



A Complete Step-by-Step Guide – v1.4 How to Install Local SAP ABAP Development System

by Ladislav Rydzyk from ABAP Academy

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Why this eBook?

First time installation of SAP software to my computer took almost one whole day. Since I knew I would most probably install SAP more than once, I created this guide to myself firstly. This helped me to save hours spent on Google solving my issues.

You've probably found your way to this eBook from ABAP Academy blog, or maybe a friend passed it along to you. Either way, I'm happy you're here.

I wrote majority of this guide for myself, when I was in a time of desperate need, working on a customer project with continuous crashing connection to the customer system. For the time being, I could not wait just like that, because deadline was coming and it was not so easy to move it. Finally, I have decided to install local installation of SAP so that I can continue coding, until admins are ready with stable connection to the system. I did it even though, SAP release¹ of local installation was not equal to the customer SAP release, since I knew, how to make it work anyway.

I have started to look for installer copy. Firstly, I was surprised that I was not able to find it right away, but I had to spend couple of minutes just by figuring out where the download place is and then what file to download. I have found few blogs about this topic with outdated and confusing information. And this was only the beginning of all day long process of installation and search for many solutions of problems which came up during one single installation.

This eBook will guide you through this process with the least pain possible. If I help just one person, to save tons of hours figuring out on how to successfully install local SAP system, writing this eBook will have been totally worth spending my time.

So, here it is for you and your continued success!

¹ Explanation for non-SAP people, SAP release is basically a version of installed SAP system

About the Author



Hello, my name is **Ladislav Rydzyk** and I am SAP/ABAP Developer since 2006. I was programming for companies like SAP, HP Slovakia, Datavard (Cool Vendor 2013 by Gartner) and others. My codes are running in customer systems like SAP (BASIS), Nestlé, Allianz, Nike, Coca Cola, BASF, KPMG and others.

You can find more information about me here: <http://abapacademy.com/about-me/>.

I hope you will enjoy reading this eBook and it gets you only valuable information.

Contributors

SAP installation process is not an easy thing. And depending on OS setup, steps to finish installation successfully may differ. This is why this ebook is written with contribution of people like you.

Thanks for additional detailed information on how to install the system belongs to:

- Eva Wagnerová
- Dalibor Koziel
- Srividhya Naidu
- Sharip R.Sabbotini
- Mahmoud Zidan

IF YOU MISS SOMETHING HERE, PLEASE CONTRIBUTE AS WELL

You can also contribute to this eBook by sending me your solved issues, which are not described in this document, because it is not possible to simulate or install SAP on all PCs with different setup. In such case, your name will be published within this eBook.

In such case, please send me your comments to how.to.install.sap.trial@abapacademy.com or on Facebook Page (<https://www.facebook.com/abapacademy>).

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Introduction

Welcome to Step-by-step tutorial on how to install your own local SAP system for learning ABAP. After completing all the steps within this eBook, you will have your own local system ready to learn and experiment any programming features in SAP system. I will lead you through all the steps from downloading all installation files to logging in to the system.

You may ask why to write an eBook about installation of SAP system. Well, if you start to search for getting such system and installing it on your own, you will be surprised how difficult can installation be. Even though we are already in era of "Next, Next, Finish" installation way, it is not true with SAP.

If you have decided to install your own SAP system, please, reserve at least 2 hours. Installation process can vary, depending on different Windows setup and hardware. In case that you get into troubles, which are not described in this document, please let me know your solution to how.to.install.sap.trial@abapacademy.com. In such case, I can update this eBook with your solution, your name and help out others to save their time.

Have fun ;).

System Requirements

- Operating System Windows 7 64 bit Professional (unsupported platform for Trial Installation) or Windows Server 2008 (32 bit OS is acceptable as well. In such case, you need to download 32 bit version instead of 64 bit, which is described in this document) – [Click here on how to find out your operating system type](#)
- JRE 1.4.x or JRE 1.5.x (for installation only, JRE 1.6 is not supported)
- Hostname must not exceed 13 characters (Full Qualified Domain Name optional)
- NTFS-File system
- Internet Explorer 7.0 or higher or Firefox 3.6 or higher
- Minimum 2 GB RAM (4 GB or more recommended)
- Virtual Memory: Pagefile size sufficient for installation (16-24 GB recommended).
- Intel Pentium III/1.1 GHz or higher (or compatible)
- 45 GB hard disk space temporary during installation - 36 GB permanent
- High-resolution monitor (1024x768 or higher, 256 colors)
- Make sure that no other SAP system or MaxDB is installed on your computer or has registry entries (multiple instances not supported with Trial))

- The SAP system requires several ports for communication services. Therefore the file %WINDIR%\system32\drivers\etc\services must not include an entry for the ports 3200, 3600, 3900 and 8000. A possible entry can be excluded by using the hash symbol (#). (Note: The entry sapmsNSP 3600 for dialog instances may not exist, as it is set to 0 in Trial versions).

Installation of SAP system described in this eBook was done on the following machine:

View basic information about your computer

Windows edition

Windows 7 Professional

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Service Pack 1

Get more features with a new edition of Windows 7



System

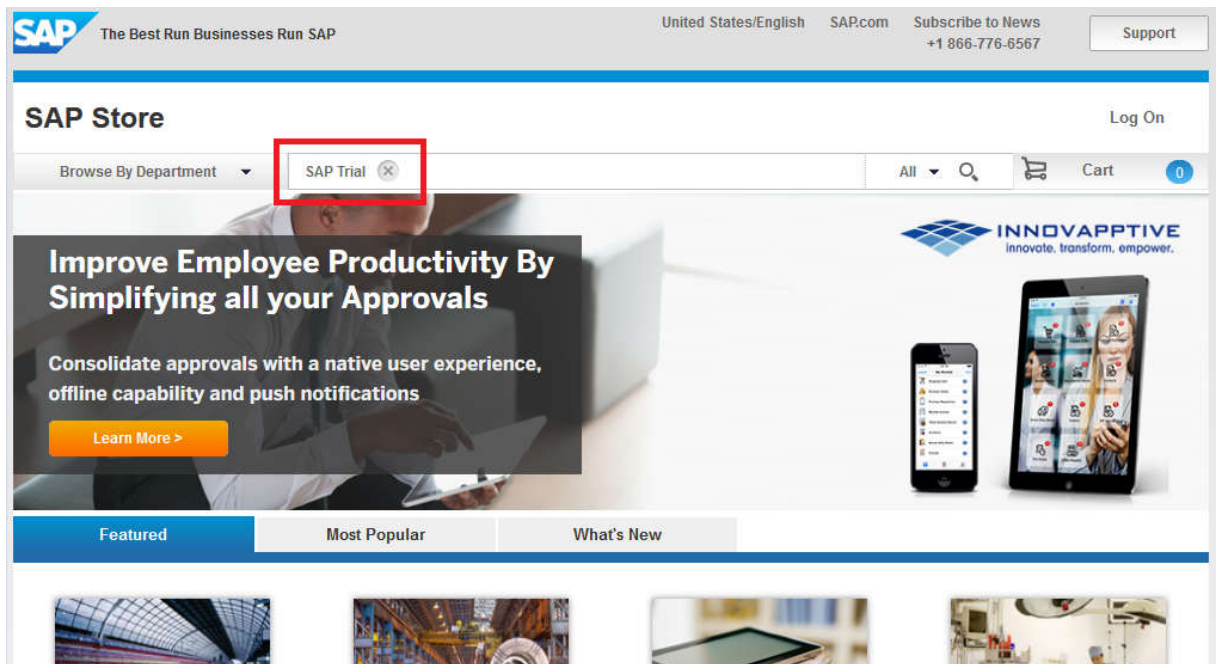
| | |
|-------------------------|---|
| Manufacturer: | Dell |
| Rating: | Windows Experience Index |
| Processor: | Intel(R) Core(TM) i5 CPU M 450 @ 2.40GHz 2.40 GHz |
| Installed memory (RAM): | 4,00 GB (3,80 GB usable) |
| System type: | 64-bit Operating System |
| Pen and Touch: | No Pen or Touch Input is available for this Display |



Download SAP Trial System

Downloading SAP Trial System can get tricky, because SAP changes its website structure quite often. This way, you could find links on the web, which are not relevant already.

Current download place of SAP software is on <https://store.sap.com/>. If you search for „SAP Trial“, you get a list of all available free software from SAP.

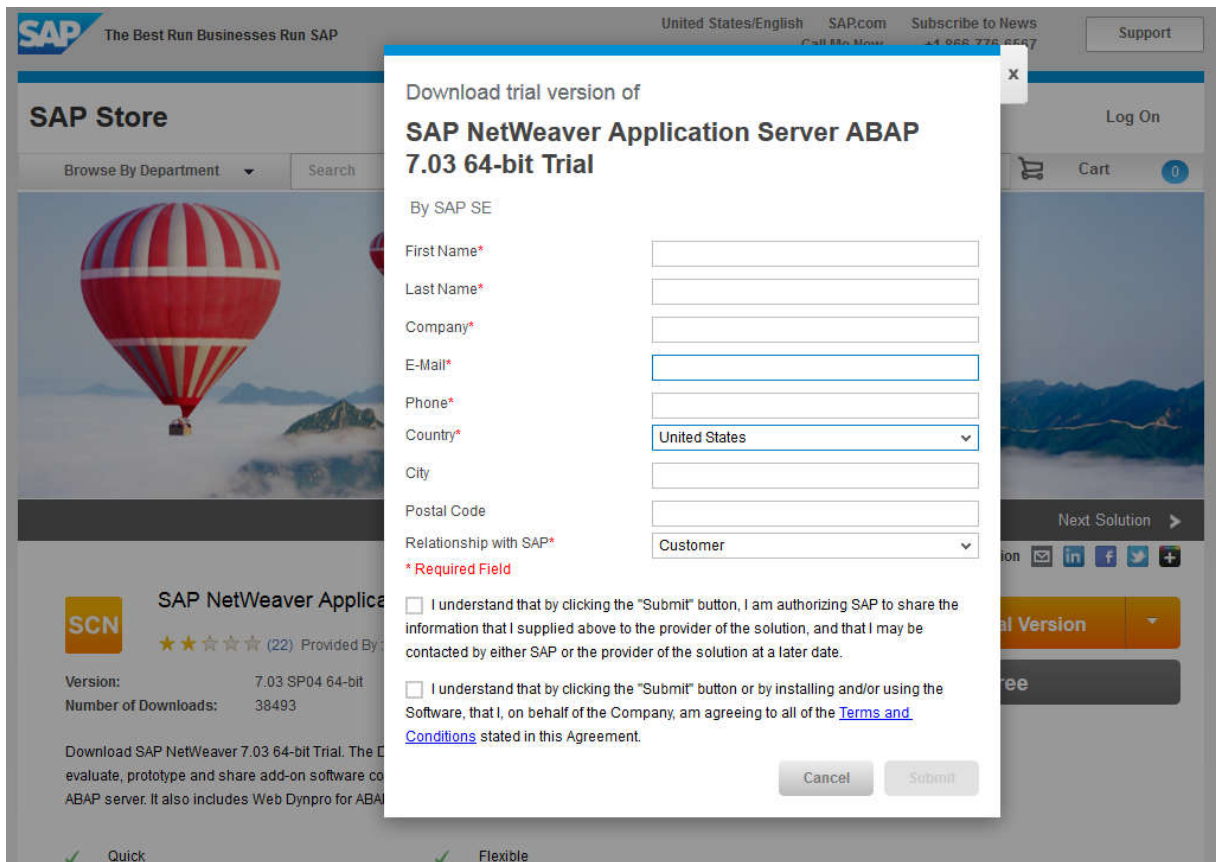


Search for „SAP NetWeaver Application Server ABAP 7.03 64-bit Trial“ version. Download page can be found via direct link here as well:

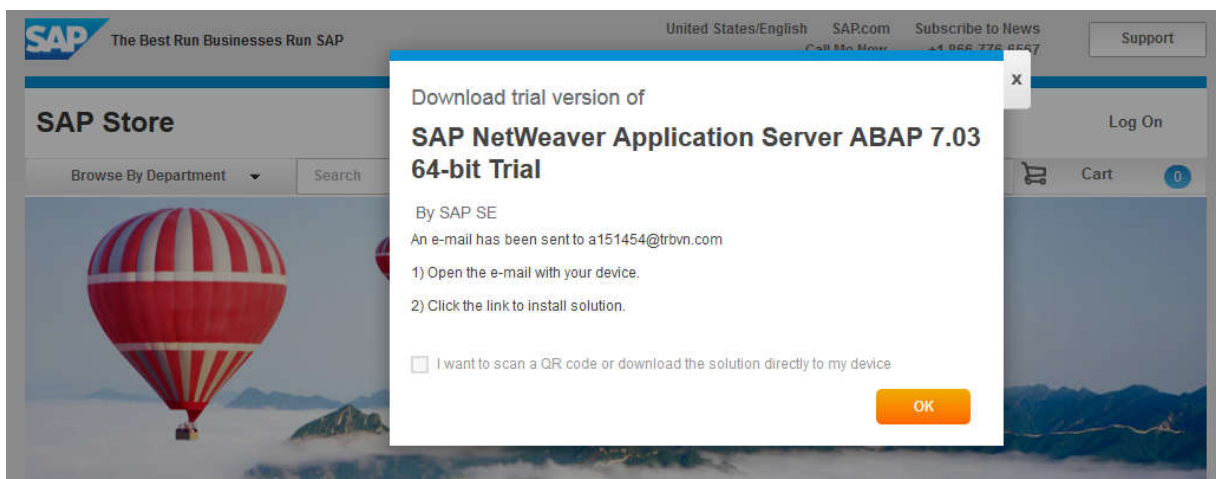
<https://store.sap.com/sap/cpa/ui/resources/store/html/SolutionDetails.html?pcntry=US&sap-language=EN&pid=0000000218>

The screenshot shows the SAP Store interface. At the top, there is a navigation bar with the SAP logo and the slogan "The Best Run Businesses Run SAP". To the right, it indicates the location and language as "United States/English" and provides contact information for SAP.com, including a "Call Me Now" button and a phone number "+1 866-776-6567". A "Support" button is also present. Below this is the "SAP Store" header with a "Log On" link. A secondary navigation bar includes a "Browse By Department" dropdown, a search field, and a shopping cart icon with a "0" item count. The main content area features a large banner image of hot air balloons over a mountain range. Below the banner are navigation arrows for "Previous Solution" and "Next Solution", and social sharing options. The product listing for "SAP NetWeaver Application Server ABAP 7.03 64-bit Trial" includes the SCN logo, a star rating of 4.5 (22 reviews), and the provider "SAP SE". Technical details listed are "Version: 7.03 SP04 64-bit" and "Number of Downloads: 38493". A descriptive paragraph explains that this is a Developer Edition trial. A list of features with green checkmarks includes "Quick", "Scalable", "Flexible", and "UI Friendly". A "Read More >" link is at the bottom left. On the right side of the product listing, there is a prominent orange "Trial Version" button with a dropdown arrow, and a grey "Free" button below it.

