IBM Software Group

IBM® WebSphere® Application Server V7

IBM Support Assistant agents

This presentation introduces how to use IBM Support Assistant agents to perform remote troubleshooting in your WebSphere Application Server environment.

Agenda

- Overview
- Installation and configuration
- Performing common tasks

The first section of this presentation provides an overview of the IBM Support Assistant agent manager and IBM Support Assistant agents and explains how these components fit into the IBM Support Assistant architecture. The second section describes how to install and configure the agent manager and agents. Finally, the last section discusses how to perform common tasks related to agents.
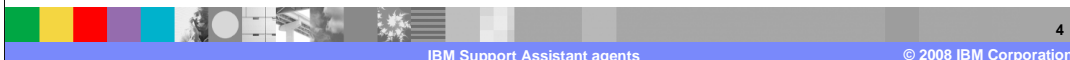
Section

Overview

This section will introduce the IBM Support Assistant agent manager and IBM Support Assistant agents.

IBM

IBM Support Assistant agent manager

- IBM Support Assistant agent manager is a lightweight server component
  - ▸ Needs to be installed on a system that is visible to remote machines, workbenches (one agent manager in your environment)
  - ▸ Provides authentication and authorization services for communication from workbench to service agents
  - ▸ Maintains a registry of configuration information about the managed systems in your environment

- The agent manager, together with agents, provide the ability to run data collection and other tasks remotely

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The agent manager is a new component in the IBM Support Assistant V4 architecture to help support remote troubleshooting and data gathering. It is a lightweight server component that maintains a registry of the configuration information about the managed systems in your environment and provides authentication and authorization services for communication between the workbench and service agents. You only need to have one agent manager in your environment, and it needs to be installed on a system that is visible to the remote systems that are running the service agents and to the workstation where you have your workbench installed.
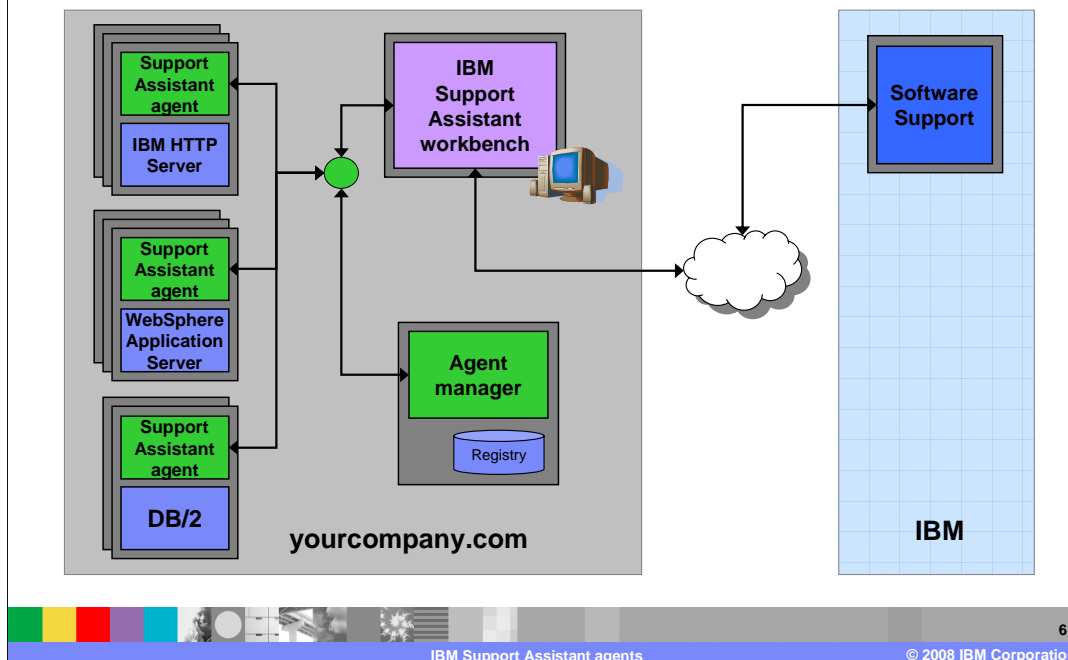
IBM Support Assistant agents

