TECHNICAL PAPER

USING VERSION 9.2 OF THE SAS BUSINESS INTELLIGENCE PLATFORM TO ASSIGN UNIQUE SAS APPLICATION SERVERS TO SAS WEB ANALYTICS

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Introduction

With the advent of version 9.2 of the SAS System for Business Intelligence, many SAS products will take advantage of the concept of a SAS Application Server. A SAS Application Server is a logical entity that represents the SAS server tier. This logical entity contains specific servers (for example, a SAS Workspace Server or a SAS Stored Process Server) that execute SAS code. Depending upon what software is licensed and purchased, a SAS Application Server will be created during deployment and configuration. By default, a typical SAS BI deployment will see two SAS Application Servers created.

SAS solutions will also leverage the use of a SAS Application Server and at times, may require "exclusive" access to one. "Exclusive" means that the fundamental nature of the SAS Application Server, or the entities it contains, will be changed in such a way that it no longer resembles the one created by default for the BI platform. These changes make it usable only by a specific SAS solution or suite of solutions.

SAS Web Analytics, a member of the SAS Customer Intelligence suite, is a solution going out shortly after the release of SAS 9.2 and needs "exclusive" access to a SAS Application Server as defined above. There are two usage cases for SAS Web Analytics.

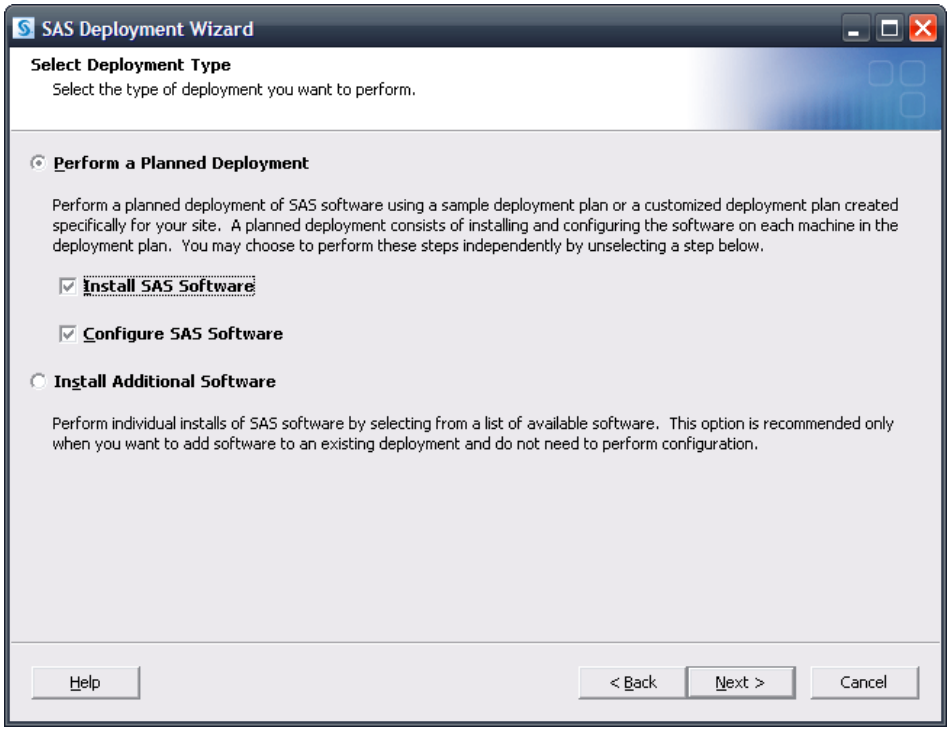
1. SAS Web Analytics deployed and configured on a "clean" system. In this case, "clean" implies that while there may be previous versions of SAS software present, no SAS 9.2 software is on the system. The customer has purchased SAS Web Analytics as well as other SAS offerings and is deploying and configuring them all at once.
2. SAS Web Analytics deployed and configured on an already configured system with SAS 9.2. SAS Web Analytics is an upsell in this case and is being added to an existing SAS 9.2 deployment which could already be using one or more SAS Application Servers.

Each of these cases is discussed in detail below.

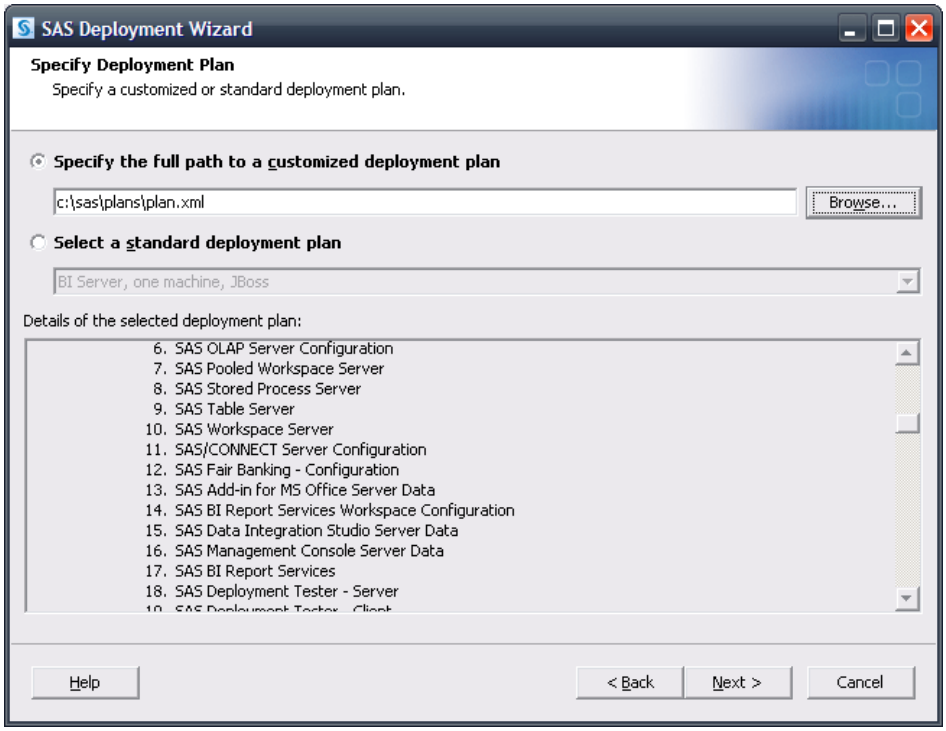
Deployment and Configuration on a "Clean" System

A customer would have ordered SAS Web Analytics along with any other required/dependent products. A deployment plan file would be created and an image made available. The customer (or consultant) would make sure the third party requirements and the pre-install checklist items had all been met and then could begin installation and configuration using the SAS Deployment Wizard (SDW). Since this system is "clean", the customer or consultant need only follow the prompts in the SDW. As SAS Web Analytics makes use of several SAS Business Intelligence components, the customer and consultant may decide to create a SAS Application Server specifically intended for use by these SAS Business Intelligence components. See the appendix for details on creating such a SAS Application Server. This section deals strictly with creating a SAS Application Server specific to SAS Web Analytics.

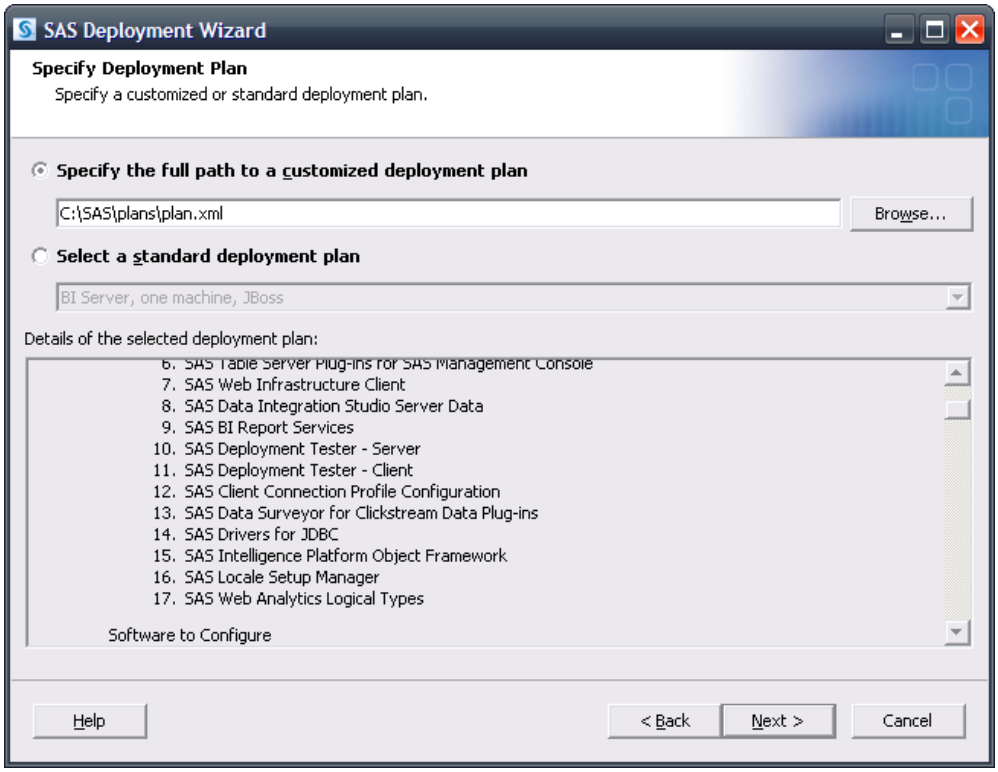
The user needs to select a deployment type, usually a “Planned Deployment” with installs and configuration also selected.



