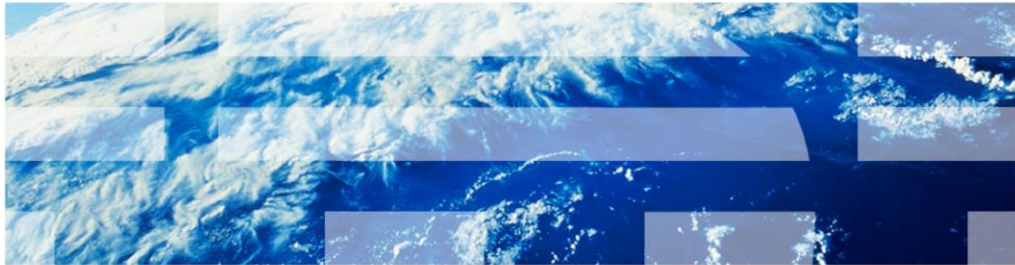


IBM Tivoli Monitoring V6.2.3

Creating an Agent Builder agent with a script as the data source



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IBM Tivoli® Monitoring V6.2.3, Creating an Agent Builder agent with a script as the data source. Agent Builder is a tool that Tivoli Monitoring provides. Agent Builder is used to build a customized agent that can use several data sources, such as files, Simple Network Management Protocol (SNMP), and Windows® event logs. In this module, you see the steps that are involved in creating an Agent Builder agent that uses a script as the data source.

Assumptions

Before you proceed, the module designer assumes that you have:

- Knowledge of IBM Tivoli Monitoring
- Agent Builder V6.2.3 is installed
- A Tivoli Monitoring environment which includes Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal client

The assumptions for this module are that you have knowledge of Tivoli Monitoring. You also have an Agent Builder installed on a system with a graphical user interface and a functioning Tivoli Monitoring environment which includes:

- Tivoli Enterprise Monitoring Server
- Tivoli Enterprise Portal Server
- Tivoli Enterprise Portal client

Objectives

When you complete this module, you can perform these tasks:

- Create, install, and configure an Agent Builder agent that uses a script as the data source
- View agent-collected data on the Tivoli Enterprise Portal

When you complete this module, you can start the Tivoli Monitoring agent that is created by the Agent Builder and connect to the Tivoli Enterprise Portal to view the agent.

Example

The installed script returns the model number and serial number:

```
# ./AB_IEA.sh  
03066865G;9131-52A  
# 
```

In this lesson, you learn to create an agent that parses the output of a script. Here is an example of the model number and serial number that the installed script returns.

Starting the Agent Builder

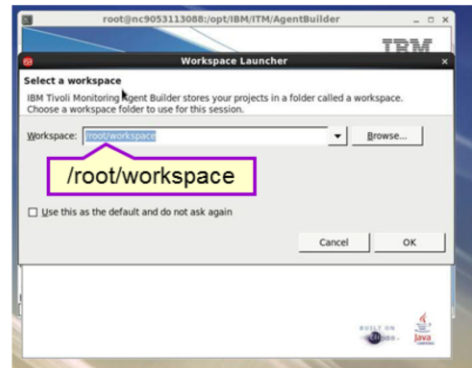
Start (launch) the Agent Builder in one of the following ways:

On Windows:

- Use the command line and type **Install_Directory\agentbuilder.exe**
- Click **Start > All Programs > IBM Tivoli Monitoring > Agent Builder**
- Click the **Agent Builder** desktop icon

On other supported UNIX® and Linux® systems:

- Type **Install_Directory/agentbuilder**



```
[root@nc9053113088 ~]# cd /opt/IBM/ITM/AgentBuilder/
[root@nc9053113088 AgentBuilder]# ./agentbuilder &
[1] 1476
[root@nc9053113088 AgentBuilder]#
```

On Windows, there are several ways to start Agent Builder. From the command line, run the command **Install_Directory\agentbuilder.exe**, or click **Start > All Programs > IBM Tivoli Monitoring > Agent Builder**. Alternatively, you can double-click the **Agent Builder** desktop icon.

