|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BlobTrigger  |  | | --- | | Binding | | T[[1]](#footnote-2) | | string | | TextReader | | Stream | | ICloudBlob | | CloudBlockBlob | | CloudPageBlob | | QueueTrigger  |  | | --- | | Binding | | T *(as JSON)* | | string | | byte[] | | CloudQueueMessage | | ServiceBusTrigger  |  | | --- | | Binding | | T *(as JSON)* | | string | | byte[] | | BrokeredMessage | |

###### Blobs

|  |  |  |
| --- | --- | --- |
| Binding | Access[[2]](#footnote-3) | Behavior Notes |
| T1 | [R] | Null pass-through. Never creates. |
| out T[[3]](#footnote-4) | [W] | Null pass-through. Always creates. |
| string | [R] | Null when missing. Never creates. |
| out string | [W] | Creates when non null value returned. |
| TextReader | [R] | Null when missing. Never creates. |
| TextWriter | [W] | Not null. Always creates. |
| Stream | R | Null when missing. Never creates. |
| Stream | W | Not null. Creates on write. |
| CloudBlobStream | [W] | Not null. Creates on write. |
| ICloudBlob | [RW] | Not null. Creates a container. |
| CloudBlockBlob |
| CloudPageBlob |

###### Queues

|  |  |
| --- | --- |
| Binding | Behavior Notes |
| ICollector<T> | Not null. Creates when item added. |
| IAsyncCollector<T> |
| out T *(as JSON)* | Sends “null” for null value. Always creates. Executed last. |
| out string | Sends message when non null value returned.  Creates queue when message is to be sent. Executed last. |
| out byte[] |
| out CloudQueueMessage |
| CloudQueue | Not null. Always creates. |

###### Tables

|  |  |
| --- | --- |
| Binding | Behavior Notes |
| IQueryable<T> | Not null. Empty when missing. Never creates. |
| ICollector<T> | Not null. Creates when item added. |
| IAsyncCollector<T> |
| T *(where T: ITableEntity)* | Null when missing. Never creates. |
| T *(POCO)* |
| CloudTable | Not null. Always creates. |

###### ServiceBus

|  |  |
| --- | --- |
| Binding | Behavior Notes |
| ICollector<T> | Not null. Creates when item added. |
| IAsyncCollector<T> |
| out T *(as JSON)* | Sends message with “null” when null returned. Always creates. |
| out string | Sends message when non null value returned.  Creates queue when message is to be sent. |
| out byte[] |
| out BrokeredMessage |

###### Misc. Bindings

|  |  |
| --- | --- |
| Argument Type | To |
| CancellationToken | Monitor for cancellation request. |
| CloudStorageAccount | Get access to Azure Storage account. |
| IBinder | Bind an arbitrary attribute at runtime. |
| TextWriter | Send a log message to a console output. |
| NoAutomaticTrigger | Indicate no automatic triggering. |

###### Binding Path

|  |  |  |
| --- | --- | --- |
| Use | In | To |
| %*name*% | Any | Replace with a value provided by INameResolver. |
| {*name*} | Trigger | Define named parameter to capture a value. |
| Binder | Replace with a binding parameter value. |
| {{ *or* }} | Any | Insert literal *{* or *}*. |

###### Binding Parameters

Use in binding path pattern and for binding to function arguments. Values may be populated by BlobTrigger (BT), QueueTrigger (QT), or retrieved from a triggering POCO. Can be bound either to the exact type or to string. If the exact type is string, it can also be bound as any TryParse-able type.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Type | Source | Value |
| BlobTrigger | string | BT | Triggering blob path |
| QueueTrigger | string | QT | Triggering message content if valid string |
| DequeueCount | int | QT | N times a message has been de-queued |
| ExpirationTime | DateTimeOffset | QT | Time a message expires |
| Id | string | QT | A message ID |
| InsertionTime | DateTimeOffset | QT | Time a message was added to the queue |
| NextVisibleTime | DateTimeOffset | QT | Time a message will next be visible |
| PopReceipt | string | QT | A message's pop receipt |
| “*Property Name*” | Primitive Type | POCO | A top level property of triggering POCO |

###### Configuration

Put connection string values in Web.config and App.config files, or in Azure Website configuration, or define environment variables, or set SDK connection strings in code.

