Sage XRT Solution

Deployment guide

Version 2024

Sage

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Distribution:

- Sage technical consultants
- Technical consultants from our partners

Before you start

Important! Read carefully the document titled ***SXS.2024.TechnicalGuidelines***.

Especially if you are deploying **Sage XRT Solution** on a virtual machine, you must ensure that:

- your physical hardware environment is powerful enough to execute all the virtual machines on which you plan to deploy the solution,
- your physical hardware environment is powerful enough to really and effectively allocate Core and RAM resources,
- you respect, as a minimum, the following recommendations from Microsoft if you plan to deploy SQL Server on a virtual environment:
    1. your database files shall be apart, not on a virtual drive but on a high velocity physical drive,
    2. it is preferable to separate SQL Server from your IIS server for memory usage consumption.

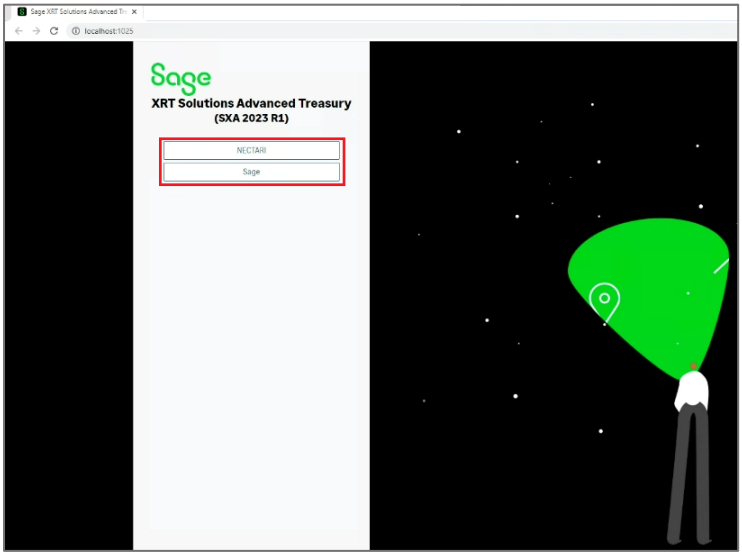
In terms of memory usage, **Sage XRT Solution** is a highly customizable product: the more your users take advantage of the product's capabilities, the more memory they will consume.

We recommend a VM with 64GB RAM, 13 Tenants with an average of 2.7 end users:

- **Sage XRT Solution Advanced** IIS pool: 12GB
- **Sage XRT Solution Advanced Odata** IIS pool: 1.5GB
- **Sage XRT Solution Advanced Batch Service**: 3GB
- **Sage XRT Solution Common Functional Service** (SCDTS): 500MB
- **Sage XRT Solution Common Authentication Service** (SCAS): 100MB
- **Sage XRT Solution Common Administration Service** (SCPS): 500MB
- **Sage XRT Solution Communication & Signature**: 1GB

Changes impacting the deployment of Sage XRT Solution

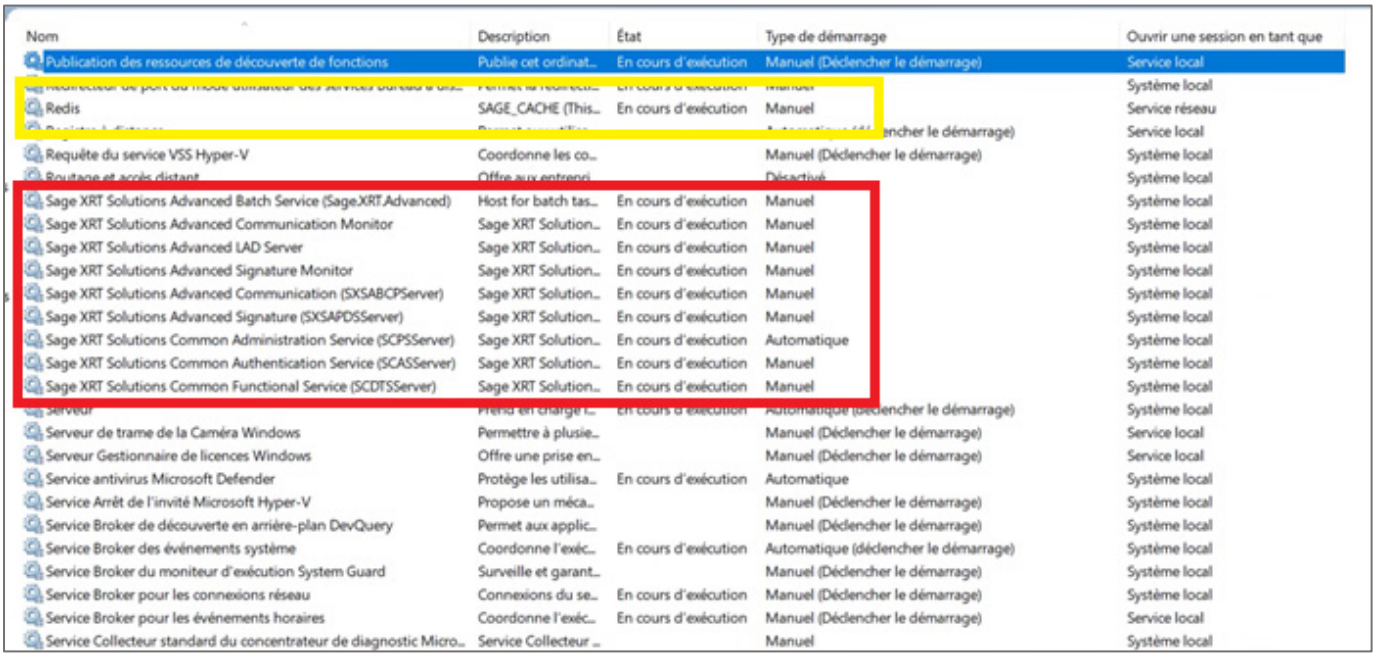
- **Sage XRT Solution 2024** proposes a unique launcher, automating the installation of all its components and automating database updates.
- **Sage XRT Solution** is now multi-tenant (one instance of the application serves different customers).
    - During updates, tenant names and information are automatically retrieved from **Common Services** elements.
    - To execute **Sage XRT Solution** for a specific tenant, open your web browser and enter the following text in the address bar: **http://localhost:INSTALL_PORT/TENANT_NAME**.
    - To select a tenant from the user interface, enter **http://localhost:INSTALL_PORT** and select a tenant from the list.



- As of version 2023 R1, oData© component is mandatory, since it is used by **XRT Solution Communication & Signature** services to push information to **Treasury** in real time.

Note: Like the application, oData© is now multi-tenant. To authenticate with your user name and password, you must prefix your user code with the tenant name in the form *TENANT_NAME\USER_CODE*.

- All **XRT Solution** Windows services are renamed and prefixed with *Sage XRT Solution* as shown below. Note that Redis© (https://redis.io/) remains our third-party component to maintain in memory data cache and inter-process communications.



Nom	Description	État	Type de démarrage	Ouvrir une session en tant que
Publication des ressources de découverte de fonctions	Publie cet ordinat...	En cours d'exécution	Manuel (Déclencher le démarrage)	Service local
Redis	SAGE_CACHE (This...	En cours d'exécution	Manuel	Service réseau
Requête du service VSS Hyper-V	Coordonne les co...		Manuel (Déclencher le démarrage)	Système local
Sage XRT Solutions Advanced Batch Service (Sage.XRT.Advanced)	Host for batch tas...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Advanced Communication Monitor	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Advanced LAD Server	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Advanced Signature Monitor	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Advanced Communication (SXSABCPServer)	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Advanced Signature (SXSAPDSServer)	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Common Administration Service (SCPSServer)	Sage XRT Solution...	En cours d'exécution	Automatique	Système local
Sage XRT Solutions Common Authentication Service (SCASServer)	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Sage XRT Solutions Common Functional Service (SCDTSServer)	Sage XRT Solution...	En cours d'exécution	Manuel	Système local
Serveur de trame de la Caméra Windows	Permettre à plusie...		Manuel (Déclencher le démarrage)	Service local
Serveur Gestionnaire de licences Windows	Offre une prise en...		Manuel (Déclencher le démarrage)	Service local
Service antivirus Microsoft Defender	Protège les utilisa...	En cours d'exécution	Automatique	Système local
Service Arrêt de l'invité Microsoft Hyper-V	Propose un méca...		Manuel (Déclencher le démarrage)	Système local
Service Broker de découverte en arrière-plan DevQuery	Permet aux applic...		Manuel (Déclencher le démarrage)	Système local
Service Broker des événements système	Coordonne l'exéc...	En cours d'exécution	Automatique (déclencher le démarrage)	Système local
Service Broker du moniteur d'exécution System Guard	Surveille et garant...		Manuel (Déclencher le démarrage)	Système local
Service Broker pour les connexions réseau	Connexions du se...	En cours d'exécution	Manuel (Déclencher le démarrage)	Système local
Service Broker pour les événements horaires	Coordonne l'exéc...	En cours d'exécution	Manuel (Déclencher le démarrage)	Service local
Service Collecteur standard du concentrateur de diagnostic Micro...	Service Collecteur ...		Manuel	Système local

- Regarding import/export folders, the following behavior is implemented during the upgrade from a multi-instance to a multi-tenant architecture:
  - In case personal import/export folders were configured in a *tenant.config* file, they are automatically assigned to the tenant during the upgrade process.
  - Import/export folders can now be defined in **Common Services** web console under **Rights – Environment Setup**.

    This information is stored in the registry: *HKEY_LOCAL_MACHINE\SOFTWARE\XRT\Common\TENANTS.*

- Automatic usage of tenant names complements common folder settings. During the installation, you can define common import/export directories that will be placed to the common part of the *.config* file.

Example:

– During installation, configure *C:\BANK_IMPORT;C:\GL_IMPORT* as common directory paths.

– Manually create folders *C:\BANK_IMPORT\TENANT_1, C:\BANK_IMPORT\TENANT_2, C:\GL_IMPORT\TENANT_1*, etc.

– **Sage XRT Solution** automatically uses dedicated per-tenant subfolders.

- If you are using SAML authentication, in the setup of **Sage XRT Solution**, the tenant "segment" must be specified in the redirection URL as follows:

  From *https://XXXXXX.domain.zz/useraccount/logonxcsweb*,

  to *https://XXXXXX.domain.zz/<tenant_name>/useraccount/logonxcsweb*.

