit the status of the selected entry.
More :	Display more options for the selected entry. • User Specific Settings • Save as Template • View Password History

	• Delete
Add to Favorites 🌣	Add the selected entry to favorites.
Statistics 🕢	Hover the icon to view who has created/modified the entry.
View Password [ூ]	Display the password of the selected entry.
Copy to clipboard 🖺	Copy the field of the selected entry (Usually Username or Password).

5.3.1 My User Vault

DESCRIPTION

The **User Vault** is a user centric **Vault** used to store private information, credentials and passwords. It allows each user to have their very own **User Vault**. The **User Vault** prevents users from using a non-secure tool to manage their personal passwords at work.



User Vault

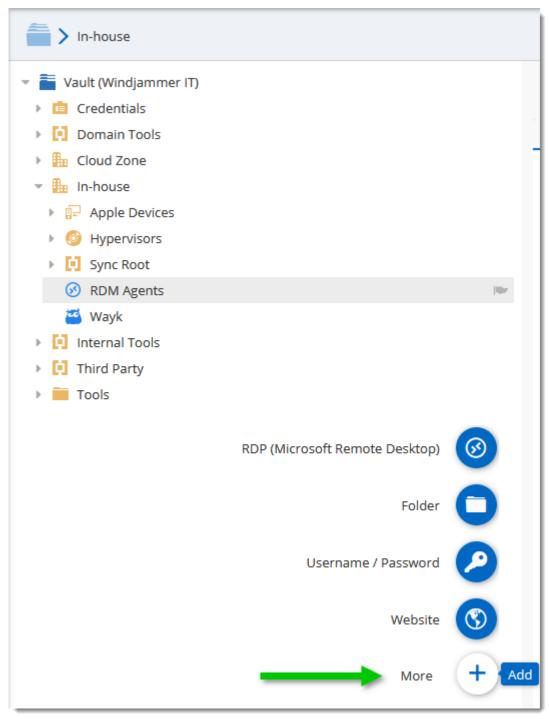
5.3.2 Create a New Entry

DESCRIPTION

Every item you see in your Vault and User Vault is an **Entry**. There are many type of entries that can be created directly in Devolutions Server web interface.

CREATING A NEW ENTRY

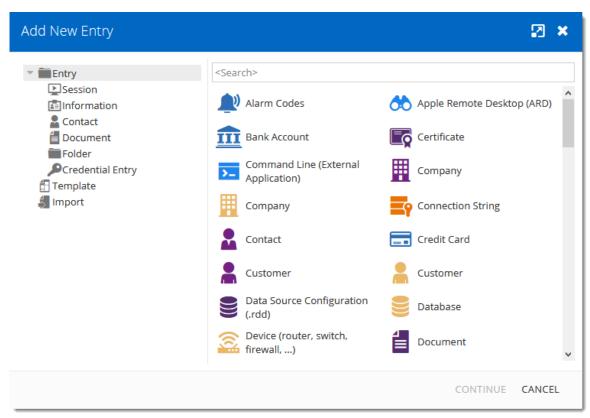
To create a new entry go in the Vaults page or User Vault page and then click on the **Add** button to create a new entry.



Add a new Entry

Moving the mouse over the **Add** button will display a list of shortcuts for common entries.

Entries come in various types, all serving different purposes for your convenience.



New Entry

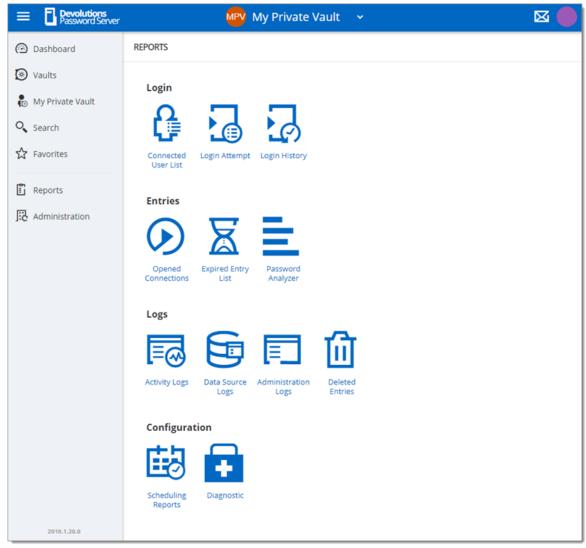
Session	Session type entries are used for connections.
Information	Information type entries are used to store all sorts of data, both sensitive or not.
Contact	Contact type entries are used to store information about particular individuals.
Document	Document type entries are used to store external files.
Folder	Folder entries are used to help you customize and compartmentalize your entries.
Credential Entry	Credential entries are used to store all sorts of credentials.

5.4 Reports

DESCRIPTION

The **Reports** is only available for administrators. It allows the administrator to consult different reports.

REPORTS



Reports

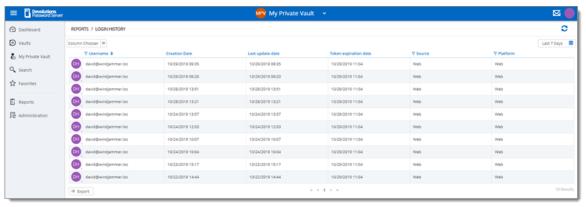
	DESCRIPTION
Connected User List	This displays the users that are currently connected to the Devolutions Server data source.
Login Attempt	This lists all unsuccessful logins to the Devolutions Server data source.
Login History	The displays the information of each user that has been connected to the Devolutions Server data source.
Opened Connections	This lists all connections that are currently opened by users.
Expired Entry List	This displays the entries that are expired or should expire in the future.
Password Analyzer	This lists all entries containing encrypted passwords and displays their Strength.
Activity Logs	The displays the information about session activity.
Data Sources Logs	This displays the logs of the Devolutions Server data source.
Administration Logs	This displays the Admin logs of the Devolutions Server data source.
Deleted Entries	This lists every entries deleted in the data source.
Scheduling Reports	With this feature, you can set dates, filters and various customized settings to schedule recurring reports over any desire period.
Diagnostic	This will present a data source diagnostic report.

REPORT CUSTOMIZATION

Most of the reports available can be customized. It is possible to filter or sort the data, choose specific columns or even export the report in a .CSV file.

FILTERING AND SORTING

In front of the column title, the **filter button** offers some built-in filter values.



Filtering and Sorting Reports

COLUMN CHOOSER

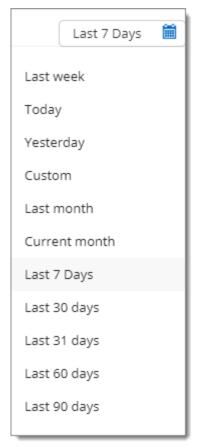
The **Column Chooser** button allows to select which columns will be displayed in the report.



Column Chooser selection Menu

TIME INTERVAL

Select the **Time Interval** on which the report will be based on.



Time Interval button

5.4.1 Configuration

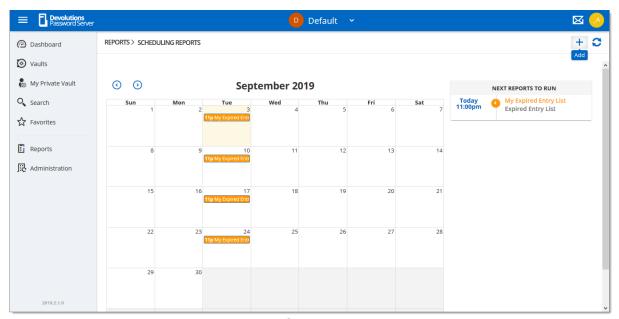
5.4.1.1 Scheduling Reports

DESCRIPTION

The Scheduling Reports will generate a report and send it by email to any selected user accounts. It could be an on demand report or a recurrent report based on a schedule (daily, weekly, monthly, yearly).

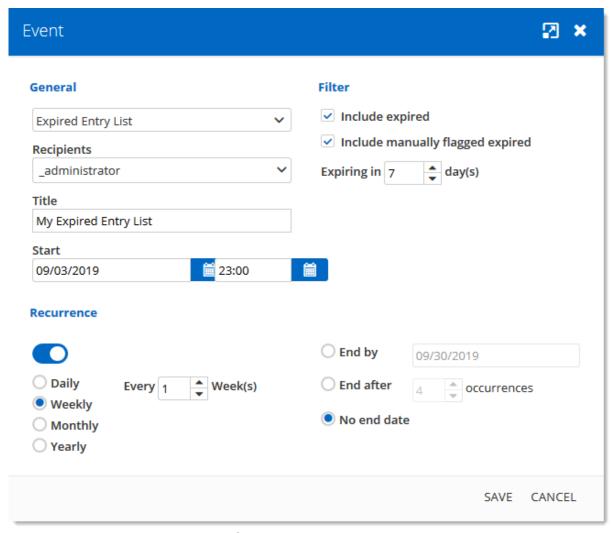
Only the Expired Entry List can be generated from the Scheduling Reports feature.

SETTINGS



Reports - Scheduling Reports

To create a new Scheduling Report, click on the Add button.



Scheduling Report creation

General options

Report type	Select the report type that will be generated. Only the Expired Entry List can be generated.
Recipients	Select all user accounts that will receive the report.
Title	Set the title of the report.

Start	Set the date and time when the report will be created.

Filter options

Include expired	Select this option to get all entries that are already expired in the report.
Include manually flagged expired	Select this option to get all entries that have been manually set to expire in the report.
Expiring in days	Set this option to get all entries that will expire in X days in the report.

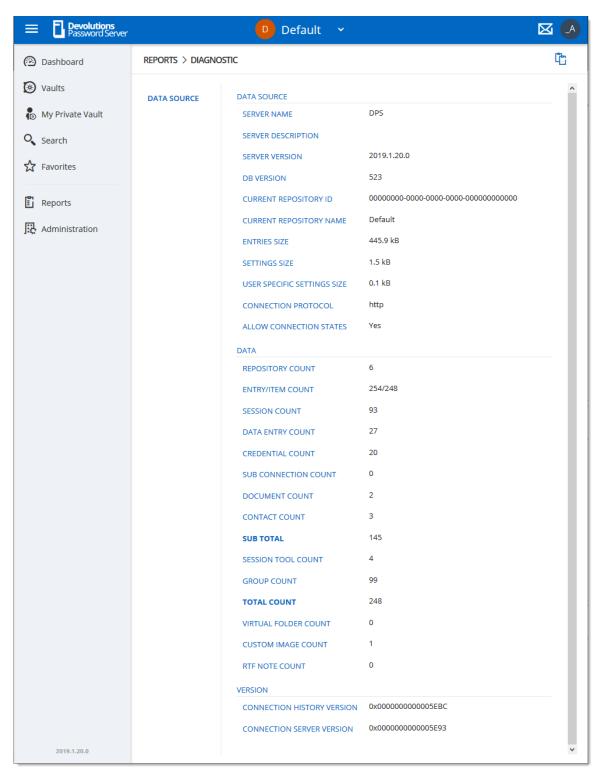
Recurrence options

Daily, Weekly, Monthly, Yearly	Set the recurrence for this report.
Every	Set the the number for the recurrence.
End by	Set this option and the date to stop the report at a specific moment.
End after occurrences	Set this option to run this report a specific number of times.
No end date	Set this option to get the report running indefinitely.

5.4.1.2 Diagnostic

DESCRIPTION

The Diagnostic report contains information such as the Devolutions Server and database version, the number of entries, the size of the data, etc. This report could be useful for troubleshooting or simply as an indication of your Devolutions Server content.

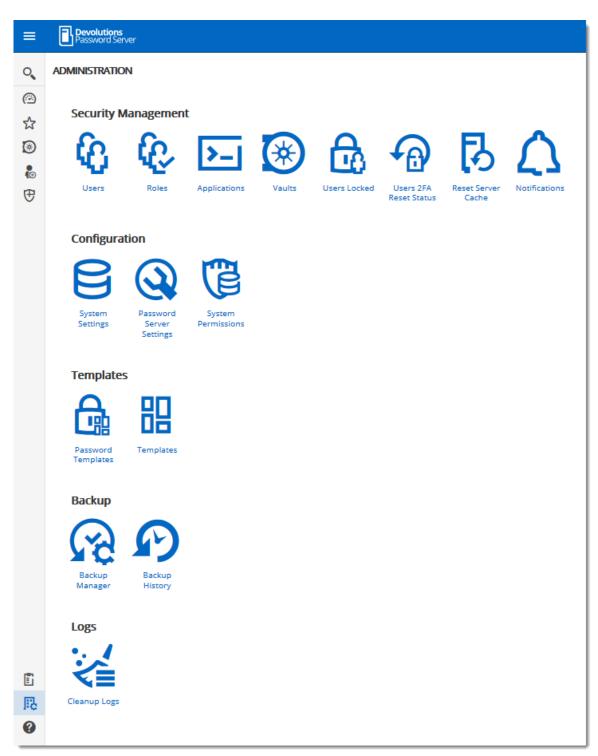


Reports - Diagnostic

5.5 Administration

DESCRIPTION

The **Administration** section is <u>only available for administrators</u>. Here you can find the various necessities to probably manage and customize your settings, ranging from security to the Backup system.



Administration

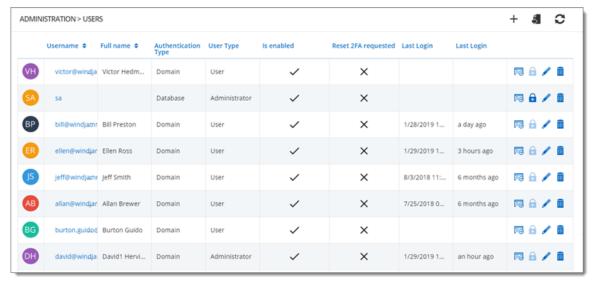
5.5.1 Security Management

5.5.1.1 Users

DESCRIPTION

Users is where you can create, import and manage users. To access the user management, navigate to **Administration** – **Users**. Click on a user to configure specific settings and permissions.

SETTINGS

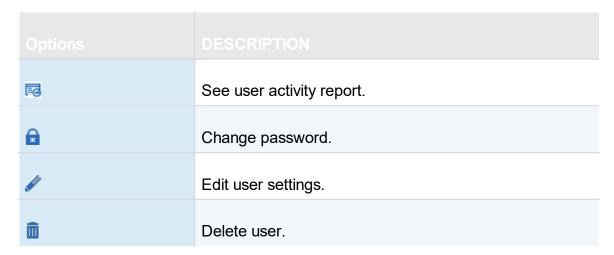


Administration - Users

GLOBAL OPTIONS

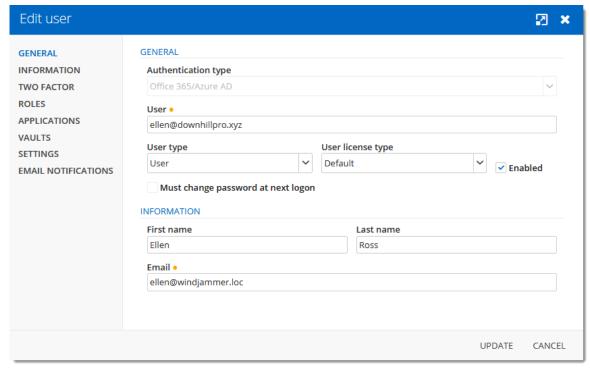
+	Add a user.
6	Import users from LDAP.
c	Refresh users list.

USER OPTIONS



5.5.1.1.1 General

DESCRIPTION



Edit Users - General

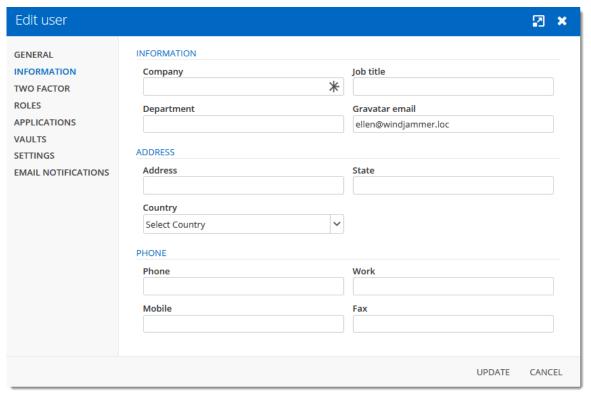
	DESCRIPTION
Authentication type	 Select the user's authentication type: Custom (Devolutions): create a user in Devolutions Server without creating an SQL login. Domain: authenticate using the Active Directory user account. Database (SQL Server): authenticate using the SQL login from your SQL Server.
User (required)	Enter the user login name.
User type	 Choose the user type: Administrator: grant full administrative rights to the user. Read only user: grant only the View access to the user. Restricted user: select which rights to grant to the user. User: grant all basic rights to the user (Add, Edit, Delete).
User license type	Select the type of the license that the user has: • Default: Connection Management. • Connection Management: for users who open remote connections. • Password Management: for users who only use Devolutions Server as a password manager.
Enabled	Check to activate the user.
Must change password at next	Check to force the user to change the password next time they log on.

logon	
First name	Enter the user's first name.
Last name	Enter the user's last name.
Email (required)	Enter the user's email address.

5.5.1.1.2 Information

DESCRIPTION

The **Information** section is for optional information.



Edit User - Information

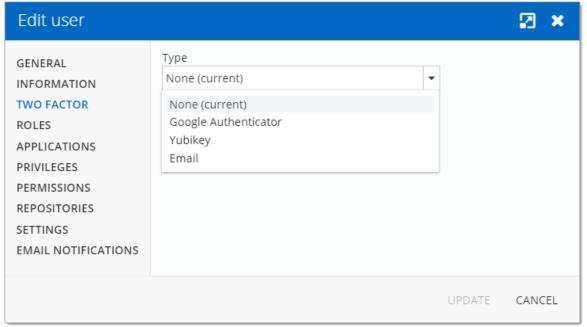
5.5.1.1.3 Two Factor

DESCRIPTION

If you set two-factor authentication as <u>optional per user in Devolutions Server Settings</u>, you then need to configure which 2FA method to use.

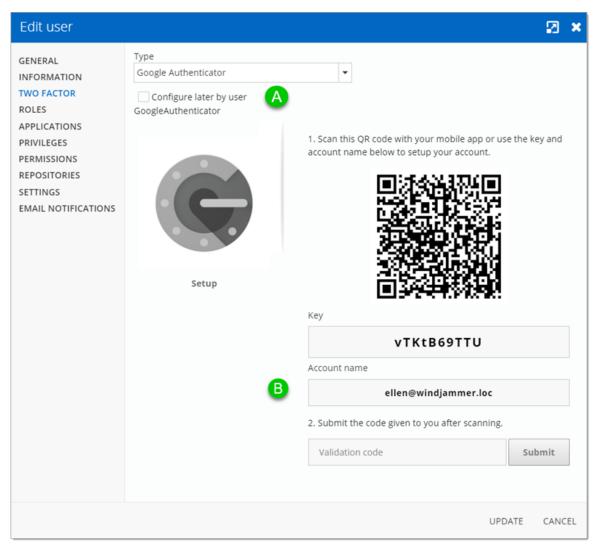
SETTINGS

1. Select the users 2FA **Type** from the list.



Edit User - Two Factor

2. Choose if you **(a)** want the user to configure the 2FA next time they log in or **(b)** complete the set up now.

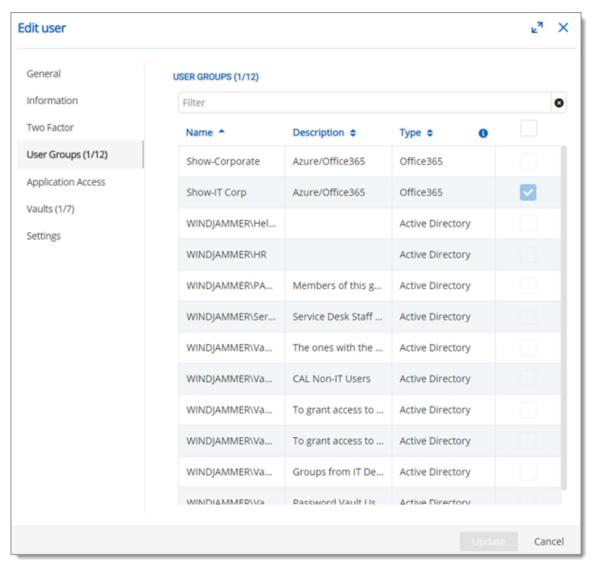


Edit User - Two Factor

5.5.1.1.4 User Groups

DESCRIPTION

Assign users to a **User Groups**.



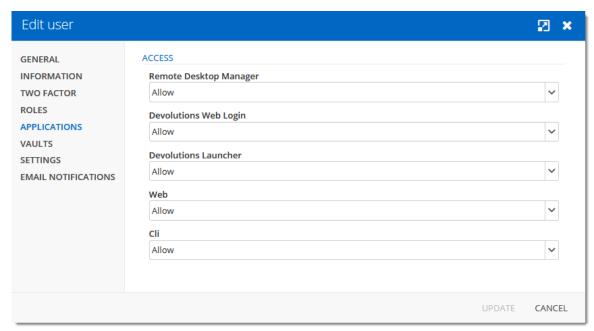
Edit User - User Groups

User Groups	Check the Is Member box to assign the user group to the user. Consult User Groups topic for more information.

5.5.1.1.5 Applications

DESCRIPTION

Allow or deny the user access to different applications and companion tools:



Edit User - Applications

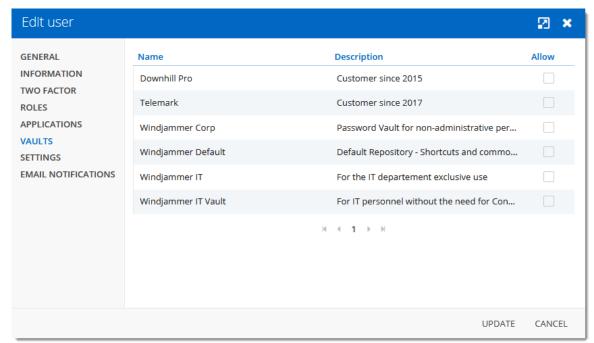
	Allow user to access Devolutions Server through Remote Desktop Manager.
Devolutions Web Login	Allow user to auto fill username and passwords on websites with Devolutions Web Login.
	Allow user to open remote connections with Devolutions Launcher.
	Allow user to use Devolutions Server web interface.
	Allow user to use the Cli.

5.5.1.1.6 Vaults

DESCRIPTION

Select which vaults the user has access to.

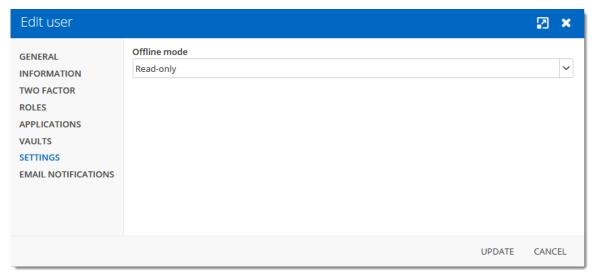
For more information, please consult the vaults topic.



Edit User - Vaults

5.5.1.1.7 Settings

DESCRIPTION



Edit User - Settings

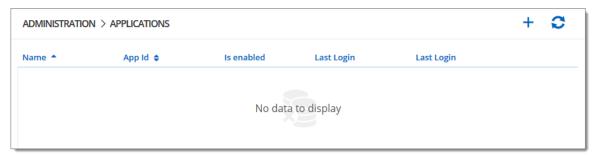
Allow the user to enable <u>Offline Mode</u> on the data source. The data source also needs to be configured to permit offline mode. There are 4 modes available:

Disabled	No offline cache allowed for the user.
Cache only	Allow to save a cache of the data source but not the offline mode.
Read-only	A read-only cache. The user will not be able to edit data in the data source. This mode is allowed for <u>Advanced Data Sources</u> only.
Read/Write	An advanced cache, with change synchronization. This mode is allowed for Advanced Data Sources only.

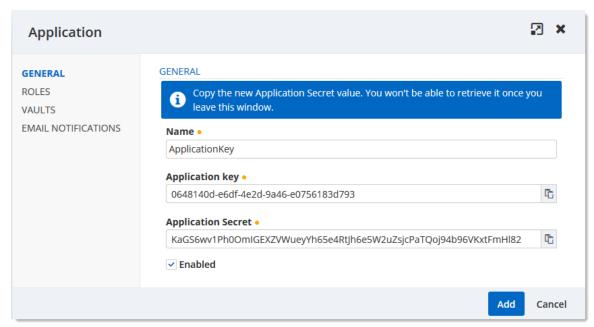
5.5.1.2 Applications

DESCRIPTION

The Applications section will allow to create an application key to communicate with Devolutions Server through the API SDK.



Administration - Applications



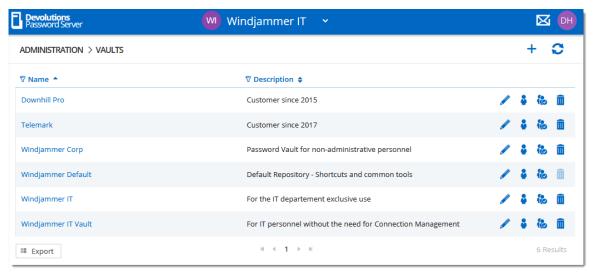
Administration - Applications - New Application

Name	Display name of the Application key.
Application key	Application key to be use in the application to communicate with Devolutions Server instance.
Application Secret	Secret key to be use in combination with the Application key. Available only on Application key creation.
Enabled	Activate the Application key.

5.5.1.3 Vaults

DESCRIPTION

The **Vaults** management allows to create and manage **Vaults**. To access the **Vaults** management, navigate to **Administration – Vaults**.



Administration - Vaults

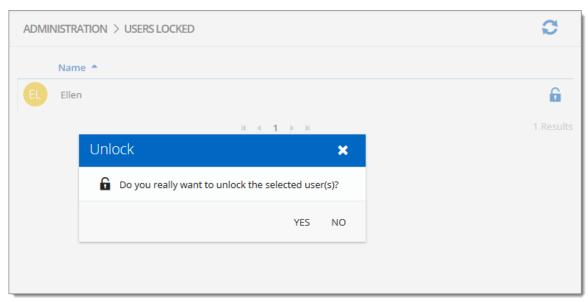
5.5.1.4 Users Locked

DESCRIPTION

The **Users Locked** allows to manage user accounts that has been locked after too many failed log in attempts. To access the **Users Locked** list, navigate to **Administration – Users Locked**



Administration - Users Locked



Unlock user account

5.5.1.5 Users 2FA Status

DESCRIPTION

The **Users 2FA Status** section displays user accounts that have requested a 2FA reset. To access the list of users that ask for a 2FA reset, navigate to **Administration** – **Users 2FA Status**.



