

MongoDB



This page explains the **MongoDB Adapter** in Bridge context. If you were looking for the same information regarding the [PAS Designer](#), refer to [MongoDB Adapter](#) in the Designer guide.

Tagged Values

<<MongoDBAlias>>

The settings on the [<<MongoDBAlias>>](#) are used to build the [MongoDB connection string](#) and to set database connection options. Each alias will create a separate connection pool. For each request, the xUML Runtime will use one connection from this pool for the entire request duration.

To use the MongoDB adapter it is helpful if you are familiar with the MongoDB options. Each listed tagged value is setting the MongoDB option having the same name. Please refer to the [MongoDB manual](#) for more information on each option.

Tagged Value	Description	Allowed Values / Examples	
Protocol (protocol)	Specifies the protocol to be used with this connection.	mongodb	Use the standard MongoDB connection protocol (default).
		mongodb+srv	Use DNS seed list.
Hosts (hosts)	Specifies a list of MongoDB host with optional ports (one list entry per line).	scheer-acme.com db.scheer-acme.com:2701	
Replica Set (replicaSet)	Specifies a replica set name.		
Database (database)	Specifies the default database to be used.		
Collection (collection)	Specifies the default collection to be used.		
xUML Runtime Use Transactions (xUMLRuntimeUseTransactions)	Specifies whether to use automatic transactions with replica sets. If enabled, the xUML Runtime will apply the transaction concepts as documented on xUML Runtime Transaction Concepts . Transactions can only be enabled when using replica sets. Also, some options like read/write concerns make it impossible to use transactions. If a conflict can be detected, the Runtime refuses to start. Use with caution, and refer to the MongoDB manual for more information.	true	Use automatic transactions on replica sets.
		false	Do not use automatic transactions on replica sets (default).
Authentication			
User (user)	Specifies the database user (if the database requires authentication). If the user contains characters that MongoDB has defined as to be illegal, they will be converted correctly to percent encoding.		
Password (password)	Specifies the password of user (if the database requires authentication). If the password contains characters that MongoDB has defined as to be illegal, they will be converted correctly to percent encoding.		
Defaultauthdb (defaultauthdb)	Specifies the defaultauthdb option, the authentication database to be used if user and password are provided.		
Auth Source (authSource)	Specifies the authSource option, the database name that is associated with the provided credentials.		

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Related Documentation:

- [The MongoDB Manual](#)

Auth Mechanism (authMechanism)	Specifies the authMechanism option, the authentication mechanism to be used to authenticate the connection.		
Auth Mechanism Properties (authMechanismProperties)	Specifies the authMechanismProperties option, the properties of the specified authMechanism as a comma-separated list of colon-separated key-value pairs.	CANNONICALIZE_HOST_NAME: true, AWS_SESSION_TOKEN: FQoGZXIvYXdzEN...	
Compression			
Compressors (compressors)	Specifies the compressors option, the compressor to be used for network communication.	zlib	Use zlib compression.
		none	No compression.
Zlib Compression Level (zlibCompressionLevel)	Specifies the zlibCompressionLevel option, compression level if zlib compression is used.	-1	zlib default
		0	no compression
		1-9	compression level
Misc			
Retry Reads (retryReads)	Specifies the retryReads option. This option enables retryable reads.	true	Retry reads (default).
		false	Do not retry reads.
Retry Writes (retryWrites)	Specifies the retryWrites option. This option enables retryable writes.	true	Retry writes (default)
		false	Do not retry writes.
Pooling			
Max Pool Size (maxPoolSize)	Specifies the maxPoolSize option, the maximum number of connections in the connection pool.	any positive integer	
		100	default
Wait Queue Timeout MS (waitQueueTimeoutMS)	Specifies the waitQueueTimeoutMS option, the maximum wait time for a client connection to become available from the pool.	any positive integer	
		30000	default
Read Concern			
Read Concern Level (readConcernLevel)	Specifies the readConcernLevel option. Refer to the MongoDB manual for more details.	One of: local (default), majority, linearizable, available, snapshot	
Read preference			
Read Preference (readPreference)	Specifies the readPreference option. Refer to the MongoDB manual for more details.	One of: primary (default), primaryPreferred, secondary, secondaryPreferred, nearest	
Max Staleness Seconds (maxStalenessSeconds)	Specifies the maxStalenessSeconds option, how stale a secondary can be before the client stops using it for read operations.	any positive integer >= 90	
		-1	default
ReadPreferenceTags (readPreferenceTags)	Specifies the readPreferenceTags option.		
Server selection & discovery			
Local Threshold MS	Specifies the localThresholdMS option.	any positive integer	

