

Installation & Administration Guide

Valerus **SmartAnalytics** ver. 5.4



XX306-00-01

Valerus **SmartAnalytics**



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1 Installing Valerus SmartAnalytics

Vicon's Valerus SmartAnalytics can be installed on the Valerus Application Server, on a Valerus Recording Server (NVR) or on a dedicated Valerus SmartAnalytics Server, depending on the system and available resources. Be aware that if the SmartAnalytics is installed on a Valerus NVR, resources on the NVR and the number of cameras it can handle will be reduced.

Consult Vicon technical services for the best practice installation.

1.1 Before Installing

1.1.1 Obtain Valerus Installer

Obtain Valerus SmartInstaller from Vicon's website.

1.1.2 .Net 3.5

.Net 3.5 must be installed prior to installing Valerus SmartAnalytics. It should be there if Valerus is already installed.

1.1.3 Uninstalling VII Gateway

If Valerus SmartAnalytics is being installed on a PC that previously had ViconNet installed on it, the VII Gateway Service *must* be removed from the unit before Valerus SmartAnalytics is installed. Go to the Control Panel, Add/Remove Programs and uninstall VII Gateway Service. If this is not done, the two programs will collide and the SmartAnalytics will not function properly.

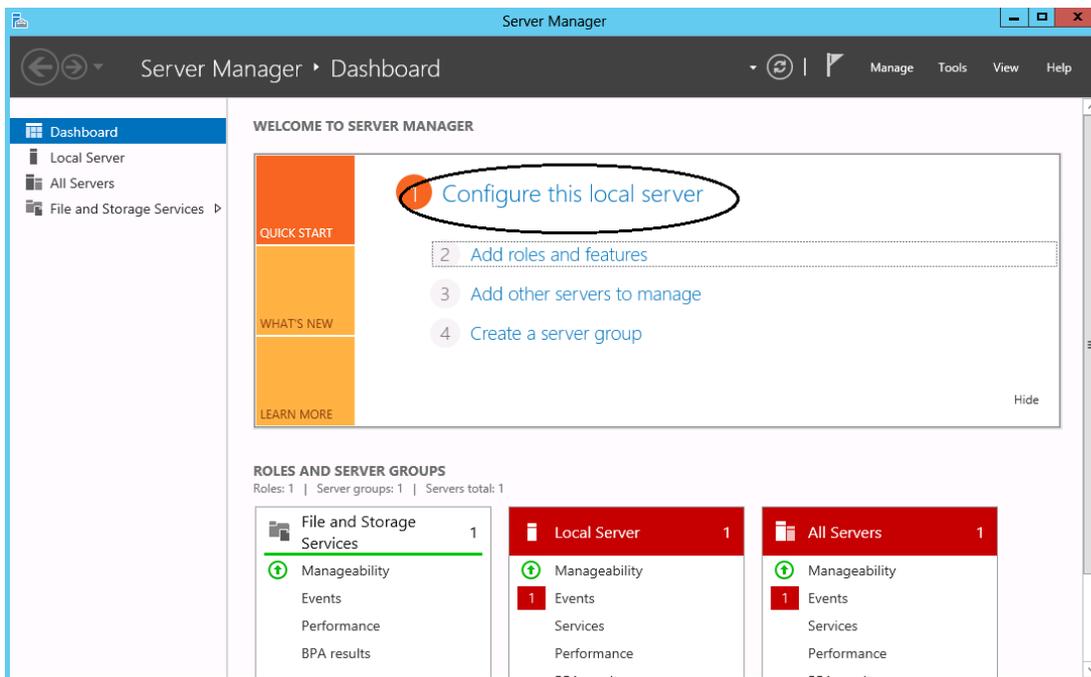
1.1.4 Windows Servers 2012 - Specific Notes

On Windows Server 2012 you need to enable Media Foundation functionality.