Administration - Users 2FA Reset Status



User 2FA Reset operation

5.5.1.6 Reset Server Cache

DESCRIPTION

Reset the **Server Cache** for specific elements.

ADMINISTRATION > RESET SERVER CACHE	
GENERAL	☐ Entries
	Roles
	Domain
	Office365
	Users
	Reset
	110.20.6

Administration - Reset Server Cache

	DESCRIPTION
Entries User Groups Vaults Users	When selecting one of those options, when resetting the cache, it will pull back all the information from the database and put the information in the server's memory cache.
Domain Office365	When resetting the Domain or the Office365 cache, it will wipe out the information saved in the database and will reload all the users and groups memberships pulled from Active Directory or from Azure AD.

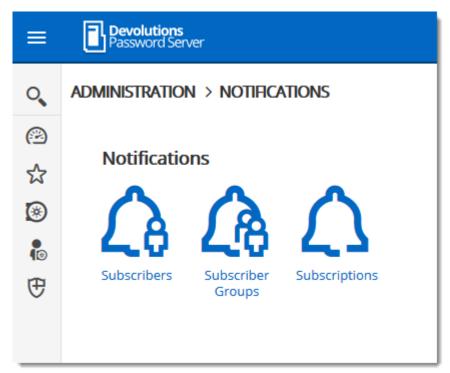
5.5.1.7 Notifications

DESCRIPTION



The <u>Email</u> feature must be enabled and properly configured to get the Notifications working.

With Devolutions Server, it is possible to get email notifications based on user activities with the Notification features.



Notifications

To get the Notification working, at least a <u>Subscriber</u> and a <u>Subscription</u> need to be created. It is also possible to regroup Subscribers in <u>Subscriber Groups</u> to send notifications to a group of subscribers.

The following sample represents a notification email that has been received for an entry creation.



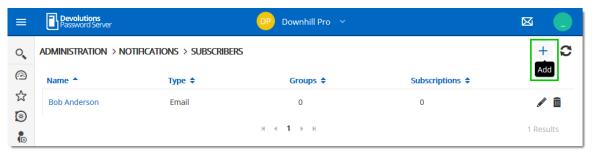
Email notification sample

5.5.1.7.1 Subscribers

DESCRIPTION

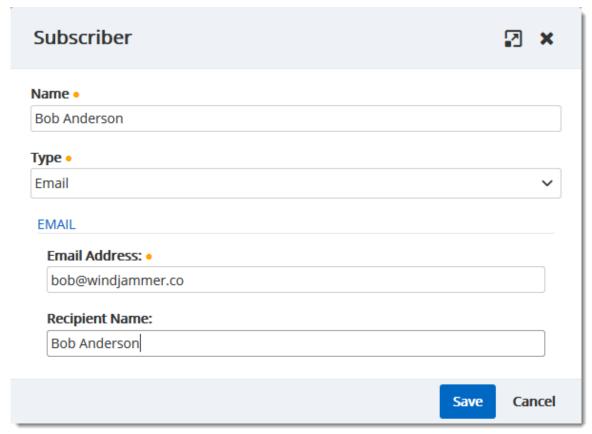
At least, one subscriber must exist to receive notifications about Devolutions Server activities.

To create a new Subscriber, click on the Add button.

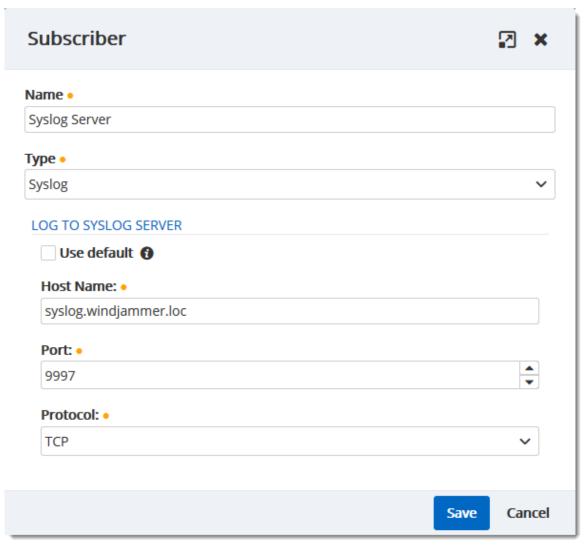


Create a Subscriber

Fill in the information in the following fields.



Email Subscriber properties



Syslog Server Subscriber properties

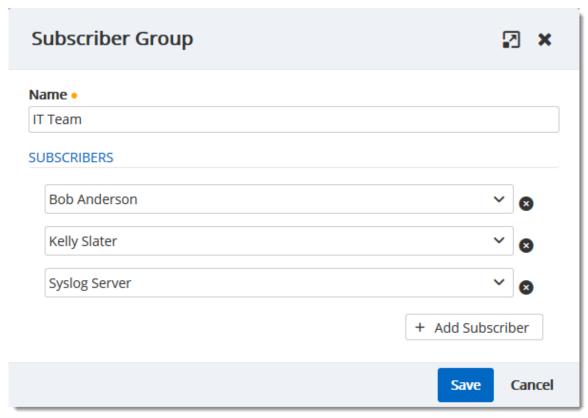
Name	Display of the Subscriber.
Туре	 Email: The notification will be sent to an email address. Email Address: Valid email address. Recipient name: Email recipient name.

 Syslog : The notification will be sent to a syslog server.
 Use default: Will use the Syslog server configuration set in <u>Logging</u>.
o Host name: Host name of the Syslog server.
o Port: Port of the syslog server.
 Protocol: Protocol (TCP or UDP) to communicate with the Syslog server.

5.5.1.7.2 Subscriber Groups

DESCRIPTION

The Subscriber Groups can be used to regroup <u>Subscribers</u> and allow to send <u>Subscriptions</u> to a group of people and/or syslog servers.

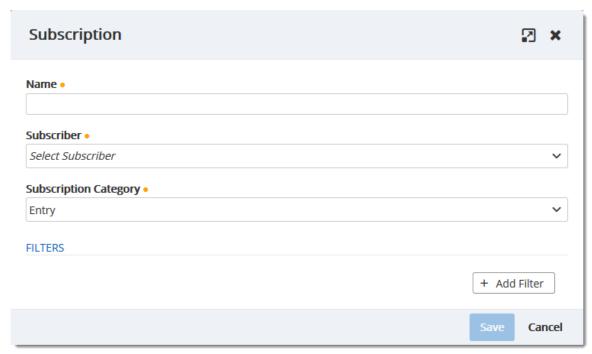


Subscriber Group properties dialog

Name	Name of the Subscriber Group.
Subscribers	List of subscribers that are member of the subscriber group. users and Syslog subscribers can be added in a subscriber group.

5.5.1.7.3 Subscriptions

The subscriptions are intended to send email according to activities on Devolutions Server. It could be activities on entries, user accounts, system settings, etc.



Subscription properties dialog

	DESCRIPTION
Name	Name of the Subscription.
Subscriber	One subscriber that will receive the notifications from the current subscription. A subscriber or a subscriber group can be selected.
Subscription Category	Category of the subscription. This can be one of the following possibilities.
	• Entry
	User Vault
	User Groups
	PAM Privileged Account
	FAIVI FIIVIIEGEU ACCOUNT

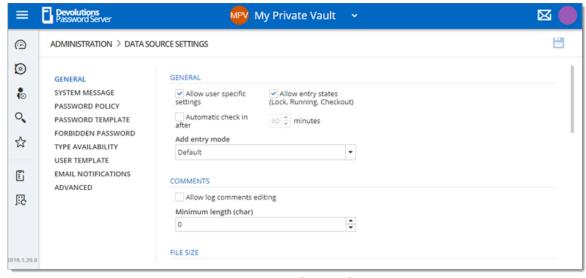
	PAM Provider
	PAM Checkout
	PAM Folder
	System Settings
Filters	The filters are tied to the subscription category and each of them has their own filters. You can add a filter with the Add Filter button. Be aware that the filters are cumulative.

5.5.2 Configuration

5.5.2.1 System Settings

DESCRIPTION

The System Settings allow the administrators control many global aspects of the Devolutions Server data source. Manage settings such as Password policy, Password Template, Type Availability, etc.

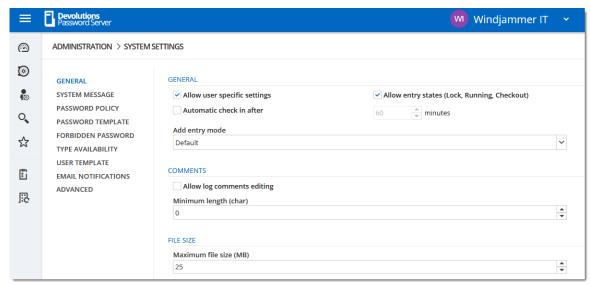


Administration - System Settings

5.5.2.1.1 General

DESCRIPTION

The General section of the System Settings allow the administrators to apply general policies for the whole data source.



Administration - System Settings - General

	DESCRIPTION
Allow user specific settings	Allow users to save User Specific Settings.
Allow entry states (Lock, Running, Checkout)	Allow entries to be locked when used or edited.
Automatic check in after	
Add entry mode	Select if users are prompted to choose a template when creating a new entry. Select between: • Default • Template list (include blank) • Template list only

No template selection

Allow log comments editing	Enable the log comment editing for all users.
Minimum length (char)	Minimum length in character for the comment.

Maximum file size (MB)	Limit the size of attachments and document entries to avoid to over load the data source.

Allow favorites	Allows to flag entries as favorites.
	DESCRIPTION
Allow User Vault	Allow users to use the <u>User Vault</u> .
Log User Vault activities	Include the logs of the <u>User Vault</u> for all users of the data source.
Allow credential repository in User	Allow credential repository for sessions in the <u>User</u> <u>Vault</u> .

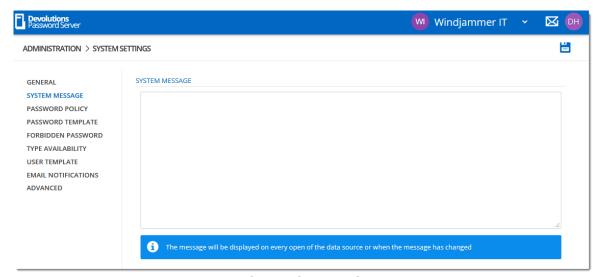
Vault	

Use legacy security	Enable the legacy security
Time Zone	Select the time zone you are currently in.
Days	 Select which days the session is available for. Select between: Any day: the session can be used any day of the week or week-end. Week days: the session can be used only the week days. Week ends: the session can be used only the week ends. Custom: manually select each day the session is available for.
Time of day	Select the hours which the session is limited to. Select between: • Any time: the session can be used at any hour. • Custom: manually select the time frame the session is available for.

5.5.2.1.2 System Message

DESCRIPTION

The **System Message** allows to set a message that will be displayed every time a user connects on the Devolutions Server data source no matter which method will be used (web interface, Remote Desktop Manager).

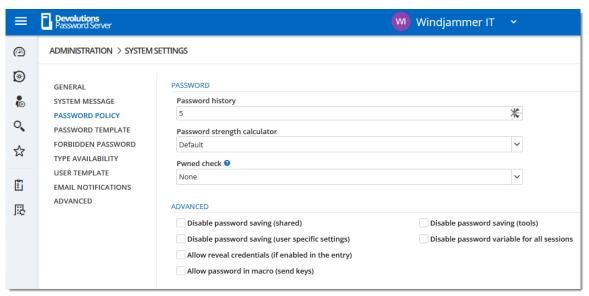


Administration - System Settings - System Message

5.5.2.1.3 Password Policy

DESCRIPTION

The **Password Policy** settings allow to set the minimal requirements for passwords that will be saved in the entries.

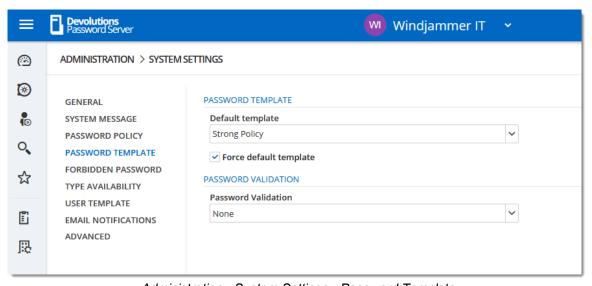


Administration - System Settings - Password Policy

	DESCRIPTION
Password History	Indicate the maximum saved password to keep in history.
Password strength calculator	Select the tool to use to analyze the password strength.
Pwned check	Verify if the used passwords have already been exposed to data breaches.
Disable password saving (shared)	Prevent users from saving passwords in entries.
Disable password saving (user specific settings)	Prevent users from saving passwords in the User Specific Settings.
Allow reveal credentials (if	Shows the credentials if the box "Allow show credentials (everybody)" is check inside the entry.

	DESCRIPTION
enabled in the entry)	
Allow password in macro (send keys)	Renders the \$MACRO_PASSWORD\$ variable useless for this data source.
Disable password saving (tools)	Prevent users from saving passwords in the Tools tab of a session.
Disable password variable for all sessions	Renders the \$PASSWORD\$ variable unusable for this data source.

5.5.2.1.4 Password Template



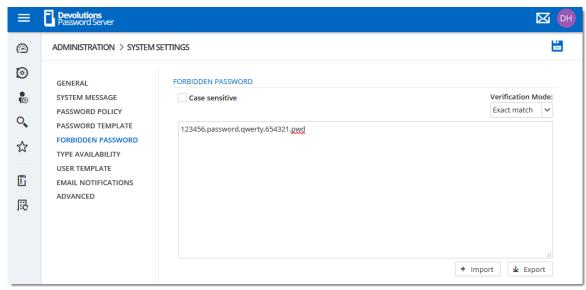
Administration - System Settings - Password Template

SETTINGS

Password Validation	Select a password template to use. Consult the Password Template page for more information.
Force default template	Enforce the default template.
Password Template	 None: No password templates will be used on password creation. Required: On password creation, the user will get a warning that the password doesn't meet the Password Template rules. The user cannot save the password. Warning: On password creation the user will get a warning that the password doesn't meet the Password Template rules. The user can save the password.

5.5.2.1.5 Forbidden Password

Forbidden Passwords allow to create a list of blacklisted passwords to forbid usage in the application. Once set in this list, <u>the password cannot be used anymore</u> in the Devolutions Server data source.

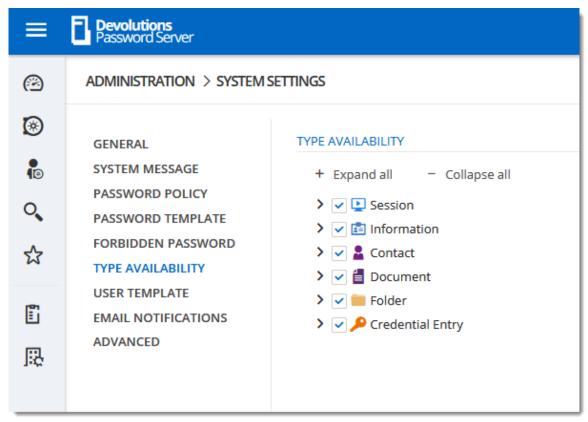


Administration - System Settings - Forbidden Password

Case sensitive	Make the verification mode case sensitive.
Verification mode	Select the verification mode between: Contains: the password will be forbidden if it contains a word in the blacklist. Exact match: the password will be forbidden if it matches a word in the blacklist.
Import	Import a list from your computer (*.pwd or .txt).
Export	Export your forbidden password list. By default the list will be exported in a password file format (.pwd).

5.5.2.1.6 Type Availability

This section will allow to control the availability of the session, information, contact, document, folder, credential entry in Devolutions Server data source. Each section contains different entry types you can choose to be available.

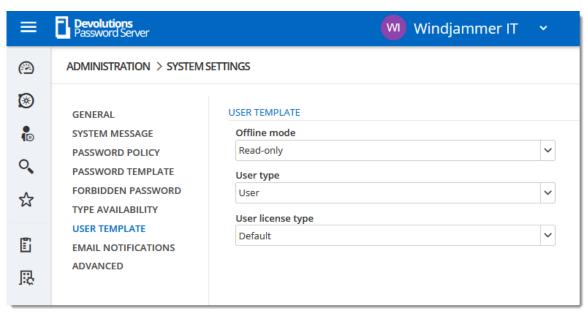


System Settings - Type Availability

5.5.2.1.7 User Template

DESCRIPTION

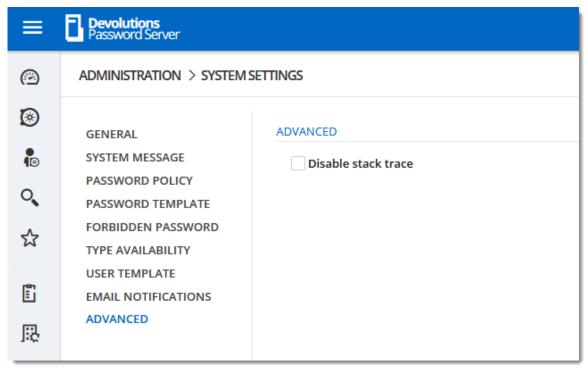
This section will set the user template for the <u>Automatic User Creation</u> feature.



System Settings - User Template

	DESCRIPTION
Offline mode	This option will only affect Remote Desktop Manager application. The possible values are : • Disabled • Read only • Read/write
User type	The possible values are : • Administrator • User • Read only user
User license type	Select if users are prompted to choose a template when creating a new entry. Select between: • Default • Connection Management • Password Management

5.5.2.1.8 Advanced

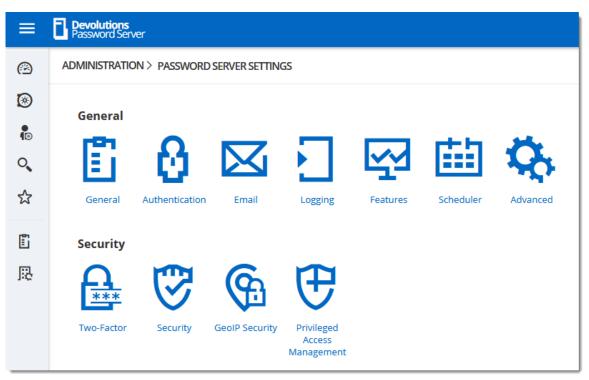


Administration - System Settings - Advanced

5.5.2.2 Devolutions Server Settings

DESCRIPTION

The **Devolutions Server Settings** page allows to manage the Devolutions Server configuration remotely.



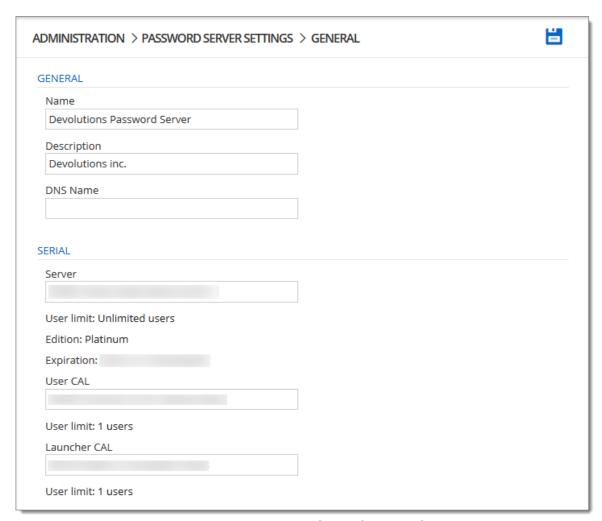
Administration - Devolutions Server Settings

5.5.2.2.1 General

5.5.2.2.1.1 General

DESCRIPTION

The **General** section allows the Administrator to modify the name or the description of the Devolutions Server instance.



Administration - Devolutions Server Settings - General

SETTINGS

GENERAL

Name	Enter the name for your server, it will be displayed in the Content area.
Description	Enter a short description or additional information.

DNS Name	Name of the DNS server.

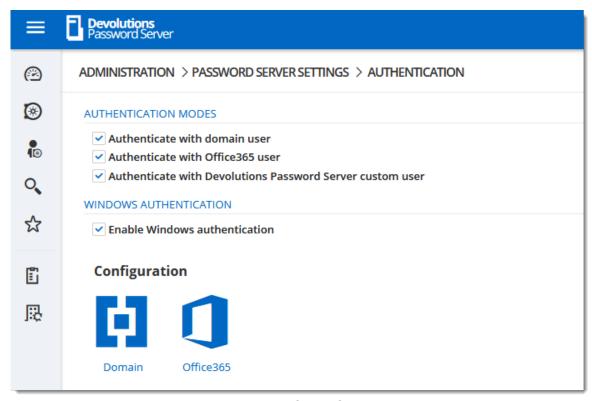
SERIAL

Serial	Insert your serial registration number.
User CAL	Insert your Client Access License keys.
Launcher CAL	Insert your Launcher License keys.

5.5.2.2.1.2 Authentication

DESCRIPTION

The **Authentication** section allows the Administrator to select which authentication types will be used to connect on Devolutions Server.



Adminsitration - Devolutions Server Settings - Authentication

SETTINGS

AUTHENTICATION MODES

	DESCRIPTION
Authenticate with domain user	The domain is used to authenticate the user.
Authenticate with Office365 user	AzureAD is used to authenticate the user.
Authenticate with Devolutions Server custom user	The Devolutions Server is used to authenticate the user. You must create the initial user through the console.

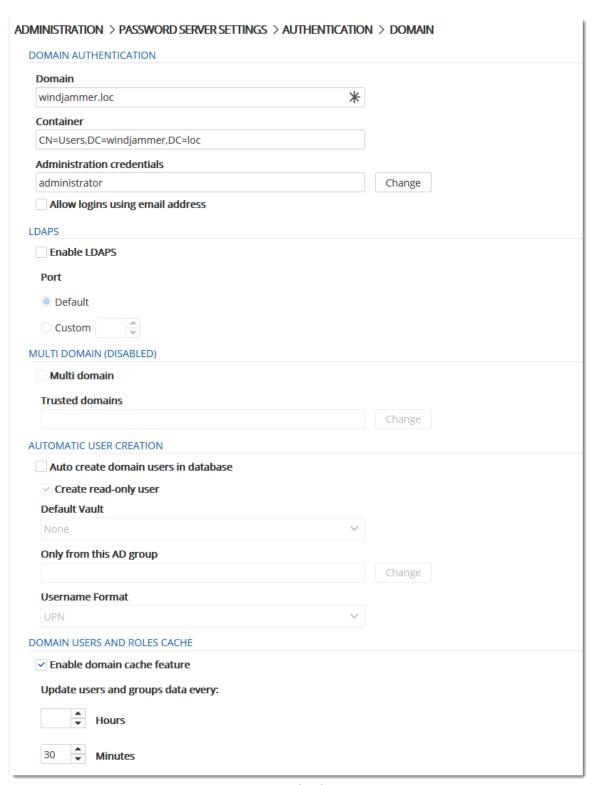
Enable Windows authentication	The application will use the current Windows authenticated user to authenticate to the Devolutions Server instance.

CONFIGURATION

Domain	Configure the <u>Domain</u> type.
Office365	Configure the Office365 type.

DESCRIPTION

The domain is used to authenticate the user. This is the most secure, flexible and easiest to manage. No need to sync users between the domain and Devolutions Server. On first use of the Devolutions Server data source, the user will be created and be given access rights according to their role in the organization as defined on the domain. You simply need to grant appropriate permissions to your user groups in Devolutions Server. Upon authentication we will validate the AD groups to which the user belongs and for any that have a corresponding user group we will grant the permissions to the user.



Authentication - Configure Domain

SETTINGS

DOMAIN AUTHENTICATION

Domain	Specify the remote computer domain name.
Container	Specify the Active Directory Organizational Unit (OU) or Group to restrict the search in a specific area in the Active Directory structure. The format must be the distinguished name (CN=Users,DC=windjammer,DC=loc).
Administration credentials	Add the credentials of a domain or service account to access the Active Directory forest and obtain user account information through LDAP queries. This account needs to be able to retrieve user account information and group memberships. It may requires higher privileges than being part of the Domain Users built-in Active Directory group. In most case, it should be sufficient.
Allow logins using email address	Allow users to use their email address to connect to the Devolutions Server instance. The email address field must be filled in the User Management.

LDAPS

Enable LDAPS	Enable the LDAP over SSL communication.
Port	Default : LDAPS default communication port.

Custom: Set a specific port value.

MULTI DOMAIN (DISABLED)



The Multi Domain feature requires the Devolutions Server Platinum Edition license. Currently, it is only working with trusted domains that belong to the same AD Forest.

Multi domain	Enable the Multi domain feature.
Trusted domains	Add your trusted domains.

AUTOMATIC USER CREATION

Auto create domain users in database	Automatically create the domain user account in the the database on the first login attempt.
Create read-only user	When this option is enabled, the user account will be created as a Read only user type account.
Default Vault	Will give access to that Vault to the user.
Only from this AD group	Will create automatically the user only if he is a member of this AD group.

Username Format	Select the username format that will be created in the database.
	UPN: The user will be created using the UPN format ex: bill@windjammer.loc.
	NetBios: The user will be created using the NetBios format ex: WINDJAMMER\bill.
	Username: The user will be created using the SAM account name.

DOMAIN USERS AND USER GROUPS CACHE

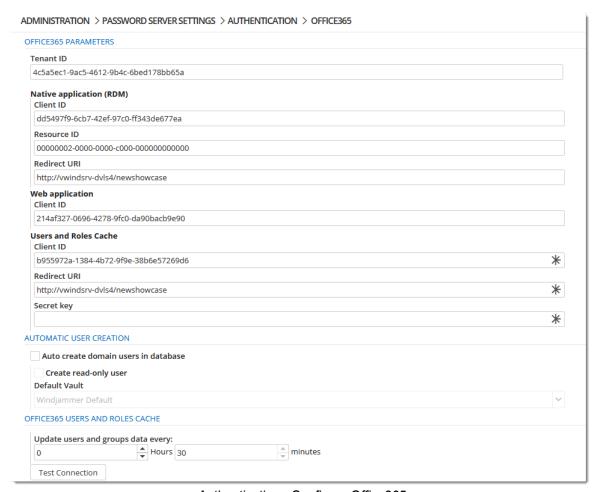
Enable domain cache feature	Activate the domain cache feature.
Update users and groups data every:	Set the hours and minutes period that the Domain Users and User Groups Cache will be refreshed. When enable, the default value is set to 30 minutes.

