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# Turbonomic 7.17.3 Release Notes

September 18, 2019

This document describes issues that are addressed in Turbonomic 7.17.3 – Release Date: September 18, 2019. Please see the Turbonomic Early Access documentation for earlier versions of the Release Notes:

<https://greencircle.vmturbo.com/community/products/pages/documentation>

For any questions, please contact Turbonomic Technical Support at [support@turbonomic.com](mailto:support@turbonomic.com), or open a ticket at:

<https://greencircle.vmturbo.com/support>

## Configuration Requirements

For this release of Turbonomic, you should satisfy the following configuration requirements.

### Transport Layer Security Requirements

By default Turbonomic requires Transport Layer Security (TLS) version 1.2 to establish secure communications with targets. Most targets should have TLSv1.2 enabled. However, some targets might not have TLS enabled, or they might have enabled an earlier version. In that case, you will see handshake errors when Turbonomic tries to connect with the target service. When you go to the Target Configuration view, you will see a Validation Failed status for such targets.

In particular, we have found that NetApp filers often have TLS disabled by default, and that the latest version they support is TLSv1. If your NetApp target fails to validate, this is could be the cause.

If target validation fails because of TLS support, you might see validation errors with the following strings:

- No appropriate protocol  
To correct this error, ensure that you have enabled the latest version of TLS that your target technology supports. If this does not resolve the issue, please contact Technical Support.
- Certificates does not conform to algorithm constraints

To correct this error, refer to the documentation for your target technology (for example, refer to NetApp documentation) for instructions to generate a certification key with a length of 1024 or greater on your target server. If this does not resolve the issue, please contact Turbonomic Technical Support.

## Fixed Issues

- **Customer Issue 107621**

**Fixed:** In environments that include Business Application entities (discovered through AppDynamics or Dynatrace targets), a business application can comprise applications that span multiple clusters. If you scope a plan to one of these clusters, the plan can include hosts from the other clusters in its count of active hosts.

- **Fixed:** In large environments some charts in the user interface can show unacceptable performance when loading the given page. For example, after running a plan, switching back to the home page can show unacceptable display performance.

- **Customer Issue 106599**

**Fixed:** To avoid confusion, the user interface should not enable Reports until the reports are updated to support the 7.17 version family.

- **Improvement:** For environments that deploy Turbonomic on Kubernetes, you can encrypt communications with an external MariaDB database. You can also specify the database user account to use.

To configure these settings, edit the CustomResourceDefinitions file (the CRD file) that you use when deploying Turbonomic to Kubernetes. In that file, find the eight different sections for each of these components:

- `action-orchestrator`
- `auth`
- `topology-processor`
- `group`
- `history`
- `plan-orchestrator`
- `reporting`
- `cost`

For each component section, find the `env:` subsection and specify the following environment variables:

- Enable secure communication for data in transit between Turbonomic and the MariaDB database.
  - name: `enableSecureDBConnection`
  - value: `"true"`
- The port the database listens on for communication from Turbonomic.
  - name: `dbPort`
  - value: `"1234"`
- The MariaDB account name Turbonomic uses to communicate with the database.
  - name: `dbUsername`
  - value: `"mysql_admin"`
- The MariaDB account password Turbonomic uses to communicate with the database.
  - name: `dbUserPassword`
  - value: `"MyPassword"`

After you edit the file, run the following command to apply your changes:

```
kubectl apply -f PathToMyCRDfile.yaml -n turbonomic
```

- **Customer Issue 106237**

**Fixed:** In large environments with many targets of the same type, under some circumstances the probe component for the given target type can display an `unhealthy` state, and experience repeated restarts.

## Known Issues

- Under some circumstances, you can configure datastore browsing such that Turbonomic identifies VMDK for existing VMs files as wasted storage. This can happen in an environment where you have shared storage that is managed by multiple targets.

Assume you turn on datastore browsing for a scope that does not include all the affected targets. In that case, Turbonomic can incorrectly identify VMDK files, or VSWP files for running VMs, as wasted storage.

As a workaround, enable database browsing in the storage policy configuration for all targets managing the shared storage.
- In vCenter Server environments, charts can show that a Virtual Datacenter (VDC) uses resources at more than 100% of capacity.

The utilization metrics that vCenter returns to Turbonomic for a VDC include utilization of resources that are reserved for vCenter overhead. However, the capacity metrics that Turbonomic discovers do not account for these reserved resources. As a result, it is possible Turbonomic shows that the VDC consumes more than 100% of capacity.

- The user interface for adding targets includes a form to add an Action Script server as a target. However, this user interface does not successfully add Action Script targets to Turbonomic. If you need to add an Action Script target, please contact your Turbonomic representative.
- As you run plans, you can generate duplicate plan names in the list on the Plan Management page. For duplicate names, Turbonomic should append the name with an integer to show the count of duplicate names.