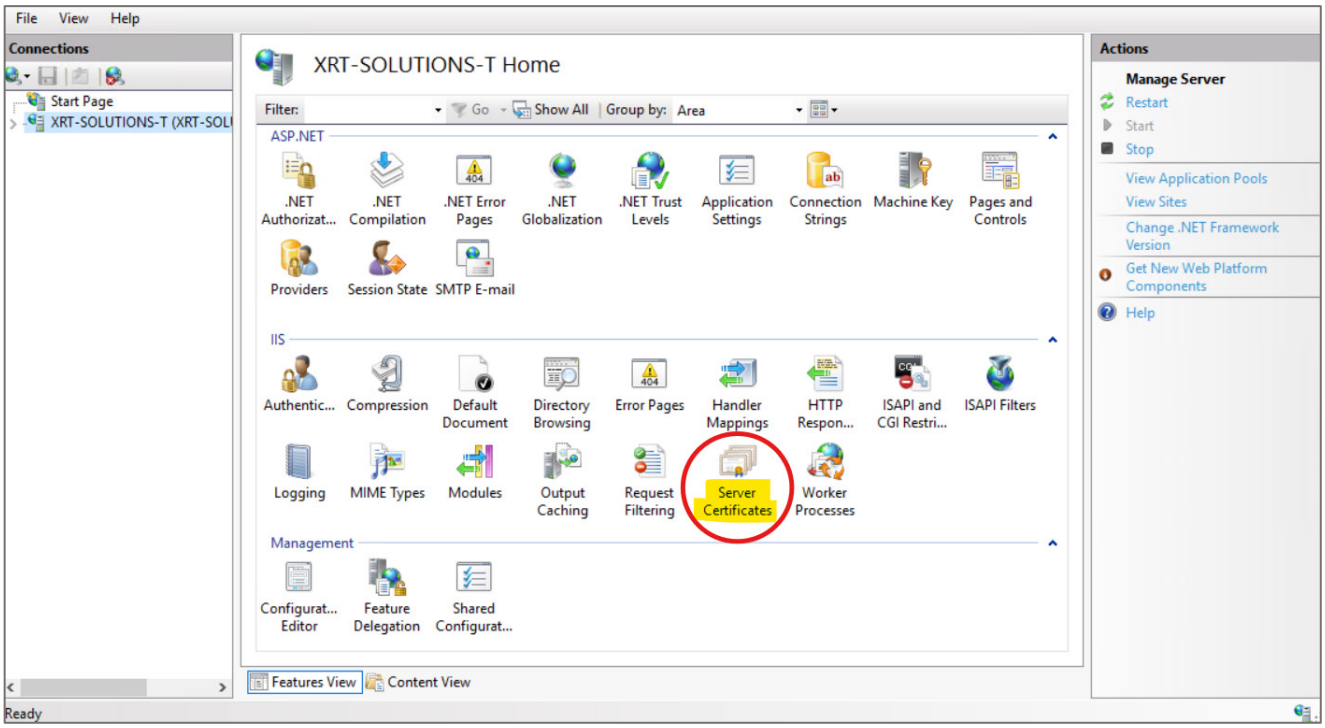
- Remove all *.SAV* configuration backup files existing on your environment. They are no longer required as the settings are properly managed by the deployment package.

- **Important!** You must remove the existing 2048-bit certificate before deploying version 2024.

Installing **Sage XRT Common Services** will deploy a 4096-bit certificate. Once the deployment is complete and your databases are updated, remember to attach this certificate to:

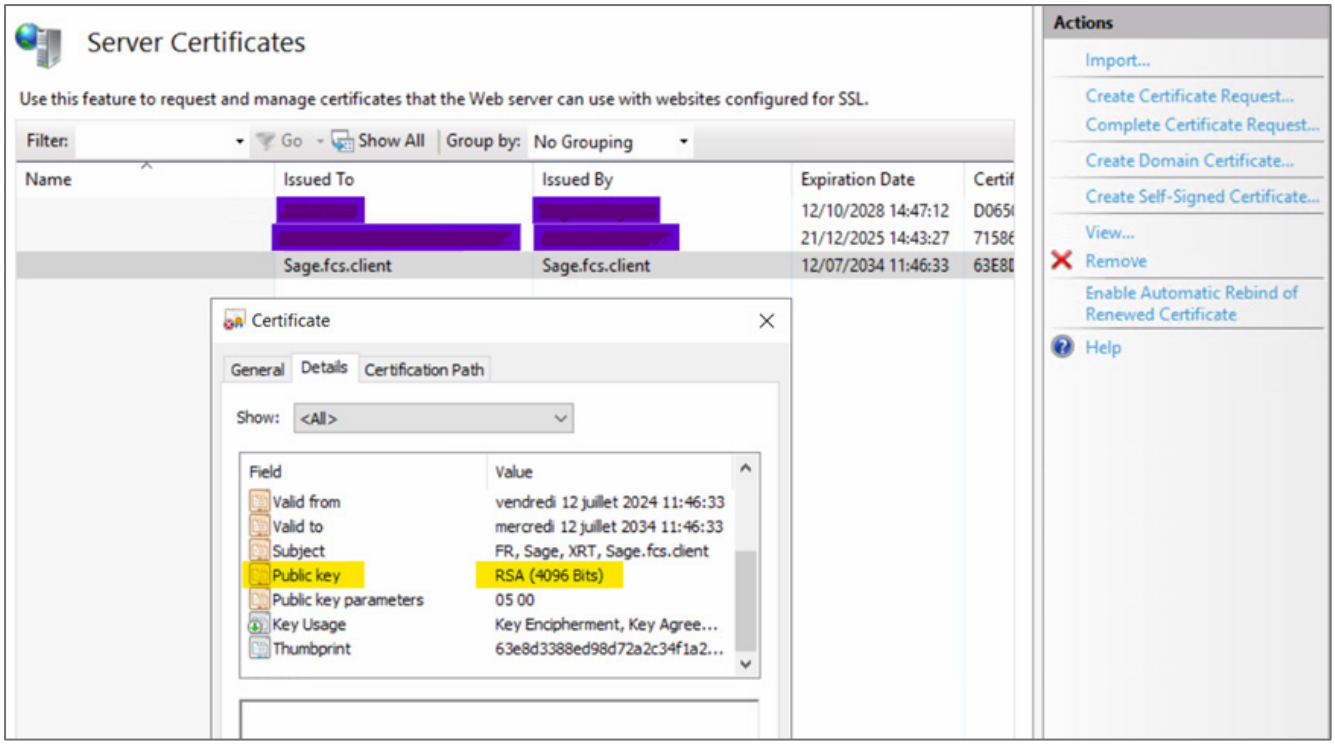
- **Sage XRT Advanced** application pool
- **Sage XRT Advanced OData** application pool

To check the version of your certificate, open **IIS**.



Double-click **Server Certificates**.

Select the *Sage.FCS.client* certificate and click **View...**, then open the **Details** tab.



If the certificate is 2048-bit, delete it and then relaunch the **Web Console** from **Sage XRT Common Services** to automatically generate a new certificate.

Be sure to attach the certificate to the two application pools listed above to complete the operation.

Naming Conventions

Important! Make you sure you have all the names for the following elements defined prior to installation.

On-premises or cloud single-tenant deployments

Suggested conventions for Sage XRT Solution Communication & Signature	
Tenant	**XRT_COMSIGN_suffix**
Common Services database for Communication & Signature	**XRT_SCS_COMSIGN_suffix**
XRT Solution Communication database	**XRT_COM_suffix**
XRT Solution Signature database	**XRT_SIGN_suffix**

Suggested conventions for Sage XRT Solution Advanced TMS	
Tenant	**XRT_ADVANCED_suffix**
Common Services database for XRT Advanced	**XRT_SCS_ADVANCED_suffix**
XRT Solution Advanced database	**XRT_ADVANCED_suffix**

Note: Suffix is optional and can be used to indicate a status (*PROD*, *TEST*, etc.) for database naming.

Cloud multi-tenant deployments

Suggested conventions for Sage XRT Solution Communication & Signature	
Tenant	**XRT_COMSIGN_suffix**
Common Services database for Communication & Signature	**XRT_SCS_COMSIGN_suffix**
XRT Solution Communication database	**XRT_COM_suffix**
XRT Solution Signature database	**XRT_SIGN_suffix**

Note: **Communication & Signature** are multi-tenant at database level.

Suggested conventions for Sage XRT Solution Advanced TMS	
Tenant	**XRT_ADVANCED_clientID_suffix**
Common Services database for XRT Advanced	**XRT_SCS_ADVANCED_clientID_suffix**
XRT Solution Advanced database	**XRT_ADVANCED_clientID_suffix**

Note: *ClientId* is whatever may uniquely identify the customer.

Fresh installation

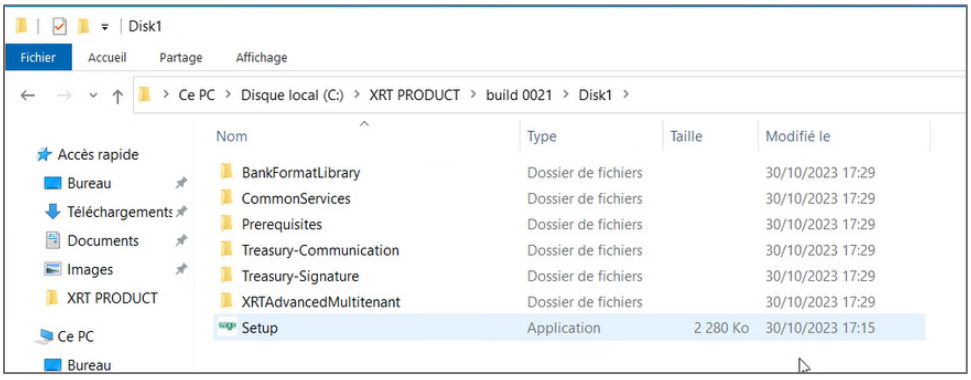
Deployment checklist

The following elements will be required for the deployment process. Make sure they have been prepared prior to the installation.

- Have your Sage licenses ready.
- Configure a Windows account service to start and run **XRT Common Authentication**, **Administration** and **Functional** services.
- Configure a Windows account service to start and run **XRT Advanced Batch** and **Scheduler** services.
- Configure a Windows account service to start and run **XRT Communication** service.
- Configure a Windows account service to start and run **XRT Signature** service.
- Specify a local or network directory structure for received files.
- Specify a local or network directory structure for exported files.

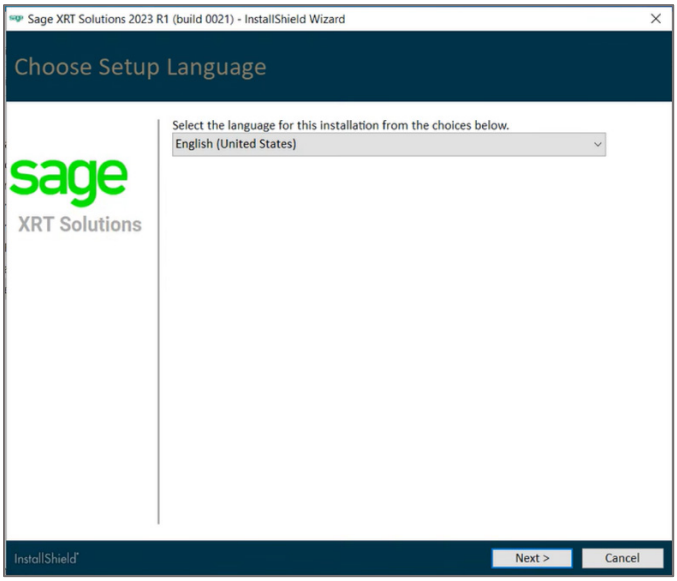
Installation procedure

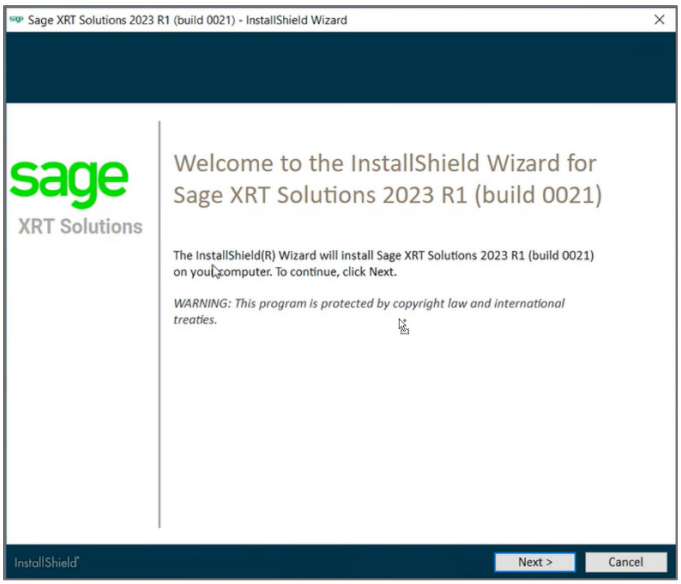
- First, you need to browse your disk to find the launcher file named **Setup**.