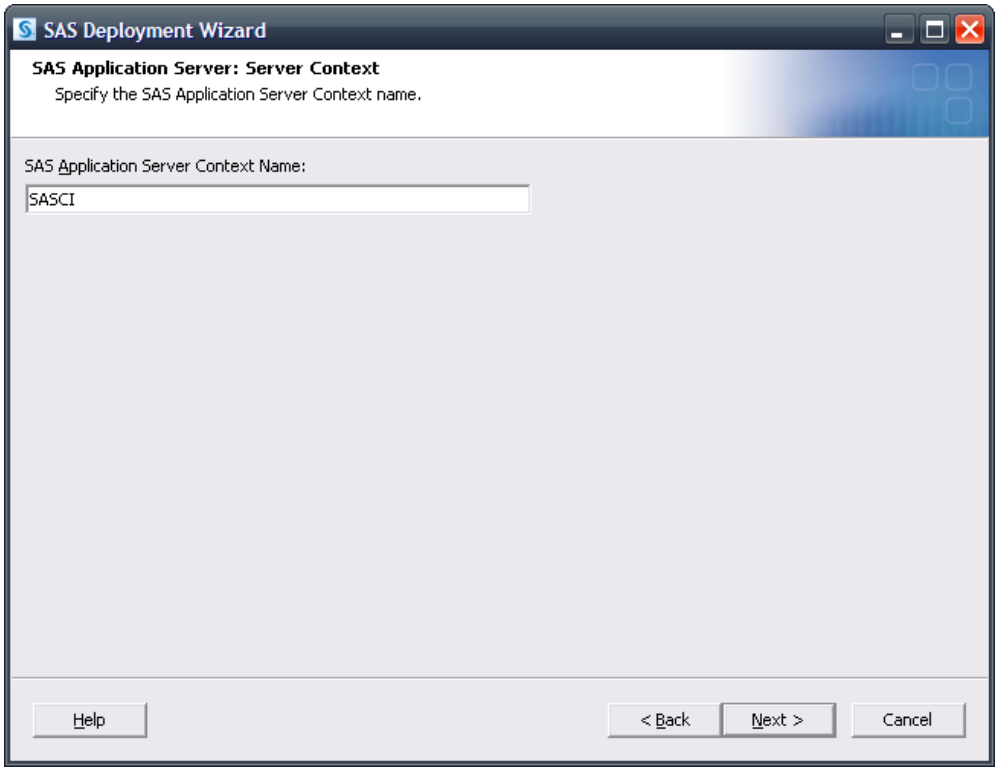
Next, the user selects the deployment plan provided with the image.



Then the user selects the machine. For this example, the Server tier is used.



Installation and configuration prompts are presented next.



The Server Context dialog is of special interest since it allows the specification of the name of the SAS Application Server to be created for use by SAS Web Analytics. When selecting the name of the server context to be associated with the SAS Application Server, SAS recommends using a unique and indicative name in the event further SAS products are added. In the example, **SASCI** was selected as it suggests Customer Intelligence and Web Analytics is a SAS Customer Intelligence Solution. If the addition of any SAS software leads to another SAS Application Server being created, a unique name will be required and **SASCI** will be insulated.

The user continues with the configuration dialogs. Upon reaching the **Deployment Summary**, click **Start** to begin the installation and configuration process.

When the deployment is complete, SAS Web Analytics, along with the SAS Business Intelligence Platform, is ready for use. Application servers associated with the SAS Application Server have been modified for SAS Web Analytics' use. The server context directory created (**SASCI**) contains a sasv9.cfg and an autoexec.sas file containing settings supplied by SAS Web Analytics that will influence the operations of the SAS Application Server. These modifications would not be found in a SAS Application Server not associated with SAS Web Analytics and serve to indicate its "exclusive" use.

Deployment and Configuration in an Upsell Scenario

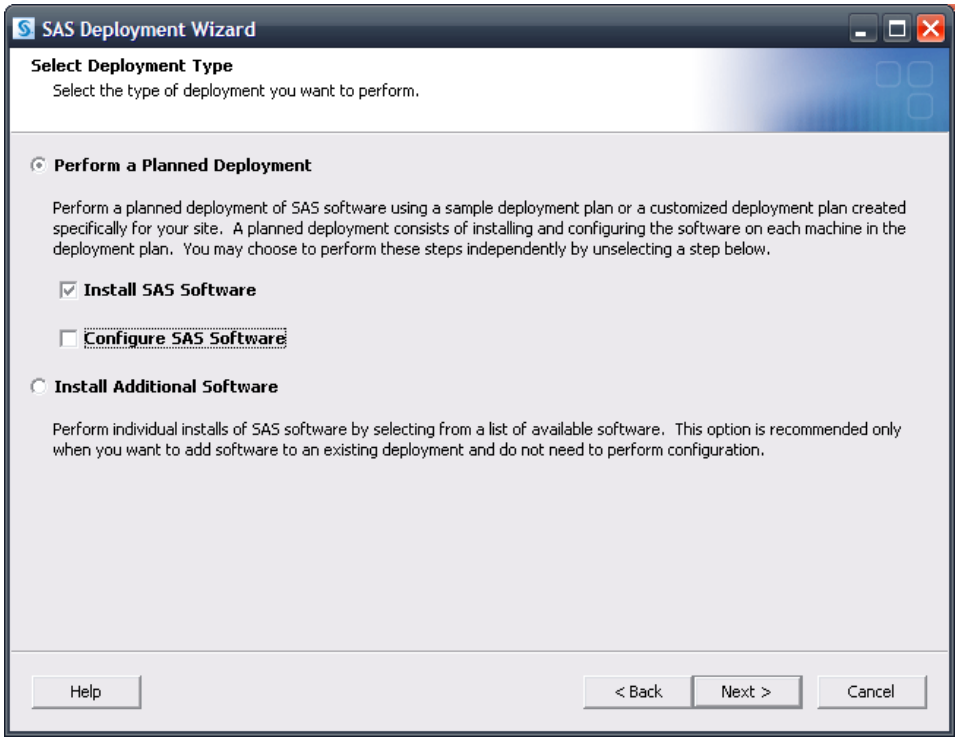
In this case, we would use an "upsell scenario" involving a customer purchasing SAS 9.2 and assorted other products when they are first released and then purchasing SAS Web Analytics later and adding it to their existing 9.2 environment.

Usually, a SAS 9.2 Business Intelligence Platform contains at least one SAS Application Server. By default, **SASApp** is the name of the SAS Application Server as well as its server context directory. Since the example we are considering uses a standard SAS 9.2 Business Intelligence Platform, it contains none of the modifications needed by SAS Web Analytics. Therefore, upon purchasing SAS Web Analytics and any other products it requires, the customer will once again use the SAS Deployment Wizard to install into their existing environment and then configure their additions.

