

Contents of the Transaction Log

Structure of the Transaction Log

The transaction log contains the following information:

Field	Description	Example
Date	Date when request was received.	2018-06-06
Time	Time when request was received.	08:02:45
Time Zone	Time zone offset	+0200
Transaction ID	Unique ID of the transaction. It is used to trace service calls through the call stack. The transaction log contains the first 40 characters of the transaction ID.	00000002d3b0bdc000069ce00ff9700ea65376f
Request ID	Unique ID of request.	101
Component Name	Name of component that has been requested (not the name of the xUML service).	urn:Services.SupportCase.SupportAPI.supportcases.GET
Elapsed Time	<p>Elapsed time, for each call (service calls, external or internal calls) in milliseconds.</p> <p>If the elapsed time is displayed as "0", the logged step has taken below 1 millisecond of time. The value of elapsed time does not contain:</p> <ul style="list-style-type: none">• before <code>SERVICE_ENTER</code><ul style="list-style-type: none">◦ reading the request data from the network◦ parsing the request body (e.g. SOAP)• after <code>SERVICE_EXIT</code><ul style="list-style-type: none">◦ creating the response (e.g. SOAP)◦ sending the response to the client	36
State	State is either OK or ERROR .	OK
Domain	<ul style="list-style-type: none">• If an adapter has been called, the domain fields contains a value denoting the adapter, for instance SAPRFC, SQL, FILE, SYSAD, POP3, URL, etc.• If a service operation has been called, the value is INTERFACE.• If a log entry has been triggered by the user via the logger adapter, the value was defined in the UML model.	INTERFACE
Log Type	<ul style="list-style-type: none">• SERVICE_ENTER or SERVICE_EXIT marks the begin/end of a service call.• TRANSITION_ENTER or TRANSITION_EXIT marks the begin/end of persistent state transition handling.• DOACTION_ENTRY or DOACTION_EXIT marks the begin/end of a persistent state do activity.• IO_ENTER or IO_EXIT marks the begin/end of an IO operation, like e.g. an adapter call.• If the logger adapter triggered the log entry, the value is CUSTOM.	SERVICE_EXIT
Parameter 1 and 2	<ul style="list-style-type: none">• Parameters, for instance, if the file system adapter has been called, the first parameter corresponds to the executed action (e.g. ReadDirectory) and the second one to the specified file.• If the logger adapter triggered the log entry, the first parameter corresponds to the description defined as input for the adapter in the UML model.	anonymous 2.0.232.75

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Correlation ID	<p>Unique ID that relate an adapter call with the adapter response. The transaction log contains the first 40 characters of the correlation ID.</p> <p>A correlation ID is available for the following:</p> <ul style="list-style-type: none"> • adapters sending a correlation ID: SOAP, URL, SMTP, SAPRFC, Persistent State, JMS • services receiving a correlation ID: SOAP, HTTP, SAP, JMS Listener <p>For more information refer to the xUML Service Reference Guide > xUML Service Adapters.</p>	<p>00000011e33a4f8400 004fc4000043ac9bc6 9bee</p>
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Log Levels

The following transaction log levels can be set for each xUML service. The higher the log level the more information will be written to the log files. The log levels in the table below are cumulative and are ordered from the lowest to the highest log level. For each log level, also the information of the lower levels is logged.

Log Level	Log Types Logged	Description
None		No logging executed.
Custom	CUSTOM	Logs everything that is written by the logger adapter (for more information refer to the xUML Service Reference Guide > Log Adapter).
Service	CUSTOM SERVICE_ENTER SERVICE_EXIT TRANSITION_ENTER TRANSITION_EXIT DOACTION_ENTER DOACTION_EXIT	Additionally logs the start and the end of calls to a service operation (service interface). For example, calls to SOAP, SAPRFC, or HTTP operations.
IOExternal	CUSTOM SERVICE_ENTER SERVICE_EXIT TRANSITION_ENTER TRANSITION_EXIT DOACTION_ENTER DOACTION_EXIT IO_ENTER IO_EXIT	Additionally logs calls of adapters that communicate with external systems like SAP, SQL, SOAP, etc. For instance, the SQL queries that are sent to the database will be logged as well. Calls via the file system and system adapter are excluded.

