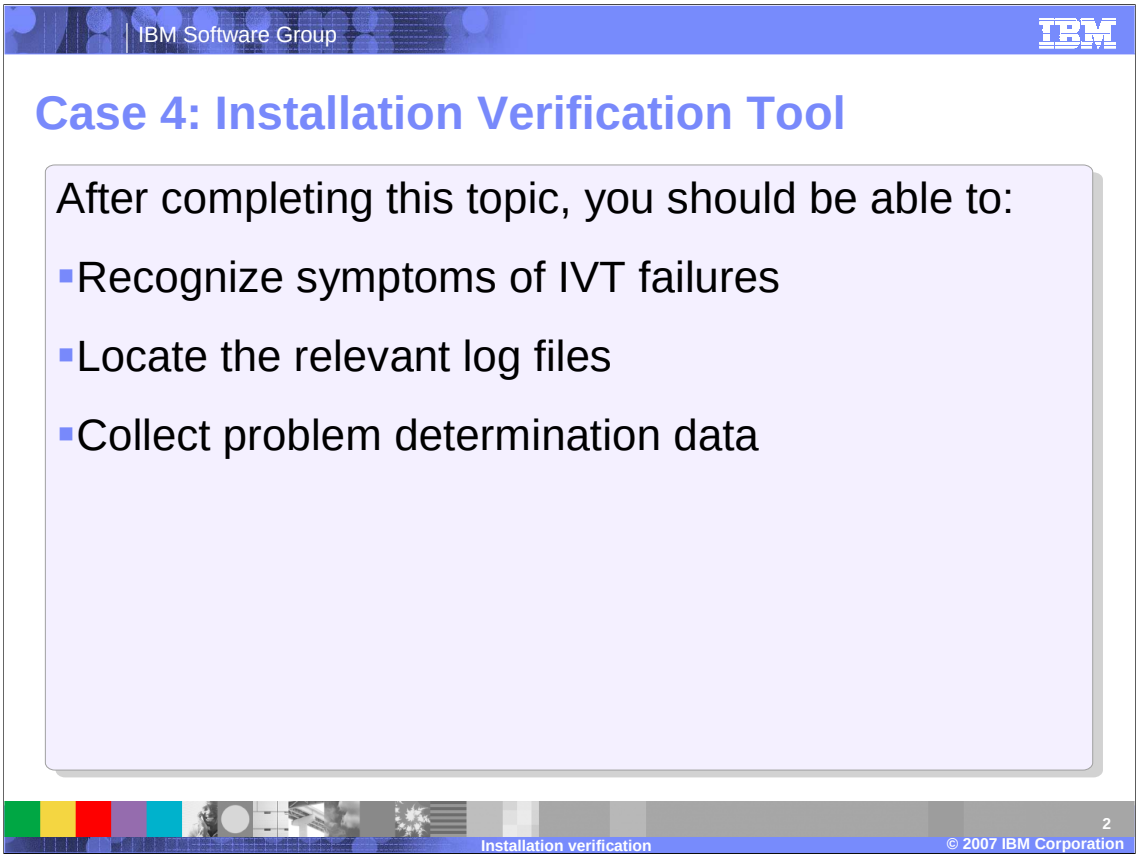
Installation Verification Tool, also known as IVT.



This section focuses on problems that may occur while using the installation verification tool, also known as IVT. At the end of the section you will be able to recognize the symptoms of IVT failures, locate the relevant log files, and collect pertinent problem determination data.

