

# ARBUTUS SMARTLINK+

## INSTALLATION GUIDE



## *Copyright*

Copyright © 2017 Arbutus Software Inc. All rights reserved.

This manual may contain dated information. Use of these materials is based on the understanding that this manual may not contain all the information, or the most current information, relevant to an intended application. Support and update services are available from Arbutus, by separate written agreement.

Published January 2017 by:

Arbutus Software Inc.  
270 - 6450 Roberts Street  
Burnaby, British Columbia  
Canada V5G 4E1

Phone: +1-604-437-7873

Fax: +1-604-437-7872

E-mail: [Info@ArbutusSoftware.com](mailto:Info@ArbutusSoftware.com)

Web: [www.ArbutusSoftware.com](http://www.ArbutusSoftware.com)

"Arbutus", Analyzer, "Arbutus ConnectPlus", "SmartLink for SAP ERP", and "SmartLink+ for SAP ERP" are registered trademarks of Arbutus, or one of its subsidiaries or licensors. Use of a term in this manual should not be regarded as affecting the validity of any trade or service mark.

## ***About this Guide***

This guide is provided to licensed users of Analyzer and "SmartLink+ for SAP ERP" and will assist you with installing and configuring "SmartLink+ for SAP ERP". For more information about our products and services, visit our web site at:

[www.ArbutusSoftware.com](http://www.ArbutusSoftware.com)

## **Need Help?**

### **Resources**

For assistance in using Analyzer or ConnectPlus, refer to these additional resources:

- Analyzer Installation Guide
- Analyzer Help
- ConnectPlus Installation Guide

## **Contacting Us**

If you have suggestions for improvements or if you can not find a solution to a problem, you can contact technical support for assistance. Please include:

- Your Analyzer serial number.
- A description of what you were doing when the problem occurred.
- The error message, if any, displayed by Analyzer.

## **Support Center**

Global Help Desk

- Phone: +1-604-437-7873 or +1-877-333-6336 ext. 333
- Fax: +1-604-437-7872
- E-mail: [support@ArbutusSoftware.com](mailto:support@ArbutusSoftware.com)

Or write to us at:

Arbutus Software Inc.  
270 - 6450 Roberts Street  
Burnaby, BC  
Canada V5G 4E1

## **Contents**

---

<b>Copyright</b> .....	<b>ii</b>
<b>About this Guide</b> .....	<b>iii</b>
<b>Contents</b> .....	<b>1</b>
<b>Chapter 1 Installing Arbutus SmartLink+ for SAP ERP</b> .....	<b>3</b>
Overview .....	3
Software Requirements .....	4
Downloading SmartLink+ from the Arbutus Web Site .....	4
Installing the SmartLink+ Add-On .....	4
Configuring the SmartLink+ Output Folder .....	5
Assigning SAP Security Authorizations .....	6
Class: “Basis: Administration” .....	7
Class: “Cross-application Authorization Objects” .....	7
Class: “Basis: Administration” .....	7
Class: “Basis: Administration” .....	8
Additional Authorizations .....	8
Post Installation Steps .....	8
<b>Chapter 2 Setting Up Arbutus SmartLink+ for SAP ERP</b> .....	<b>10</b>
System Requirements .....	10
Arbutus Analyzer .....	10
SAP Server Connectivity .....	10
SmartLink+ Server-side Components .....	10
Installation Procedures .....	11
Overview .....	11
Running Setup - Interactive .....	11
Running Setup - Automated .....	23

---

Technical Reference ..... 24

# CHAPTER 1 INSTALLING ARBUTUS SMARTLINK+ FOR SAP ERP

This chapter provides information about how to install SmartLink+® (Desktop Edition Version 4.0) and configure your SAP® ERP system to support SmartLink+®.

You should read through this entire guide before starting the installation and performing the set up.

## Overview

In order to complete the SmartLink+ installation, tasks must be completed by users with particular rights. Users in the following roles must complete specific installation procedures where indicated in this guide:

- Desktop Administrator – This user role requires Administrator rights to the computer where the SmartLink+ client will be installed. This may be an end-user that belongs to the Administrators group on the computer, or the procedure may need to be completed by a System Administrator.
- SAP Security Administrator – This user role must have the necessary security rights on the SAP ERP system to configure security authorizations for SmartLink+ users.
- SAP Basis Administrator – This user role must have the necessary security rights to install the SmartLink+ add-on on the SAP ERP system.

**IMPORTANT** - You should only attempt to complete procedures if you belong to the specified user role and have the appropriate network and security rights to complete the task.

The following steps must be completed to install SmartLink+:

1. Check the software requirements to ensure that all prerequisite software is installed, and that any earlier versions of SmartLink+, or the evaluation version, are removed. This step must be completed by your SAP Basis Administrator and/or Desktop Administrator.
2. Install the SmartLink+ add-on for the SAP ERP system. This step must be completed by your SAP Basis Administrator.
3. Configure the SmartLink+ output folder on the SAP ERP system. This step must be completed by your SAP Basis Administrator.
4. Configure SAP security authorizations. This step must be completed by your SAP Security Administrator.

5. Install the Arbutus Analyzer desktop software. This step must be completed by a desktop administrator, or a user with Administrator rights on the workstation where the SAP GUI is installed.
6. Run the SmartLink+ desktop install on the machine where Arbutus Analyzer was just installed.

## Software Requirements

You must ensure that all local computers where SmartLink+ (Desktop Edition) will be installed already have the following software correctly installed and configured:

- Arbutus Analyzer Version 6.01 or later
- SAP®GUI version 7.3, patch level 9, or later
- SAP Note 1258724 installed. More information can be found at the following link:

<https://service.sap.com/sap/support/notes/1258724>

## Downloading SmartLink+ from the Arbutus Web Site

Go to the following Arbutus Web Site downloads page to download the correct version of SmartLink+:

<http://www.arbutussoftware.com/support/downloads/>

The downloaded ZIP file is name SmartLinkPlus.zip and contains the following files:

- SmartLinkPlus.exe - this is the Windows client piece that installs the SmartLink+ DLL and client files into the Analyzer Program Files (x86) folder
- DE10090218991\_0000003.PAT - this is the file that is referenced in the next section called Installing the SmartLink+ Add-On

## Installing the SmartLink+ Add-On

**IMPORTANT:** The following procedures must be completed by your SAP Basis Administrator.

You need to use the SAP Front End to install the appropriate SmartLink+ add-on upon the SAP ERP system.

SmartLink+ add-ons are packaged as .PAT files. For the initial installation, there will be one type of .PAT file used:

- Add-on Installation Package (AOI)

The steps you need to follow to install a .PAT file depend on the type of installation you are completing:



- Use the Add-On Installation Tool to install Add-on Installation Packages. The installation package file is named DE10090218991\_0000003.PAT. This .PAT file supports Unicode and Non-Unicode versions of SAP ECC6. Use the SAINT transaction to access the Add-on Installation Tool.

## Configuring the SmartLink+ Output Folder

**IMPORTANT:** The following procedures must be completed by your SAP Basis Administrator.

You need to create an output folder where the SAP ERP system can store the results of SmartLink+ Background mode queries.

Before proceeding with the configuration, you must create a folder on the SAP server to store files generated by the SAP ERP system for SmartLink+. The name and location of this folder is user defined, but you must ensure that it meets the following requirements:

- There is at least 1 to 3 GB of storage space available in the folder.
- Access to the folder is limited to the <SID>adm ID. This user account must have read/write permissions for the folder and the files in the folder.

*Note: Even though the files in the output folder are deleted after they have been downloaded to Arbutus, you should set up a scheduled task or daemon to delete files in the folder that are more than a week old.*

Configuring the output folder is a two part process. You need to define the location of the output folder in the SAP ERP system, and then you need to define the logical file name used by the SAP ERP system to reference this location. The following procedures includes both of these steps.

