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# Turbonomic 8.5.6 REST API Changes

June 29, 2022

This document describes issues that result in changes to the REST API. It is a running list of changes that accumulates 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, this list will start with new changes 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.

In some instances, we must make changes that are not backward-compatible. In this case, we deprecate the change for a period of time that should be sufficient for you to understand the change and implement an alternative in your scripts.

- For a list of upcoming deprecations, see [Appendix: API Deprecation Contract \(on page 4\)](#).

# REST API Changes

- **Improvement:**

Fix Version: 8.5.6

**The API now includes the `Plan Destinations` endpoint.**

A plan destination is an external resource where plan results can be uploaded. Currently, you can upload the results of a 'Migrate to Cloud' plan to the Azure Migrate portal. Use the `Plan Destinations` endpoint to get plan destinations and run uploads.

- **Improvement:**

Fix Version: 8.5.5

**Customer Issue 119869**

**When deleting a reservation, you can now specify whether to permanently delete that reservation.**

The API now includes the new `reservation_force_delete` parameter that you can pass along with a `DELETE` call to a specific reservation. When `reservation_force_delete = true`, the system removes the reservation permanently, no matter what state it is in. Before this release, a reservation that you deleted via the API or user interface continued to display for deletion, and was only permanently deleted after 48 hours.

- **Improvement:**

Fix Version: 8.5.1

**The API includes a new `LABEL` commodity type.**

The `commodityType` enum includes a new `LABEL` commodity type.

- **Improvement:**

Fix Version: 8.5.4

**For API developers, when a reservation you create fails, the returned DTO includes more data about the failure.**

When you create a reservation, and the reservation fails, the API returns a DTO to explain the cause of the failure. This DTO includes new fields:

- `timespan`: Indicates whether the reservation calculation was based on realtime or historical resource utilization data. Can be one of:
  - `Current`: The calculations were based on realtime utilization data
  - `Historical`: The calculations were based on historical utilization
- `cluster`: The name of the cluster that came the closest to being able to provide the resources that the reservation needed.

- `hrefCluster`: A link to stats for the closest-seller cluster.
- `hrefEntity`: A link to stats for the closest-seller entity that is a member of the closest-seller cluster.

For example, the DTO can include data similar to the following for a placement failure:

```
"placements": {
  "failureInfos": [
    {
      "resource": "StorageAmount",
      "timespan": "Historical",
      "closestSeller": {
        "uuid": "74167780552264",
        "displayName": "QSGRID01:DC6DS2",
        "className": "Storage",
        "cluster": "StorageCluster-A",
        "hrefEntity": "/reservations/stats/74167780552264",
        "hrefCluster": "/reservations/stats/74167780552265"
      },
      "maxQuantityAvailable": 248294.59024047852,
      "quantityRequested": 273184.5625,
      "units": "MB"
    }
  ]
}
```

- **Improvement:**

Fix Version: 8.5.6

**Customer Issue 117624,117939,117973,117995,120864**

**Handling of non-executable actions has been improved.**

This release improves the handling of actions that are currently not executable due to prerequisite actions.

For example, in order to suspend Host A, VM\_01 in the host must first move to Host B. However, Host B only has capacity for one VM and is currently hosting VM\_02. In this case, Host A suspension is blocked by two prerequisite actions – VM\_02 moving to another host and VM\_01 moving to Host B.

The Action Details page for the main action (Host A suspension in the example) now shows the following information:

```
"Blocked by actions on target or destination that need to be executed first."
```

For earlier releases, the Action Details page indicated that the action is blocked by a policy.

For API developers, the `ActionApiDTO` now shows this state. Turbonomic sets the `BLOCKED_BY` key of the `relatedActionsCountByType` parameter to 0, which indicates that an action is currently not executable due to prerequisite actions.

When all the prerequisite actions have been executed, the main action becomes executable.

- **Improvement:**

Fix Version: 8.5.4

**When you examine a failed reservation via the API, the data now returns a reason for the failure.**

After you create a reservation, you can GET the `reservations` endpoint for data about the current reservations in your environment. The resulting data includes a `status`. If the status is `PLACEMENT_FAILED`, Turbonomic could not place all the workloads in the reservation for some reason. Starting with version 8.5.4, the `placements` field in the data includes `invalidInfo` to give a reason for the placement failure. The reason can be:

- `MARKET_CONNECTIVITY_ERROR`: The reservation process could not connect to the Market component for some reason.
- `MARKET_NOT_READY`: The market does not have data from the Headroom plans for the given reservation scope.
- `INVALID_CONSTRAINTS`: The reservation policies include conflicting or invalid constraints.

