

This presentation provides an overview of the logging and tracing support provided in WebSphere® Partner Gateway V6.1



The goal of the presentations to provide you with a brief overview of the logging and tracing support and how to enable and configure log and trace files.



This slide shows the agenda of the presentation



The next section provides a brief overview of the logging and tracing support provided in WebSphere Partner Gateway V6.1



WebSphere Partner Gateway V6.1 makes use of the logging API supported by WebSphere Application Server instead of using the Log4j API that WebSphere Partner Gateway V6.0 used.

The benefits of this include the support for all log formats supported by WebSphere Application Server. support for generating common base events, event correlation and the ability to enable log levels for user exits. WebSphere Application Server provides the administrative console and wsadmin scripting to configure logging and tracing.



This section will cover the log files in general.

wpgv61_	_logging_	_tracing_	_support.ppt	

Installation log files location

Components	Temp (during install) log files location
	<system-temp>\bcgloader\logs</system-temp>
DBLoader	For Windows, system temp is C:\Documents and Settings\ <user>\Local Settings\Temp\</user>
WebSphere Partner Gateway Hub (Console, Receiver, Document Manager) and Messaging Application Server	<system-temp>\bcghub\logs</system-temp>
Hub	Final log files location
All servers and all install activities during install (like adding Node, creating profile)	<wpg_install dir="">\logs\</wpg_install>
Common	<wpg_install dir="">\logs\All</wpg_install>
Console	<wpg_install dir="">\logs\bcgconsole</wpg_install>
Receiver	<wpg_install dir="">\logs\bcgreceiver</wpg_install>
Document Manager	<wpg_install dir="">\logs\bcgdocmgr</wpg_install>
Messaging Application Server	<wpg_install dir="">\logs\bcgmas</wpg_install>
Deployment Manager	<wpg_install dir="">\logs\dmgr</wpg_install>
Messaging Artifacts	<wpg_install dir="">\logs\wpm</wpg_install>
	and tracing support

The table specifies the installation log file locations. These are files generated during the installation. These are separate from the runtime log files when the WebSphere Partner Gateway servers are started. If the install fails, look at the temporary files in addition to the final installation files. Sometimes the problem may be logged in the temporary file since they are created before the final log files. The log is appended to the files rather than creating new files on every installation. The application and messaging database installation log files are available only in the temporary location. These files are not copied to any final directory.

IBM



The various runtime log files generated by WebSphere Partner Gateway server Simple mode are shown here. As you can see in the graphic, in a simple distributed mode, you have one single server hosting all the WebSphere Partner Gateway components (Console, Receiver and Document manager). All the components write to the Server log files which are the Systemout.log and Systemerr.log files. Also shown is the trace.log file used when tracing is enabled.



The various runtime log files generated by WebSphere Partner Gateway server Simple distributed Mode are shown here.

As you can see in the graphic, in a Simple distributed mode, you have a server hosting all of the WebSphere Partner Gateway components (Console, Receiver and Document manager). All components write to the "Server Log files" which are the Systemout.log and Systemerr.log files. Also shown is the trace file used when tracing is enabled for each component. The deployment manager and the messaging servers have their own set of "Server Log files".



The various runtime log files generated by WebSphere Partner Gateway server Full distributed Mode are shown here.

Shown in the graphic is one variation of a Full distributed mode installation, you have one single server host one of the WebSphere Partner Gateway components (Console, Receiver and Document manager). Each component writes to its own Server log files which are the Systemout.log and Systemerr.log files. Also shown are the trace files used when tracing is enabled for each component on their corresponding servers. The deployment manager and the messaging servers have their own set of "Server Log files".



The directory for the location of the runtime log files for each of the servers is shown on this page. The log files appear under the specific profiles of WebSphere Application Server V6.1. In V6.0, profile has one server which represented one of the WebSphere Partner Gateway components (Receiver, Console or Doc Manager). In V6.1 all the components are J2EE applications. Depending on what topology you chose to use for your installation the values for profile-name> and server-name> change. For example in simple mode you have one profile with one server hosting all the applications so you only have one profile and the profile which hosts the WebSphere Partner Gateway Components. So in this case profile-name> value is the deployment manager profile name and the profile hosting the applications.



This section will provide details on how log files can configured and the various properties that you have available to configure.



All the runtime logs for the servers are placed in the Systemout.log and the Systemerr.log file. As mentioned before WebSphere Partner Gateway V6.1 makes use of the logging support provide by the WebSphere Application Server instead of the log4j used by the WebSphere Partner Gateway V6.0

The log files can be managed using the WebSphere Application Server administrative console. You can specify the name, size and the number of historical log files to maintain.