➤ **To enable Media Foundation functionality:**

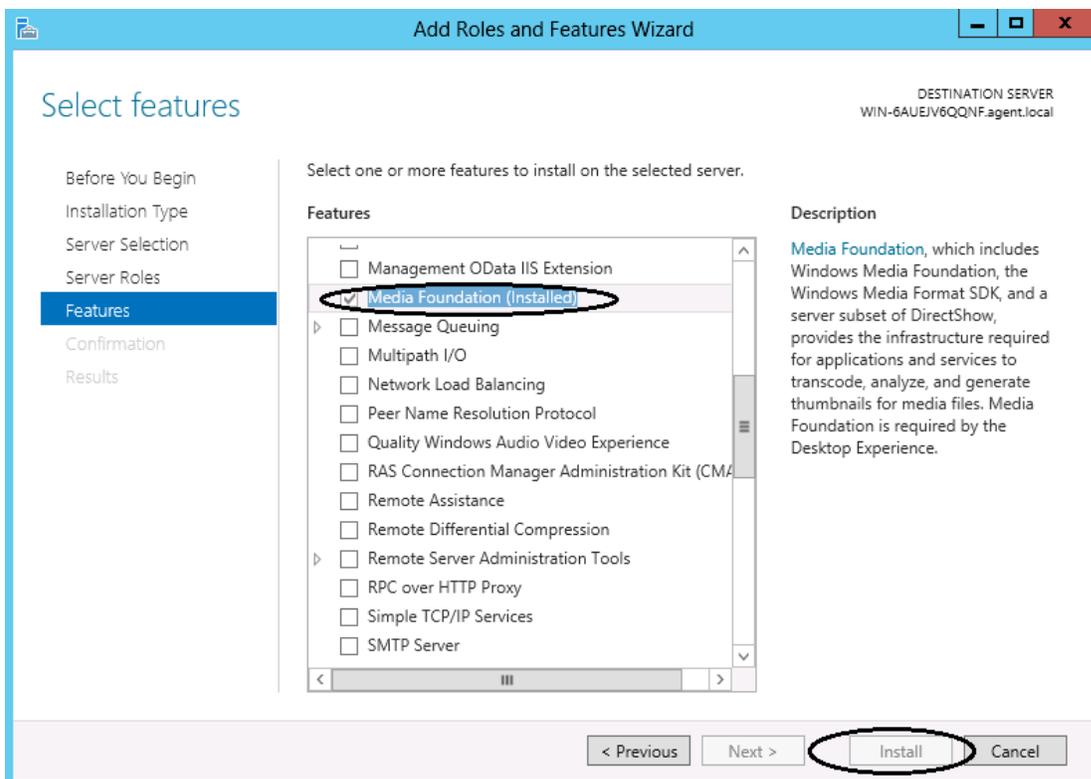
- Open **Server Manager** and choose **Add roles and features**:

Figure 1-1: Windows Server 2012 - Server Manager



- In the **Features** menu, verify that the **Media Foundation** option is selected. If it's not, select it and click the **Install** button:

Figure 1-2: Windows Server 2012 - Select Media Foundation



1.2 Installation on a Single Server

Depending on your deployment's size and scope and on the type of PC you have, you can implement a single-server installation in which all system components are installed on a single PC. Valerus SmartAnalytics can be installed on the Valerus Application Server, a Valerus All-in-One Server, on an NVR in the system or a SmartAnalytics dedicated server. For larger systems, the components should be distributed among the servers and clients that will be using the different SmartAnalytics. Note that the Client must be installed on any unit that will require Valerus SmartSearch.

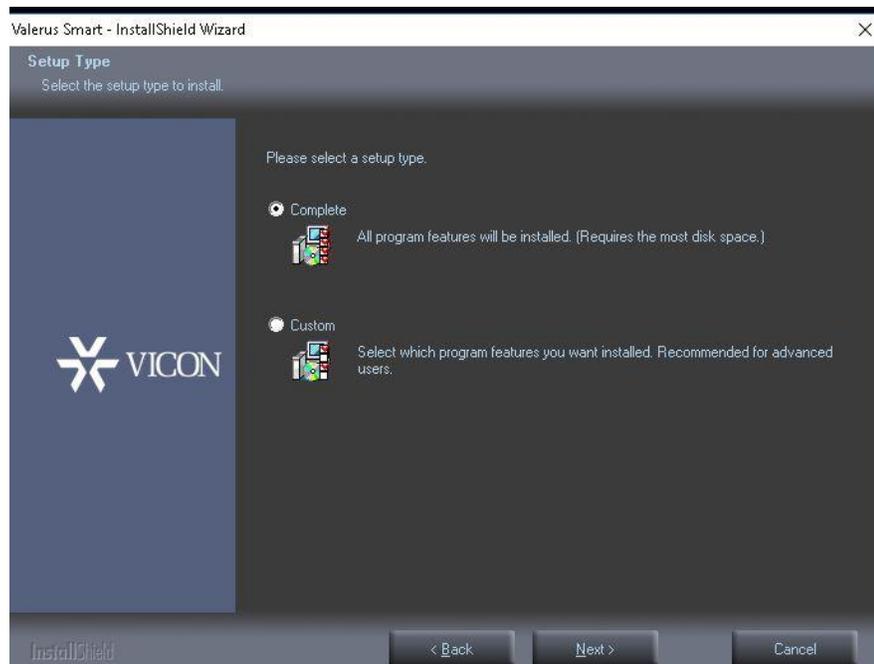
Contact Vicon Technical Support to clarify how best to configure your installation.

➤ **To install all components:**

1. After obtaining the installer file from Vicon's website, save it on your all-in-one system desktop; click on the desktop icon  and then run it. The Valerus Smart InstallShield Wizard guides you through an intuitive setup process. An opening screen and Welcome screen display. Click **Next** until the **Setup Type** screen opens.

