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# Turbonomic 7.16.4 Release Notes

June 12, 2019

This document describes issues that are addressed in Turbonomic 7.16.4 – Release Date: June 12, 2019. Please see the Turbonomic documentation for earlier versions of the Release Notes:

<https://turbonomic.com/turbonomic-7-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

- **Fixed:** For tracking the generation and execution of actions, Turbonomic must improve its memory management.
- **Fixed:** In cases where there are no pending actions in your environment, the Pending Actions chart can take an unusually long time to load.

## Known Issues

- Before you run reports that list resize actions for VMs, you must first run the VM Rightsizing Recommendations report. By default, Turbonomic does not store historical data for VM rightsizing. For that reason, reports that can show rightsizing history for VMs do not include the rightsizing data by default. However, once you run the VM Rightsizing Recommendations report, Turbonomic generates this historical data, and continues to store it. Subsequent runs of other rightsizing reports will then include this data.

- In the Pending Actions list, the actions sort by severity by default. You can choose to sort by different criteria. However, when you choose another criterion the list does not change its sorting.

- **Customer Issue 105298**

In AWS environments, to scale an instance Turbonomic can recommend changing a current instance to a different instance type. Note that AWS maintains a limit of EC2 instances per region.

Turbonomic does not currently get reliable information about the limits for specific instances, compared to the number of instances currently online. As a result, Turbonomic can recommend actions to move a workload to an instance that exceeds the limit. In this case, the resize action will fail.

- **Customer Issue 104680**

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 deployment profiles for the deploy action to succeed.

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 placement profile for a given discovered template. However in this version, Turbonomic does not discover the placement profiles. For that reason, you cannot set up placement or reservations using discovered templates.

- When you delete a user account, if that user owned any shared dashboards, then the ownership of those dashboards should transfer to the administrator user account that executed the delete. However, this transfer does not occur.

- **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.*

- Under some circumstances in a NetApp environment, execution of a storage move action will fail.

- This version of Turbonomic treats the validation of targets differently than earlier versions.

For this version, after you edit or update a target specification in the user interface you must click **Validate** to manually direct Turbonomic to test its connection with the target.

In earlier versions, after you edit a target specification the product would automatically validate the target connection.

- 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.

- **Customer Issue 100911,104082,104121**

For AWS environments that include Third Party Marketplace AMIs, Turbonomic can recommend scaling to an instance type that is not supported for a given Marketplace AMI. As a result, the scaling action can fail.

As part of its intelligent workload management, Turbonomic can recommend scaling the instance to a different instance type. However, Turbonomic chooses from the full set of available instance types, and does not recognize whether the recommended type is supported for the given Marketplace AMI. For this reason, the scaling action can fail.

To avoid this situation, create an Automation Policy for a group of related Third Party Marketplace instances, and then set the Excluded Templates scaling constraint to exclude any unsupported instance types.

- In the Pending Actions list, the actions sort by severity by default. You can choose to sort by different criteria. However, when you choose another criterion the list does not change its sorting.
- 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.
  - 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.