

API Guides and Examples



Setup:

1. Login into Mavvrik as admin.
2. Go to Admin > API page.
3. Retrieve: "Tenant ID" and "API Key".

Scenario 1: Get Total Costs

Headers	GraphQL Query	Response Example
<pre>"tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>"</pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre>BASE: https://graphql.mavvrik.ai QUERY: query CostsQuery(\$option: CostOption!, \$filter: Filter) { costs(option: \$option, filter: \$filter) { cost date groupId groupName } } VARIABLES: { "option": { "xAxis": "date", "interval": "month", "groupBy": "provider_code", "fromDate": "2024-01-01", "toDate": "2024-07-01", "options": ["discount", "tax", "refund"] } }</pre>	<pre>{ "data": { "costs": [{ "cost": 21317.91115106204, "date": "2024-01-01", "groupId": "aws", "groupName": null }, { "cost": 34767.43769793464, "date": "2024-02-01", "groupId": "aws", "groupName": null }, ...] } }</pre>

	<pre> }, "filter": { "provider_code": ["aws"] } } </pre>	
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Scenario 2: Get Cost Line Items

Headers	GraphQL Query	Response Example
<pre>"tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>"</pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre> BASE: https://graphql.mavvrik.ai QUERY: query CostItemsPageQuery(\$option: CostOption!, \$filter: Filter!, \$search: Search) { costItemsPage(option: \$option, filter: \$filter, search: \$search) { costs { date provider_code billing_account_id billing_account_name usage_account_id usage_account_name resource_group_id product_name location_id location_name cost cost_type usage_type quantity availability_zone tags unit_of_quantity category cost_category cloud_resource_id sku_id sku_name } page_info { items_count page_no page_size } } } VARIABLES: { "option": { "interval": "month", </pre>	<pre> { "data": { "costItemsPage": { "costs": [{ "date": "2024-06-01", "provider_code": "aws", "billing_account_id": "719473856879", "billing_account_name": "Zohra Slim", "usage_account_id": "262102437560", "usage_account_name": "EWS", "resource_group_id": null, "product_name": "Amazon Elastic Compute Cloud", "location_id": null, "location_name": null, "cost": 1636.9669000000001, "cost_type": "Tax", "usage_type": null, "quantity": 1, "availability_zone": null, "tags": "[]", "unit_of_quantity": null, "category": "Other", "cost_category": "Compute", "cloud_resource_id": null, </pre>

	<pre> "fromDate": "2024-06-01", "toDate": "2024-06-30", "options": ["discount", "refund", "tax"], "pageNo": 0, "pageSize": 10, "sortBy": "cost", "sortOrder": "desc" }, "filter": { "provider_code": ["aws"] } } </pre>	<pre> "sku_id": null, "sku_name": null }, ...], "page_info": { "items_count": 12987, "page_no": 0, "page_size": 10 } }}} </pre>
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Scenario 3: Get Cost Top Entries

Headers	GraphQL Query	Response Example
<pre> "tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>" </pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre> BASE: https://graphql.mavvrik.ai QUERY: query CostTopEntriesQuery(\$option: CostOption!, \$filter: Filter) { costTopEntries(option: \$option, filter: \$filter) { topEntries { cost groupId groupName } } } VARIABLES: { "option": { "category": "product_name", </pre>	<pre> { "data": { "costTopEntries": { "topEntries": [{ "cost": 14328.03365041066, "groupId": "Amazon Elastic Compute Cloud", "groupName": null }, { "cost": 1891.87485621158, "groupId": "Elastic Load Balancing", "groupName": null }, { "cost": 1636.7244492851114, "groupId": "Amazon Relational Database Service", "groupName": null }] } } } </pre>

	<pre> "month": "2024-06-01", "limit": 10, "options": ["discount", "refund", "tax"] }, "filter": { "provider_code": ["aws"] } } </pre>	<pre> ...]} }}</pre>
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Scenario 4: Get Cost Filter Options

Headers	GraphQL Query	Response Example
<pre> "tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>" </pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<p>BASE: https://graphql.mavvrik.ai</p> <p>QUERY:</p> <pre> query CostFilterOptionsQuery(\$option: CostOption!, \$filter: Filter) { costFilterOptions(option: \$option, filter: \$filter) { provider_code product_name sku_id sku_name billing_account_id billing_account_name usage_account_id usage_account_name resource_group_id location_id location_name cost_type category billing_entity tag_keys } } </pre> <p>VARIABLES:</p> <pre> { "option": { "todayDate": "2024-07-01", "options": ["discount", "refund", "tax"] } } </pre> <p><i>Note. this API will look for all possible filter options 12 months back from the provided "todayDate" option.</i></p>	<pre> { "data": { "costFilterOptions": [{ "provider_code": "azure", "product_name": ["Bandwidth", ...], "sku_id": null, "sku_name": null, "billing_account_id": ["015cfd94-5049-5bfb-2770-ca7d0fff9092"], "billing_account_name": ["My Azure"], "usage_account_id": ["30bfb244-1f85-45cb-a3f0-827740e33402", ...], "usage_account_name": ["Subscription 1", ...], "resource_group_id": ["rg-1", ...], "location_id": ["eastus", "westeurope", ...], "location_name": ["eastus", "westeurope", ...], "cost_type": ["Usage", ...], "category": ["RoundingAdjustment", ...], "billing_entity": ["Azure"], "tag_keys": ["name", "status", ...] }, ...] } } </pre>