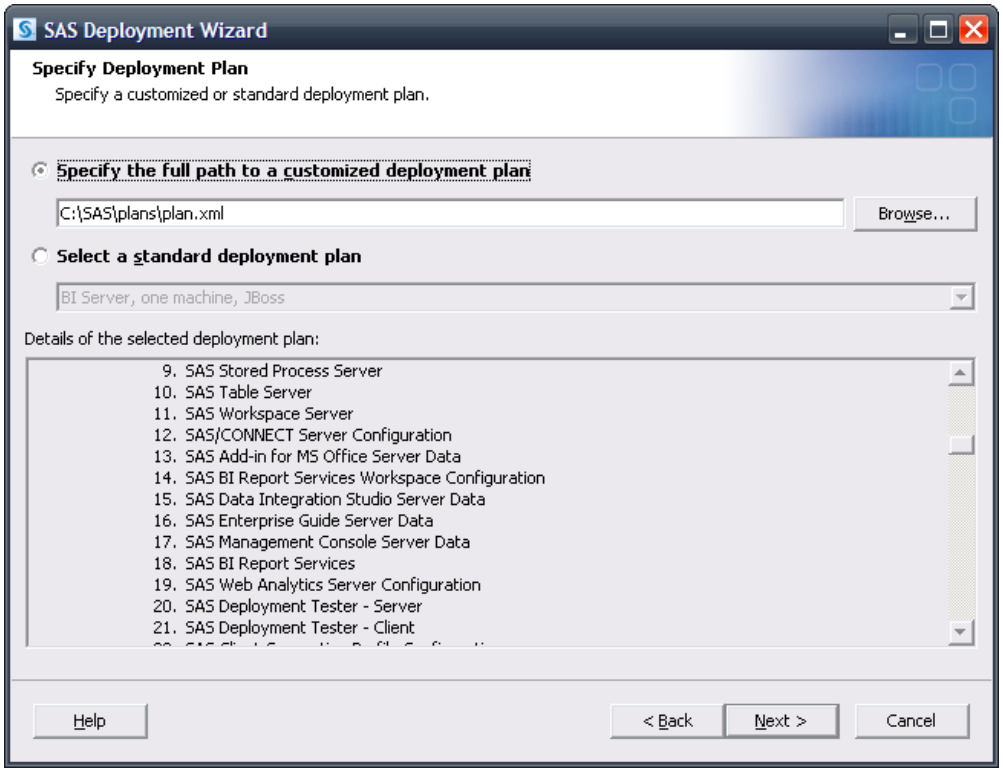
Installing

Upon purchasing any new software after having an existing order, the customer's plan and order information will be updated. The customer will receive a new plan and order that takes into account what they previously had and is augmented with any new purchases. When the user receives the new plan and order, they will be ready to proceed.

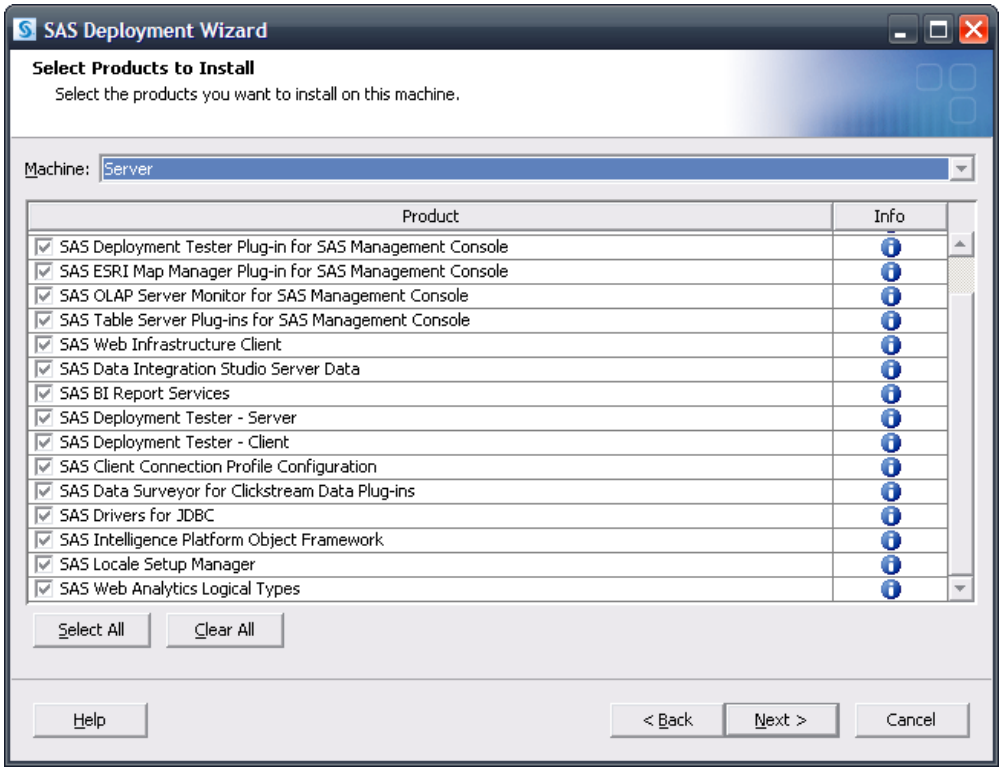
Before invoking the SDW, SAS strongly recommends that the user stop any active SAS sessions on the machine SAS Web Analytics is going to be installed on, including but not limited to SAS Object Spawners and SAS servers. When all SAS sessions are stopped, invoke the SDW as before, again choosing a "Planned Deployment", but this time only specifying "Install SAS Software" since configuration is not possible due to the SAS sessions you've stopped.



Next, the user specifies the new plan that includes SAS Web Analytics.



The user again chooses the Server tier.



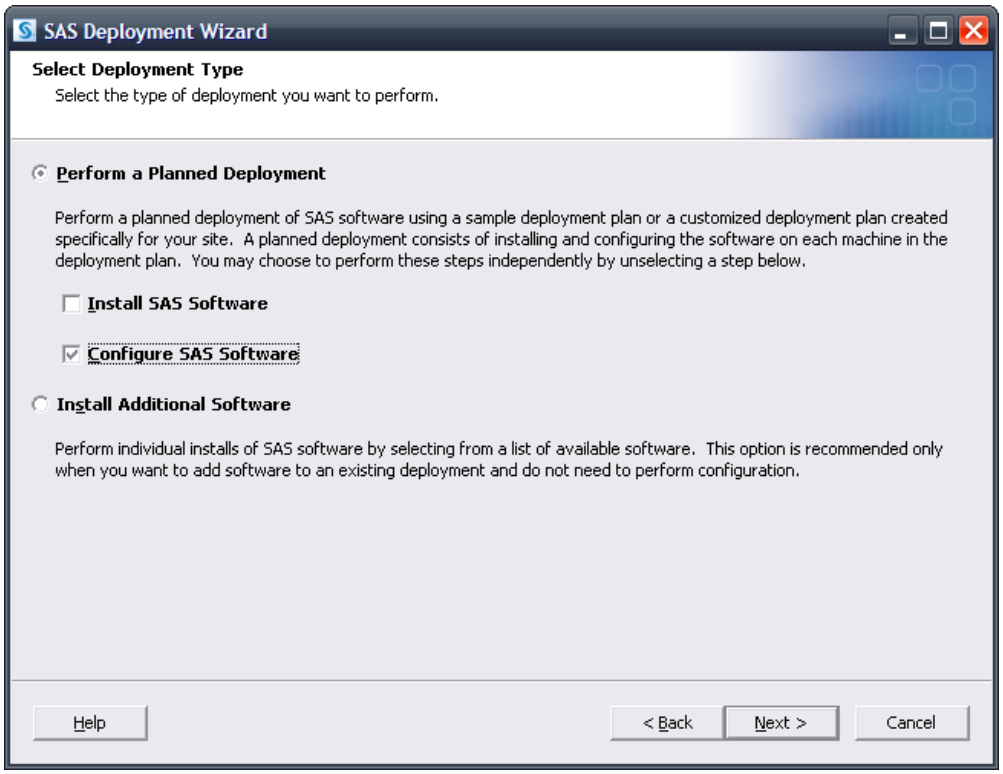
All products available to install are listed in the dialog. Products that have previously been installed can be removed from the list, but this is not required since the installation process will not affect previously installed software.

Continue through the dialogs using the same settings as before, and then select **Start** to begin the installation process. The installation process for all selected products will be executed, and no damage will be done to any existing installations. Close the SDW when the deployment is complete. SAS Web Analytics, as well as any additional products that were selected, have been installed. These products are ready to be used but have yet to be configured. SAS Web Analytics needs "exclusive" access to a SAS Pooled Workspace Server, a SAS Stored Process Server, and a SAS Workspace Server. Furthermore, SAS Web Analytics needs to modify files contained within a SAS Application Server and as such, a new SAS Application Server will need to be created.