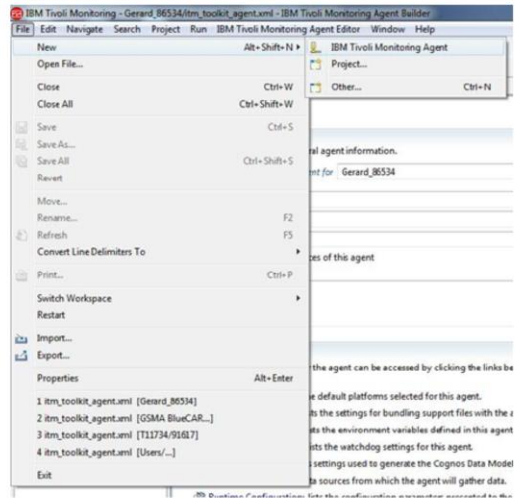
On other supported operating systems, you can start it from the Agent Builder **Install_Directory** by running the **agentbuilder** executable file.

When you start the Agent Builder, the software prompts for the workspace location. Workspace is the directory where all the projects are saved. Specify the workspace directory and click **OK**.

The Agent Builder software starts.

Creating the Agent Builder agent

Click **File > New > IBM Tivoli Monitoring Agent**



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Creating an Agent Builder agent with a script as the data source

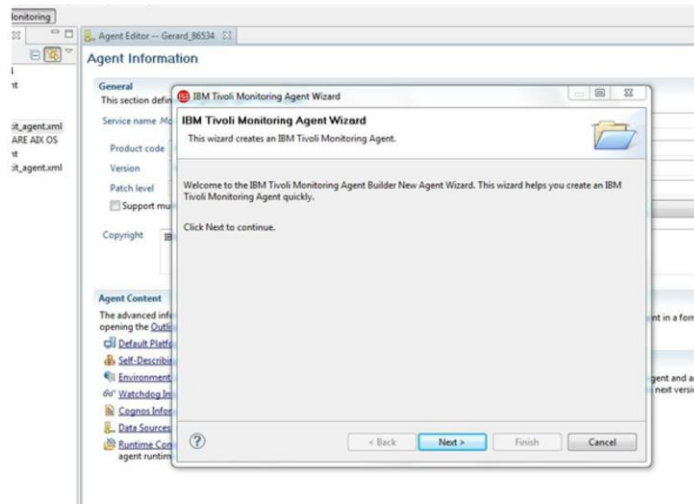
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To create the agent, click **File > New > IBM Tivoli Monitoring Agent**.

Optionally, you can create a new project and then create an agent under that project.

IBM Tivoli Monitoring Agent wizard

Click **Next**



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Creating an Agent Builder agent with a script as the data source

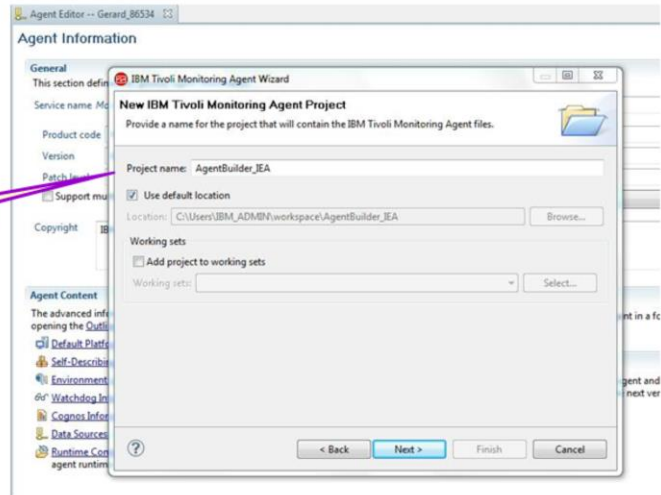
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The IBM Tivoli Monitoring Agent Wizard window opens. Click **Next**.

Entering the project name

- Type a project name
- Click **Next**

Project name



The agent must be a part of a project. Type the project name and click **Next**.

General information

Agent Information

General
This section defines the agent's general information.

Service name: M...
Product code:
Version:
Patch level:
 Support mu...
Copyright: IBM

Agent Content
The advanced info...
opening the Outi...
Default Platf...
Self-Describ...
Environment...
Watchdog In...
Cognos Infor...
Data Sourc...
Runtime Con...
agent runtim...

IBM Tivoli Monitoring Agent Wizard

General Information
Enter the description of the agent you are creating.