(localThresholdMS)		15	default
Server Selection Timeout MS (serverSelectionTimeoutMS)	Specifies the serverSelectionTimeoutMS option.	any positive integer	
		30000	default
Heartbeat Frequency MS (heartbeatFrequencyMS)	Specifies the heartbeatFrequencyMS option.	any positive integer	
		10000	default
TLS			
Tls (tls)	Specifies the tls option, used to enable/disable TLS.	true	Enable TLS.
		false	Disable TLS (default).
Tls Certificate Key File (tlsCertificateKeyFile)	Specifies the tlsCertificateKeyFile option, the path to a .pem file that contains either the TLS/SSL X.509 certificate of the client, or the client's TLS/SSL certificate and key.		
Tls Certificate Key File Password (tlsCertificateKeyFilePassword)	Specifies the tlsCertificateKeyFilePassword option, the password to decrypt the certificate file.		
Tls CA File (tlsCAFile)	Specifies the tlsCAFile option, the path to a .pem file that contains the root certificate chain of the certificate authority. This file is used to validate the certificate presented by the database instance.		
Tls Allow Invalid Certificates (tlsAllowInvalidCertificates)	Specifies the tlsAllowInvalidCertificates option, used to allow invalid certificates.	true	Bypass certificate validation.
		false	Validate the certificate presented by the database instance (default).
Tls Allow Invalid Hostnames (tlsAllowInvalidHostnames)	Specifies the tlsAllowInvalidHostnames option, used to disable hostname validation.	true	Do not validate the hostname of the certificate presented by the database instance.
		false	Validate the hostname of the certificate presented by the database instance (default).
Tls Insecure (tlsInsecure)	Specifies the tlsInsecure option.	true	Disable TLS various certificate validations. Refer to the MongoDB manual for details.
		false	Validate TLS certificates (default).
Timeout			
Connect Timeout MS (connectTimeoutMS)	Specifies the connectTimeoutMS option, the time in milliseconds a connection is attempted before it times out.	any positive integer	
		30000	default
Socket Timeout MS (socketTimeoutMS)	Specifies the socketTimeoutMS option, the time in milliseconds a send or receive is attempted on a socket before it times out.	any positive integer	
		30000	default
Write Concern			

W (w)	Specifies the w option. This option requests acknowledgement that a write operation has been propagated to the specified number of MongoDB instances or MongoDB instances with specific tags.	a positive integer (default 1)	Acknowledge propagation to the given number of databases.
		majority	Acknowledge propagation to the majority of databases.
		a tag set	Acknowledge propagation to the databases with the specified tags.
WtimeoutMS (wtimeoutMS)	Specifies the wtimeoutMS option, the time limit for the write concern in milliseconds.	any positive integer	
		30000	default
Journal (journal)	Specifies the journal option. This option requests acknowledgement from the database that the write operation has been written to the journal.	true	Request acknowledgement for write operations.
		false	No acknowledgement of write operations (default).


<<MongoDBAdapter>>

Tagged Value	Description	Allowed Values	
Alias (alias)	Specify the MongoDB alias resp. the database the adapter should connect to.	a valid MongoDB alias	
Database (database)	Overwrite the database given in the alias .		
Collection (collection)	Overwrite the collection given in the alias .		
Action (action)	Holds the action to perform on the database.	insert	Insert a new document.
		find	Find a document.
		aggregate	Execute an aggregation operation.
		fetch	Fetch the next document from a result set.
		update	Update a document.
		replace	Replace a document.
		delete	Delete a document.

MongoDB Adapter Parameters

Action "find"

Name	Type	Direction	Description	Allowed Values / Examples
database	String	in	Name of the database you want to access. This overwrites the setting on the <<MongoDB Alias>> and <<MongoDBAdapter>>.	
collection	String	in	Name of the collection you want to access. This overwrites the setting on the <<MongoDB Alias>> and <<MongoDBAdapter>>.	
options	MongoDBFindOptions	in	MongoDB options for find.	

queryString	String	in	MongoDB JSON query string. <div>  In contrast to the MongoDB shell, the JSON keys must be quoted properly. </div>	MongoDB query string as valid JSON
handle	MongoDBHandle	out	Handle to a result set. You can use fetch to get documents from this result set.	
result	Array of String	out	Result set as an array. Depending on the array element specified on this parameter, the resulting documents are either presented in extended JSON format (String), or serialized into xUML model structures (<document class>).	
	Array of <document class>			

Action "fetch"

Name	Type	Direction	Description
handle	MongoDBHandle	in	Handle to a result set that has been created by a find action.
result	String	out	Fetched document. Depending on the type specified on this parameter, the resulting document is either presented in extended JSON format (String), or serialized into model structures (<document class>).
	<document class>		

Action "aggregate"

Name	Type	Direction	Description
database	String	in	Name of the database you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.
collection	String	in	Name of the collection you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.
pipeline	Array of String	in	Pipeline you want to use with aggregation. Each array element must be a MongoDB pipeline step as valid JSON.
handle	MongoDBHandle	out	Handle to a result set. You can use fetch to get documents from this result set.
result	Array of String	out	Result set as an array. Depending on the array element specified on this parameter, the resulting documents are either presented in extended JSON format (String), or serialized into xUML model structures (<document class>).
	Array of <document class>		



Action "insert"

Name	Type	Direction	Description
database	String	in	Name of the database you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.



collection	String	in	Name of the collection you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.
document	<document class>	in	A data structure representing the document you want to insert. The data structure will be serialized.
documents	Array of <document class>	in	Array of documents you want to insert. Each array element is treated as a single document parameter and all of them will be inserted.