- Agents are based on the Tivoli Common Agent runtime
  - ▸ Provide services such as data collection, software inventory, file transfer
  - ▸ Install the agent on any system you want to manage
  - ▸ Agents can be customized with product-specific content

The service agents that are now available with IBM Support Assistant are based on the Tivoli Common Agent runtime. They work in conjunction with the agent manager to provide remote debugging capability to your IBM Support Assistant Workbench. The agent needs to be installed on any system that you want manage. The basic agent provides services such as data collection, file transfer, and the ability to generate a software inventory for the system, but the agents can also be customized with product-specific content. For example, you can install agent add-ons for WebSphere Application Server V7 that allow you to remotely connect to a system, trigger a dump for the Java Virtual Machine in your WebSphere environment, and automatically transfer the dump back to your workstation.

Deployment architecture, Version 4

The Version 4 architecture for IBM Support Assistant includes an agent manager and remote agents that help gather diagnostic data for your IBM software products. The agents are designed to run on the systems where you have your software products – like WebSphere Application Server – deployed. They can be customized with add-ons to gather relevant data for a variety of problem determination tasks. The agent manager is a lightweight server component that coordinates communication between the agents and the workbench. Together, the agent manager and agents allow you to access remote systems directly from your support assistant workbench and easily transfer files from the remote systems to your desktop to send to IBM support. The Version 4 workbench also still provides the product information and tools that were available in the previous release.

Section

Installation and configuration

IBM Support Assistant agents

This section describes how to install and configure the agent manager and agents.

IBM

Packaging and platform support

- IBM Support Assistant agents are available for Windows®, AIX®, Linux®, and Solaris®

Windows	
Installation image	IBM Support Assistant agent CD
OS levels	Windows XP Professional with SP1
	Windows Server 2003 Datacenter
	Windows Server 2003 Enterprise
	Windows Server 2003 Standard
Hardware	Intel® Pentium® processor or compatible

AIX	
Installation image	IBM Support Assistant agent CD
OS levels	AIX 5L 5.3 with APAR IY91085
	AIX 6.1
Hardware	Any system from the IBM POWER family of processors

The agent manager and agents are designed to work on the server platforms where you typically deploy your IBM software products, like WebSphere Application Server. This includes support for Windows, AIX, Linux, and Solaris. The agent manager and agents use a common installation image, which is available with your WebSphere Application Server media and can also be downloaded at no charge from the IBM Support Assistant Web site. This slide lists the supported hardware and software levels for AIX and Windows.

Packaging and platform support – Agents

Linux	
Installation image	IBM Support Assistant agent CD
OS levels	Red Hat Enterprise Linux AS 4.0
	Red Hat Enterprise Linux AS 5.0
	SUSE Linux Enterprise Server 9.0
	SUSE Linux Enterprise Server 10.0
Hardware	Intel Pentium processor or compatible

Solaris	
Installation image	IBM Support Assistant agent CD
OS level	Solaris 10
Hardware	Sun Solaris operating environment compatible SPARC workstation