DESCRIPTION



Microsoft Azure Active Directory subscription is required to configure Office365 authentication in Devolutions Server. You need to create three new app registrations in Microsoft Azure Active Directory before completing the authentication settings. For more information about the app registrations, see Azure portal configuration guide for Office 365 authentication.

The **Office365** tab allows Devolutions Server to authenticate users using **Office365 authentication**. All fields are mandatory.



Authentication - Configure Office365

SETTINGS

OFFICE365 PARAMETERS

Tenant ID	The TenantID is the Directory ID of the Azure Active Directory.

NATIVE APPLICATION (RDM)

Client ID	Application ID of the Azure AD application.
Resources ID	resourceAppid from the Manifest of the Azure AD application.
Redirect URI	Redirect URI from the Azure AD application.

WEB APPLICATION

Client ID	Application ID from the web app section of the Azure AD application.

USERS AND USER GROUPS CACHE

Client ID	Application ID of the Azure AD application.
Redirect URI	Redirect URI from the Azure AD application.
Secret Key	Key from the Password generated in Settings - Keys of the Azure AD application.

AUTOMATIC USER CREATION

Auto create domain users in database	Automatically create the Office365 user account in the database on the first login attempt.
Create read-only user	Set the user account as a read-only account.
Default Vault	Will give access to that Vault to the user.

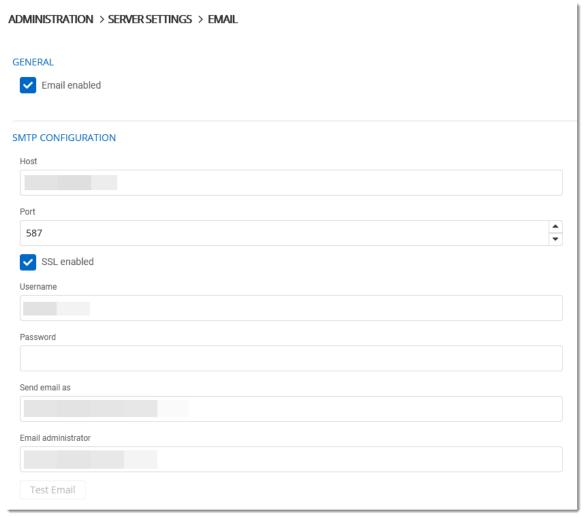
OFFICE365 USERS AND USER GROUPS CACHE

Update users and groups data every:	Set the hours and minutes period that the Office365 Users and User Groups Cache will be refreshed. Default value is set to 30 minutes.

5.5.2.2.1.3 Email

DESCRIPTION

Emails are sent by our Notification engine and by some of our 2 factor authentication providers.



Administration - Devolutions Server Settings - Email

SETTINGS

GENERAL

Email enabled	Enable the Email feature.

SMTP CONFIGURATION

Host	Name or IP address of the SMTP server.
Port	Set the SMTP server port.
SSL enabled	Specifies whether to use Secure Sockets Layer (SSL) to encrypt the connection. Please see Note 1 for important information.
Username	Enter your username to connect to your SMTP server.
Password	Enter your password to connect to your SMTP server.
Send email as	Sender email address.
Email administrator	Recipient email address that will receive the errors.
Test Email	Test your email settings.

NOTE 1

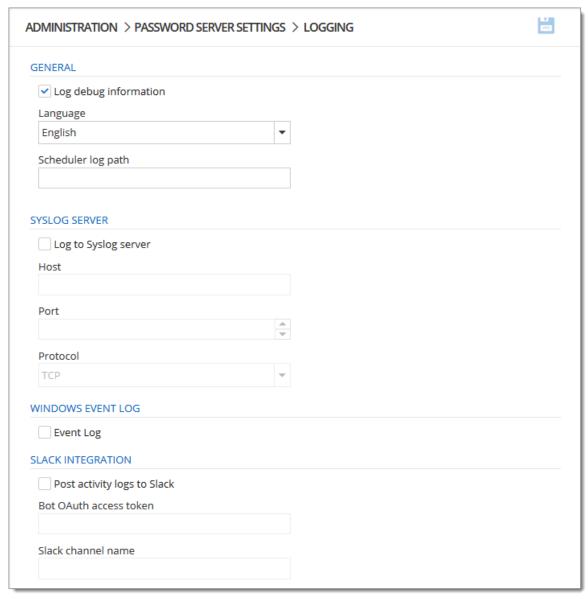
Devolutions Server only supports the **SMTP Service Extension for Secure SMTP over Transport Layer Security** as defined in RFC 3207. In this mode, the SMTP session begins on an unencrypted channel, then a **STARTTLS** command is issued by the client to the server to switch to secure communication using SSL.

An alternate connection method is where an SSL session is established up front before any protocol commands are sent. This connection method is sometimes called **SMTP/SSL**, **SMTP over SSL** or **SMTPS** and by default uses port 465. This alternate connection method using SSL is not currently supported.

5.5.2.2.1.4 Logging

DESCRIPTION

The **Logging** section allows the administrator to configure the logging features.



Administration - Devolutions Server Settings - Logging

GENERAL

Log debug information	Enable the Devolutions Server instance logs. When enabled, this will raise the debug level and provide more log entries.
Language	Choose the language of the logs.
Scheduler log path	Set the destination path of the log file.

SYSLOG SERVER

Log to Syslog server	Send the logs to a Syslog Server.
Host	Enter your Syslog Server host to connect.
Port	Enter your Syslog Server port to connect.
Protocol	Select your preferred Protocol mode between: • TCP
	• UDP

WINDOWS EVENT LOG

Event Log	Send the logs to Windows Event Log.

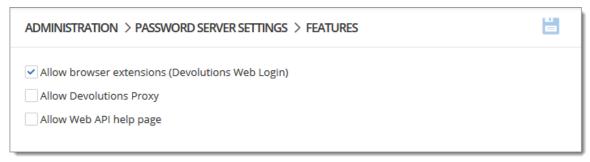
SLACK INTEGRATION

	DESCRIPTION
Post activity logs to Slack	Post the logs in a Slack channel.
Bot OAuth access token	Slack authentication access token.
Slack channel name	Name of the Slack channel where the logs will be posted.

5.5.2.2.1.5 Features

DESCRIPTION

The **Features** section section allows the administrator to configure the web interface features.



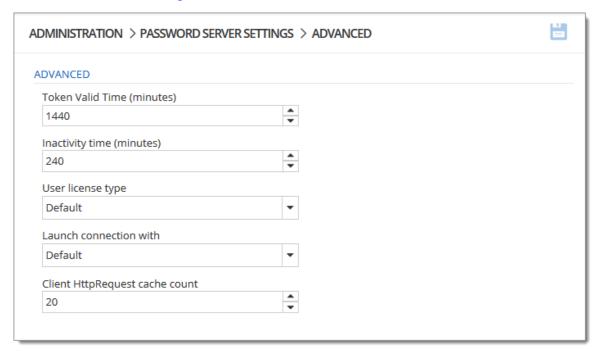
Administration - Devolutions Server Settings - Features

Allow browser extensions Devolutions Web Login)	Allow to save credentials in the Devolutions Server instance with Devolutions Web Login.
Devolutions Proxy	Enable the Devolutions Proxy feature.
Allow Web API help page	

5.5.2.2.1.6 Advanced

DESCRIPTION

The **Advanced** section allows the administrator to configure the **Token Valid Time** parameter and the <u>Labelling</u>.



Administration - Devolutions Server Settings - Advanced

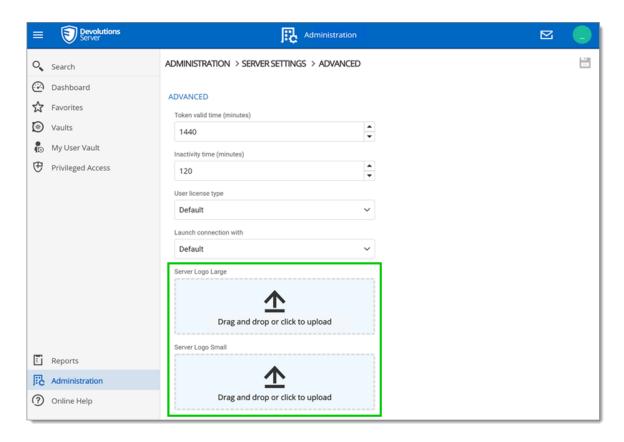
FEATURES

Token Valid Time (minutes)	This the duration time of the token. At the expiration of the token, the user must again authenticate himself on the Devolutions Server instance. The maximal value is 1440 minutes which is 24 hours.
Inactivity time (minutes)	Enter the delay for the user to be disconnected from the server if inactive. This value must be lower than the Toke Valid Time parameter. This parameter is applied on the web interface or with the Devolutions Web Login browser companion tool. It has no effect on Remote Desktop Manager.
User license type	Select the license type. Default is Connection Management .
Launch connection with	Sets the application that opens remote connections: Remote Desktop Manager or Devolutions Launcher. Default refers to Devolutions Launcher.
Client HttpRequest cache count	For internal use. Do not modify this value unless specified for support situation.

DESCRIPTION

You can customize the Devolutions Server web interface logo's to better serve your own customers.

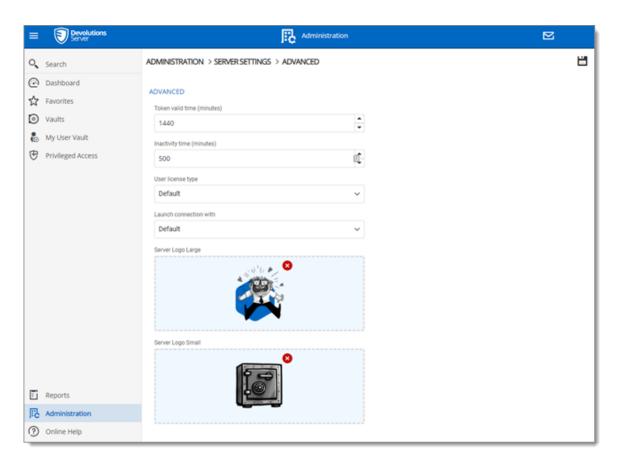
Brandring is possible in *Administration - Server Settings - Advanced*.



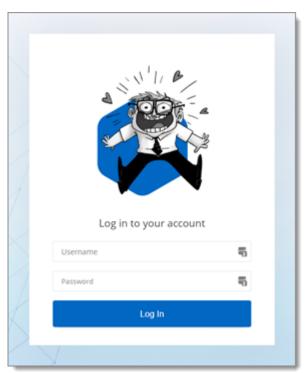
It is compatible with most popular file extension, like JPEG, GIF, PNG and TIFF.

Server Logo Large	This is the image for the login page with a max width of 300px. The height will be automatically set to observe the ratio of the image.
Server Logo Small	This is for the image in the toolbar with a max width of 145px and height of 40px.

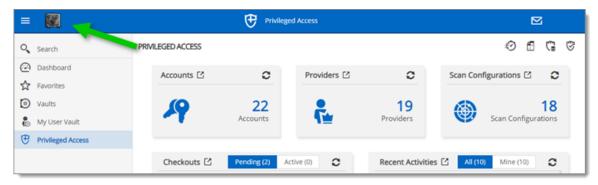
Here is an example of this feature with loaded images in the Administration settings.



The result for the Devolutions Server login page:



And for the toolbar logo:



5.5.2.2.2 Security

5.5.2.2.2.1 Two-Factor

DESCRIPTION



This feature is only available with Devolutions Server Enterprise or Platinum licenses.

Configure **Two-Factor Authentication** in Devolutions Server to add an extra layer of security to the application.

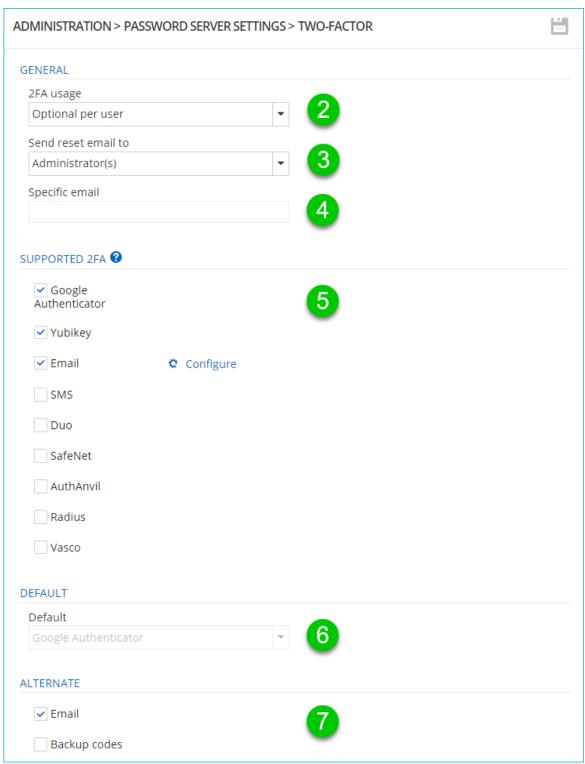
Devolutions Server supports 9 types of 2FA. You can configure a default 2FA type for your entire organization or configure 2FA by user. When 2FA is configured, users log in with their username/password as well as a 2FA product.

HOW TO CONFIGURE 2FA FROM THE WEB INTERFACE

- To access the 2FA configuration, go to Administration Devolutions Server Settings – Two-Factor
- 2. Choose how you want to enforce two-factor authentication in 2FA usage.

OPTION	DESCRIPTION
None	2FA is not enforced.
Optional per user	2FA is enforced on an individual basis. The administrator chooses who uses 2FA and what product or technology they use.
	Choose this option if not all users are set up for two- factor authentication.
Required	2FA is enforced for all users. A default 2FA type is set for all users.

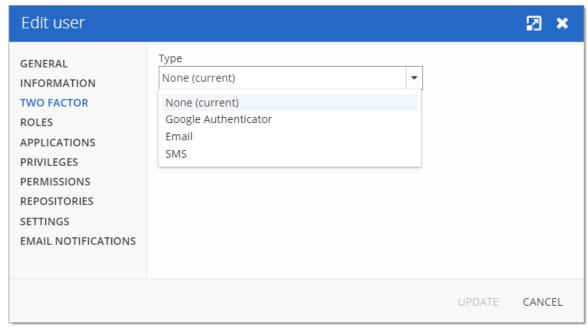
- **3.** Select who receives 2FA reset requests from users. You can choose to send the email to all Devolutions Server **administrators** or a **specific email**.
- **4.** If you chose to send reset requests to an email address instead of the Devolutions Server administrators, enter the email address in **specific email**.
- **5.** Select the 2FA types users can authenticate with. Choose as many as necessary.
- 6. If you chose 2FA usage as Required in step 3, choose the Default 2FA type.
- 7. Select **alternate** ways to log in. These options will be offered when users do not have access to the usual method.



Administration - Devolutions Server Settings - Two-Factor

8. When 2FA usage is set to **Optional per user**, the 2FA method must be configured in *Administration – Users – Two Factor* for each user. You can

also set a 2FA type on the user if they are using a product different than the default method. See Edit Users for more information.



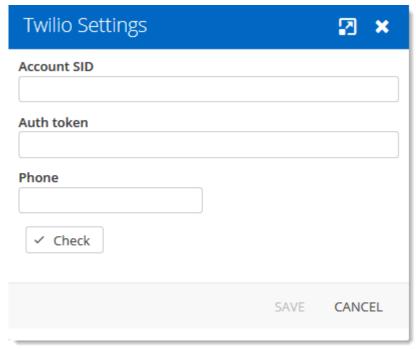
Edit User - Two Factor

OVERVIEW

The 2FA SMS will request the user to enter a code he has received on his mobile phone as its second component to access the data source.

There are two possible configuration available. To use the free version, do not fill in the Twilio settings.

The other available configuration is to configure Twilio. Please fill in the appropriate fields with the information from your Twilio subscription.



Twilio Settings dialog

OPTION	DESCRIPTION
Account SID	Account SID of your Twilio account.
Auth token	Authorization toke from your Twilio account.
Phone	Phone number.

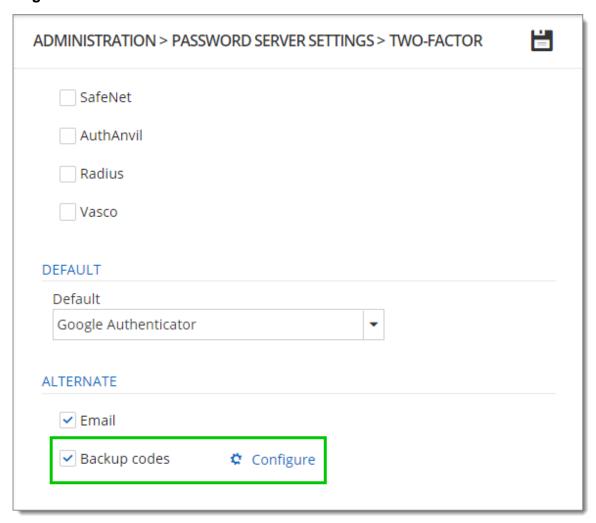
DESCRIPTION

Backup codes are validation codes that provide users with one time access to Devolutions Server when they do not have access to their usual 2FA product or device. These must be generated before and kept safe in case of emergencies.

The **Administrator** enables the option and then <u>users can generate their backup codes</u>.

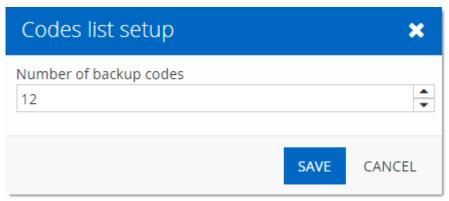
ADMINISTRATOR - ENABLE BACKUP CODES

An administrator must enable backup codes as an alternate method of two-factor authentication. To turn on the option, go to *Administration – Devolutions Server Settings – Two-Factor*.



Backup Codes - Two-Factor Authentication

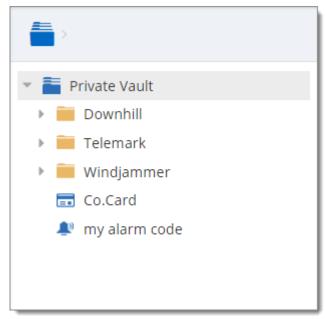
Click **Configure** to set how many backup codes a user can generate.



Configure the number of Backup Codes

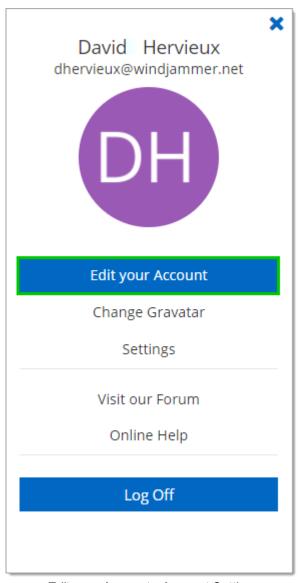
USER - GENERATE BACKUP CODES

1. To generate your backup codes, click your avatar in the top right corner.



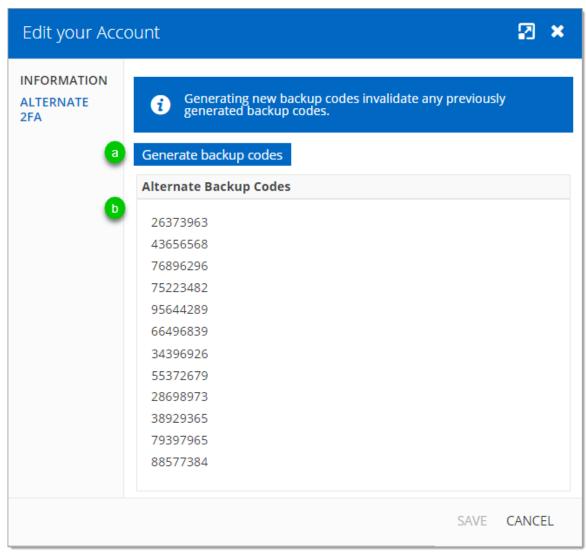
Click user avatar

2. Click Edit your Account



Edit your Account - Account Settings

3. Click **Alternate 2FA** and then **(a)** click **Generate backup codes**. A list of backup codes are displayed **(b)**. The user can copy and paste the codes and store them elsewhere.

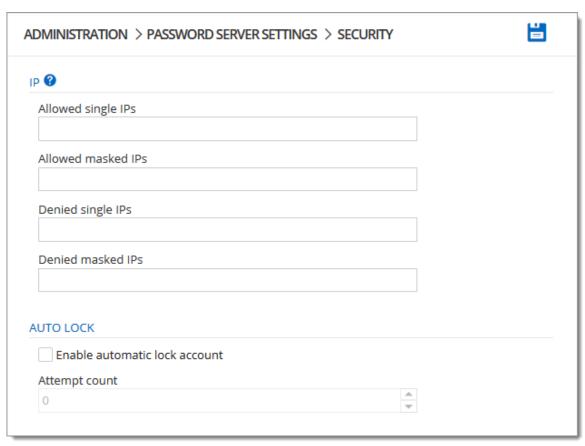


Alternate 2FA - Generate Backup Codes

5.5.2.2.2.2 Security

DESCRIPTION

The Security section allows the administrator to configure the allowed and denied IPs addresses.



Administration - Devolutions Server Settings - Security

SETTINGS

IP

Allowed Single IPs	If you wish to restrain the access to the Devolutions Server to only certain IPs address enter those here. If nothing is entered in this field all IPs address will be allowed to connect to the Devolutions Server.
Allowed Masked IPs	If you wish to restrain the access to only certain Masked IPs (dividing the host part of an IP address into a subnet

	and host address) on the Devolutions Server, enter those Masked IP address here.
Denied Single IPs	If you wish to deny access to the server from certain IPs address enter those in this field.
Denied Masked IPs	If you wish to deny access to the server from certain Masked IPs address (dividing the host part of an IP address into a subnet and host address) enter those in this field.

AUTO LOCK

Enabled auto lock	Automatically locks down the access to the Server after a predetermine number of failed attempt.
Attempt Count	Enter the number of failed attempts before locking down the Server.

5.5.2.2.2.3 GeoIP Security

DESCRIPTION

The **GeoIP Security** section section allows the administrator to set IPs restriction based on the geographical location.



Administration - Devolutions Server Settings - GeoIP Security

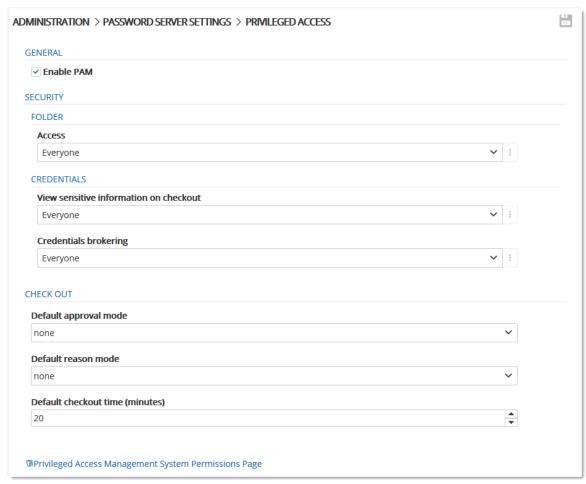
	DESCRIPTION
GeoIP Mode	Choose your method of GeoIP between: None: Will not be using GeoIP security MaxMind: Use the MaxMind's GeoIP database to look up the city, AS number and other information for an IP address. Connect to your account by entering your User ID and License Key in the appropriate field and then select the countries you wish to grant access to your Devolutions Server.
User ID	User ID to connect on MaxMind.
License key	License key to connect on MaxMind.

Countries	Select all authorized countries to connect to the Devolutions Server instance.

5.5.2.2.2.4 Privileged Access Management

DESCRIPTION

This section is dedicated to enable and configure the Privileged Access Management.



Administration - Devolutions Server Settings - Privileged Access Management

GENERAL

Enable PAM (Preview)	Enable the Privileged Access Management functionality.

SECURITY - FOLDER

Access	Possible values :
	Custom
	Everyone
	• Never

SECURITY - CREDENTIALS

View sensitive information on checkout	Possible values : • Custom • Everyone
Credentials brokering	NeverPossible values :Custom

• Everyone
• Never

CHECK OUT

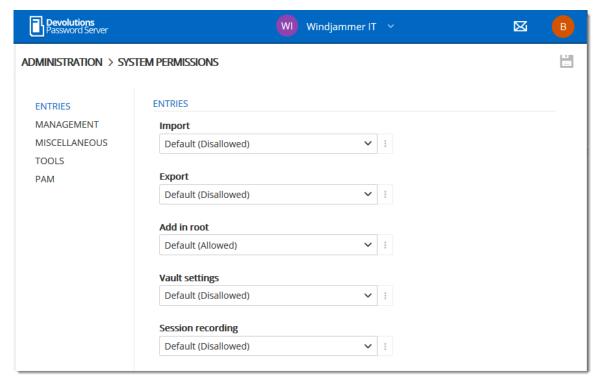
Default approval mode	Possible values :
	nonemandatory
Default reason mode	Possible values :
	• none
	• mandatory
	• optional
Default checkout time (minutes)	

5.5.2.3 System Permissions

DESCRIPTION

The **System Permissions** allows to grant some administrative permissions to standard users without making them administrators. The **Default** setting inherits the permission

set on the user or user groups. These are handled as you would permissions in an entry.

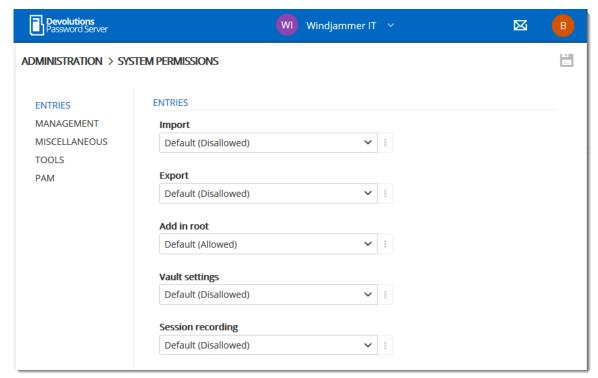


Administration - System Permissions

SYSTEM PERMISSIONS

- Entries
- Management
- Miscellaneous
- Tools
- Privileged Access Management (PAM)

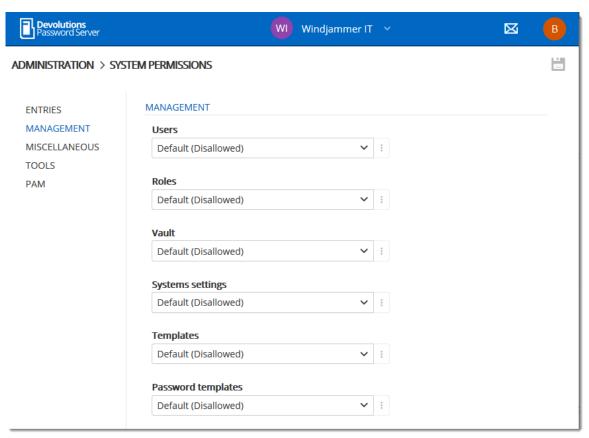
5.5.2.3.1 Entries



Administration - System Permissions

Import	Restrain the import privilege to certain users.
Export	Restrain the export privilege to certain users.
Add in root	Restrain creating entries in root to certain users.
Vault settings	Restrain access to vault settings to certain users.
Session recording	Restrain access to the session recording feature.