Case 4: Installation Verification Tool (1 of 2)

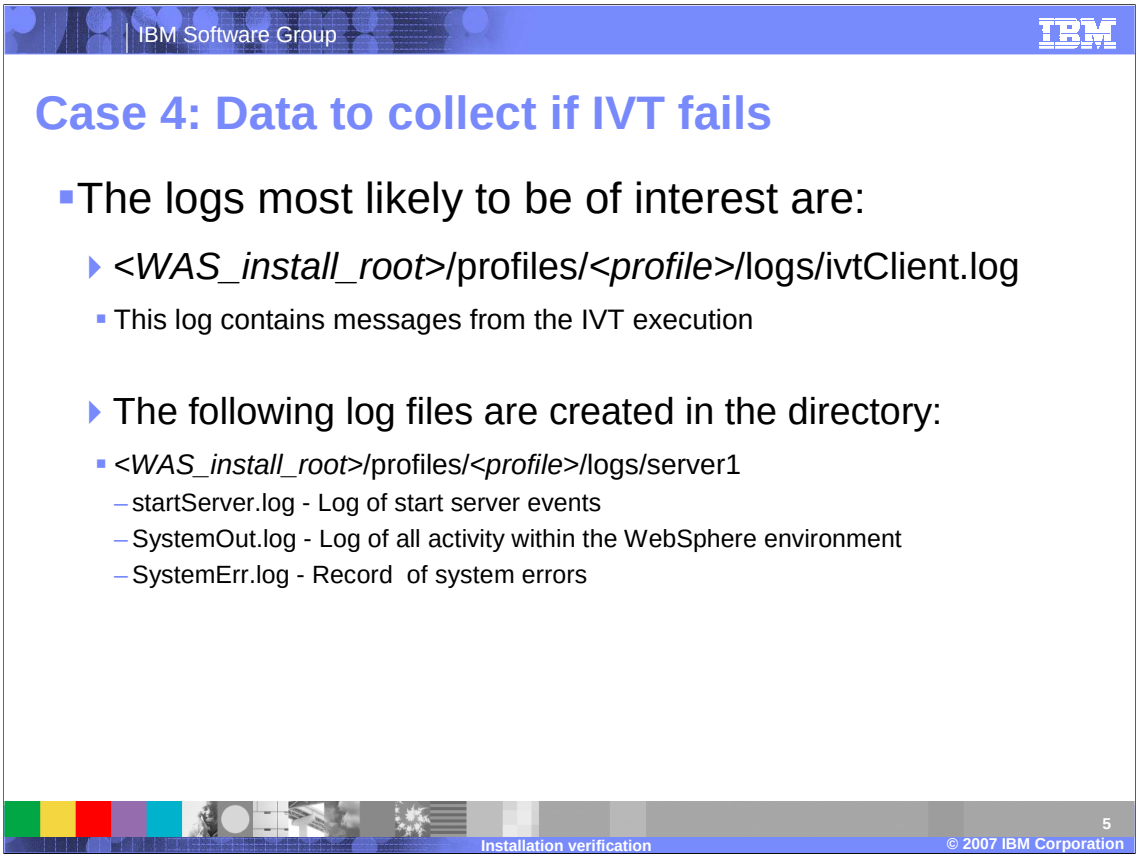
- The IVT looks at the profile configuration for the server and looks for a server running on the server port number
- Note that if a server is up and running on that port, the IVT runs against that server, even if it is not the one you just installed
- If no server is running on that port, the IVT attempts to start the server
- When the server has started successfully, the IVT accesses the server and runs various tests, including
  - Servlet engine verification,
  - JSP verification
  - EJB verification
  - And others

The IVT runs to verify that the profile creation was successful and the profile can be executed. IVT works by checking the ports associated with the profile and verifying that there is a server running on the appropriate ports. If another server happens to already be running on the specified ports then IVT will run against that server and may not properly test the newly created profile. If the IVT does not detect a server at the designated ports it will make an attempt to start the server in the profile and will then continue its tests. The IVT tests each of the main components of a server to verify that they are functioning properly. These include servlet engine, JSPs, and EJBs.