For example, the data for a single reservation could include the following data:

```
"demandEntities": [
  {
    "template": {
      "uuid": "215167980658768",
      "displayName": "MyVmTemplate",
      "className": "VirtualMachineProfile"
    },
    "placements": {
      "invalidInfo": {
        "invalidReason": "MARKET_CONNECTIVITY_ERROR"
      }
    }
  }
]
```

## API Deprecation Contract

The following endpoints, requests, DTOs, and parameters are deprecated in the Turbonomic API. The End of Life (EOL) gives the product version in which we will finalize these changes, and will no longer offer the deprecated items.

**NOTE:**

See the instructions for alternative usage for deprecated items with a defined EOL.

### EOL: Not Determined

We deprecate the following features, but we have not determined which Turbonomic version marks their End of Life.

Endpoints	None
Requests	None

Request Parameters	None
DTOs	<ul style="list-style-type: none"> <li>• DTO: <code>ScenarioChangeApiDTO</code> Instruction: Use the <code>loadChanges</code> or <code>configChanges</code> parameters in the <code>ScenarioApiDTO</code>.</li> </ul>
DTO Parameters	<ul style="list-style-type: none"> <li>• DTO: <code>ScenarioApiDTO</code> Parameter Name: <code>changes</code> Instruction: Use the <code>loadChanges</code> or <code>configChanges</code> parameters.</li> </ul>

## EOL: 8.6.1

### Behavior Changes:

- Pagination of Returned Data from `/search` requests:  
For searches, the API paginates the returned data. If you do not specify a pagination limit, then the API returns pages set to the default limit. Starting with version 8.6.1, the default and max pagination limits for search data will be 500. You can set pagination to less than 500, but if your search results include more than 500 entries, the results will be paginated. Your scripts should always check for a pagination cursor when processing search results.

We will make the following deprecation changes in the 8.6.1 release. These deprecated features will be removed from the API at that time.

Endpoints	None
Requests	None

Request Parameters	None
DTOs	<ul style="list-style-type: none"> <li>ReportScheduleApiDTO This release will remove ReportScheduleApiDTO.</li> </ul>
DTO Parameters	<ul style="list-style-type: none"> <li>           DTO: ActionApiDTO            Parameter Name: CurrentLocation            Instruction: The object in this parameter will only contain the following fields:           <ul style="list-style-type: none"> <li>links</li> <li>uuid</li> <li>className</li> <li>displayName</li> <li>discoveredBy</li> <li>environmentType</li> <li>vendorIDs</li> </ul> </li> <li>           DTO: ActionApiDTO            Parameter Name: NewLocation            Instruction: The object in this parameter will only contain the following fields:           <ul style="list-style-type: none"> <li>links</li> <li>uuid</li> <li>className</li> <li>displayName</li> <li>discoveredBy</li> <li>environmentType</li> <li>vendorIDs</li> </ul> </li> <li>           DTO: ProductVersionDTO            Parameter Name: buildUser            Instruction: Deprecated with no replacement. This parameter was not set in the 8.x product family.         </li> </ul>

	<ul style="list-style-type: none"> <li>• DTO: <code>GroupApiDTO</code> Parameter Name: <code>remoteId</code> Instruction: Deprecated with no replacement. This parameter was not set in the 8.x product family.</li> <li>• DTO: <code>UserApiDTO</code> Parameter Names:                         <ul style="list-style-type: none"> <li>◦ <code>roleUuid</code></li> <li>◦ <code>roleName</code></li> </ul> </li> </ul> <p>Instruction: Deprecated. Use the <code>roles</code> parameter in <code>UserApiDTO</code>.</p>
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## EOL: 8.7.1

We will make the following deprecation changes in the 8.7.1 release. These deprecated features will be removed from the API at that time.