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Scenario 5: Get K8s Total Costs

Headers	GraphQL Query	Response Example
<pre>"tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>"</pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre>BASE: https://graphql.mavvrik.ai QUERY: query K8sCostsQuery(\$option: CostOption!, \$filter: Filter) { k8sCosts(option: \$option, filter: \$filter) { groupId groupName cost date } } VARIABLES: { "option": { "xAxis": "date", "interval": "month", "groupBy": "cluster_id", "fromDate": "2024-01-01", "toDate": "2024-07-01" }, "filter": { "namespace": ["namespace-prod"] } }</pre>	<pre>{ "data": { "k8sCosts": [{ "groupId": "mmyvu5nr4b", "groupName": "prod-k8s", "cost": 15.783968351998446, "date": "2024-06-01" }, { "groupId": "mmyvu5nr4b", "groupName": "prod-k8s", "cost": 14.894476137118748, "date": "2024-07-01" }] } }</pre>

Scenario 6: Get K8s Cost Line Items

Headers	GraphQL Query	Response Example
<pre>"tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>"</pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre>BASE: https://graphql.mavvrik.ai QUERY: query K8sCostItemsQuery(\$option: CostOption!, \$filter: Filter!, \$search: Search) { k8sCostItems(option: \$option, filter: \$filter, search: \$search) { k8sCosts { date cluster_id cluster_name node pv namespace deployment cron_job controller controller_kind pod pvc pv_storage_class container gpu_model gpu_id gpu_uuid gpu_gi_id gpu_gi_profile usage_type cost_type requests limits usage metered_usage unit idle_cost usage_cost total_cost tags } page_info { items_count page_no page_size } } } VARIABLES: { "option": { "interval": "month", "fromDate": "2024-07-01", "toDate": "2024-07-31", "pageNo": 0, "pageSize": 100, "sortBy": "total_cost", "sortOrder": "desc" }, "filter": { "namespace": ["namespace-prod"], "cluster_id": ["mmyvu5nr4b"] } }</pre>	<pre>{ "data": { "k8sCostItems": { "k8sCosts": [{ "date": "2024-07-01", "cluster_id": "mmyvu5nr4b", "cluster_name": "prod-k8s", "node": "node069", "pv": null, "namespace": "namespace-prod", "deployment": null, "cron_job": null, "controller": "eventbus-project-default", "controller_kind": "StatefulSet", "pod": "eventbus-project-default-2", "pvc": null, "pv_storage_class": null, "container": "metrics", "gpu_model": null, "gpu_id": null, "gpu_uuid": null, "gpu_gi_id": null, "gpu_gi_profile": null, "usage_type": "cpu", "cost_type": "Usage", "requests": 0.05, "limits": null, "usage": 0.0004387336760675827, "metered_usage": 0.05, "unit": "core", "idle_cost": 0.7897051507263538, "usage_cost": 0.9225000000000007, </pre>

	<pre> } } </pre>	<pre> "total_cost": 1.7122051507263545, "tags": "[{"key":"controller","value":"eventbus- controller"}]" }, ...]} }}</pre>
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Scenario 7: Get K8s Cost Top Entries

Headers	GraphQL Query	Response Example
<pre> "tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>" </pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre> BASE: https://graphql.mavvrik.ai QUERY: query K8sCostTopEntriesQuery(\$option: CostOption!, \$filter: Filter) { k8sCostTopEntries(option: \$option, filter: \$filter) { topEntries { cost groupId groupName } } } VARIABLES: { "option": { "category":"namespace", "month": "2024-06-01", "limit": 10 }, "filter": { "cluster_id": ["mmyvu5nr4b"] } } </pre>	<pre> { "data": { "k8sCostTopEntries": { "topEntries": [{ "cost": 596599.4945945753, "groupId": "namespace-prod", "groupName": null }, { "cost": 234887.34416585905, "groupId": "namespace-test", "groupName": null }, { "cost": 93897.40176987801, "groupId": "namespace-stage", "groupName": null }, ...] } } } </pre>

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Scenario 8: Get K8s Cost Filter Options