Case 4: Installation Verification Tool (2 of 2)

- You should run the IVT before making any configuration changes to WebSphere Application Server
- Stop all instances of WebSphere Application Server be before running the IVT
- IVT fails usually because the application server fails to start
  - Common reasons for this include
    - Port conflicts
    - Not enough memory

You should use IVT as a check point before making any changes to the configuration for a profile. This lets you avoid making changes to a profile that is already broken and can help you isolate the changes that are responsible for breaking the profile. It is also recommended you stop all instances of WebSphere Application Server before running the IVT. IVT is able to automatically start the servers to check their configuration and stopping the servers before the test will help IVT detect port conflicts more reliably. Letting IVT start the servers also helps you determine if the host machine has enough resources, such as memory, to run all of servers in the profile.



If IVT is not able to successfully complete its test of the WebSphere Application Server profile then your next step should be to check the ivtClient log in the profile‘s log directory. This file will contain a history of the tests performed by IVT and give you an idea of the state of IVT when it failed. If IVT failed while trying to start the server, which is a common reason for IVT to fail, then another important log is the SystemOut log. This file will contain information pertaining to the server and will provide more information as to why it was not able to start. The SystemOut log can be found in the log folder within the specific profile‘s directory.

Case 4: What to look for if IVT fails (1 of 3)

- Look for messages with IVTL and ADMU prefixes
- Look for the following message in *ivtClient.log*:

```
   ADMUXXXXX: Server servername open for e-
business;  process id is xxxx
```

- Examine the error messages in ivtClient.log to locate the failing process

There are two key prefixes that you will want to look for when you are reviewing the ivtClient log, IVTL and ADMU. These flags indicate what IVT successfully completed and what it was currently doing when it failed. We learned earlier that the majority of IVT failures occur because IVT was not able to start the server. If you can find the the server open for e-business line shown on this slide in your ivtClient log then you know that IVT was able to start the server and that the failure must have occured during one of the tests. In this case, you want to examine any error messages to try and locate the failing process.

Case 4: What to look for if IVT fails (2 of 3)

- If another deployment manager is running with the same port, you see the following messages:

```
IVTL0110E: Log file error with
C:\WebSphere\AppServer\profiles\Dmgr02\logs\dmgr\
SystemOut.log,java.io.FileNotFoundException:
C:\WebSphere\AppServer
```

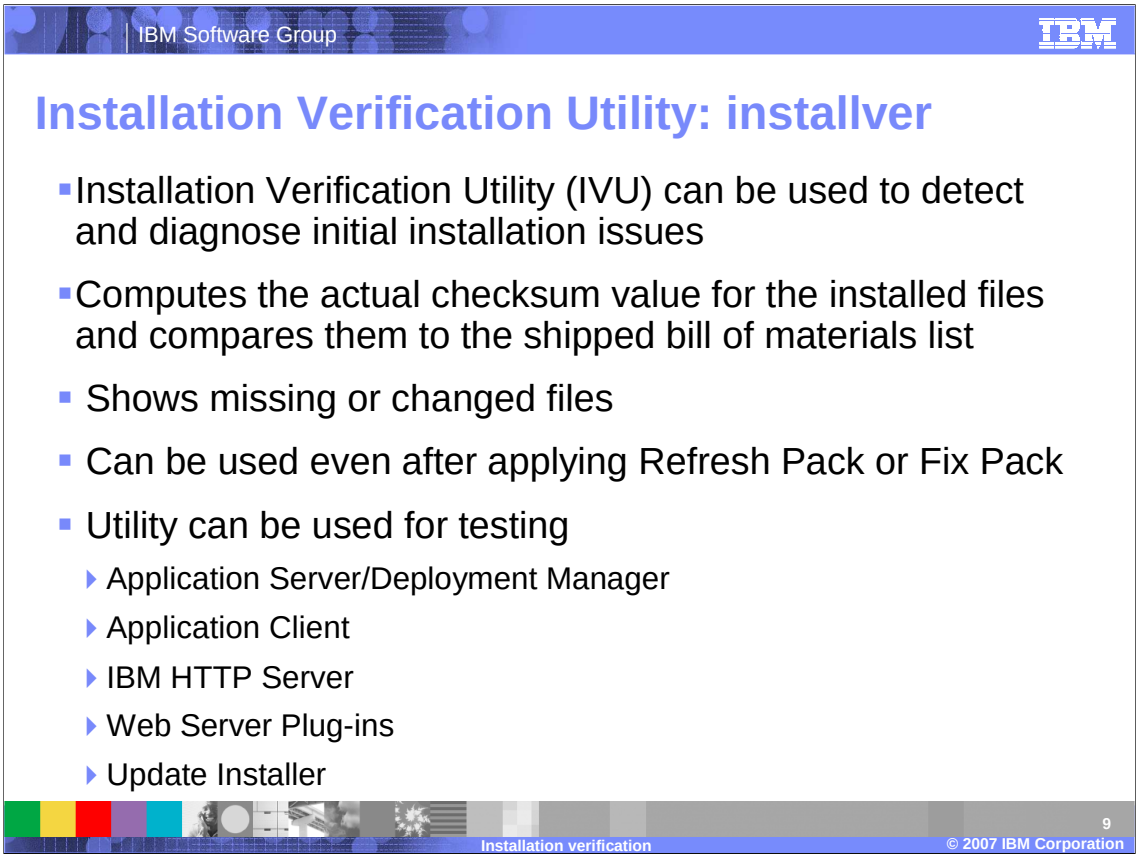
- If the server does not start, look at the `Server Port number is:` entry.
  - This entry contains the server port number of the profile instance
  - Make sure that this port is not in use