*Note: If your organization has more than one SAP ERP system, you need to configure the output directory on each system users will access with SmartLink+.*

To configure the output directory:

1. Open the SAP Logon Pad and log in to the SAP ERP system where you want to configure SmartLink+.
2. The SAP Easy Access screen is displayed.
3. In the text box in the top-left corner, enter /nFILE and press Enter.

*Note: A message appears informing you that the change will affect all clients.*

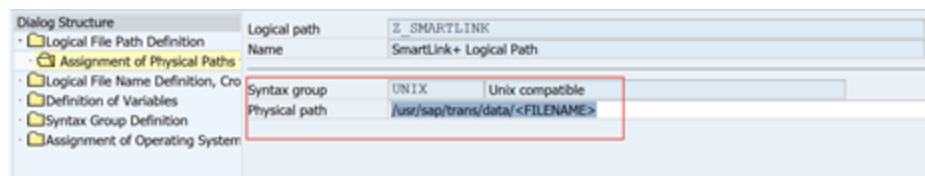
4. Click the green check mark to continue.
5. The Logical file path definition screen appears.
6. Click New Entries to display the New Entries screen.
7. In the Logical file path field, enter Z\_SMARTLINK.
8. In the Name field, enter SmartLink+ Logical Path, and then click Save.

*Note: The Enter Change dialog box appears.*

9. Assign the changes to a change request.
10. Select the row in the Logical File Path table that contains the Z\_SMARTLINK+ entry.
11. In the tree view, double-click the Assignment of Physical paths to Logical path folder.
12. Click New Entries to display the New Entries dialog box.
13. Click the Syntax Group drop-down list.
14. Double-click the platform that your SAP ERP system is running on.

*Note: The platform you select appears in the Syntax group text box in the New Entries dialog box.*

15. In the Physical path field, enter the full physical path to the SmartLink+ output folder, add <FILENAME> to the end of this path, and then click Save. For example, if the output folder is C:\SmartLink\_output, enter C:\SmartLink\_output\<FILENAME>. If you use Unix/Linux, then the path may look like the following screen shot:



16. In the Dialog Structure, double-click Logical file name definition, cross client folder.
17. Click New Entries to display the New Entries dialog box.
18. Enter the following information:
  - In the Logical file field, type Z\_SMARTLINK
  - In the Name field, type SmartLink+ Logical File
  - Leave the Physical file field blank
  - In the Data format field, type DAT
  - In the Applicat. Area field, type BC
  - In the Logical path field, type Z\_SMARTLINK
19. Click Save to save the logical file name entry.

## Assigning SAP Security Authorizations

**IMPORTANT:** The following configuration must be completed by your SAP Security Administrator.

SmartLink+ users must have a valid SAP user ID configured that allows them to connect to the SAP ERP system. The data that users can access is restricted to the SAP tables for which they have been assigned display authorizations.

You must assign SmartLink+ users the SAP authorizations listed below. Consult your SAP ERP system documentation for information on assigning SAP authorizations to users.

### **Class: “Basis: Administration”**

Authorization Object: S\_DATASET 'Authorization for File Access

Field	Value
ACTVT	06 (Delete)
	33 (Read)
	34 (Write)
FILENAME	*
PROGRAM	%_*
	/SMARTLP/BACKGROUND_EXECUTE
	/SMARTLP/SMARTLINK_CORE==CP

### **Class: “Cross-application Authorization Objects”**

Authorization Object: S\_RFC (Authorization check for RFC access)

Field	Value
ACTVT	16 (Execute)
RFC_NAME	SYST
	/SMARTLP/SAPLFUGR_QUERY
RFC_TYPE	FUGR

### **Class: “Basis: Administration”**

Authorization Object: S\_BTCH\_JOB (Background Processing: Operations on Background Jobs)

Field	Value
-------	-------

JOBACTION	RELE (Release)
JOBGROUP	‘ ‘

### Class: “Basis: Administration”

Authorization Object: S\_GUI (Authorization for GUI activities)

Field	Value
ACTVT	61 (Export)

### Additional Authorizations

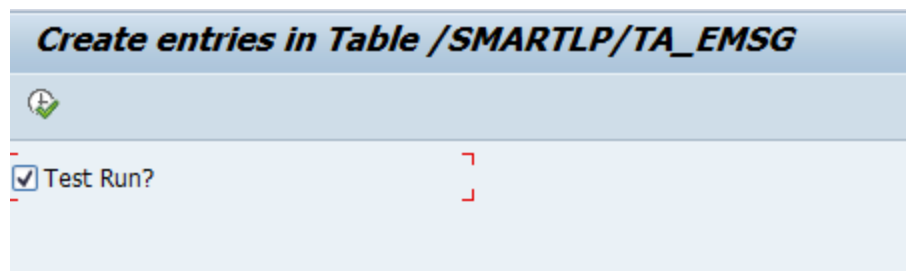
SmartLink+ users must also be assigned the S\_TABU\_DIS (Table Maintenance) display authorizations required by their roles.

### Post Installation Steps

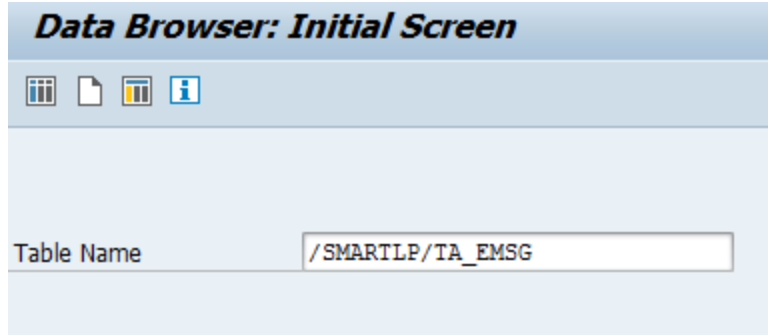
SmartLink+ has created custom error messages that will the end user identify exactly where an issue occurred. These error messages are specific to Smartlink+ and are above and beyond standard SAP error messages. These error messages will help Arbutus support troubleshoot issues an end user may experience.

As part of the Smartlink+ installation, there is an empty table create that needs to be populated. A report with the error messages was created and needs to be loaded into the empty table. Follow the steps below to load the error table.

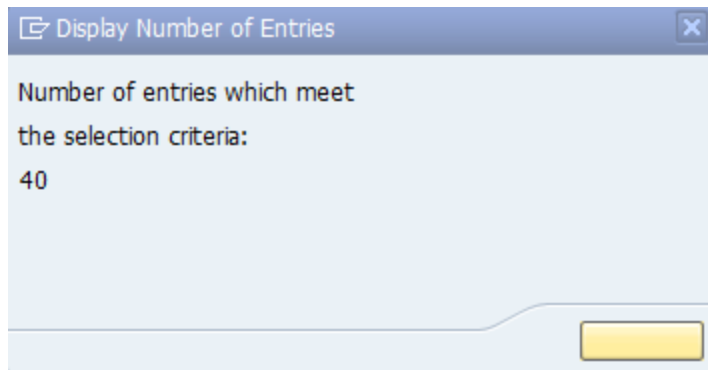
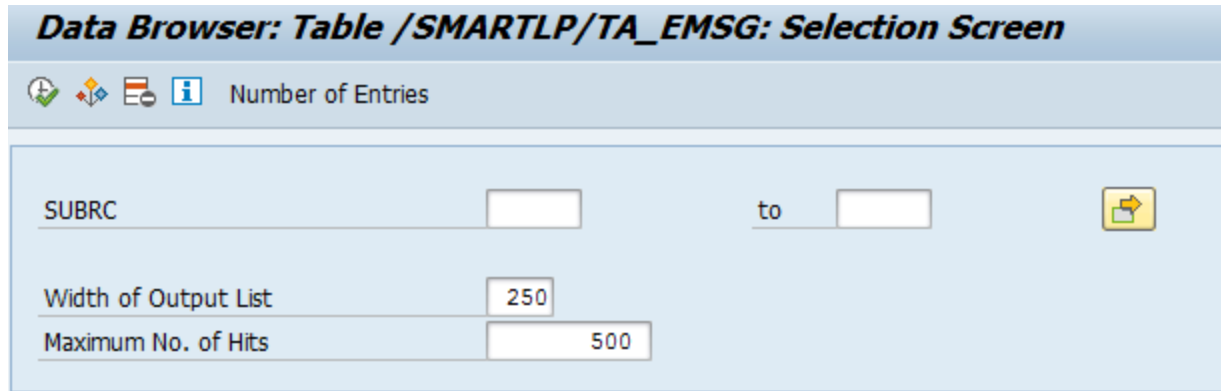
1. Run transaction /n/SMARTLP/MSGC
2. By default, "Test Run" is checked. Uncheck it and run it.