Display name: AgentBuilder_JEA
Copyright: IBM

Default Operating Systems

<input checked="" type="checkbox"/> AIX (32-bit)	<input type="checkbox"/> Linux 2.4 (Intel)	<input type="checkbox"/> Linux (64-bit Itanium)	<input type="checkbox"/> Windows
<input checked="" type="checkbox"/> AIX (64-bit)	<input type="checkbox"/> Linux 2.6 (Intel)	<input type="checkbox"/> Linux (64-bit x86)	<input type="checkbox"/> Windows (64-bit)
<input type="checkbox"/> HP-UX (32-bit)	<input type="checkbox"/> Linux (31-bit zSeries)	<input type="checkbox"/> Solaris (32-bit SPARC)	
<input type="checkbox"/> HP-UX (64-bit)	<input type="checkbox"/> Linux (64-bit zSeries)	<input type="checkbox"/> Solaris (64-bit SPARC)	
<input type="checkbox"/> HP-UX (64-bit Itanium)	<input type="checkbox"/> Linux (64-bit PowerPC)	<input type="checkbox"/> Solaris (64-bit x86)	
<input type="checkbox"/> All operating systems	<input type="checkbox"/> All Linux	<input type="checkbox"/> All UNIX	<input type="checkbox"/> All Windows

< Back Next > Finish Cancel

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- Select the operating systems for agent installation
- Click **Next**

In the General Information window, you can choose the operating systems for agent installation. For the purposes of this example, select the operating systems as AIX®, both 32-bit and 64-bit.

You can also specify the **Display name**. After the agent is installed and running, this name displays for the agent on the Tivoli Enterprise Portal.

Click **Next**.

Agent information

Agent Information

IBM Tivoli Monitoring Agent Wizard

Agent Information

Specify the general information for the agent.

Service name: Monitoring Agent for AgentBuilder_JEA

Product code: K10

Company identifier: IBM

Agent identifier: MAC_ID

Version: 623

Support multiple instances of this agent

Minimum ITM version: 6.2.1

< Back Next > Finish Cancel

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Creating an Agent Builder agent with a script as the data source

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The Agent Information section contains the details about the agent that is being built.

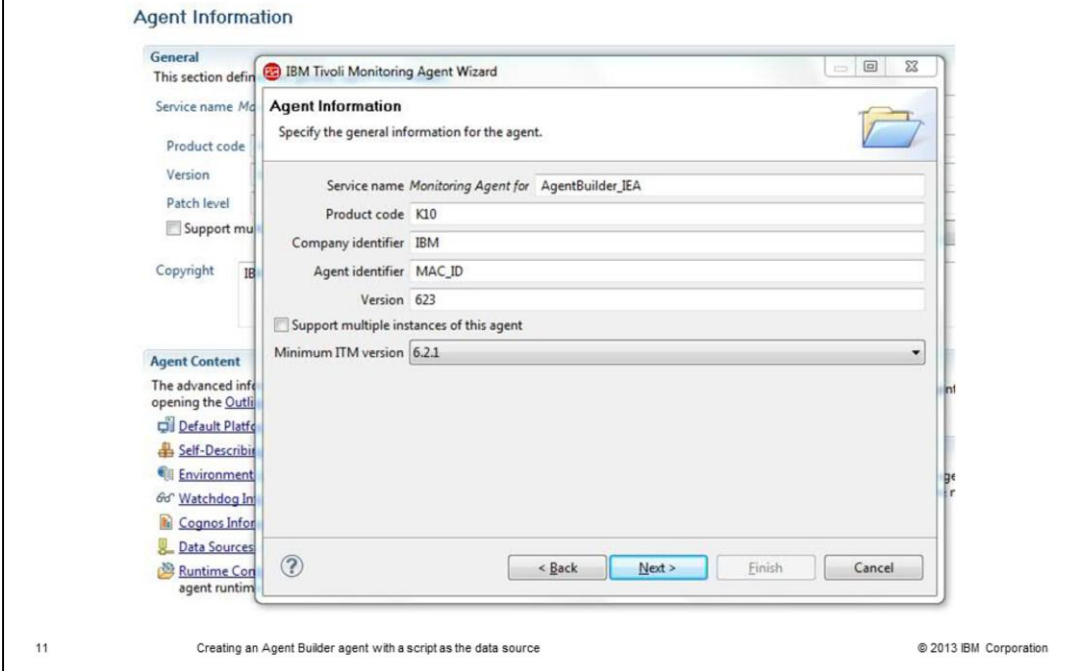
The **Service name** is the name of the service that is created on Windows and is also the name of the service that is displayed in the Manage Tivoli Monitoring Services window.