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This slide lists the supported hardware and software levels for Linux and Solaris.
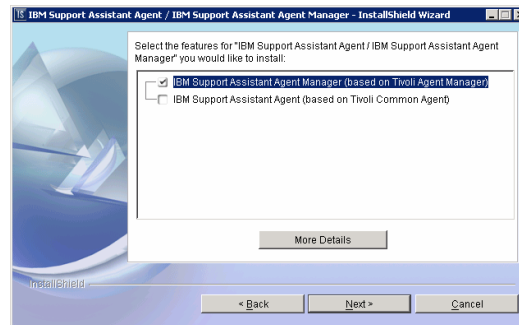
Installation process
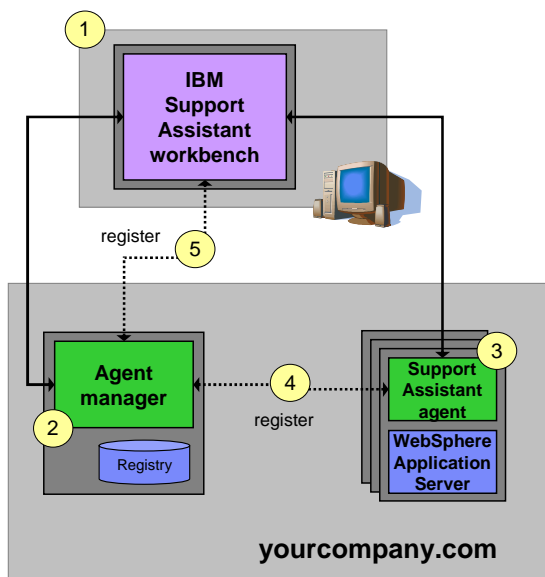
Sample installation flow

- Install the workbench on your desktop
- Install the agent manager – start it
- Install the common agent – start it
- Register the agent with the agent manager, can be done during installation process
- Register the workbench with the agent manager
- Workbench can communicate with the agent manager and agents

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The diagram on this slide illustrates a sample installation flow for configuring your IBM Support Assistant environment. Typically, you install the workbench on your desktop first, but a new workbench can be installed on a new desktop at any time. You should always install the agent manager and start it before installing any agents. Once the agent manager is installed, you can install new agents at any time. After you have both the agent manager and an agent installed, you need to register the agent with the agent manager. You can also do the registration as a part of the agent installation process – you will see an example of this later on in the presentation. Next, register the workbench with the agent manager. At that point, the components of your environment are all connected, and the workbench is able to communicate with the agent manager and the registered service agents. The next slides cover the installation and configuration process in more detail.
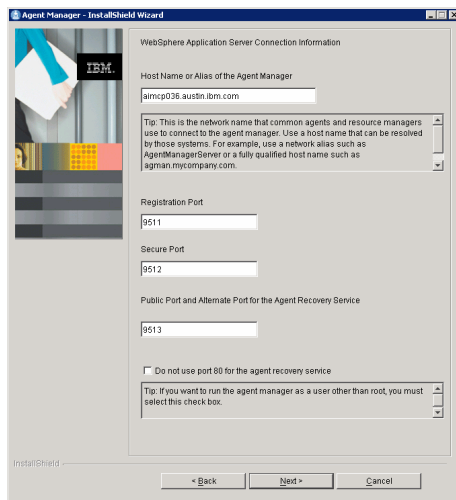
Agent manager installation setup

- Install the agent manager before installing agents
- Unpack the installation image for your operating system and run the installation program
  - ▶ Accept the license agreement
  - ▶ Choose the option to install **IBM Support Assistant Agent Manager (based on Tivoli Agent Manager)**
  - ▶ Choose an installation directory
  - ▶ Review the installation summary
  - ▶ Click the **Install** button and a new window opens
  - ▶ Choose a language for the agent manager installer

IBM Support Assistant Agent / IBM Support Assistant Agent Manager - InstallShield Wizard

Select the features for "IBM Support Assistant Agent / IBM Support Assistant Agent Manager" you would like to install:

☑ IBM Support Assistant Agent Manager (based on Tivoli Agent Manager)
☐ IBM Support Assistant Agent (based on Tivoli Common Agent)