3. Check whether 40 entries are created in table /SMARTLP/TA\_EMSG.



4. Click on Number of Entries.



## **CHAPTER 2 SETTING UP ARBUTUS SMARTLINK+ FOR SAP ERP**

This chapter provides information about how to set up SmartLink+® and configure Arbutus Analyzer to work with SmartLink+®.

You should read through this entire guide before starting the installation and performing the set up.

### **System Requirements**

#### **Arbutus Analyzer**

SmartLink+ can be installed for use with the desktop version of Arbutus Analyzer, or for use with the server Analyzer on the Arbutus Windows Server, that are installed on a Windows operating system.

See the Arbutus Analyzer Installation Guide for system requirements for Analyzer - these are the same requirements for using SmartLink+ with Arbutus Analyzer.

*Note: SmartLink+ setup typically does not require administrative rights.*

An additional 1 MB of disk space will be required for each instance of Arbutus Analyzer product(s) where SmartLink+ will be installed.

#### **SAP Server Connectivity**

In order to use SmartLink+, you'll need a connection to one or more SAP servers.

If you are already connecting to an SAP server using Arbutus Analyzer or some other SAP or third-party product, you probably already have all of the connection details you need to connect using SmartLink+.

SAP Server connection info will typically include an IP address, server type and system number. Your IT department or SAP system admin should be able to supply this information. You will also need valid SAP credentials to connect to all desired SAP servers.

SmartLink+ Setup includes all of the SAP client connection run time support (NetWeaver DLLs) needed for use with Analyzer.

#### **SmartLink+ Server-side Components**

The package containing SAP server-side support for SmartLink+ must be installed on all SAP Servers you wish to use with SmartLink+.

*Note: Technically this is not a prerequisite for SmartLink+ Setup, only for use of SmartLink+ with Analyzer.*

## Installation Procedures

### Overview

SmartLink+ Setup will make every effort to discover existing Arbutus Analyzer products, as well as existing SAP Server connectivity definitions during the Setup process.

SmartLink+ Setup can be installed for multiple Arbutus Analyzer products simultaneously, ensuring they are all using the same version of SmartLink+, SAP client connectivity definitions and run time support.

After SmartLink+ Setup is completed, if existing SAP Server connectivity was not discovered during the setup process, additional manual steps to define SAP Server connectivity may be required.

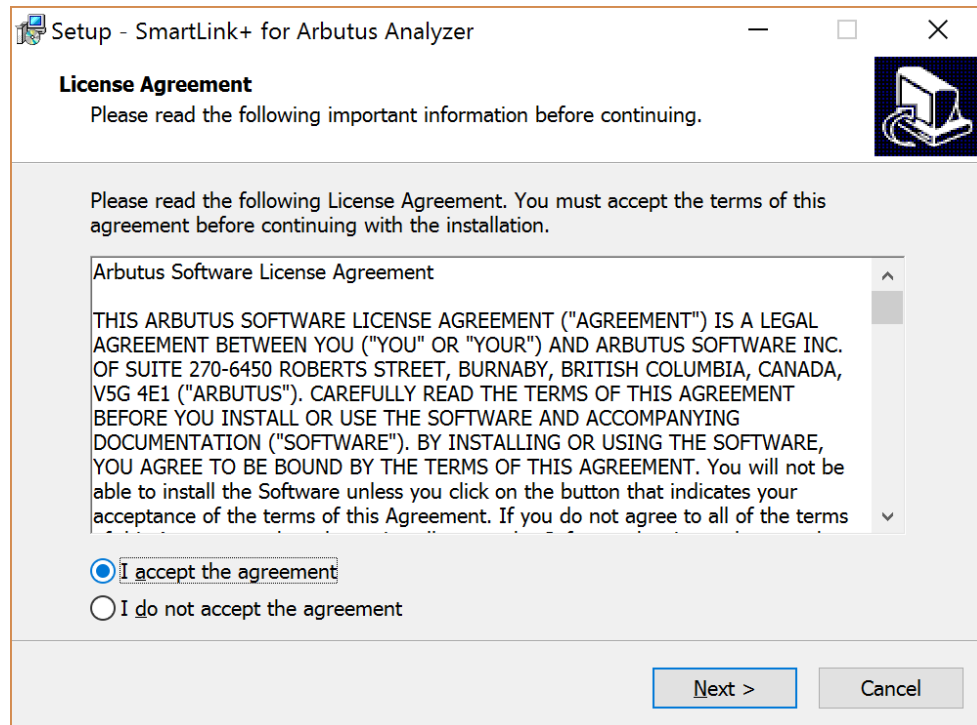
SmartLink+ Setup includes uninstall support accessible thru Windows Control Panel > Programs and Features. This includes support for uninstalling from multiple Arbutus Analyzer products (any that were updated during the SmartLink+ Setup process.)

### Running Setup - Interactive

#### Step 1 - Run SmartLinkPlusSetup.exe

Double-click in Windows Explorer, enter the .exe name in Windows CMD/PowerShell session, or use Start > Run