5.5.2.3.2 Management

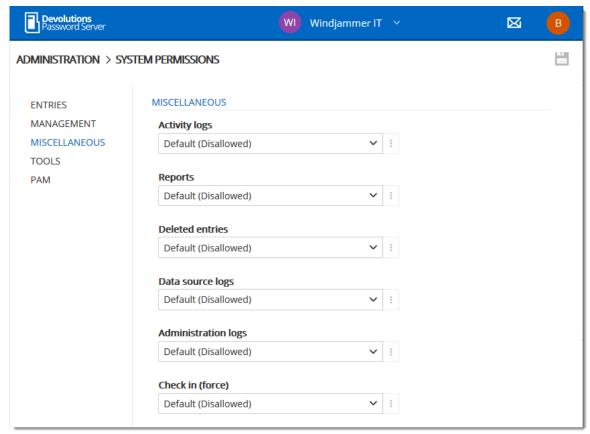


Administration - System Permissions - Management

	DESCRIPTION
Users	Allow users/user groups to access the user management.
User groups	Allow users/user groups to access the user groups management.
Vault	Allow users/user groups to access the Vault management.
System Settings	Allow users/user groups to access System Settings.
Templates	Allow users/user groups to create and manage templates.

Password templates	Allow users/user groups to create and manage password templates.

5.5.2.3.3 Miscellaneous

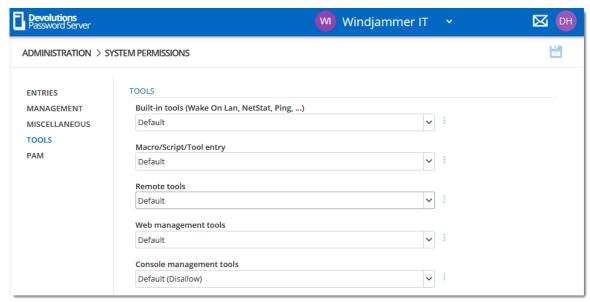


Administration - System Permissions - Miscellaneous

Activity logs	Allow users/user groups to view the activity logs.
Reports	Allow users/user groups to generate and view reports.

Deleted entries	Allow users/user groups to view and restore deleted entries.
Data source logs	Allow users/user groups to view the data source logs.
Administration logs	Allow users/user groups to view the administration logs.
Check in (force)	Allow users/user groups to be able to check in entries.

5.5.2.3.4 Tools



Administration - System Permissions - Tools

Buit-in tools (Wake On Lan,	Allow users/user groups to use session related tools.

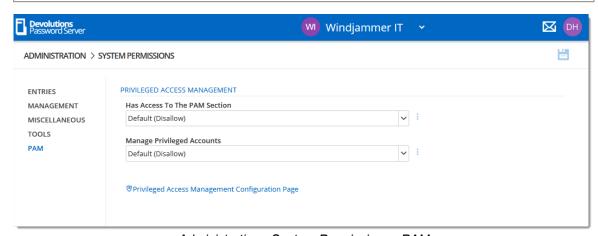
	DESCRIPTION
NetStat, Ping,)	
Macro/Script/Tool entry	Allow users/user groups to use Macro/Script/Tool entries.
Remote tools	Allow users/user groups to use remote tools.
Web management tools	Allow users/user groups to use web management tools.
Console management tools	Allow users/user groups to use console management tools.

5.5.2.3.5 Privileged Access Management

DESCRIPTION



To use these features you must first ensure they are enabled in the Privileged Access Management in the **Devolutions Server Settings**.



Administration - System Permissions - PAM

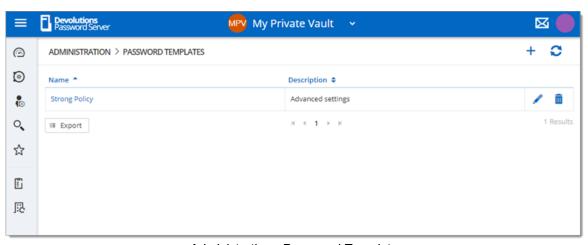
Has Access to the PAM Section	Determine who has access to the PAM section.
Manage Privileged Accounts	Determine who can managed the Privileged accounts.
Privileged Access Management Configuration Page	Links you to the Configuration page of the PAM.

5.5.3 Templates

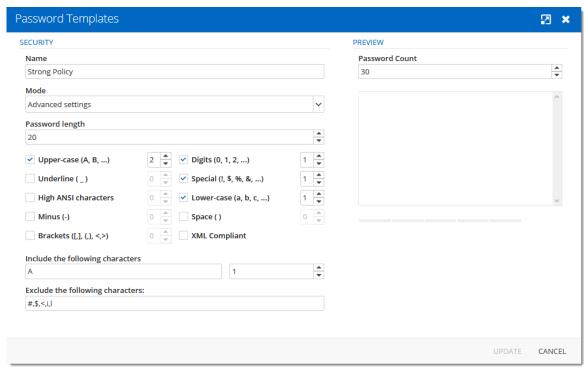
5.5.3.1 Password Templates

DESCRIPTION

The **Password Templates** allow administrators to manage password templates.



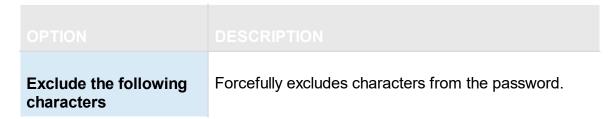
Administration - Password Templates



Password Templates

Name	Name of the Password Template.
Mode	Default
	Advanced settings
	Readable password
	Use a pattern
	Pronounceable password
	Strong password
Upper-case (A, B, C,)	Will include uppercase letters for password generation.

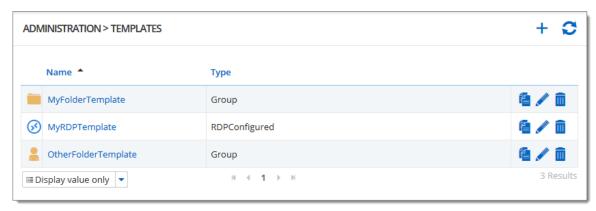
Underline (_)	Will include the underline (_) character for password generation.
High ANSI characters	Will include characters form '-' to U255 (excluding U255) for password generation.
Minus (-)	Will include the minus (-) character for password generation.
Brackets ([,], (,), <,>)	Will include brackets characters for password generation.
Digits (0, 1, 2,)	Will include digits for password generation.
Special (!, \$, %, &,)	Will include special characters for password generation.
Lower-case (a, b, c,)	Will include lowercase letters for password generation.
Space ()	Will include the space character for password generation.
XML Compliant	Will generate XML compliant passwords.
Also include the following characters	Add any other characters to be include for password generation.
Exclude the following characters	The characters listed in this field will not be used for password generation.
Password count	Number of passwords that will be generated.
Include the following characters	Forcefully including characters inside the password.



5.5.3.2 Templates

DESCRIPTION

The **Templates** allow administrators to manage entry templates. With this you can set preferences to how entries information will be filled when creating them.

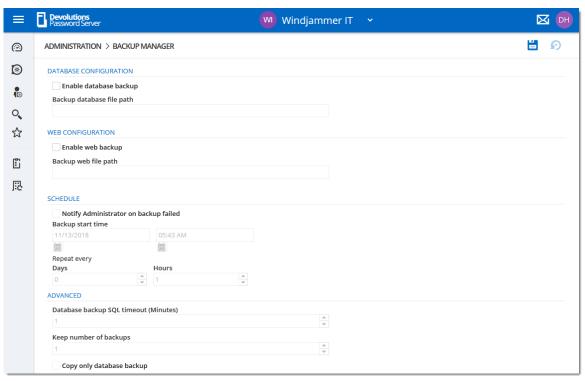


5.5.4 Backup

5.5.4.1 Backup Manager

DESCRIPTION

The **Backup Manager** section allow administrators to configure the parameters to backup the database and the web application folder.



Administration - Backup Manager

SETTINGS

Save	Save the latest modifications of the Backup schedule options.
Backup Now	Create immediately a backup of the SQL database and/or the web application folder.

DATABASE CONFIGURATION

Enable database	Activate the backup of the SQL database.

backup	
Backup database file path	The path to the folder where the backup of the SQL database will be saved. We recommend to use a shared network folder with proper permissions set on it to be able to save the backup file.
	Note: As the backup command is running on the SQL Server, this path must exist on the SQL Server or accessible from that SQL Server.

WEB CONFIGURATION

Enable web backup	Activate the backup of the web application.
Backup web file path	The path to the folder where the backup of the web application will be saved. We recommend to use a shared network folder with proper permissions set on it to be able to save the backup file.

SCHEDULE

Notify Administrator on backup failed	Will send an email when the backup fails. The Email feature must be enabled in the Server Settings in order to work. For more information, please see <u>Email</u> <u>Settings</u> .

Backup start time	Date and time when the backup will be automatically started.
Repeat every	The time interval when the backup will be repeated.

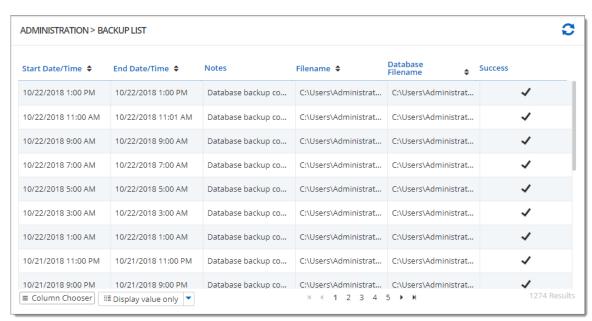
ADVANCED

	DESCRIPTION
Database backup SQL timeout (Minutes)	Number of minutes before a timeout in the SQL instance.
Keep number of backups	Number of the backup that will be kept in the backup folder.
Copy only database backup	A SQL Server backup that is independent of the sequence of conventional SQL Server backups. For more information, please see https://docs.microsoft.com/en-us/sql/relational-databases/backup-restore/copy-only-backups-sql-server .

5.5.4.2 Backup List

DESCRIPTION

The **Backup List** section displays the list of the backup that have been taken.



Administration - Backup List

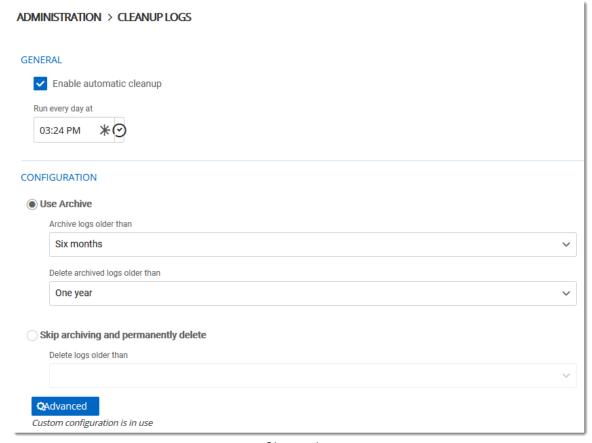
Start Date/Time	Date and time when the backup process was started.
End Date/Time	Date and time when the backup process was stopped.
Notes	Message to inform the completion or the fail of the backup.
Filename	Path and name of the web application backup file.
Database Filename	Path and name of the SQL database backup file.
Success	A check mark will indicate a successful backup. An X will indicate that the backup has failed.

5.5.5 Logs

5.5.5.1 Cleanup Logs

DESCRIPTION

The Cleanup Logs functionality will allow to archive logs available in the database that are older than the selected period. And it can also delete these archived logs based on the selected time limit in the parameters.



Cleanup logs

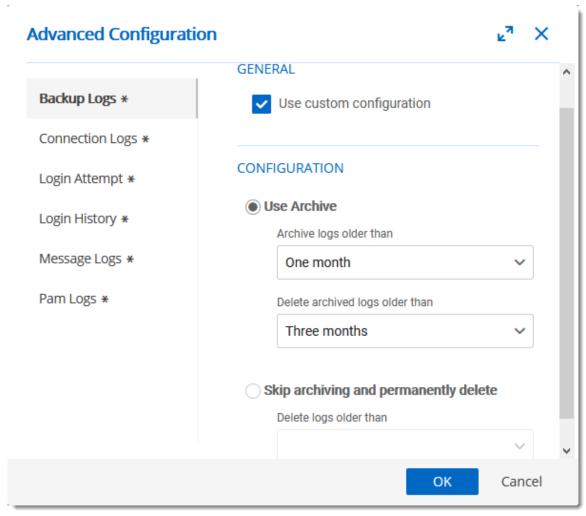
OPTION	DESCRIPTION
Enable automatic cleanup	Enable the automatic cleanup logs feature to automatically archive and delete logs.
Run every day at	Set the time when the feature will run.

OPTION	DESCRIPTION
Use Archive	If enable, the job will archive and delete logs based on the period selected in the two drop down lists.
Archive logs older than	Will archive logs that are older than the selected value in the drop down list. Possible choices: One month Three months Six months One year
Delete archived logs older than	Will delete all archived logs that are older than the selected value in the drop down list. Possible choices: Three months Six months One year Two years
Skip archiving and permanently delete	If enable, will not archive the logs and will permanently delete them
Delete Logs older than	Will permanently delete all logs older than the selected value in the drop down list. Possible choices: One month Three months Six months One year Two years
Advanced	Advanced configuration if for configuring the archiving and deletion operation on each logs separately.

5.5.5.1.1 Advanced configuration

DESCRIPTION

The advanced configuration allows to set individual clean up parameters for all different logs of Devolutions Server.



Cleanup Logs - Advanced configuration

LOGS	DESCRIPTION
Backup Logs	Logs related to the <u>Backup Manager</u> .

LOGS	DESCRIPTION
Connection Logs	Logs related to all operations on entries like viewing a password, opening an entry, etc.
Login Attempt	Logs related to failed login attemps to Devolutions Server.
Login History	Logs related to all successful logins to Devolutions Server.
Message Logs	Logs related to data source logs of Devolutions Server.
PAM Logs	Logs related to the Devolutions Server PAM feature.

GENERAL	DESCRIPTION
Use custom configuration	Allow to set specific archiving and deletion parameters for the selected log.

CONFIGURATION	DESCRIPTION			
Use archive	Use the archive operation to clean the logs.			
Archive logs older than	Will archive logs that are older than the selected value in the drop down list.			
	Possible choices : One month Three months Six months One year			

CONFIGURATION	DESCRIPTION			
Delete archive logs older than	Will delete all archived logs that are older than the selected value in the drop down list. Possible choices: Three months Six months One year Two years			
Skip archiving and permanently delete	If enable, will not archive the logs and will permanently delete them			
Delete Logs older than	Will permanently delete all logs older than the selected value in the drop down list. Possible choices: One month Three months Six months One year Two years			

5.6 User Groups Based Security

DESCRIPTION

Devolutions Server user groups based security allows to create a granular protection system that is quite flexible. However, flexibility comes at a price and sometimes making the wrong choices could increase the time involved in managing the system.

The following recommendations are based on our experience with the system and the ideas shared by our community. Follow these guidelines, as they will help you to use the Devolutions Server user groups based security efficiently.

Here are the main key points of the user groups based security:

- Security is inherited: child items and folders are covered by a parent folder's security.
- **Permissions can be overridden**: a permission set on a sub folder will override the parent item's permission.

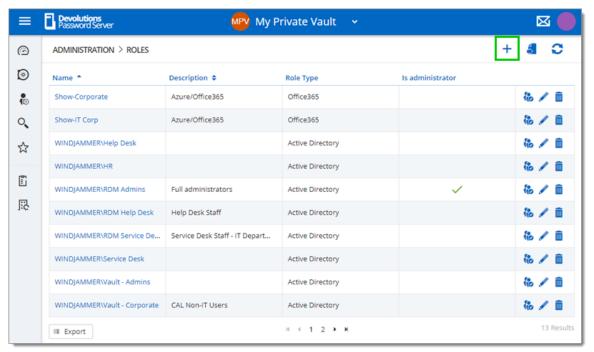
• Permissions are granular: multiple permissions can be set on entries at once.

USER GROUPS CONFIGURATION

When using Devolutions Server user groups based security, user groups are mostly used to control user access for multiple users at once.

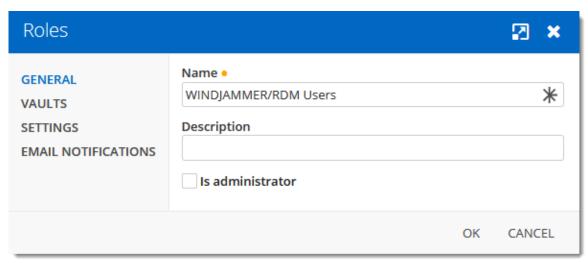
CREATE THE USER GROUPS

To create user groups, navigate to *Administration – User Groups*, then click + Add.



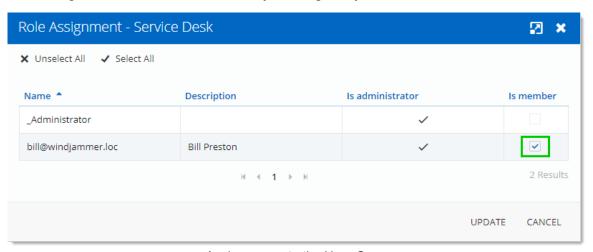
Create a User Group

All settings can be left to default unless the user group contains only administrators. In this case, check the **Administrator** box when configuring the user group. Enter a name for the user group, then click **OK**. For Active Directory groups, the domain must be provided like the following.



Configure a User Group

To assign users to the user group, click , then check the Is Member box of the respective user. With a user group created from an Active Directory group, there is no need to assign users as it is automatically managed by Devolutions Server.



Assign a user to the User Group

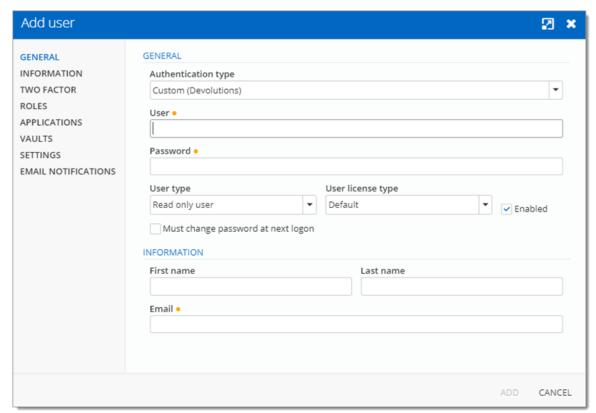
USER CONFIGURATION

USER TEMPLATE

It is possible to change the default user template. To do so, navigate to **Administration – System Settings – User Template**. These settings control the default settings of a new user. The best practice is to disable all privileges.

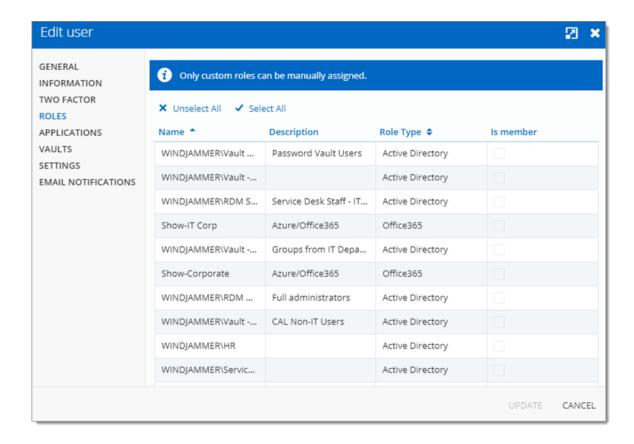
CREATE THE USER

To create users, navigate to *Administration – Users*, then click **+ Add User**. Enter a **Login** for the user, select the **User** type and enter an email address.



Create a user

A user can be assigned to multiple user groups at once by checking the **Is Member** box of the respective user groups in the **User Groups** section of the **User Management**. As part of the Active Directory integration, there is no need to assign users to those user groups as it is automatically managed by Devolutions Server.



ADMINISTRATORS

Administrators can do everything, regardless of the security. These users are usually the chief officers and senior management.

RESTRICTED USERS

Restricted users have limited access to resources. They usually have the **Add** and **Edit** rights only. These users can be mid or first level executives, such as service desk and help desk.

USERS

Users also have limited access to resources much like **Restricted users**. However, **Users** have by default the **Add**, **Edit** and **Delete** rights and can perform these actions on all unsecured entries.

READ ONLY USERS

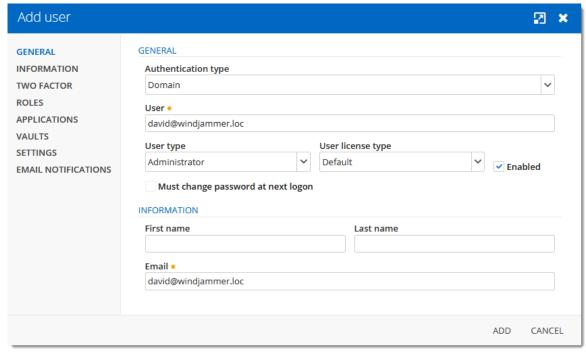
Read only users can only view and use resources, but cannot edit them. These users are usually external consultants.

SELECT THE APPROPRIATE USER TYPE

When creating users, some key points must be taken into consideration. Ask yourself the following questions while configuring a new user:

> Should they be able to access any resource without restriction?

- ✓ Administrators can access any resource without restriction.
- ✓ Make a user administrator by selecting Administrator as the User type when creating the user.

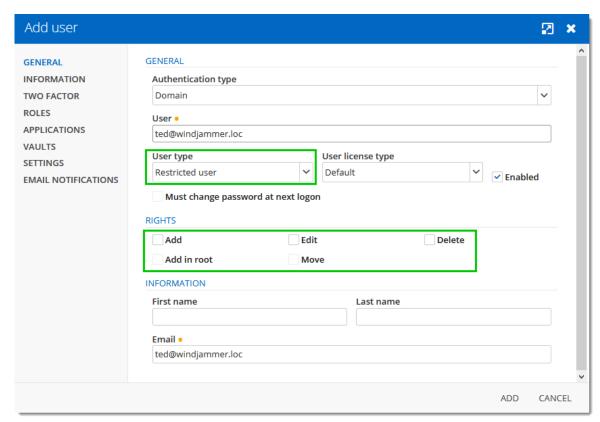


Administrator user

> Should they be able to add, edit, or delete entries?

✓ Make a Restricted user by selecting Restricted user as the User type when creating the user.

✓ Set up manually which rights are granted to the user.

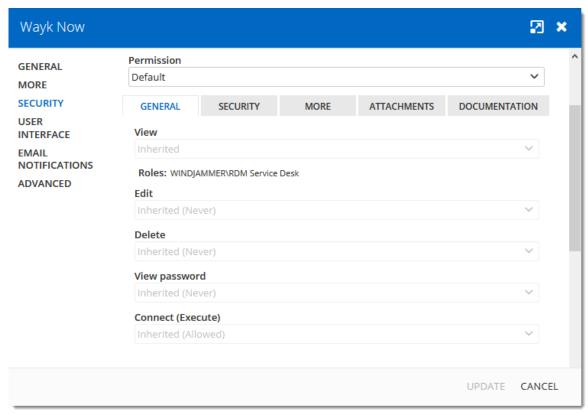


Restricted user

ENTRY CONFIGURATION

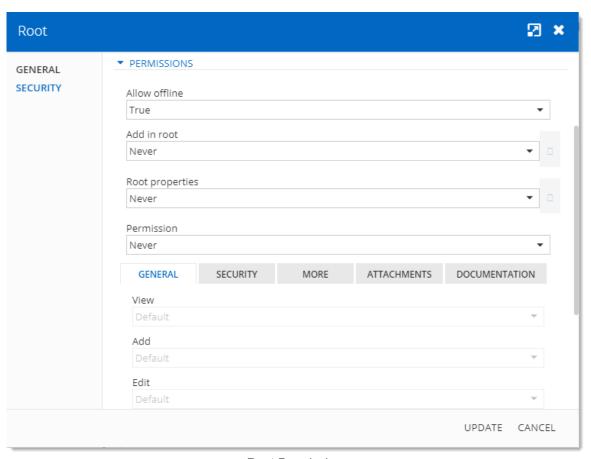
Access is granted or denied to users by setting permission on entries. **Permissions** can be set to users or user groups. The best practice is to grant permissions to user groups to control access for multiple users at once.

To set permissions on an entry, edit any entry, then navigate to the **Security – Permissions** section.



Entry's Permissions

Permissions are usually set on folders, and apply to all child entries. A best practice is to set all the permissions of the vault folder to **Never**. As a result, all permissions of all entries are denied by default.

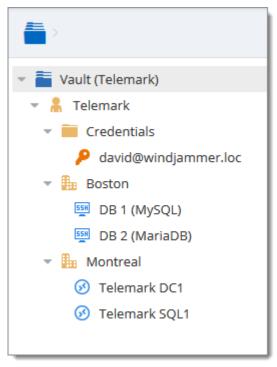


Root Permissions

Access is denied to users by expressly granting the access to other users. In other words, all users that are not on the list of a permission have the access denied.

For a user to have access to a sub folder, the user must have at least the **View** permission on all parent folders.

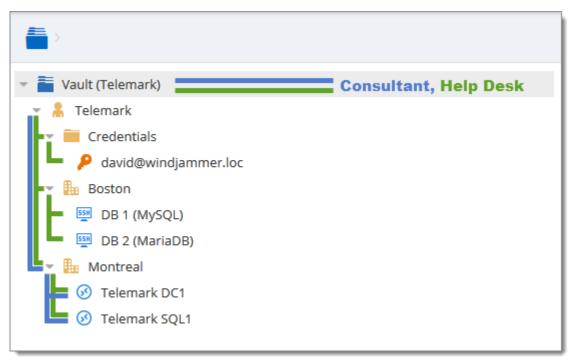
Consider the following structure:



Sample Structure

There are three levels of folders: the Vault, Telemark, and child items of Telemark.

