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# Turbonomic 8.1.0 REST API Changes

February 12, 2021

This document describes issues that result in changes to the REST API. It is a running list of changes that accumulates these changes until the next release of the API Programming Guide. When we release a new version of the programming guide, it will include these changes. At that time, the list will start with new change to the API.

Because the API is a full reflection of the Turbonomic product, some changes to the product necessarily cause changes in the API. This can include bug fixes and improvements to the product. For example, we might add new commodities that you can get for a given entity type. Or a bug fix might change the data that is returned by an API request. We strive to make these changes backward-compatible whenever possible.

## REST API Changes

- **Improvement:**

Fix Version: 8.0.5

When creating a Scenario, you can now set the `capacity_CPUProvisioned` and `capacity_MemProvisioned` values as a percentage in the `automationSettingList` parameter of the `configChanges` parameter of the `ScenarioapiInputDTO`.

- **Improvement:**

**This release introduces small changes to JVM target configuration.**

For JVM targets, the Target Name field is for display purposes only, and the User Name and Password values are optional, depending on the requirements for your target. This release introduces tooltips to explain these details.

- **Improvement:**

Fix Version: 8.0.3

When configuring a scenario for a Migrate to Cloud plan, you can now specify the set of RIs to use, out of the RIs that are available for the plan's scope.

- **Improvement:**

Fix Version: 8.1.1

**This setting is a public beta. All functionality associated with this setting may not be implemented at this time.**

This version of Turbonomic introduces a new Global Default setting, `Enable analysis of on-prem Virtual Volume`. This setting enables the product to generate the commodities and perform the analysis required to execute actions on individual virtual volumes.

This version of Turbonomic introduces a new `boolean` setting to the `marketsettingsmanager` settings manager, `onPremVirtualVolumeResourceAnalysis`. This global setting defaults to `false`, and when enabled, the product will generate the commodities and perform the analysis required to execute actions on individual virtual volumes.

- **Improvement:**

Fix Version: 8.1.1

The data returned from any requests for ENTITIES includes aspects. Under circumstances where there is no value for the following aspects, the DTO does not include the given aspect:

- `aspects.dbAspect.maxConcurrentSessions`
- `aspects.dbAspect.maxConcurrentWorkers`

- **Improvement:**

Fix Version: 8.1.0

**Customer Issue 114133**

When execute the API call, `api/v3/groups/{UUID}/members`, and the group has no members, the API used to return a 500 error. The API now returns an empty list of members.

- **Improvement:**

Fix Version: 8.0.6

When creating a reservation, the reserving entity will evaluate templates for both actual and reserved resources.

Pursuant to this change, the following commodities have been renamed:

- CPU to `CPUProvisioned`
- MEM to `MEMProvisioned`
- STORAGE to `StorageProvisioned`

In addition, the standard commodities for the reserved entity (VM, container, etc) will be returned.

- **Improvement:**

Fix Version: 8.0.6

When executing `statistics` endpoint requests that aggregate statistics from multiple entities, if the returned values have more than one commodity key (For example, the memory allocation of a Cluster, as each host will have a unique key for this statistic) the `displayName` of the statistic will read `"displayName": "KEY: MULTIPLE KEYS"`.

- **Improvement:**

Fix Version: 8.0.6

The `DELETE /users/ldap` request has been implemented. This request allows you to delete the current AD configuration.

- **Improvement:**

Fix Version: 8.0.5

When a virtual machine fails placement due of a commodity (such as storage) with multiple keys, the reason for not being placed will include which key is causing the failure.

- **Improvement:**

Fix Version: 8.0.4

When a VM fails to place in a migrate to cloud plan, available details concerning the reason why will be available. To facilitate this, the following DTOs have been introduced:

- BaseCommodityApiDTO
- FailedResourceApiDTO
- UnplacementDetailsApiDTO
- UnplacementReasonApiDTO

- **Improvement:**

Fix Version: 8.0.4

For /search endpoint requests, there is now a `queryType` parameter that explicitly defines the pattern-matching of the query. The allowed values for this parameter are [EXACT, CONTAINS, REGEX].

- **Improvement:**

Fix Version: 8.0.3

For Container entities, Turbonomic now represents CPU resources in units of `millicore`, rather than megahertz.