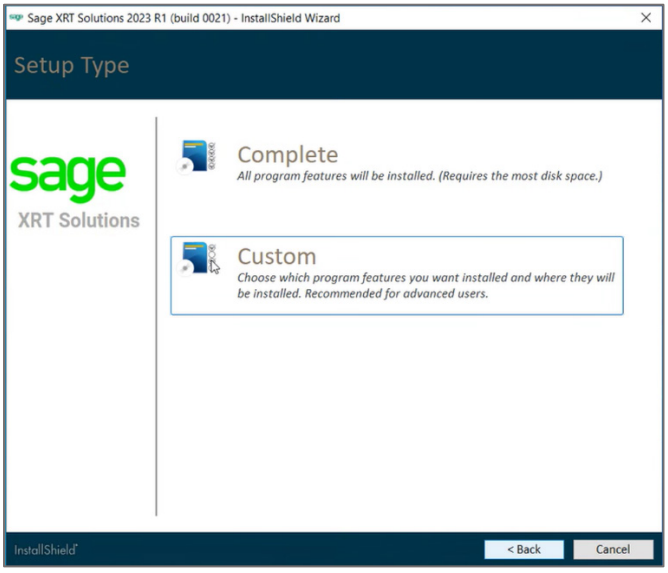
- Right-click on **Setup** and select **Run as administrator**.

- Select a language and click **Next**, then **Next** again to confirm the installation of **Sage XRT Solution 2024**.

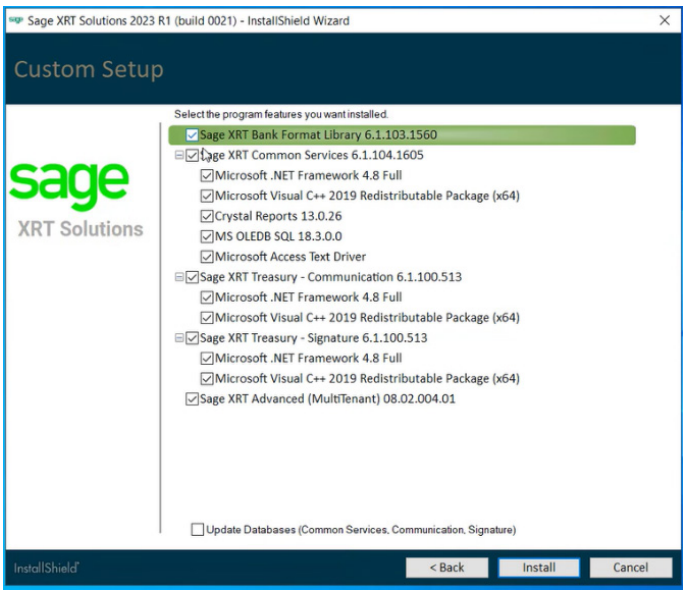




- For the purpose of this document, select **Custom** as a **Setup Type**.



The setup wizard analyzes your system and pre-selects the modules and/or components that can be installed.

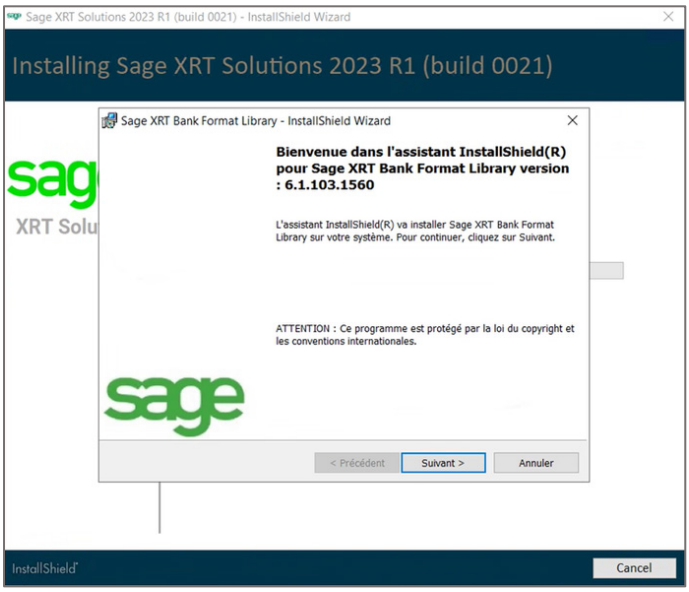


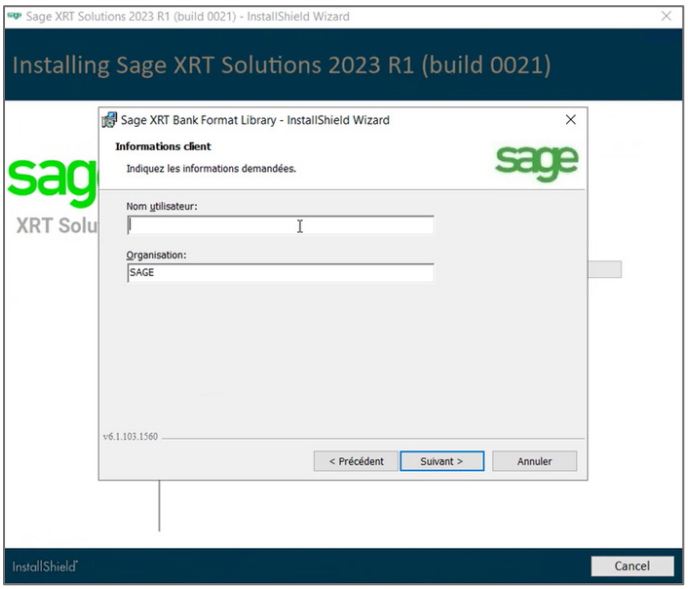
- Refine your selection and click **Install**.

The setup wizard will execute the installation packages for each module one after the other. If required, you may be asked to reboot the system. Then, the installation will automatically resume.

Installation of Sage XRT Bank Format Library

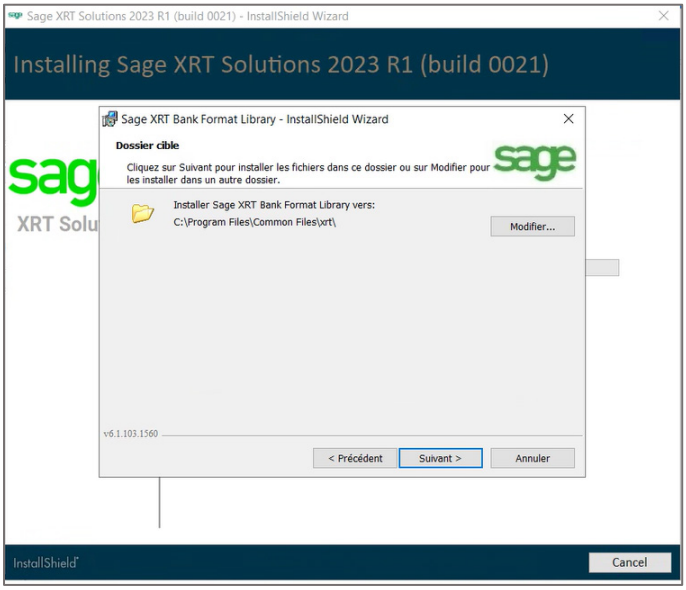
- When the following screen appears, click **Next** to confirm the installation, then enter any username you want (purely informative) and click **Next** again.



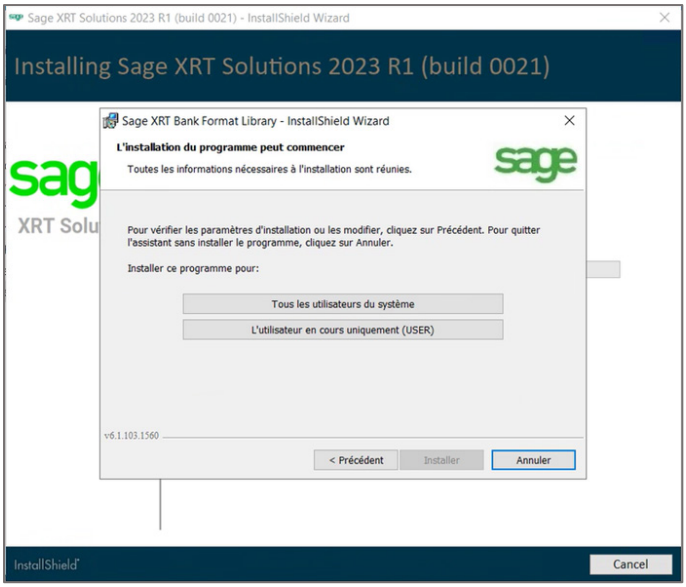


- If required, click **Change...** to select a destination folder for the installation, then click **Next**.

Note: We recommend that you keep the folder paths and only change the volume if needed.

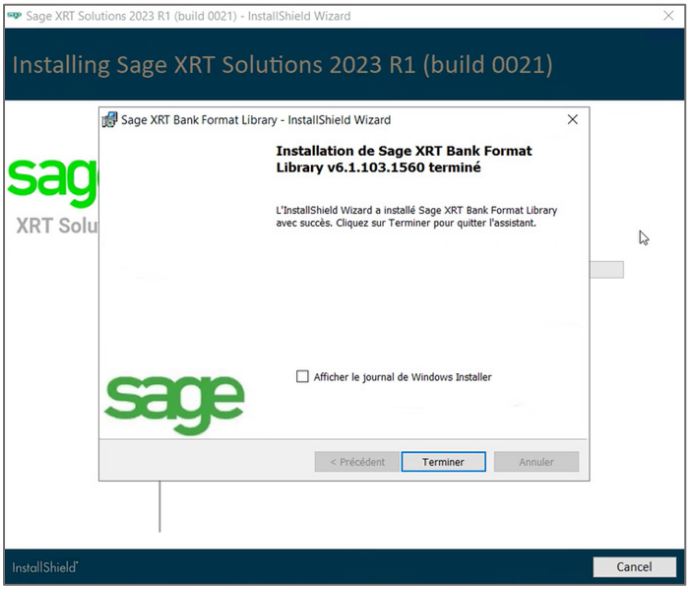


- Unless you have a precise idea of your future needs, you may choose to install the program for **All users**, then click **Install**.



The install process starts.

