Websphere Message Broker rules

R1	Keywords should be in upper case	5min	Readability		
R2	Negative IF / ELSE condition	1hour	complexity	readability	
R3	Have preference for XMLNSC over XMLNS	20min	performance		
R4	Database is accessed but we cannot check the logic as no readonly account assigned to sonar	1hour	database		
R5	Unused variable or unused parameters in procedure of function call	10min	bestpractices	performance	
R6	A table has been referenced that has not been found in the schema	60min	database		
R7	A column being referenced has not been found in the DB schema	60min	database		
R8	A column being referenced has not been indexed. This may be a performance issue	60min	database	performance	
R9	Your licence has expired	60min	licence		
R10	No MQ Definition file/s have been found. The plugin will be unable to check the MQ setup against the code	60min	mq		
R11	MQ Queue defined but not used in the code	60min	mq		
R12	MQ Queue used in the code but not not listed in the definition file	60min	mq		
R13	The messageflow looks to be invalid (not valid xml)	60min	messageflow	pluginerror	
R14	The flow has two or more COMPUTE nodes in a row	60min	performance		
R15	Navigating message tree could be replaced by a reference (2 lines)	60min	performance		
R16	Unused method (function or procedure)	60min	readability		
R17	Atomic references atomic	60min	deadlock	error	
R18	Credentials are in plain text	60min	security		
R19	The line is extra long and may cause issues being viewed	1min	readability	standards	
R20	The file does not contain company name in the header comments	5min	documentation	standards	
R21	Avoid using CARDINALITY within loops	40min	performance		
R22	Environment values should be under the Variables subtree	40min	performance		
R23	Use LocalEnvironment over Environment	60min	performance		
R24	Source file is empty	5min	readability		
R25	Try/Catch no functional catch connected. May cause errors to be lost	5min	exceptionhandc	standards	
R26	Two or more RCD nodes in the same flow path	5min	performance		
R27	The MB-Precise plugin has failed to process this file completely. Please look in the SONAR debug for more details	5min	pluginerror		
R28	Cyclomatic Complexity is higher then the threshold	120min	complexity	readability	
R29	The function or procedure is longer than the threshold	60min	complexity	readability	
R30	Node refers to an empty main method. Either code has been left out or the node can be removed from the flow	10min	completeness	performance	
R31	Message flow does not contain a note	10min	documentation	standards	
R32	MQNode name within the flow doesn't match the Queue name	10min	mq	readability	standards
R33	The PASSTHRU statement parameters and values don't match	30min	correctness	database	sql
R34	The node has a very long delay waiting for a response. This will cause blocking of the runtime and could suggest issue with the design/arc	120min	architecture	performance	
R35	The flow references a method that cannot be found in the esql code	30min	completeness		
R36	A subflow has been created but is not being referenced. It may be able to be removed	30min	completeness	readability	
R37	Check node found in the flow. Check node has deprecated by the validation node	5min	deprecated	standards	
R38	Database access with low polling interval could cause database contention issues for other applications/code	45min	database	performance	
R39	Using a SELECT * will affect the resources used (memory) if not all the fields are required	120min	database	performance	
R40	Code is unreachable following a RETURN or THROW statement	20min	correctness	readability	
R41	The method/procedure has a higher number of parameters then the threshold	60min	complexity	readability	
R42	The parameter on a method/procedure has a short name (and is likely to be meaningless)	20min	readability	standards	
R43	TODO has been left in the comments	10min	completeness	readability	
R44	SLEEP() has been called. Calling SLEEP blocks the flow in the execution group	60min	architecture	performance	

R45	CASE statement has single WHEN. Could be replaced by an IF statement	15min	completeness	readability	
R46	CASE has no default ELSE statement	15min	completeness	readability	
R47	Multiple statements on the same line	5min	readability	standards	
R48	The input node has no failure handler connected. Errors may not be able to be tracked or may be lost	60min	correctness	exceptionhandling	standards
R49	There is no input connection to this node. The code may not be reachable or functioning	20min	correctness	readability	