Log files properties can be managed from the Administrative Console of WebSphere Application Server by navigating to Logs and Trace \rightarrow <Server-name> \rightarrow JVM Logs

This slide shows the screen capture from the administrative console. In the configuration tab, you can provide the name of the log file, the format of log messages, file size and the number of historical log files to maintain. Any changes made to the properties in the configuration tab are reflected in the next server startup.



Runtime tab gives you an option to view the content of the current log file and any historical log files.



The difference between the Advanced and the Basis format option is the amount of metadata that is written along with the log message. Advanced format includes the organization name, product name, class name, method name, originator, thread id, thread name, and other information for the message. The Basic log format does not include all of this information.



This section will cover the trace files



You can make use of the WebSphere Application Server administrative console to configure and manage trace files. Administrative console provides various options like setting the size, name, location and the historical files to maintain for tracing. You can also select the components that you want to see the trace messages for and the level of the trace messages generated by the selected components.



This slide talks about configuring trace file for the simple mode of install.

You can configure the trace by navigating to *Troubleshooting* > *Logs and Trace* > *<Server-name*> > *Diagnostic Trace* in administrative console. You can make changes to trace file configuration in runtime tab or using the configuration tab. changes made in configuration tab requires server restart

Before the trace messages can be written to the trace file, tracing needs to be enabled. Enable Log property can be used to enable or disable tracing. The trace file is enabled by default.

Trace output specifies where trace output should be written. The trace output can be written directly to an output file, or stored in memory.

If **Memory Buffer** option is selected, the trace output will be written to an in-memory circular buffer. If you select this option you must provide a value for the **Maximum Buffer Size.** This value specifies the number of entries, in thousands, that can be cached in the buffer. When this number is exceeded, older entries are overwritten by new entries.

If **File** option is selected, the trace output is written to a file. The self-managing log file writes messages to the file until the specified maximum file size is reached. When the file reaches the specified size, logging is temporarily suspended and the log file is closed and renamed. The new name is based on the original name of the file, plus a timestamp qualifier that indicates when the renaming occurred. Once the renaming is complete, a new, empty log file with the original name is reopened, and logging resumes. No messages are lost as a result of the rollover, although a single message may be split across the two files. If you select the file option, you must specify values for **Maximum File Size**, **Maximum Number of Historical Files** and **File Name** properties.

Maximum File Size specifies the maximum size, in megabytes, to which the output file is allowed to grow. This attribute is only valid if the File Size attribute is selected. When the file reaches this size, it is rolled over as described above.

Maximum Number of Historical Files specifies the maximum number of rolled over files to keep.

File Name specifies the name of the file to which the trace output is written.



You can specify one of three levels for trace output: Basic, Advanced and Log analyzer format.

Basic (or Compatible) preserves only basic trace information. Select this option to minimize the amount of space taken up by the trace output.

Advanced preserves more specific trace information. Select this option to see detailed trace information for use in troubleshooting and problem determination.

Log analyzer trace format preserves trace information in the same format as produced by Showlog tool.

Enabling tra	<mark>ce – Full dis</mark> t	tributed mod	e
 Trace files properties m Navigate to Trouble Each of the WebSph Changes made in co Trace file located un {WPG_INSTAL 	anaged from the Administrat shooting → Logs and Trac here Partner Gateway compo- onfiguration tab require serve der LL_DIR}\wasND\profiles\ <p< th=""><th>ive Console of WebSphere A e →<server-name> →Diagn onents write to their own trace or restart profile-name>\logs\<server-r< th=""><th>oplication Server ostic Trace file aame></th></server-r<></server-name></th></p<>	ive Console of WebSphere A e → <server-name> →Diagn onents write to their own trace or restart profile-name>\logs\<server-r< th=""><th>oplication Server ostic Trace file aame></th></server-r<></server-name>	oplication Server ostic Trace file aame>
Logaing and Tracing > hcgconsole > Diagnostic Trace Use this page to view and modify the properties of the about how the application server components run with the server is restarted. Changes on the Runtime pane Configuration Runtime	Legaing and Tracing > Legdocring > Diagnostic Trace Use this page to view and modify the properties of the about how the application server components run wit the server is restarted. Changes on the Runtime par Configuration Runtime	Longing and Tracing > bicresceiver > Diagnostic Trace Use this page to view and modify the properties of the about how the application server components run with the server is restarted. Changes on the Runtime pane Configuration Runtime	Legains and Tracing > brames > Diagnostic Tr Use this page to view and modify the propertie about how the application server components is be server is restanted. Changes on the Runtim Configuration Runtime
General Properties	General Properties	General Properties	General Properties
Trace Output C Memory Buffer + Maximum Buffer Size B thousand entries C File + Maximum File Size S 10 + Maximum File Size S 10 + File Itame S(SERVER_LOG_ROOT)/bog_console.log	Trace Output C Memory Buffer B Method Size File Maximum File Size So MB Maximum Number of Historical Files SiseRVER_LOG_ROOT/bog_routerlog	Trace Output C Memory Buffer Memory Buffer Maximum Buffer Size B bousand entries C File Maximum File Size Maximum Number of Historical Files 10 File Name Editor Control Control Control Control Control Trace Output Format	Trace Output C Memory Buffer + Maximum Buffer Size 8 thousand entries C File 20 M8 + Maximum File Size 20 M8 + Maximum Number of Historical File 1 File Itame File Itame Trace Output Format
Trace Output Format Advanced Apply OK Reset Cancel	Advanced	Advanced	Apply OK Reset Cancel