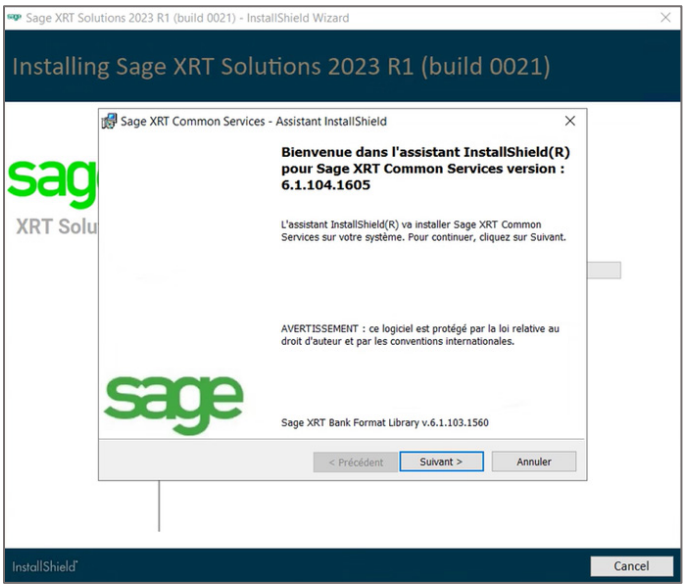
Wait until the operations are completed and the following screen appears, confirming that **Sage XRT Bank Format Library** has been installed.

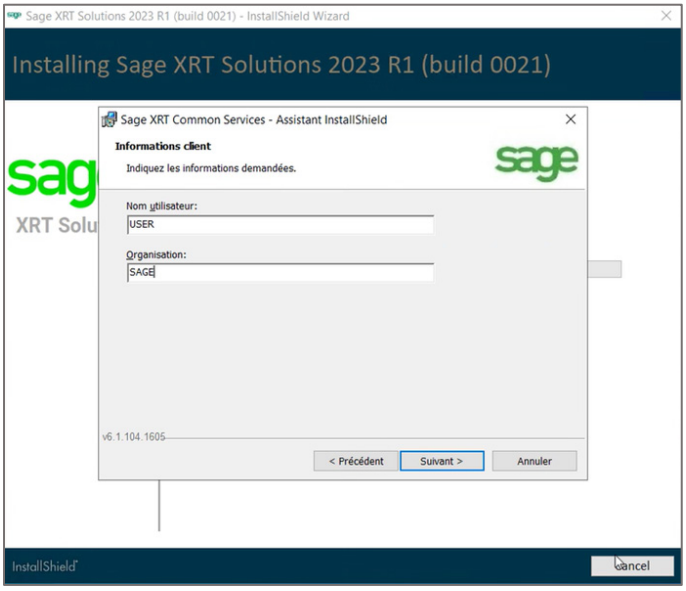


- Click **Finish** to continue to the next installation step.

Installation of Sage XRT Common Services

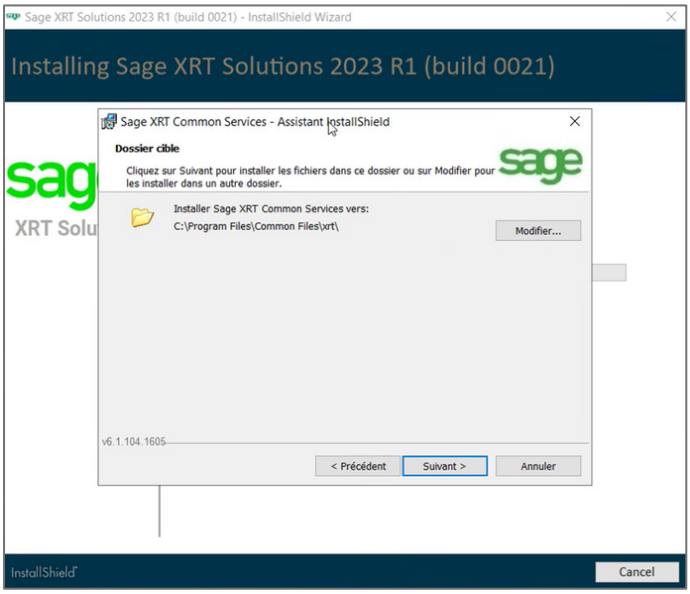
- When the following screen appears, click **Next** to confirm the installation, then enter any username you want (purely informative) and click **Next** again.



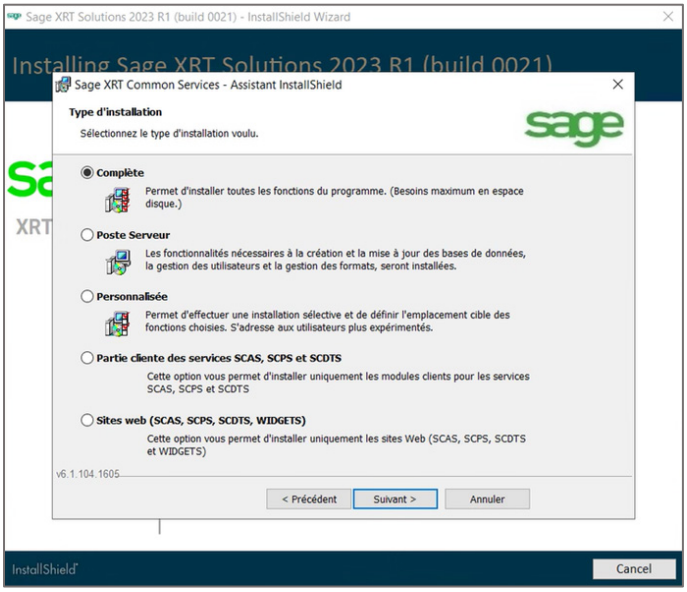


- If required, click **Change...** to select a destination folder for the installation, then click **Next**.

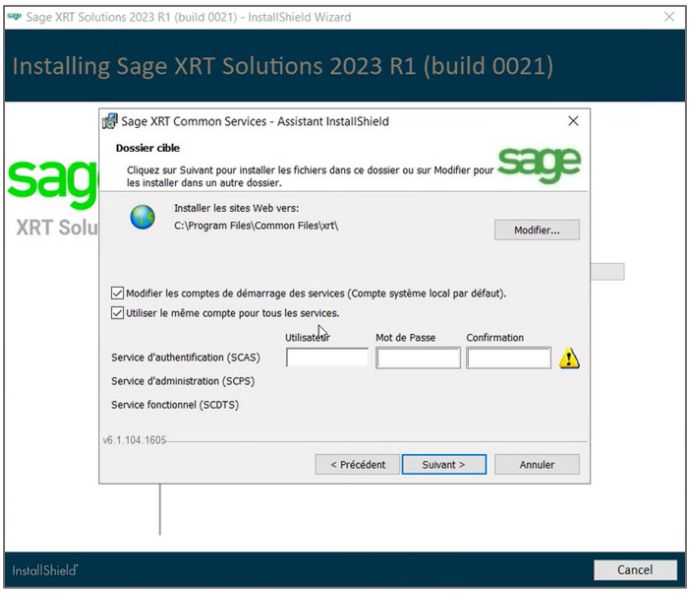
Note: We recommend that you keep the folder paths and only change the volume if needed.



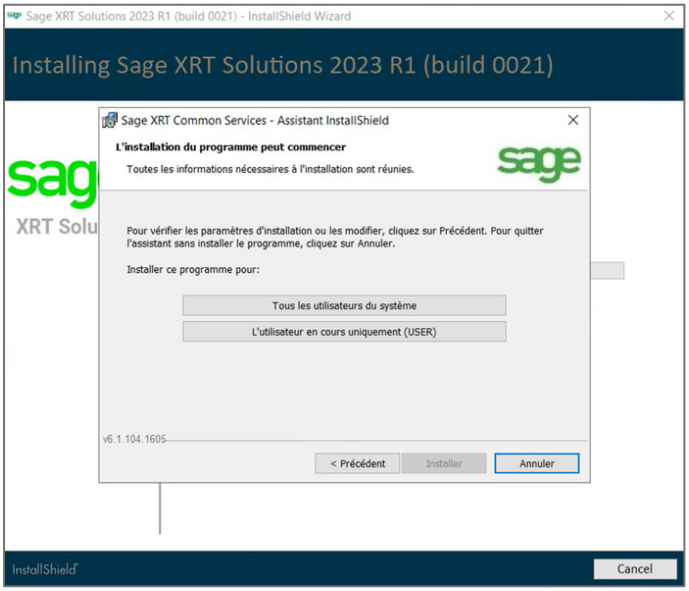
- Since you are deploying **Sage XRT solution**, you need all the components to be installed! Select the **Complete** setup type and click **Next**.



- Select the options **Change service startup accounts** and **Use the same account for all services**, then complete the fields dedicated to the Windows services used to start and run the common **Authentication**, **Administration** and **Functional** services (Refer to **Deployment Checklist**).

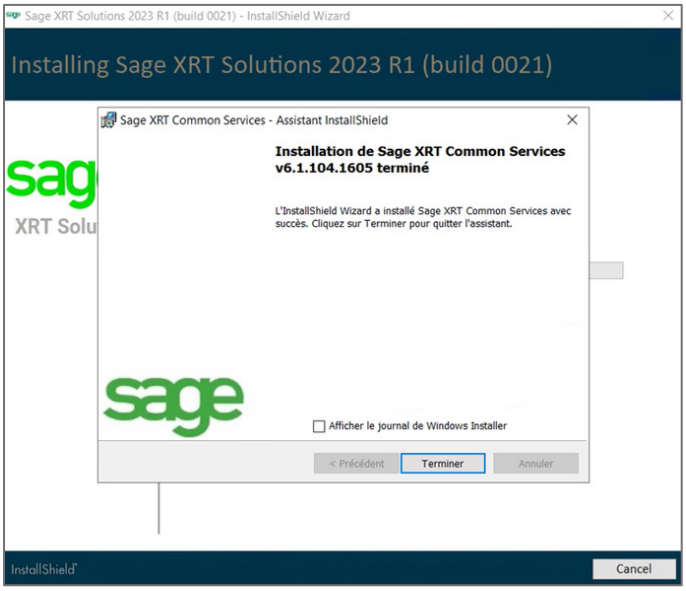


- Unless you have a precise idea of your future needs, you may choose to install the program for **All users**, then click **Install**.



The install process starts.

Wait until the operations are completed and the following screen appears, confirming that **Sage XRT Common Services** has been installed.

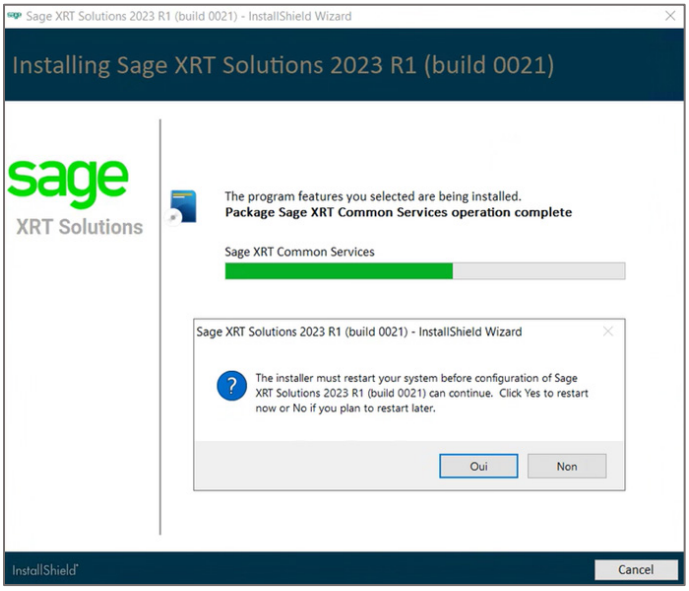


- Click **Finish** to continue to the next installation step.

To continue with the setup process, both **Administration** and **Authentication** services must be started and running.