R50	Label has no associated processing logic attached	30min	correctness		
R51	Not all input nodes connected. Resources may not be processed correctly	30min	correctness		
R52	The filter node may not have its connections connected correctly	60min	correctness		
R53	The filter node cannot modify the message	60min	correctness		
R54	The date format may not be correct	20min	correctness		
R55	The COMPUTE nodes connections are inconsistent	50min	correctness		
R56	The LOOP may not have a valid LEAVE statement (and may not exit validly)	60min	correctness		
R57	The code may be referring a to field that is not part of the MQMD header definition (and may be ignored)	20min	correctness		
R58	BITSTREAM is deprecated. Use ASBITSTREAM instead	60min	deprecated	performance	standards
R59	The queue name defined may not be compliant (length, case, underscores, starts with SYSTEM., blanks, short names)	10min	standards		
R60	Usually the RouteTo and Label are in the same flow as to make things more readable	20min	correctness	ccstandards	
R61	It is good programming practice to give an EXTERNAL variable an initial value	10min	readability	standards	
R62	The routing nodes connections and filters may not be consistant	60min	correctness		
R63	The message flow may not have been included in the deployment build scripts	10min	correctness		
R64	The message flow has a long path	120min	performance	readability	
R65	The message flow does not consistently reply to messages/requests	30min	correctness		
R66	SOAPInputNode does not have 'Enable support for ?wsdl checked'	10min	correctness		
R67	InputNode parse timing is not set to 'complete'	10min	standards		
R68	InputNode validation is not set to 'content and value'	10min	standards		
R69	MQInputNode domain should be XMLNSC	10min	standards		
R70	InputNode 'Build tree using XML schema data types' not set	10min	standards		
R71	The input node has no catch handler connected. Errors may not be able to be tracked or may be lost	30min	correctness	exceptionhandling	standards
R72	The SOAP input node does not have the required monitoring events added	20min	standards		
R73	The MQ input node does not have the required monitoring events added	20min	standards		
R74	The SOAP Request node does not have the required monitoring events added	20min	standards		
R75	The MQ output node does not have the required monitoring events added	20min	standards		
R76	The JMS output node does not have the required monitoring events added	20min	standards		
R77	The Publication node does not have the required monitoring events added	20min	standards		
R78	The UOW on the monitoring event is not set to 'none'	20min	standards		
R79	The Monitoring Events Local Transaction Correlator is not 'automatic'	20min	standards		
R80	The Monitoring Events Parent Transaction Correlator is not 'automatic'	20min	standards		
R81	The Monitoring Events Global Transaction Correlator is not '$Root/SOAP/Header/btg:businessHeader/globalTransactionId' (applies to SO	20min	standards		
R82	The Monitoring Events Global Transaction Correlator is not '$Root/MQRFH2/usr/globalTransactionId' (applies to MQ nodes)	20min	standards		
R83	The Monitoring Events Global Transaction Correlator is not '$Environment/btg:monitoring/globalTransactionId' (applies to JMS nodes)	20min	standards		
R84	The xml.xsd file is not imported in the soapenv11.xsd	20min	standards		
R85	The <Header> element does not have the namespace field set to '##any'	20min	standards		
R86	The faultstring Fault element has to be a FaultString type and not a String type	20min	standards		
R87	The MQInputNode Transaction mode should be 'yes'.	20min	standards		
R88	A terminal that has been deprecated is being used	45min	deprecated	standards	
R89	Classification entry is not set for online	20min	standards		
R90	The flow contains a duplicate UDP/property default value	20min	standards		
R91	The filter node may only have one return value	30min	correctness		
R92	The condition is more complicated then the threshold	60min	complexity		
R93	The COMPUTE mode is message but the message is never read or written	60min	correctness		
R94	The COMPUTE node never creates an output message	60min	correctness		
R95	The main method is referred to by more then 1 COMPUTE node	60min	correctness		
R96	Flow contains an MQReplyNode without an MQInputNode	90min	correctness		
R97	The AggregateControl Node has an infinite timeout set. This may cause flows to never complete if all replies do not arrive	90min	correctness		
R98	The timeouts on the nodes in the flow are potentially longer than the allowed delay on the input node	90min	correctness	performance	