Suppose that a user, such as a consultant, must have access to the Montreal folder only. The consultant must be granted the **View** permission on the Telemark folder as well. However, granting the **View** access to the Telemark folder gives to the consultant the permissions to view all child items of Telemark. To deny the **View** permissions for the consultant on specific child items, the **View** permissions of these items must be expressly set for other users.



Permissions Structure

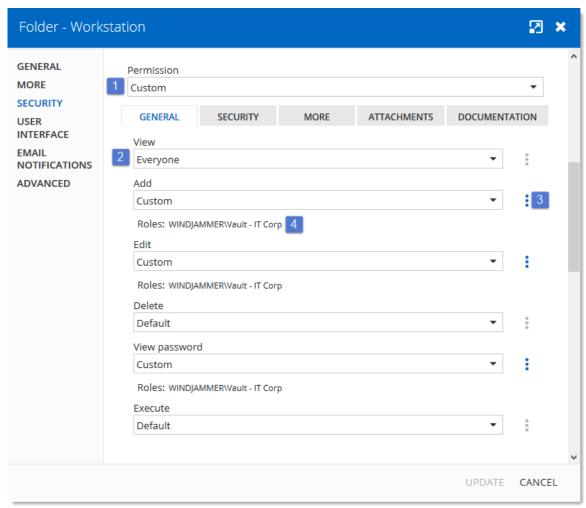
5.6.1 Permissions

DESCRIPTION

The **Permissions** panel can be found in every entry properties in the **Security** - **Permissions** section.

It is also possible to allow administrators to grant administrative permissions to standard users without making them administrators with System Permissions.

The user groups based permissions system can give a very accurate control of the security. Here is an overview of the permissions window:

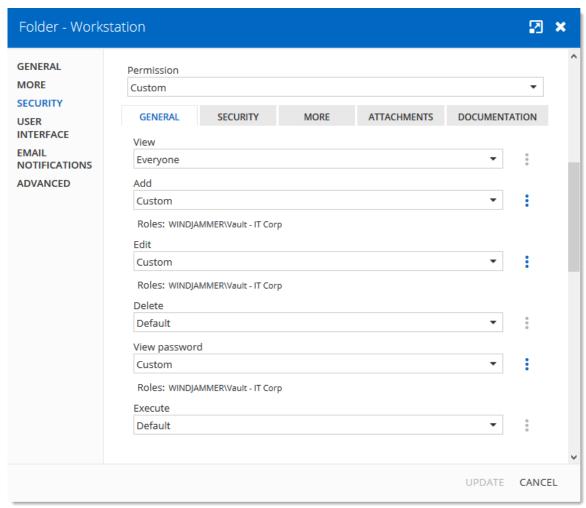


Permissions Panel

	DESCRIPTION				
1. Permission	Sets the permission mode. This must be set to Custom in order to change the discrete permissions below. Select between:				
	Inherited (Default): will inherit the permissions from the parent groups.				
	Custom: lets you specify a custom value for each of the permission.				
	Everyone: everyone will be granted all the permissions below.				

	DESCRIPTION				
	Never: no one but the administrators will be granted the permissions				
2. Discrete permissions	Lets you choose who you want to grant permissions to. These combo boxes are available only if the above Permission combo box is set to Custom . Select between:				
	Inherited (Default): will inherit the permissions from the parent groups/folders.				
	Custom: lets you specify a custom value for the permission.				
	Everyone: everyone will be granted the permission				
	Never: no one but the administrators will be granted the permission.				
3. Users / User groups selector	Lets you select Users / User Groups to be granted the permission. Available only if the permission is set to Custom .				
4. Current permission	Displays the granted permission for the current entry.				

GENERAL

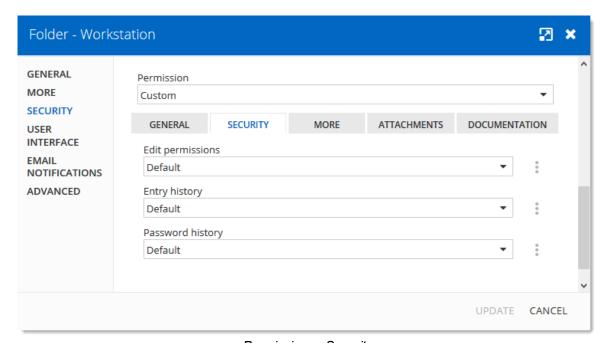


Permissions - General

Permission	Sets the permission mode. It must be set to Custom in order to change the permissions individually.
View	Allow users/user groups to view entries.
Add	Allow users/user groups to add entries
Edit	Allow users/user groups to edit entries.
Delete	Allow users/user groups to delete entries.

View password	Allow users/user groups to view entry password .
Connect (Execute)	Allow users/user groups to open entries.

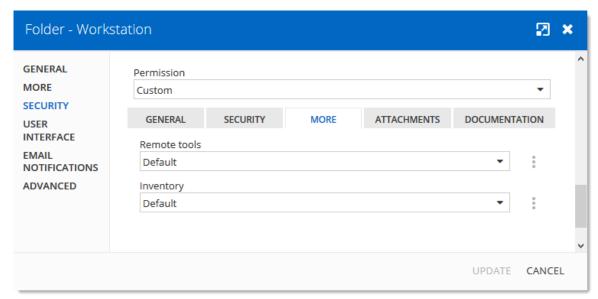
SECURITY



Permissions - Security

Edit permissions	Allow users/user groups to edit permissions.
Entry history	Allow users/user groups to view and use entry history.
Password History	Allow users/user groups to view the Password History .

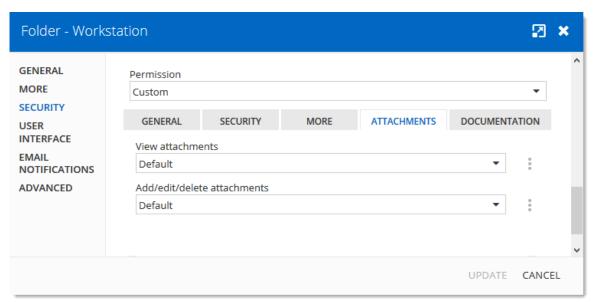
MORE



Permissions - More

Remote tools	Allow users/user groups to use Remote Tools .
Inventory	Allow users/user groups to use the Inventory Report tool.

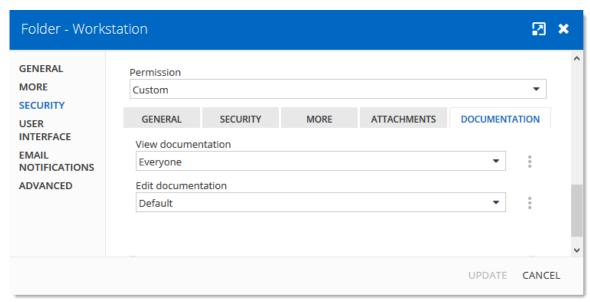
ATTACHMENTS



Permissions - Attachment

View attachments	Allow users/user groups to view attachments.
Add/edit/delete attachments	Allow users/user groups to add/edit/delete attachments.

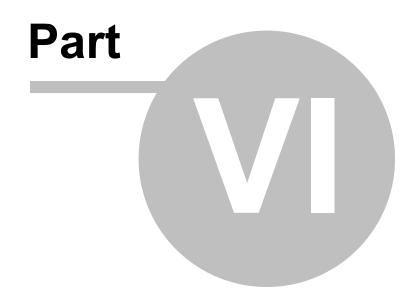
DOCUMENTATION



Permissions - Documentation

View documentation	Allow users/user groups to view documentation.
Edit documentation	Allow users/user groups to edit documentation.

Privileged Access Management



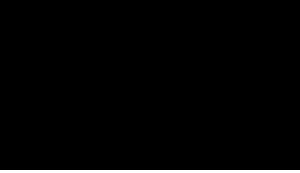
6 Privileged Access Management

DESCRIPTION

Devolutions Privileged Access Management solution provides all the following features. It is specifically designed to meet the needs of SMBs, providing enterprise-grade features to bring a level of protection usually only afforded to large organizations while at the same time being robust, easy to deploy and affordable.

- 1. Ease of deployment and management
- 2. Secure password vault
- 3. Logging and reporting
- 4. Built-in two-factor authentication
- 5. Access brokering
- 6. User Groups access control

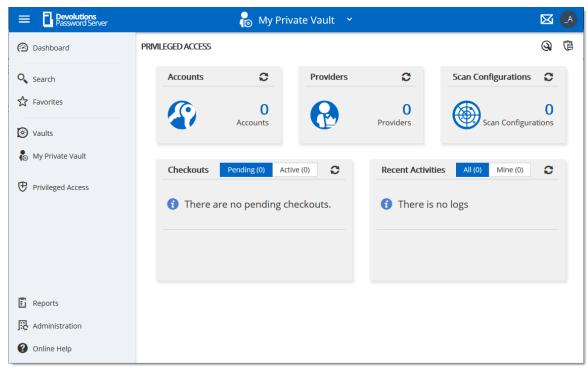
For an overview of the Devolutions Privileged Access Management, please watch the following video.



PAM Preview

PRIVILEGED ACCESS DASHBOARD

The Privileged Access Dashboard provides a quick overview of the available **Accounts**, **Providers**, **Scan Configurations**, current **Checkouts** and the **Recent Activities**.



Privileged Access Management Dashboard

6.1 Getting Started

DESCRIPTION

In this topic, you will find the steps on how to get started with the **Privileged Access Management** features in Devolutions Server.

First, you will need to be logged as an administrator in your DVLS.

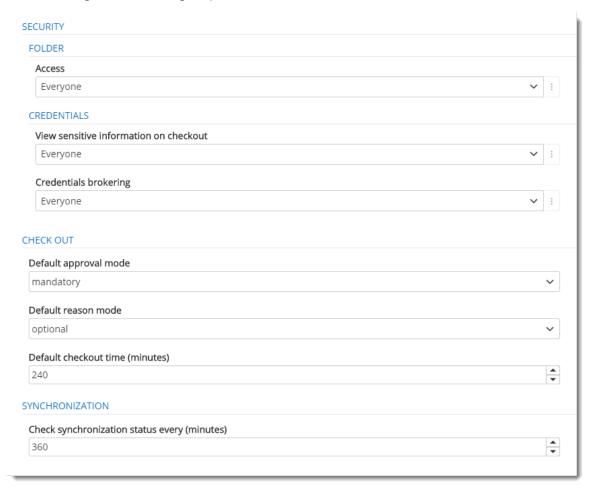
PAM SETTINGS CONFIGURATION

- 1. Head to Administration -> Devolutions Server Settings -> PAM.
- 2. Check **Enable PAM** and click the **Save** button in the top right to make the PAM side-panel appear on the left.

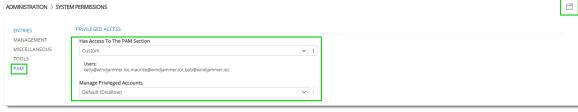


Enabling PAM

3. Configure the default settings for the <u>checkout system</u>, <u>credentials brokering</u>, <u>sensitive information access</u>, default checkout times and synchronizations. The **Custom** setting allows user groups based access control.



- 4. Next, head to Administration -> System Permissions -> PAM.
- 5. Configure the accesses to the PAM system for the users/admins and manage privileged accounts rights on who can edit the privileged entries. Then, click **Save**.

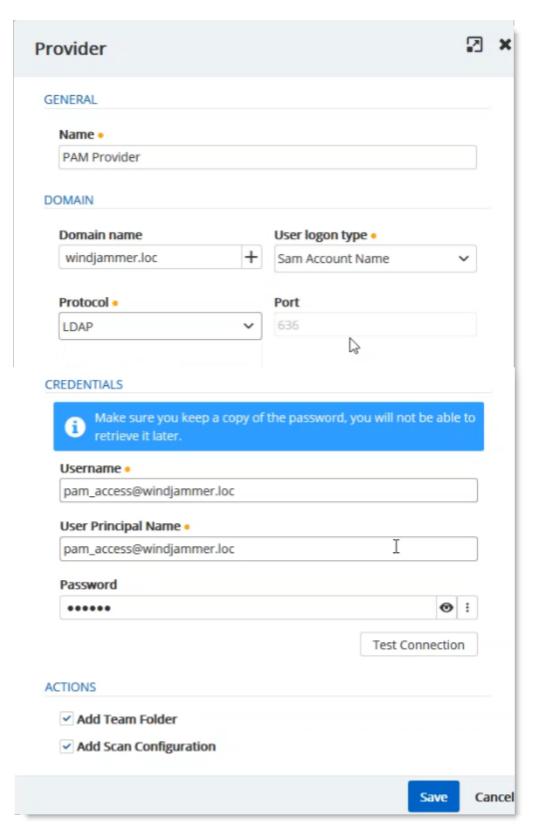


PAM Access configuration

ADD A PROVIDER

Back to the PAM section, add a provider of any of the 3 types : **Domain User** (AD), **Local User** (SSH) or **SQL User**.

When adding the provider, make sure you keep the *Add Team Folder* and *Add Scan Configuration* options checked.

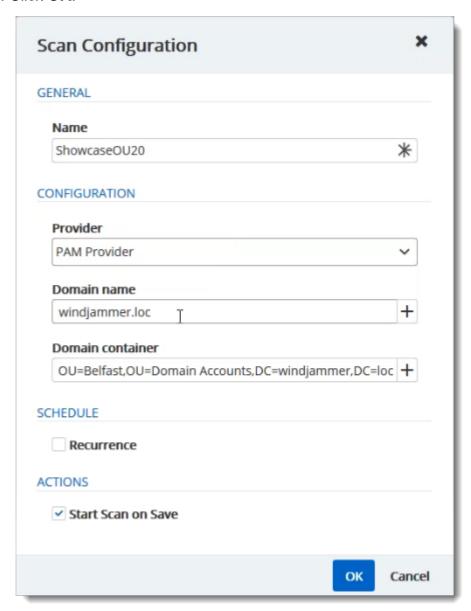


PAM Provider Configuration

For more information, please consult the **Providers** topic.

ADD A SCAN CONFIGURATION

- 1. Confirm that it is the good provider, domain and domain container (where the accounts are located).
- 2. Make sure the **Start Scan on Save** checkbox is selected.
- 3. Click *OK*.

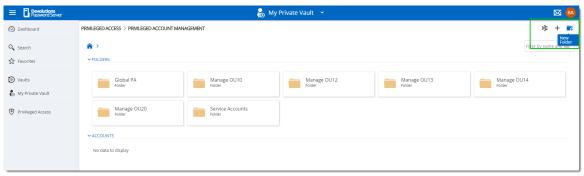


PAM Scan Config

For more information, please refer to the Scan Configurations topic.

ADD FOLDERS IN THE ACCOUNTS SECTION

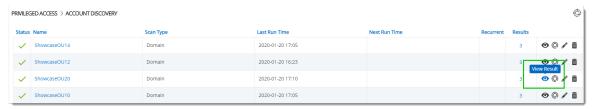
In the *Accounts* section of the PAM tab, you need to create a *Folder* to contain the accounts. You can customize that particular <u>folder's security options</u> if you don't want to give them the defaults you set during the initial configuration. You can also <u>customize</u> the approvers on the folder directly which will give you a list of the administrators.



PAM Create Folder

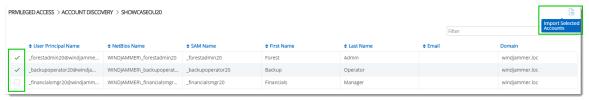
IMPORT ACCOUNTS FROM A SCAN

1. In the **Scan Configuration** section, click the result of your initial search.



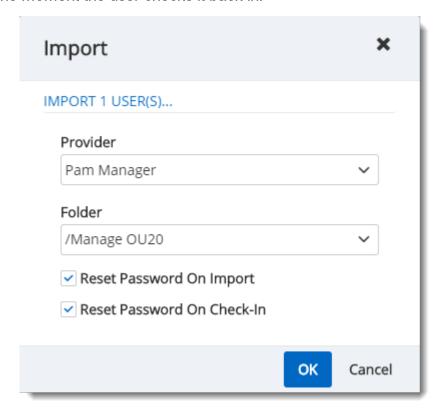
View Scan Results

2. Select all the accounts you want to import, and on the top right, click the *Import* button.



Import Selected Entries

3. You can put them in the folder of your choice. You can also choose whether to reset password on import or on check-in (recommended). That way, the password is safe the moment the user checks it back in.



Import Users

Once imported, you can click into the folder and manually check the **Synchronization Status** in the top right of the screen. You will know the accounts are well synchronized when the credentials have a green bar on the left.



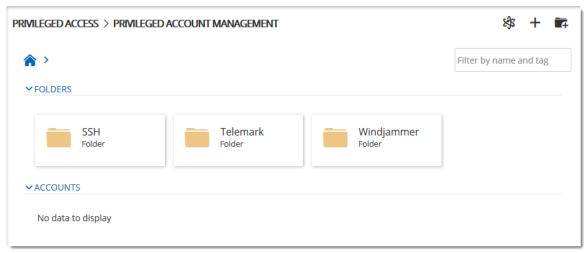
PAM Account Sync Check

You are now ready to use the privileged access management portion of Devolutions Server!

6.2 Accounts

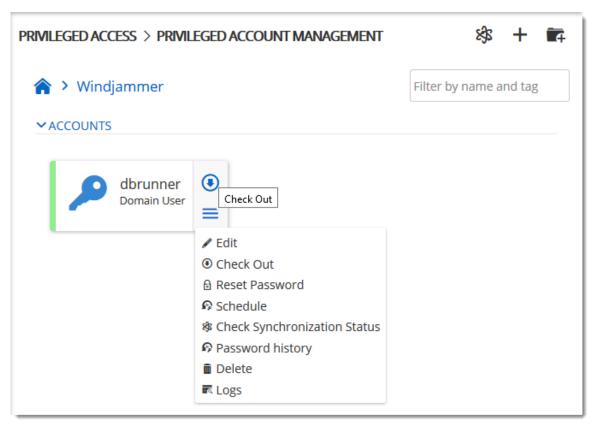
DESCRIPTION

The Accounts section allows to manage all privileged accounts within the Privileged Access Management solution. The accounts can be organized within folders or directly saved in the Root.



Accounts dashboard

For every privileged account, it is possible to manage the checkout/check-in process or to have access to many options described below.



Privileged Accounts folder content

MORE

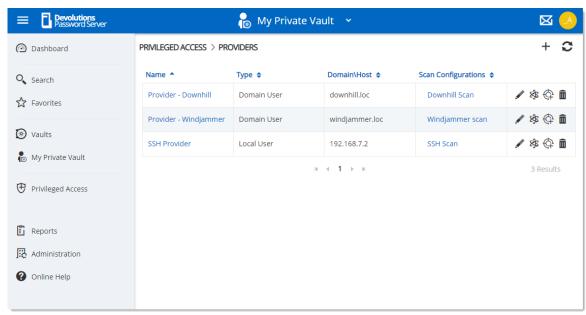
Edit	Edit the privileged account properties.
Check Out	Access and lock the privileged account.
Reset Password	Reset the password in Devolutions Server and in Active Directory or on the Local SSH machine.
Schedule	Reset the password based on a automated schedule.
Check Synchronization Status	Verify if the Provider can still access the account in the Domain or the Local SSH machine.

Password history	Open the Password history dialog.
Delete	Remove the account from the Privileged Account Management system without deleting it in the Domain or the Local SSH machine.
Logs	Open the Logs dialog which contains the account's activity.

6.3 Providers

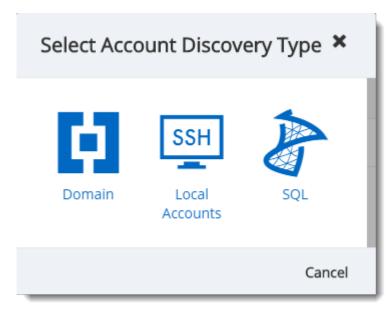
DESCRIPTION

The usage of Providers is required to scan the Active Directory structure, your local network for SSH discovering, and SQL.



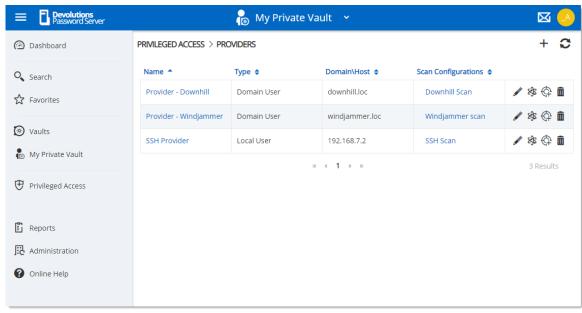
Providers dashboard

On the creation of a Provider, two choices are available: <u>Domain User</u>, <u>SSH Local User</u>, and <u>SQL User</u>. Multiple Providers can be created and can reach different domains as long as the Devolutions Server instance can communicate with the domain controller.



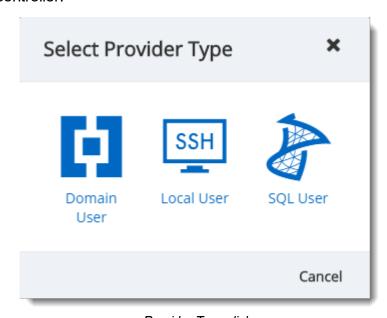
Provider Type dialog

The usage of Providers is required to scan the Active Directory structure, your local network for SSH discovering or your SQL Server accounts.



Providers dashboard

On the creation of a Provider, three choices are available: <u>Domain User</u>, <u>SQL Server</u> or <u>SSH Local User</u>. Multiple Providers can be created and can reach different domains as long as the Devolutions Server instance can communicate with the domain controller.

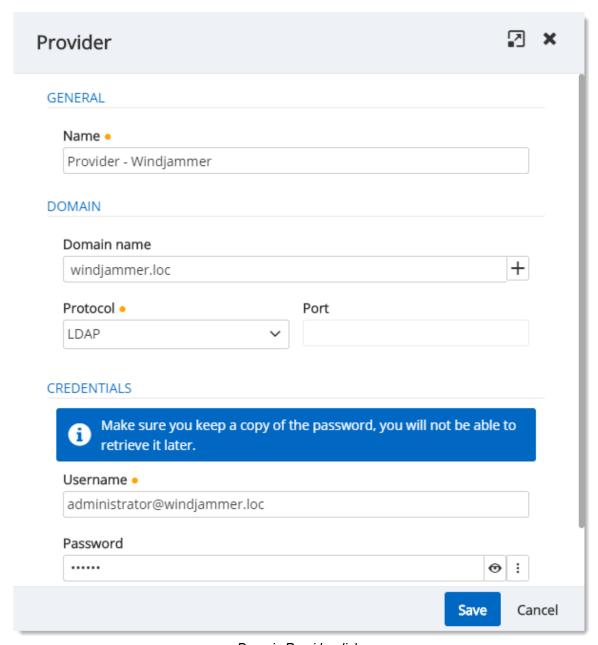


Provider Type dialog

6.3.1 Domain Provider

DESCRIPTION

The Domain Provider allows Devolutions Server to store the domain account credentials to be used for Active Directory accounts discovery or to achieve password rotation.



Domain Provider dialog

GENERAL

Name	Display name of the Provider.

DOMAIN

Domain name	FQDN of the domain against where the scan or the password rotation will be executed.
Protocol	Protocol used to contact the domain controller. Select between:
	• LDAP
	• LDAPS
Port	Set the port number used with the configured Protocol.

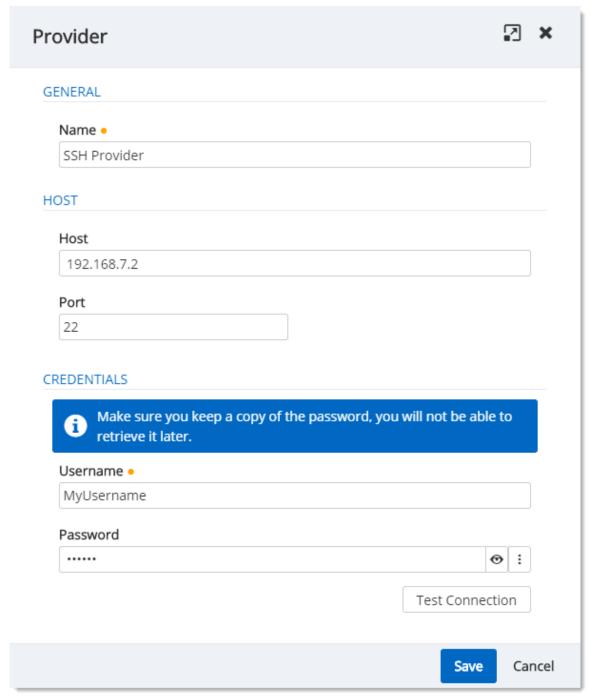
CREDENTIALS

Username	Username of the domain account.
Password	Password of the domain account.

6.3.2 Local SSH Provider

DESCRIPTION

The SSH Provider allows Devolutions Server to store the SSH local account credentials to be used for SSH accounts discovery or to achieve password rotation.



SSH Provider dialog

GENERAL

Name	Display name of the Provider.

HOST

Host	IP Address or host name where the SSH accounts are located.
Port	Set the port number used to communicate with the host.

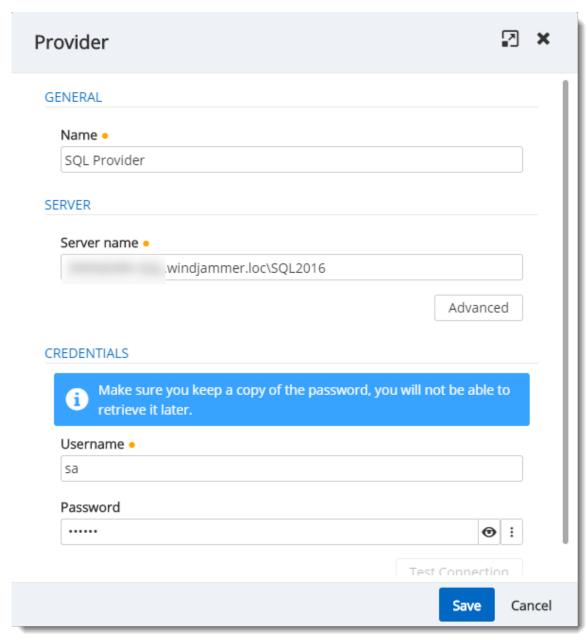
CREDENTIALS

Username	Username of the SSH account.
Password	Password of the SSH account.