IOInternal	CUSTOM SERVICE _ENTER SERVICE _EXIT TRANSITI ON_ENT ER TRANSITI ON_EXIT DOACTIO N_ENTER DOACTIO N_EXIT IO_ENTER IO_EXIT	Additionally logs also calls of adapters to internal (local) resources (file system adapter and system adapter).
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Transaction Log Domains

Each adapter logs to a dedicated domain:

Adapter	Adapter Stereotype	Domain	Documentation Link
Log entries that concern the service itself		INTERFACE	
Conversation	E2ESendSignalAction E2EAcceptEventAction	CONVERSATION	Transaction Logging of Conversations
File System Adapter	FileSystemAdapter	FILE	Transaction Logging of the File System Adapter
Java Adapter JMS Adapter	JavaAdapter JMSAdapter E2EJMSListener	JAVA	Transaction Logging of the Java Adapter
Log Adapter	Logger	domain given by the adapter call in tagged value domain	Transaction Logging of Log Adapter
Persistent States Adapter	PersistentStateAdapter	PSTATE	Transation Logging of the Persistent State Adapter
POP3 Adapter	POP3Adapter	POP3	Transaction Logging of the POP3 Adapter
REST Adapter	RESTAdapter	REST	Transaction Logging of the REST Adapter
SAP Adapter	SAPRFCAdapter SAPTRFCAdapter SAPTRFCCreateTransaction SAPTRFCConfirmTransaction	SAPRFC	Transaction Logging of the SAP Adapter
SMTP Adapter	SMTPAdapter	SMTP	Transaction Logging of the SMTP Adapter
SOAP Adapter	SOAPAdapter	SOAP	Transaction Logging of the SOAP Adapter
SQL Adapter	SQLAdapter	SQL	Transaction Logging of the SQL Adapter
System Adapter	SystemAdapter	SYSAD	Transaction Logging of the System Adapter
URL Adapter	URLAdapter	URL	Transaction Logging of the URL Adapter
ZIP Adapter	ZIPAdapter	ZIP	Transaction Logging of the ZIP Adapter

Transaction Log xUML Service Adapter Details

Conversations

Domain	State	Parameter 1	Parameter 2	Correlation ID
Log Level: IOInternal				
CONVERSATION	OK	Send	conversation ID	✓
		Receive	conversation ID	✓

File System Adapter

Domain	Component	Parameter 1	State	Parameter 2
Log Level: IOInternal				
FILE	name of the adapter action node	adapter action as defined on the adapter: read, readLine, write, createDirectory, readDirectory, status, remove, removeRecursively, rename, append, close Example: createDirectory	OK	path to file /directory Example: . /tmp /testFile_dyn.txt
			ERROR	error message Example: Failed stating entry " . /tmp /testFile_dyn.txt".
		rename	OK	path to old file Example: . /tmp /testFile_old.txt

Java Adapter

Domain	Component	Parameter 1	State	Parameter 2	
Log Level: IOInternal				IO_ENTER	IO_EXIT
JAVA	name of the adapter action node	JavaAddOn.execute	OK ERROR	start	executed

JMS Adapter

The JMS adapter is used in combination with the Java adapter. Possible errors are logged with the Java adapter.

Domain	Component	Transaction ID	Parameter 1	State	Parameter 2	Correlation ID
Log Level: IOInternal						
JAVA	name of the adapter action node	custom JMS header property xTransactionID if present (see JMS Adapter Reference for more information on custom JMS Adapter header fields)	SendMessageAction.execute ReceiveMessageAction.execute	OK	JMS connection Example: tcp://localhost:61616	JMSTransactionID (for send and receive, not for listen)

Log Adapter

Domain	Component	Adapter Action	State	Parameter 1	Parameter 2
Log Level: Custom					
as defined in tagged value domain	name of the adapter action node	report	OK	as defined in tagged value description	as defined in tagged value parameter

POP3 Adapter

Domain	Component	Adapter Action	Parameter 1	Parameter 2	
				State OK	State ERROR
Log Level: IOExternal					
POP3	name of the adapter action node	getMessage	GetMail	Mail host Example: linux.e2e.ch	Failed
		delete	DeleteMail		
		commit	commit		
		rollback	Rollback		

Persistent State Adapter

Log Level "Service"

The start of a transition/do activity (TRANSITION_ENTER/DOACTION_ENTER) is always logged with state OK. If the transition/do activity fails, TRANSITION_EXIT/DOACTION_EXIT is logged with state ERROR and the transition/do activity is rolledback.