In a full distributed mode, you have more than one server. Each WebSphere Partner Gateway component can be hosted on a different server. You have the same options that were discussed in the previous slide for configuring the tracing. For a full distributed mode, the default formatting is set to advanced for the servers hosting the WebSphere Partner Gateway applications.. With the Advanced format, each trace message includes the class name, method name, originator, thread id, thread name, and other information for the message. For the messaging server, the default trace format is basic. The Basic log format does not include this information. Log and Trace Analyzer format is also available.

You can change the properties in the configuration tab or the runtime tab. Any changes made in the configuration tab requires a server restart for the changes to take effect. The changes made in the runtime tab go into effect immediately but are only retained if the server is not stopped. If the server is stopped and re started, the server will use the settings in the configuration tab.



The next section discusses how to configure the level of detail for the messages that go into trace and log files.



The WebSphere Application Server administrative console is used for controlling the detail level of messages that go into the log and trace files.

The default level is set to SEVERE for WebSphere Partner Gateway applications.. Only messages that are at a level SEVERE or above written to the log file. You have the option to configure the message detail level at the Component level or at the Group level as shown in the screen captures in the slide. If the message level is at fatal, severe, warning, audit, info, config or detail, the messages are only written to the log files at that level and above. If you want to see trace messages in the trace files that you configured, the detail level should be set to a fine, finer or finest. When using the Components tab to set the detail level, you can easily locate the WebSphere Partner Gateway components by looking for the prefix com.ibm.bcg. If you are setting the detail level in the Groups tab, look for the prefix BCG to locate the groups that relate to WebSphere Partner Gateway.



You can enable tracing for some EDI, XML and ROD (flat file) components that are used in relation to validation maps and transformation maps created by the Data Interchange Services client. This tracing is enabled from the WebSphere Partner Gateway Console by navigating to System Administration > Feature Administration > EDI Properties. The default tracing level is set to 0 or no tracing. Valid values for tracing are 0,1,2 and 3.



A one character field that indicates the type of the message or trace event can be used to interpret the message. Message types are in upper case. As shown in the slide, each message contains a character that you can use to determine if a message is a log or trace message and the detail level of that message. You can make use of the table listed in the slide for reference to map the character to the level.

	IBM Software Group		TBM
Log	level mapping fro	om V6.0 to V6.1	
- W	ebSphere Partner Gateway Log and trace messages class WebSphere Partner Gateway	V6.0 sified using severity levels used	by
• W	ebSphere Partner Gateway Makes use of WebSphere Ap	olication Server Severity levels	
= W	VebSphere Partner Gateway V Makes use of WebSphere App WebSphere Partner Gateway V6.0 Severity Level	WebSphere Application Server V6.1 Severity Level	
- W	ebSphere Partner Gateway Makes use of WebSphere App WebSphere Partner Gateway V6.0 Severity Level FATAL	WebSphere Application Server V6.1 Severity Level FATAL	
- W	VebSphere Partner Gateway V Makes use of WebSphere App WebSphere Partner Gateway V6.0 Severity Level FATAL ERROR	WebSphere Application Server V6.1 Severity Level FATAL SEVERE	
• W	VebSphere Partner Gateway V Makes use of WebSphere App WebSphere Partner Gateway V6.0 Severity Level FATAL ERROR WARN	WebSphere Application Server V6.1 Severity Level FATAL SEVERE WARNING	
= W	VebSphere Partner Gateway V Makes use of WebSphere App WebSphere Partner Gateway V6.0 Severity Level FATAL ERROR WARN INFO	WebSphere Application Server V6.1 Severity Level FATAL SEVERE WARNING INFO	

In V6.0 WebSphere Partner Gateway used log levels that are not related to the WebSphere Application server log levels. Since WebSphere Partner Gateway V6.1 uses the WebSphere Application Server log levels, you can use this table to map the log level in V6.0 to the appropriate level in V6.1



This section will provide a brief summary of this presentation.



WebSphere Partner Gateway V6.1 uses the logging API provided by the WebSphere Application Server V6.1 instead of the log4j used in V6.0. The presentation covered details on the various installation and runtime log files. Also covered are the details of the trace files and the how to configure log and trace messages.