6.3.3 SQL Server Provider

DESCRIPTION

The SQL Provider allows Devolutions Server to store the SQL account credentials to be used for SQL accounts discovery or to achieve password rotation.



SQL Provider dialog

GENERAL

Name	Display name of the Provider.

SERVER

Server	Hostname of the SQL Server

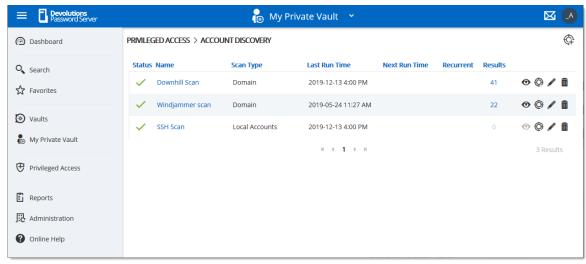
CREDENTIALS

Username	Username of the SQL account with rights to list accounts.
Password	Password of the SQL account.

6.4 Scan Configurations

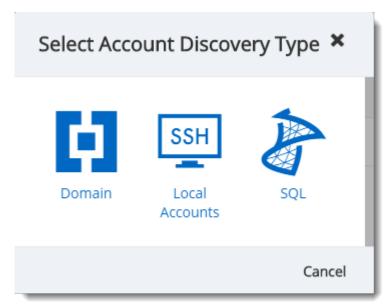
DESCRIPTION

The Scan Configurations or Account Discovery is the configured instance that will discover accounts in a domain, a SQL server or SSH environment.



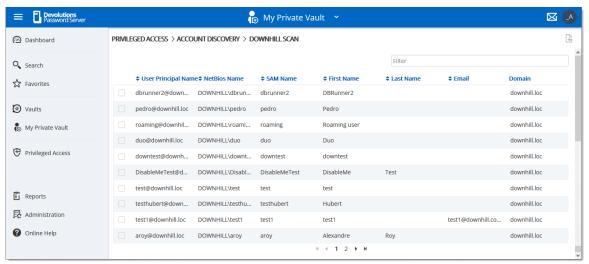
Account Discovery dialog

On the creation of an Account Discovery, it is possible to choose between <u>Domain</u>, <u>SQL Server</u> or <u>SSH Local Accounts</u>.



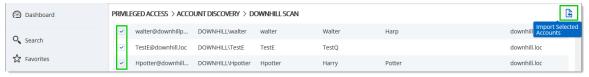
Account Type Options

To see the results of the discovery process, click on the eye icon of the Account Discovery to see the list of accounts.



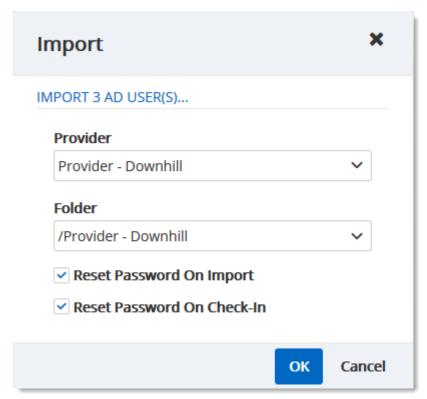
Account Discovery results dialog

In order to manage privileged accounts with the Devolutions Server PAM feature, select the accounts from the Account Discovery results page and click on the Import Selected Accounts button. Then the accounts will be available in Privileged Access - Accounts.



Import Selected Accounts operation

On import, the **Provider**, Destination Folder and Reset Password options can be set.



Import Window

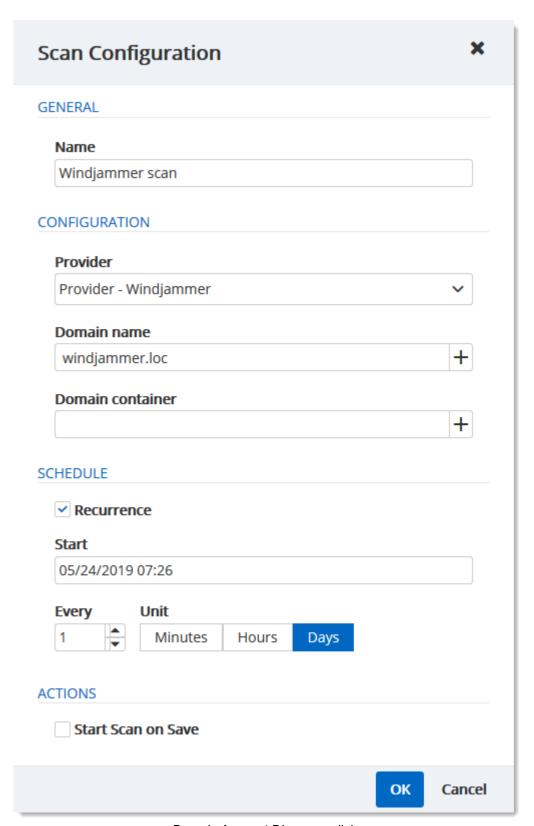
IMPORT

Provider	Select the Provider in the drop-down list.
Folder	Select the destination folder in the drop-down list.
Reset Password On Import	On import, the password will be reset.
Reset Password On Check-In	When the user will release the account on Check-In, the password will be reset.

6.4.1 Domain Account Discovery

DESCRIPTION

The Domain Account Discovery allows Devolutions Server to scan a domain area to find accounts. The accounts will not be automatically added.



Domain Account Discovery dialog

GENERAL

Name	Display name of the Domain Account Discovery.

CONFIGURATION

Provider	Name of the Domain Provider.
Domain name	FQDN of the domain against where the scan or the password rotation will be executed.
Domain Container	Distinguished name of an Active Directory OU or group.

SCHEDULE

Recurrence	If enable, will run the Account Discovery on a regular basis depending on the schedule configuration.
Start	Starting date and hour of the Account Discovery recurrence.
Every	Number of Units.
Unit	Units of time.

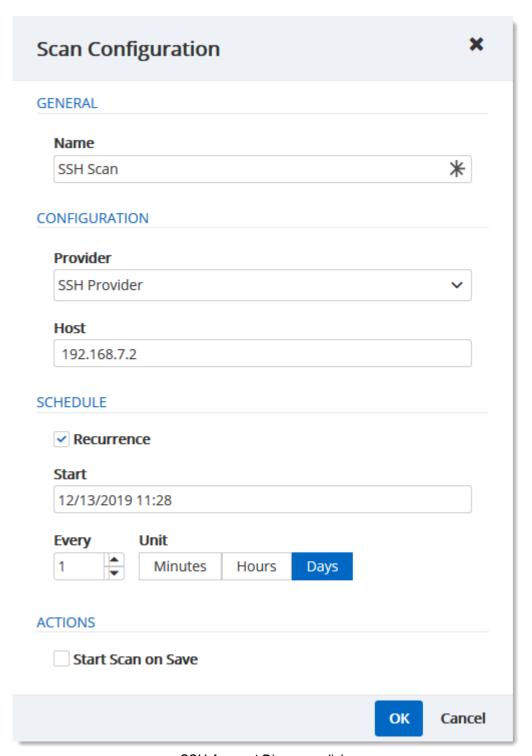
ACTION

Start Scan on Save	If enabled, will start the account discovery scan on saving the modifications.

6.4.2 SSH Account Discovery

DESCRIPTION

The SSH Account Discovery allows Devolutions Server to scan the host to find accounts. The accounts will not be automatically added.



SSH Account Discovery dialog

GENERAL

Name	Display name of the SSH Account Discovery.

CONFIGURATION

Provider	Name of the SHH Provider.
Host	IP of the host where the scan or the password rotation will be executed.

SCHEDULE

Recurrence	If enable, will run the Account Discovery on a regular basis depending on the schedule configuration.
Start	Starting date and hour of the Account Discovery recurrence.
Every	Number of Units.
Unit	Units of time.

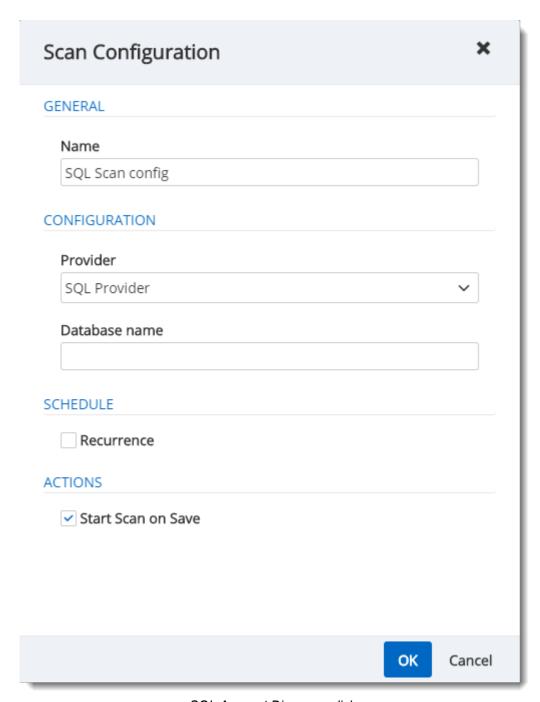
ACTION

Start Scan on Save	If enabled, will start the account discovery scan on saving the modifications.

6.4.3 SQL Account Discovery

DESCRIPTION

The SQL Account Discovery allows Devolutions Server to scan the host to find accounts. The accounts will not be automatically added.



SQL Account Discovery dialog

GENERAL

Name	Display name of the SQL Account Discovery.

CONFIGURATION

Provider	Name of the SQL Provider.
Database Name	Name of the Database, the scan will list the accounts in that database

SCHEDULE

Recurrence	If enable, will run the Account Discovery on a regular basis depending on the schedule configuration.
Start	Starting date and hour of the Account Discovery recurrence.
Every	Number of Units.
Unit	Units of time.

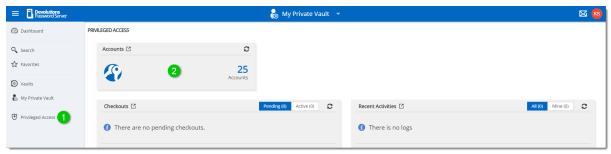
ACTION

Start Scan on Save	If enabled, will start the account discovery scan on saving the modifications.

6.5 Checkout Process

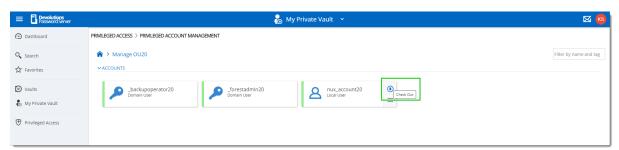
DESCRIPTION

- 1. To check out an entry requiring approbation, the user needs to go to the **Privileged Access** section on the Devolutions Server's webpage.
- 2. The user then clicks on the Accounts panel.



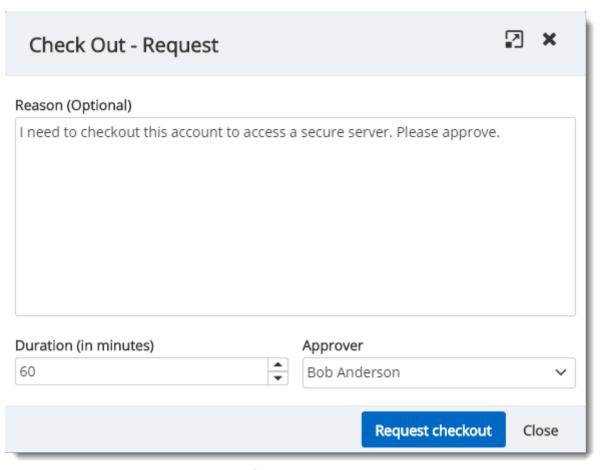
Privileged Access

The user then locates the account they want to check out for temporary use and clicks the *Check Out* button on the entry.



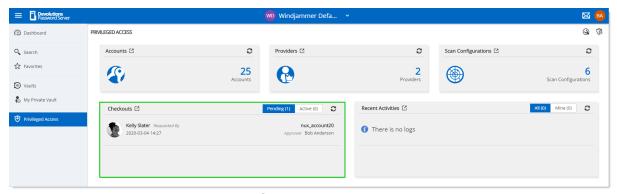
PAM Account Selection

A pop-up will appear requesting information on the checkout request to be sent to an administrator for approval.



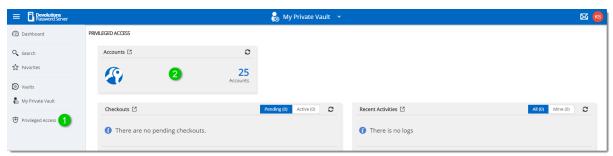
Checkout Request

Once the request is sent, the selected Approver will have the request in the *Checkout* field of his *Privileged Access* window.



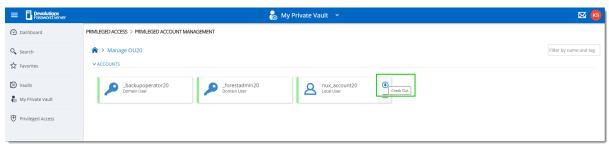
Checkout Request

- 1. To check out an entry requiring approbation, the user needs to go to the Privileged Access section on the Devolutions Server's webpage.
- 2. The user then clicks on the Accounts panel.



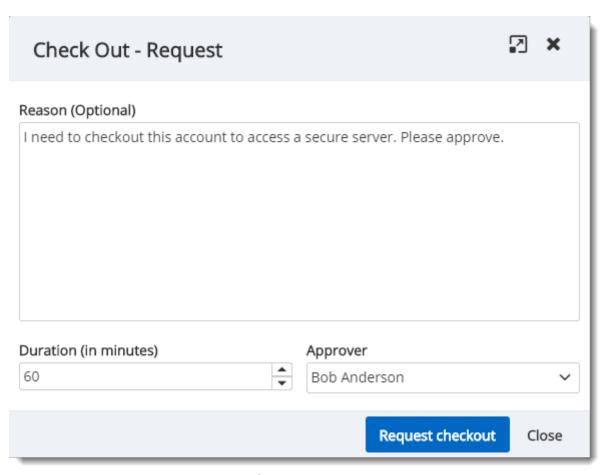
Privileged Access

The user then locates the account they want to Check Out for temporary use and clicks the *Check Out* button on the entry.



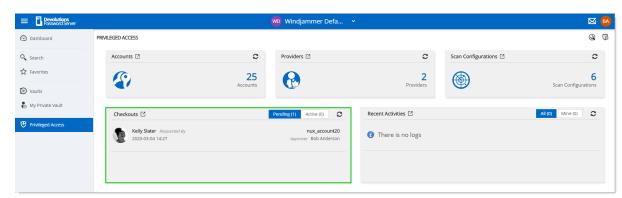
PAM Account Selection

A pop-up will appear requesting information on the checkout request to be sent to an administrator for approval.



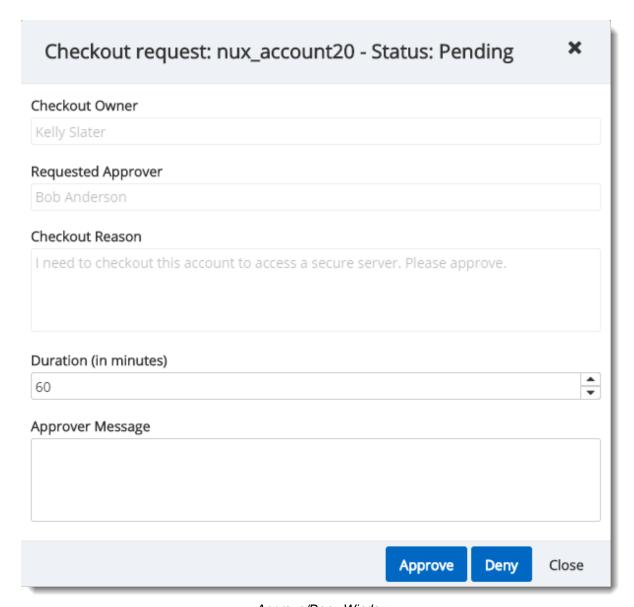
Checkout Request

Once the request is sent, the selected Approver will have the request in the "Checkout" field of his *Privileged Access* window.



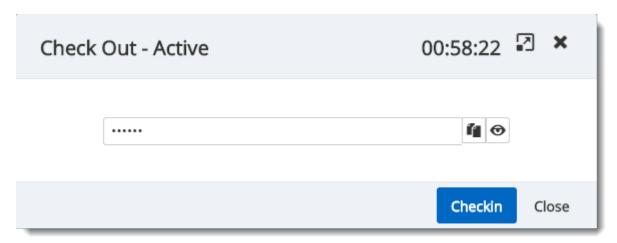
Checkout Request

The approver gets the following pop-up when clicking on the request where it's possible to either *Approve* or *Deny* the request and leave an optional message.



Approve/Deny Window

If the request is denied, the user will see that their request on the account is no longer pending and was denied in the recent activity field of the main **Privileged Access** page. If approved, they will be able to access the account by clicking on the same button they used to submit the request. They'll now get this **Active Checkout** window instead of the request one:



Checkout Active

Once done with the account, they can use the *CheckIn* button on the last window to release their hold on the checkout.

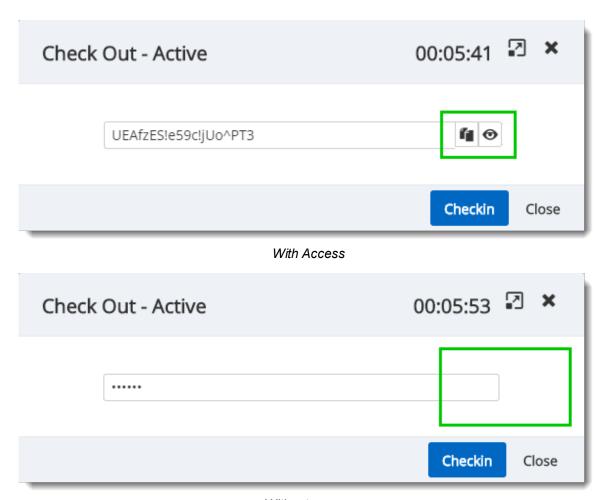
Privileged accounts' passwords are automatically changed on check-in if the corresponding option is enabled.

6.6 View Sensitive Data vs Account Brokering

DESCRIPTION

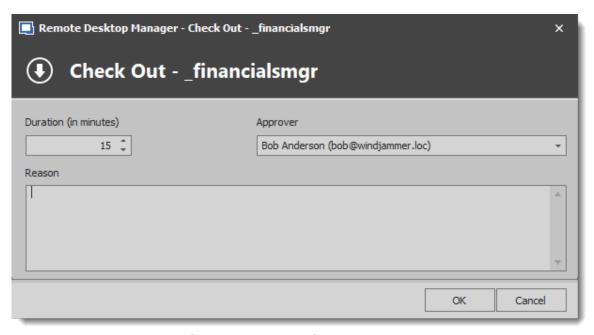
It is important to learn the differences between the 2 sets of permissions known as **View sensitive data on checkout** and **Credential Brokering**. In this topic, you will find an explanation of the way they're used.

Giving access to *View Sensitive Data on Checkout* to a user will let that user see the password when the entry is checked out.



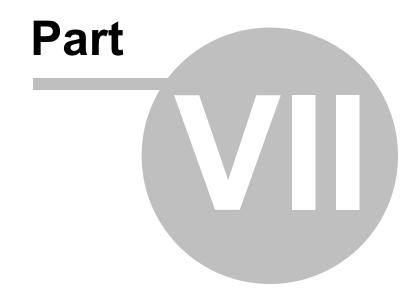
Without access

Credential Brokering lets a user check out credentials for a session from Remote Desktop Manager directly on the entry itself. When opening the session that requires a privileged account, a pop-up can appear with the **checkout request** window if the entry requires approval. Following the approval, the user will be able to launch the session successfully. Otherwise, the entry will be used seamlessly to open the session.



Credential Brokering Checkout Request

Devolutions Web Login



7 Devolutions Web Login

7.1 Overview

DESCRIPTION



Devolutions Web Login is a web browser password plugin used in conjunction with Remote Desktop Manager, Devolutions Server and Devolutions Password Hub, which allows users to securely inject passwords into websites using credentials stored in their vaults.

It gives system administrators full control over the management of passwords, without affecting the user's productivity.

		%
Remote Desktop Manager	Devolutions Server Secure, Manage and	Devolutions Password Hub
Centralize, Manage and	Monitor	Vault and Manage
Secure Remote Connections	Access to Privileged Accounts	Business-User Passwords
Remote Desktop Manager centralizes all remote connections on a single platform that is securely shared between users and across the entire team.	you control access to	Devolutions Password Hub is a secure and cloud-based password manager for teams.



Advanced users, other browser extensions, or even JavaScript injection can all result in the password being read from the password edit control, even if it displays dots instead of the password. Any use of an external browser must be carefully weighed against your security requirements.

Warning for all Remote Desktop Manager users:



The **Devolutions Web Login (DWL)** was created for a normal desktop environment. It uses Inter-process communication (IPC) with the client application. Using it on a remote desktop server introduces a level of risk that may be unacceptable for corporate users.

Safe usage of **DWL** requires a manual configuration of both **RDM** and **DWL** on each user profiles. For more information about the subject visit our Secure Devolutions Web Login topic.

7.2 Installation

DESCRIPTION

Devolutions Web Login is a free browser extension companion tools. It does require one of our products to function at this time.

Click on the browser link below to start the installation of Devolutions Web Login plugin:

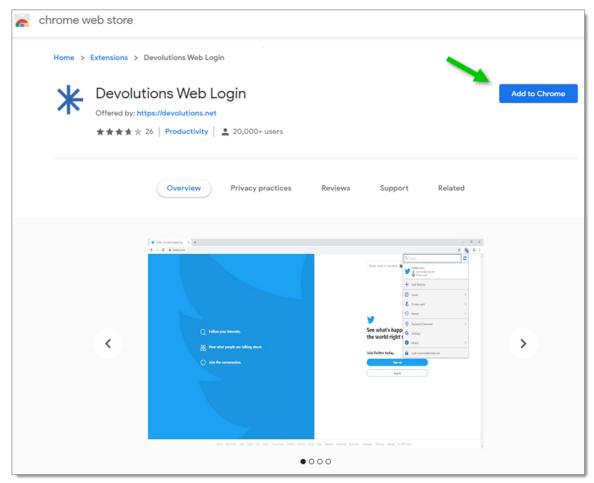
- Chrome
- Firefox
- Edge
- Opera

7.2.1 Chrome

DESCRIPTION

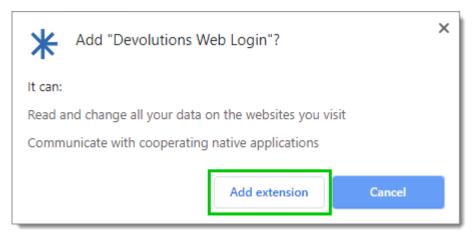
Follow the steps below to complete the installation of Devolutions Web Login in the Chrome web browser.

- 1. Open Chrome.
- 2. Navigate to <u>Devolutions Web Login extension</u> or use the link from our <u>Website</u>.
- 3. Click the *Add To Chrome* button.



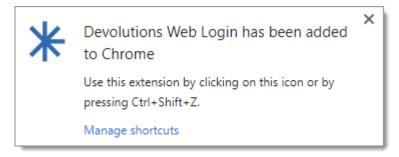
Devolutions Web Login Chrome Web Store

4. Click Add extension in the confirmation dialog.

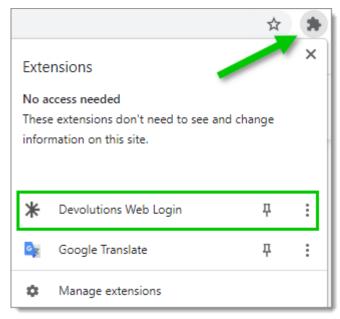


Extension Installation Confirmation

Once installed a confirmation box will appear.



5. Click the Chrome extension button and Pin Devolutions Web Login to finish the installation.



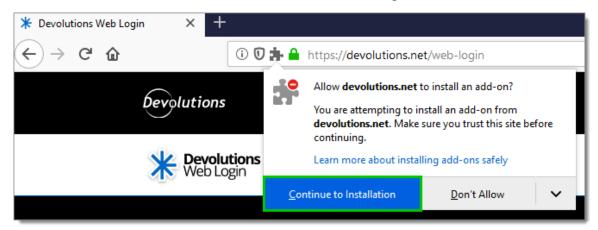
Devolutions Web Login Extension Button

7.2.2 Firefox

DESCRIPTION

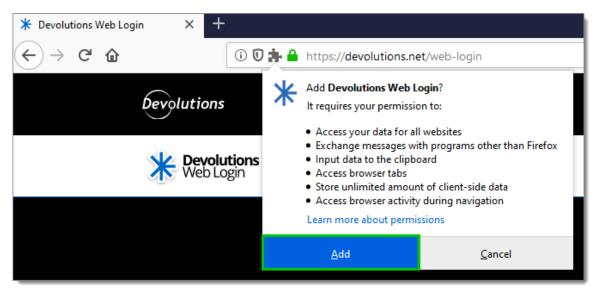
Follow the steps below to complete the installation of Devolutions Web Login in the Firefox web browser.

- 1. Open a Firefox window.
- 2. Download the extension from our **Devolutions Web Login** website page.
- 3. Click Continue to Installation in the confirmation dialog.



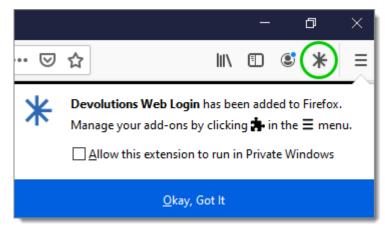
Continue to Installation

4. Click *Add*, when prompted to add Devolutions Web Login to the extension.



Add the Extension

5. Once installed, access the extension by clicking * in the top-right corner of Firefox.



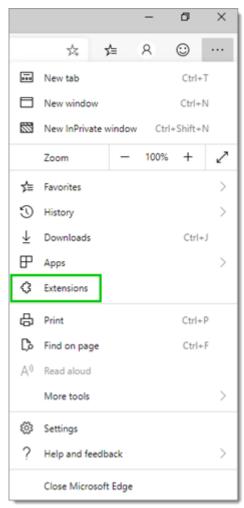
Devolutions Web Login Extension Button

7.2.3 Edge

DESCRIPTION

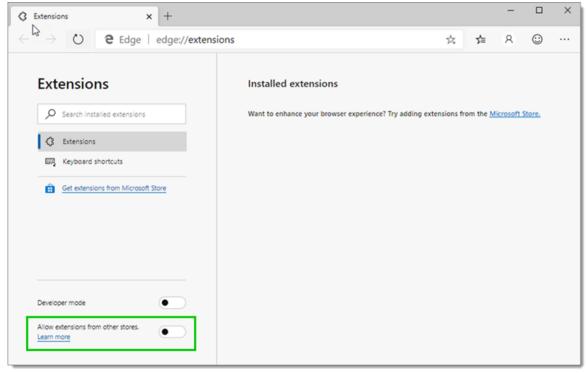
Here are the steps to install Devolutions Web Login on Microsoft Edge Beta.