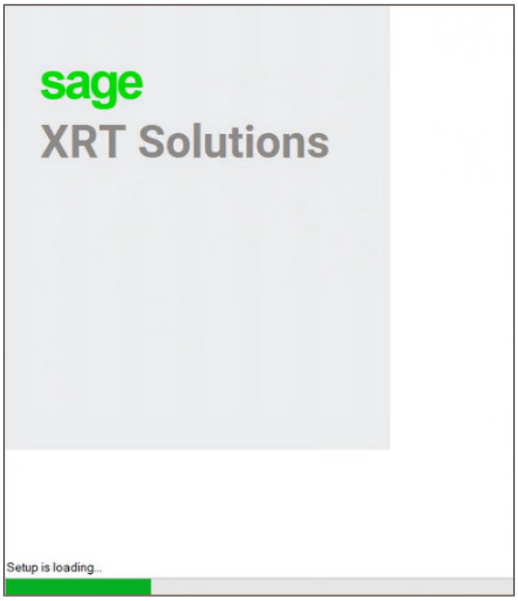
The setup wizard proposes to restart your system.

- Click **Yes** to reboot.

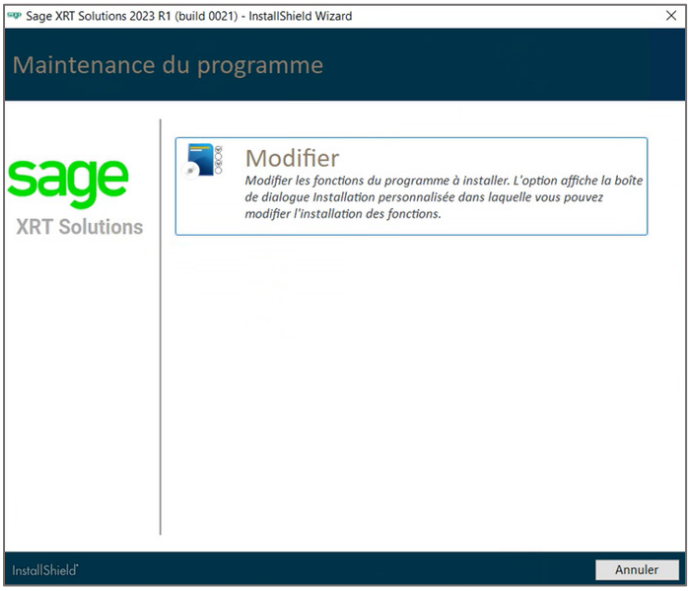


Note: Click **No** only if you know exactly when and how to properly start the services.

After the reboot, the installation process will automatically resume.

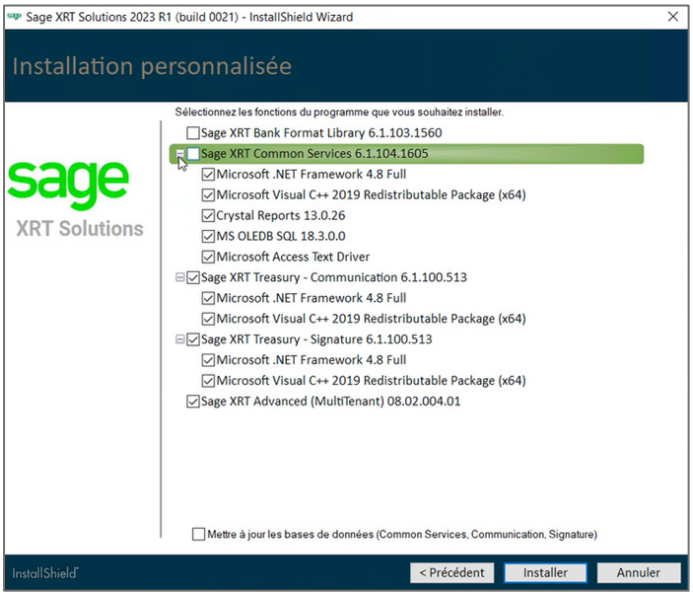


- In the **Program Maintenance** screen, click **Modify**.



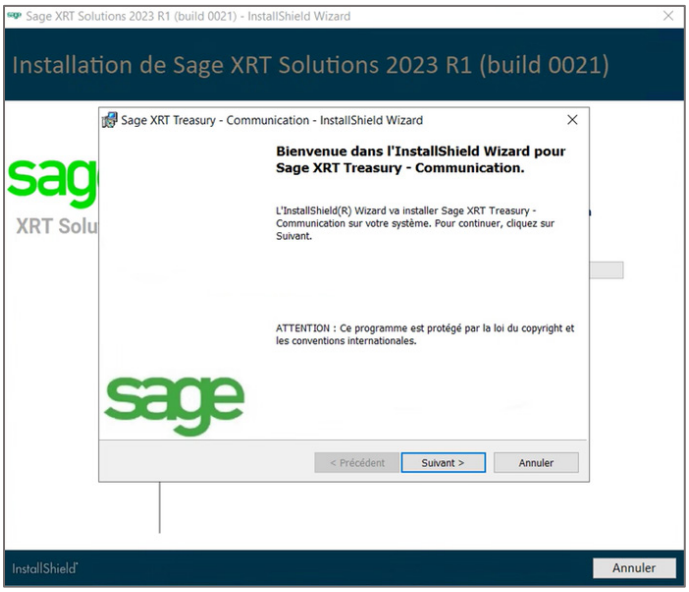
In the **Custom Setup** screen, the items **Sage XRT Bank Format Library** and **Sage XRT Common Services** should now appear unchecked.

- Click **Install** to continue to the next installation step.

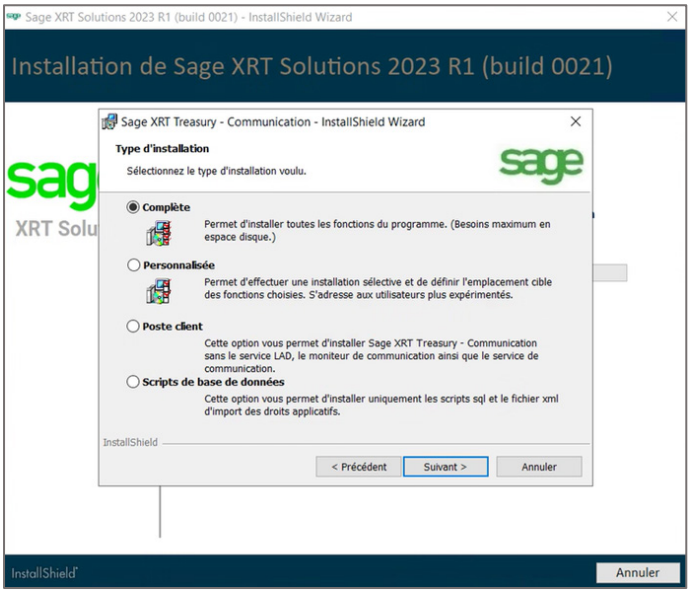


Installation of Sage XRT Communication

- When the following screen appears, click **Next** to confirm the installation.

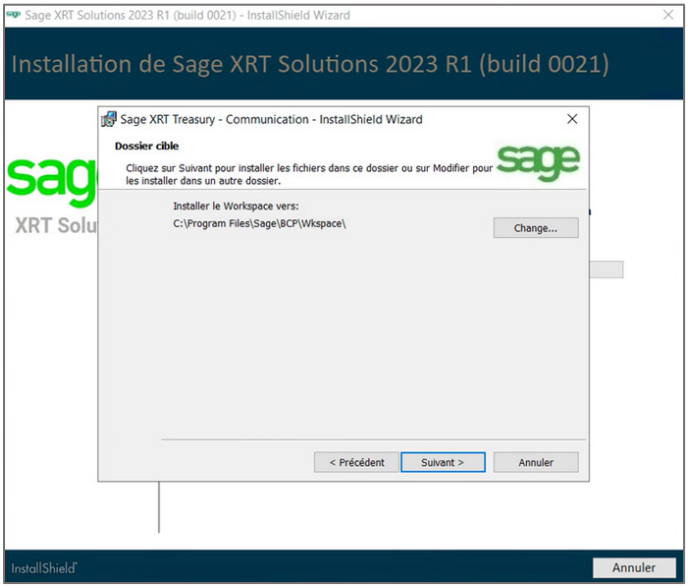


- Since you are deploying **Sage XRT solution**, you need all the components to be installed! Select the **Complete** setup type and click **Next**.

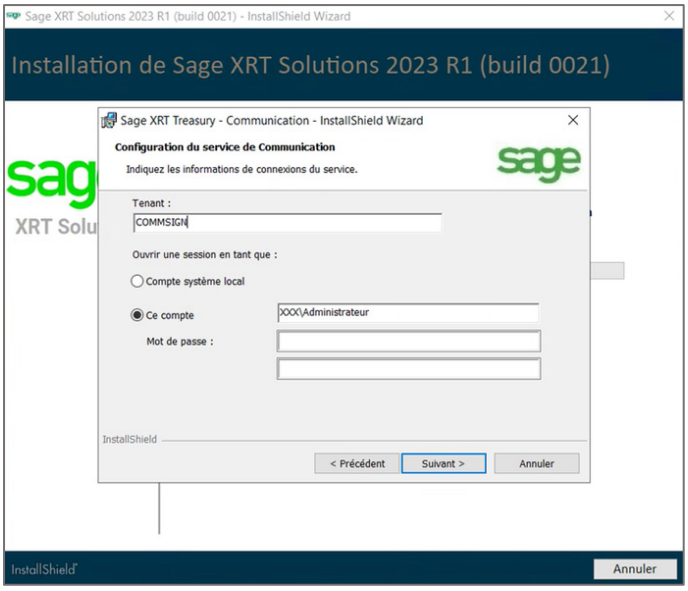


- If required, click **Change...** to select a destination folder for the installation, then click **Next**.

Note: We recommend that you keep the folder paths and only change the volume if needed.



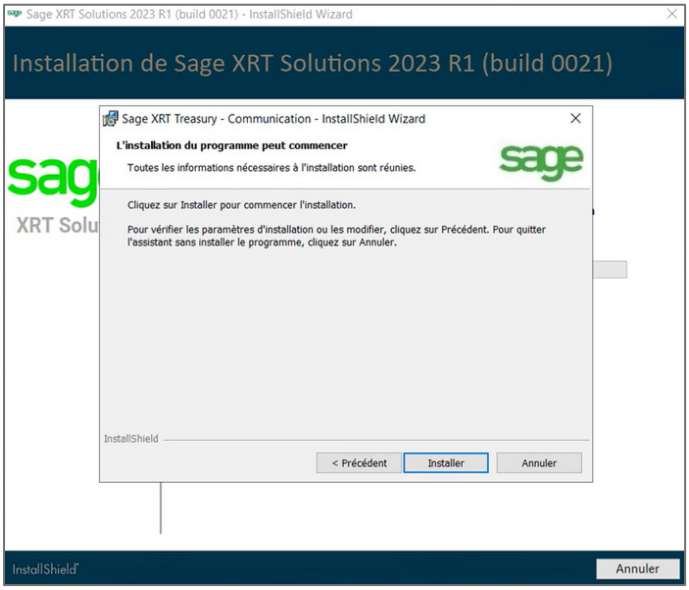
- In the **Communication** service configuration screen, enter a name for the **Tenant** (refer to **Naming Conventions**).