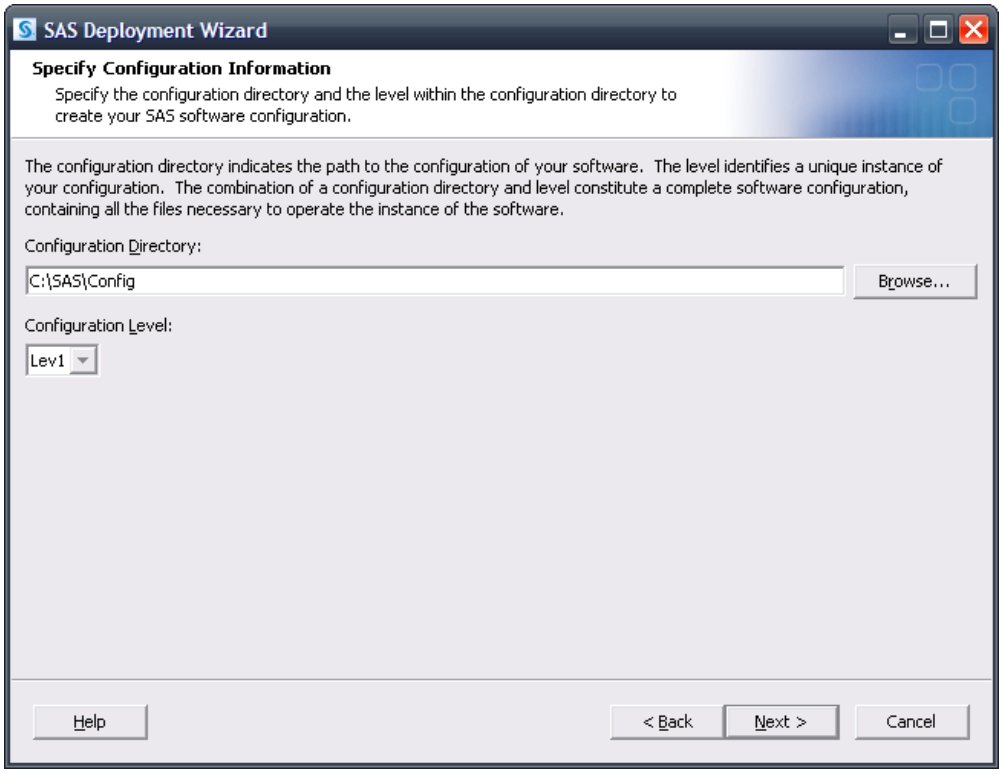
Configuring

At this point, restart all SAS servers that were previously stopped, in order of their dependencies. For example, a SAS Metadata Server should be started before a SAS OLAP Cube Server. When all servers and sessions are active, restart the SDW to begin the configuration process. This run-through will require different answers than were used during the initial configuration, with special attention paid to servers being configured.

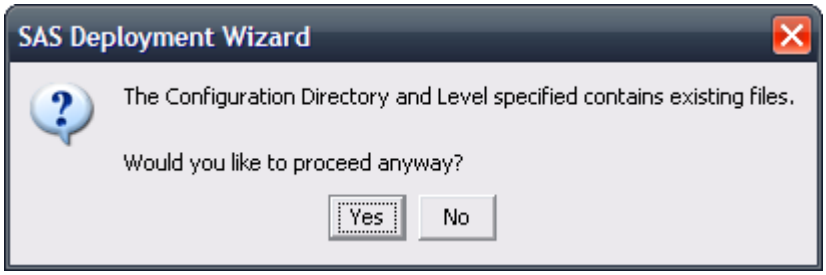
The user chooses a "Planned Deployment" and then when selecting the deployment type, clears the **Install SAS Software** check box and selects **Configure SAS Software**.



The user chooses the same plan and machine (Server) as before. Also, the user specifies the same configuration location and level used in the initial deployment.

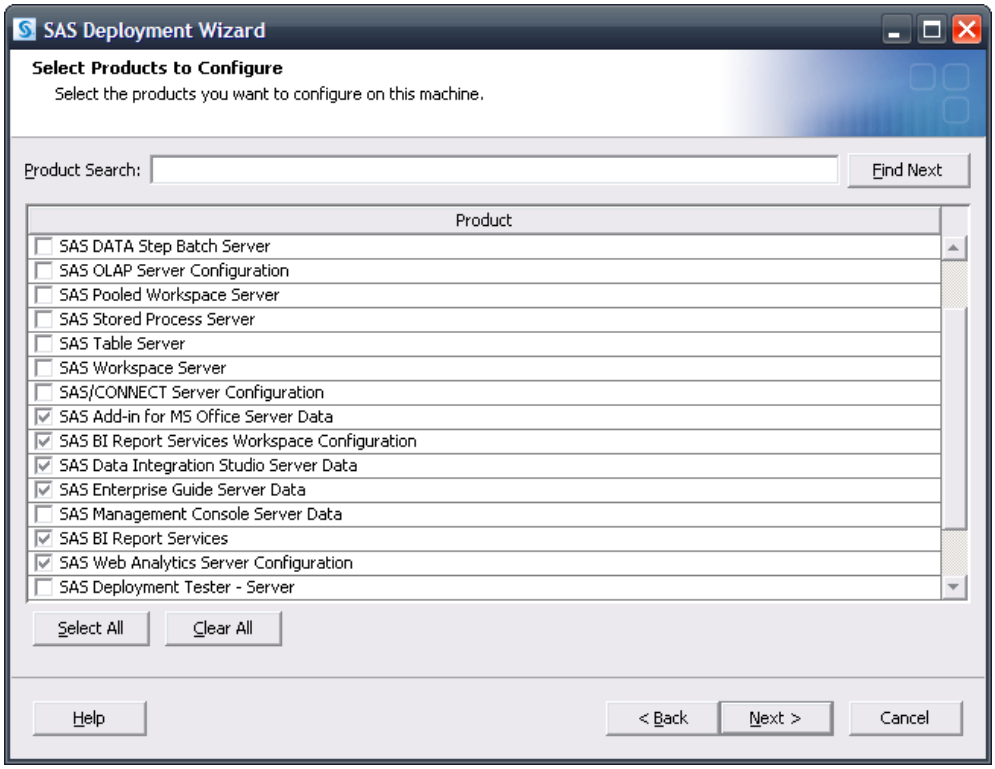


The SDW will recognize that this configuration directory and level directory already contain files.

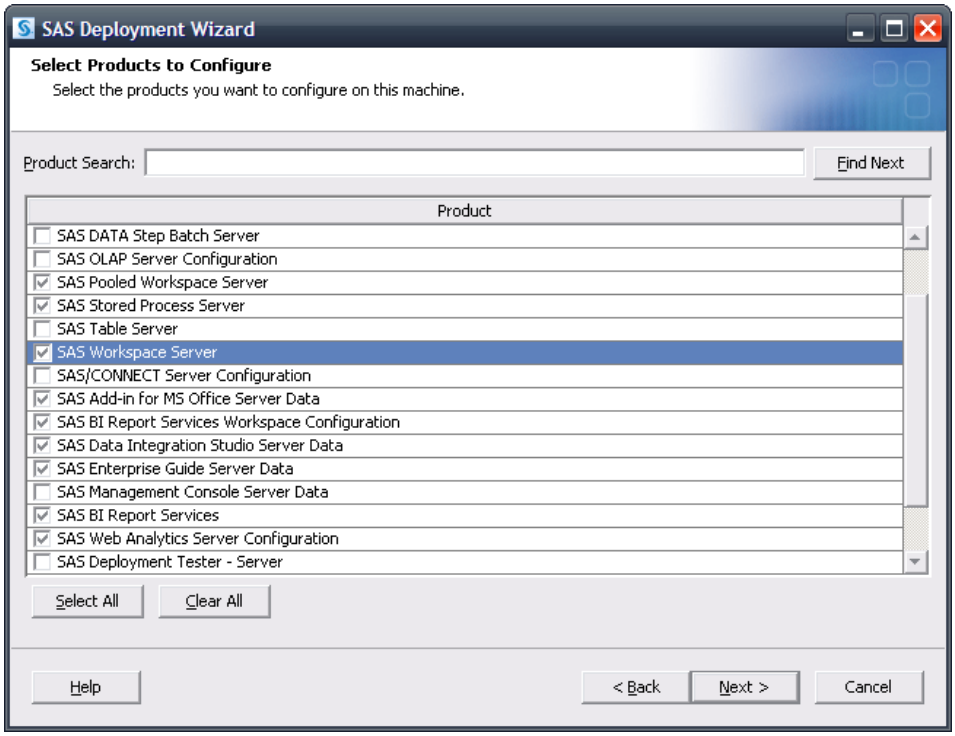


Click **Yes** to proceed.