- 1. Open Microsoft Edge Beta.
- 2. Click on *Extensions* in the menu of the browser.



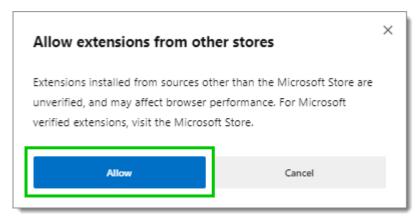
Microsoft Edge Beta Menu

3. Allow extensions from other stores.



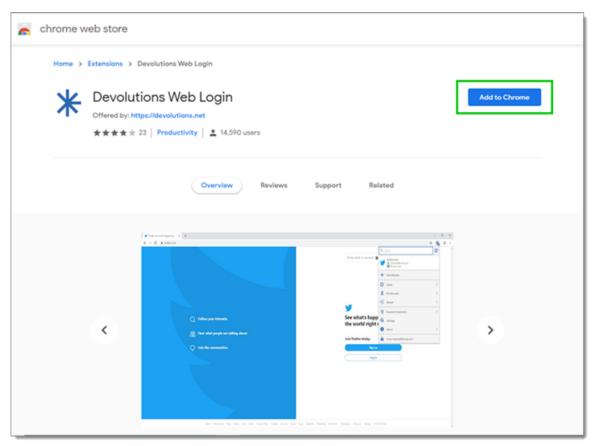
Allow Extensions

4. Allow Non Microsoft Store Extensions.



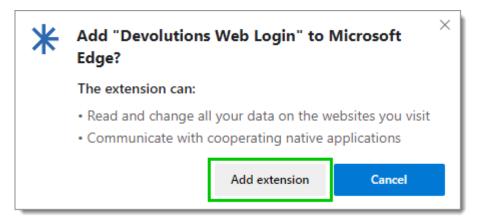
Allow Non Microsoft Store Extensions

- 5. Follow the extension from <u>Devolutions Web Login</u> website page to the Chrome Web Store.
- 6. Click Add to Chrome.



Chrome Web Store

7. Add the extension to Microsoft Edge Beta.



Add Devolutions Web Login to Microsoft Edge Beta

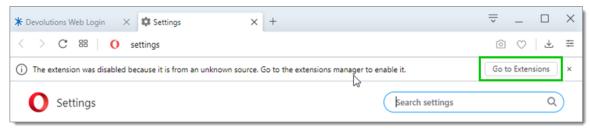
The extension is installed. Access it by clicking * in the top-right corner of the Microsoft Edge Beta web browser.

7.2.4 Opera

DESCRIPTION

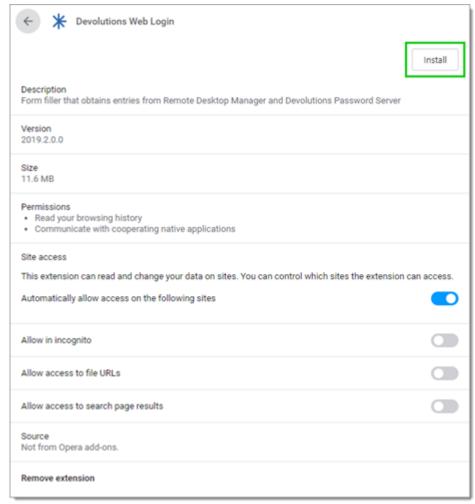
Follow the steps below to complete the installation of Devolutions Web Login in the Opera web browser.

- 1. Open Opera.
- 2. Download the extension of **Devolutions Web Login** from our website page.
- 3. Go to *Browser Settings* in the easy setup of Opera.
- 4. Drag and drop the .crx file from step 2 from the downloads in the web browser.
- 5. Click on *Go to Extension* from the information panel at the top.



Opera Extensions Enabling

6. Click *Install* and the **Yes, install** pop up.



Opera Install Window

7. Access the extension by clicking * in the top-right corner of Opera.

7.3 First Login

7.3.1 Password Hub

DESCRIPTION

FIRST LOGIN WITH DEVOLUTIONS WEB LOGIN

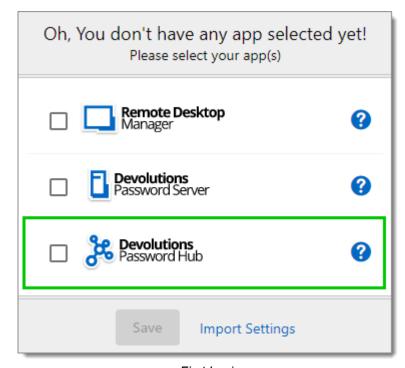
Follow these steps to connect Devolutions Password Hub to Devolutions Web Login extension:

1. Click on **Devolutions Web Login** * extension at the top right corner of your browser.



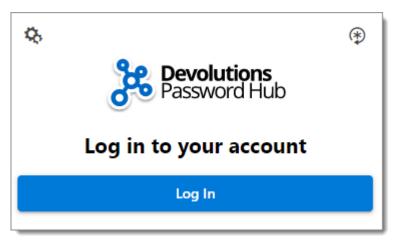
A Devolutions Password Hub access is required to continue.

2. Choose **Devolutions Password Hub** in the list and **Save**. You could at this point import settings; the option will also be available in the **Settings** menu after the log in.



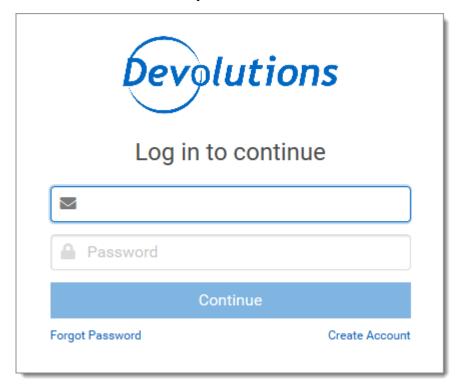
First Login

3. *Log in* to your account.



Log In

4. Enter the credentials from your Devolutions Account to continue.



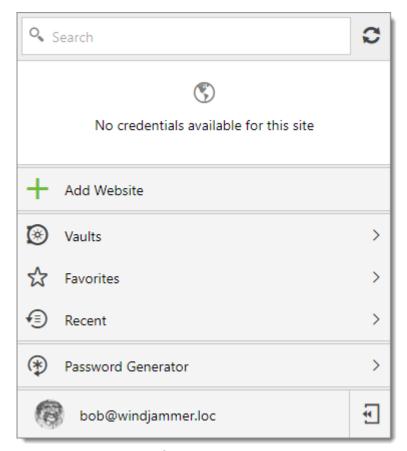
Devolutions Account Login

5. Unlock the vault with your master key.



Devolutions Web Login will recognize automatically the Password Hub linked to your Devolutions account. Click *Change* to modify the URL.

Devolutions Web Login is now connected to your vaults.



Devolutions Web Login Connected to Devolutions Password Hub

7.3.2 Devolutions Server

DESCRIPTION

FIRST LOGIN WITH DEVOLUTIONS WEB LOGIN

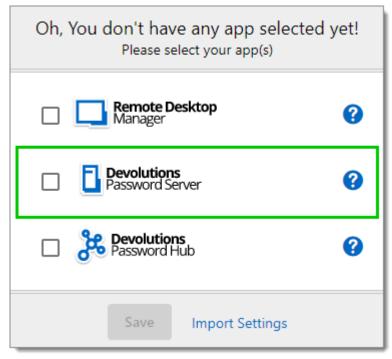
Follow these steps to connect Devolutions Server to Devolutions Web Login extension:

1. Click on **Devolutions Web Login** * extension at the top right corner of your browser.



A Devolutions Server access is required to continue.

2. Choose **Devolutions Server** in the list and **Save**. You could at this point import settings; the option will also be available in the **Settings** menu after the log in.



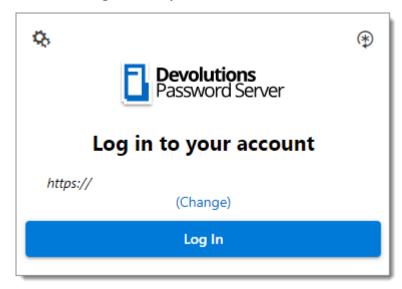
First Login

3. Enter the server address. Test the connection to validate it, then Save.



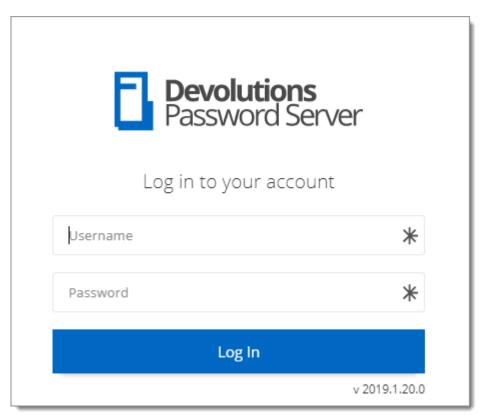
Server Address

4. Press the *Log In* after you saved the address.



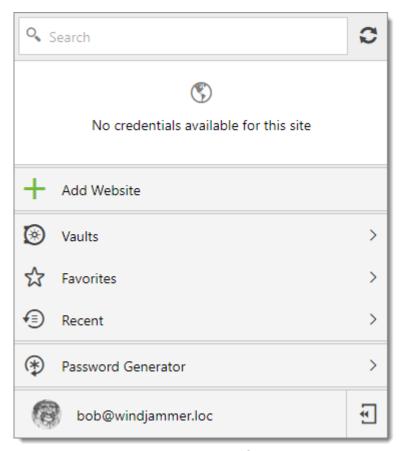
Devolutions Web Login Login

5. Enter your Devolutions Server credentials and log in.



Devolutions Server Login

Devolutions Web Login is now connected to your vaults.



Devolutions Web Login Connected

7.3.3 Remote Desktop Manager

DESCRIPTION

FIRST LOGIN WITH DEVOLUTIONS WEB LOGIN

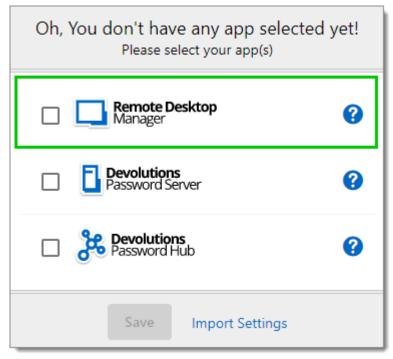
Follow these steps to connect your Remote Desktop Manager to Devolutions Web Login extension:

1. Click on Devolutions Web Login * extension at the top right corner of your browser.



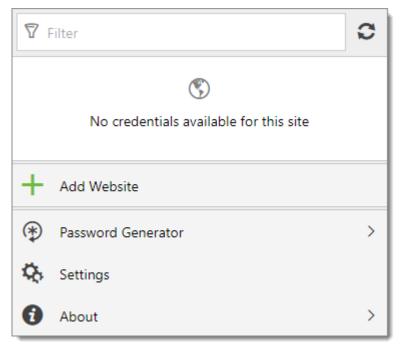
Remote Desktop Manager must be installed and running to continue.

2. Choose *Remote Desktop Manager* in the list and *Save*. You could at this point import settings; the option will also be available in the <u>Settings</u> menu after the log in.



First Login

You will be automatically connected to your vaults.



Devolutions Web Login Connected

7.4 Exploring Devolutions Web Login

7.4.1 Menu

DESCRIPTION

The user interface **Devolutions Web Login** is slightly different in appearance when connected to Remote Desktop Manager, Devolutions Server or Devolutions Password Hub.

See below a list of the menu and information available from the Devolutions Web Login extension:

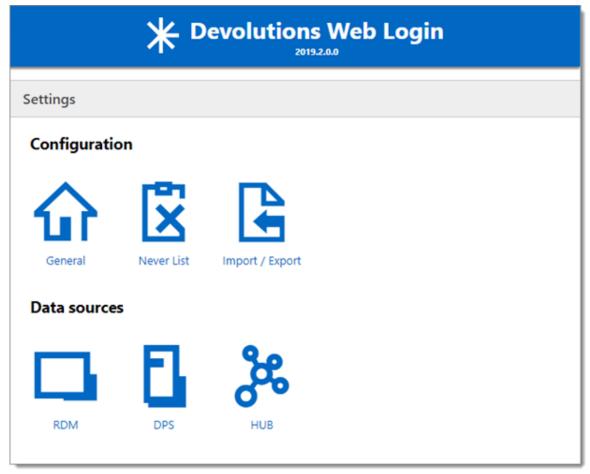
- Refine the credential list available with the search.
- Add a website from Devolutions Web Login in a specific folder located in a vault or your User Vault.
- **Visualize the credential** stored in the vaults if you are connected with Devolutions Server or Devolutions Password Hub.
- Browse recently used entry or favorites.

- Use the **password generator** to create custom and more secure credentials.
- Set Devolutions Web Login settings.

7.4.1.1 Settings

DESCRIPTION

Devolutions Web Login settings are separated in two categories, **Configuration** and **Data sources**.



Devolutions Web Login Settings

CONFIGURATION

The *General* settings are about the user interface and interaction.

- Show Devolutions Web Login extension icon in the credentials fields.
- Show the prompt when saving credentials on new login.
- Color the fields that are filled with Devolutions Web Login
- Disable the analytics in the advanced setting.

The **Never list** displays the list of websites, added locally, to which the user will never be prompted to save credentials.

- Type can range from: Never add site, Never autofill, Never do anything too Never show icons in field.
- Matching options are: Base domains, Host, Starts with, RegEx and Exact.

To remove a website from the never list click the *trash can* icon next to it. To edit an entry, delete it and create another.

The *Import / Export* setting allows to save and transfer your currently set preferred settings.

- Import setting from other browsers or users.
- Choose to export Devolutions Web Login settings, password generator template and the never list.

DATA SOURCES

The data sources settings are used to customize Devolutions Web Login interactions with Remote Desktop Manager, Devolutions Server and Devolutions Password Hub.

REMOTE DESKTOP MANAGER

GENERAL OPTIONS	DESCRIPTION
Enable Remote Desktop Manager app	Retrieve entries from Remote Desktop Manager when the application is open.

GENERAL OPTIONS	DESCRIPTION	
Use default port (19443)	Communicate with the default port 19443 between the application.	
Add entry in User Vault by default	Save new entries in the User Vault.	
Destination folder	Choose the folder where the credentials are stored in the vault.	
ACTION OPTIONS	DESCRIPTION	
Automatically retrieve credentials on page load	Devolutions Web Login automatically search for credentials in the data source when connecting to a website.	
	If disabled, click on the Devolutions Web Login extension icon to manually retrieve credentials.	
Automatically fill in credentials on load	Fill automatically the credentials when loading a web page.	
Automatically submit the form after filling	Submit the credentials automatically when the fields are filled.	
ADVANCED OPTIONS	DESCRIPTION	
Application key	Secure the port with an application key by using the same code in Remote Desktop Manager and Devolutions Web Login.	
	Navigate to <i>File – Options – Browser Extensions</i> in Remote Desktop Manager to set the application key.	

ADVANCED OPTIONS	DESCRIPTION
Enable native messaging	Exchange messages with a native application installed on the user's computer.
Use legacy API	Use the old browser extension API for compatibility with older versions of Remote Desktop Manager.

DEVOLUTIONS SERVER

GENERAL OPTIONS	DESCRIPTION	
Enable Devolutions Server	Retrieve entries from Devolutions Server.	
Destination folder	Choose the folder where the credentials are stored in the vault.	
Server URL	Enter the URL of the Devolutions Server instance to connect to.	
ACTION OPTIONS	DESCRIPTION	
Automatically retrieve credentials on page load	Devolutions Web Login automatically search for credentials in the data source when connecting to a website. If disabled, click on the Devolutions Web Login extension icon to manually retrieve credentials.	
Automatically fill in credentials on load	Fill automatically the credentials when loading a web page.	
Automatically submit the form after filling	Submit the credentials automatically when the fields are filled.	

DEVOLUTIONS PASSWORD HUB

GENERAL OPTIONS	DESCRIPTION	
Enable Devolutions Password Hub	Retrieve entries from Devolutions Password Hub.	
Server URL	Enter the URL of the Devolutions Password Hub instance to connect to.	
ACTION OPTIONS	DESCRIPTION	
Automatically fill in credentials on load	Fill automatically the credentials when loading a web page.	
Automatically submit the form after filling	Submit the credentials automatically when the fields are filled	
ADVANCED OPTIONS	DESCRIPTION	
Devolutions Account login	Set your Devolutions Account login URL.	
Show favicon	Display the Devolutions Web Login favicon.	

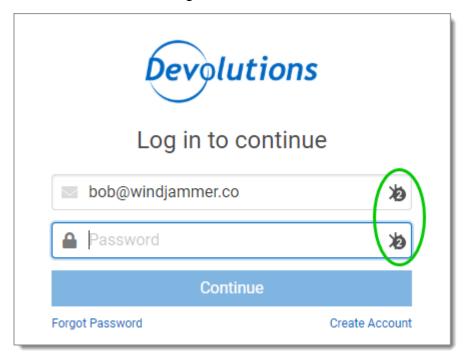
7.4.2 Retrieve Credentials

DESCRIPTION

Once configured in your Devolutions product, credentials are automatically detected by **Devolutions Web Login** when connected to their respective applications.

LOG IN TO A WEBSITE

Select an entry from the list in Devolutions Web Login or click on the icon in the credential field to fill in the login information and connect to the website.

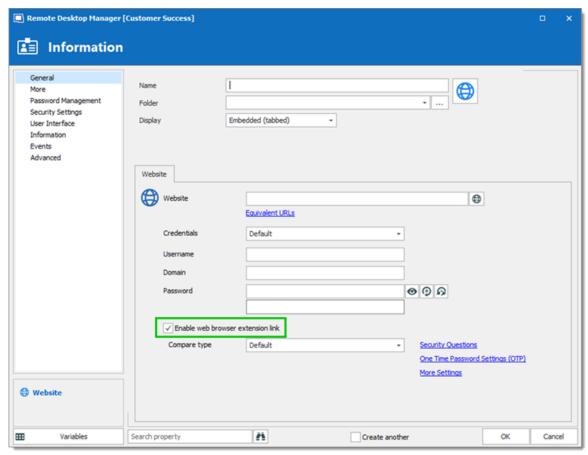


Automatic Log In

7.4.2.1 Remote Desktop Manager

DESCRIPTION

Checkmark *Enable web browser extension link* in Remote Desktop Manager entries to allow Devolutions Web Login extension to retrieve the credentials when connecting to its respective website.



Enable web browser extension link

7.4.3 Secure Devolutions Web Login

DESCRIPTION

In Remote Desktop Manager version 2021.1 and higher, we changed how our browser extension, Devolutions Web Login, communicates with Remote Desktop Manager to fill in credentials inside web pages. We did these changes to increase the security of this feature. Follow this <u>link</u> for the steps.

If you are using a version prior to 2021.1 and as mentioned in the Devolutions Web Login <u>Overview</u> topic, installing the extension in a Terminal Services environment can introduce security risks. In such environments, each user must have a distinct port assigned, as well as an application key to prevent any other Devolutions Web Login from listening in.

If you insist on using it, it is critical that each user is assigned a distinct port. An application key must be set as well. The first client application that starts will be able to use the port exclusively. ALL Devolutions Web Login calling on that port will get the responses, unless an application key is set. Follow this <u>link</u> for the steps.

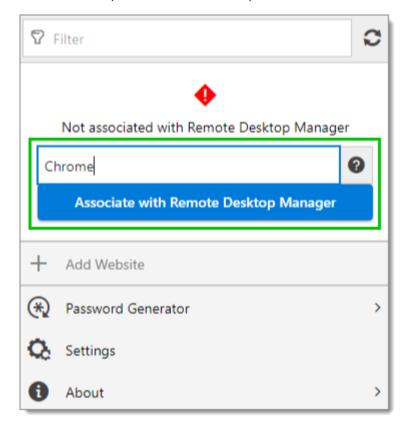
HOW TO SET UP DEVOLUTIONS WEB LOGIN FOR VERSION 2021.1 AND HIGHER



An application key is mandatory if you are using Devolutions Web Login on a Terminal server. Please follow the steps describe here.

When you will first open Devolutions Web Login and choose to use it with Remote Desktop Manager, you will be prompted to pair the two applications.

1. Enter a name, for this association, in the text box.





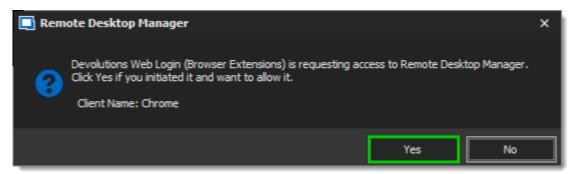
This can be used to identify a particular association and to deny access to it from Remote Desktop Manager. The default name is the name of the web browser running Devolutions Web Login.

2. Click on Associate with Remote Desktop Manager.



A popup window should appear on Remote Desktop Manager asking if the request was actually sent by you.

3. Click **Yes** to accept the association request.



You are now paired.



Note that, while Remote Desktop Manager can handle multiple associations (e.g., multiple browsers), Devolutions Web Login can only be paired to a single instance of RDM at any time.

HOW TO SET UP DEVOLUTIONS WEB LOGIN FOR VERSION LOWER THAN 2021.1 AND FOR TERMINAL SERVER

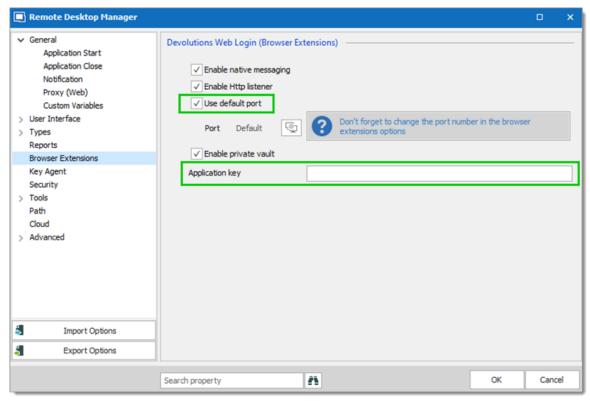


The application key is displayed in clear text, it must be kept secret by the user.

To enable the security layer in Remote Desktop Manager, follow these steps:

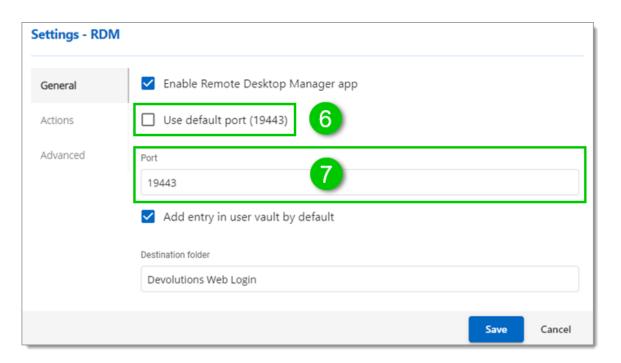
1. Navigate to *File – Options – Browser Extensions*.

- 2. Uncheck Use default port.
- 3. Enter a custom port.
- 4. Type an Application key then click OK

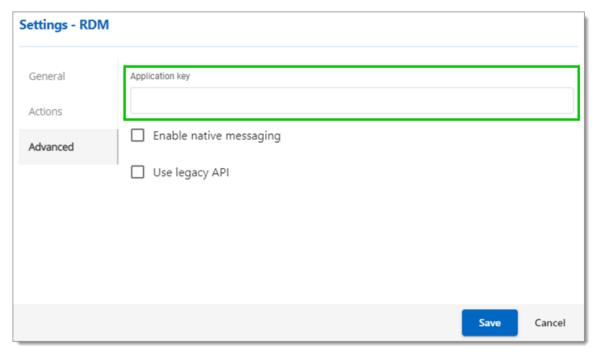


Remote Desktop Manager Browser Extensions Options

- 5. In your browser, click the Devolutions Web Login icon **★** and go to **Settings Data sources RDM**.
- 6. Disable Use default port.
- 7. Enter the custom port created earlier in Remote Desktop Manager and Save.



8. Click *Advanced* and enter the same *Application key* as Remote Desktop Manager.



Devolutions Web Login Settings for Remote Desktop Manager

7.4.3.1 Unpair a Browser Extension

DESCRIPTION

In the event you want to deny access to Remote Desktop Manager from a previously paired browser extension, you need to delete it from Remote Desktop Manager.

- 1. In RDM go to *File Options Browser Extensions*.
- 2. In the **Devolutions Web Login Associations** section click the **x** button of the entry in the list and click **OK** to save the modifications.



In the **Devolutions Web Login Associations** section, you will find a list of each association made to Remote Desktop Manager including some information to identify them. This includes the name specified at the time of association (which defaults to the web browser's name), a part of the encryption key used between the two, it's creation date and the date when it was last used.

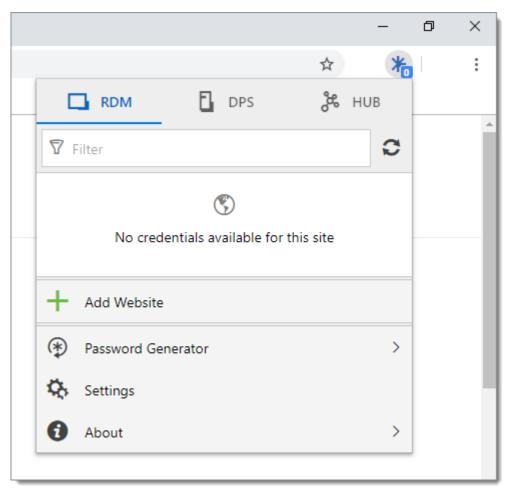
7.4.4 Keyboard Shortcuts

DESCRIPTION

Here is the list of keyboard shortcuts available for Devolutions Web Login:

CTRL+SHIFT+Z

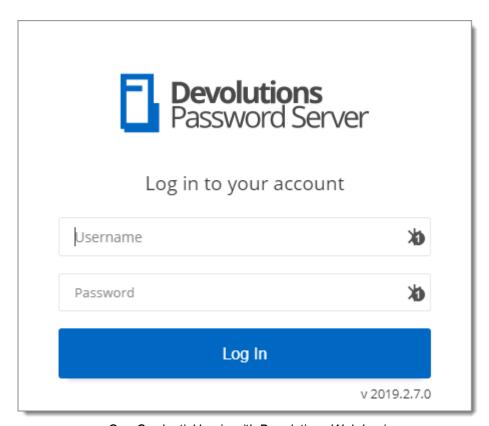
Use this key shortcut to open Devolutions Web Login window in your active browser.