- Select **This account** and specify the information of the Windows service account used to start and run the **Communication** service, then click **Next**.

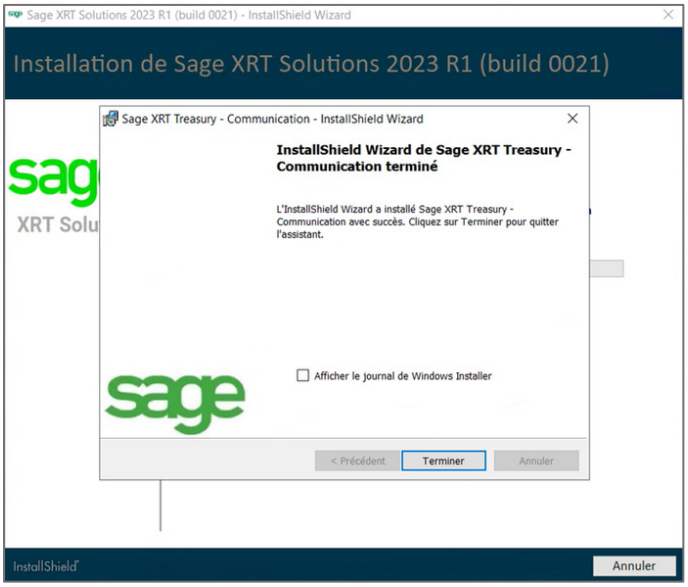
Note: We recommend that you do not use the **Local system account** option.

- When the following screen appears, click **Install**.



The install process starts.

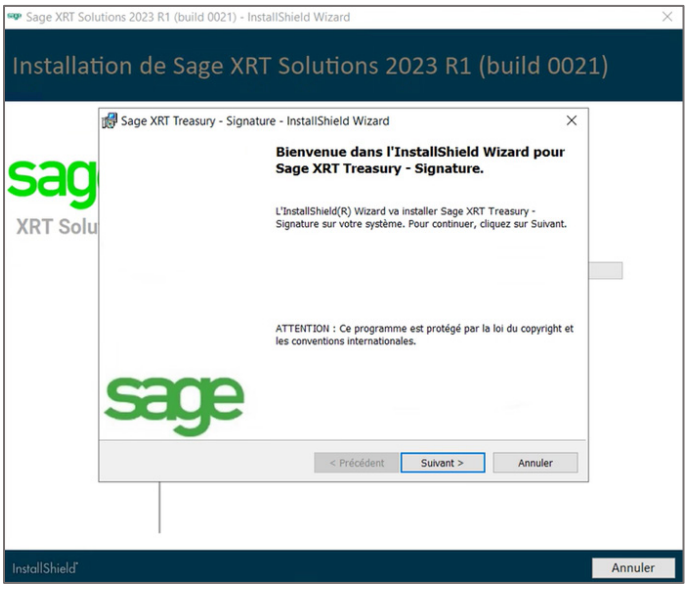
Wait until the operations are completed and the following screen appears, confirming that **Sage XRT Communication** has been installed.



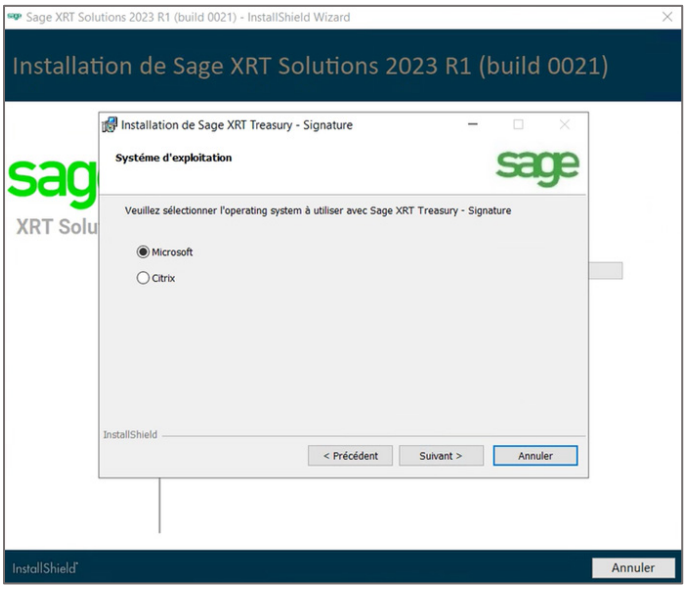
- Click **Finish** to continue to the next installation step.

Installation of Sage XRT Signature

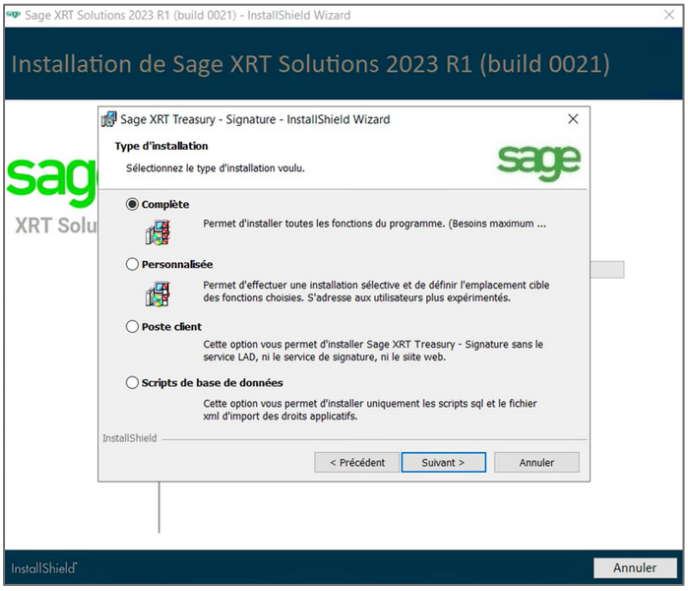
- When the following screen appears, click **Next** to confirm the installation.



- In the **Operating system** screen, select **Microsoft** and click **Next**.

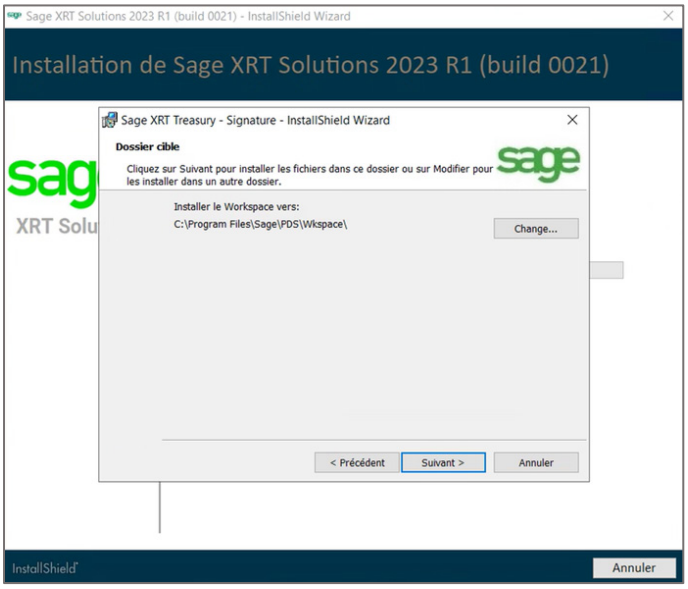


- Since you are deploying **Sage XRT solution**, you need all the components to be installed! Select the **Complete** setup type and click **Next**.

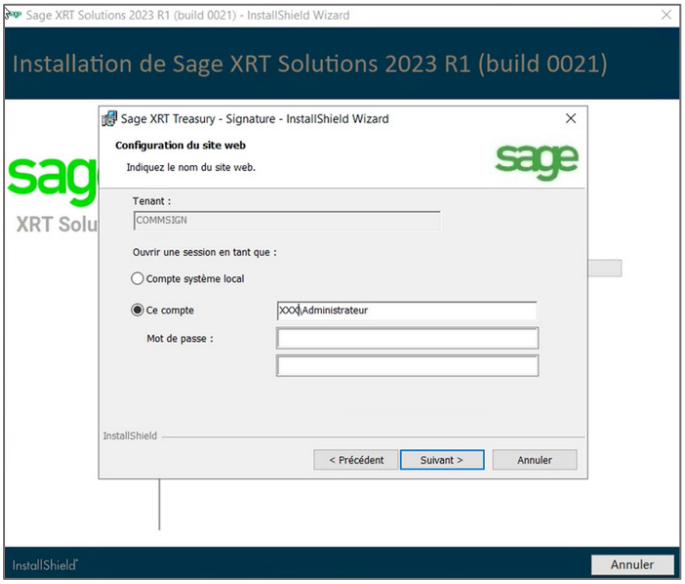


- If required, click **Change...** to select a destination folder for the installation, then click **Next**.

Note: We recommend that you keep the folder paths and only change the volume if needed.



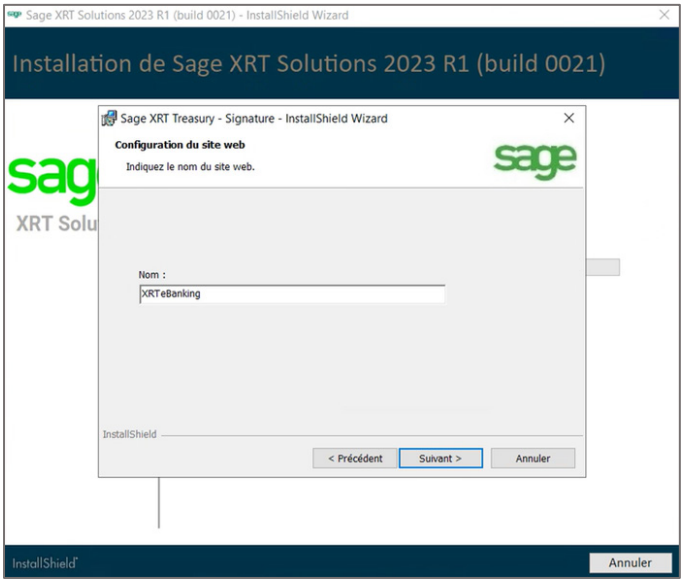
- In the **Web site** configuration screen, enter the same exact **Tenant** name as specified for **Sage XRT Communication** (refer to **Naming Conventions**).



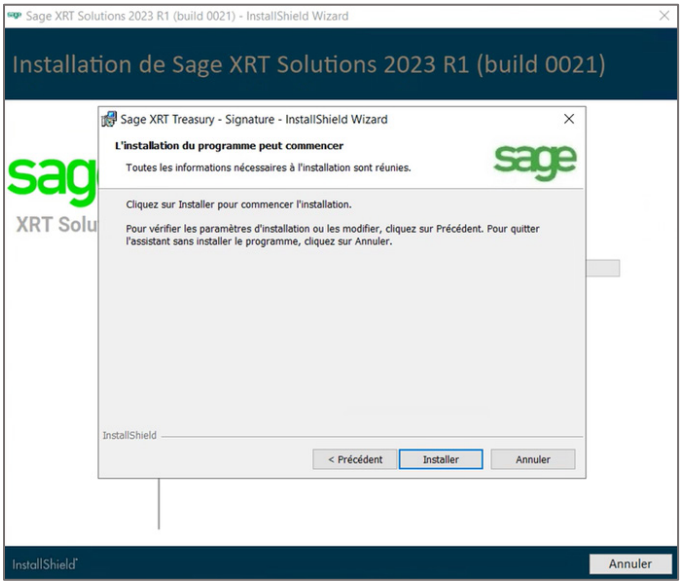
- Select **This account** and specify the information of the Windows service account used to start and run the **Signature** service, then click **Next**.