## Step 2 - Accept the License Agreement

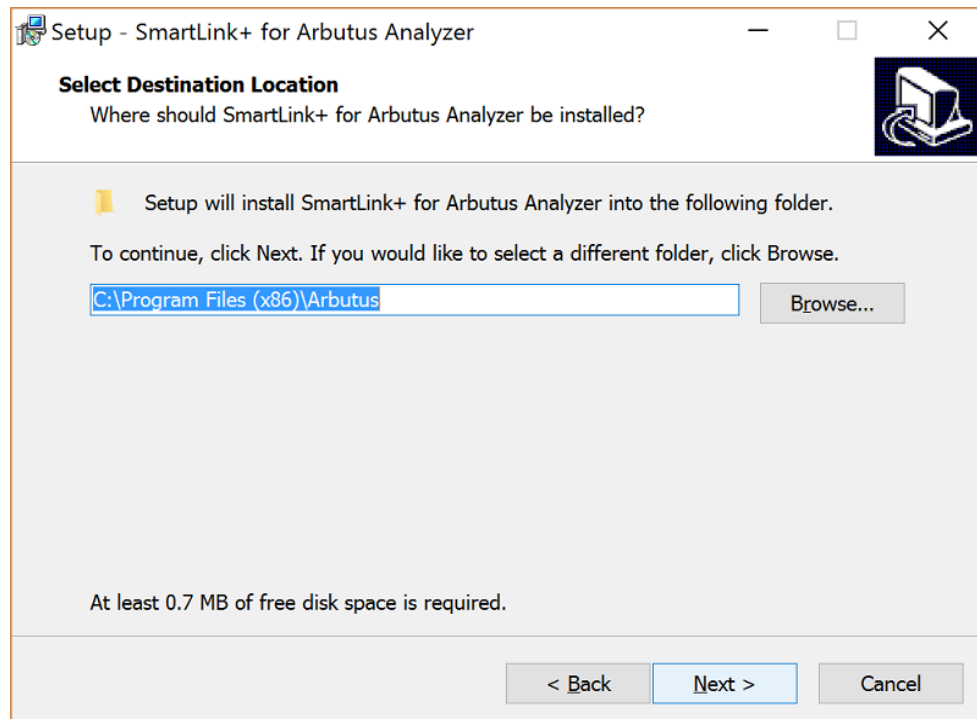


## Step 3 - Choose Analyzer Target Folder

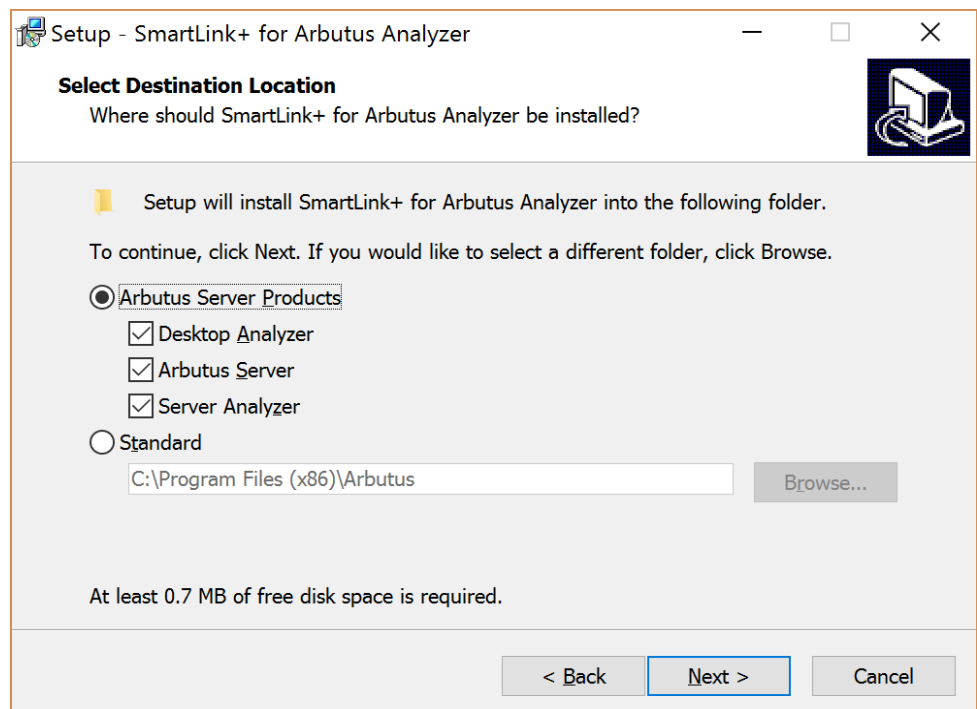
After accepting the license agreement, SmartLink+ Setup will attempt to discover all installed Arbutus products.



### Step 3a - Single Arbutus Product Installed



### Step 3b - Multiple Arbutus Products Installed



*Note: You can choose to override the default and install for a single specific Arbutus product by choosing Standard mode and the appropriate target folder.*

#### Step 4 - SAP Connectivity Detection / Discovery / Locator (OPTIONAL)

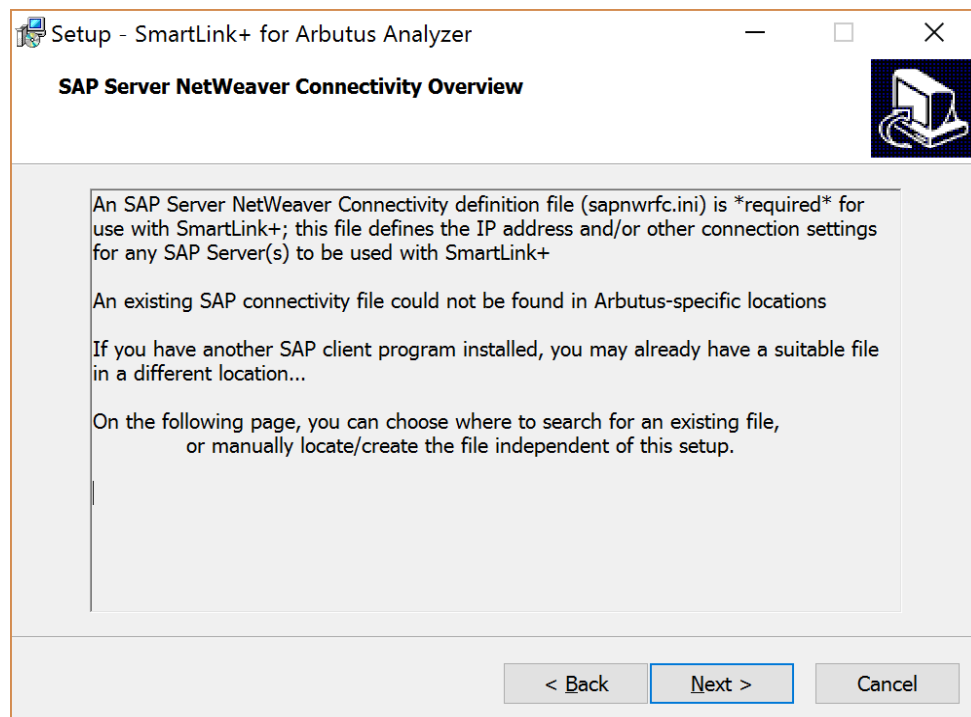
After choosing the target Arbutus Analyzer product(s) / folder, SmartLink+ Setup will attempt to location existing SAP Server Connectivity definitions.

This search automatically includes the following:

- Sapnwrfc.ini file in any Arbutus products folder
- Saprfc.ini file in Arbutus products folder or as defined by RFC\_INI environment folder
- ArbutusS.ini (as used with Arbutus Analyzer RFC Connector component)

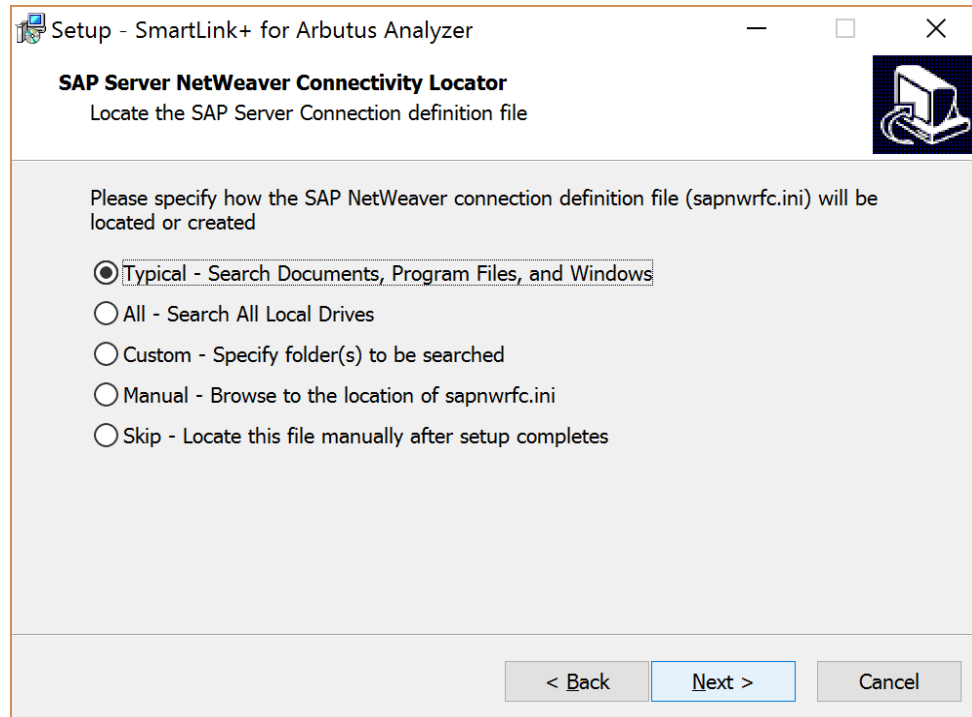
If an Sapnwrfc.ini file is found in an Arbutus product folder, you will automatically skip to “Step 5 - Ready to Install”; otherwise, you can optionally choose how to resolve SAP Connectivity during SmartLink+ Setup, or defer SAP Connectivity definition as a manual step you will perform after SmartLink+ Setup completes.

