# **Create or Manage Resources**

Last updated by | Charlene Wang | Jan 3, 2023 at 12:30 AM PST

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Created On: Dec 4, 2022 Authored by: luyang1 Reviewed By: zhizhwan

## **Create or Managed Resources**

Customers may create and manage SQL Database servers, single databases, elastic pool using the Azure portal, PowerShell, Azure CLI, REST API, and Transact-SQL as per their business needs.

Create a single database - Azure SQL Database [2]

Create and manage elastic pool - Azure SQL Database

# Check operation info from telemetry

If customer submit the operation request via Azure portal/PowerShell/Azure CLI/REST API, then the request will go to ARM layer first, then ARM pass the request to Resource Provider layer. Please refer to <u>ARM overview</u>.

#### Check the operation info on ARM layer

Refer to ARM info

```
// Check ARM layer log/error
let server = '{serverName}';
let db = '{dbName}';
let subID = '{SubscriptionId}';
 \texttt{let crIID = '\{correlationId\}' //if the correlationId of the operation is unknown then remove this filter and the operation of the operati
let startTime = ago(1d);
let endTime = now();
union withsource=SourceTable kind=outer HttpIncomingRequests,HttpOutgoingRequests,EventServiceEntries
   where TIMESTAMP >= startTime and TIMESTAMP <= endTime
   where subscriptionId =~ subID
   where properties contains server //and properties contains db
   where correlationId =~ crlID //if the correlationId of the operation is unknown then remove this filter and
   where isempty(server) or resourceUri endswith strcat('/',server) or resourceUri has strcat('/',server,'/')
   extend statusMessage = parse_json(tostring(parse_json(properties).statusMessage))
   extend statusMessageStatus = statusMessage.status
   extend error = statusMessage.error
   extend errorMessage = statusMessage.error.message
   extend errorMessageCode = tostring(statusMessage.error.details[0].code)
   extend errorMessageDetails = tostring(statusMessage.error.details[0].message)
   where errorMessageDetails != 'The operation timed out and automatically rolled back. Please retry the operat
   parse resourceUri with '/subscriptions/' subId '/resourcegroups/' RGname 'providers/Microsoft.Sql/' Resourc
   parse resourceUri with '/subscriptions/' subId2 '/resourceGroups/' RGname2 'providers/Microsoft.Sql/' Resou
   extend Message = iif(errorMessageDetails!='', errorMessageDetails, errorMessage)
   extend Resource = iif(isnotempty(Resource), Resource, Resource2)
| project SourceTable, PreciseTimeStamp, resourceProvider, operationName, Resource
  status, subStatus, errorCode, errorMessage, Message, statusMessageStatus, errorMessageCode
   eventTimestamp, correlationId, operationId, resourceUri, targetResourceProvider, targetUri
  properties, authorization, claims, Deployment, principalOid, principalPuid
// authorization column contains: scope, action, role info, etc
// claims column contains: appid, ipaddr, user name(operation committer), user email account info(sometimes te
// get ARM layer correlationID from the above query, and use it in below queries
Traces
| where TIMESTAMP > {startTime}
   where TIMESTAMP < {endTime}
   where subscriptionId =~ "{subscriptionId}"
   where correlationId =~ "{correlationId}"
   project PreciseTimeStamp, TaskName, correlationId, operationName, message, exception, SourceNamespace, addit
   ActivityId, subscriptionId, tenantId
Errors
   where TIMESTAMP > {startTime}
   where TIMESTAMP < {endTime}
   where correlationId =~ "{correlationId}"
| project PreciseTimeStamp, correlationId, operationName, message, exception, additionalProperties, tenantId,
ProviderTraces
   where TIMESTAMP > {startTime}
   where TIMESTAMP < {endTime}
   where subscriptionId =~ "{subscriptionId}"
   where correlationId =~ "{correlationId}'
   project PreciseTimeStamp, correlationId, operationName, message, exception, ActivityId, principalOid, provid
```

#### Subscription level operations from ARM

Can't find an operation customer claims they have done?

This query checks all (top 100) the create/update/delete operations done from ARM perspective for the subscription.

- Tracking ID may match serviceRequestId
- serviceRequestId will be the same as request id in MonManagement

```
//Connect to https://armprod.kusto.windows.net/ARMProd
let starttime = ago(1d);
let endtime = now();
let subId = tolower('{SubscriptionId}');
HttpOutgoingRequests
 where TIMESTAMP between (starttime .. endtime)
  where subscriptionId == subId
  where TaskName == 'HttpOutgoingRequestStart'
  where httpMethod != 'GET'
  where targetResourceProvider == 'MICROSOFT.SOL'
  where targetResourceType startswith 'SERVERS'
  parse hostName with 'management.' Region '.control.database.windows.net'
 project TIMESTAMP, ActivityId
| join kind=leftouter (
HttpOutgoingRequests
  where TIMESTAMP between (starttime .. endtime)
  where subscriptionId == subId
  where TaskName != 'HttpOutgoingRequestStart'
  where httpMethod != 'GET'
  where targetResourceProvider == 'MICROSOFT.SQL'
  where targetResourceType startswith 'SERVERS
  parse hostName with 'management.' Region '.control.database.windows.net'
 project TIMESTAMP, TaskName, correlationId, serviceRequestId, httpMethod
  Region, operationName, targetUri, ActivityId
) on ActivityId
| parse TaskName with 'HttpOutgoingRequestEndWith' Result
project Start=TIMESTAMP, End=TIMESTAMP1, Result, correlationId, serviceRequestId
 httpMethod, Region, operationName, targetUri
```

#### Check resource provider layer telemetry

```
// -- run below Kusto query in corresponding region
// check firewall rule change operations for a specific server
MonManagementResourceProvider
 where http verb == "PUT"
 where TIMESTAMP > {startTime}
 where TIMESTAMP < {endTime}
 where request url contains '{serverName}'
 where operation name contains "MICROSOFT.SQL"
 where operation_name contains "FIREWALLRULES" or operation_name contains "VIRTUALNETWORKRULES"
 project originalEventTimestamp, logical_server_name, request_id, controller_name, action_name, http_verb, me
exception_http_code, request_url, code_package_version, operation_type, api_version,
response_code, body_size, headers, azure_async_operation_header, client_request_id, exception_type, error_desc
extra_parameters, client_routing_id, caller_address
// use the request id got from the above query
MonManagement
| where request id =~ "{requestId}"
project originalEventTimestamp, request id, event, state, old state, new state, action, request name, operat
 message, fsm error message, error message, is user error, last exception, exception message
```

## Check database and server creation/drop status on XTS:

```
XTS(view):
```

```
sterling servers and databases.xts (sterling)
```

#### XTS(CMS query):

```
-- Check management operations related to the server
select * from management_operations
where logical_server_name = '{serverName}' and subscription_id = '{subscriptionId}'
order by start_time

-- Check database state (pay attention to state, parent state and tombstone_reason,etc)
select * from all_logical_databases
where logical_server_name = '{serverName}' and logical_database_name = '{databaseName}'

select * from logical_databases
where logical_server_name = '{serverName}' and logical_database_name = '{databaseName}'

select * from logical_servers where name = '{serverName}'

select * from upsert_logical_server_requests
where requested_logical_server_name = '{serverName}'

-- Check elastic pool info
select * from all elastic pools where logical server name = '{serverName}'
```

### How good have you found this content?