Note: We recommend that you do not use the **Local system account** option.

- Keep the default name proposed for the site and click **Next**.

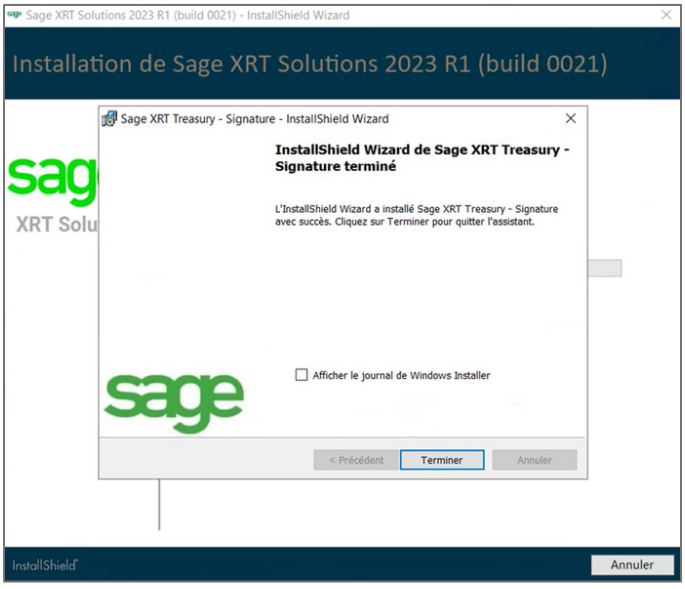


- When the following screen appears, click **Install**.



The install process starts.

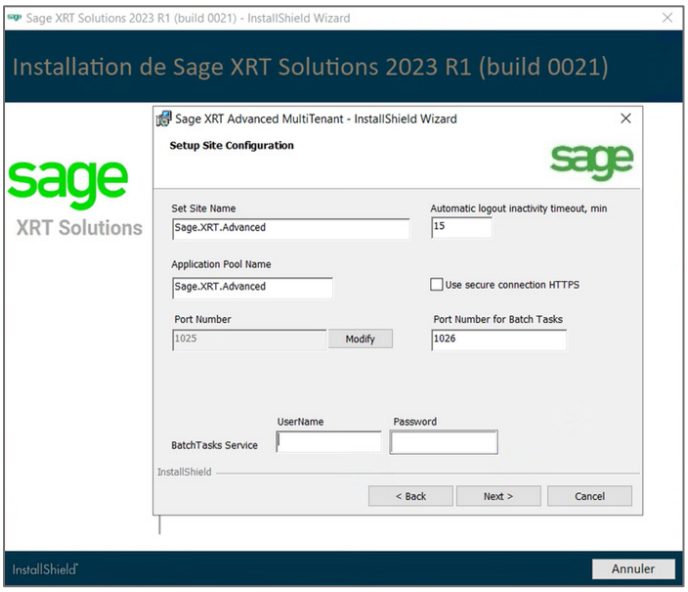
Wait until the operations are completed and the following screen appears, confirming that **Sage XRT Signature** has been installed.



- Click **Finish** to continue to the next installation step.

Installation of Sage XRT Advanced TMS

- When the following screen appears, enter the same name for both **Set Site Name** and **Application Pool Name** fields (Refer to **Naming Conventions**).



Automatic logout inactivity timeout is a security parameter that will automatically disconnect any end-user after a specified period of inactivity. The default period is set to **15** minutes.

Note: The login timeout value can be changed later by IT, by editing the *XXXX_tenants.config* file.

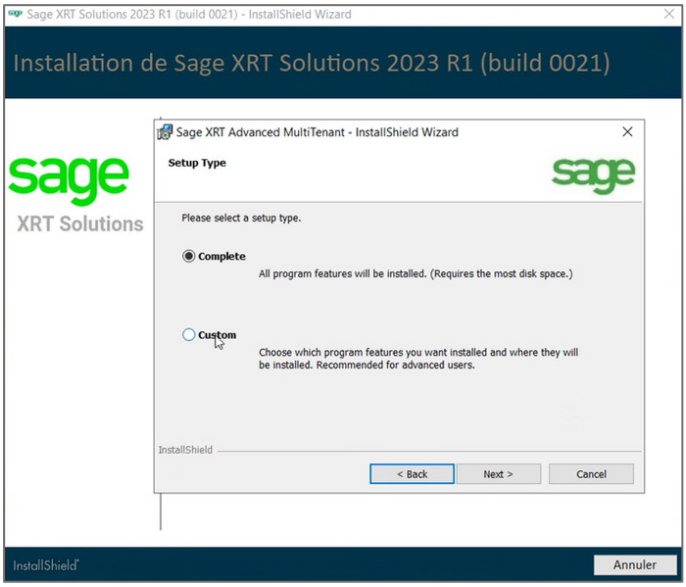
The default listening ports for the application are defined as follows:

- **1025**: **Treasury** IIS application pool
- **1026**: **Treasury** asynchronous batch tasks service
- **1027** : **Treasury** OData

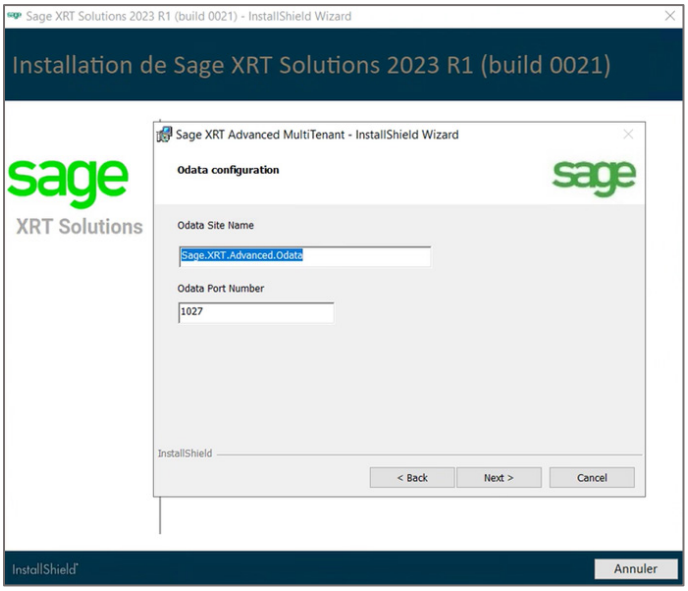
Note: To change these settings, refer to **Science Direct - Registered Ports** or contact your IT department.

- Specify the information of the Windows service account used to start and run the asynchronous **Batch Tasks Service** – the same as used for **Communication** and **Signature** services – then click **Next**.

- Since you are deploying **Sage XRT solution**, you need all the components to be installed! Select the **Complete** setup type and click **Next**.



- In the **Odata configuration** screen, click **Next**.



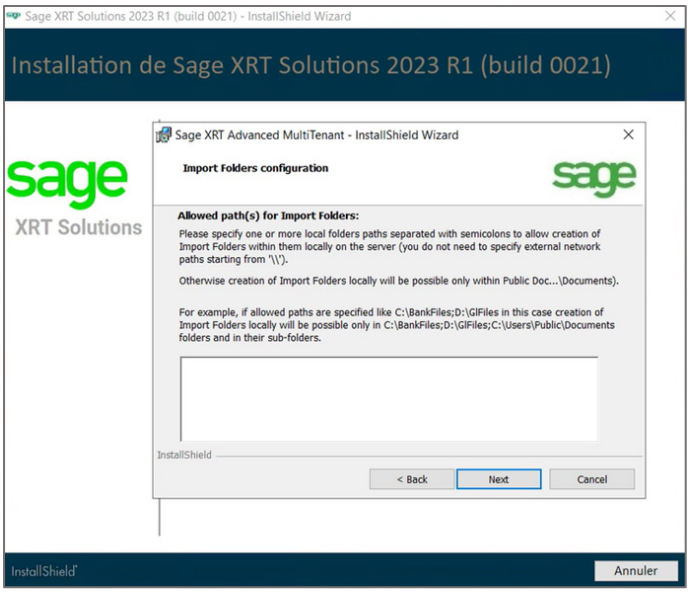
Note: OData stack is now mandatory. We strongly suggest that you keep the proposed values:

– The default **Odata Site Name** corresponds to the Application Site Name followed by the suffix "*.oData*".

– The default **Odata Port Number** corresponds to the Application Port + 2.

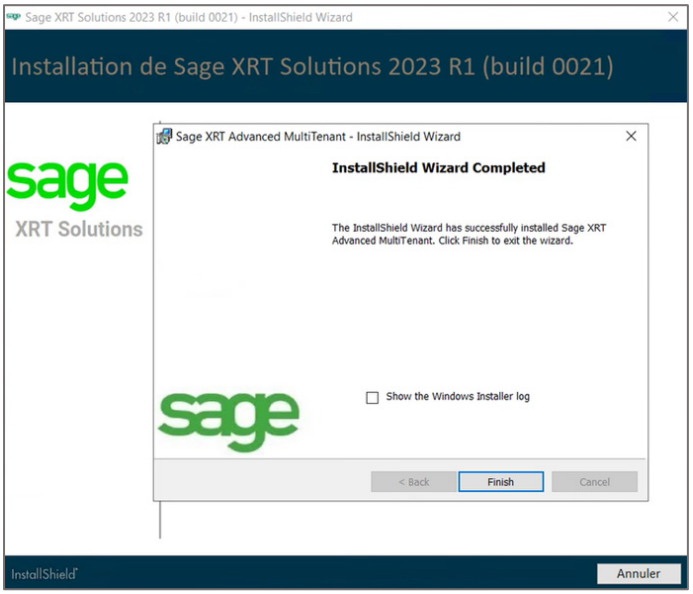
- If you are deploying the solution on-premises, or in a single-tenant environment, specify your local or network folder structure for received and exported files (Refer to **Deployment Checklist**) in the **Import folders configuration** screen, then click **Next**.

  Otherwise, refer to **item 5** of **Changes impacting the deployment of Sage XRT Solution**.

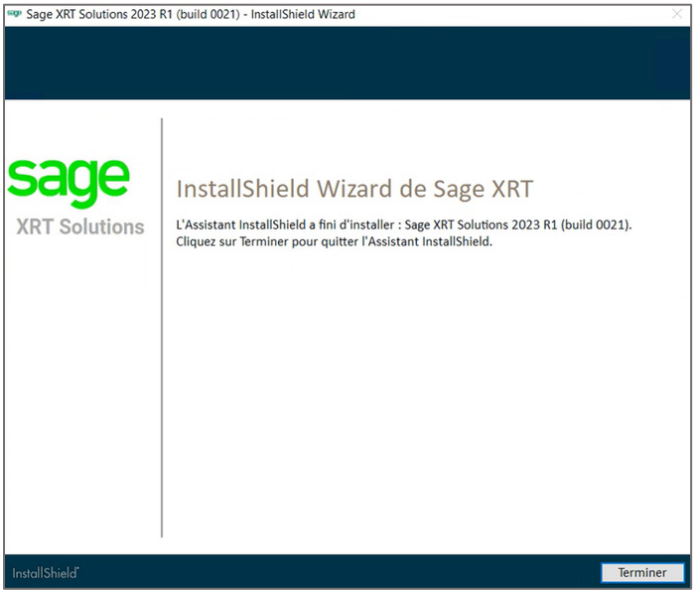


The install process starts.