The **Product code** that identifies every agent can be a combination of two digits or a letter and a digit. The first character in the product code must always be a digit. In the example, the product code displays as K10; the letter K is added by the tool, the actual product code is 10.

In the **Company identifier** field, type an alphabetic string that uniquely identifies the organization that develops the agent (IBM is reserved).

In the **Agent identifier** field, type an alphabetic string that uniquely identifies the agent that is being developed. For example, **MAC_ID** might be a good identifier if the agent retrieves data about the system.

Entering the version



In the **Version** field, type a three-digit number that identifies the agent version in the format VRR, where:

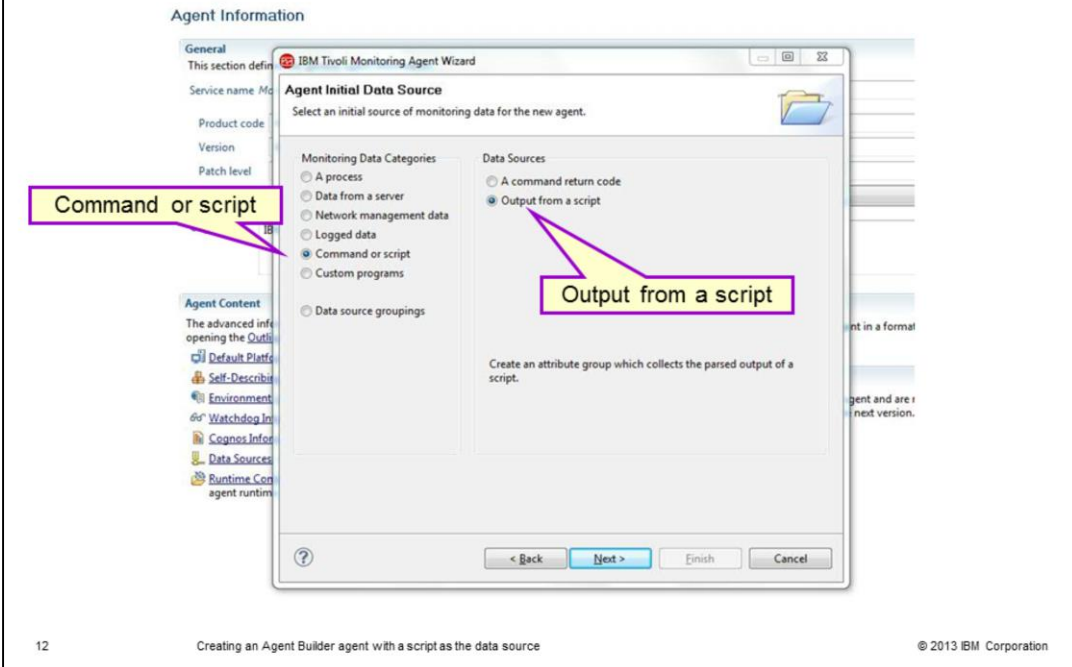
V = Version
 R = Release
 R = Release ...

The VRR entered is converted to an IBM Tivoli Monitoring VVRRMMFF format that looks like 0V.RR.00.00.

If you want your agent to support multiple instances, select the **Support multiple instances of this agent** check box.

In the **Minimum ITM Version** field, select the minimum version of IBM Tivoli Monitoring that the agent requires.