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
PSTATE	name of the persistent state class	TRANSITION_ENTER TRANSITION_EXIT	OK	name of the transition	primary key of the persistent state object
		DOACTION_ENTER DOACTION_EXIT	OK	internal MagicDraw id of the do activity	primary key of the persistent state object

Log Level "IOInternal" for Bridge Console Actions

Domain	Control Port Action	Component	Parameter 1	Parameter 2
Log Level: IOInternal				
PSTATE	retry of completion transition	broadcastCompletionEvent	<name of persistent state class>	<console user>
	retry of completion transition	createCompletionEvent	<name of persistent state class>:<unique object ID>	
	delete single PS object	deleteObject	<name of persistent state class>:<unique object ID>	
	show pstate data as raw object	getObject	<name of persistent state class>:<unique object ID>	
	show pstate data as raw object	getObjectByKey	<name of persistent state class>:<unique object ID>	
	list all PS classes	listAllClasses		
	list all PS classes	listClasses		
	list all PS objects	listObjects	<name of persistent state class>	
	show instances for owner	listOwners		

assign objects to own service instance	moveOwner	Move owner from <ID of old owner> to <ID of new owner>
delete PS objects	reset	
delete PS objects	resetAll	
send signal to PS object	sendSignal	<unique object ID>


Log Level "IOInternal" for xUML Service Actions

Domain	Component	Adapter Action	Parameter 1	Parameter 2		
				IO_ENTER State OK	IO_EXIT State OK	IO_EXIT State ERROR
Log Level: IOInternal						
PSTATE	name of the persistent state class	broadcast signal	Broadcast	signal name		
		create	Create	undefined	primary key of the persistent state object	undefined
		getObjectHandle	Get handle	unknown	primary key of the persistent state object	unknown
		getObjectHandles	Search handles	name of the persistent state class		
		getObjectCopy	Get copy	primary key of the persistent state object		
		getStateInfo	Get state info	primary key of the persistent state object		
		commit	Commit	primary key of the persistent state object		
		rollback	Rollback	primary key of the persistent state object		
		send signal	Send	signal name		

REST Adapter

Domain	Component	Parameter 1	State	Parameter 2
Log Level: IOExternal				
REST	name of the adapter action node	REST method, e.g. GET	OK ERROR	REST URL

SAP Adapter

Domain	Component	Parameter 1		State	Parameter 2	Correlation ID
Log Level: IOExternal						
SAPRFC	name of the adapter action node	adapter operation Example: RFC_SYSTEM_INFO		OK ERROR	IP address of the SAP system Example: 80.241.97.227	
	SAPConnectionPool	OpenConnection	Open connection to SAP system.			

		CloseC onnect ion	Close connection to SAP system.		
		PoolEx hausted	No connection available from the SAP connection pool.		

SMTP Adapter

Domain	Component	Parameter 1	State	Parameter 2	Correlation ID
Log Level:IOExternal					
SMTP	name of the adapter action node	Send Mail	OK	SMTP host and correlation ID Example: smtp.mail.net 00000002a28435030000387c0000 1adcd46ef793	✓
			ERROR	error message Example: <test3@e2e.ch>: Recipient address rejected: User unknown in local recipient table	✓

SOAP Adapter

Domain	Component Name	Parameter 1	State	Parameter 2	Correlation ID
Log Level:IOExternal					
SOAP	name of the SOAP operation	"	OK	URL	✓
			ERROR	error message	

SQL Adapter


Adapter Call			
Domain	Adapter Action	Parameter 1	
Log Level:IOExternal			
SQL	execute	SQL action as defined in the SQL statement: select, insert, update, commit, rollback or stored procedure name Example: INSERT	
	fetch	fetch	
	closeHandle	closeHandle	
Log Level: IOInternal			
SQL	implicit action	connect	Establish a connection to the database.
		PRAGMA	Apply a PRAGMA statment to the database connection.
		disable autocommit	Disable autocommit on this database connection.
		set transaction isolation level to	Set the database isolation level to the given value.
		commit (implicit)	Perform an implicit commit on the database transaction.
		rollback (implicit)	Perform an implicit rollback on the database transaction.
		isalive (implicit)	Test the database connection.
		disconnect	Disconnect from the database.
States			
Domain	State	Parameter 2	

SQL	OK	name and path of the SQL database the action has been performed on Example: ..\resource\Employee.sqlite
	ERROR	error message Example: SQLAPI exception

System Adapter

Domain	Component Name	Parameter 1	State	Parameter 2
Log Level: IOInternal				
SYSAD	name of the adapter action node	Execute	OK	component name