A dialog will be presented to select the products to configure.

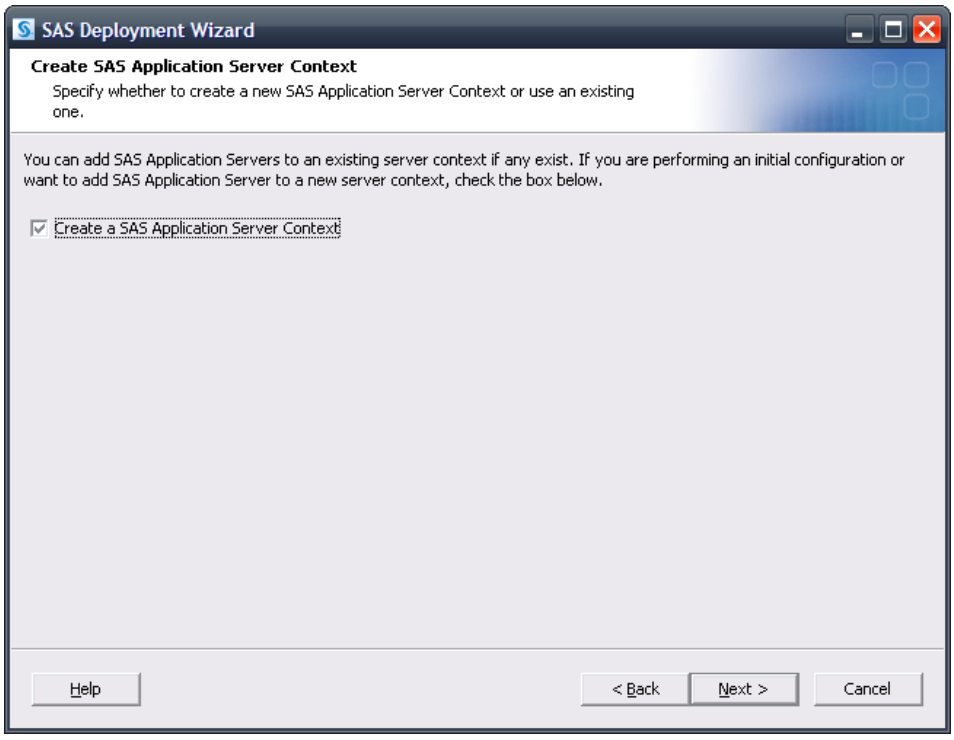


This dialog presents all products available for configuration but has deselected any products previously configured. Since Web Analytics Server has yet to be configured, it is checked, along with everything else needed in the configuration of SAS Web Analytics. However, since a SAS Workspace Server, SAS Pooled Workspace Server, and a SAS Stored Process Server have already been configured, they are deselected. Since SAS Web Analytics needs "exclusive" access to a SAS Workspace Server, a SAS Pooled Workspace Server, and a SAS Stored Process Server, they will need to be selected.



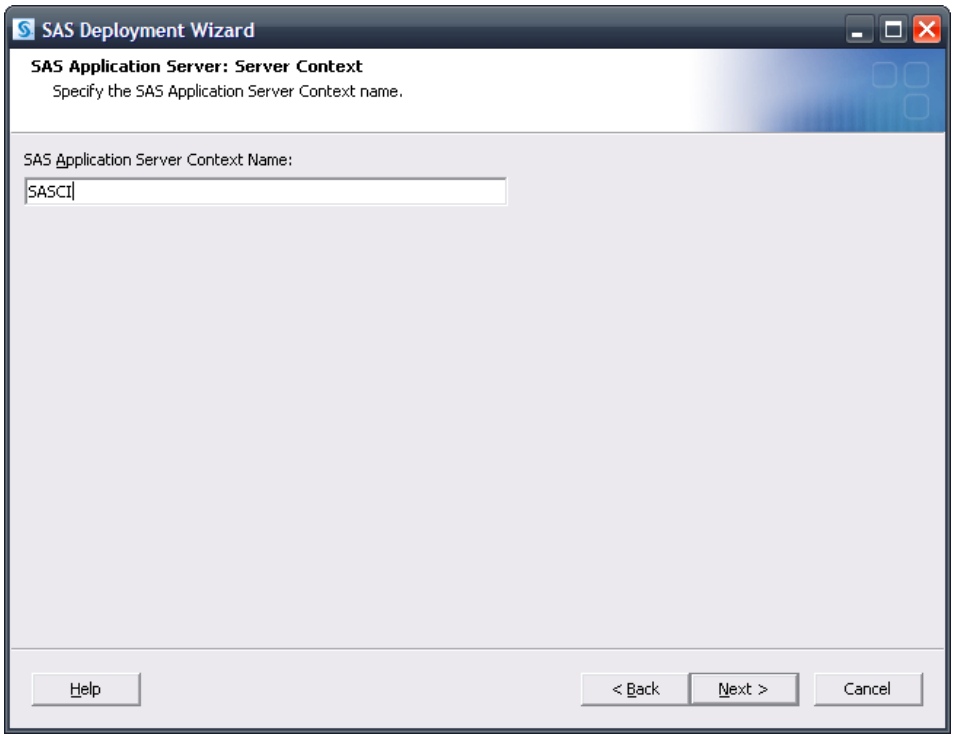
The user must use the same values that were used during the initial deployment. Specify the host information for the SAS Metadata Server as well as valid credentials for the SAS Administrator, the SAS Trusted User, and SAS Spawned Servers account.

The SAS Application Server information appears next.



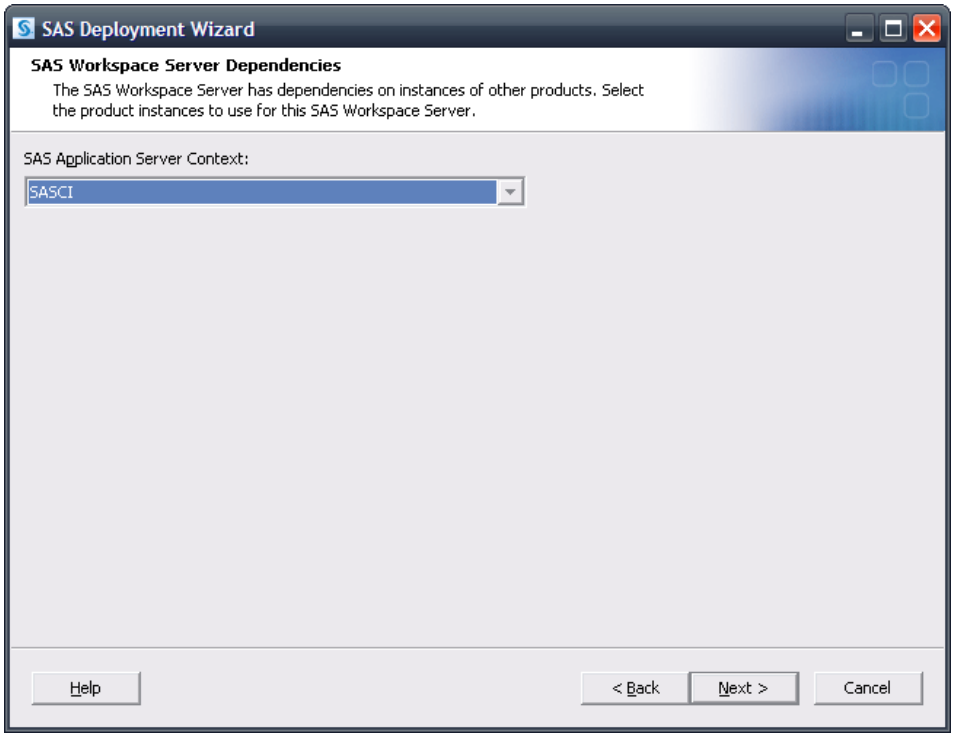
It is important here to create a SAS Application Server Context. This is done in order to provide the "exclusive" access SAS Web Analytics requires.

The name of the SAS Application Server Context prompt appears next.



When specifying the name of the SAS Application Server's context, an existing name cannot be used. Our example again uses **SASCI**, which is easy to associate with SAS Web Analytics, SAS Customer Intelligence solution.