Entering the data source

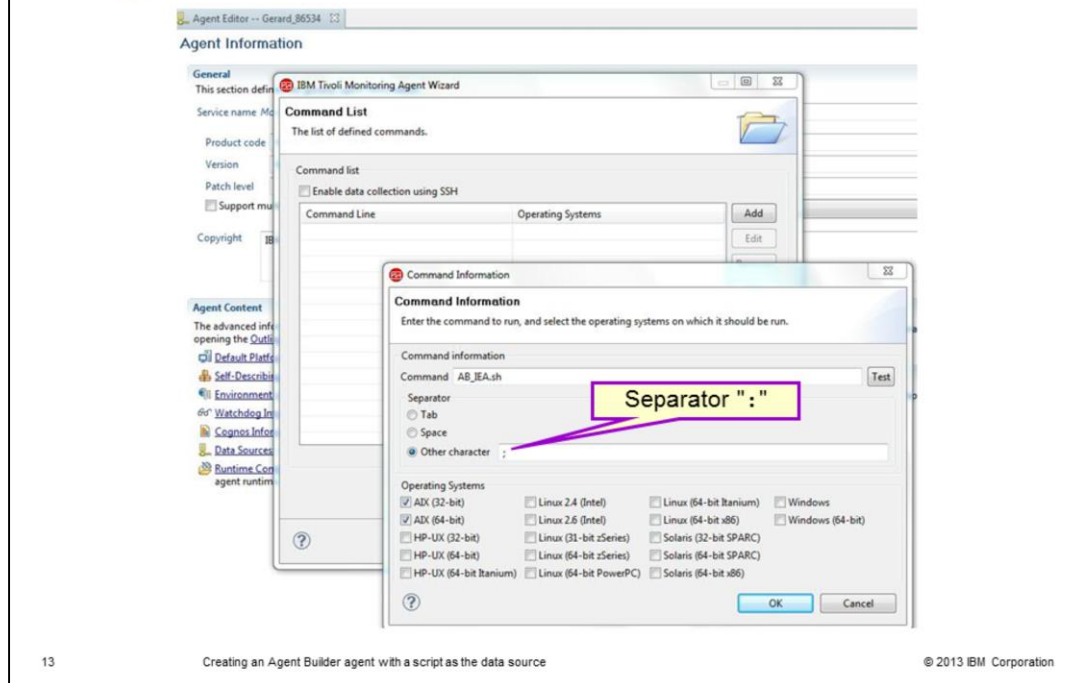


In the next section in the wizard, you enter the data source. In this example, because the data source is the data that is obtained by running a script, under **Monitoring Data categories**, you click **Command or script**.

Under **Data Sources**, click **Output from a script**.

Click **Next**.

Adding the command information



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Creating an Agent Builder agent with a script as the data source

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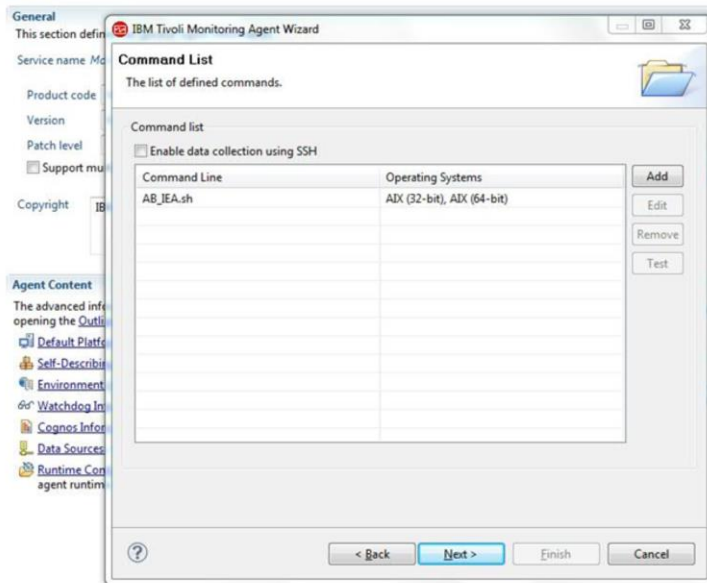
From the Command List window, click **Add** to specify the command to be run. If you select the check box for **Enable data collection using SSH**, the software runs the command line relative to the home directory of the user on the remote system. The check box is cleared in this example.

When you click **Add**, the Command Information window opens.

- In the **Command** text field, type the command to run with the necessary arguments.
- The **separator** is a character that differentiates the different attributes that the script returns.
- The **Operating Systems** section populates based on the platforms that you selected.
- Under the **Command Files** section, **File Name** is an optional field. It lists the files that are required for the script to run.
- Click **OK**.

Viewing the updated command list

Agent Information



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Creating an Agent Builder agent with a script as the data source

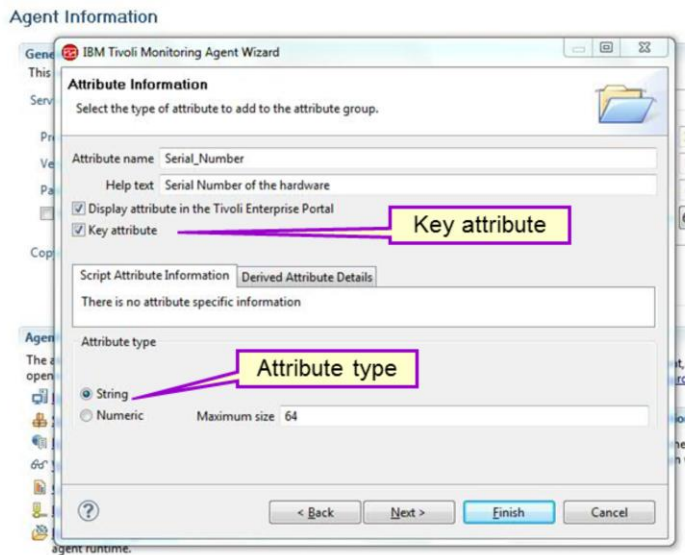
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When the Command Information window closes, the **Command List** is updated with the information.