URL Adapter

Domain	Parameter 1	State	Parameter 2	Correlation ID
Log Level: IOExternal				
URL	URL method Example: GET	OK	URL Example: http://www.e2ebridge.com/BridgeFiles/bridging_in_a_nutshell.htm	
		ERROR	-	

ZIP Adapter

Domain	Parameter 1	State	Parameter 2
Log Level: IOInternal			
ZIP	Zip	OK	name of the ZIP file
		ERROR	-

Transaction Log Service Implementation Details

HTTP Service

Domain	Component	Log Type	Transaction ID	State	Parameter 1	Parameter 2	Correlation ID
Log Level: Service							
INTERFACE	model path to the HTTP operation Example: urn:Services.SimpleHTTPService.SimpleHTTPPort.echo	SERVICE_ENTER	HTTP header X-Transaction-ID if present	OK	anonymous	IP address of the caller HTTP header X-Sender-Host HTTP header X-Sender-Service Example: 1700:e84e: bridge2.scheer-acme.com TestService	HTTP header X-Request-ID if present
		SERVICE_EXIT	HTTP header X-Transaction-ID or unique id if not present				

Java Callback Service

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
INTERFACE	model path to the callback operation Example: urn:Services.HelloBridgeService.HelloBridgePort.sendText	SERVICE_ENTER SERVICE_EXIT	OK	anonymous	IP address of the caller Example: 1700:e84e:

REST Service

Domain	Component	Log Type	Transaction ID	State	Parameter 1	Parameter 2	Correlation ID
Log Level: Service							
INTERFACE	model path to the REST operation Example: urn:Services.SupportCase.SupportAPI.supportcases.POST	SERVIC E_ENTER	HTTP header X-Transaction-ID if present	OK	anonymous	IP address of the caller HTTP header X-Sender-Host HTTP header X-Sender-Service Example: 1700:e84e: bridge2.scheer-acme.com TestService	HTTP header X-Request-ID if present
		SERVIC E_EXIT	HTTP header X-Transaction-ID or unique id if not present				

SAP Service

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
INTERFACE	model path to the SAPRFC operation Example: urn:Services.RFCServerExample.CalculatorPort.ZRFC_SERVICES.ZRFC_ADD	SERVIC E_ENTER SERVIC E_EXIT	OK	anonymous	IP address of the caller Example: 1700:e84e:

Scheduler Service

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
INTERFACE	model path to the scheduler. EXECUTE_SCHEDULER_DIAGRAM	SERVICE_ENTER SERVICE_EXIT	OK	default	-

SOAP Service

Domain	Component	Log Type	Transaction ID	State	Parameter 1	Parameter 2	Correlation ID
Log Level: Service							
INTERFACE	model path to the SOAP operation Example: urn:HelloWorldService.HelloWorldPort.helloWorldCreate	SERVIC E_ENTER	HTTP header X-Transaction-ID if present	OK	anonymous	IP address of the caller HTTP header X-Sender-Host HTTP header X-Sender-Service Example: 1700:e84e: bridge2.scheer-acme.com TestService	HTTP header X-Request-ID if present
		SERVIC E_EXIT	HTTP header X-Transaction-ID or unique id if not present				

Timer and Event Observer Service

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					

INTERFACE	model path to the timer . EXECUTE_TIMER_DIAGRAM	SERVICE_ENTER SERVICE_EXIT	OK	default	-
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Transaction Log System Log Details

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
INTERFACE	request service status rpcctrl.Status	SERVICE_ENTER SERVICE_EXIT	OK	anonymous	IP address of the caller Example: 1700:e84e::
	request long running session threshold rpcctrl.Sessions	SERVICE_ENTER SERVICE_EXIT	OK	SYSTEM	
	reload changed tab files (e.g. due to changes to service preferences) rpcctrl.Reload	SERVICE_ENTER SERVICE_EXIT	OK	anonymous	
	request service shutdown rpcctrl.Shutdown	SERVICE_ENTER SERVICE_EXIT	OK	<user that has triggered the action> Example: admin	

Transaction Log xUML Runtime API Details

Domain	Component	Log Type	State	Parameter 1	Parameter 2
Log Level: Service					
INTERFACE	urn:xUML_Controller.xUML Controller.<api resource path>.<request method>	SERVICE_ENTER SERVICE_EXIT	OK	anonymous	IP address of the caller Example: 1700:e84e::