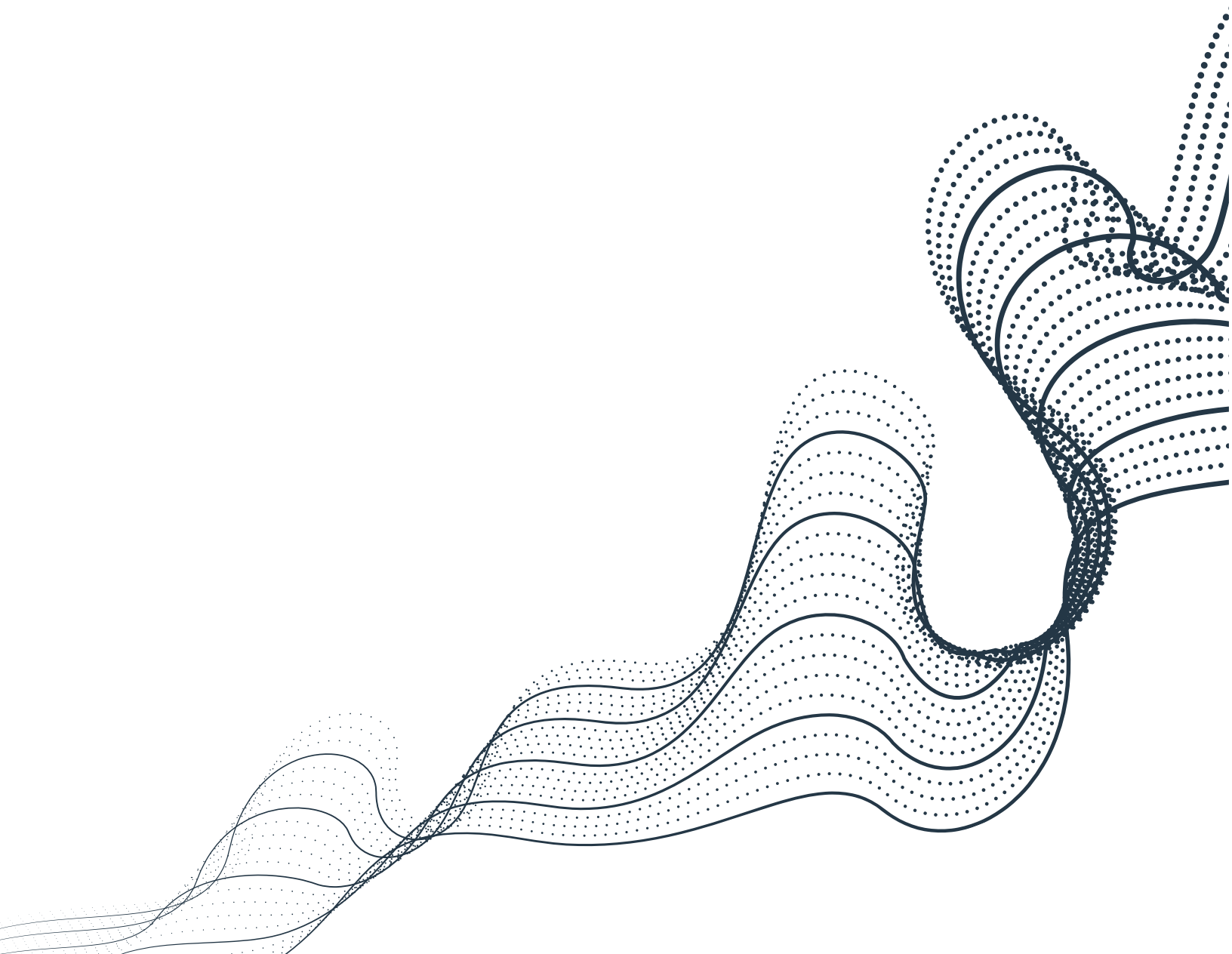


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# Release Notes



# Contents

What's New in Version 8.0 .....	3
Cloud Expense Management Enhancements .....	3
Fresh New Look and Name .....	8
New Features in REST .....	13
Installation and Upgrade Notes .....	14
Deprecated and Removed Features and Platforms .....	15
Issues Resolved in the Release .....	16
Resolved in version 8.0.2 .....	16
Resolved in version 8.0.1 .....	16
Resolved in version 8.0.0 .....	16
Known Issues .....	19

# What's New in Version 8.0

Commander Version 8.0 introduces significant new capabilities in cloud governance, which ensure your cloud environments remain optimized and compliant with industry best practices and standards. We've also added some cloud expense management enhancements, that allow you to better track and control your cloud spend.