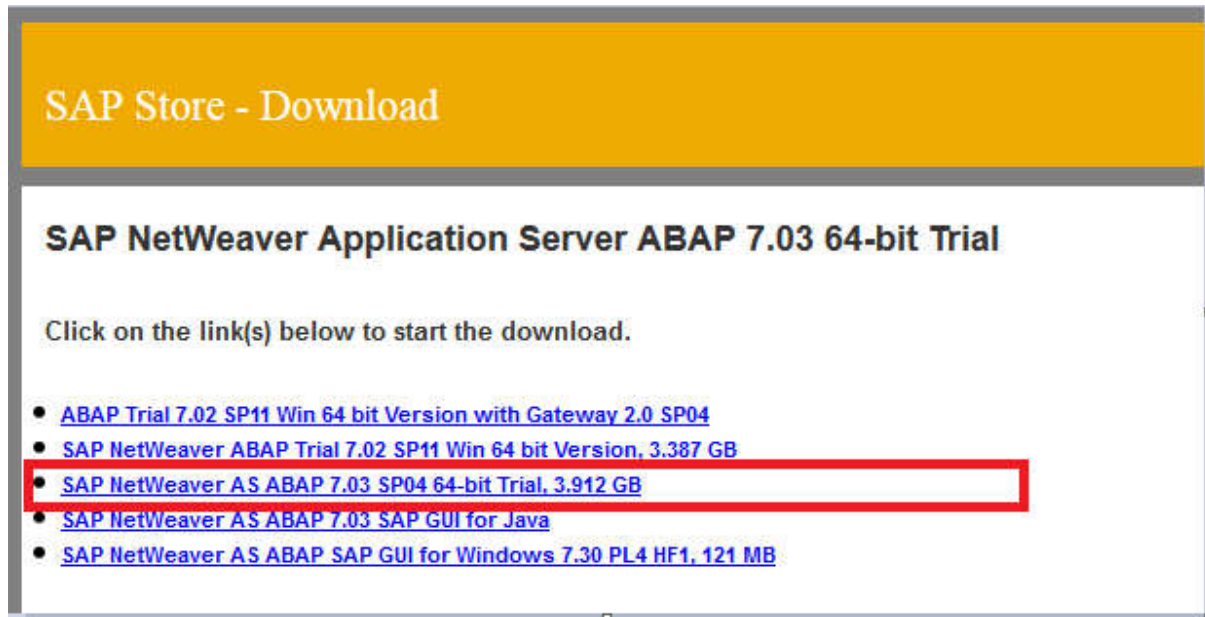
Click on „Trial Version“ button to request download. You must fill in all required fields to start downloading.



After submitting, you get confirmation popup with information that email was sent to your inbox with download link. Download link is valid only for restricted time (usually 48 hours).



From provided link, you get the list of all available software for download. Choose „SAP NetWeaver AS ABAP 7.03 SP04 64-bit Trial, 3.912 GB“.



SAP Store - Download

SAP NetWeaver Application Server ABAP 7.03 64-bit Trial

Click on the link(s) below to start the download.

- [ABAP Trial 7.02 SP11 Win 64 bit Version with Gateway 2.0 SP04](#)
- [SAP NetWeaver ABAP Trial 7.02 SP11 Win 64 bit Version, 3.387 GB](#)
- [SAP NetWeaver AS ABAP 7.03 SP04 64-bit Trial, 3.912 GB](#)
- [SAP NetWeaver AS ABAP 7.03 SAP GUI for Java](#)
- [SAP NetWeaver AS ABAP SAP GUI for Windows 7.30 PL4 HF1, 121 MB](#)

While installation files are downloading, continue with setting up Java Runtime Environment.

Download and Setup Java Runtime Environment

SAP needs JRE to run properly. To download the newest version, type in „download java se runtime environment“ to a search engine. You get to the site a similar site to this one:

The screenshot shows the Oracle Java SE Runtime Environment 8 Downloads page. The main content area is titled "Java SE Runtime Environment 8 Downloads" and provides instructions on how to download the Java Runtime Environment (JRE) or Java Development Kit (JDK). Below the instructions, there are two sections for downloading the JRE 8u71 and JRE 8u72. Each section includes a table with columns for "Product / File Description", "File Size", and "Download".

Java SE Runtime Environment 8u71 Downloads

| Product / File Description | File Size | Download |
|----------------------------|-----------|---------------------------------|
| Linux x86 | 49.05 MB | jre-8u71-linux-i586.rpm |
| Linux x86 | 70.52 MB | jre-8u71-linux-i586.tar.gz |
| Linux x64 | 46.93 MB | jre-8u71-linux-x64.rpm |
| Linux x64 | 68.42 MB | jre-8u71-linux-x64.tar.gz |
| Mac OS X | 64.25 MB | jre-8u71-macosx-x64.dmg |
| Mac OS X | 55.95 MB | jre-8u71-macosx-x64.tar.gz |
| Solaris SPARC 64-bit | 52.08 MB | jre-8u71-solaris-sparcv9.tar.gz |
| Solaris x64 | 49.66 MB | jre-8u71-solaris-x64.tar.gz |
| Windows x86 Online | 0.61 MB | jre-8u71-windows-i586-iftw.exe |
| Windows x86 Offline | 47.66 MB | jre-8u71-windows-i586.exe |
| Windows x86 | 59.34 MB | jre-8u71-windows-i586.tar.gz |
| Windows x64 | 54.16 MB | jre-8u71-windows-x64.exe |
| Windows x64 | 62.68 MB | jre-8u71-windows-x64.tar.gz |

Java SE Runtime Environment 8u72 Downloads

| Product / File Description | File Size | Download |
|----------------------------|-----------|---------------------------------|
| Linux x86 | 49.06 MB | jre-8u72-linux-i586.rpm |
| Linux x86 | 70.54 MB | jre-8u72-linux-i586.tar.gz |
| Linux x64 | 46.94 MB | jre-8u72-linux-x64.rpm |
| Linux x64 | 68.46 MB | jre-8u72-linux-x64.tar.gz |
| Mac OS X | 64.26 MB | jre-8u72-macosx-x64.dmg |
| Mac OS X x64 | 55.95 MB | jre-8u72-macosx-x64.tar.gz |
| Solaris SPARC 64-bit | 52.09 MB | jre-8u72-solaris-sparcv9.tar.gz |
| Solaris x64 | 49.67 MB | jre-8u72-solaris-x64.tar.gz |
| Windows x86 Online | 0.61 MB | jre-8u72-windows-i586-iftw.exe |
| Windows x86 Offline | 48.17 MB | jre-8u72-windows-i586.exe |
| Windows x86 | 59.35 MB | jre-8u72-windows-i586.tar.gz |
| Windows x64 | 54.63 MB | jre-8u72-windows-x64.exe |
| Windows x64 | 62.69 MB | jre-8u72-windows-x64.tar.gz |

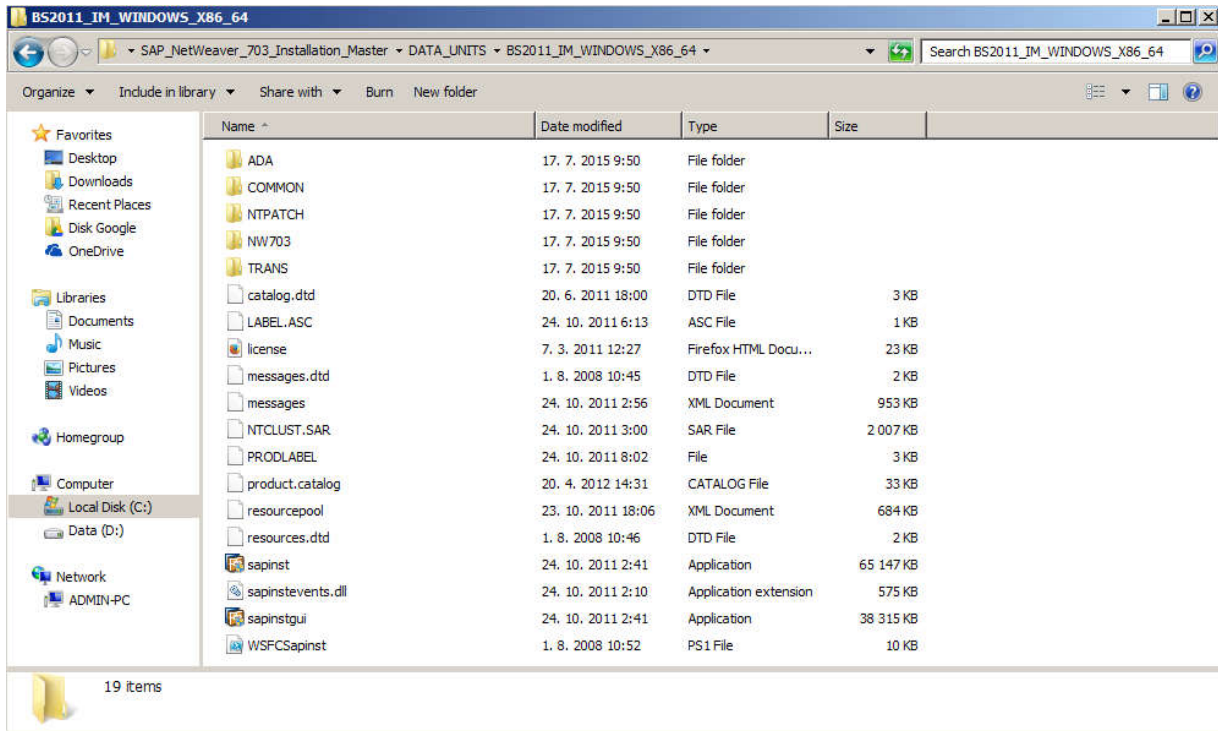
Choose the most current Windows x64.exe file, download it and install on your PC.

Start SAP Application Server Installation Process

Make sure that you run installation process under user with administrator privileges.

Unpack downloaded file: „ABAP_7_03_SP04_64_bit_Trial_3_9_2_GB.rar“ and run following .exe file:

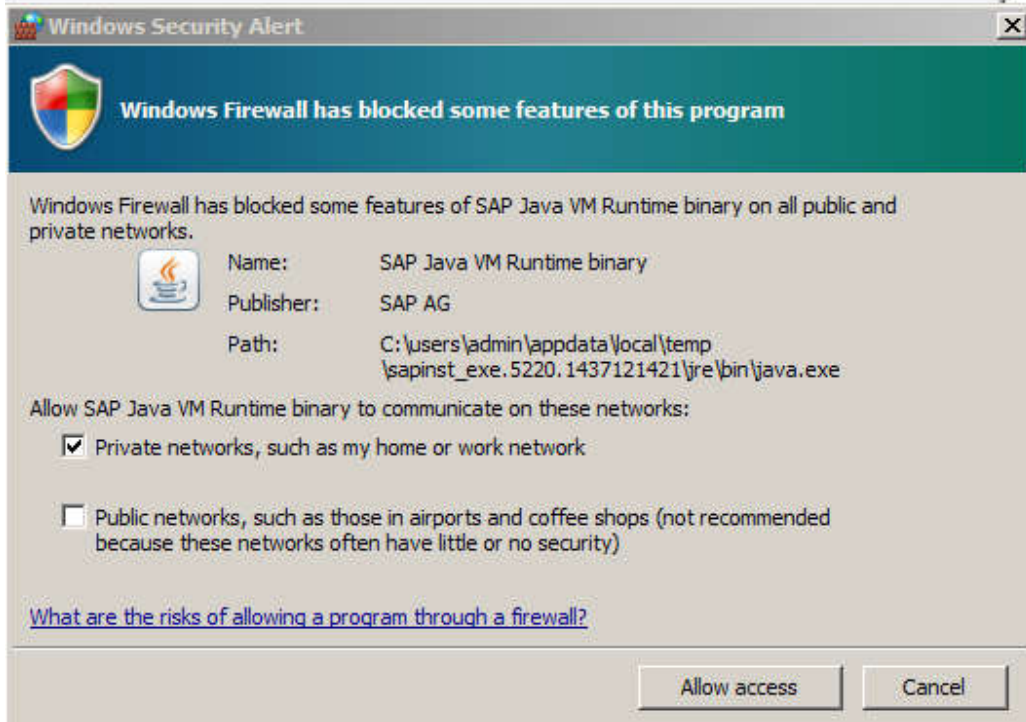
"\\NWABAPTRIAL70304 64\SAP NetWeaver 703 Installation Master\DATA UNITS\BS2011 IM WINDOWS X86 64\sapinst.exe"



Installation process starts.



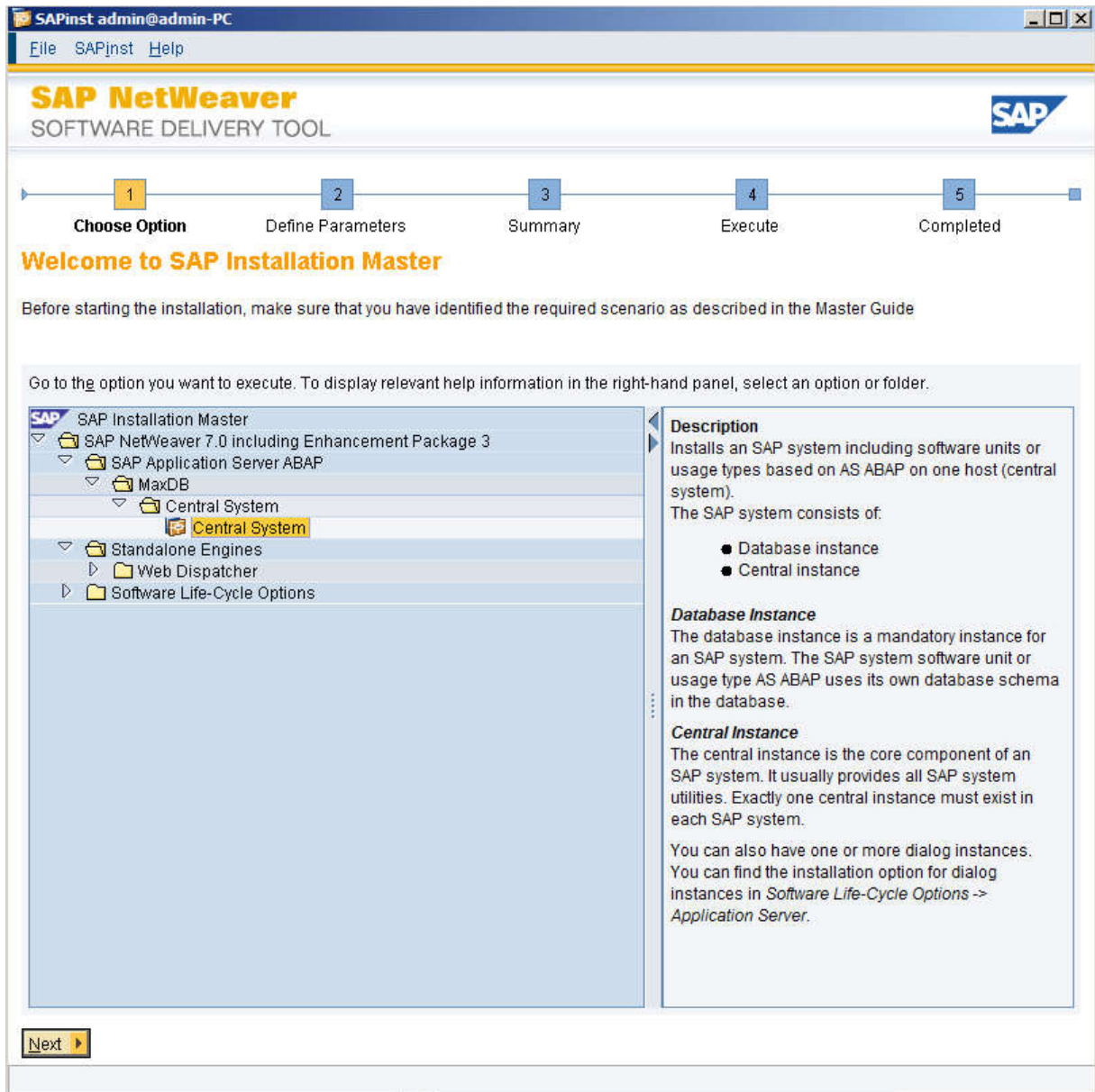
Allow access through your firewall for "sapinst" and "SAP Java VM Runtime binary".