##### Step 4a - SAP Connectivity Overview



##### Step 4b - SAP Connectivity Locator

In this step, choose an option for locating an existing SAP Connectivity definition, or defer to a post-Setup manual process.



- Typical: Search filesystem locations where sapnwrfc.ini file is normally located for use with any software.
- All: Search all local drives. This does not include removable media drives (DVD/CD/Floppy/USB etc) or Mapped Network drives.

*Note: The Search All option can take an extended period of time to complete.*

- Custom: Specify location(s) to search.
- Manual: Specify the location of an existing sapnwrfc.ini file.
- Skip: defer definition of SAP Connectivity to post-Setup manual process.
- Derive: extract SAP Connectivity settings from Arbutus Server configuration

*Note: This additional option will only be shown if you have Arbutus Windows Server installed and SAP Connectivity defined in the ArbutusS.INI file for use with the RFCConnector component.*

- Skip - Locate this file manually after setup completes
- Derive - extract SAP Connectivity settings from Arbutus Server config

#### *Step 4c - Typical / All / Custom Options*

The same dialog is used, and the same functionality is available, whether you choose the Typical or All or Custom option in the previous step...

In this dialog, you can review and confirm and modify the locations to be searched. Which locations you see by default will vary depending on the Typical

vs All vs Custom selection, your version of Windows and other individual/machine-specific settings.

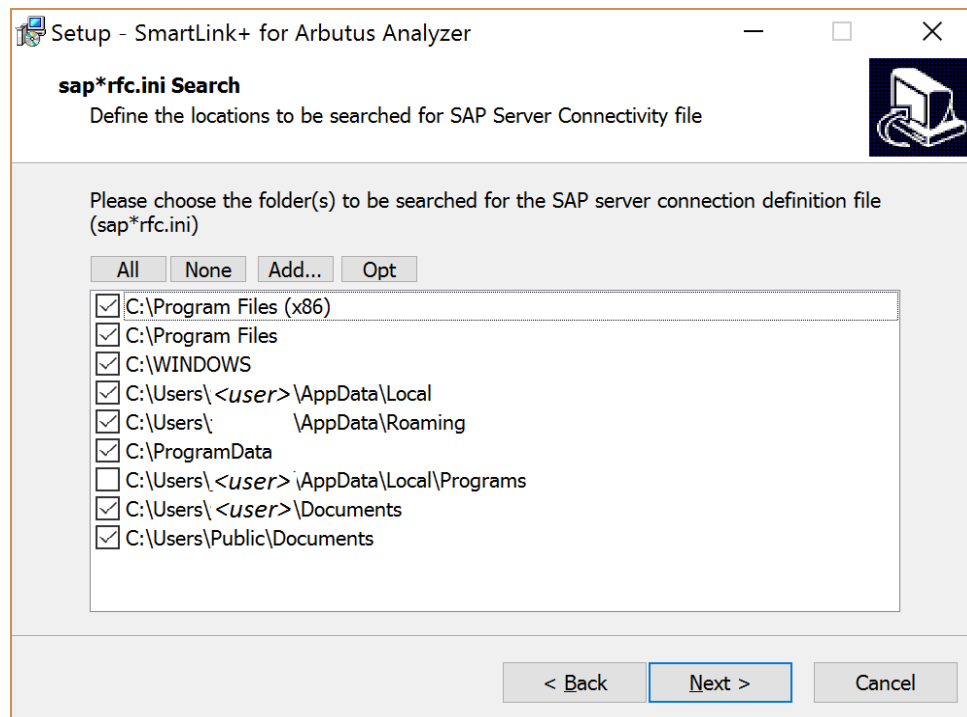
Individual locations can be enabled or disabled for searching with the check box for each folder name. For convenience, All or None of the listed locations can be selected using the buttons above the list of locations.

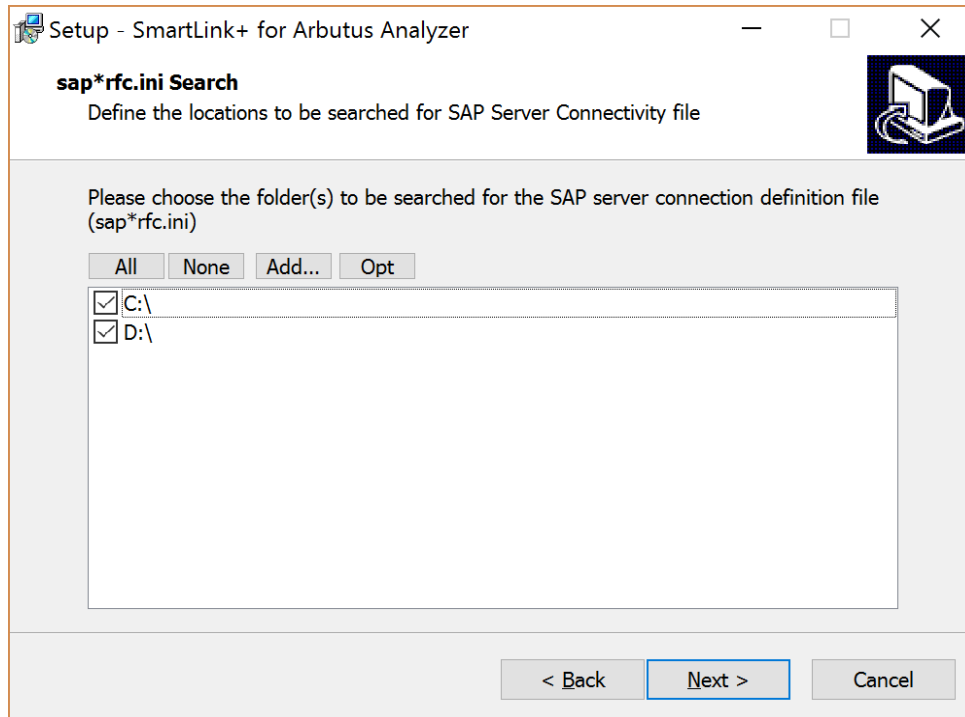
To specify additional or alternative locations to be searched, use the Add button. There is no remove or delete option, simply un-check the location(s) you don't want to be searched.

The selected search location(s) will always be optimized to avoid duplicate searches- for example, if you specify both C:\foo and C:\foo\bar, C:\foo\bar will only be searched once. Use the "Opt" (Optimize) button to preview and verify duplicate specifications (duplicates will be unchecked).