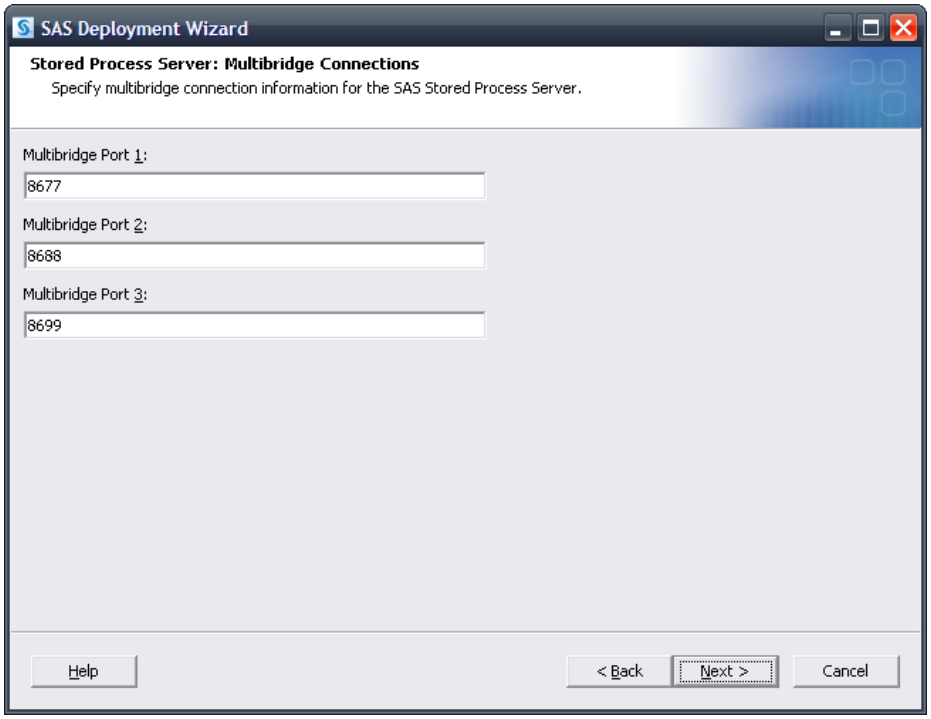
Each server being added to the SAS Application Server will prompt for which context to use.



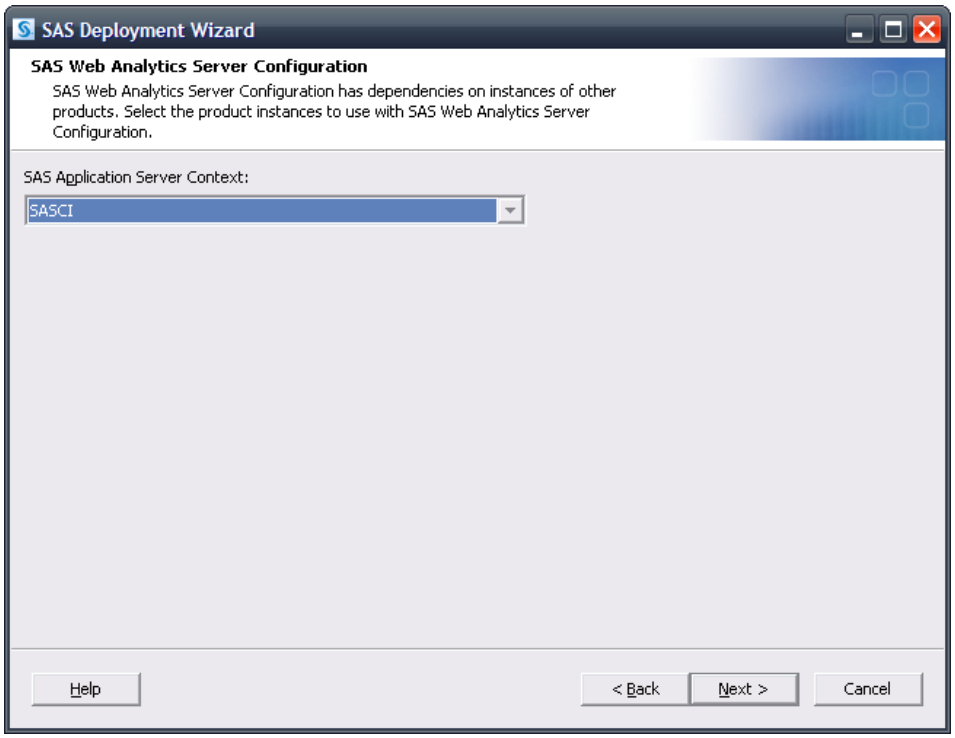
SASCI should be the selection for each server.

Each server being added will also prompt for their main port. The SAS Workspace Server, SAS Pooled Workspace Server, and SAS Stored Process Server being added to **SASCI** can use whatever port is desired, including the same port the previous configuration might have used for them (provided that no other conflicts exist). The SAS 9.2 Object Spawner is fully capable of handling this issue such that no conflicts will occur in the spawning of these servers.

The SAS Stored Process Server does, however, need unique port values for its multibridge connections. This example uses a variation on the default values of 8611, 8621, and 8631.



Continue through the prompts.



The user specifies the dependencies for SAS Web Analytics using the newly created SAS Application Server, **SASCI**.

After completing the rest of the prompts and when indicated by the SDW, the user chooses **Start** to begin the configuration.

The *Configuration Guidelines and Details* will be presented to the user upon completion of the SDW. As new servers are added that are managed by a SAS Object Spawner, the SAS Object Spawner associated with this configuration will need to be restarted to detect them. Upon doing so, the configuration of SAS Web Analytics is complete.

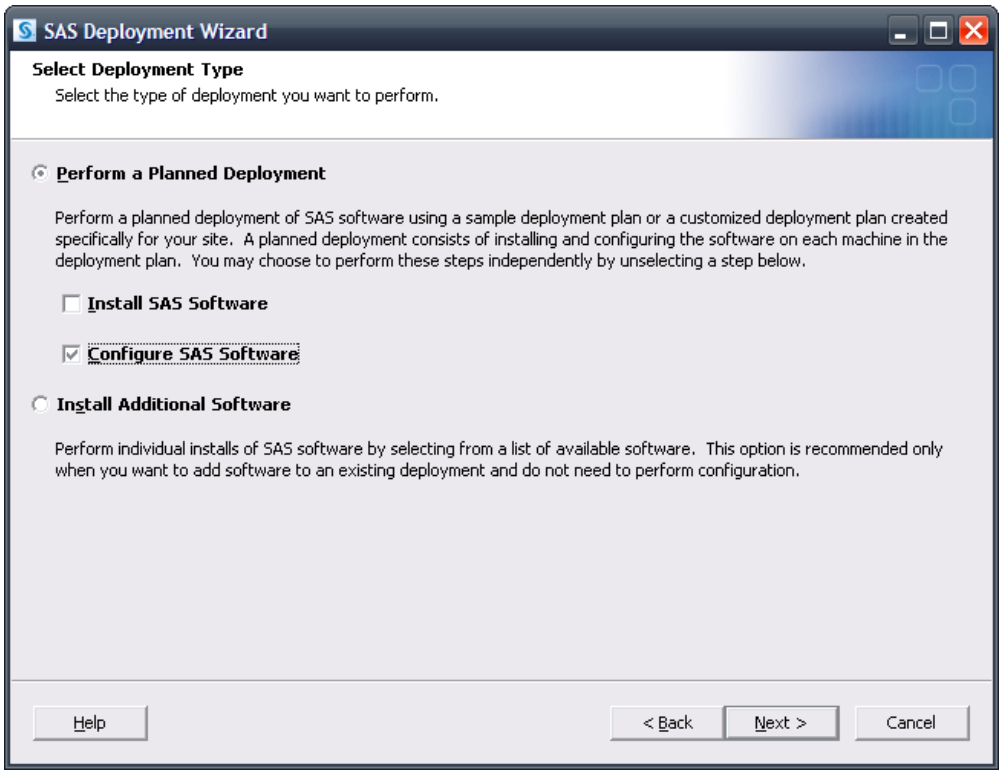
Conclusions

SAS Web Analytics is a SAS solution that requires "exclusive" access to a SAS Application Server. The main issues to consider are what products are required in support of this solution and whether or not it will be installed and configured on top of an existing configuration. Either of the approaches discussed above should able to handle most requirements. Be sure that unique ports are used when applicable and name things in such a way that they are easy to associate with the solution in question.