The following snippet of the EntityApiDTO reflects this change:

```
"currentValue": "200.0",
  "newValue": "50.0",
  "resizeToValue": "50.0",
  "valueUnits": "millicore",
```

- **Improvement:**

Fix Version: 8.0.4

Network information will now be returned as part of the PMEntityAspectDTO. The below example is the format within the DTO:

```
{
  "physicalMachineAspect": {
    "dedicatedFailoverHost": false,
    "cpuModel": "Intel(R) Xeon(R) CPU           X5355  @ 2.66GHz",
    "connectedNetworks": [
      "Broadcom BCM5708C NetXtreme II GigE (NDIS VBD Client) #46 - Virtual Switch",
      "10.10.64.0/24-122-vlan_test"
    ],
    "type": "PMEntityAspectApiDTO"
  }
}
```

- **Improvement:**

Fix Version: 8.0.2

**Customer Issue 113211**

For actions, the ActionApiDTO now contains the parameter `actionID`. This ID will remain constant, even when the same action is generated multiple times. The UUID of the action itself will change, but the `actionID` parameter will remain the same.

- **Improvement:**

Fix Version: 8.0.2

Fix Version: 8.0.3

**Customer Issue 111820,112206**

For ActionApiDTO and LogEntryApiDTO, the `reasonCommodity` parameter has been deprecated and replaced by `reasonCommodities`, which will now return an array of commodities. This value will be populated only when the action was caused by an underutilized or overutilized commodity.

For ActionApiDTOs, the `resizeToValue` parameter has been deprecated and replaced by `newValue`

For on-premises resize actions, the `currentEntity` and `newEntity` both referred to the same object. Instead, they have been replaced with the `target` parameter.

- **Improvement:**

Fix Version: 8.0.3

When creating a policy for containers, the group of settings applicable has been renamed from `container` to `containerSpec`.

The `containerSpec` policy settings now include `RATE_OF_RESIZE`, `usedIncrement_Container_VCPU`, and `usedIncrement_Container_VMEM`. These settings are explained in more detail in the API Guide.

- **Improvement:**

Fix Version: 8.0.3

**Customer Issue 112656**

In 8.0.3 we introduced the common proxy configuration for a subset of probes, which will cause changes in target fields related to proxy settings.

```
proxy -> proxyHost
port -> proxyPort
proxyUser -> proxyUsername
```

If you are using any scripts which creates or modifies targets with the proxy setting, please update them.

The list of affected types:

```
TYPE => FIELDS TO UPDATE
---- => -----
AWS => proxy,port,proxyUser
AWS Billing => proxy,port,proxyUser
AWS Cost => proxy,port,proxyUser
Azure Subscription => proxy,port,proxyUser
Azure Cost => proxy,port,proxyUser
Azure EA => proxyUser
Azure Service Principal => proxyUser
GCP => proxy,port,proxyUser
GCP Cost => proxy,port,proxyUser
Pivotal Ops Manager => proxy
```

```

ServiceNow => proxyUser
AppInsights => proxy,port,proxyUser
AWS Lambda => proxy,port,proxyUser
Azure Wasted Volumes => proxy,port,proxyUser
Intersight => proxy
Intersight UCS => proxy
Intersight Hyperflex => proxy
  
```

- **Improvement:**

Fix Version: 8.0.2

When retrieving cluster statistics, providing a future date for the `startDate` parameter, the API will return projected statistics for the cluster at the requested time.

Additionally, if a `startDate` is not provided, it will be set to the current time by default.

- **Improvement:**

Fix Version: 8.0.2

The Business User entity now has an associated aspect that will return the current session list for the associated Business User.

- **Improvement:**

Fix Version: 8.0.1

**Customer Issue 112992**

When searching for business accounts using the `/search` endpoint, you can now filter based on name using the query parameter. Previously, this functionality was not implemented for business accounts.

- **Improvement:**

Fix Version: 8.0.4

**Customer Issue 105173,108179,112638**

You can now direct Turbonomic to only execute cloud VM scaling actions that improve performance or reduce costs. When you create a policy for the cloud VMs, choose the **Scale for Performance** or **Scale for Savings** option.

The `automationmanager` settings manager now includes the following settings to reflect the new scaling action types:

- `cloudComputeScaleForSavings`
- `cloudComputeScaleForPerf`

- **Improvement:**

Fix Version: 8.0.1

When an entity is purchasing commodities from multiple providers, the display name for the aggregated statistic is `NOW FROM: MULTIPLE PROVIDERS`.