*Note: The All option, and/or specifying an entire drive to search, can take an extended period of time to complete.*

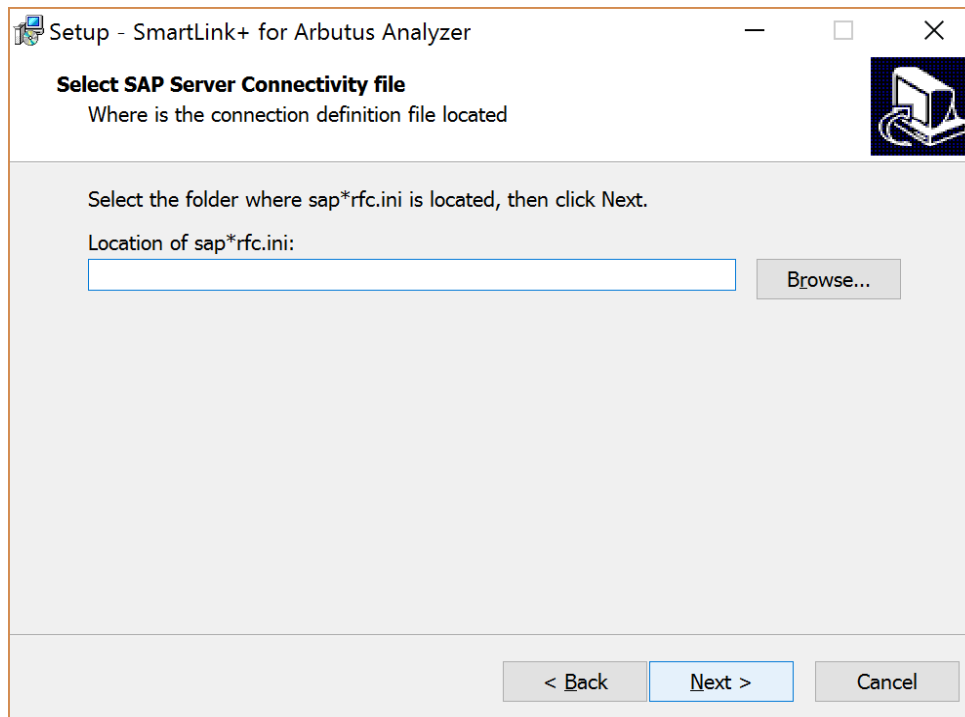
Choose Next when you are satisfied with the location(s) to be searched for SAP Connectivity definitions.





#### Step 4d - Manual Option

If you know the location of an existing Sapnwrfc.ini or Saprfc.ini SAP Connectivity definitions file, click Browse to specify that file location.



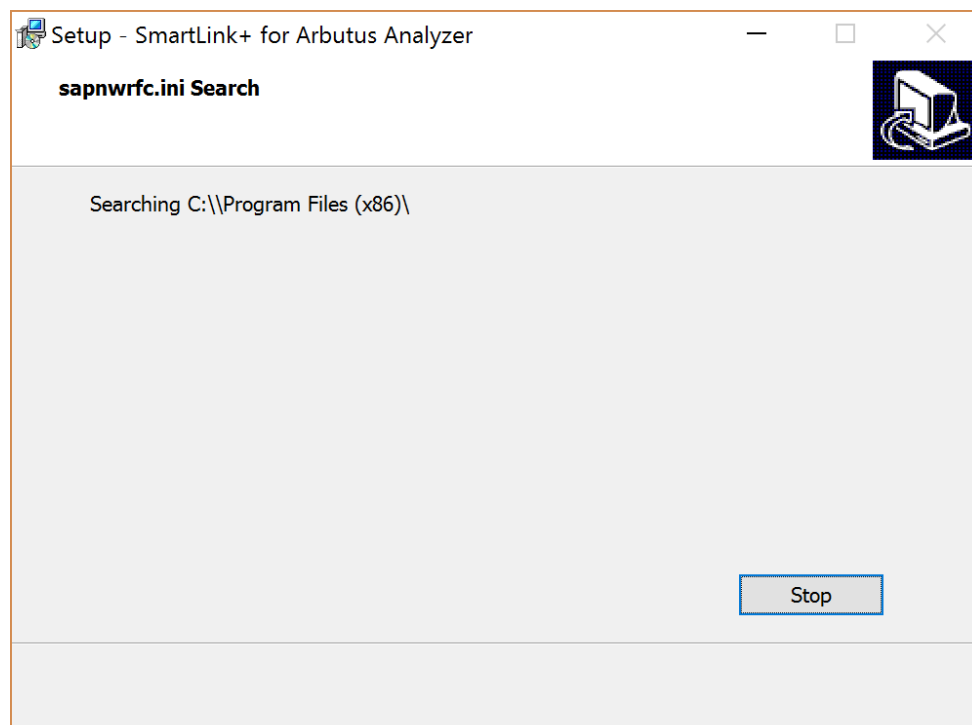
#### *Step 4e - Connectivity Search*

If you chose the Typical/All/Custom Search option, this dialog will show the progress of the search for existing SAP Connectivity definitions.

The “Searching...” item near the top of the dialog will periodically update with the location being searched.

To Stop the search process, click the Stop button; there may be a brief delay before it responds.

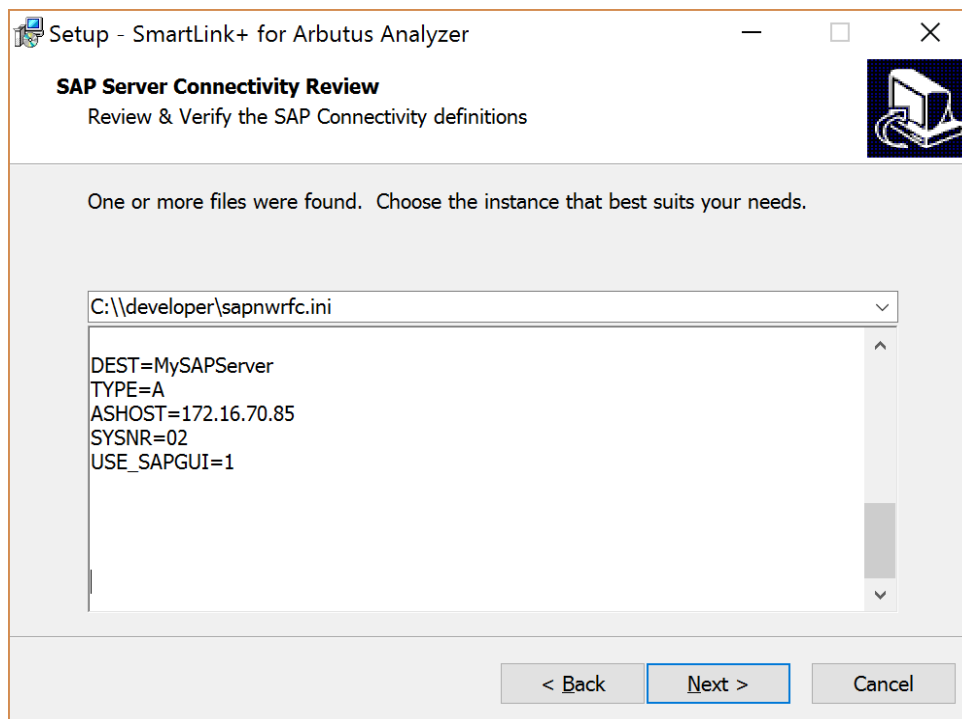
Once the Search completes, or if you Stopped the search after one or more SAP Connectivity definitions were found, you will automatically be taken to the next step.



#### *Step 4f - Connectivity Review*

If an existing SAP Connectivity definition was found either thru automated Search or Manual options, or if you chose the Derive option, this dialog will allow you to review the definition before proceeding with setup.

If multiple SAP Connectivity definitions were found, the drop down can be used to select the definition set that is best suited for use with SmartLink+.