More Details

InstallShield

< Back   Next >   Cancel

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The agent manager and agents use a common installer. When you start the installer, you need to choose whether you are installing the agent manager or the agent or both. If you are installing the agent manager and the agent on different systems, as is the case in this example, you can only install one at a time. To start the agent manager installer, choose the IBM Support Assistant Agent Manager option and step through the next panels in the wizard to choose an installation directory and a language to use for the agent manager installer. Once you have made those selections, the dedicated agent manager installer will start.
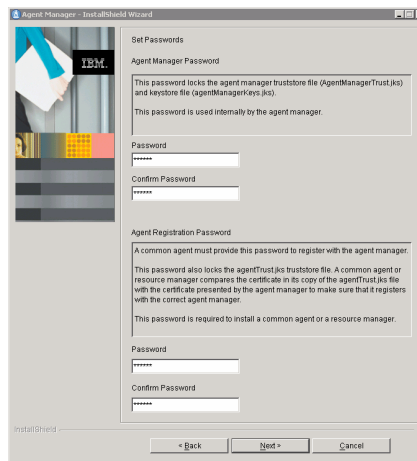
Agent manager installation

- Choose **Typical** installation
- Choose an installation directory for the agent manager components
- Configure the ports the agent manager will use to communicate
  - ▸ Default registration port: 9511
  - ▸ Default secure port: 9512
  - ▸ Default public port, alternate agent recovery service port: 9513
- Choose whether to start the agent manager after installation, on system restart

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Recall that the agent manager is a lightweight server component that is used to coordinate communication between the workbench and service agents, so you will need to configure the ports that the agent manager will use to communicate with the other components. The default registration port is 9511, and the default public port is 9513. You will need to use these port values when registering the agent and the workbench with the agent manager, so be sure to make a note of the port values that you choose if you change them from the defaults.
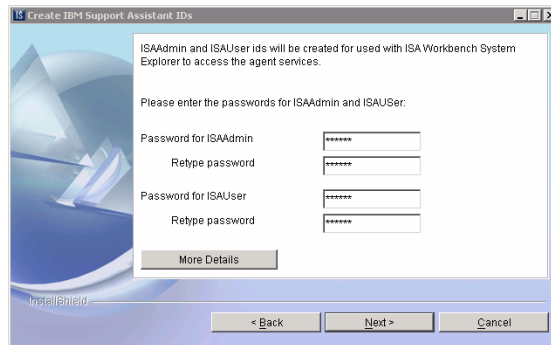
Agent manager installation (continued)

- Choose to **Create certificates for this installation**

- Set the password for the certificate authority

- Set the passwords for the agent manager and for agent registration
  - You will need the agent manager password to uninstall the agent manager
  - You will need the agent registration password to register an agent with the agent manager

- Optionally, create a backup directory for agent manager certificates

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You will also need to configure some security options as a part of the agent manager installation process, including providing information for creating certificates and setting up passwords for the agent manager and for agent registration. You will need the agent registration password to link an agent with the agent manager.

Agent manager installation (continued)

- Allow the installation process to run

- Click **Finish** to return to the original wizard

- Create passwords for the ISAAdmin and ISAUser IDs
  - ▸ These IDs are used when the workbench communicates with agents
  - ▸ ISAUser can access services provided by agents, such as data collection and file transfer
  - ▸ ISAAdmin can also perform administrative tasks, like installing new services on an agent

- Click **Next** to create the IDs, restart the agent manager

When you reach the end of the agent manager installer, allow the installation process to complete, and then click Finish to return to the original wizard. There are two special IDs that the workbench uses to communicate with the agent manager – ISAAdmin and ISAUser. On this panel, you need to choose passwords for both of those IDs. When you configure the workbench to connect to the agent manager with the ISAUser ID, you are able to use the services of the agents – like collecting data and transferring files – but you are not able to perform administrative tasks like installing new add-ons to an agent. You need to use the ISAAdmin ID to be able to perform administrative tasks.
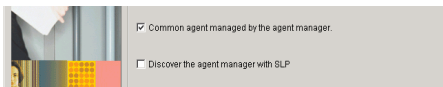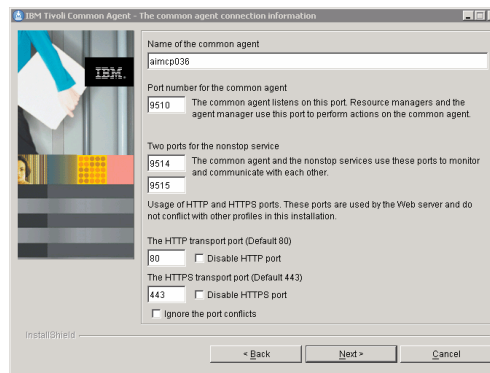
Agent installation