We've given the product a new name and new look, which provides a more modern user experience. We've also added the ability to further customize the Service Portal by uploading a banner logo in addition to the primary logo.

Finally, we've also made some REST API enhancements.

For more information, see the following:

- [Cloud Expense Management Enhancements](#)
- [Fresh New Look and Name](#)
- [New Features in REST](#)

## Cloud Expense Management Enhancements

### Cost Anomaly Detection

To help you keep costs under control, you can now detect spending anomalies automatically. Using the Configure Cost Anomaly Alerts dialog, you can configure settings to alert you if there are any unusual costs after comparing your daily costs to your established typical costs.

Cost Anomaly Detection will notify users with appropriate permissions if there's a sudden spending increase or decrease, so they're aware of potential waste or wrongly terminated services. Costs will be sorted into Service Types and there's an option to exclude any Service Types that regularly produce spending spikes, such as Tax and Support.

These anomaly alerts will be displayed on a new Alerts tab in the Service Portal Cost Dashboard. Clicking the Details link in each alert takes you to the Daily Costs chart where the anomaly is highlighted. If you click on Details of an alert for a specific service type, the Daily Costs, Monthly Costs, and Most Expensive Regions sections will be pre-filtered to show only that service type. Here's an example of the Alerts tab:

Summary   Daily Cost <u>Alerts</u>			Configure ▼
2019/09/16	Budget Alert		<a href="#">Details</a>
Current monthly expenses of \$1.82K for all organization services have exceeded 80% of target budget of \$10.00. Also, current monthly expenses of \$1.82K for your organization have exceeded 80% of target budget of \$10.00.			
2019/09/15	Amazon Web Services Cost Anomaly Alert	Service Type: AWS Instances	<a href="#">Details</a>
Your recent daily cost was \$35.56. Your average cost for the past 14 days has been \$47.90. This represents a decrease of 26%.			
2019/09/14	Global Cost Anomaly Alert	Service Type: All Services	<a href="#">Details</a>
Your recent daily cost was \$87.39. Your average cost for the past 14 days has been \$111.21. This represents a decrease of 21%.			

Users will have full flexibility to configure the thresholds and service types for these anomaly alerts:

### Configure Cost Anomaly Alerts

☒ Enable Anomaly Detection

Detect cost anomalies and issue alerts based on a comparison of daily costs and thresholds that are set below. Costs are grouped by Service Type.

Delta Threshold (Percent):  %

Excluded Service Types: 

AWS Support (Basic), AWS Support (Business), AWS Support (Developer), AWS Support (Enterprise), Tax, Invoice, Support

☐ Send email notification

[Advanced Options](#)

Apply

Cancel

In order to configure and view the alerts, users require the permissions: Show All Organization Services, Show Cost Dashboard, and Manage Cost Anomalies. To see alerts, you must have "All Services" selected in the Organization view dropdown on the top right of your Service Portal window.

For more information, see "Cost Anomaly Detection" in the Service Portal User Guide.

## Filtering by Service Type

To see the context of cost anomalies even further, in the Service Portal you can now filter by Service Type. When you filter by Service Type, you can analyze cost trends and see forecasts for that service type only.

### Filters

Select the criteria to filter cost data

Cloud Type

Service Type

Advanced Filters

Add Filter

Clear Filters

Apply Filters

Cancel

For more information, see "Filtering Cost Dashboard data" in the Service Portal User Guide.

## Markups and Discounts

If you want to adjust your cloud services costs before you reveal them to your users, you can add a markup or a discount percentage using the Markups and Discounts page in the Edit Cost Model dialog. With this feature, Service Portal users will see the adjusted costs throughout the Service Portal and in any emails to them that contain cost information. The cost adjustments, which can be used with any private or public cloud services, can be applied globally or to specific service types. This is useful for applying different markups or discounts for different groups of bill line items.

**Edit Cost Model**

**Markups and Discounts**

Add a markup or discount to your private or public cloud services. The margin can be a positive or negative percentage. You can apply different margins to different service types or add a single, global margin that will be applied to all items.