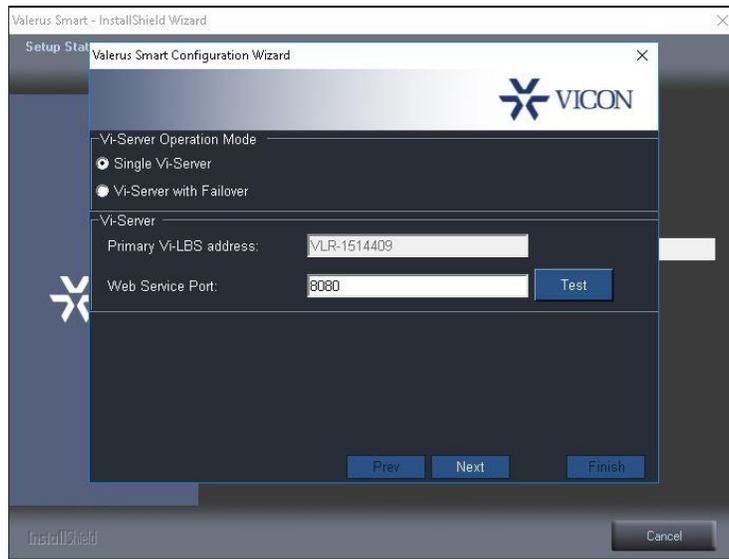


Figure 1-3: Setup Type



2. Leave the **Complete** option selected. Click **Next** to Continue with the installation steps, click OK on installation screens that pop up, including WinPcap, until the **Valerus SmartAnalytics Settings** screen opens:

Figure 1-4: Valerus SmartAnalytics Settings



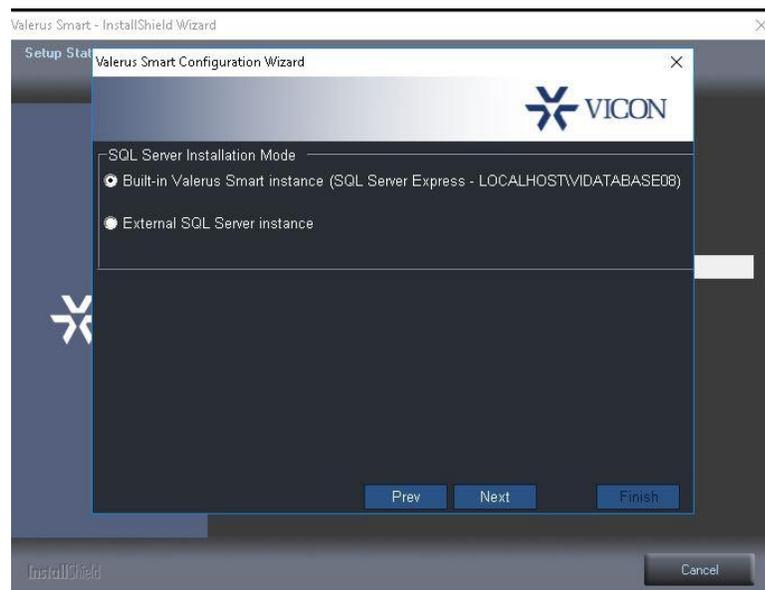
3. Configure Valerus SmartAnalytics Settings using the table below as reference.

Table 1-1: Valerus SmartAnalytics Settings

| Setting | Description |
|------------------|---|
| Operation Mode | Leave the default option: Single Server |
| Web Service Port | Some Valerus SmartAnalytics components communicate using the Web Service standard over port 8080 . If your server machine is already using port 8080 for other services, change this default value. Note: You can use the Test button to verify if the specific port is available |

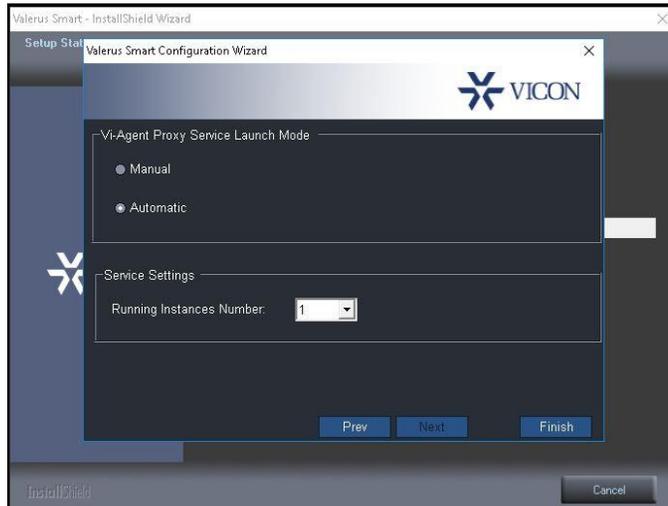
4. Click **Next**; the **SQL Server Configuration** screen opens.