|  |  |
| --- | --- |
| Name | Value |
| AzureWebJobsStorage | Azure Storage connection string used for reading and writing data. |
| AzureWebJobsDashboard | Azure Storage connection string used for logging and diagnostics. |
| AzureWebJobsServiceBus | Azure ServiceBus connection string. |

1. Blob Operations
   1. Simple Blob Trigger

Triggered when a new blob is created or updated at the container "input". Binds the second argument to a blob in a container "output" with the same name.

public static void BlobCopySimple(  
[BlobTrigger("input/{name}")] TextReader input,  
[Blob("output/{name}")] out string output);

* 1. Advanced Blob Trigger

Triggered when a new blob is created or modified. The “name” and “extension” arguments are bound to parameters captured by the triggering blob path pattern. The “blobTrigger” is bound to the triggering blob path. The “output” argument is bound to a write stream associated with a blob in “output” container with the same name.

public static async Task BlobTriggerAdvanced(  
[BlobTrigger(@"staging/{name}.{extension}")] CloudBlockBlob blob,  
string name,  
string extension,   
string blobTrigger,  
[Blob(@"output/{name}.{extension}", FileAccess.Write)] Stream output);

* 1. Handle Poison Blob

Invoked when a blob triggering message ends up in the poison queue after five unsuccessful retries. The “log” parameter is bound to a text writer associated with a Dashboard output log.

public static void PoisonBlobHandler(  
[QueueTrigger("webjobs-blobtrigger-poison")] BlobTriggerPosionMessage poisonMessage,  
TextWriter log);

1. Queue Operations
   1. Simple Queue Trigger

Triggered when new message received from “orders” queue. Binds triggering message to an Order object. Binds the second argument to outgoing message in “output” queue.

public static void MessageCopySimple(  
[QueueTrigger("mailbox")] CloudQueueMessage message,   
[Queue("output")] out string output);

* 1. Property Binding

Shows binding parameters to properties of a queue message. The "name" parameter is bound to the value of the "Name" property in the Order object. The "dequeueCount" parameter is bound to the property value of the actual CloudQueueMessage object.

public static void PropertyBinding(  
[QueueTrigger("order")] Order order,   
string name,   
int dequeueCount,   
string queueTrigger,   
[Blob("orders/{OrderId}")] out string orderData,  
TextWriter log);

* 1. Handle Poison Message

Invoked when a message ends up in the poison queue. It is used to demonstrate the poison queue messasge handling. The trigger message is moved into a poison queue after a binding or a function fails 5 times.

public static void PoisonMessageHandler(  
[QueueTrigger("orders-poison")] string poisonMessage);

1. Table Operations
   1. Simple Table Update

Triggered on new message in the “orders” queue. Binds “entries” parameter to the “transactions” table.

public static void ProcessOrder(  
[QueueTrigger("orders")] Order order,   
[Table("items")] ICollector<OrderItem> items);

* 1. Manual Trigger

Not triggered automatically. Binds “logEntries” to the “log” table.

[NoAutomaticTrigger]

public static void ProcessLogEntries(  
[Table("log")] IQueryable<LogEntry> logEntries);

1. ServiceBus Operations
   1. Simple ServiceBus Queue Trigger

Triggered when new message received from “incoming” queue. Binds the “message” argument to outgoing message in “outgoing” queue.

public static void ServiceBusMessageCopySimple(  
[ServiceBusTrigger("incoming")] string notification,  
[ServiceBus("outgoing")] out string message);

* 1. Simple ServiceBus Topic Listener

Topic subscription listener.

public static void ServiceBusEventsListener(  
[ServiceBusTrigger("events", "service-1")] BrokeredMessage message);

1. Misc. Operations
   1. Runtime Binder

Shows binding to IBinder for runtime binding.

public static void ProcessRequestWithRuntimeBinder(  
[QueueTrigger("requests")] Request request,   
IBinder binder);

* 1. Cancellation Token

Shows binding to a cancellation token. Triggered by a queue message received from a queue with a name resolved by INameResolver.

public static void ShutdownMonitor(  
[QueueTrigger("%ShutdownQueueName%")] string message,  
CancellationToken cancelToken);

1. As de-serialized by *ICloudBlobStreamBinder<T*>. See notes on Stream read binding behavior. [↑](#footnote-ref-2)
2. The default value is in []. If none specified then explicit FileAccess attribute property is required. [↑](#footnote-ref-3)
3. Serialized by *ICloudBlobStreamBinder<T*>. See notes on Stream write binding behavior. [↑](#footnote-ref-4)