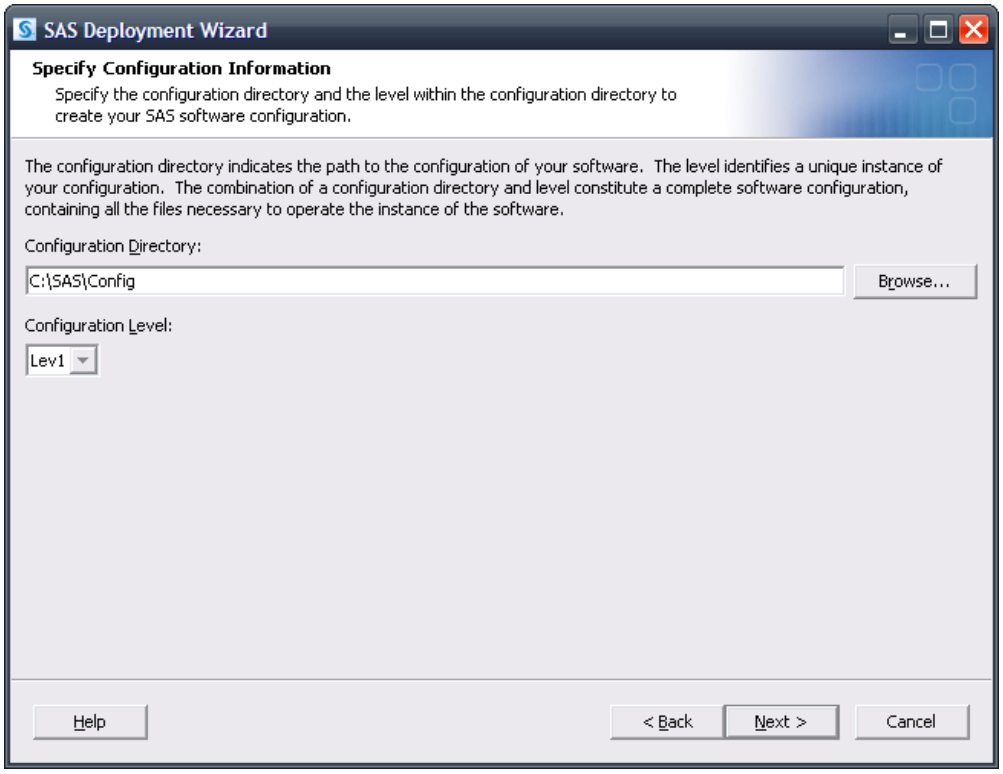
Appendix - Creating a SAS Application Server Specific to the SAS Business Intelligence Platform

As seen above, if the user installs and configures SAS Web Analytics on a "clean" system, they create a SAS Web Analytics specific SAS Application Server (**SASCI**). If the user wants to have a SAS Application Server specifically for use by the SAS Business Intelligence platform, a similar procedure can be followed. As before, the SDW will be used to configure the new Application Server.

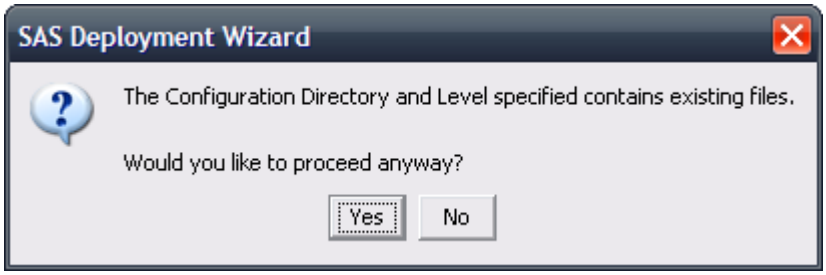
The user chooses a "Planned Deployment" and then when selecting the deployment type, clears the **Install SAS Software** check box and selects **Configure SAS Software**.



Choose the same plan and machine as before (for example, Server). Also, for this example, the same configuration location and level used in the initial deployment are specified.

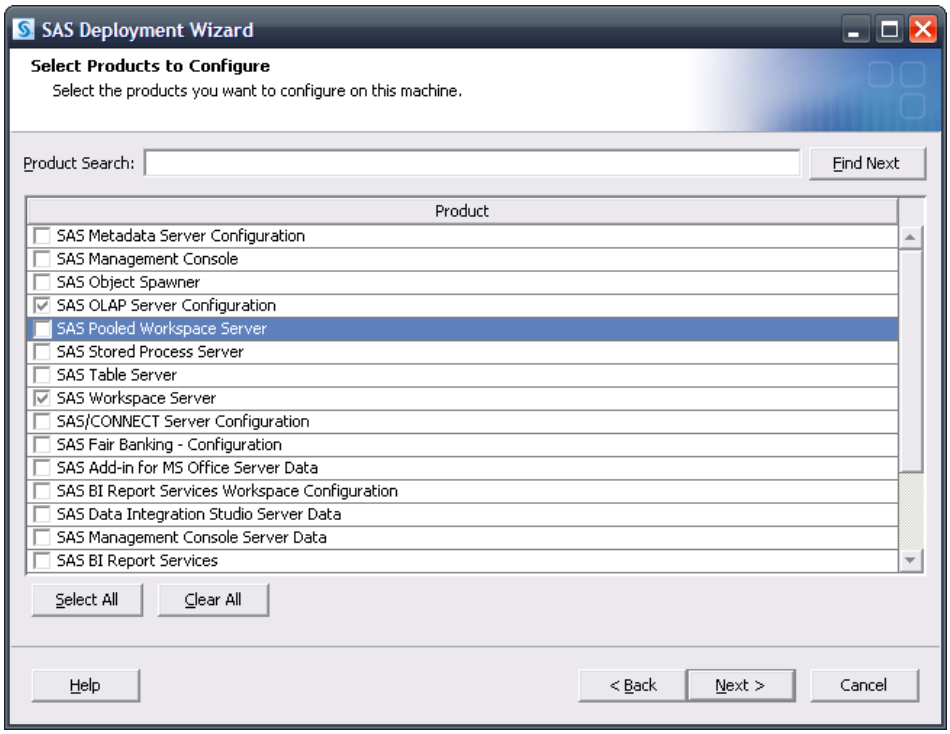


The SDW will recognize that this configuration directory and level directory already contain files.

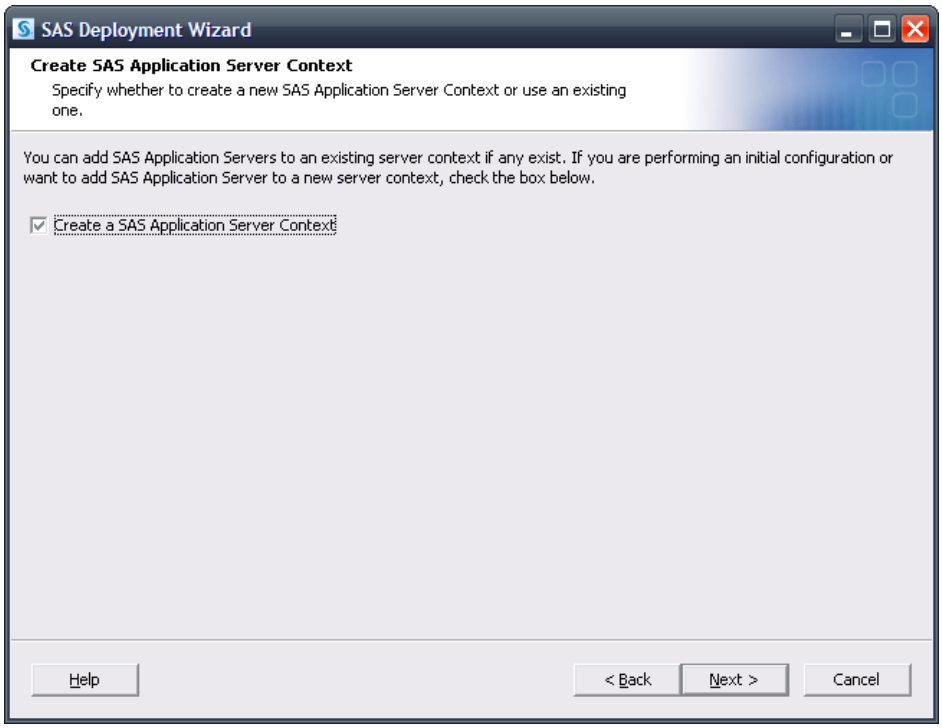


Click **Yes** to proceed.