Devolutions Web Login in Chrome

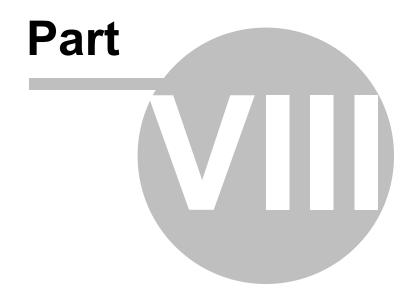
CTRL+SHIFT+Y

Use it to auto-fill your credential when only one is available for an entry.



One Credential Login with Devolutions Web Login

Devolutions Launcher



8 Devolutions Launcher

8.1 Overview

DESCRIPTION



Devolutions Launcher is a companion tool for Devolutions Server and Devolutions Password Hub. It can launch multiple remote sessions simultaneously, while giving system administrators full control. It is available on Windows.

Devolutions Server Secure, Manage and Monitor Access to Privileged	Devolutions Password Hub Vault and Manage Business-User	
Accounts Devolutions Server lets you control access to privileged accounts and manage remote sessions through a secure solution that can be deployed on premises.	Passwords Devolutions Password Hub is a secure and cloud-based password manager for teams	

8.2 Installation

8.2.1 Prerequisites

DESCRIPTION

MINIMUM GENERAL REQUIREMENTS

Devolutions Server 2019.1.X.X or later.

Most recent browsers are supported and so is Internet Explorer 11 or above.

MINIMUM PLATFORM REQUIREMENTS

WINDOWS

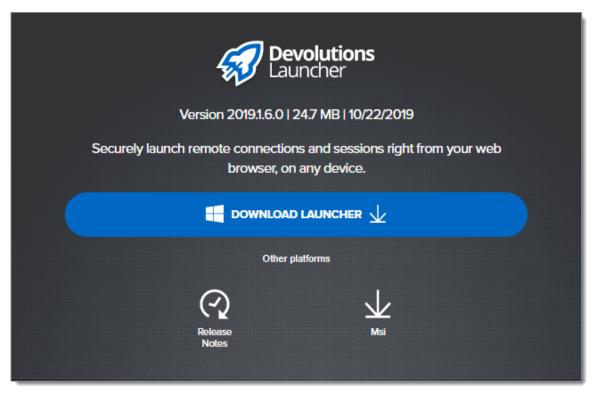
- Windows 8 or later
- Microsoft .NET Framework 4.7.2
- 1 GHz or faster processor
- 2 GB of RAM
- 100 MB hard drive space

8.2.1.1 Download and Installation

DESCRIPTION

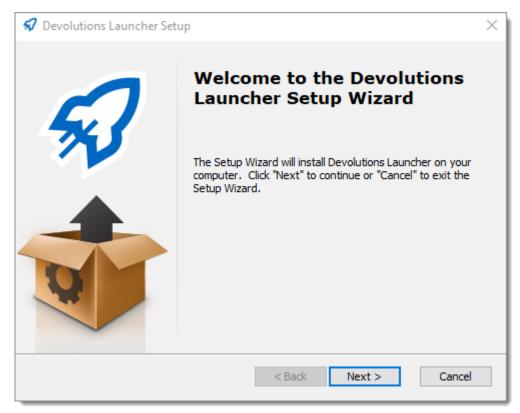
Follow these steps to install Devolutions Launcher:

1. Download <u>Devolutions Launcher</u> or search the companion tools in the products section of <u>Devolutions</u>.



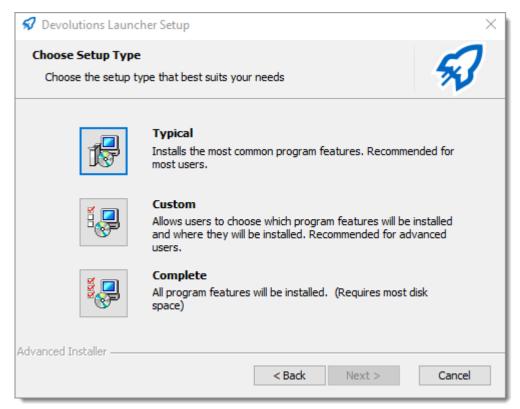
Devolutions Launcher Download Page

- 2. Open the downloaded file.
- 3. Click Next on the Welcome page.



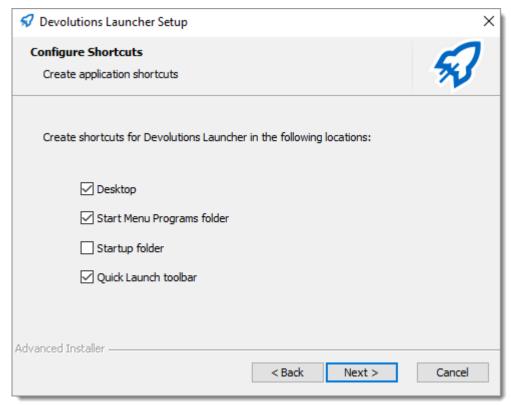
Devolutions Launcher Setup Wizard - Welcome

4. Choose the setup type.



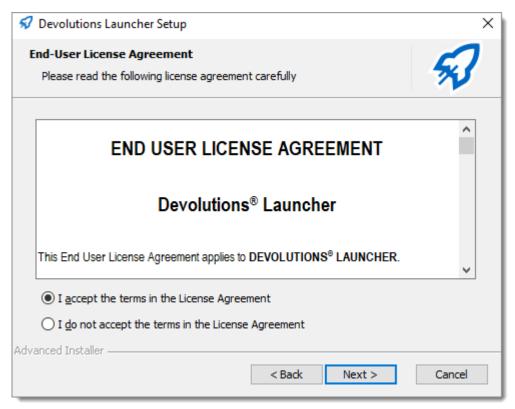
Devolutions Launcher Setup Wizard - Setup Type

5. Configure the shortcuts for Devolutions Launcher.



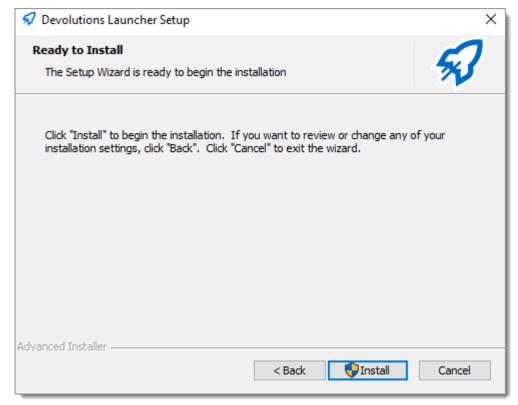
Devolutions Launcher Setup Wizard - Configure Shortcuts

6. Accept the terms of the license agreement and click Next.



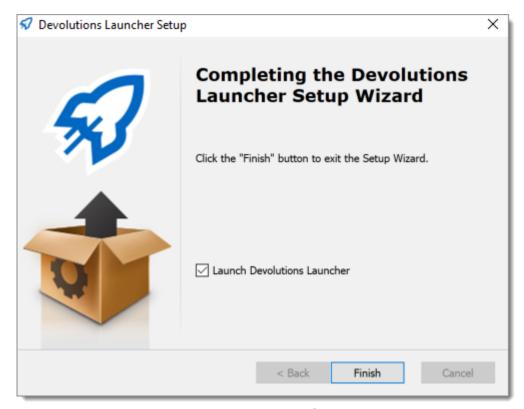
Devolutions Launcher - End User License Agreement

7. Click Install.



Devolutions Launcher - Ready to Install

8. Click *Finish* to complete the installation.



Devolutions Launcher - Complete

8.3 Configuration and Settings

8.3.1 Devolutions Server

DESCRIPTION

Devolutions Launcher and Devolutions Server must be configured together. Launch connections can be set for all users in **Devolutions Server Settings** or individually in **Account Settings**.



You need to at least log in to Devolutions Launcher **once** for the companion tool to launch your sessions from Devolutions Server.

SERVER SETTINGS

This method sets how all users open remote connections.

Choose Devolutions Launcher to open remote connections in *Administration* – *Password Server Settings* – *Advanced*.

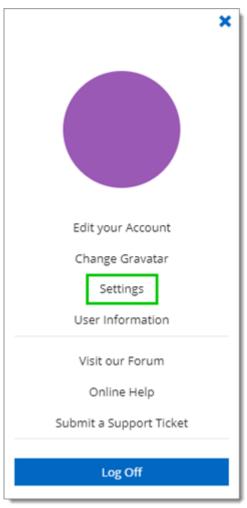


Administration - Devolutions Server Settings - Advanced

ACCOUNT SETTINGS

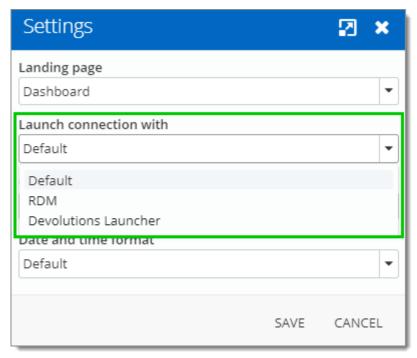
This method sets how individual users open remote connections.

- 1. Click the *user avatar* in the upper right corner.
- 2. Click Settings.



User Settings

3. Choose **Devolutions Launcher** from the drop-down list and **Save**.



Settings - Launch connection with Devolutions Launcher

8.3.1.1 Initial Settings

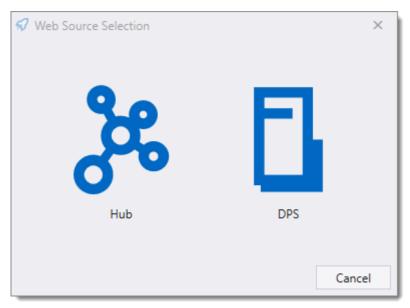
DESCRIPTION

When you finish the installation of Devolutions Launcher, you are prompted to choose a web source between Devolutions Password Hub and Devolutions Server.



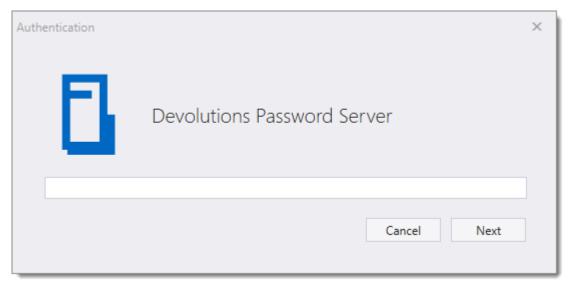
Web source login is available in the **Settings – Source** of Devolutions Launcher.

1. Choose **Devolutions Server**.



Choose a web source

2. Enter the Devolutions Server web address and click Next.

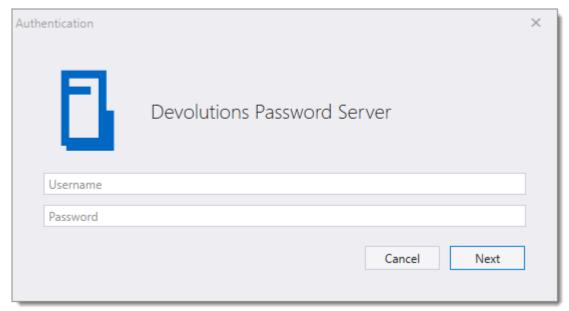


Devolutions Server Web Address

- 3. Fill in your Devolutions Server credentials or choose *Membership*, if available at this time, and choose between these options:
 - Domain user
 - Database user
 - Local Machine user
 - Devolutions Server Custom user

Windows authentication

You can login with **Azure Active Directory** if you use it to manage your users. In Devolutions Server and Remote Desktop Manager this authentication type is called **Office365**.



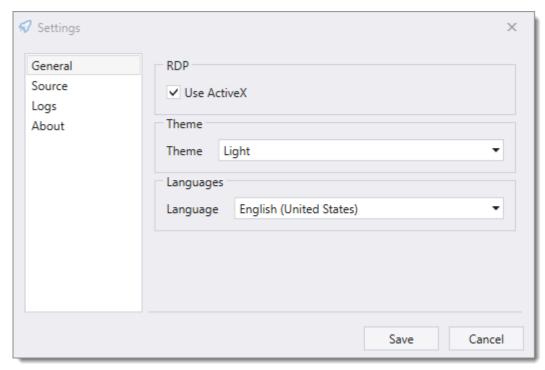
Devolutions Server Credentials

SETTINGS

GENERAL

In this menu you can personalize the following options:

- Use Active X to open RDP sessions. When unchecked, RDP sessions will open using FreeRDP protocol.
- Choose the color theme of Devolutions Launcher.
- Choose between the available languages. Close the application and the icon in the notification area to activate the new setting.



Devolutions Launcher Settings - General

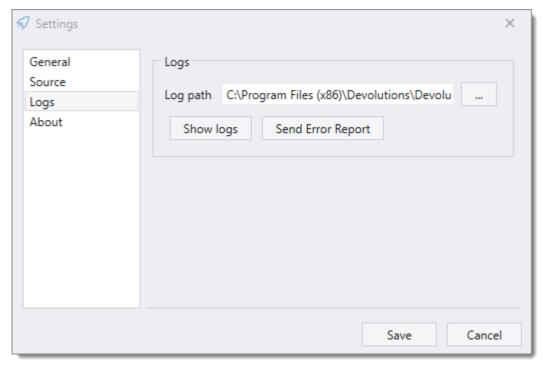
SOURCE

Log in or out of your connected source.

LOGS

The information in this section is primarily for administrators and application developers.

The log records events into a text file.



Devolutions Launcher Settings - Logs

- 1. Create a new log file (it can be a text document) before choosing the path.
- 2. Click the ellipsis button to select the path to save the log file, then save.

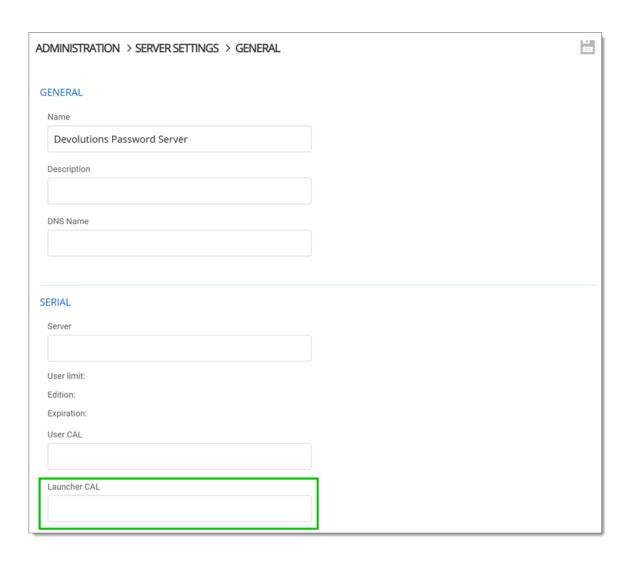
ABOUT

View Devolutions Launcher version and check for updates.

8.3.1.2 Launcher License Registration

DESCRIPTION

The location to register your Devolutions Launcher CAL license, in the web interface of Devolutions Server, is in *Administration - Server Settings - General - Serial*.



8.3.2 Devolutions Password Hub

8.3.2.1 Initial Settings

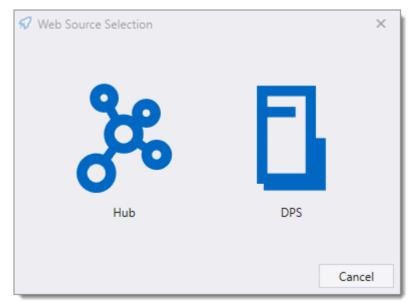
DESCRIPTION

When you finish the installation of Devolutions Launcher, you are prompted to choose a web source between Devolutions Password Hub and Devolutions Server.



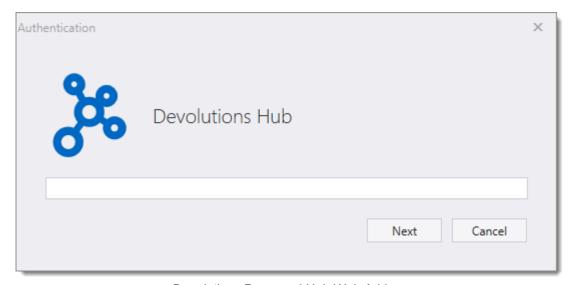
Web source login is available in the **Settings – Source** of Devolutions Launcher.

1. Choose **Devolutions Password Hub**.



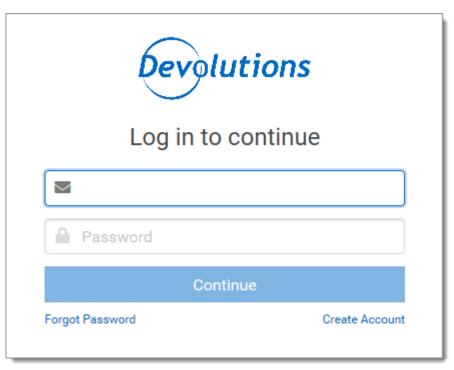
Choose a web source

2. Enter the Devolutions Password Hub web address and click Next.



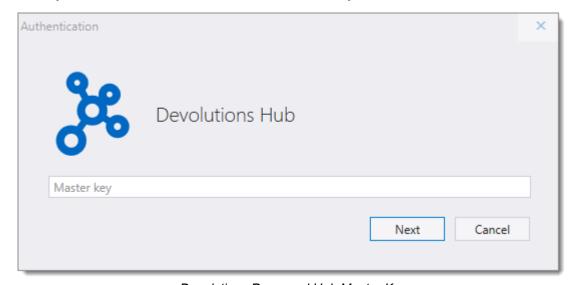
Devolutions Password Hub Web Address

3. Fill with your Devolutions Password Hub credentials and *Continue*.



Devolutions Password Hub Credentials

4. Enter your Devolutions Password Hub masterkey and click Next.



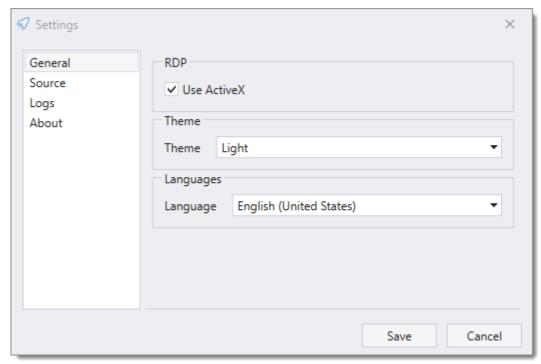
Devolutions Password Hub Master Key

SETTINGS

GENERAL

In this menu you can personalize the following options:

- Use Active X to open RDP sessions. When unchecked, RDP sessions will open using FreeRDP protocol.
- Choose the color theme of Devolutions Launcher.
- Choose between the available languages. Close the application and the icon in the notification area to activate the new setting.



Devolutions Launcher Settings - General

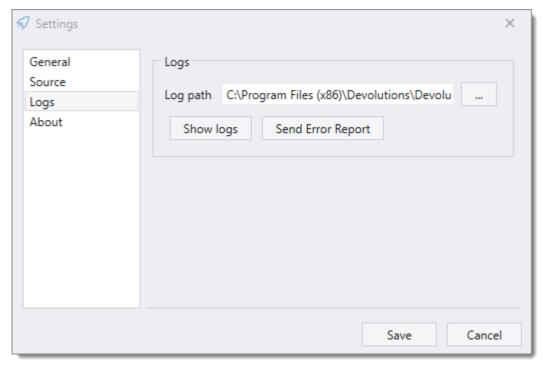
SOURCE

Log in or out of your connected source.

LOGS

The information in this section is primarily for administrators and application developers.

The log records events into a text file.



Devolutions Launcher Settings - Logs

- 1. Create a new log file (it can be a text document) before choosing the path.
- 2. Click the ellipsis button to select the path to save the log file, then save.

ABOUT

View Devolutions Launcher version and check for updates.

8.4 Utilization

8.4.1 How to Open a Session

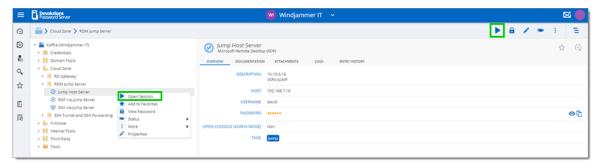
DESCRIPTION

HOW TO OPEN REMOTE CONNECTIONS WITH DEVOLUTIONS LAUNCHER

An overview of Devolutions Launcher

OPEN A SESSION WITH DEVOLUTIONS SERVER

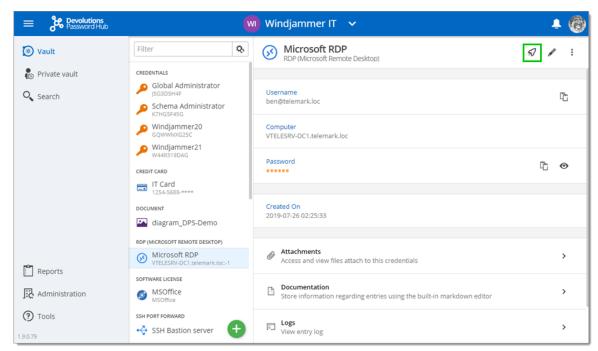
Click the play button open a session in the right-click contextual menu.



Open a Devolutions Server session

OPEN A SESSION WITH DEVOLUTIONS PASSWORD HUB

Click the **Devolutions Launcher** icon.



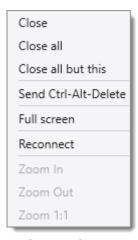
Open a Devolutions Password Hub session

SESSION SETTINGS IN DEVOLUTIONS LAUNCHER

Undock or float a session by clicking and holding the tab away from the window and releasing it.

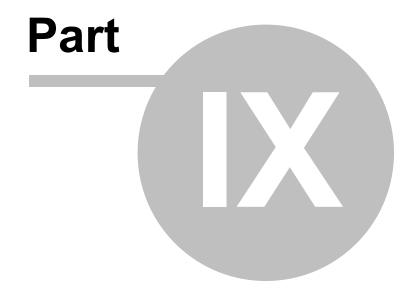
Re dock it by clicking and holding the tab, releasing it on the upper part of Devolutions Launcher.

To use the shortcut *Ctrl-Alt-Delete* in a session, right-click on the session tab to open the menu and click on the *Send Ctrl-Alt-Delete* button.



Session Settings

Support/Resources



9 Support/Resources

9.1 FAQ (Frequently Asked Questions)

WHAT IS DEVOLUTIONS SERVER?

Devolutions Server is a specialized data source for our various client applications of the **Remote Desktop Manager** platform.

WHY BUY DEVOLUTIONS SERVER?

Ideal for businesses that would prefer to store their data in-house, want to deploy their own SSL certificate or firewall or who need Active Directory integration with user groups management.

WHAT ARE THE KEY BENEFITS OF DEVOLUTIONS SERVER?

Devolutions Server is installed on your hardware, in your environment, or with your ISP to give you total control of everything, including:

- Active Directory integration
- User groups management
- Hardware
- Operating System
- Firewall / Application Delivery
- Load Balancing / Fault tolerant environment for the web server layer.
- Database, including clustering / failover capabilities.
- Backups
- SSL certificates

Devolutions Server also offers an improved security model, as database access is limited to the server and no direct connection is established. This secure architecture is a significant improvement over standard client-server architecture. (SQL Server data source)

CAN I GET A TRIAL OF DEVOLUTIONS SERVER?

Yes - Request a trial

DOES DEVOLUTIONS SERVER INCLUDE A CLIENT LICENSE OF REMOTE DESKTOP MANAGER?

Devolutions Server does not include any client licenses.

IS DEVOLUTIONS SERVER SUBSCRIPTION BASED?

Yes, Devolutions Server is subscription based. You can subscribe for one (1) year or three (3) years at a time. Giving you unlimited client connectivity for that period of time.

WHAT IF I NO LONGER WANT/NEED A DEVOLUTIONS SERVER? IS MY DATA STILL ACCESSIBLE?

Yes, once your Devolutions Server subscription is expired you can still access the data using one of our applications. However the Devolutions Server data source will no longer be accessible. You will need to reconfigure your clients to connect directly to the database using a SQL Server data source. Since Active Directory integration will not be allowed anymore, you will need to reassign user permissions.

CAN I UPGRADE FROM A SQL SERVER DATA SOURCE TO DEVOLUTIONS SERVER?

Yes, the underlying SQL server database structure for the SQL Server data source is a subset of the Devolutions Server database structure. When installing/configuring the Devolutions Server simply specify the existing database and choose upgrade.

Note: Before executing any database modification it is always a good idea to make sure you have a proper backup of the database.

CAN I DOWNGRADE FROM A DEVOLUTIONS SERVER DOWN TO SQL SERVER DATA SOURCE?

Yes, since the database for Devolutions Server is a superset of the SQL Server data source. Simply connect to the database using the SQL Server data source and your sessions will all be available. Keep in mind that not all Devolutions Server features will be accessible when using the SQL Server data source, you will need to review all security permissions.

9.2 Previous Versions

DESCRIPTION

Here are the links to the pdf manuals of past releases.

Devolutions Server 4.6

Devolutions Server 4.5

Devolutions Server 4.0

Devolutions Server 3.2

Devolutions Server 3.0

Devolutions Server 2.5

9.3 Technical Support

Hours: Monday to Friday 7:30 a.m. to 6:00 p.m. EST

Knowledge

Base:

Find helpful information's and procedures regarding our products.

Email: ticket@devolutions.net

Forum: https://forum.devolutions.net/

Language: English-Français-Deutsch

Phone: +1 844 463.0419

EXTENDED AND PREMIUM SUPPORT PLANS

Subscribers of a paid support plan receive a plan ID. You should send your include your plan ID in your tickets.

Please consult our **Support Policy** for more information.





Contact Us

For any questions, feel free to contact us:

Support: ticket@devolutions.net

Phone: +1 844 463.0419

Monday to Friday 7:30 a.m. to 6 p.m. EST

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