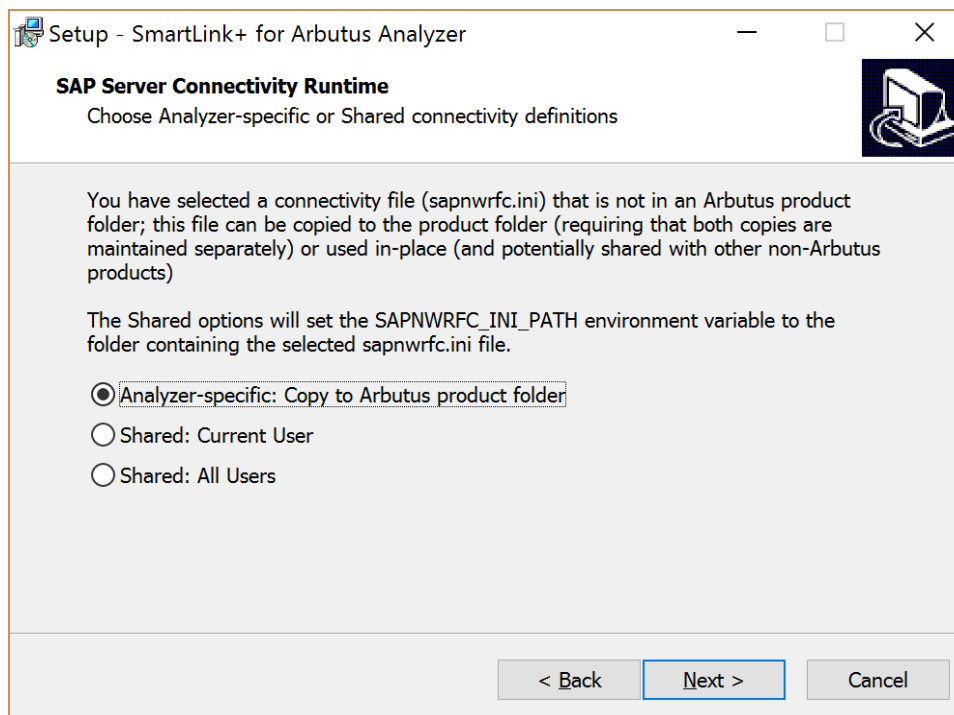


#### *Step 4g - Private or Shared Sapnwrfc.ini*

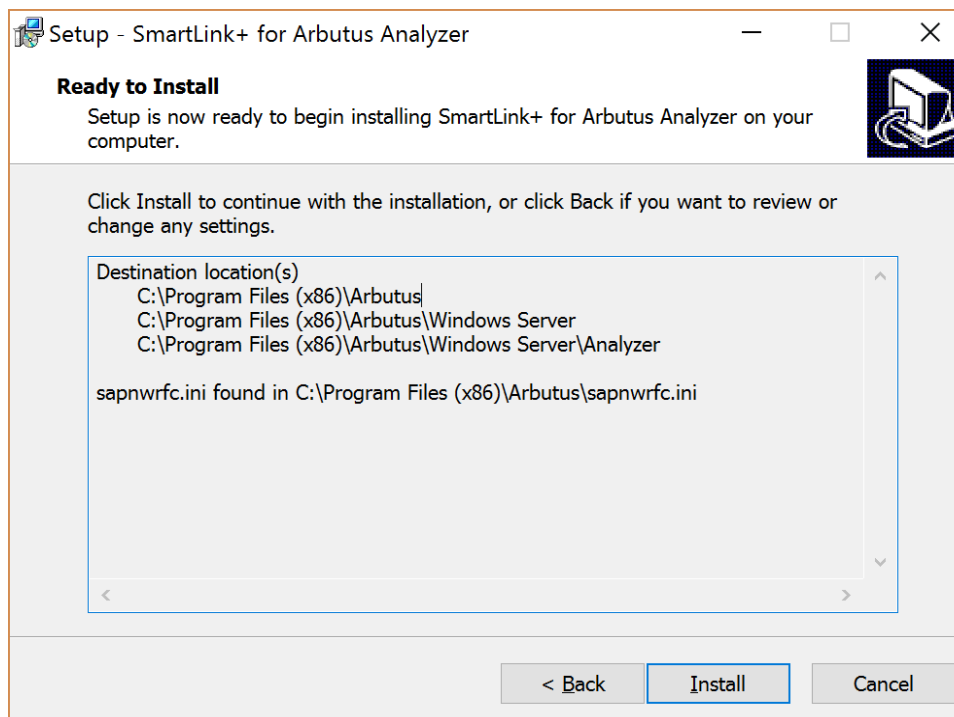
If the selected Sapnwrfc.ini SAP Connectivity definition file is located somewhere other than an Arbutus product folder, you can choose whether to make a copy for use only with SmartLink+ or use it in-place and shared with other third-party products.

The “Shared” options will create or update a SmartLink+ specific environment variable setting to point to the connectivity definition.

*Note: The “Shared: All Users” option will typically require administrative rights to complete.*



### Step 5 - Ready to Install



This step will summarize the updates that will be applied by the installation process.

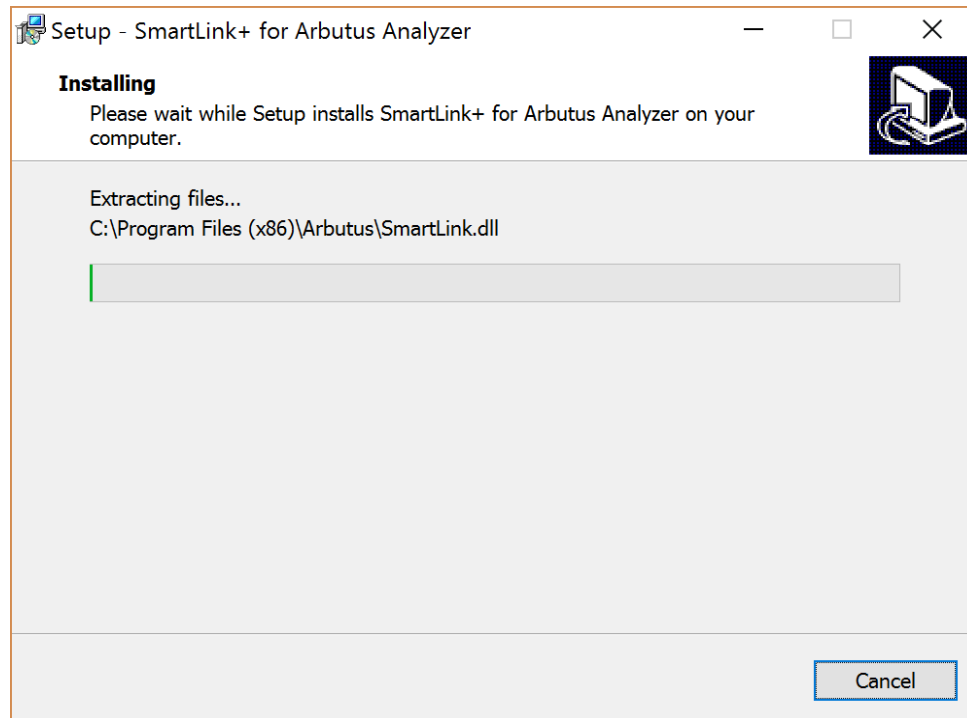
1. Destination location(s) - the destination folder where SmartLink+ will be installed, which may include multiple existing Arbutus products



2. [OPTIONAL] SAP server connectivity handling - the specific messaging will vary depending on whether SAP Connectivity definitions were automatically found and/or on the options you chose in Step 4.

### Step 6 - Installing

SmartLink+ and SAP client connectivity support will be installed to the selected Arbutus Analyzer product folder(s). The progress bar will update as each file is copied.