- Make sure that the agent manager is installed and running
  - https://<host name>:9511/AgentMgr/Info
- Run the same installation program that you used to start the agent manager installation process
  - Accept the license agreement
  - Choose to install the **IBM Support Assistant agent (based on Tivoli Common Agent)**
  - Choose an installation directory
  - Click the **Install** button and a new window opens
  - Choose a language for the common agent installer

IBM Support Assistant agents
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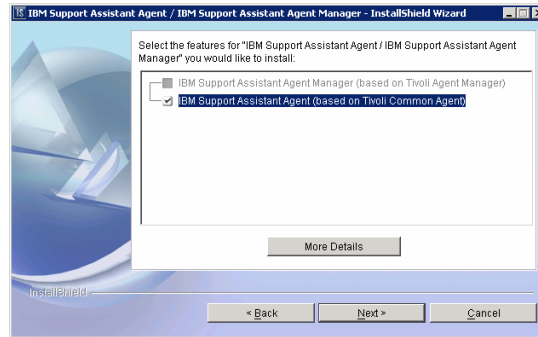
After you have installed the agent manager, make sure that it is running, and then start the installer for the agent. Launch the same installer that you used to install the agent manager, but this time, choose the option for installing the agent. Notice that, to fully configure your environment, you need to run the installation program twice – once for the agent manager, and here again, to install the agent.

Agent installation (continued)

- Choose **Typical** installation

- Choose an installation directory for the agent components

- Configure the ports the agent will use to communicate
  - Default common agent port: 9510

- On the next panel, make sure that the box next to **Common agent managed by the agent manager** is checked

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In the dedicated agent installer, you will need to choose an installation directory for the components and configure the ports that the agent will use to communicate. The default common agent port is 9510; this is the port that the agent listens on and that the agent manager uses to perform actions with the agent. After you have configured the ports, you can choose to automatically register the agent with an agent manager by choosing the "Common agent managed by the agent manager" option. If you do not choose to register with an agent manager at installation time, you can do so later.
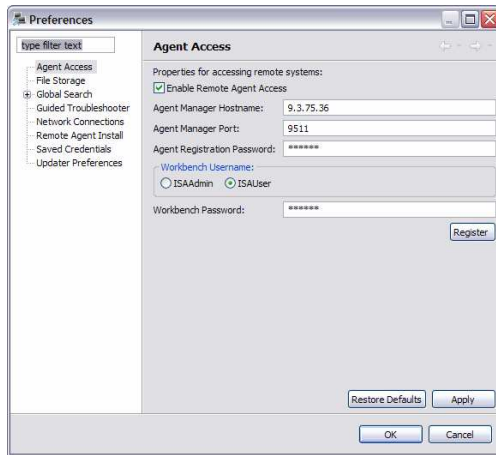
Agent installation (continued)

- Provide the host name of the system where you installed the agent manager
  - ▶ Use fully qualified host name
  - ▶ Provide public port for the agent manager, if different than the default
  - ▶ Installation process will test the connection to the agent manager
- On subsequent panels:
  - ▶ Accept the default options for certificates
  - ▶ Provide the agent registration password
  - ▶ Click **Install** to start the agent installation
- Installation will complete, agent is started and registered
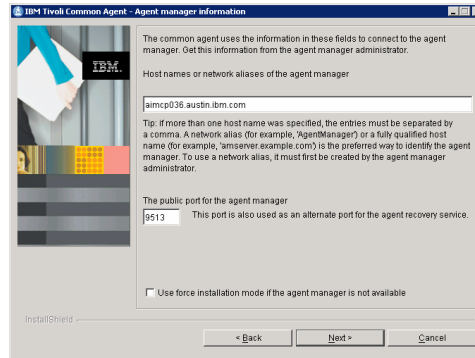
If you choose to register the agent with the agent manager at installation time, you need to provide connection information for the agent manager. Be sure to use a fully qualified host name for the agent manager and provide the value for the agent manager's public port – the default for the public port is 9513. The installation process will test that it can connect to the agent manager, and you will also have to provide the agent registration password that you created when installing the agent manager. When the installation process finishes, the agent is installed, started, and registered with the agent manager.