Figure 1-5: SQL Server Configuration



5. Select the **Built-in instance** option (default), if using its own database, to take advantage of **Microsoft SQL Server Express** bundled with Valerus SmartAnalytics. A new named instance called **VIDATABASE08** is installed on the local machine. External SQL Server instance is only checked if using another existing database. Additional information on setting up an external database can be found in section 1.5.
6. Click **Next**, the **Valerus Proxy** (VAP) configuration screen is shown:

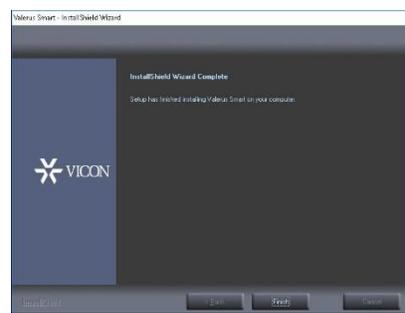
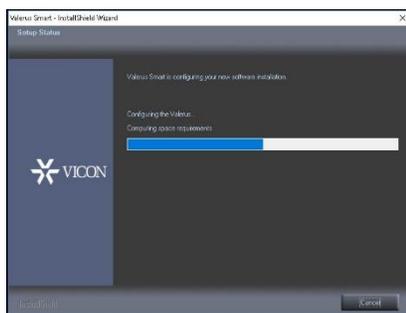
Figure 1-6: Valerus Proxy Configuration



Optionally apply these settings:

- Set the Service mode to **Manual** if your deployment does not require a VAP component on this unit. Note that VAP will be installed but is disabled. This can be selected if the VAP is to be installed on another PC (see Custom installation).
- Specify the required number of VAP services. The number of instances needed depends on system configuration and the number of channels on each machine. Each VAP can handle 8 cameras. The hardware Vicon sells and specifies as minimum requirement can handle a maximum of 4 VAP instances, which is 32 channels. It is recommended to consult the support team regarding the optimal number of VAP instances.

7. Click **Finish**.



Note

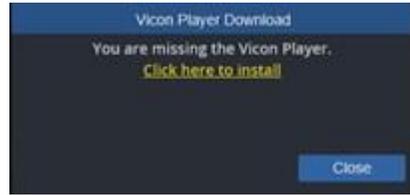
During Valerus SmartAnalytics installation process you may be notified that .NET Framework 4.5, WinPcap and Microsoft SQL Express 2008 require installation. Confirm these notifications and allow the installations of these components, which may take several minutes. Depending on your specific configuration, you may be notified that a PC restart is

required following installation. After restarting your PC, the Valerus SmartAnalytics installation process is automatically resumed.

1.2.1 Installing the Valerus Player

The Valerus Player must be installed for each user who will be using the unit. If there will be multiple users logging into Windows on the same machine, the Valerus Player must be individually installed for each user. It is recommended that you select a user with admin privileges to be used for this purpose. This same user will be used to run the Valerus SmartAnalytics Services (shown below).

8. Log in as the specific user.
9. In Valerus, there will be a message () if the video player is not installed for that user.
10. Click the icon; a popup similar to that below displays. Click to install the player; a standard browser download message will display to install.



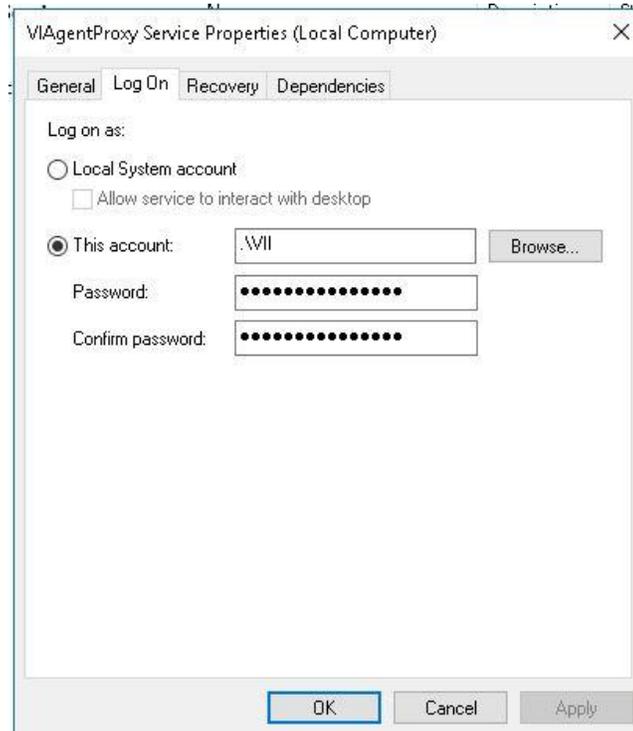
4. Below is an example if IE11 download message. Click Run to install.



5. Follow the installation instruction, close the browser and launch it again after the installation is complete. The player should now be installed and will work to display video.
Repeat this same procedure for every Windows user in the case where multiple users are expected.

1.2.3 Post-Installation Services Setup

After the Valerus SmartAnalytics has been installed, the Services have to be configured with local administrator permissions to work properly with Valerus. The Services include the Valerus SmartAction (VIVMS Manager) and VAP (Valerus Proxy). These settings must be done on each server where the Services are installed.