R99	The MQGet node has an infinite timeout set. This may cause flows to never complete if the requested message is not available	90min	architectual	performance	
R100	The XSL cache is set to 0, so style sheets will be compiled each time the node runs	10min	performance		
R101	MQInputNode domain should use XMLNSC over XMLNS	15min	performance	standards	

R102	COMPUTE nodes are not allowed (ESQL code should be avoided)	90min	standards		
R103	The default schema is being used which that should be avoided	15min	standards		
R104	Module names should be named using camel case	10min	standards		
R105	The schema name is not matching what has been set in the property file	10min	standards		
R106	Reading whole file may cause issues with performance. Split into batches where possible	60min	performance		
R107	Duplicate method	60min	readability	standards	
R108	Trace nodes should not be used	5min	standards		
R109	Java Compute nodes should not be used	90min	standards		
R110	The input node has been set to allow multiple instances	50min	standards		
R111	CopyEntireMessage makes calling CopyMessageHeaders redundant	15min	performance	standards	readability
R112	BAR files should be generated and not part of the project	15min	standards		
R113	Queues defined should have descriptions	10min	standards		
R114	Queues should be based on templates	10min	standards		
R115	BOTHRESH and BOQNAME should be defined	15min	correctness	standards	
R116	Queue is set as clustered	15min	correctness	standards	performance
R117	Queue description is longer then 100 characters	15min	correctness	standards	
R118	Listener name doesnot match pattern	10min	standards		
R119	BACKOUT queue name does not match the pattern *.BACKOUT	15min	standards		
R120	Constant declarations should be in UPPER_CASE	10min	standards		
R121	Header files should contain author, version and date (ESQL and Message flows)	5min	standards		
R122	Should not include CC01_GenerateLogEvents subflow	20min	standards		
R123	Variables should start with a lower case	5min	standards		
R124	Function and procedure names should start with lower case	5min	standards		
R125	Parameters should have a direction	10min	correctness	standards	
R126	Should check that the last MOVE completed	15min	correctness		
R127	Native IIB input/ouput nodes should be only via a subflow	60min	standards		
R128	Try/catch nodes should be only via a subflow	60min	correctness	standards	
R129	Function and procedure names should start with upper case	10min	standards		
R130	MQInput nodes transactionMode should be set to 'yes'	15min	correctness	standards	
R131	The COMPUTE node does not have a name	5min	correctness	standards	
R132	The COMPUTE node name and ESQL module do not match	15min	standards		
R133	The library name is longer then 30 characters	15min	standards		
R134	The library name does not match the pattern ICC_CMM_*	15min	standards		
R135	Flows should write to alias queue not the queue directly	15min	standards		
R136	MessageSet name is longer then 30 characters	15min	standards		
R137	he MessageSet name does not match the pattern <BUSINESS SERVICE ID>[_<INTERFACING SYSTEM NAME>]_{'COMMON'|<BUSIN	25min	standards		
R138	TOPICSTR has non recommended characters	50min	correctness	standards	
R139	SUB(subscription) does not match DEST queue	10min	correctness	standards	
R140	The queue name defined may not be compliant with the naming standard	10min	correctness	standards	
R141	The line contains both code and comments. Trailing comments are discouraged	1min	standards		
R142	The Function/Procedure/Module does not contain a comment (reporting only once)	10min	standards		
R143	Found CF02_CC01_GenerateLogEvents but CaptureBusinessKeys not set	20min	correctness	standards	
R144	The channel name defined may not be compliant with the naming standard	10min	correctness	standards	
R145	The channel XMITQ and does not have a matching transmission queue	15min	correctness	standards	
R146	The XPATH contains //. // selects nodes from anywhere in the document and can affect peformance of the XSL	10min	performance		
R147	The XSL contains an xsl:message element. These are usually only used in non-production code	50min	performance		
R148	The XSL contains an xsl:message element with terminate set to 'yes'. That will stop the XSLT processor	30min	correctness		
R150	An xsl:choose with only 1 when condition could be replaced with an xsl:if	15min	readability		
R151	An xsl:choose is missing an fall through xsl:otherwise	30min	standards		
R152	An xsl:otherwise is empty	30min	correctness	readability	