Name and Targets	Percentage
Global Default	10
AWS Data Transfer	3
AWS Key Management Service	5
AWS Lambda	2.5
Amazon Elastic Container Service for Kubernetes	1.5
Amazon Glacier	-3
AmazonCloudWatch	2

Add Service Type

For more information on applying markups and discounts, see "Markups and discounts page" in the Commander User Guide.

To better manage cloud resources, Commander administrators now have the option of viewing original or adjusted costs on the Cost Analytics dashboard. Here's the Edit Cost Filters dialog showing the Cost Adjustments option:

**Edit Cost Filters**

Cloud Type:  Cloud Type will determine Managed System availability.

Managed System:

Organization:  Include all VMs/services, whether assigned to an organization or not.

Cost Adjustments:

Advanced Filters:

For more information, see "Filtering cost analytics information" in the Commander User Guide.

You now have the option to generate some reports that have only the adjusted costs, so you can provide Service Portal users with only marked-up and discounted costs, not the actual costs you pay. Reports that can have adjusted pricing include the Cloud Billing report, the VM Billing report, and the VM Comparative Economics report.

For more information, see "Markups and Discounts page" in the Commander User Guide.

## Charge Type Classification

With the new Charge Type Classification feature, you can offer your Service Portal users a more customized Cloud Billing Report. Now you can choose which charge types to include or exclude from your AWS or GCP cloud billing reports. Charge types like taxes, credits, and rounding adjustments can be excluded from the billing report that your customers see. The report is also easier to read because the total taxes and credits can be displayed as separate items in the report.

Here's the Report Generator for the Cloud Billing Report showing the options for Charge Type Classification:

### Cloud Billing

Calculate the accrued costs to date for all private and public cloud services. Dates are at GMT timezone.

☒ By Period
 ☐ By Dates

During:
 

Last 3 Months

Cloud Type:
 

All Cloud Types

Cloud Type will determine Managed System availability.

Organization:
 

Any Organization

Include all VMs assigned to chosen organization.

Group By:
 

None

Comment:

[Remove Advanced Filters](#)

+

Charge Type

▼

is

▼

Adjustment ▼

Adjustment

Credit

Tax

Usage

Help

Generate

For more information, see "Cloud Billing Report" in the Commander User Guide.

A new setting is available in the Configure Organization wizard to allow you to show or hide cloud credit and tax information from Service Portal Cost Dashboard users.

- 6 -

Configure Organization

Organization Properties

Configure key pair credentials, landing page, and visibility of credits and taxes for the organization.

Name and Members

Organization Properties

Quotas

Key Pair Credentials:

Add Credentials

Landing Page:

Dashboard

Cost Dashboard:

Show cloud credits and taxes

Show cloud credits and taxes

Hide cloud credits and taxes

Help

Back

Next

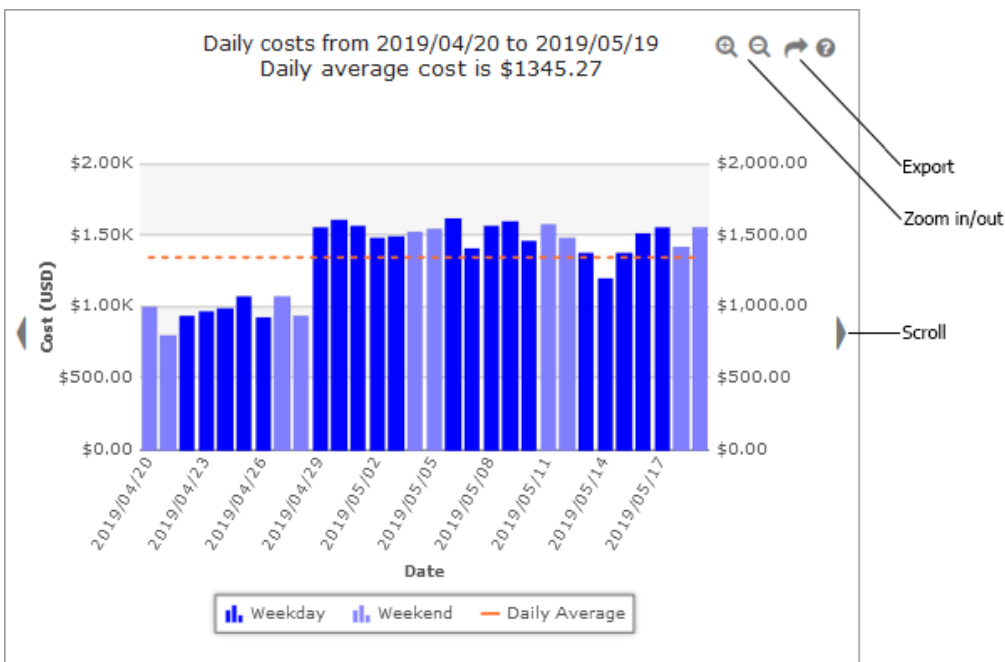
Finish

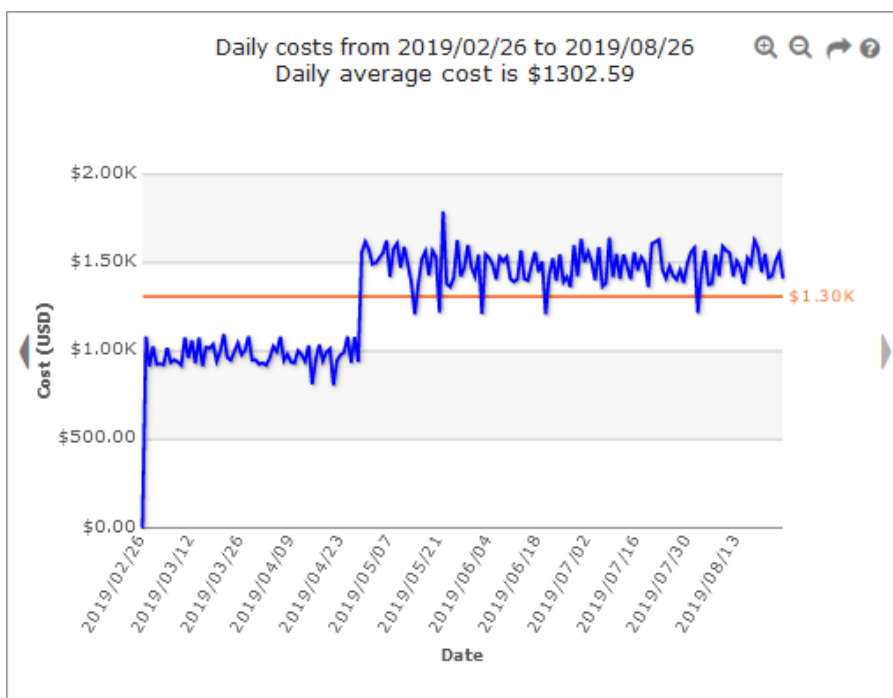
Cancel

For more information, see "Displaying credits and taxes in the Service Portal Cost Dashboard" in the Commander User Guide.

## Cost chart zooming and scrolling

In both Commander and the Service Portal, the new zooming and scrolling features on the Daily Costs chart allow you to see cost trends on bigger or smaller scales. You can zoom in to see one week of data or zoom out to see up to 2 years of data. Scrolling lets you scan your data to get a better picture of your costs over time.





For more information, see "Daily Costs" in the Commander User Guide.

## Enhanced billing data retrieval and display

To provide even greater precision for your Cost Analytics charts and Billing Reports, we've improved our billing data retrieval and display processes with the following enhancements:

- Accurate daily billing data takes a while for public cloud providers to accumulate and publish, so Commander will wait 24 hours before retrieving and displaying any public cloud billing records. You'll see the most accurate information possible. For private clouds, you'll be able to see yesterday's estimated costs, but for public clouds, the most recent costing information will be the costs from the day before yesterday.
- For AWS, to make sure Commander captures any late billing adjustments, Commander will confirm the accuracy of all daily AWS costs every day of the current month.
- Commander will also check every day for AWS bill updates for the previous billing month.

For more information, see "Setting Up Cost Analytics" in the Commander User Guide.

## Fresh New Look and Name

We're excited to announce that Embotics' flagship product has a brand new name. Instead of vCommander, our product is now called Commander.