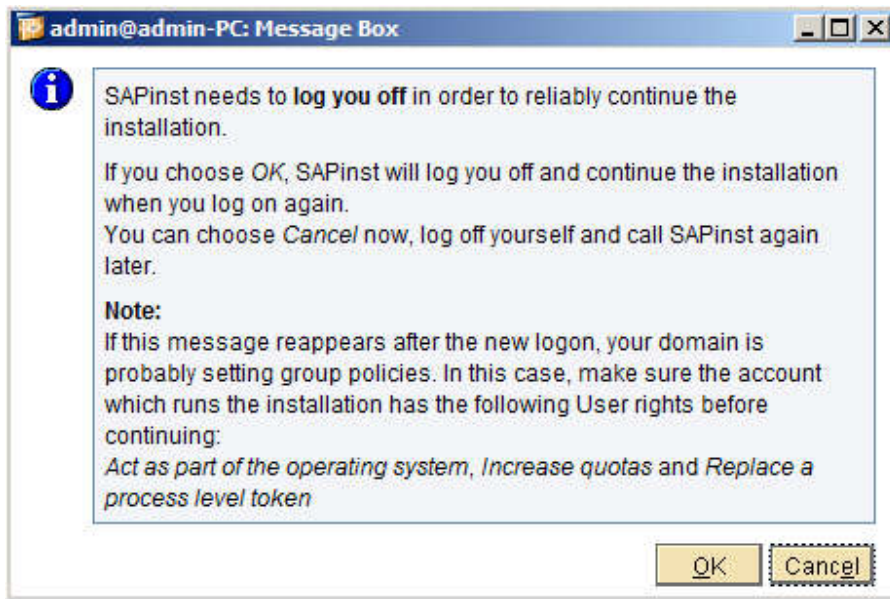
Installation Process: Choose Option

First screen of installation wizard comes up.

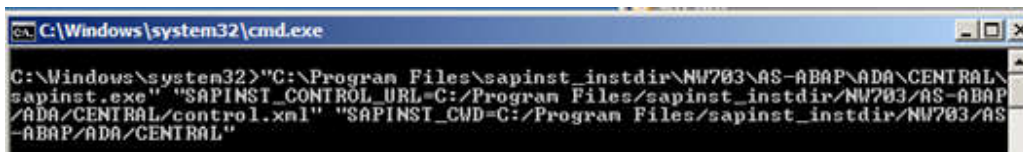
In the installation window choose "SAP Application Server ABAP->MaxDB->Central System" and click "Next". By selecting this option, you choose to install MaxDB database system and ABAP application server on your machine.



After few seconds, popup window comes up, which informs you, that you will be logged off from the system. This is necessary to proceed to continue in installation process.



If you click "OK", you will be logged of and after logging back into the system, command line window with the following information should appear and you are going to be able to continue with the installation right away.

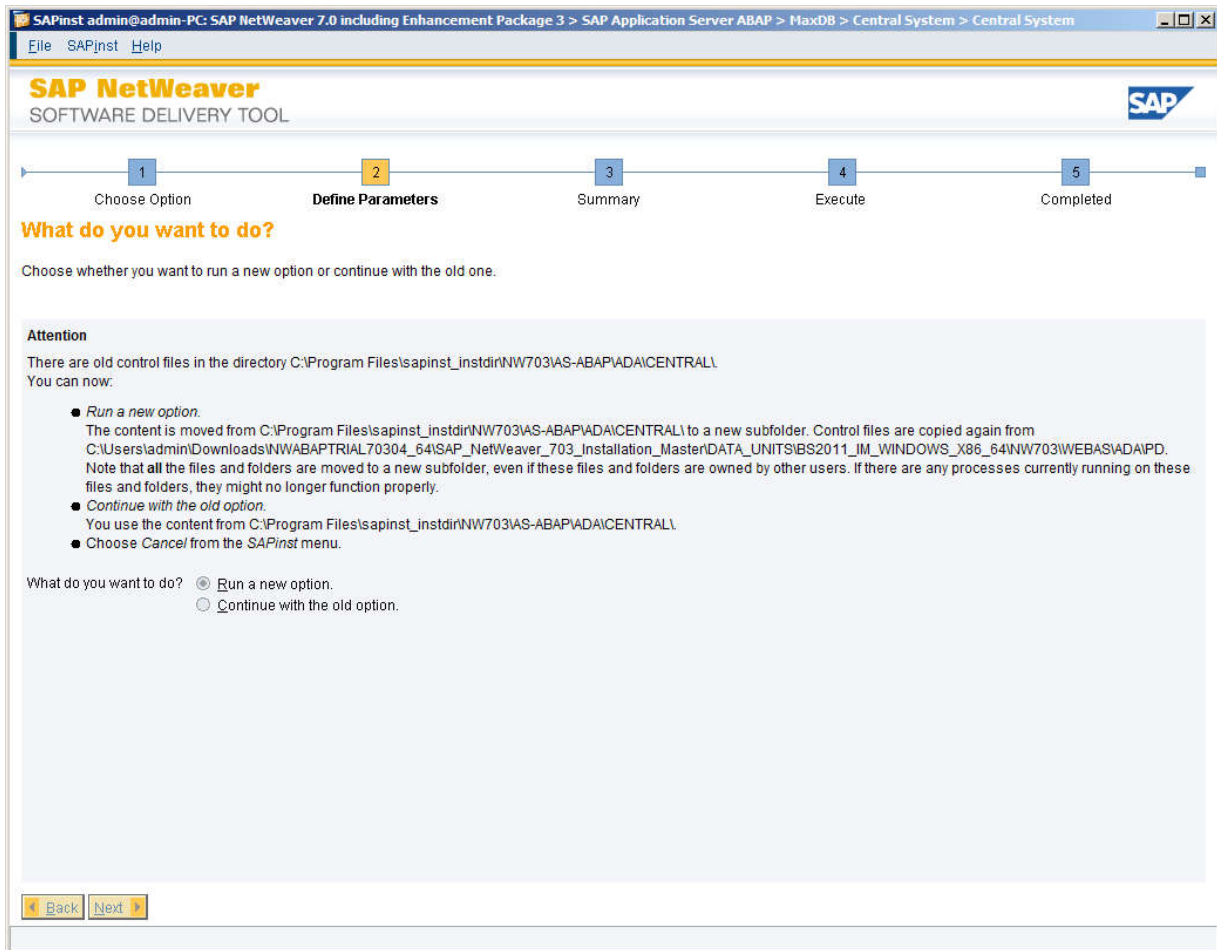


If it is not your case and you don't see any command line window after you log in, you should run installation process once more and if you get to the same installation phase, choose "Continue with the old option"

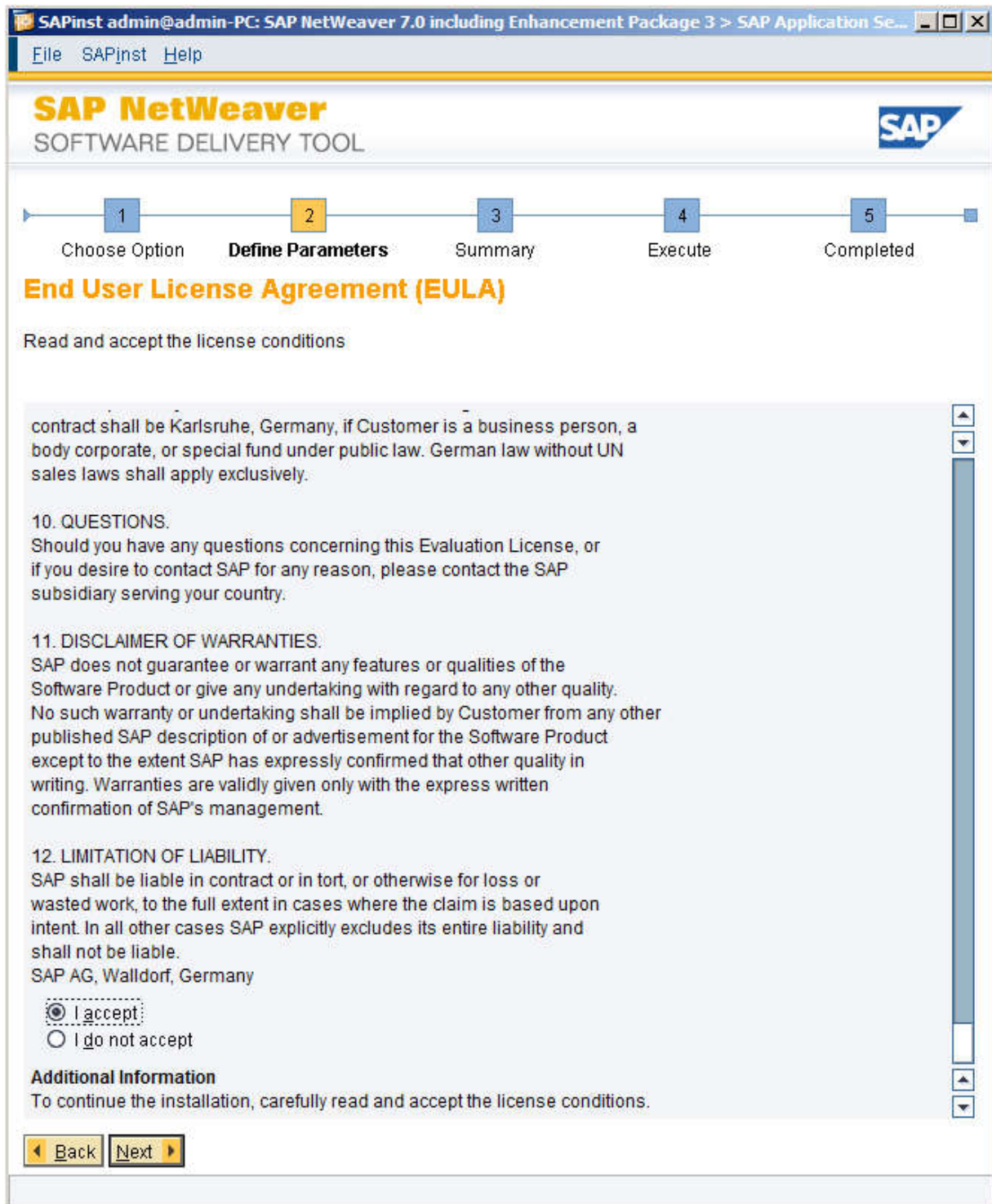
Installation Process: Define Parameters

You can also choose to log off by yourself later on. You can also continue with the installation even after restarting your computer. You just need to run installation file once more.

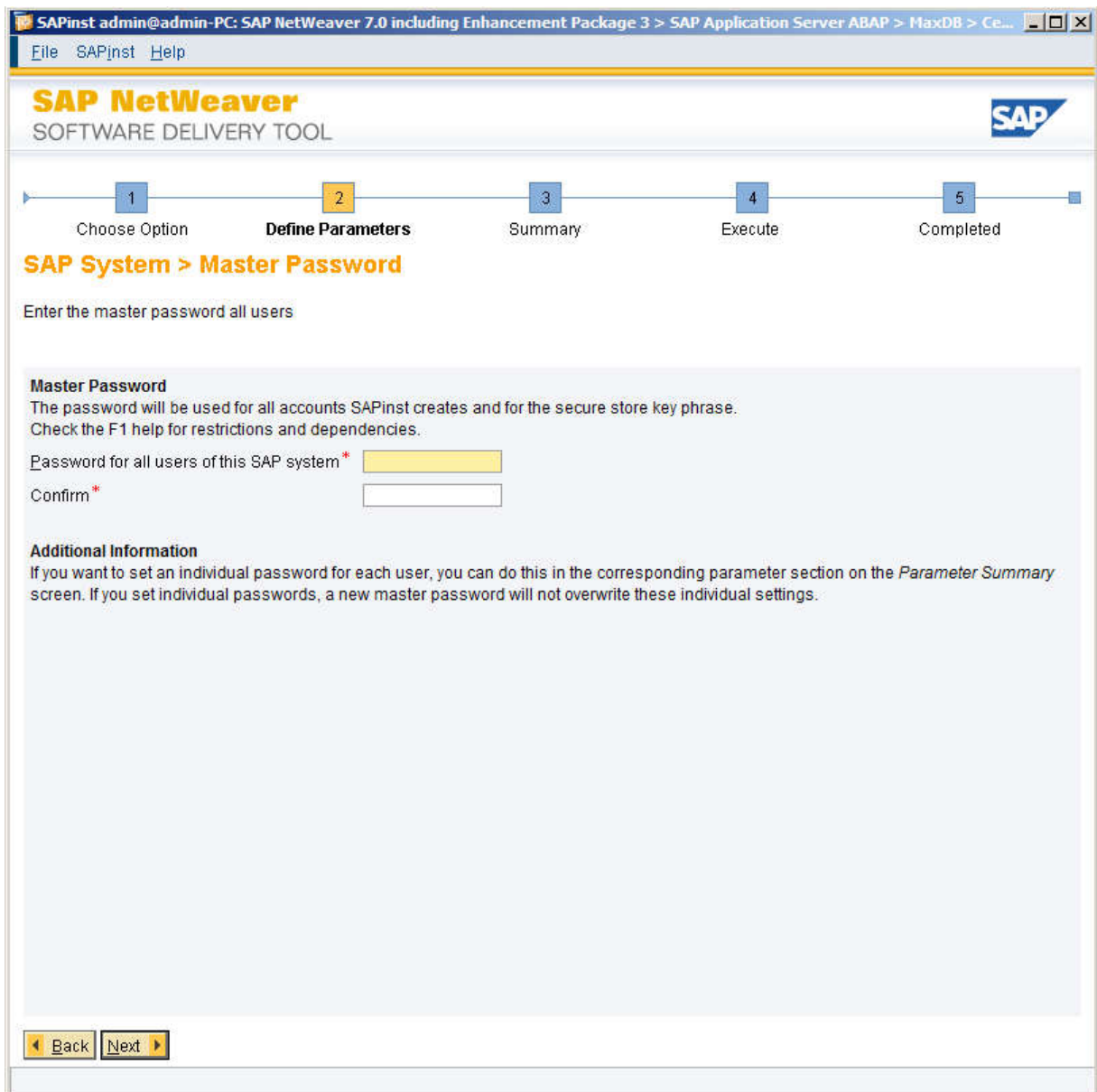
In such case, you will have to repeat the same installation process and you will get to the following point, where you will be prompted to choose running installation either from new or old option. Choose "Continue with the old option", to be able to continue with our installation.



Accept the License Agreement and click „Next“.

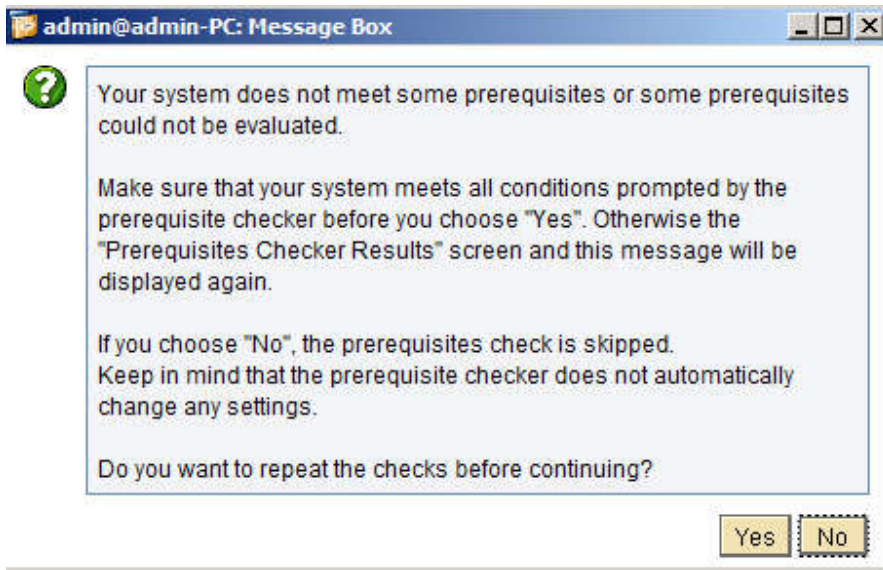


Set your master password for all technical users and click "Next".