R159	An XSL variable has been declared but not used/referenced	15min	correctness	readability	standards
R160	An XSL variable has used but not declared	15min	correctness	readability	
R163	The <xsl:variable> name doesn't help understanding the code (it may be meaningless)	5min	standards		
R164	CopyEntireMessage makes calling CopyMessageHeaders redundant	15min	performance		
R165	Properties' is not included in the map and will be left empty when the node finishes	15min	correctness		
R166	IF condition missing ELSE	10min	correctness		
R167	TODO found in mapping node	10min	completeness	correctness	

R168	COMPUTE node should throw exception on database error	5min	correctness	standards	
R169	ESQL code has been commented out. It should be removed before code checkin	25min	correctness	readability	
R170	The rule template has flagged all MQ flows to be deployed to at least 2 execution groups	15min	correctness		
R172	EVAL statements may pose security issues	60min	security	standards	
R173	SOAP.Context.SOAP_Version is not 1.1 or 1.2	15min	correctness		
R174	Assigning to null will delete the field in the output, did you want to set the field to empty instead?	10min	correctness		
R175	The message domain may not be valid (MQMD, SOAP, XML, XMLNSC, BLOB, JSON. MRM)	10min	correctness		
R176	That child elelement may not be valid in that domain	10min	correctness		
R177	Use SOAP domain over XML or XMLNSC	15min	performance		
R178	Header files should contain author, version and date (ESQL only)	5min	documentation	standards	
R179	Module names should be named using camel case	5min	documentation	standards	
R180	BOTHRESH and BOQNAME should not be defined for a backout queue	5min	correctness		
R181	Commit mode should be '1-SEND_THEN_COMMIT', Sync level '0-NONE' for IMSRequest node	15min	correctness	standards	
R182	It is good programming practice to give an EXTERNAL variable an initial value - blanks are allowed	5min	correctness	standards	
R183	The Function/Procedure/Module does not contain a comment (multiple)	5min	documentation	standards	
R184	Module names should be named using camel case	5min	documentation	standards	
R185	Module names should not contain a space, later versions of IIB cannot have a space in a module name	10min	compatability	standards	
R186	A DELETE FROM a table with no criteria has been found, all rows will be deleted	10min	correctness		
R187	Mapping nodes should not be used	60min	standards		
R188	DECLARE could be combined	10min	performance		
R189	IF/ELSE could be CASE	20min	Readability		
R190	File does not contain header comments (ignore case)	10min	Readability	standards	
R191	Note on msgflow should contain Name, Author, Date and description	10min	Readability	standards	
R192	Note on subflow should contain Name, Author, Date and description	10min	Readability	standards	
R193	The ESQL format is not formatted correctly	5min	Readability	standards	
R194	The node name is a duplicate within the flow	15min	correctness	readability	
R195	COMPUTE node is the last node in the flow	15min	correctness	performance	readability
R196	A hard coded mapping was found in the ESQL	10min	Readability	standards	
R197	THROW USER EXCEPTION MESSAGE '3001' found	10min	standards		
R198	Number of nodes in a msgflow exceeded	60min	complexity	performance	
R199	Number of nodes in a subflow exceeded	60min	complexity	performance	
R200	The message flow attempts to reply to a non-existent request	30min	correctness		
R201	MQMD UserIdentifier has been changed	30min	standards	correctness	
R202	SOAP Request node does not have its SOAP Fault terminal wired	20min	correctness	standards	
R203	MQOUTPUT nodes validation should be set to 'content and value'	10min	correctness	standards	
R204	Constant does not match the regular expression provided	5min	standards		
R205	The filter node 'unknown' terminal should be connected	30min	correctness		
R206	The SCA node 'fault' terminal should be connected	30min	correctness		
R207	The SOAP Async node 'fault' terminal should be connected	30min	correctness		
R208	The HTTP Async requst node 'failure' terminal should be connected	30min	correctness		
R209	The MQGET node 'warning' terminal should be connected	30min	correctness		
R210	The MQGET node 'no message' terminal should be connected	30min	correctness		
R211	The FILEREAD node 'no match' terminal should be connected	30min	correctness		
R212	The COMPUTE node does not have a return value	15min	correctness		
R213	String concatenations must not be chained more than 3 times	15min	standards	performance	