Along with a new name, Commander now has a fresh, updated UI. Our goals are to create a more modern look and feel and provide a richer experience. Here's a look at the new Commander Catalog page:



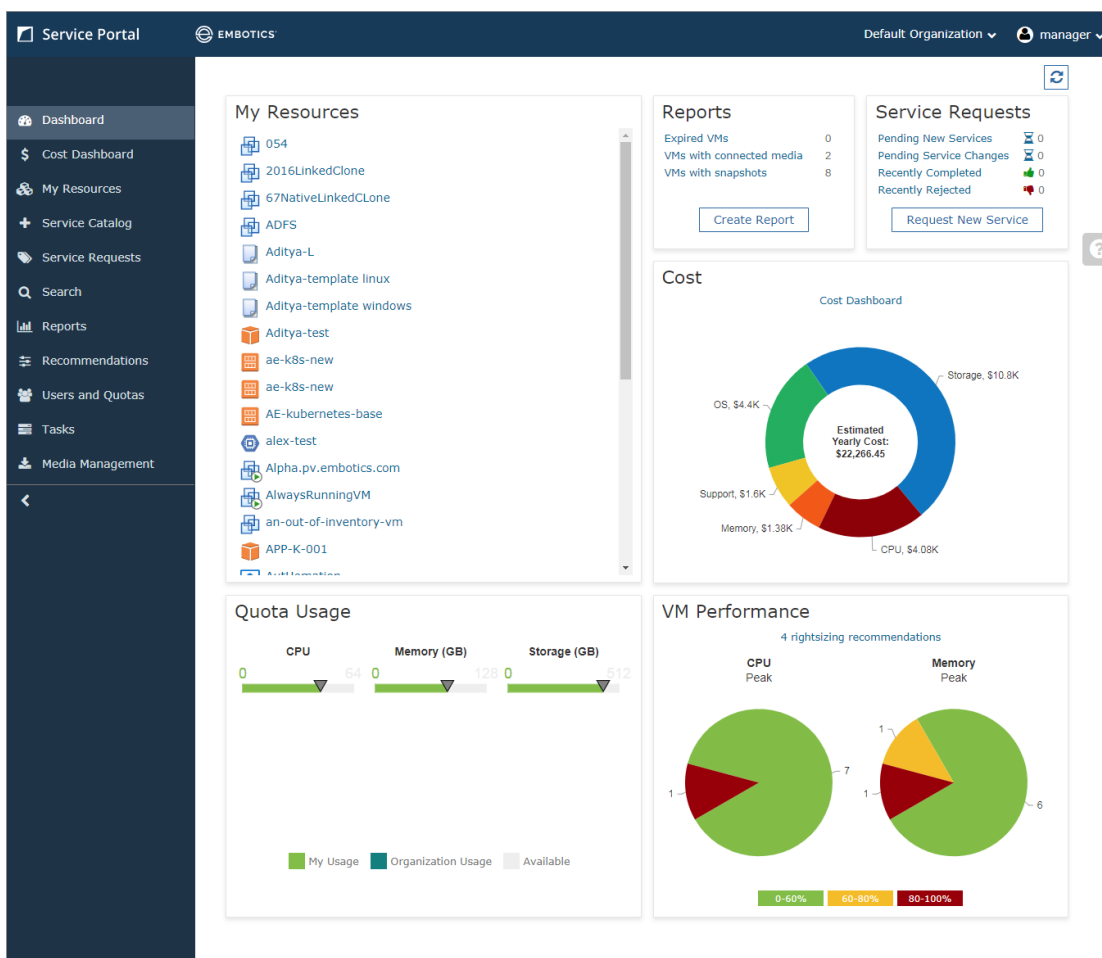
The screenshot displays the EMBOTICS Commander Self-Service Catalog. The top navigation bar includes 'Views', 'Configuration', 'Tools', 'Reports', and 'Help'. Below this, a secondary navigation bar lists 'Self-Service' (active), 'Getting Started', 'Placement', 'Catalog' (highlighted in red), 'Forms', 'Approval', 'Provisioning', 'Completion', and 'Notification'. A search bar at the top of the catalog shows '3 unfiltered rows'. The catalog lists three services:

Service Name	Price	Action
Azure Public	\$1087	<a href="#">Show Details</a>
deploy-docker-dev <small>deploys a single docker instance on centos7</small>	\$3750	<a href="#">Show Details</a>
DeployGoldImage <small>Linux</small>	\$4550	<a href="#">Show Details</a>

At the bottom, there are buttons for 'Help', 'Configure', 'Multi-Cloud', and 'Add Service'. A sidebar at the bottom left contains 'Tasks' (highlighted), 'Workflows', and 'Alerts'.

You'll note that we've changed colors, as well as streamlined navigation and improved the overall look. We've also updated the styling for reports and emails.