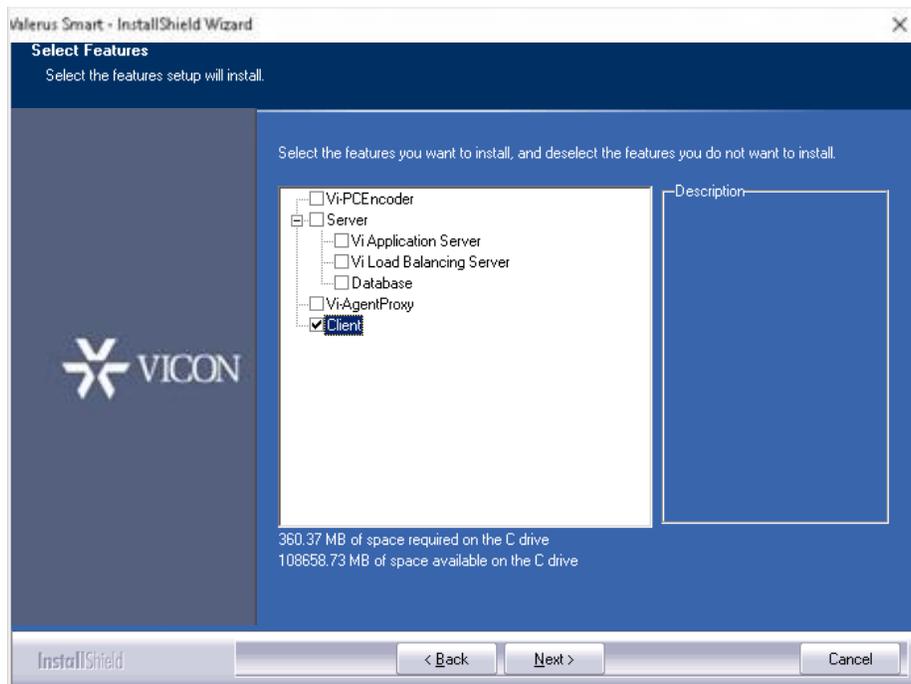
1. Open Windows Services. Scroll to the specific service (i.e., VIAgent Proxy or VIVMSManager). Right click on the Service and select Properties.
2. From the Properties screen, select the Log On tab. Select the **This account** field and click Browse to navigate to the local user with admin privileges for this server; click OK and restart the Service.
3. Repeat this procedure for each Service. Note that if there are multiple instances of Proxies, this must be done for each of them.

1.3 Installing Client Applications on a Separate PC

When installing Valerus SmartAnalytics, users can opt to distribute different Valerus SmartAnalytics components on different PCs, based on equipment considerations. This section shows how to install SmartAnalytics client applications on a separate PC. Remember that Client applications must be installed on each unit on which you want to Launch the Valerus SmartSearch Application.

- **To install SmartAnalytics client applications on a separate PC:**
 1. Run the installer file supplied by Vicon on the PC; the InstallShield Wizard guides you through the setup process. Follow it until the **Setup Type** screen opens (see Figure 1-).
 2. Select the **Custom** option and proceed (click **Next**) until the **Select Features** screen opens.
 3. Leave **Client** selected and clear other components to exclude from the installation:

Figure 1-7: Select Client Component



4. In the **Network Settings** screen specify Valerus SmartAnalytics server address. If you are deploying server redundancy, also specify the address of the secondary Valerus SmartAnalytics server.
5. Click **Next** until **Finish**.

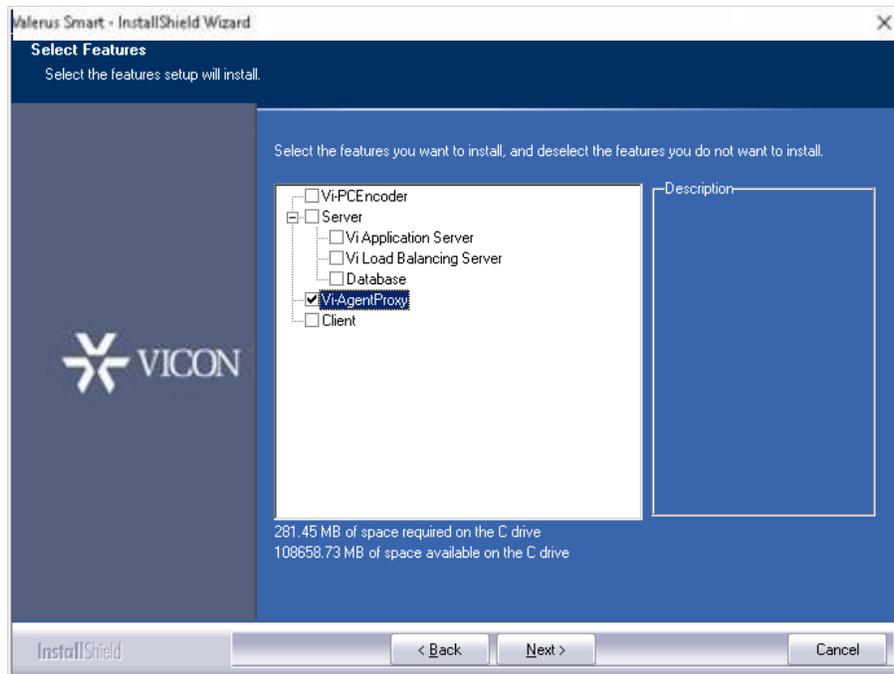
1.4 Installing VAP on a Separate PC

When installing Valerus SmartAnalytics, users can opt to distribute different Valerus SmartAnalytics components on different PCs, based on deployment considerations. This section describes how to install VAP on a separate PC. It is recommended to consult the support team regarding the optimal installation and the required number of PCs to install VAP services on.