Click **Next**.

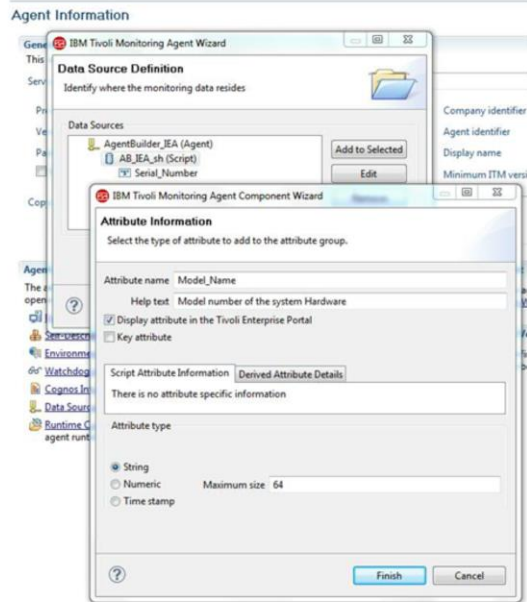
Adding an attribute

- Specify the name of the attribute and the **Help text** which helps identify the attribute
- Pick the attribute type



In the Attribute Information window, add the first attribute that the script returns. One of the attributes should be a *key attribute*. You must select the **Key attribute** check box to indicate the key attribute. You also must specify the data type of the attribute as **string**, **numeric**, or **timestamp**.

Adding more attributes



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Creating an Agent Builder agent with a script as the data source

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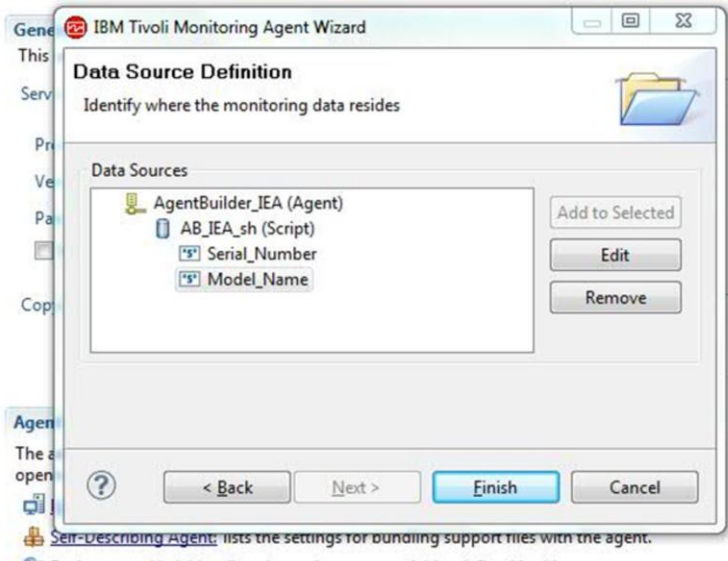
To add multiple attributes to the workspace, you highlight the script name and then select **Add to Selected**. In the Attribute Information window that opens, type the details for another attribute.

After you enter all the information, click **Finish**.

Data Source Definition window

- The Data Source Definition window displays all the attributes that you entered
- Click **Finish**

Agent Information



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Creating an Agent Builder agent with a script as the data source

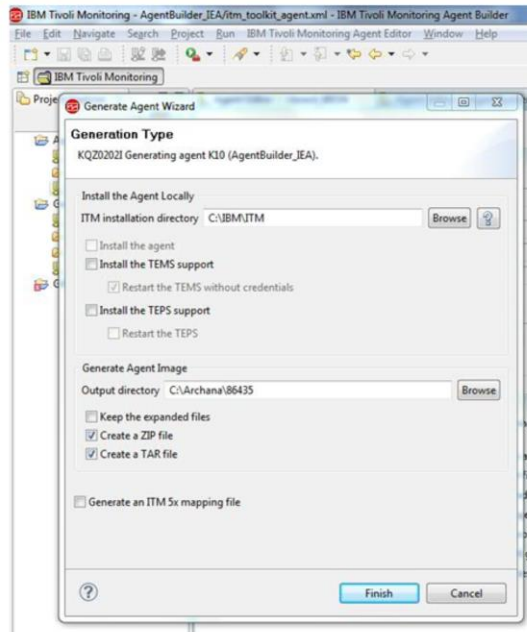
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After all the attributes are added, the Data Source Definition window looks like this screen capture.