Also, if you haven't re-skinned your Service Portal, this will be the new default portal look and feel:

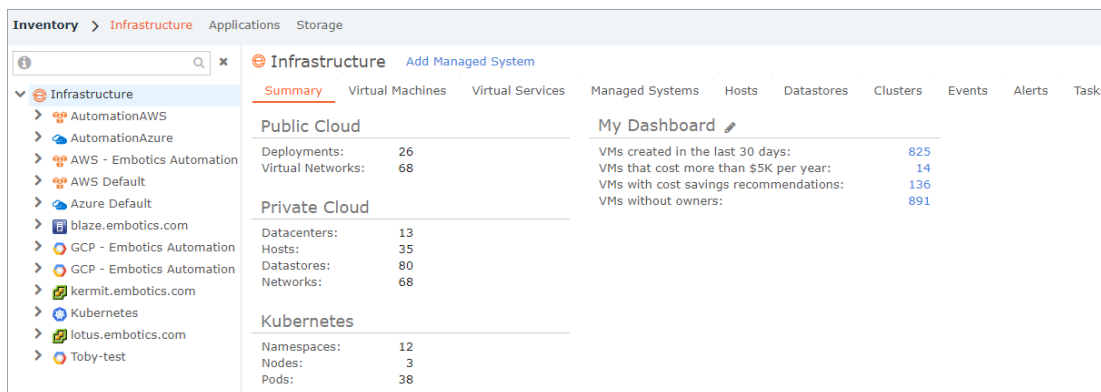


The Commander restyle also introduces some user experience changes.

## Inventory views

The Summary tab for all Inventory views (Infrastructure, Applications, and Storage) is now restyled to provide a modern look. The following changes have been made to the Summary tab to provide more detailed information:

- In the Infrastructure and Applications views for the root node, the information previously provided in the General section is replaced with the Public Cloud, Private Cloud, and Kubernetes sections.



- In the Applications view for the root node, the My Dashboard section is added.

- In the Infrastructure and Applications views for the root node, you can now configure My Dashboard to display up to eight searches. Previously, you could only display four searches. For more information, see "Monitoring Your Inventory" in the Commander User Guide.
- In the Infrastructure view for VMs, the Operational section is now called Lifecycle.

The screenshot shows the 'Starlight' resource details page. The left sidebar displays the 'Infrastructure' view with a search bar and a tree of resources. The main content area is divided into two tabs: 'Summary' (selected) and 'Details'. The 'Summary' tab shows general information about the resource, including its Guest OS, Resources, Guest Tools Status, IP Address, DNS Name, Power State, Host, VM Files, and Service Request. The 'Details' tab shows more specific information, including Estimated Annual Cost, Created By, Date Created, Uptime, Powered Off Since, Snapshot Count, Oldest Snapshot Date, Virtual Disk Size (GB), and File Location. Below the 'Summary' tab, there is a 'Lifecycle' section showing Expiry State, Expiry Date, Expiry Group, Compliance State, and Organization.

General		Details	
Guest OS:	Windows Server 2016, 64-bit (Build 14393)	Estimated Annual Cost:	\$3479 <a href="#">Details</a>
Resources:	2 CPU, 12 GB Memory	Created By:	
Guest Tools Status:	VMware Tools are Running (Current)	Date Created:	2019/09/12 13:22:18
IP Address:	10.10.20.101 <a href="#">Details</a>	Uptime:	1 days, 3 hours
DNS Name:	Starlight.PV.embotics.com	Powered Off Since:	
Power State:	Running	Snapshot Count:	1
Host:	charming.embotics.com	Oldest Snapshot Date:	2019/09/11 16:48:37
VM Files:	<a href="#">Click To View</a>	Virtual Disk Size (GB):	100.0
Service Request:	<a href="#">View All (0)</a>	File Location:	[Docs] Starlight/Starlight.vmx

Lifecycle	
Expiry State:	No Expiry Date Set
Expiry Date:	No Expiry Date Set
Expiry Group:	Default Expiry Group
Compliance State:	Compliant
Organization:	
Primary Owner Login:	

## Inventory tree search

You can now search the tree in the Infrastructure, Applications, and Storage views to quickly and easily find resources within the hierarchy.