Wait until the operations are completed and the following screen appears, confirming that **Sage XRT Advanced MultiTenant** has been installed.



- Click **Finish**.



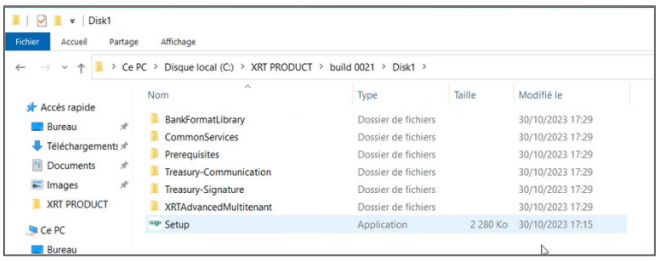
- Click **Finish** to close the setup wizard.

Sage XRT Solution is now installed on your system.

Update of an existing multi-tenant platform

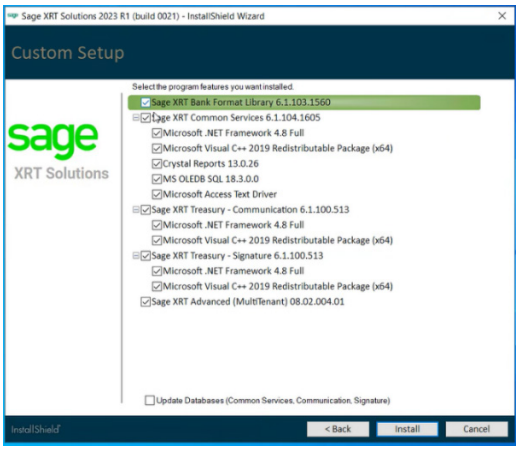
Installation procedure

- Browse your disk to find the launcher file named **Setup**.



- Right-click on **Setup** and select **Run as administrator**.

The setup wizard analyzes your system and pre-selects the modules and/or components that need to be updated.



- Select the **Update Databases** option if required and click **Install**.

Make sure you that you have carefully read and understood the section **Changes impacting the deployment of Sage XRT Solution**, and you're done!

Update of an existing multi-instance platform

Reminder

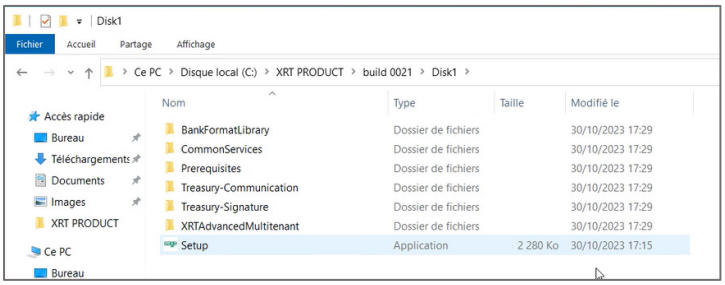
A multi-instance platform corresponds to the deployment mode existing before multi-tenant version 2023 R1. Typically, this type of platform consisted of:

- 1 deployment of **Bank Format Library** (BFL) shared by all customers,
- 1 deployment of **Sage XRT Common Services** (SCS) shared by all customers, with 1 workgroup and 1 database per customer,
- 1 deployment of **Sage XRT Advanced** (SXA) per customer, with 1 workgroup and 1 database per customer,
- 1 deployment of **Sage XRT Communication** shared by all customers,
- 1 deployment of **Sage XRT Signature** shared by all customers.

Installation procedure

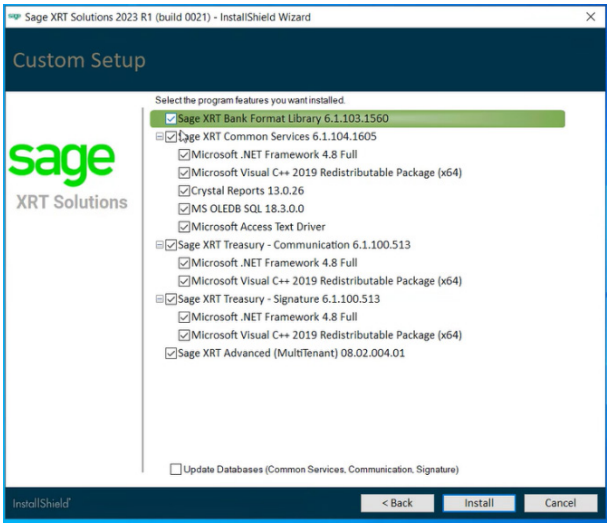
The following instructions enable you to move from a multi-instance to a multi-tenant platform installation.

- Uninstall any instance of **Sage XRT Advanced**.
- Browse your disk to find the launcher file named **Setup**.



- Right-click on **Setup** and select **Run as administrator**.

The setup wizard analyzes your system and pre-selects the modules and/or components that need to be installed or updated.



- Refine your selection and click **Install**.

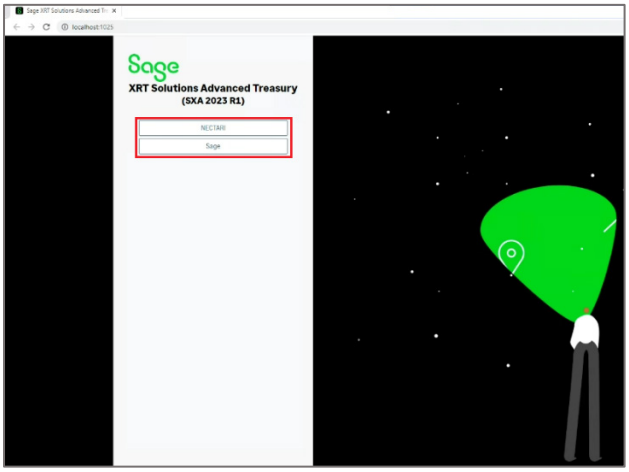
The setup wizard launches the fresh installation of **Sage XRT Advanced**.

Note: The instance is named **Sage XRT Advanced**. It can be changed during the installation process, but we recommend that you keep the default name.

All your previous SXA Workgroups will automatically be changed into Tenants.

- Follow the steps described in the **Fresh Installation** section.

Make sure you that you have carefully read and understood the section **Changes impacting the deployment of Sage XRT Solution**, and you're done!

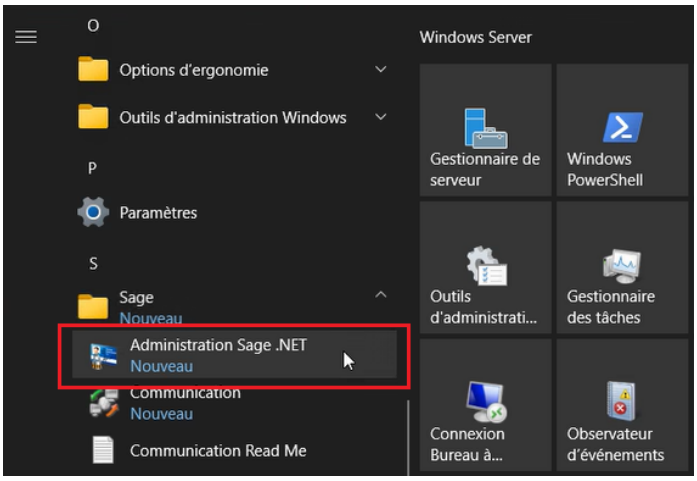


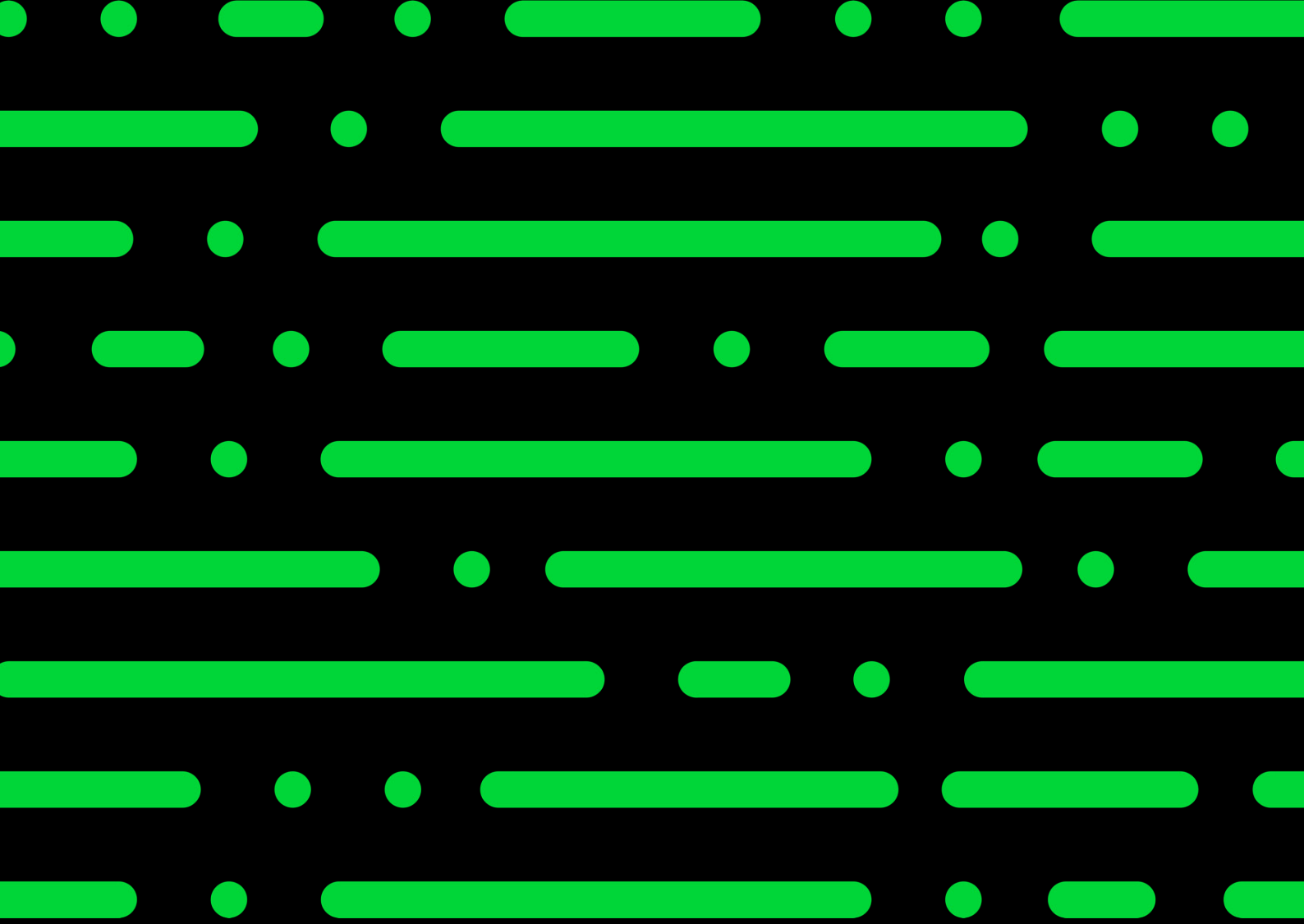
Creation of Tenants and related Databases

Nothing new here!

You need to browse your disk to find the launcher file named **Administration Sage.NET**, and run the program **as administrator**.

Then just do as you have always done...





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