- **Fixed Issue:**

The following legacy action states have been removed and are no longer valid values: `PENDING_ACCEPT`, `REJECTED`, `PRE_IN_PROGRESS`, `POST_IN_PROGRESS`, `RECOMMENDED`, `DISABLED`, `ACCOUNTING`

- **Fixed Issue:**

Fix Version: 8.1.0

**Customer Issue 113843**

When you execute an API call to get actions, the returned data should include a value for `lastModified`. However, the data always returns a value of 0 for that field.

- **Fixed Issue:**

Fix Version: 8.1.0

Fix Version: 8.1.1

**Customer Issue 113527**

Under some circumstances, when creating large groups the API returns a 500 error and generates the following log entry:

```
ERROR [grpc-default-executor-22959] [GroupRpcService] : Cannot find groups with ids
```

- **Fixed Issue:**

Fix Version: 8.0.5

**Customer Issue 113568**

When using the API to get historical statistics data, if you provide an end date in the past for the date range, the API does not return data for cost-related statistics.

- **Fixed Issue:**

Fix Version: 8.0.5

This release introduces a new `FAILING` state for actions. When using an action orchestrator target to invoke a POST phase script, this state will be seen if the status is checked after the action execution fails, but before the POST script has finished execution.

- **Fixed Issue:**

Fix Version: 8.0.3

Fix Version: 8.0.4

When you create a reservation (to place workloads), you can define Don't Place policies for the affected scope. However, the reservation calculation ignores the Don't Place constraints.

- **Fixed Issue:**

Fix Version: 8.0.2

Previously, the `GET /businessunits/uuid/relatedBusinessUnits` request ignored the requested relationship, and would return all child, sibling, and parent accounts.

This request now respects the requested relationship type when returning results.

- **Fixed Issue:**

Fix Version: 8.0.1

For configuration of Database policies, the user interface enables you to specify **Scaling Target VCPU Utilization** and **Scaling Target VMEM Utilization**. However, these settings are not used for Database policies, and should be removed.

The API no longer accepts databases for calls to work with `vcpu` and `vmem`. These no longer accept the `entityType.DATABASE` value.

- **Fixed Issue:**

Fix Version: 8.0.1

When creating policies via the API, you can now create policies of the following types:

- MUST\_RUN\_TOGETHER
- MUST\_NOT\_RUN\_TOGETHER

- **Fixed Issue:**

Fix Version: 8.0.1

When using the SwaggerUI to view DTO models, some nested DTOs would not display properly.

- **Fixed Issue:**

Fix Version: 8.0.1

The `PUT /settings/{settingsManager_Uuid}/{setting_Uuid}` request now correctly updates default entity settings.

Additionally, the `entityType` parameter is now required when adjusting non-global settings.

- **Known Issue:**

Fix Version: 8.1.0

**For embedded reports, the user cannot schedule reports to be emailed to subscribers.**

A Turbonomic administrator user should be able to schedule embedded reports to be emailed to subscribers. This requires an additional user role that is not available in the user interface.

To add the `report_editor` role to an administrator user, you can use the API. (For complete information, see the API Guide.) For example, you can use the SWAGGER UI to edit a user account with the following payload:

```
{
  "loginProvider": "LOCAL",
  "password": "MyPassword",
  "roles": [
    { "name": "report_editor" },
    { "name": "ADMINISTRATOR" }
  ],
  "type": "DedicatedCustomer",
  "username": "MyUsername"
}
```

- **Known Issue:**

Fix Version: 8.0.1

**Customer Issue 112516**

When requesting `numVMs` and `headroom stats` (such as `MemHeadroom`), the results will include different timestamps: `Midnight`, representing the headroom stats, and the time of the last discovery representing the `numVMs stats`.

- **Known Issue:**

Fix Version: 8.0.2

When you request `STATS` from the REST API, you can execute a `POST` for `/entities/{entityId}/stats` or you can request `stats`. The returned data gives different date formats depending on which request you make.

- **Known Issue:**

Fix Version: 7.22.2

**Customer Issue 113061**

The naming format for the nightly plan average template name has changed. Originally it began with `AVG:` and now in 7.22.6 the format is `{vCenter name}::AVG:`. Note that the 7.22.X API Guide does not document this change.