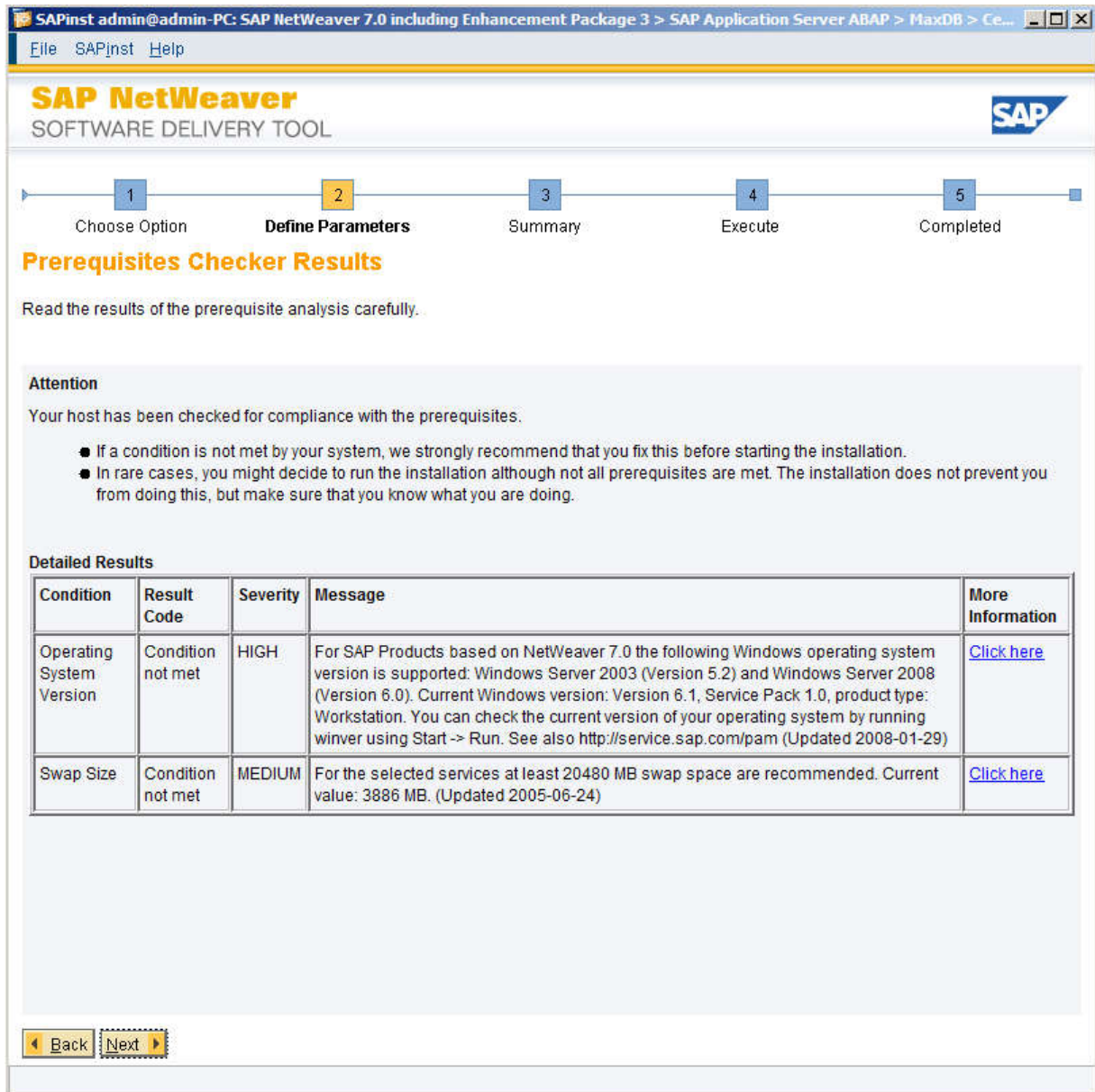


Then installation checks your system and all the prerequisites, which need to be met to be able to continue. If any problem is found, you might see the following window.

Just click on "Yes" to see what prerequisites your system does not meet.



Following screenshot is from our installation process. It contains all conditions, which are not met with our OS.



If you will have to do some changes to your OS, stop the installation "File->Exit". Do the necessary changes. Restart computer if needed. Run sapinst.exe again and continue installation from the point where you stopped by choosing "Continue with the old option" in window that will come up.

In my case, I had to increase swap size to 20480 MB (here is how you do it on Windows 7: <http://windows.microsoft.com/en-us/windows/change-virtual-memory-size#1TC=windows-7>). It is not required to meet all of the requirements to continue with the installation. I left the "Operating System Version" issue unresolved.

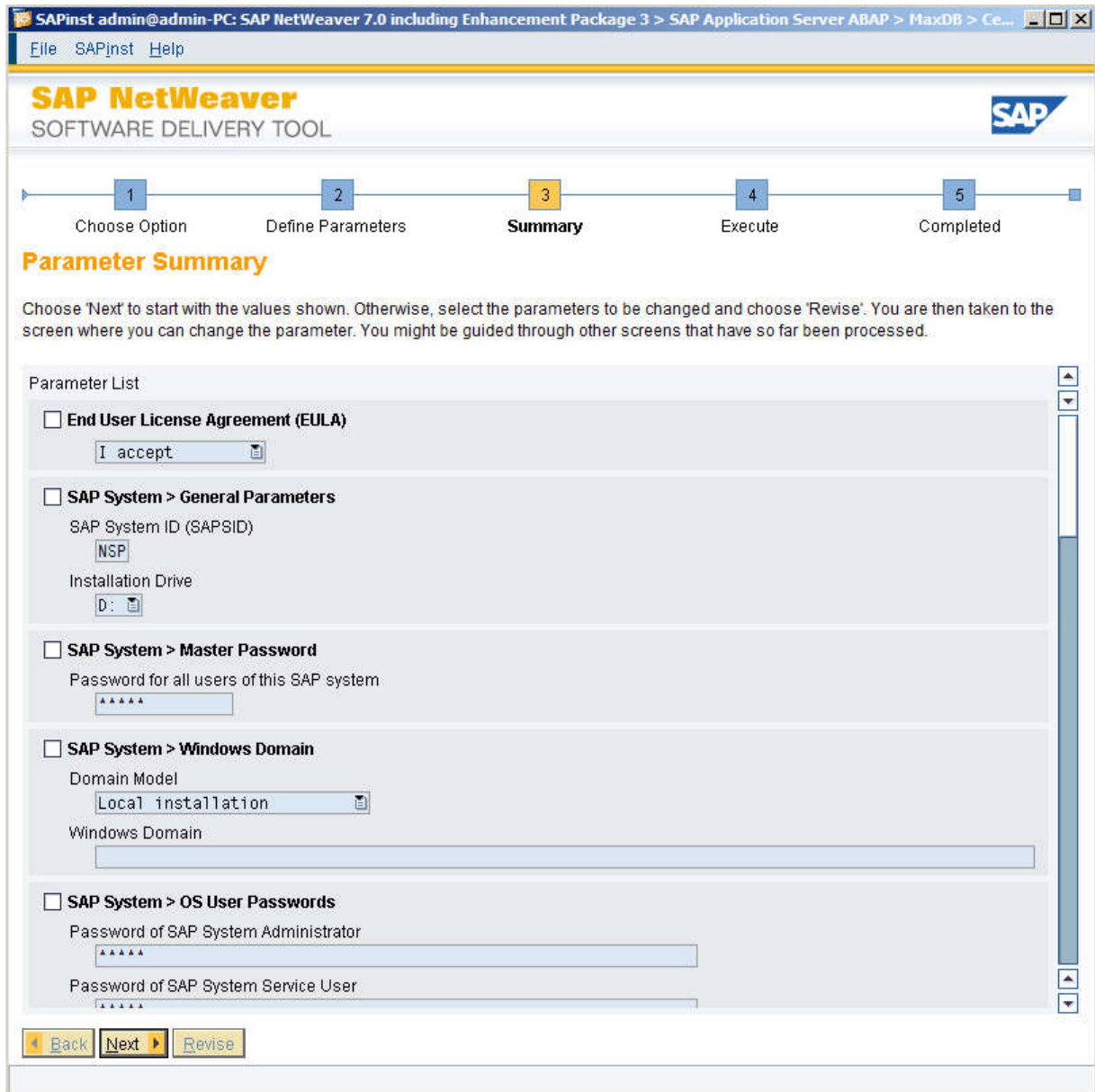
Hit "Next" and if popup window comes up again, click „Yes" to continue with installation process.

Installation Process: Summary

Parameter Summary screen comes up. You can go through the list to check if you want to change some values. If so, feel free, otherwise you can continue without any changes.

People do most changes for System ID, which is the name of your system and change passwords.

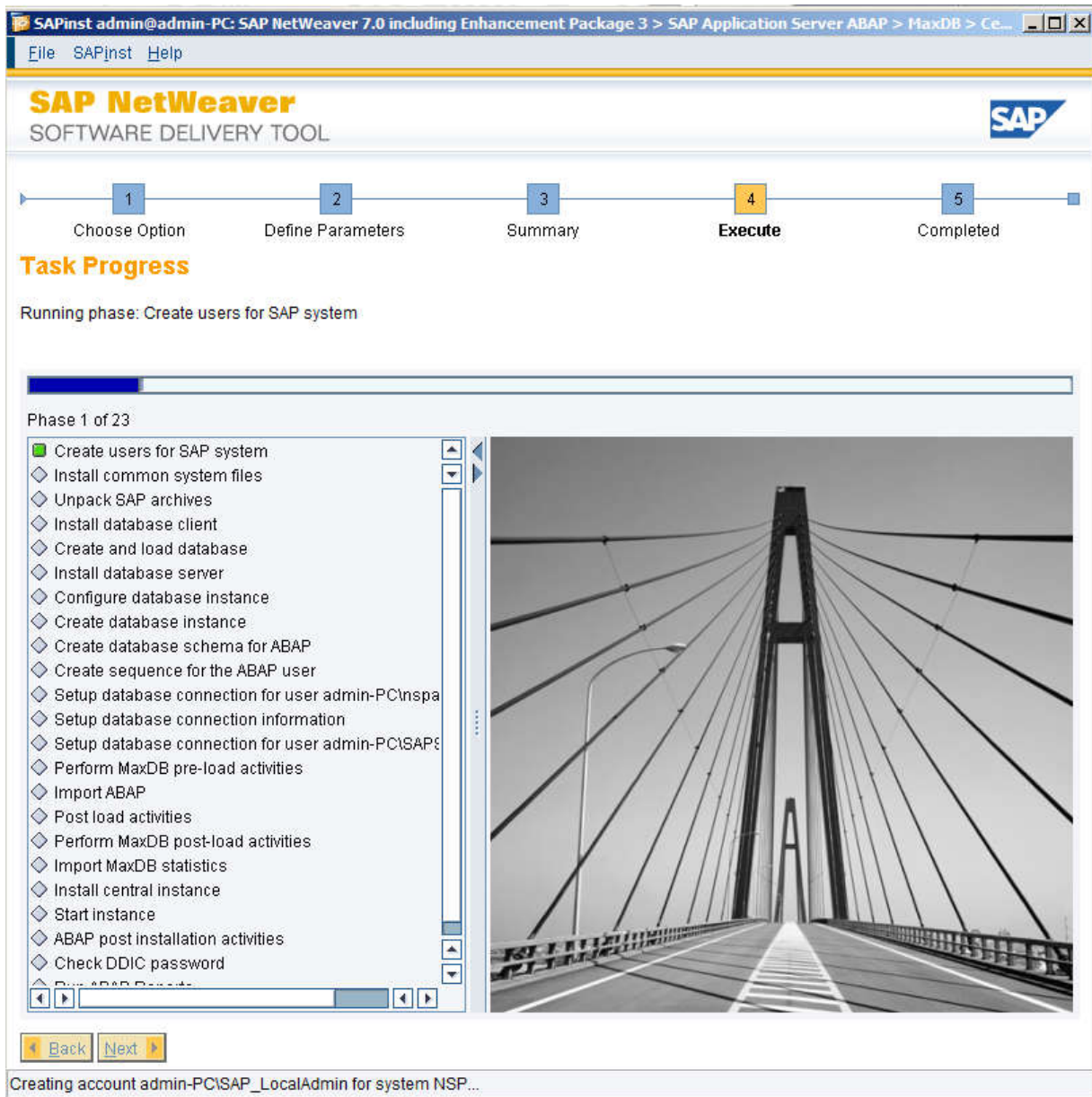
Notice: in this state, in some cases installation may not proceed further. Most often, the problem is that you don't have enough of space on your hard drive.



Installation Process: Execute

Perfect, installation finally starts and lets hope that you are going to make it for the first time without any problem ;). Unfortunately, this is probably not going to happen, but lets be optimistic.

The longest part is "Import ABAP". This can take about an hour. Depends on your system.



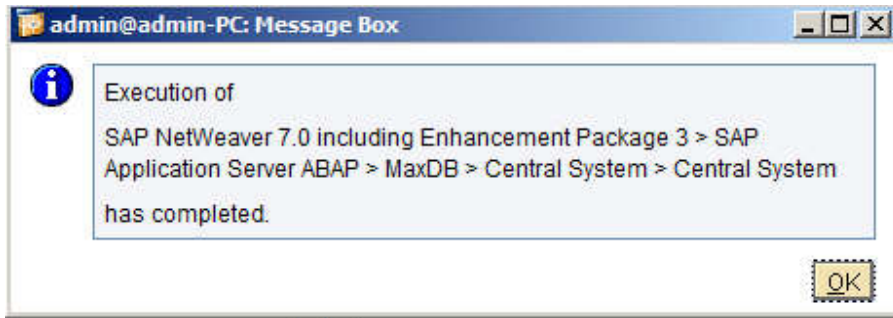
Installation Process: Troubleshooting

Mostly in this part you start to get into troubles. If this is your case, please refer to constantly updated Troubleshooting part of ABAP Academy website:

<http://abapacademy.com/blog/category/sap-netweaver/troubleshooting/>

Installation Process: Completed

And this is what we were waiting for. Congratulations! Server installation was the longest and hardest part.