Click **Finish**.

Generating the agent bundle

- Choose **IBM Tivoli Monitoring Agent Editor** from the main menu and select **Generate Agent**
- Under the **Generate Agent Image** section, specify the location where the installation bundles are created
- Click **Finish**



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Creating an Agent Builder agent with a script as the data source

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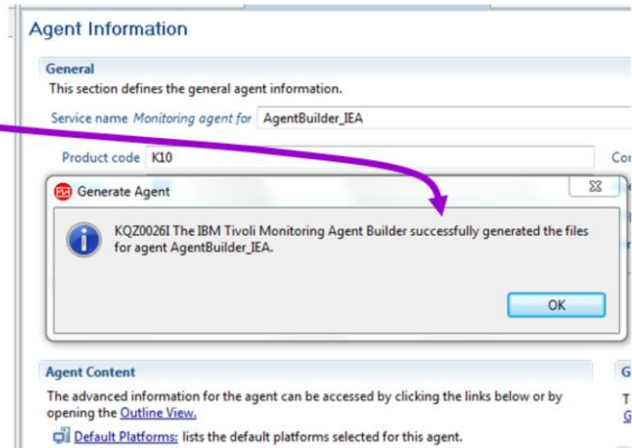
Now, you are ready to generate the agent bundle. From the main menu, click **IBM Tivoli Monitoring Agent Editor** and choose **Generate Agent**. If the agent installation is for the local system, you select the **Install the agent** check box. In addition, if the Tivoli Enterprise Monitoring Server or the Tivoli Enterprise Portal Server is running on the local system, you can install application support for the agent by selecting the corresponding check boxes.

If you want to install the agent on a remote system, you specify the location where the installation bundles are created.

Click **Finish**.

Generating the agent bundle

- After the bundle is created successfully, a message opens
- Click **OK**



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Creating an Agent Builder agent with a script as the data source

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After the agent bundle is generated, a message opens that indicates the agent bundles generated successfully.

Click **OK**.

Now, you are ready to install the agent by either transferring the bundles to the remote system or to the Tivoli Enterprise Monitoring Server system to add the bundle to the depot for remote installation.

In this example, move the agent bundle to the agent system and install it locally.

Installing the Agent Builder agent

- Transfer the bundle to the system where the agent should be installed
- Extract the contents of the bundle
- To install the agent, run the `./installIraAgent` command:
 - For Linux or UNIX:
`./installIraAgent.sh`
`$CANDLEHOME`
 - For Windows:
`installIraAgent.bat`
`%CANDLEHOME%`
- The installed agent is listed when you run `$CANDLEHOME/bin/cinfo -i`

```
# ls
10_dd.properties          installIra.sh             ira
10_dd_062300000.xml      installIraAgent.sh       k10unix.dsc
K10.tar                   installIraAgentTEMS.bat  reports
getarch.ksh               installIraAgentTEMS.sh   support
help                       installIraAgentTEPS.bat
installIra.bat            installIraAgentTEPS.sh
# ./installIraAgent.sh /opt/IBM/ITM
Installing k10 .....
Stopping Monitoring Agent for AgentBuilder_IEA ...
KCIINO196E Agent is not running...
copying agent config files now...
Install of K10 Agent successful.
To start the agent, run:
/opt/IBM/ITM/bin/itmcmd agent start 10
To stop the agent, run:
/opt/IBM/ITM/bin/itmcmd agent stop 10
# █

# pwd
/opt/IBM/ITM/bin
# ./cinfo -i

***** Wed Jul 18 13:15:26 CDT 2012 *****
User: root Groups: system bin sys security cron audit lp
Host name : aixcnp          Installer Lvl:06.22.02.00
CandleHome: /opt/IBM/ITM
*****
...Product inventory
10   Monitoring Agent for AgentBuilder_IEA
     aix526 Version: 06.23.00.00
ak   IBM Tivoli Monitoring Shared Libraries
     aix523 Version: 06.22.02.00
     aix526 Version: 06.22.02.00
qs   IBM GSKit Security Interface
     aix523 Version: 07.40.27.00
     aix526 Version: 07.40.27.00
```

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Creating an Agent Builder agent with a script as the data source

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For agent installation, the Tivoli Monitoring Agent for the operating system must be present.