Registering the workbench and agent manager

Preferences

type filter text

Agent Access

- Agent Access
- File Storage
- Global Search
- Guided Troubleshooter
- Network Connections
- Remote Agent Install
- Saved Credentials
- Updater Preferences

Properties for accessing remote systems:

☑ Enable Remote Agent Access

Agent Manager Hostname: 9.3.75.36

Agent Manager Port: 9511

Agent Registration Password: ******

Workbench Username:
○ ISAAdmin ⊙ ISAUser

Workbench Password: ******

Register

Restore Defaults   Apply

OK   Cancel

- In the workbench, go to **File > Preferences > Agent Access**
- Check the box next to **Enable Remote Agent Access**
- Provide the:
  ▸ Agent manager host name
  ▸ Agent manager public port
  ▸ Agent registration password
- Choose the workbench username that you want – ISAAdmin or ISAUser
  ▸ Provide the appropriate user password
- Click the **Register** button

Now that the agent manager and agent are in place, the last step of the configuration process is to register your IBM Support Assistant Workbench with the agent manager. Access the registration menu under File > Preferences > Agent Access. To enable the fields on the page, check the box next to Enable Remote Agent Access. You will need to provide the agent manager host name, the agent manager public port, and the agent registration password. Choose which username you want to use – ISAAdmin or ISAUser – and provide the appropriate password for the username that you select. Click the Register button to complete the registration process. Now, your workbench, agent manager, and service agent are all installed and registered and able to communicate with each other.

Section

Performing common tasks

This section describes how to perform common tasks with service agents. These tasks are all driven from the IBM Support Assistant Workbench. To do these tasks, you must have registered the workbench with an agent manager.

Using the systems explorer

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Open the explorer under **Administration > Explore Systems**

Right-click on the system and choose **Show Software Inventory** to get a list of products installed on a remote system

Browse the remote file system, after authenticating with the remote OS

Right-click on a file and choose **Add to a Case** to copy the file to your workstation and store it with a case

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There is a systems explorer embedded in the IBM Support Assistant Workbench that you can use to browse through your local file system and any of the systems that you are connected to remotely through the agent manager. If you right click on one of the systems in the left navigation pane, you can choose the Show Software Inventory option to get a list of all of the products installed on the remote system. The left pane lists the file system contents as you browse the remote system. The system explorer is integrated with the workbench's case manager, so if you right-click on a file and choose to add it to a case file, it will automatically be copied from the remote system to your workstation and stored with whatever case you choose.

Installing add-ons to remote agents
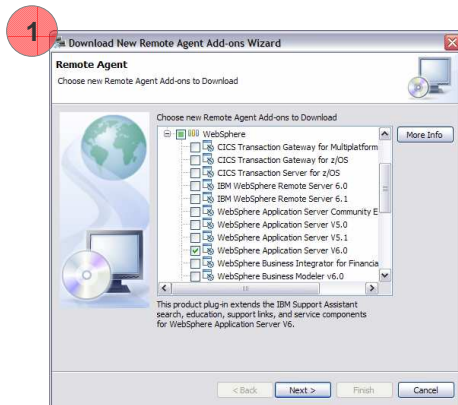
From the workbench, download the add-on to your local repository under **Administration > Remote Agents > Download New Add-ons to Local Repository**
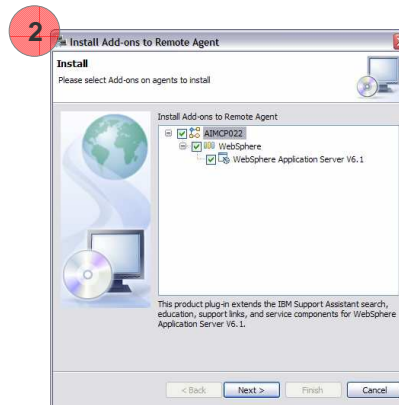
Install the software to the remote agent using the **Administration > Remote Agents > Install Add-ons to Agents** menu