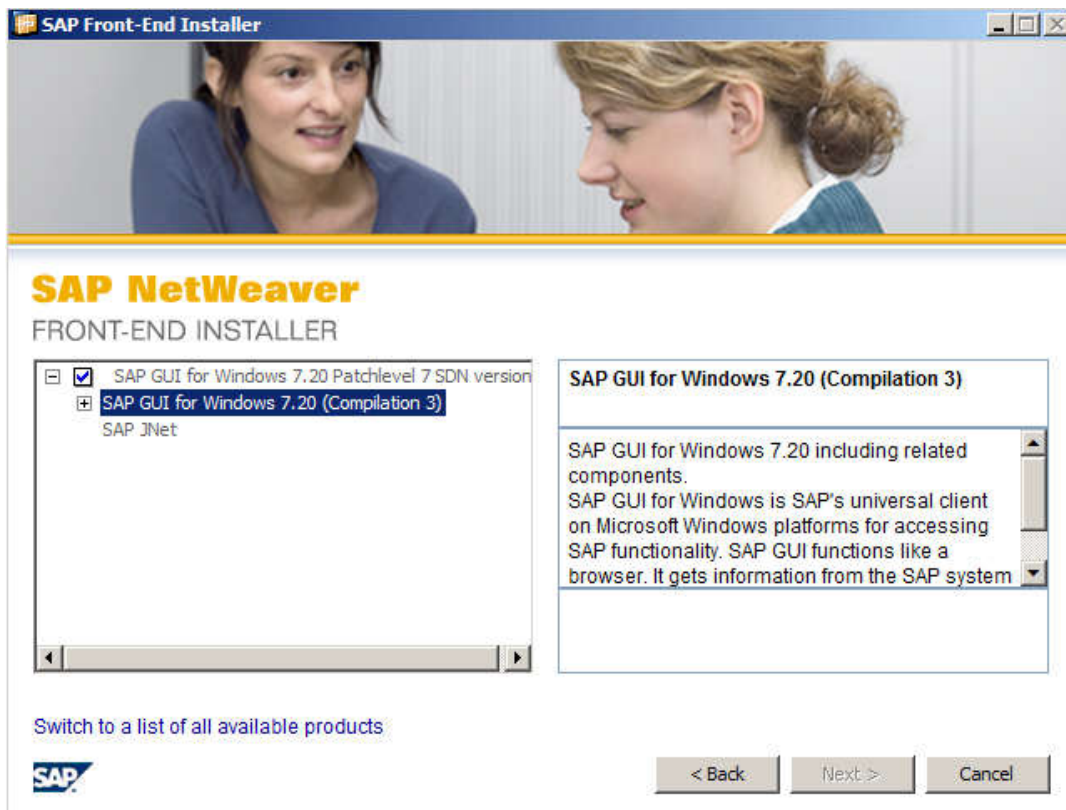
SAP GUI Installation Process

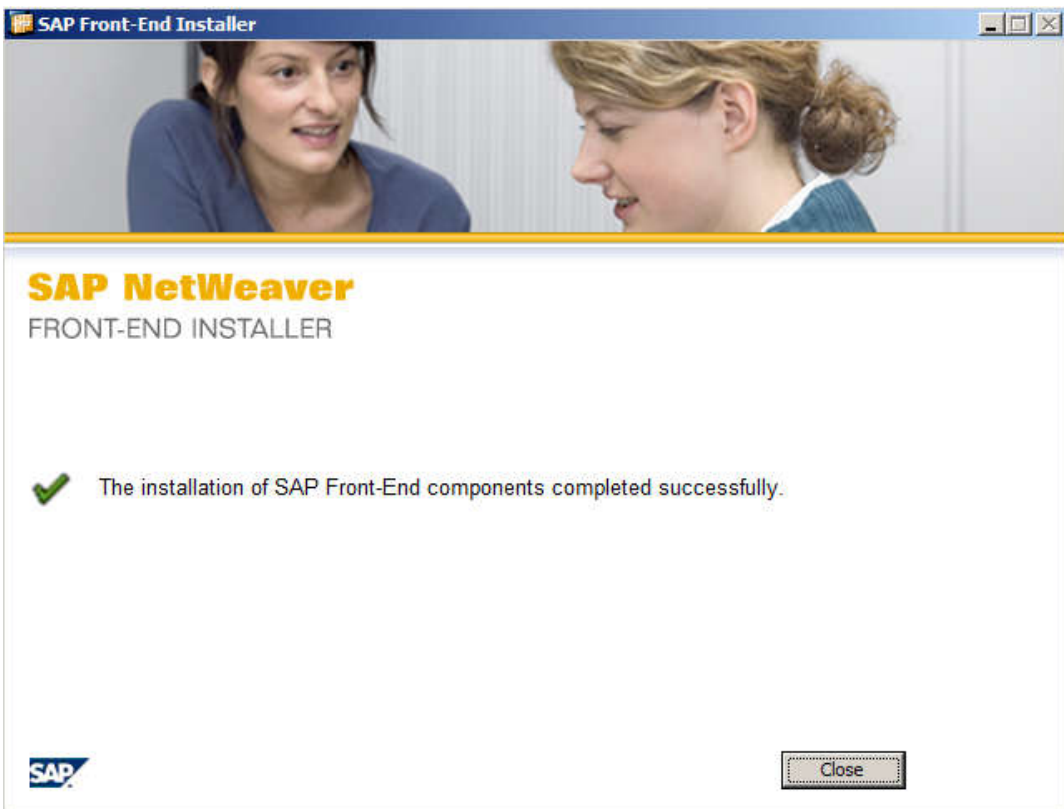
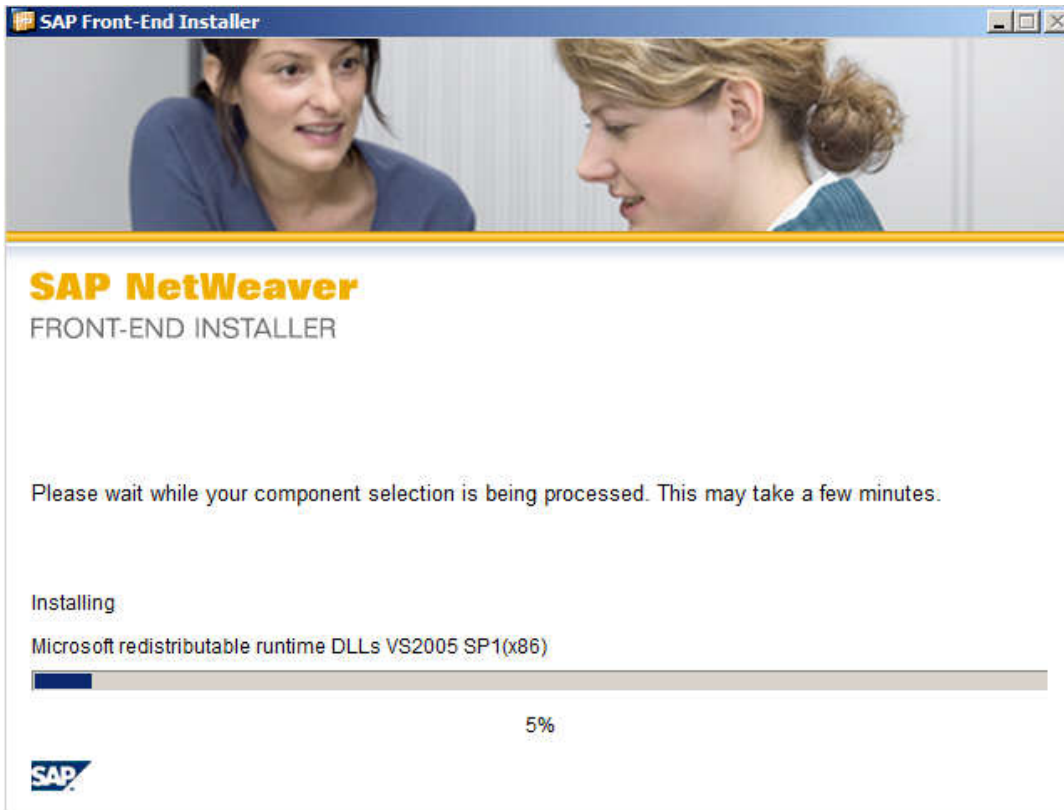
Install SAP GUI, which is presentation layer of SAP server side.

Run the following executable file:

"\NWABAPTRIAL70304_64\Frontend&tools\SAP_GUI_for_Windows_7.20_Patchlevel_7_SDN_version_20110701_1428.exe"

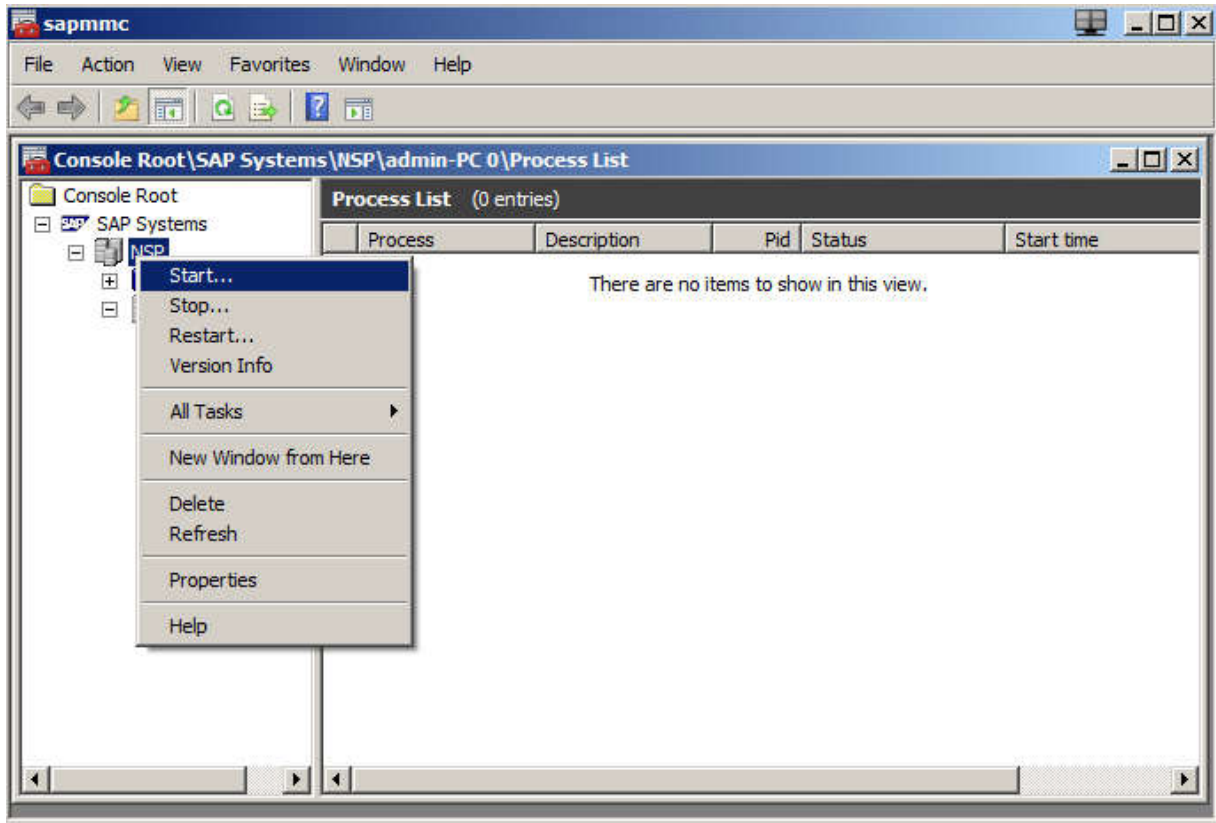
Installation is straight forward. In installation window choose SAP GUI and installation process starts.



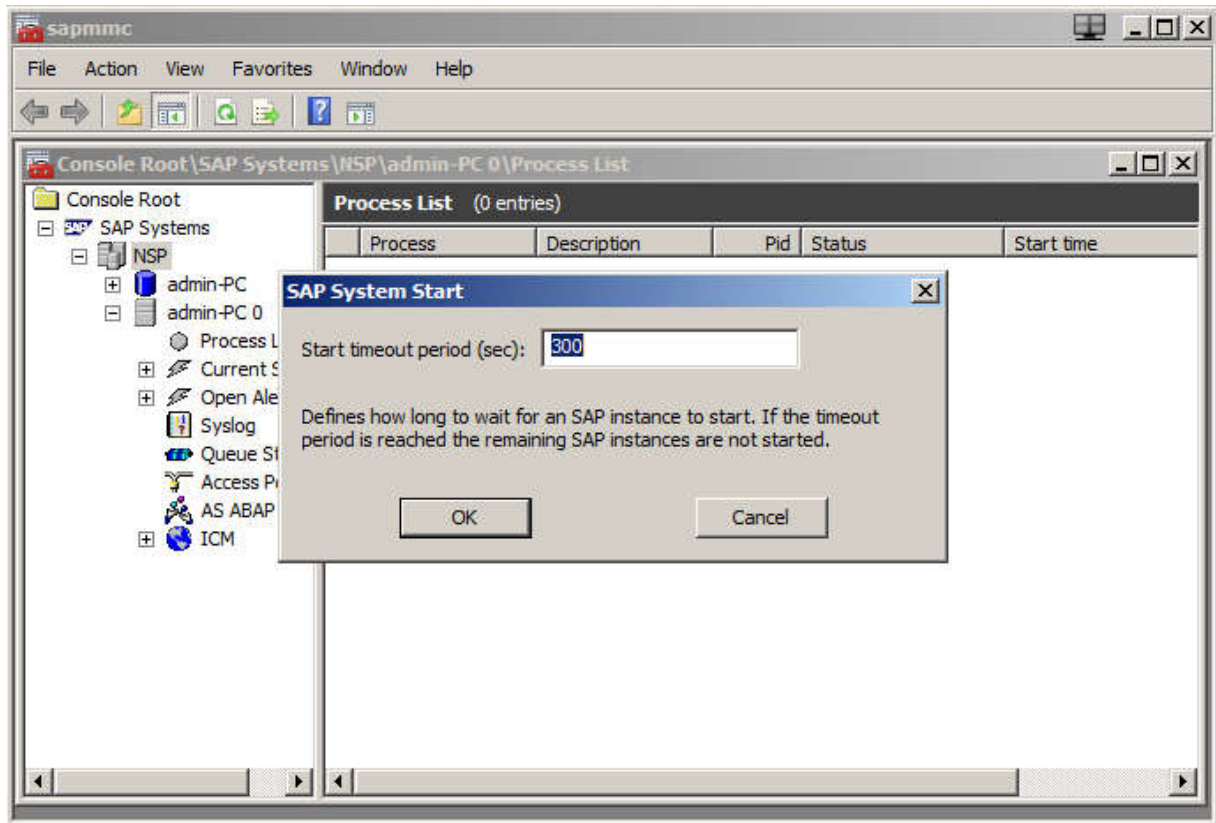


Start and Stop Server

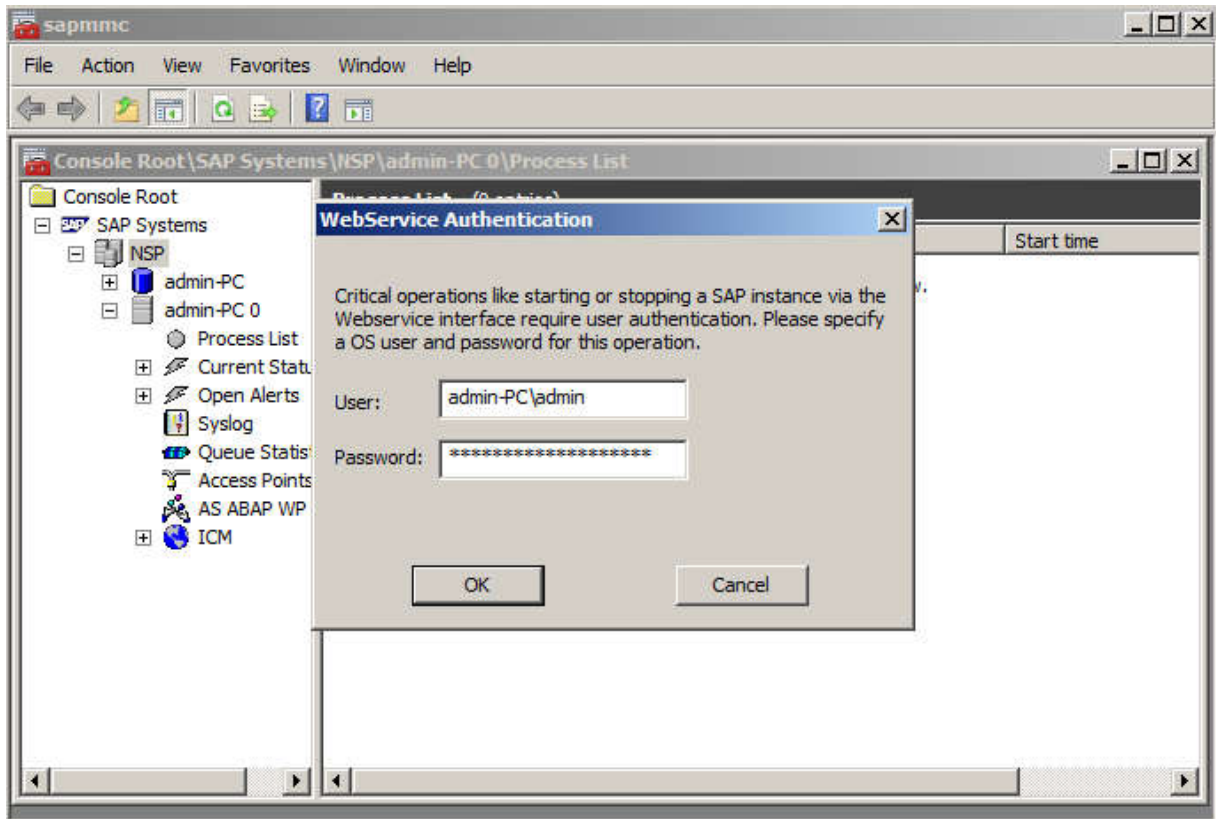
Go to START menu and type in „SAP Management Console“. Right click on NSP system and choose "Start".