Headers	GraphQL Query	Response Example
<pre>"tenant": "<TENANT-ID>" "x-api-key": "<API-KEY>"</pre> <p><i>Note. refer to schema appendix section for more details on option and filter.</i></p>	<pre>BASE: https://graphql.mavvrik.ai QUERY: query K8sCostFilterOptionsQuery(\$option: CostOption!, \$filter: Filter) { k8sCostFilterOptions(option: \$option, filter: \$filter) { provider_code cluster_id cluster_name node namespace controller_kind pv pvc pv_storage_class gpu_model location_id location_name cost_type usage_type tag_keys } } VARIABLES: { "option": { "todayDate": "2024-07-01" } }</pre> <p><i>Note. this API will look for all possible filter options 12 months back from the provided "todayDate" option.</i></p>	<pre>{ "data": { "k8sCostFilterOptions": [{ "provider_code": "k8s", "cluster_id": ["mmyvu5nr4b"], "cluster_name": ["kao-prod-k8s"], "node": ["node-1", "node-2", ...], "namespace": ["ns1", "ns2", ...], "controller_kind": ["Node", ...], "pv": ["pvc-982822d6-b3e7-4cd6-997e-4c9104857157", ...], "pvc": ["test-afc990cf-workdir", ...], "pv_storage_class": ["cls1", "cls2", ...], "gpu_model": ["NVIDIA A100", ...], "location_id": ["mmyvu5nr4b"], "location_name": ["London"], "cost_type": ["Unallocated", "Usage", ...], "usage_type": ["gpu", "cpu", "memory"], "tag_keys": ["app_kubernetes_io_instance", "app_kubernetes_io_name", ...] }] } }</pre>

Scenario 9: Using Perspective

Below is the API to LIST all the perspectives. In order to use perspective with any of those above GraphQL APIs, grab the "filter" structure of the particular perspective returned by this API that you want to use and place it in the "filter" variable of the above GraphQL API.

Header	Request	Response Example
"x-api-key": "<API-KEY>"	GET https://api.mavvrik.ai /<TENANT-ID>/perspective	<pre>[{ "filter": { "provider_code": ["aws"] }, "created": "2024-07-12T20:33:06.879Z", "name": "Perspective-AWS", "description": "Perspective-AWS Desc.", "id": "d3zfwfsxjb" }, ...]</pre>

Schemas

1. CostOption – [CostsQuery, K8sCostsQuery]

xAxis	['date', 'billing_account_id', 'usage_account_id']	
interval	['month', 'day']	K8s currently ONLY support 'monthly'
groupBy	For CostsQuery: ['provider_code', 'billing_account_id', 'usage_account_id', 'resource_group_id', 'location_id', 'category', 'product_name', 'sku_id', 'cost_type', 'tag.value']	
	For K8sCostsQuery: ['cluster_id', 'node', 'namespace', 'controller_kind', 'pv',	

	'pvc', 'pv_storage_class', 'gpu_model', 'location_id', 'cost_type', 'usage_type', 'tag.value']	
fromDate	Start month/date	Interval = month, format "YYYY-MM-01" Interval = day, format "YYYY-MM-DD"
toDate	End month/date	
Options (ONLY CostsQuery)	['amortized', 'discount', 'refund', 'tax']	Use 'amortized' if we want to get amortized-cost instead of actual-cost

2. CostOption - [CostItemsPageQuery, K8sCostItemsQuery]

interval	['month', 'day']	K8s currently ONLY support 'monthly'
fromDate	Start month/date	Interval = month, format "YYYY-MM-01" Interval = day, format "YYYY-MM-DD"
toDate	End month/date	
Options (ONLY CostItemsPageQuery)	['amortized', 'discount', 'refund', 'tax']	Use 'amortized' if we want to get amortized-cost instead of actual-cost
pageNo	Pagination: page number	
pageSize	Pagination: number of rows per page	
sortBy	Can sort on any fields returned in the response	
sortOrder	['asc', 'desc']	

3. CostOption - [CostTopEntriesQuery, K8sCostTopEntriesQuery]

category	For CostTopEntriesQuery: ['provider_code', 'billing_account_id', 'usage_account_id', 'resource_group_id', 'location_id', 'category', 'product_name', 'sku_id', 'cost_type', 'tag.value']	
	For K8sCostTopEntriesQuery: ['cluster_id', 'node', 'namespace', 'controller_kind', 'pv', 'pvc', 'pv_storage_class', 'gpu_model', 'location_id',	

	'cost_type', 'usage_type', 'tag.value']	
month	Format: YYYY-MM-01	
limit	e.g. 5 to retrieve top-5	
Options (ONLY CostTopEntriesQuery)	['amortized', 'discount', 'refund', 'tax']	

4. Filter - [CostsQuery, CostItemsPageQuery, CostTopEntriesQuery]

provider_code		<i>Note. use values returned by CostFilterOptionsQuery.</i>
billing_account_id		
usage_account_id		
resource_group_id (Azure ONLY)		
location_id		
category		
product_name		
sku_id (GCP ONLY)		
cost_type		
tag_keys		
tags		

5. Filter - [K8sCostsQuery, K8sCostItemsQuery, K8sCostTopEntriesQuery]

cluster_id		<i>Note. use values returned by K8sCostFilterOptionsQuery.</i>
node		
namespace		

controller_kind		
pv		
pvc		
pv_storage_class		
gpu_model		
location_id		
cost_type		
usage_type		
tag_keys		
tags		