After the agent bundle is transferred to the system where the agent must be installed, extract the contents of the bundle. To install the agent, run the command `./installIraAgent.sh $CANDLEHOME`.

After the agent is installed, it is listed when you run the command `$CANDLEHOME/bin/cinfo -i`.

Installing the application support for Agent Builder agent

- Application support for Tivoli Enterprise Monitoring Server
 - Transfer the bundle to the Tivoli Enterprise Monitoring Server system
 - Extract the contents of the bundle
 - Run this command to install the application support on Tivoli Enterprise Monitoring Server:
 - For Linux or UNIX:
`./installIraAgentTEMS.sh $CANDLEHOME`
 - For Windows:
`installIraAgentTEMS.bat %CANDLEHOME%`
- Application support for Tivoli Enterprise Portal Server
 - Transfer the bundle to the Tivoli Enterprise Portal Server system
 - Extract the contents of the bundle
 - Run this command to install the application support on Tivoli Enterprise Portal Server
 - For Linux or UNIX:
`./installIraAgentTEPS.sh $CANDLEHOME`
 - For Windows:
`installIraAgentTEPS.bat %CANDLEHOME%`

For application support installation for Tivoli Enterprise Monitoring Server, you must transfer the bundle to the Tivoli Enterprise Monitoring Server system and extract the contents of the bundle. For application support installation on Tivoli Enterprise Monitoring Server, run either of these two commands:

- If the Tivoli Enterprise Monitoring Server is on Linux or UNIX
`./installIraAgentTEMS.sh $CANDLEHOME`
- If the Tivoli Enterprise Monitoring Server is on Windows
`installIraAgentTEMS.bat %CANDLEHOME%`

For application support installation for Tivoli Enterprise Portal Server, you must transfer the bundle to the Tivoli Enterprise Portal Server system and extract the contents of the bundle. For application support installation on the Tivoli Enterprise Portal Server, run either of these two commands:

- If the Tivoli Enterprise Portal Server is on Linux or UNIX
`./installIraAgentTEPS.sh $CANDLEHOME`
- If the Tivoli Enterprise Portal Server is on Windows
`installIraAgentTEPS.bat %CANDLEHOME%`

Configuring and starting the agent on UNIX or Linux

- To configure the agent, run `$CANDLEHOME/bin/itmcmd config -A <pc>`
- To start the agent, run `$CANDLEHOME/bin/itmcmd agent start <pc>`

```
# ./itmcmd config -A 10
Agent configuration started...

Will this agent connect to a TEMS? [1=YES, 2=NO] (Default is: 1):
TEMS Host Name (Default is: aixcnp): nmp136

Network Protocol [ip, sna, ip.pipe or ip.spipe] (Default is: ip.pipe):

    Now choose the next protocol number from one of these:
    - ip
    - sna
    - ip.spipe
    - 0 for none
Network Protocol 2 (Default is: 0):
IP.PIPE Port Number (Default is: 1918):
Enter name of KDC_PARTITION (Default is: null):

Configure connection for a secondary TEMS? [1=YES, 2=NO] (Default is: 2):
Enter Optional Primary Network Name or 0 for "none" (Default is: 0):
Agent configuration completed...
# ./itmcmd agent start 10
Starting Monitoring Agent for AgentBuilder_IEA ...
Monitoring Agent for AgentBuilder_IEA started
# █
```

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Creating an Agent Builder agent with a script as the data source

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To configure the agent on UNIX or Linux, run
`$CANDLEHOME/bin/itmcmd config -A <pc>`.

After the agent is configured on UNIX or Linux, start the agent with the command
`$CANDLEHOME/bin/itmcmd agent start <pc>`.

Summary

Now that you completed this module, you can perform these tasks:

- Create, install, and configure an Agent Builder agent that uses a script as the data source
- View agent-collected data on the Tivoli Enterprise Portal

Now that you completed this module, you can start the Tivoli Monitoring Agent that is created by the Agent Builder and connect to the Tivoli Enterprise Portal to view the agent.

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