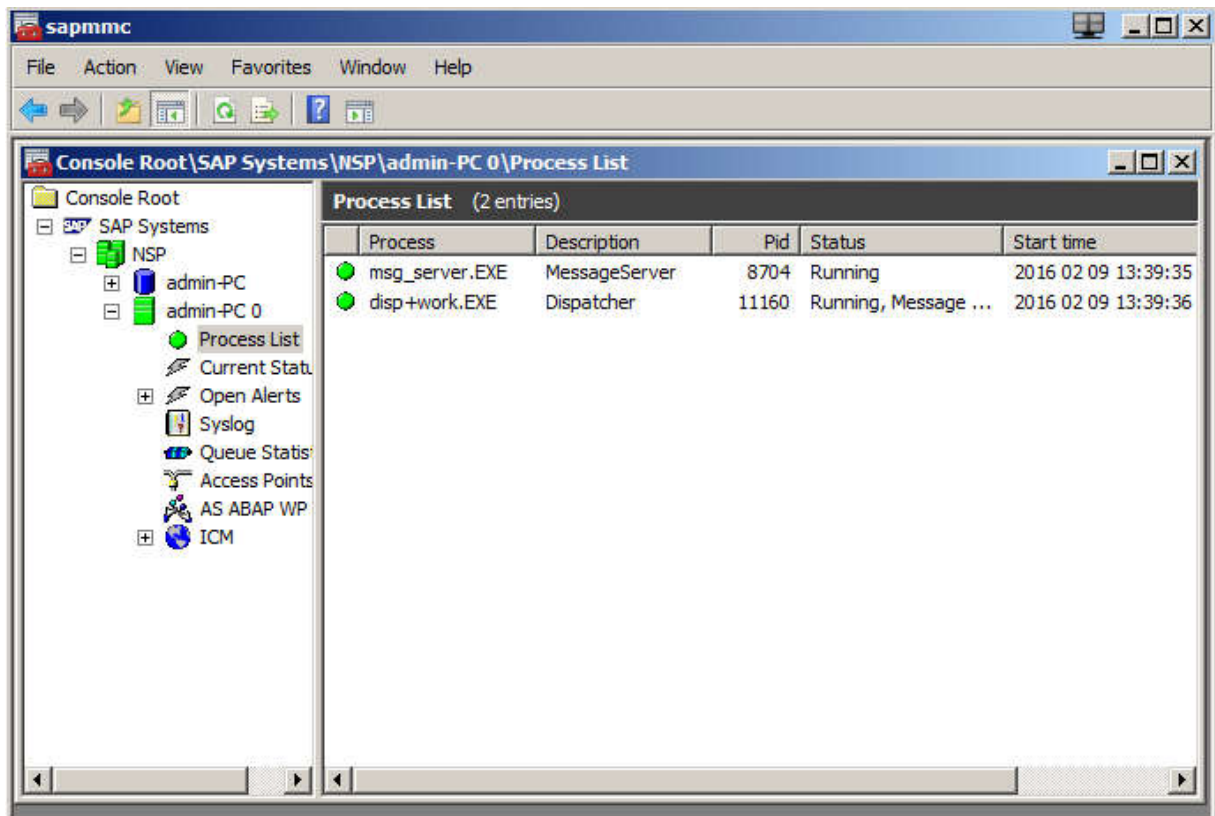
Information popup window comes up with information about start timeout period. Leave it as it is or you can change it if you want.



Then provide login credentials from installation process and hit "OK".



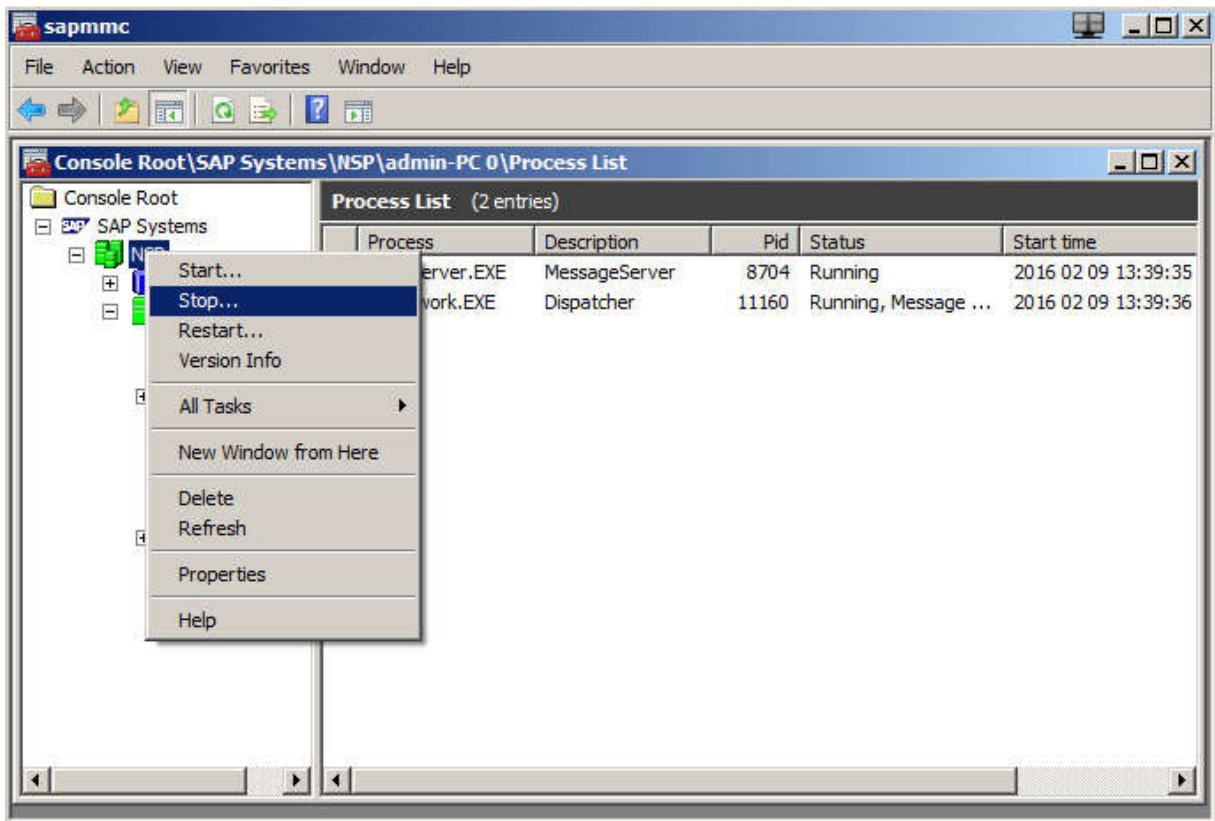
Starting process take few seconds. Wait until all icons are green and then you are ready to go.



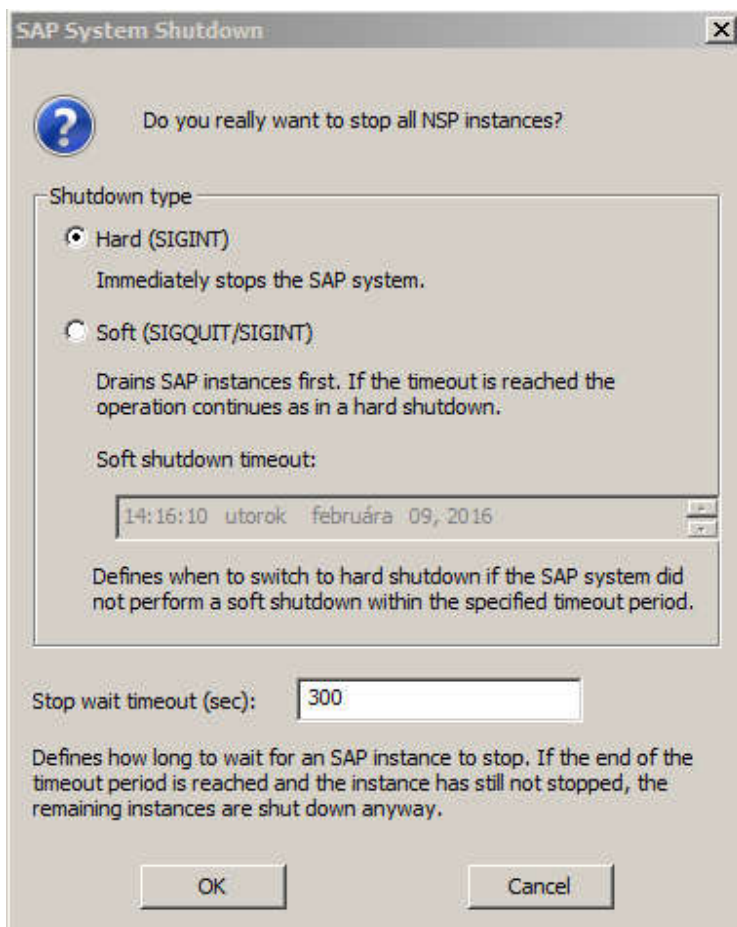
Stop Server

Notice: Stop server only when you will be done with programming. In this state, you can skip stopping server part. This part is here to give you all the information on one place.

Stopping server is similar to starting. Go to "SAP Management Console", right click on NSP system and choose "Stop".

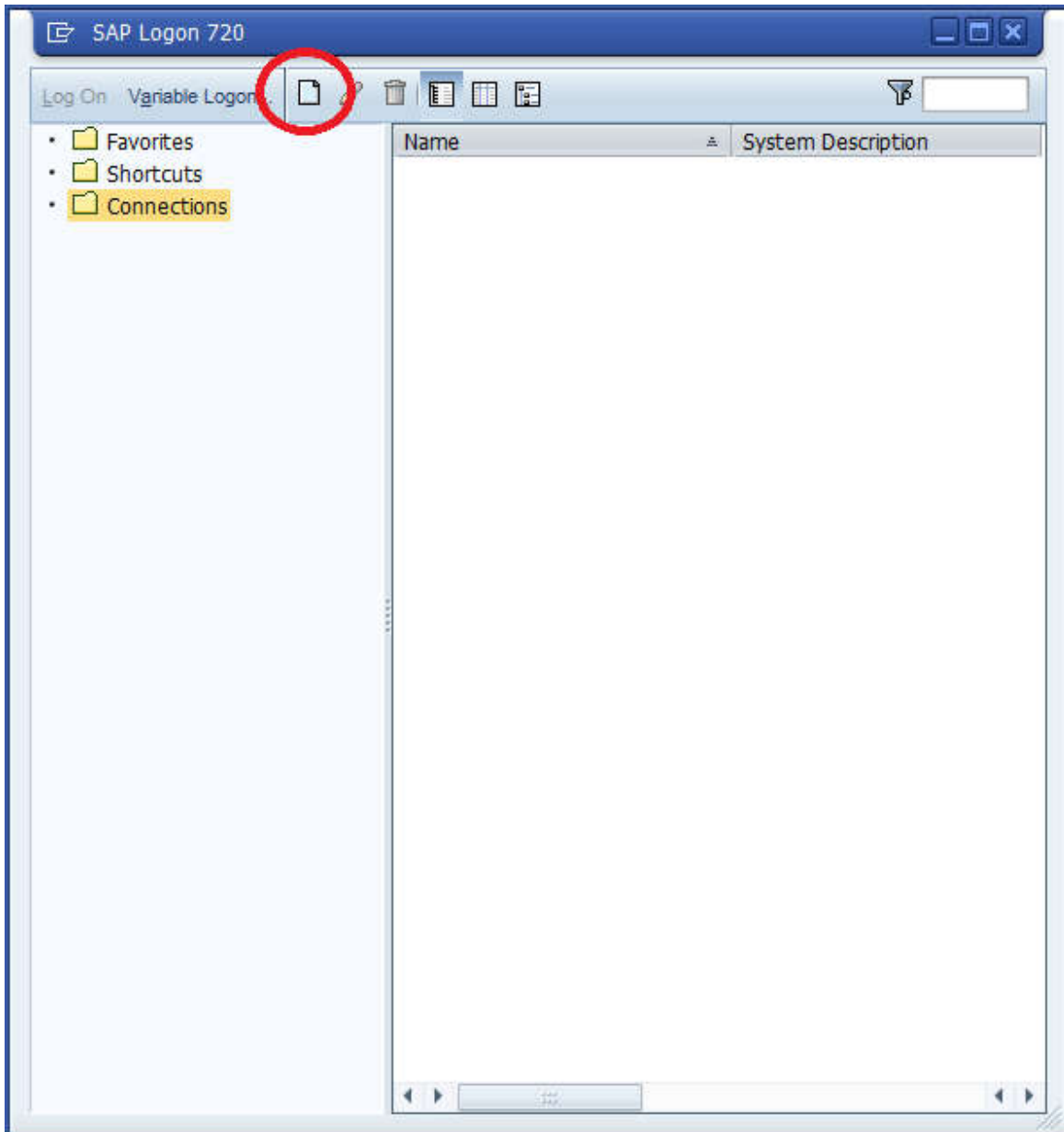


You can choose between "Hard" and "Soft" system shutdown. In your case, always choose "Hard" option, since you want to shut down your system completely.