➤ **To install VAP on a separate PC:**

1. Run the supplied installer file; the InstallShield Wizard guides you through the setup process. Follow it until the **Setup Type** screen opens (see [Figure 1-](#)).
2. Select the **Custom** option and proceed (click **Next**) until the **Select Features** screen opens.
3. Leave **Proxy** selected and uncheck other components to exclude from the installation.

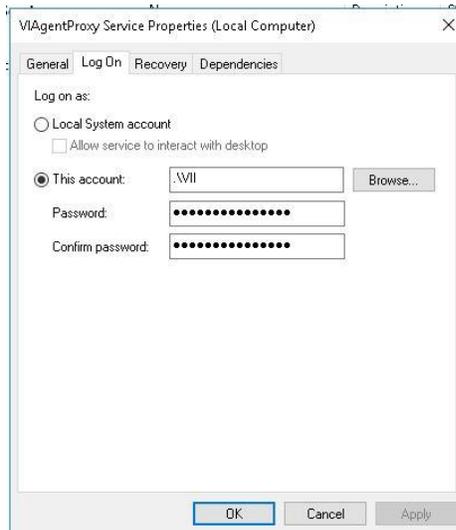
Figure 1-8: Select Components – Choosing VAP Only



4. In the **Network Settings** screen specify the Valerus SmartAnalytics server address. If you are deploying server redundancy, also specify the address of the secondary Valerus SmartAnalytics server.
Click **Next** until the **Proxy Configuration** screen opens and specify the number of **Proxy** services to be installed on this PC.
6. Click **Finish**.

1.4.2 Post-Installation Services Setup

After the Valerus SmartAnalytics has been installed, the Services have to be configured with local administrator permissions to work properly with Valerus. The Services include the Valerus SmartAction (VIVMS Manager) and VAP (Valerus Proxy). These settings must be done on each server where the Services are installed.

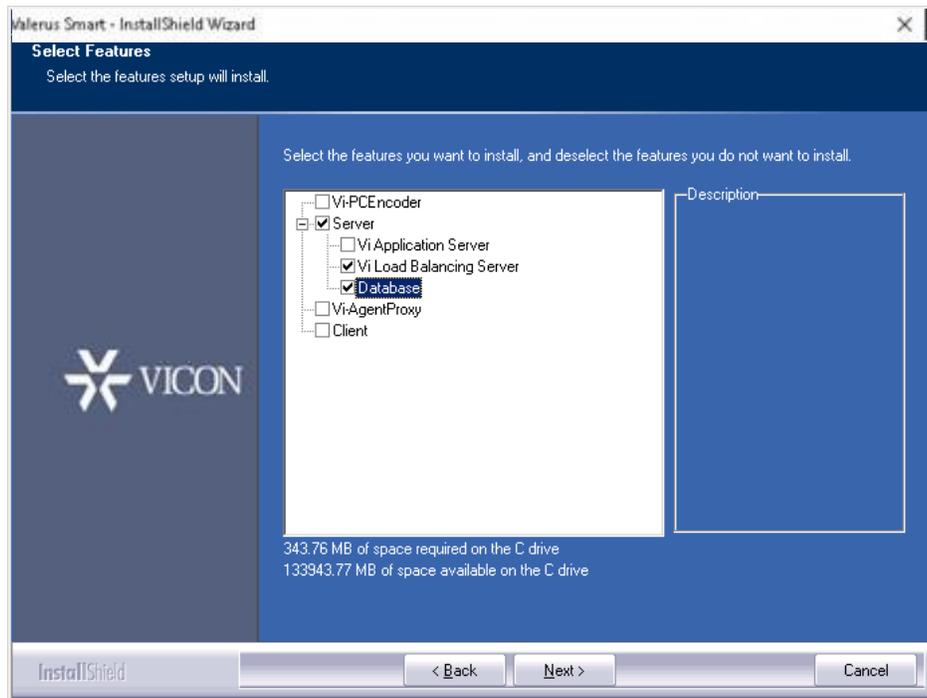


5. Open Windows Services. Scroll to the specific service (i.e., VIAgent Proxy or VIVMSManager). Right click on the Service and select Properties.
6. From the Properties screen, select the Log On tab. Select the **This account** field and click Browse to navigate to the local user with admin privileges for this server; click OK and restart the Service.
7. Repeat this procedure for each Service. Note that if there are multiple instances of Proxies, this must be done for each of them.