Action "update"

Name	Type	Direction	Description	Allowed Values / Examples
database	String	in	Name of the database you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.	
collection	String	in	Name of the collection you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.	
pipeline	Array of String	in	Pipeline you want to use with update. Each array element must be a MongoDB pipeline step as valid JSON.	
options	MongoDBUpdateOptions	in	MongoDB options for update.	
nullifications	Array of String	in	An array of database fields to be set to NULL upon update. The elements of the path to the field within the corresponding document are to be separated by a dot (see examples). You can use arrays with that notation (see example) only if arrayFilters have been provided with the MongoDB update options.	customer.address customer.address.street customer.phoneArray.[elem].number
removals	Array of String	in	An array of database fields to be removed upon update. The elements of the path to the field within the corresponding document are to be separated by a dot (see examples). You can use arrays with that notation (see example) only if arrayFilters have been provided with the MongoDB update options.	customer.address customer.address.street customer.phoneArray.[elem].number
queryString	String	in	MongoDB JSON query string. <div> In contrast to the MongoDB shell, the JSON keys must be quoted properly.</div>	MongoDB query string as valid JSON
document	Any <document class>	in	A data structure representing the document you want to insert. For this, the following rules apply: <ul style="list-style-type: none"> unset top-level fields will be skipped complex fields will be replaced entirely 	



updateString	String	in	<p>MongoDB JSON update string.</p> <div>  In contrast to the MongoDB shell, the JSON keys must be quoted properly. </div> <p>Refer to Querying MongoDB for a comprehensive explanation of how to build an update string and the implications.</p>	<p>MongoDB update string as valid JSON</p> <pre>{ "\$set": { "address": { "city": "Dallas" } } }</pre> <pre>{ "\$set": { "address.city": "Dallas" } }</pre>
rowsAffected	Integer	out	<p>Returns how many rows have been affected by the action.</p> <div>  This information may be unavailable depending on the acknowledgement settings on the MongoDBAlias. If the Runtime cannot retrieve this information, rowsAffected will be NULL. </div>	

Action "replace"

Name	Type	Direction	Description	Allowed Values / Examples
database	String	in	Name of the database you want to access. This overwrites the setting on the MongoDBAlias and MongoDBAdapter .	
collection	String	in	Name of the collection you want to access. This overwrites the setting on the MongoDBAlias and MongoDBAdapter .	
options	MongoDBReplaceOptions	in	MongoDB options for replace.	
queryString	String	in	<p>MongoDB JSON query string.</p> <div>  In contrast to the MongoDB shell, the JSON keys must be quoted properly. </div>	MongoDB query string as valid JSON
document	Any <document class>	in	A data structure representing the document you want to replace the selected document with. The old stored document will be replaced by the new one, the MongoDB _id , however, will not change.	
rowsAffected	Integer	out	<p>Returns how many rows have been affected by the action.</p> <div>  This information may be unavailable depending on the acknowledgement settings on the MongoDBAlias. If the Runtime cannot retrieve this information, rowsAffected will be NULL. </div>	

Action "delete"

Name	Type	Direction	Description	Allowed Values / Examples
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database	String	in	Name of the database you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.	
collection	String	in	Name of the collection you want to access. This overwrites the setting on the <<MongoDBAlias>> and <<MongoDBAdapter>>.	
queryString	String	in	<p>MongoDB JSON query string.</p> <div>  In contrast to the MongoDB shell, the JSON keys must be quoted properly. </div>	MongoDB query string as valid JSON
rowsAffected	Integer	out	<p>Returns how many rows have been affected by the action.</p> <div>  This information may be unavailable depending on the acknowledgement settings on the <<MongoDBAlias>>. If the Runtime cannot retrieve this information, rowsAffected will be NULL. </div>	

MongoDB Adapter Parameter Types

MongoDBFindOptions

Attribute	Type	Description	Allowed Values / Examples
limit	Integer	Limits the number of returned documents.	any integer between -2^{31} and 2^{31}
skip	Integer	Specifies the number of documents to skip in the result set (counted from the beginning).	any positive integer
projection	String	An aggregation document that projects the results accordingly. It defines the final shape of the returned documents.	valid JSON
sort	String	A sort document.	valid JSON

MongoDBHandle

Attribute	Type	Description
id	Integer	ID of the MongoDB handle.

MongoDBReplaceOptions

Attribute	Type	Description	Allowed Values / Examples	
upsert	Boolean	Specifies if the document should be inserted if no document matches the query.	true	Insert document.
			false	Do nothing.

MongoDBUpdateOptions

Attribute	Type	Description	Allowed Values / Examples	
upsert	Boolean	Specifies if the document should be inserted if no document matches the query	true	Insert document.
			false	Do nothing.
arrayFilters	Array of String	Sets conditions for the filtered positional operators during the update.	array of filter document as valid JSON strings	