Agents can be customized with add-ons. Agent add-ons are often used for product-specific data collection. The process of downloading and installing agent add-ons is driven from the workbench. Updating the agent software is an administrative task, so you need to be registered with the agent manager using the ISAAdmin user ID. Installing add-ons to remote agents is a two part process. First, use the workbench to download the agent add-on to your local repository. After the add-on is in your local repository, you can install the software to a remote agent. The agent add-on for WebSphere Application Server contains specialized software to automatically gather diagnostic data related to common problems. For example, after installing the agent add-on, you are able to connect to a remote WebSphere Application Server installation and launch a tool that will automatically generate a Java heap dump and transfer it down to your workstation for analysis.

Remote data collection
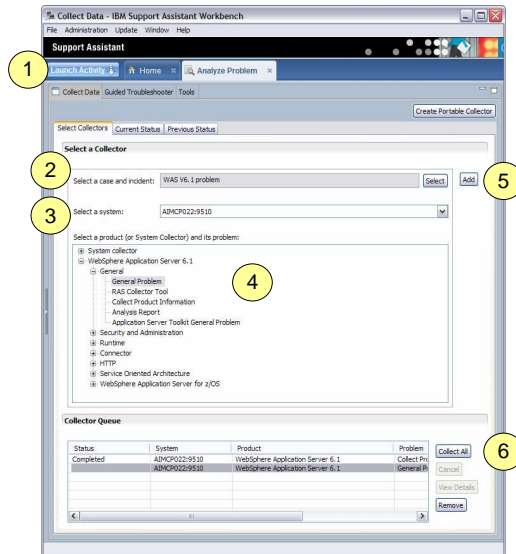
1. Under **Launch Activity**, choose **Analyze Problem** and go to the **Collect Data** tab

2. Select a case in which to store the data

3. Choose the system to collect the data from – remote systems with registered agents are available in the dropdown menu

4. Choose the collector you want to run

5. Click **Add** button to add the collector to the queue

6. Click **Collect All** to start the collector

The workbench contains a set of data collection tools that you can use to automatically collect data on local and remote systems. You can access these tools from the Analyze Problem activity in the workbench, under the Collect Data tab. First, you need to choose where to store the data that gets collected. Select the case that you want to use to organize your data. Next, choose the system that you are going to run the collector on. This can be the local system where you are running your workstation or any system that you are connected to through the agent manager. All available systems appear in the system dropdown menu. Next you need to choose which collector to run. You will have different collectors available depending on which add-ons you have installed. If, for example, you have the WebSphere Application Server V7 add-on installed and are experiencing a general problem, you can choose the General Problem collector to capture standard application server log files. Once you have selected a collector to run, click the Add button to add it to your collector queue. When you have added all of the collectors to your queue that you want to run, click the Collect All button to start the collectors. A status window will pop up that will keep you updated with the progress of the collectors.

Section

Summary and reference

IBM Support Assistant agents

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This section contains a summary and reference.

Summary

- IBM Support Assistant agent manager is a server component that coordinates communication between agents and the workbench

- IBM Support Assistant agents are deployed on your production systems and provide services like data gathering and file transfer

- Use the agent manager and agents, in conjunction with the IBM Support Assistant workbench, to do remote troubleshooting with your IBM software products

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The IBM Support Assistant agent manager is a server component that coordinates communication between agents and the workbench. IBM Support Assistant agents are deployed on your production systems and provide services like data gathering and file transfer. Use the agent manager and agents, in conjunction with the IBM Support Assistant workbench, to do remote troubleshooting with your IBM software products.

Reference

- IBM Support Assistant

  http://www.ibm.com/software/support/isa/

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