1.5 Installing the Database on a Different Machine to the LBS & AS (External Instance)

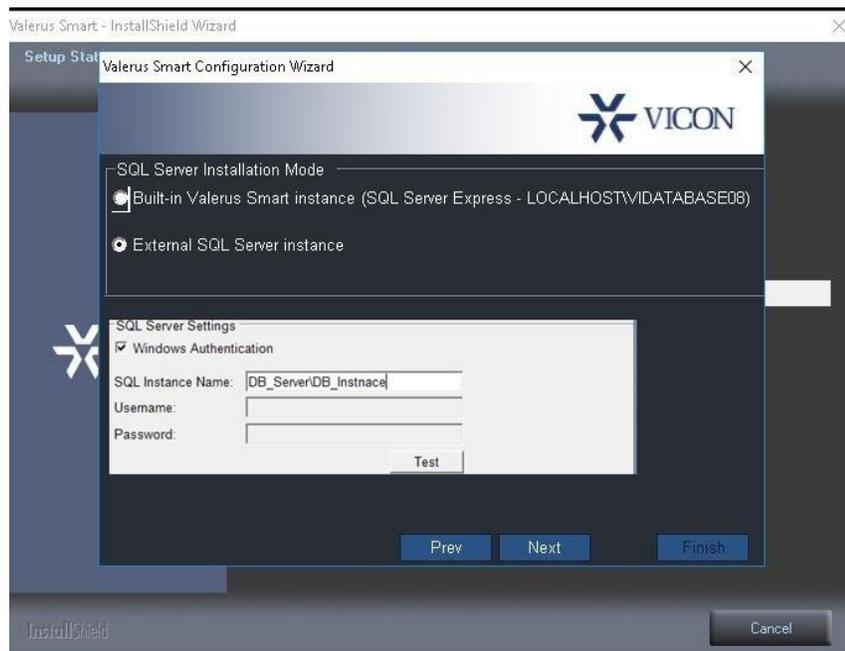
- **To install the database on a different machine to the LBS and AS:**
 1. Run the installer file on the LBS; the InstallShield Wizard guides you through an intuitive setup process (click **Next**) until the **Setup Type** screen opens.
 2. Select the **Custom** option and click **Next**; the **Select Features** screen opens.

Figure 1-9: Selecting Database with the Load Balancing Server



3. Exclude all irrelevant components and sub-components, as shown in the figure above. Note that the Database component should be always selected together with the LBS.
4. Click **Next** until the **SQL Server Configuration** screen:

Figure 1-10: SQL Server Configuration



5. Select the **External SQL Server instance** option for the Valerus SmartAnalytics database to be installed on an existing external SQL instance that is deployed in your network. In this configuration you must also define:
 - **SQL Instance Name** using the standard format of DB_Server\DB_Instance or DB_Server only in case of an SQL Server default instance.
 - If **Windows Authentication** is not used to access the database, clear this option and define the appropriate **User** and **Password** to access the database.
6. Click **Next**; the installer validates whether the **SQL Server Configuration** settings that you defined are valid. If not, you're notified. Note: You can proactively test the SQL server connectivity by clicking the **Test** button.

Note

If the **Windows Authentication** option was selected, the **LBS** and **AS** services settings should be modified, since Valerus SmartAnalytics services are installed using the **Local System** account, i.e., the service works with a default user who might not have sufficient privileges to work with the chosen SQL Server instance.

To modify the services settings:

- Open **Log On** tab in the service's **Properties**.
- Set the field **This account** with the domain user who has sufficient privileges for the SQL Server instance, specified in step 4 above.

2 Activating Valerus SmartAnalytics Software

To learn about activating Valerus Smart Analytics Software and other licensing operations such as extending an evaluation license, changing a license after activation, and more, please refer to the “**Licensing Guide**” which is posted on Vicon’s website.

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3 Valerus SmartAnalytics Database Management

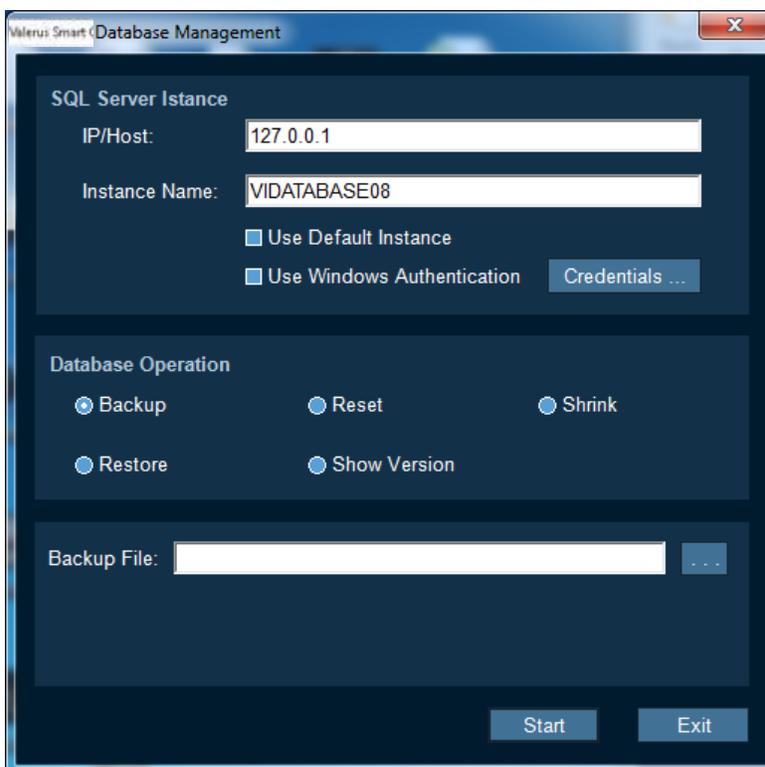
Use the **Valerus SmartDB Database Management** tool to manage the Valerus SmartAnalytics database. The tool enables you to:

- Back up the database
- Restore the database
- Reset the database
- Shrink the database
- Obtain the database version

3.1 Getting Started

- **To open Valerus SmartDB tool for Database Management:**
 1. Click **Start > All Programs > Valerus SmartAnalytics > Administrator Tools > Database Management**; the **Database Management** screen opens:

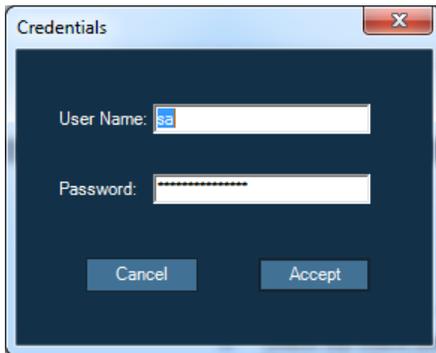
Figure 3-1: Valerus SmartDB Database Management



2. In the field **IP/Host**, specify the host of the database if it's on another machine, or leave it at the default.
3. In the field **Instance Name**, specify the instance name of the SQL Server in the case of a named instance, or leave the field blank in the case of a default instance.
4. Select the **Use Windows Authentication** option for Windows Authentication to be used for the database instance (that you defined above) rather than specific user access.

- To specify specific user access, click **Credentials**; the **Credentials** screen opens.

Figure 3-2: Credentials



3.2 Backing up the Database

- **To back up the database:**
 - In the **Valerus SmartDB Database Management** screen make sure that the **Backup** option is selected. Click the button  adjacent to the field **Backup File** and navigate to the destination folder. Note that you do not have to specify the backup file name since the system designates a default file name.
 - Click **Start**; the backup operation starts; a progress bar shows its progress.
 - When the operation is completed, click **Exit** or perform another operation.

3.3 Restoring the Database

Before restoring the database *back up* the previous one. The restore operation *restores a backed-up database*.

- **To restore the database:**
 - In the **Valerus SmartDB Database Management** screen, select the **Restore** option.
 - Click the button  adjacent to the field **Restore File** and navigate to the database file to be restored. The extension of the restore file is **zip**. The filename must include the full path.
 - Click **Start**; the restore operation starts; a progress bar displays its progress.
 - When the operation is completed, click **Exit** or perform another operation.

Note

The restore operation *overwrites the current database with the restored database*.

3.4 Resetting the Database

It may sometimes necessary to delete all data stored in the database tables and to restart. You can do this by resetting the database.

- **To reset the database:**
 - In the **Valerus SmartDB Database Management** screen, select the **Reset** option.
 - Click **Start**; the reset operation starts; a progress bar displays its progress.
 - When the operation is completed, click **Exit** or perform another operation.

Note

The reset operation *deletes all tables in the database with the exception of the login table*. The reset operation *reinitializes the database*.

3.5 Shrink the Database

While data stored in the database can periodically be purged or deleted by the administrator, Microsoft SQL features its own mechanism for freeing and minimizing database storage. To accelerate this, you can perform a shrink operation.

➤ **To shrink the database:**

1. In the **Valerus SmartDB Database Management** screen, select the **Shrink** option.
2. Click **Start**; the shrink operation starts; a progress bar displays its progress.
3. When the operation is completed, click **Exit** or perform another operation.

3.6 Obtaining the Database Version

➤ **To obtain the database version:**

1. In the **Valerus SmartDB Database Management** screen, select the **Show Version** option.
2. Click **Start**; the **Database Version** field in the **Valerus SmartDB Database Management** screen displays the version of the current database.

Appendix A: Required Firewall Settings

When a firewall is used (including Microsoft Windows Firewall), the following ports must be opened and enabled in the communications path:

| TCP Port # | Description |
|--|--|
| 8080 | Some Valerus SmartAnalytics components maintain communication using the Web Service standard over port 8080 . If either your server or client machine is already using port 8080 for other services, you can change this default value during the installation process. |
| 15000 | Enables communication between the Load Balancing Server (LBS_Service) and the application server (AS_Service) |
| 15029 | Enables communication workstations and Vicon Valerus using HTTP |
| 15030 | Enables communication between Valerus SmartAnalytics Server and unit using AMP |
| 15031 | Enables video streaming between SmartAnalytics-Gateway and Valerus |
| 15036 | Enables communication between the GUI applications (via Gateway) and Server |
| 15072 | Enables communication between two LBS machines. Valid only when redundancy is used. |
| 15050-15060 16050-16060 | Enable communication between VAP instances and Server |

For your convenience it's possible to open a range of ports between 15000 and 15060 for the system to use. Note that if you are distributing your installation on multiple PCs, you need to open these ports on each PC.

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