This can happen if you give a plan a duplicate name before you run it. For example, Turbonomic provides a default name for each plan type. If you run multiple instances of that plan type, and do not change from the duplicate plan name, this problem will arise. To workaround this problem, be sure to provide your own name for your plans.
- The Turbonomic audit log tracks all communications with the platform via HTTPS. The log entries should include the IP address of the requesting client, as well as the user account. However, the log entries do not include the IP address of the originating client.
- When you specify a schedule, you must be aware of issues for Daylight Savings Time changes. For example, assume you create two schedules, one that starts at 7:00 am and lasts 12 hours, and another schedule that starts at 7:00 pm and lasts 12 hours. If you apply those schedules to policies on the same scope, then the policies can experience a scheduling conflict as Daylight Savings time changes.
- **Customer Issue 104680,107464**

In Hyper-V environments, under some circumstances a host in a cluster can have multiple `D:` drives. In this case the target (Hyper-V or VMM) does not return valid data for that host, and discovery for the cluster fails. Because this is an issue of incomplete or invalid data returned by the target hypervisor, there is no known workaround that you can perform through Turbonomic.

If you experience incomplete host cluster discovery in Hyper-V, and you suspect this issue, please contact your Hyper-V support for possible ways to reconfigure your environment.
- When you use the **PLACE** page to set up a reservation or a deployment, you choose the templates to represent the workload you will deploy. The templates you choose must include an **Image** specification that gives the path to the VM package, and optional placement constraints.

Typically, you will use templates that are discovered through your hypervisor targets. Along with discovering resource capacities for the given VM, Turbonomic should also discover the Image specification for a given discovered template. However in this version, Turbonomic does not discover the Image descriptions. In addition, discovered templates and their image specifications are read-only. For this reason, you cannot set up placement or reservations using discovered templates.
- **WARNING:** Do Not Delete the `administrator` User Account.

The user interface allows an administrator user to delete all the user accounts for a Turbonomic installation. This includes the `administrator` user account. *You should NEVER delete all user accounts, and you should never delete the administrator account.*
- If you run the Alleviate Pressure plan in Turbonomic 7, and then compare it to the same plan and scope in a 6.1 release, then the display of instances in the supply chain are not identical for both versions.
- Ring charts that show the utilization of different resources show a yellow segment whenever the Reserved Capacity for the resource is zero. For some resources there is no concept of reserved capacity, yet the ring chart still shows a yellow segment.
- For cases where actions indicate provisioning new hosts, the Optimized Improvements chart does not include the hosts to provision in the After Plan section.

- **Customer Issue 99189,99805**

In vCenter environments, you might see unusually high storage latency values or excessive recommendations to provision new storage. There is a known problem with the storage latency values that vCenter Server versions 6.5.u1x and earlier return via the API. These versions can return unusually high storage latency values.

Turbonomic considers storage latency when calculating whether to move a VM to existing storage, or whether to provision new storage. Because of this known problem, Turbonomic can incorrectly recommend provisioning storage when moves are appropriate.

If you encounter this problem, then you should create a policy that disables storage moves for VMs that are managed by vCenter Server versions 6.5.u1x and earlier. To create this policy:

- Create a VM group that contains all the affected VMs. Note that Turbonomic automatically creates a group named `VMs_vCenter` that you might be able to use.
  - Create a new VM automation policy. This policy will disable storage move actions.
  - Set the group that you created to be the policy scope.
  - Under **Action Automation** add the `Storage Move` action and set it to `Disabled`.
- In cases where actions recommend that you suspend hosts, the Optimal Improvements chart should indicate no utilization on the hosts to be suspended. Under some circumstances, the chart can show utilization on these hosts. The result is incorrectly low values for utilization on the other hosts in the current scope.
  - Turbonomic generates special average or max utilization templates that it uses when calculating cluster headroom. You should not edit these templates, because Turbonomic will overwrite your changes the next time it generates the templates. However, the Template Catalog presents these templates as editable.
  - After you run a plan, the user interface enables you to make changes to the plan configuration and then run the plan again. If you do this, the plan results will be inconsistent. If you want to run a plan with a different configuration, you should start a new plan.
  - You should never use duplicate names for groups of the same entity type. However, the user interface does not validate group names to keep you from creating a duplicate name.
  - Under some circumstances when using the Deploy View, the user interface can fail to respond. After you request a placement, if the placement recommendation does not appear within one to two minutes, reload the browser running Turbonomic to reset the user interface.
  - There is a rare case where Turbonomic can lose the cluster relationship for VMs running on a host. Assume you move a host out of a cluster, and directly into the datacenter (not into a cluster). Next you create a new cluster and then move the host into that cluster. In this case, the VMs on that host will not belong to any PM cluster. This can also affect Provider Virtual Datacenters that belong to the new cluster.

To avoid this problem, create the cluster first, and move the host directly into it. If this problem occurs, rediscover your environment to establish the correct cluster relationships.

- The Target Configuration Guide gives instructions to connect to OpenStack targets. However, if you are running OpenStack Mitaka, you must perform additional configuration on the Mitaka platform to enable IOPS and Network data collection from Physical Machines. For those instructions, please see the Green Circle article at this location: [HTTPS://greencircle.vmturbo.com/docs/DOC-4685](https://greencircle.vmturbo.com/docs/DOC-4685).

- For VMs running on Hyper-V, if you set a VCPU limit (limit VCPU to less than 100%), then the VCPU utilization data that VM returns to Turbonomic is not correct. As a result, Turbonomic will not recommend that you increase the VCPU limit.