A common reason why a server cannot start is because there is a port number conflict with another process on the machine. The log message on this slide is an example of what a port conlict might look like when IVT is trying to start a deployment manager profile. The stack trace that follows this message will contain a line indicating the port number where the server was attempting to establish a connection. Check the system to see if that port is currently in use.

Case 4: What to look for if IVT fails (3 of 3)

- If the port does not seem to be the problem, look at
  - startServer.log
  - SystemErr.log
  - SystemOut.log
- Look for information related to server startup in the startServer.log and SystemOut.log, such as the following:
  - Any error messages starting with WSVR (server runtime)
  - ADMU (management utility).
- Look for error messages in SystemErr.log These messages will start with:
  - `[Date and time stamp] 0000000a SystemErr`

If IVT failed but the failure did not match any of the symptoms already discussed in this section then your next step should be to inspect the profile‘s startServer and System logs. Look in the startServer and SystemOut logs for any message starting with WSVR, which pertains to the server runtime, or ADMU, the management utility. You should also inspect the SystemErr log for a summary of the errors incountered while running the server.



A new install verifcation tool called Install Verification Utility was introduced in WebSphere Application Server version 6.0.2. IVU, commonly referred to as installver, uses a checksum to verify that the core product files have not been altered since they were installed. This tool is helpful in determining if changes were made to the core file, such as applying fixpacks and ifixes.

Run the installver utility

- Successful verification messages:

```
I CWNVU0160I: [ivu] Verifying.
I CWNVU0170I: [ivu] The installation root directory is C:\Program
Files\IBM\WebSphere\AppServer\
I CWNVU0300I: [ivu] The total number of user excluded files found are 0.
I CWNVU0300I: [ivu] The total number of IBM excluded files found are 75.
I CWNVU0180I: [ivu] Searching directory
properties\version\install\6.0.0.0\backup for file listing: files.list
I CWNVU0260I: [ivu] The total number of components found is: 285
I CWNVU0270I: [ivu] Gathering installation root data.
I CWNVU0460I: [ivu] The utility is running.
I CWNVU0290I: [ivu] Starting the verification for 1 components.
I CWNVU0470I: [ivu] Starting to analyze: installver
I CWNVU0480I: [ivu] Done analyzing: installver
I CWNVU0400I: [ivu] Total issues found : 0
I CWNVU0340I: [ivu] Done.
```


Here is an example of the output genereated by a successful run of the installver tool. Notice the second to last line where the output indicates that zero issues were found with this installation of WebSphere Application Server.

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