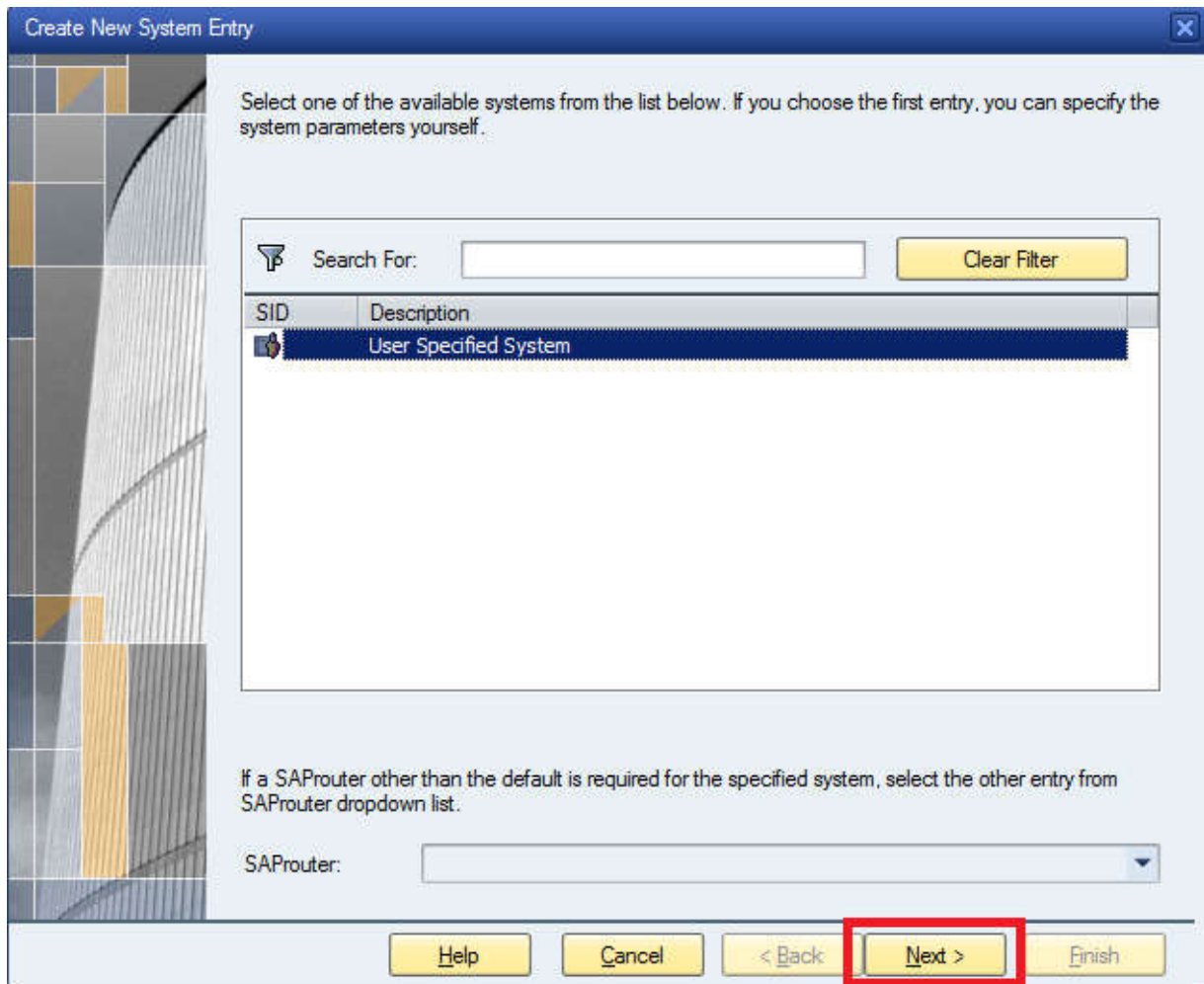


Setup System

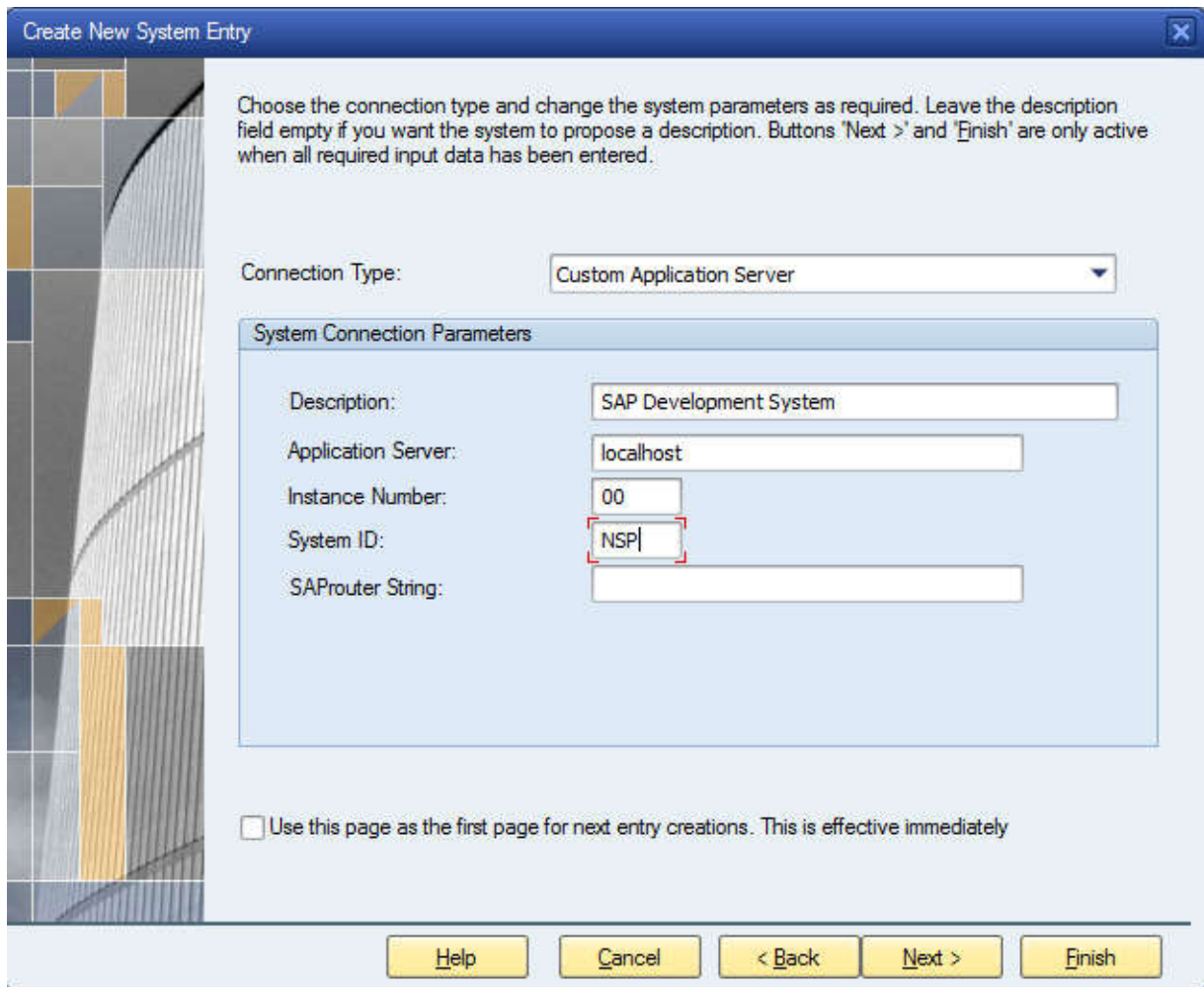
Start "SAP Logon" from START menu or directly from your desktop. From the window, choose "New" icon to create connection to development system.



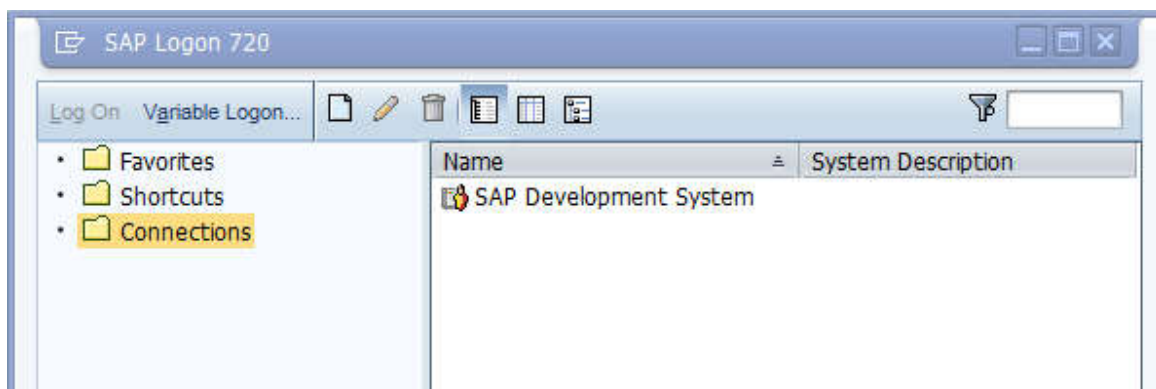
Select "User Specified System" and click "Next".



Enter the following connection values (SAP System ID for the trial version is NSP and Instance Number is 00). See the following screenshot:



Then click "Finish" and your system connection is ready.



Log In to System

You can logon to the system by double clicking on the new created entry.

Default client is "001", which is productive client. This client should be used for daily work. Client 000 is for administrative tasks. Only use as experienced user

SAP provides following preinstalled users:

- **DDIC** – is intended for certain system administration and maintenance tasks. Only use DDIC as experienced user.
- **SAP*** - is a SAP default user and typically used for certain administrative tasks. Only use SAP* as experienced user.
- **BCUSER** – purpose of this user is to develop applications and maintain the system. Even though this user is preshipped and recognized by trial version, it still needs to be created within trial version

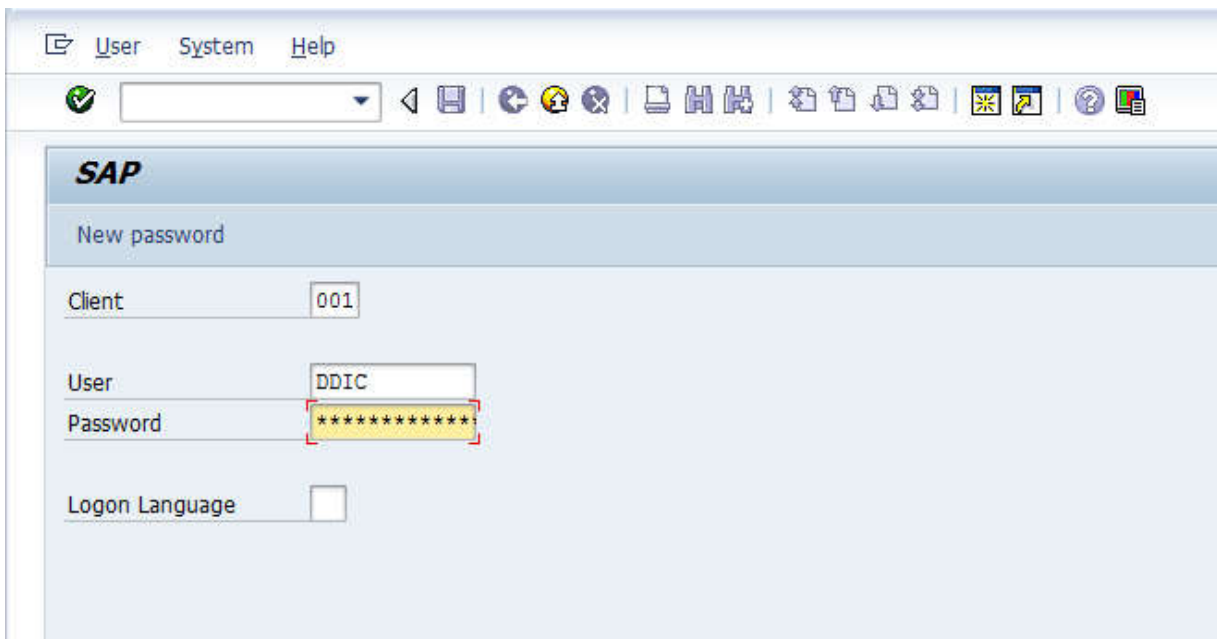
How to create BCUSER

Login to the system with following credentials:

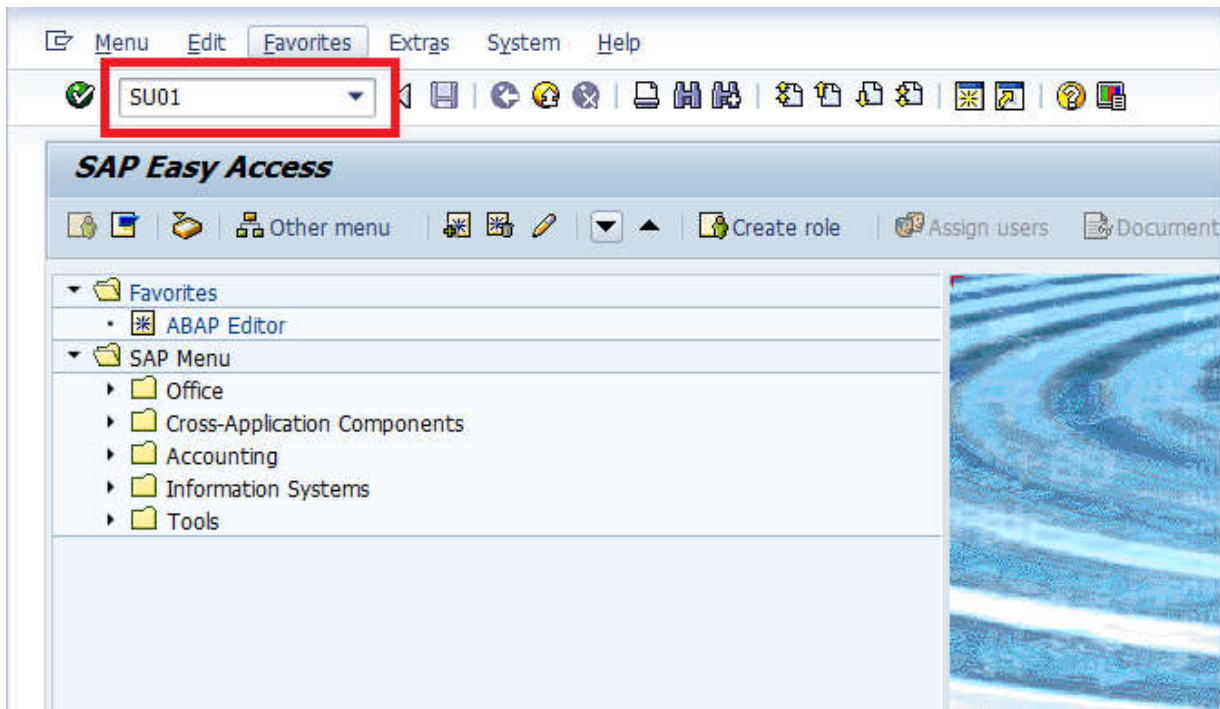
- Client: 001
- Login: DDIC
- Password: use your password provided during installation process

Notice 1: In some cases it happens that instead of your password, you should use this password "19920706"

Notice 2: If you type wrong password 3 times, user gets locked. Please follow instructions on this link to unlock your user: <http://abapacademy.com/blog/how-to-unlock-user-in-sap-system/>

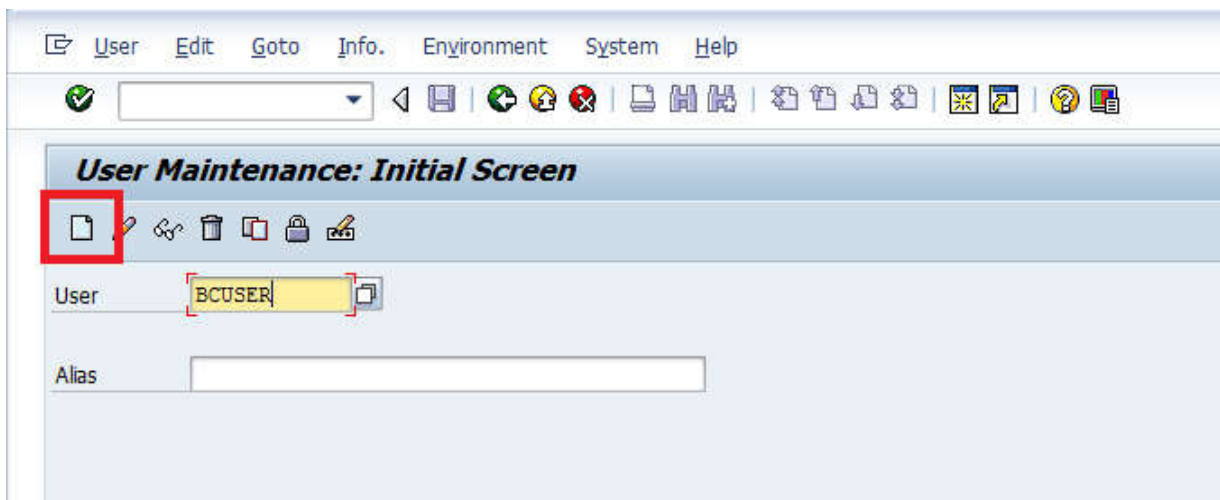


Type "SU01" into transaction field. You get to User Maintenance transaction main screen.