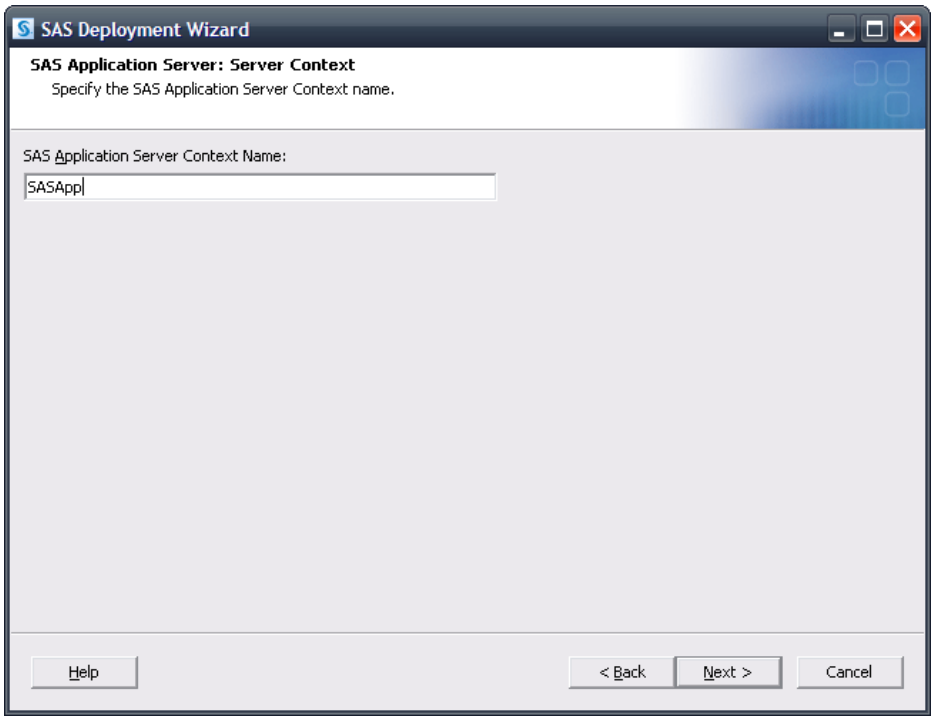
A dialog will be presented to select the products to configure. Choose any of the SAS Application Servers that the user wants to add to the SAS Application Server that will be created. The example below shows a SAS OLAP Cube Server and a SAS Workspace Server.



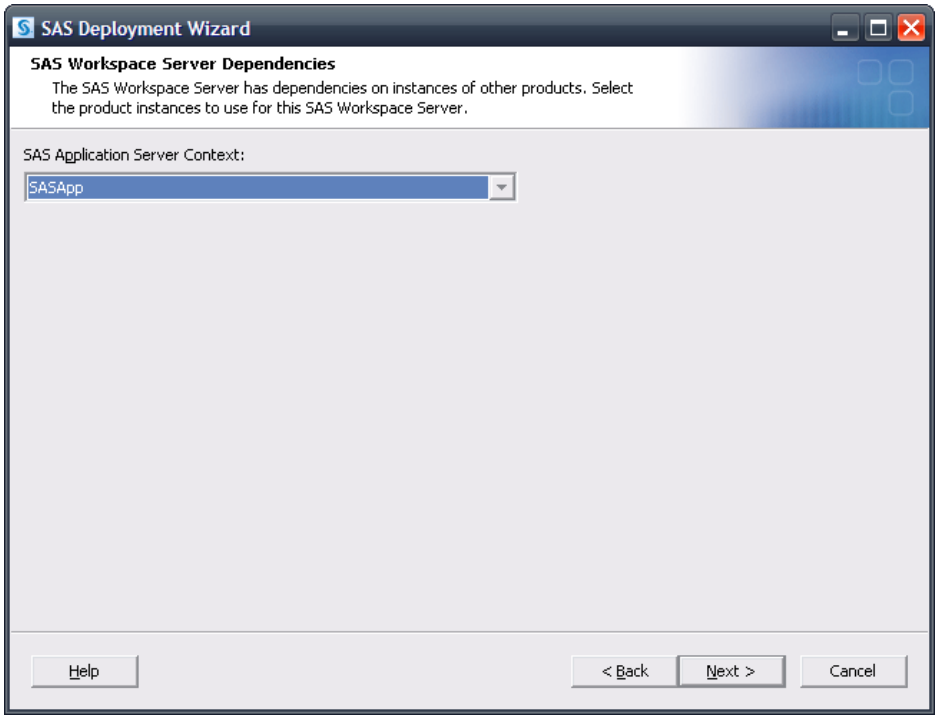
The SAS Application Server information appears next.



It is important here to select to create a SAS Application Server Context. This is done in order to provide an additional SAS Application Server. Assuming a SAS Application Server specific to the SAS Web Analytics solution has already been created (**SASCI**), the usual default of **SASApp** can be used.



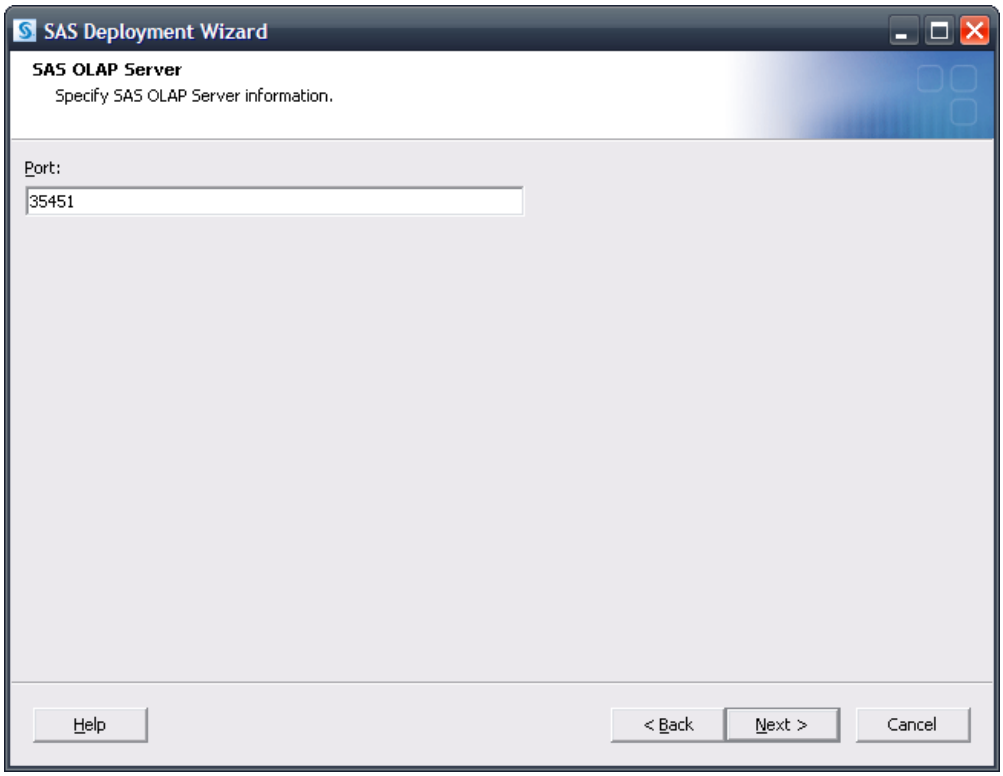
Dependencies for the application servers being added will then need to be specified.



Since these servers are intended to be associated to the new SAS Application Server, **SASApp** should be selected.

Each server being added will also prompt for their main port. For this example, the SAS Workspace Server can use whatever port is desired, including the same port the previous configuration might have used for them (provided that no other conflicts exist). The SAS 9.2 Object Spawner is fully capable of handling this issue such that no conflicts will occur in the spawning of this server.

The SAS OLAP Cube Server being added does require a unique port. 5451 is the default port for a SAS OLAP Cube Server so for this example, a much different value is used, 35451. The user can use any port that is appropriate and available—it merely has to be unique and not in use.



Complete the rest of the prompts and when indicated by the SDW, choose **Start** to begin the configuration.

The *Configuration Guidelines and Details* will be presented to the user upon completion of the SDW. As new servers are added that are managed by a SAS Object Spawner, the SAS Object Spawner associated with this configuration will need to be restarted to detect them. Upon doing so, the creation and configuration of a new SAS Application Server is complete.

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