Endpoints	None
Requests	<ul style="list-style-type: none"> <li>• <code>DELETE /entities/&lt;entityId&gt;/tags/&lt;tagKey&gt;</code> Instead, use <code>DELETE /entities/&lt;entityId&gt;/tags?key=&lt;tagKey&gt;</code></li> <li>• <code>DELETE /groups/&lt;groupId&gt;/tags/&lt;tagKey&gt;</code> Instead, use <code>DELETE /groups/&lt;groupId&gt;/tags?key=&lt;tagKey&gt;</code></li> </ul>
Request Parameters	None
DTOs	<ul style="list-style-type: none"> <li>• <code>LicenseApiInputDTO</code> Instruction: Use <code>LicenseApiDTO</code>.</li> </ul>
DTO Parameters	<ul style="list-style-type: none"> <li>• DTO: <code>HttpProxyDTO</code> Parameter Name: <code>portNumber</code> Instruction: Use <code>proxyPortNumber</code>.</li> <li>• DTO: <code>LogEntryApiDTO</code> Parameter Name: <code>reasonCommodity</code> Instruction: Use the array, <code>reasonCommodities</code>.</li> </ul>

# API Deprecation History

The following endpoints, requests, DTOs, and/or parameters have been deprecated in the Turbonomic API. The End of Life (EOL) gives the product version in which we finalized these changes, and no longer support the deprecated items.

## EOL: 8.5.1

### Behavior Changes:

- Pagination of Returned Data

The default pagination will change for the following requests:

- `GET /groups`
- `GET /groups/<groupId>/members`
- `GET /groups/<groupId>/entities`
- `GET /targets/<targetId>/entities`
- `GET /tags`
- `GET /tags/{tagKey}/entities`

To paginate returned data, the `limit`, `orderBy`, and `cursor` parameters control how the APIs paginate their data. Currently if you specify any one of these parameters, the API paginates the returned data. If you do not specify any of these parameters, the API does not paginate the output, and it returns an unlimited set of data.

Starting with version 8.5.1, if you do not specify a `limit` for these requests, the API will paginate the data to a default limit. If your scripts make these requests without setting a limit, you should update them to check for a pagination cursor in the returned data.

We made the following deprecation changes in the 8.5.1 release. These deprecated features were removed from the API at that time.

Endpoints	None
Requests	<ul style="list-style-type: none"> <li>• Request: <code>GET /users/onetimepassword</code></li> </ul> <p>Instruction: Deprecated with no replacement. This is not required for any Turbo-nomic activities.</p>
Request Parameters	None
DTOs	None
DTO Parameters	None

## EOL: 8.4.3

We made the following deprecation changes in the 8.4.3 release. These deprecated features were removed from the API at that time.

Endpoints	None
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Requests	None
Request Parameters	<ul style="list-style-type: none"> <li>Request: <code>GET /search</code> Parameter Name: <code>regex</code> Instruction: Use the <code>queryType</code> parameter.</li> </ul>
DTOs	<ul style="list-style-type: none"> <li>DTO: <code>StatPercentileApiDTO</code> Instruction: Use <code>StatHistUtilizationApiDTO</code>.</li> </ul>
DTO Parameters	<ul style="list-style-type: none"> <li>DTO: <code>ActionApiDTO</code> Parameter Name: <code>resizeToValue</code> Instruction: Use the <code>newValue</code> parameter.</li> <li>DTO: <code>ActionScopesApiDTO</code> Parameter Name: <code>limitEntities</code> Instruction: Use the <code>limit</code> parameter.</li> <li>DTO: <code>BillingFamilyApiDTO</code> Parameter Name: <code>uuidToNameMap</code> Instruction: Use the <code>businessUnitApiDTOList</code> parameter.</li> <li>DTO: <code>BusinessUnitApiDTO</code> Parameter Name: <code>hasRelatedTarget</code> Instruction: Use the <code>associatedTargetId</code> parameter.</li> <li>DTO: <code>ScopeUuidsApiInputDTO</code> Parameter Name: <code>topologyContextId</code> Instruction: Use the <code>marketId</code> parameter.</li> <li>DTO: <code>StatApiDTO</code> Parameter Name: <code>percentile</code> Instruction: Use the <code>histUtilizations</code> parameter.</li> <li>DTO: <code>TargetApiDTO</code> Parameter Name: <code>currentBusinessAccount</code> Instruction: Use the <code>associatedTargetId</code> parameter of the <code>BusinessUnit-ApiDTO</code>.</li> </ul>