R214	BOOLEAN ESQL variables should be named 'is'	5min	standards		
R215	FILEOUTPUT node should not be used	30min	standards		
R216	MQINPUT node should not have 'Transaction rollback' event configured	5min	standards		
R217	MQINPUT node should not have 'Failure terminal' event configured	5min	standards		
R218	Topic Wilcard contains WILDCARD(BLOCK) recommend WILCARD(PASSTHRU)	20min	standards		
R219	Filter node following a Compute node is redundant	20min	correctness	performance	
R220	IF / ELSE could be a single COALESCE statement	10min	Readability		

Datapower rules

ID	Description	Time	Category 1	Category 2	Category 3
D1	The XPATH contains //. // selects nodes from anywhere in the document and can affect peformance of the XSL	30min	performance		
D2	There is no timeout set for MQ Get for open-url	10min	performance		
D3	An option set is not valid	10min	correctness		
D4	A DP extension has been found that is not in the known list	10min	correctness		
D5	A DP variable has been found that is not in the known list	10min	correctness		
D6	The code is trying to change a DP variable that has been marked as read only	10min	correctness		
D7	The code is trying to read a DP variable that has been marked as write only	10min	correctness		
D8	The XSL contains an xsl:message element. These are usually only used in non-production code	10min	performance		
D9	An xsl:choose is missing an fall through xsl:otherwise	10min	correctness		
D10	The XSL contains an xsl:message element with terminate set to 'yes'. That will stop the XSLT processor	10min	correctness		
D11	The XSL contains a dp:priority logging message that is not 'debug', 'info', 'error' or 'emergency'	5min	standards		
D12	An xsl:otherwise is empty	10min	correctness		
D13	The <xsl:variable> name doesn't help understanding the code (it may be meaningless)	10min	Readability	standards	
D14	An xsl:choose with only 1 when condition could be replaced with an xsl:if	10min	correctness	readability	
D15	An XSL variable has used but not declared	10min	correctness		
D16	An XSL variable has been declared but not used/referenced	10min	correctness	readability	
D17	A DP extension-function has been found that is not in the known list	30min	correctness		
D18	Use the pooled DPMQ over MQ wben reading and writing MQ messages	15min	performance		

Sterling Integrator rules

ID	Description	Time	Category 1	Category 2	Category 3
S1	The lock and unlock operations do not match	15min	correctness		
S2	The ACTION for the LockService is not lock or unlock	15min	correctness		
S3	The LockService has no lock name assigned	15min	correctness	readability	standards
S4	No fault handler has been defined for the process	30min	correctness	standards	exceptionhandling
S5	A fault handler has been defined for the process	30min	correctness	standards	exceptionhandling
S6	Missing name	10min	correctness	standards	
S7	The sequence name is duplicate	20min	correctness	standards	
S8	Use SFTP over FTP	20min	correctness		
S9	Use HTTPS over HTTP	20min	standards		
S10	The process name is used in more then 1 file	20min	correctness	readability	standards
S11	A process is being invoked but the target cannot be found	30min	correctness		
S12	The process name and the invoke name do not match exactly	30min	correctness		
S13	The process is invoking itself. This may be a circular reference	30min	correctness		
S14	Operations after a 'BPExceptionService' will not be called	15min	correctness	readability	
S15	A rule has been defined but no CASE has been found	15min	correctness	readability	
S16	A CASE statement has been found that does not match a RULE	15min	correctness	readability	
S17	The bpml file cannot be processed. It may not be valid XML	15min	correctness		
S18	TODO has been left in the comments	15min	correctness	correctness	
S19	MQ Queue used in the code but not not listed in the definition file	10min	completeness	mq	deployment
S20	Source file is empty	10min	completeness	standards	
S21	Using a SELECT * will affect the resources used (memory)if not all the fields are required	60min	performance	sql	
S22	A table being referenced has not been found in the DB schema	10min	correctness	database	
S23	A column being referenced has not been found in the DB schema	10min	correctness	database	
S24	A column being referenced has not been indexed. This may be a performance issue	10min	database	performance	
S25	File does not contain header comments	10min	documentation	readability	
S26	Header files should contain author, version and date	10min	documentation	readability	standards
S27	JDBC has not been configured	10min	database		