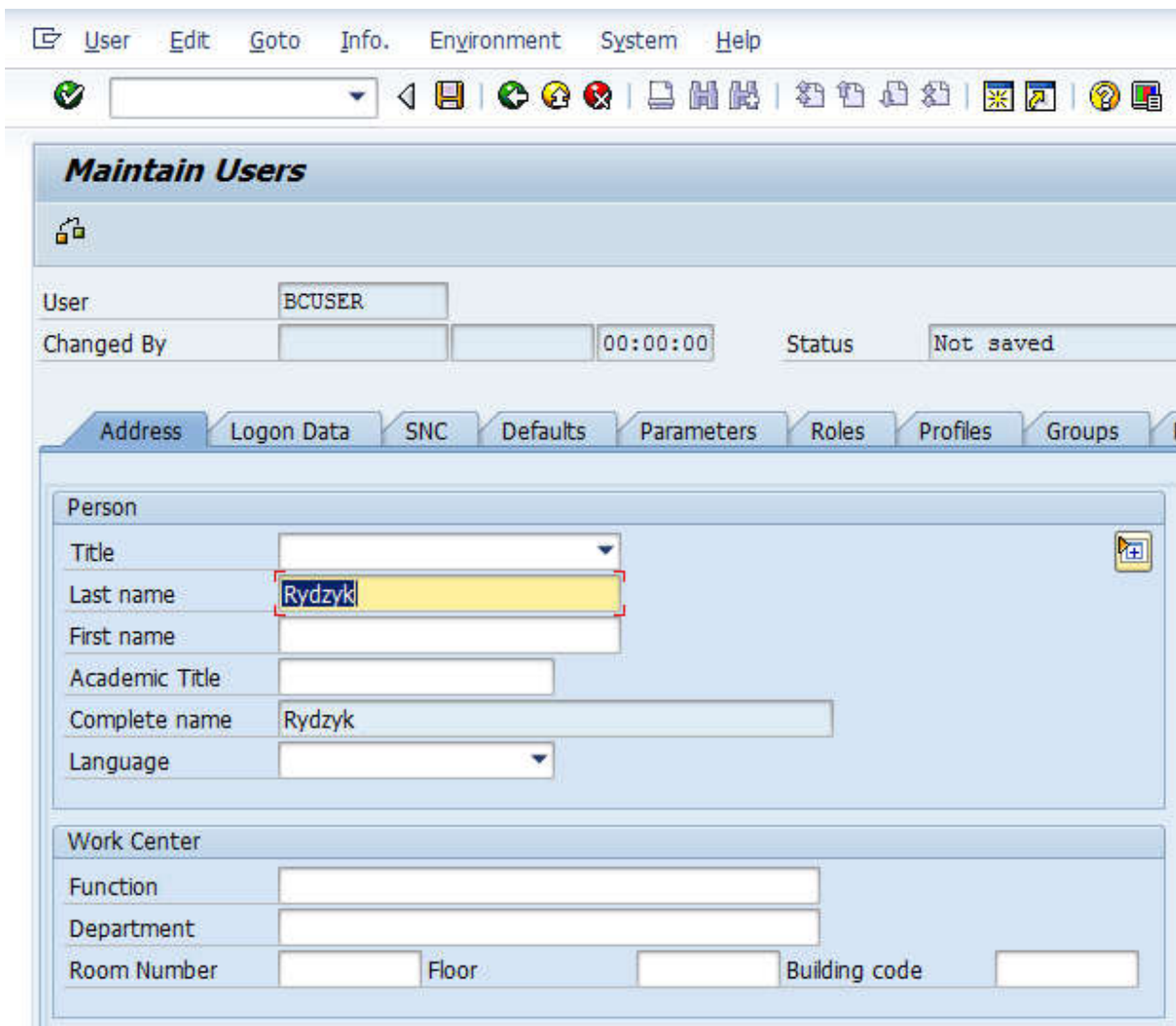
Type in "BCUSER" into "User" field and hit "Create" button.

Notice: It may happen that in your case BCUSER is already created. In such case, hit Edit button (pencil icon, next to Create button)



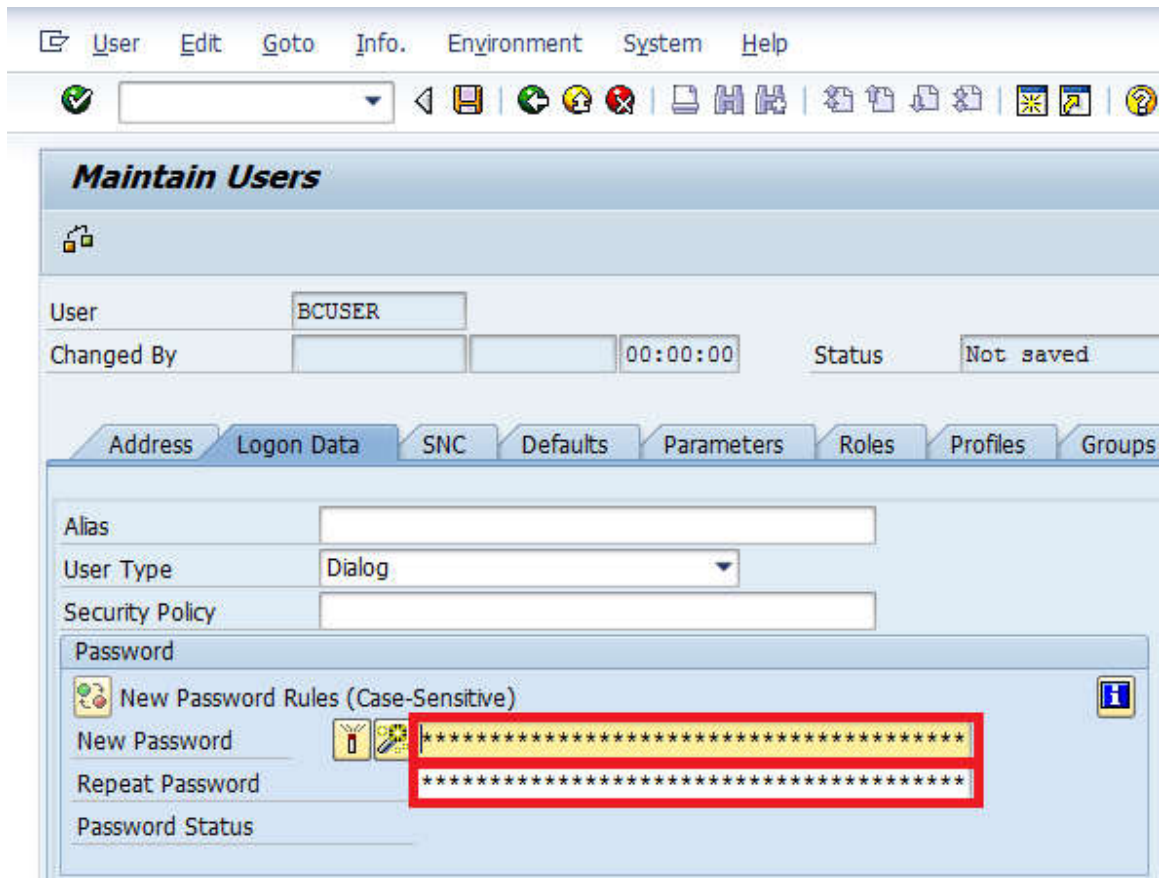
Fill in at least all mandatory fields:

- Last name: type there your name

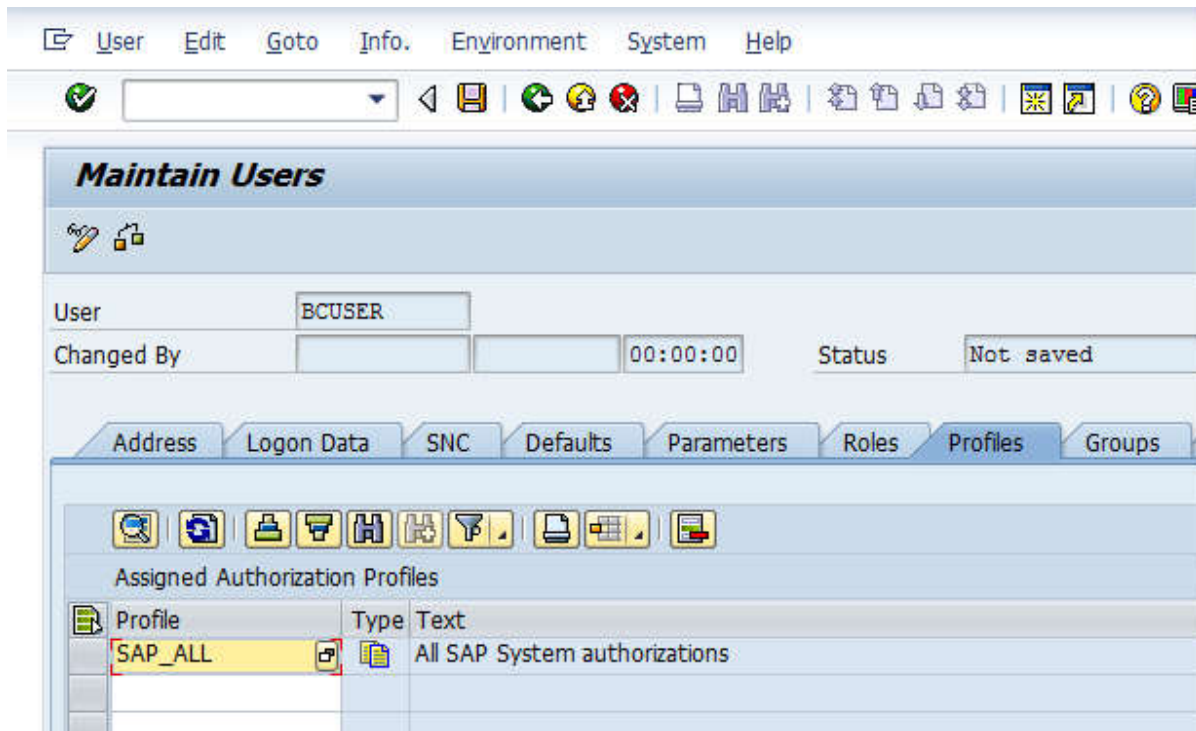


- Initial password – this is only temporary password, which you will be asked before you get to the system for the first time. Type your real password at logon screen, not here, e.g. "init123"

Notice: SAP password fields always contain stars inside, even though they are not filled. Don't get confused.

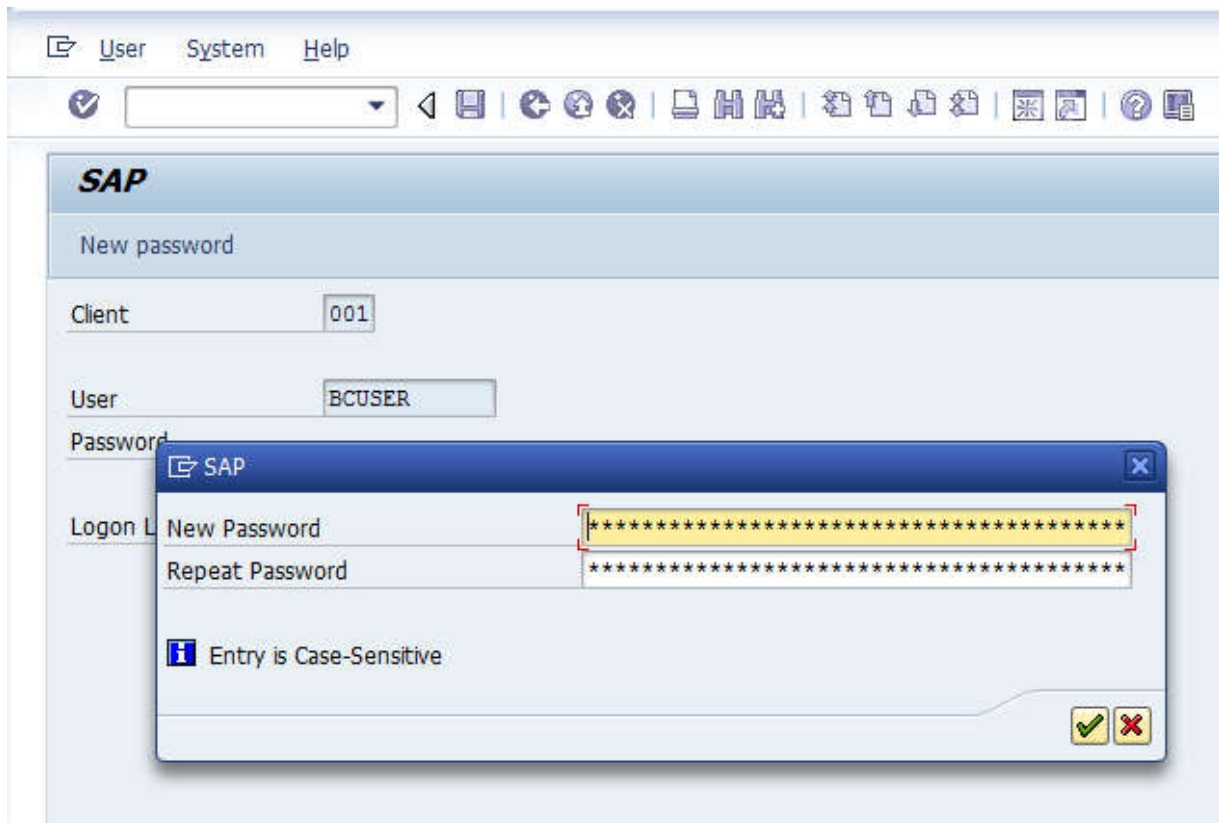


- Profile – type "SAP_ALL" to profile table. This ensures that you get all SAP authorizations needed for development and other activities within the system



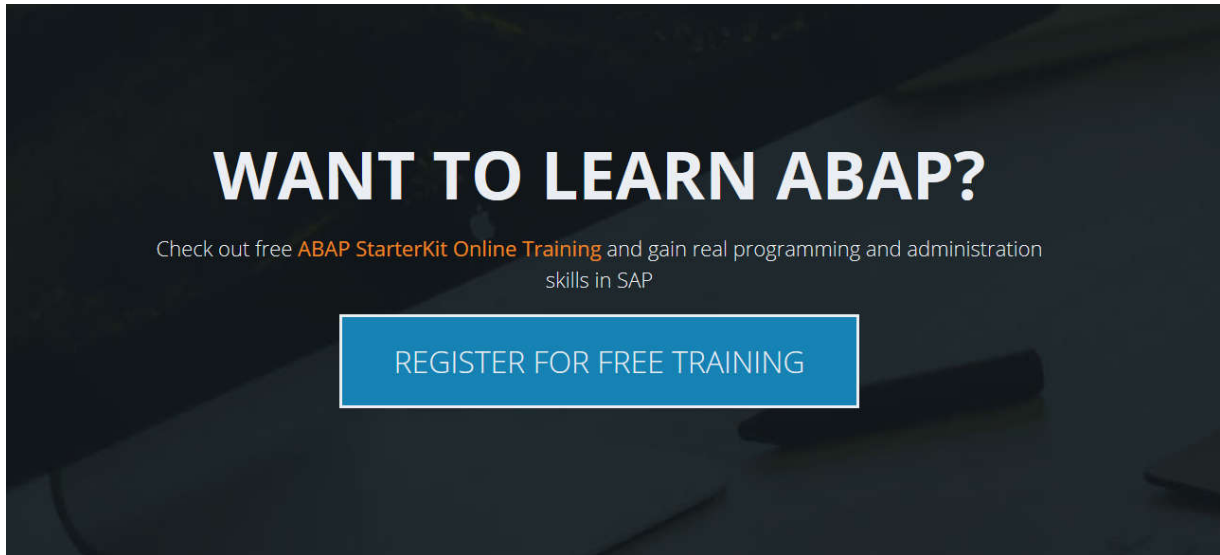
Press "Save" button and close this window (Log off). You will be asked if you want to log off. Just press "Yes".

Login again to the system, but now with your "BCUSER" user and your temporary password. Change your password and you get successfully into your local SAP system.



If you need more information, go to HTM file, which you have received in your installation folder: `"../NWABAPTRIAL70304_64/start.htm"`, under section "Installing the SAP GUI for Windows (SAP frontend)"

What's next?



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Thank you once more and I wish you nothing less than success!

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