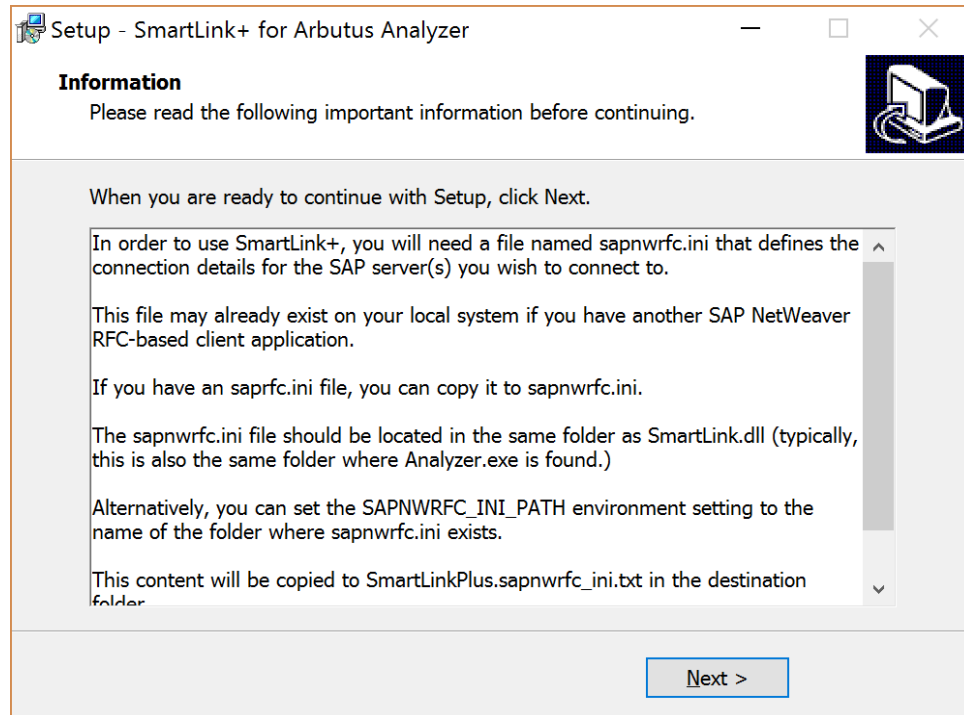


### Step 7 - Post-Setup Configuration [OPTIONAL]

This step will only be shown if an existing SAP Connectivity definition could not be found and you chose the Skip option in the SAP Connectivity Locator step.

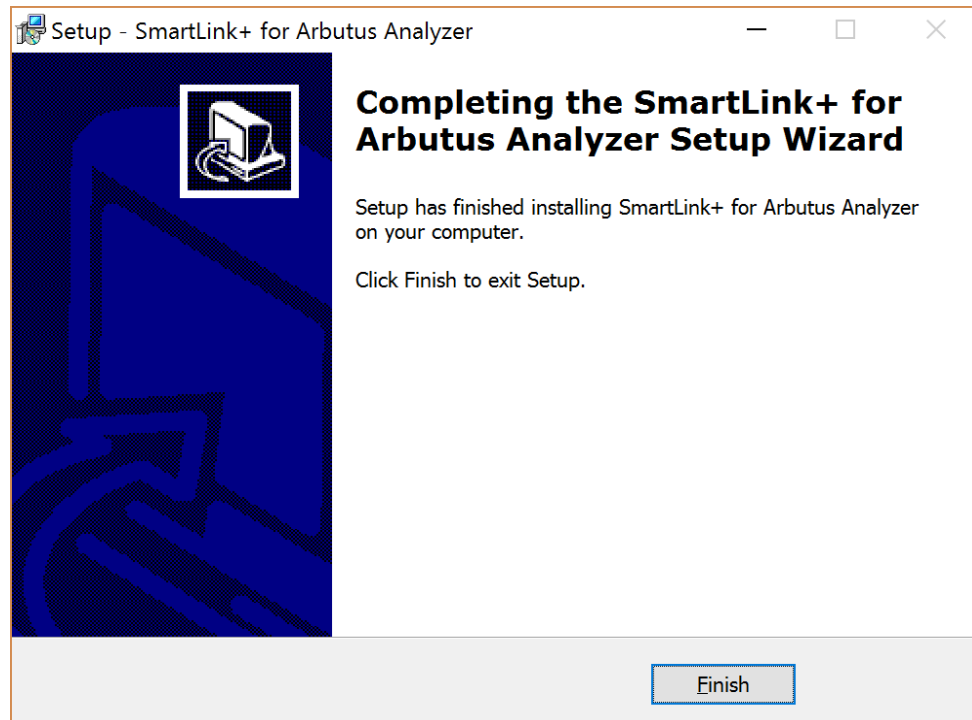
This dialog provides additional instructions to be used to manually create or define the location for an Sapnwrfc.ini file.

This information can also be found in SmartLinkPlusSetup.Sapnwrfc\_ini.txt file in the Destination folder(s).



### Step 8 - Setup Completed

Click Finish to exit Setup.



## Running Setup - Automated

SmartLink+ Setup supports the following command-line parameters for executing in an automated/unattended mode.

`/SILENT, /VERYSILENT`

Instructs Setup to be silent or very silent.

When Setup is silent the wizard and the background window are not displayed but the installation progress window is.

When a setup is very silent this installation progress window is not displayed.

Everything else is normal. For example, error messages during installation are displayed.

If a restart is necessary and the '/NORESTART' command isn't used (see below) and Setup is silent, it will display a Reboot now? message box. If it's very silent it will reboot without asking.

`/SUPPRESSMSGBOXES`

Instructs Setup to suppress message boxes. Only has an effect when combined with '/SILENT' or '/VERYSILENT'.

The default responses in situations where there is a choice are:

- Yes in a 'Keep newer file?' situation.
- No in a 'File exists, confirm overwrite.' situation.
- Abort in Abort/Retry situations.
- Cancel in Retry/Cancel situations.
- Yes (=continue) in a DiskSpaceWarning/DirExists/DirDoesntExist/NoUninstallWarning/ExitSetupMessage/ConfirmUninstall situation.
- Yes (=restart) in a FinishedRestartMessage/UninstalledAndNeedsRestart situation.

`/NOCANCEL`

Prevents the user from cancelling during the installation process, by disabling the Cancel button and ignoring clicks on the close button. Useful along with '/SILENT' or '/VERYSILENT'.

`/NORESTART`

Prevents Setup from restarting the system following a successful installation, or after a Preparing to Install failure that requests a restart. Typically used along with /SILENT or /VERYSILENT.

`/RESTARTEXITCODE=exit code`

Specifies a custom exit code that Setup is to return when the system needs to be restarted following a successful installation. By default, 0 is returned following a successful installation. Typically used along with /NORESTART.

## Technical Reference

### Command-line Parameters

#### *Logging*

SmartLink+ support may ask you to enable logging if you have a problem using SmartLink+ Setup.

`/LOG`

Causes Setup to create a log file in the user's TEMP directory detailing file installation and actions taken during the installation process. This can be a helpful debugging aid. For example, if you suspect a file isn't being replaced when you believe it should be (or vice versa), the log file will tell you if the file was really skipped, and why.

The log file is created with a unique name based on the current date - it will not overwrite or append to existing log files.

The information contained in the log file is technical in nature and therefore not intended to be understandable by end users. Nor is it designed to be machine-parsable; the format of the file is subject to change without notice.

`/LOG="filename"`

Same as /LOG, except it allows you to specify a fixed path/filename to use for the log file. If a file with the specified name already exists it will be overwritten. If the file cannot be created, Setup will abort with an error message.