The screenshot shows the 'Inventory' view with the 'Infrastructure' tab selected. A search bar at the top of the tree is set to 'automation'. The tree is filtered to show only resources containing 'automation' in their name. The results are organized into several categories: Datacenters, Folders, Management Servers, Resource Groups, Resource Pools, Virtual Services, and Virtual Machines. Each category lists the relevant resources, such as 'Automation', 'AutomationAWS', 'AutomationAzure', 'AWS - Embotics Automation - Proxy', 'GCP - Embotics Automation', 'GCP - Embotics Automation - Proxy', 'AutomationEastUs', 'Appliance\_Automation', 'Automation Test Systems', 'Automation-Corpv', 'AutomationVC', 'Automation-vApp', and 'AutomationVC'.

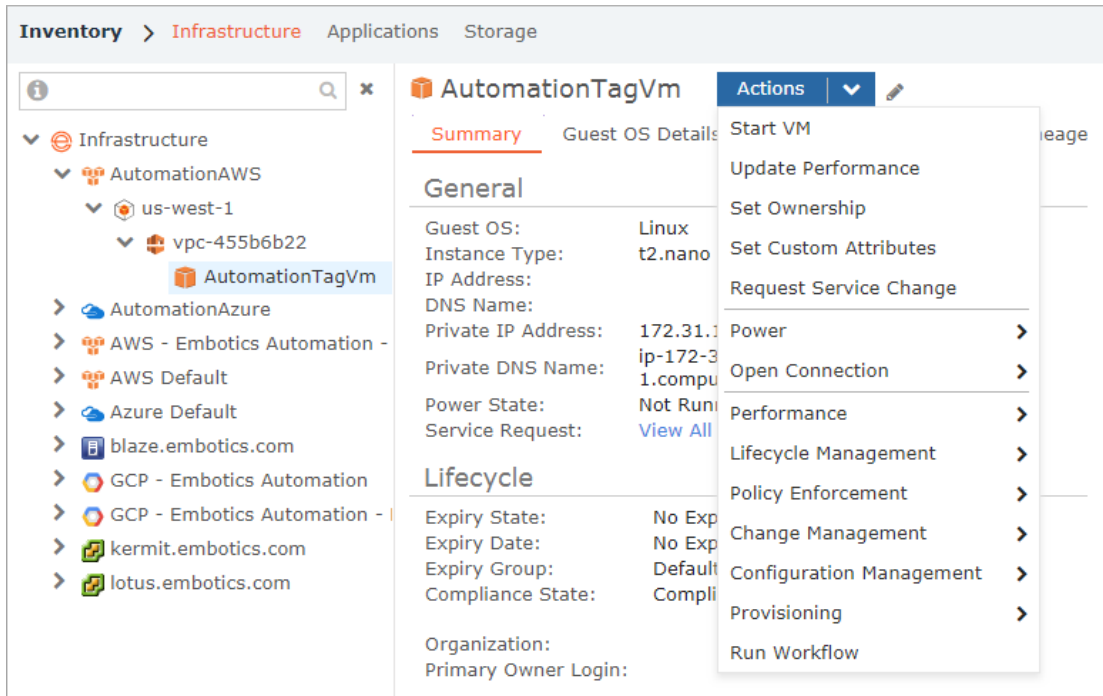
From the filtered results you can then click through to see the details of the resource you were looking for. For more information, see "Searching the tree" in the Commander User Guide.


## Actions drop-down list

When you select a resource from the Infrastructure, Applications, or Storage views (formerly called the

Operational, Deployed, and Storage views), the actions that you can take on that resource are now displayed in a drop-down list at the top of the Views page. The Actions drop-down list replaces the Commands pane that was previously displayed in the Views page.

For VMs many available actions may be available. Therefore, you can click  **Pick Properties** to set any Action commands that you may frequently use to the top of the drop-down list. In the following example, the first five actions were chosen to be "quick actions". For more information on how to customize what quick actions you want add, see "Displaying VM and virtual service actions" in the Commander User Guide for more information.



-  You can also right-click an object in the Inventory tree and choose an available action. However, you can't set any quick actions for right-click menu.

## Reorganized Identity and Access

We've moved all Organizations, Users, Service Portal Roles, and Authentication under one menu called **Identity and Access**, so all this related information can be easily found in one place.

**EMBOTIX Commander** Views Configuration Tools Reports Help

Identity and Access > Organizations Parent Organizations Users Service Portal Roles Authentication

An organization is a group of consumers with a common business purpose. Organizations allow you to segregate data for your consumer groups, set up distinct cloud automation configurations for your consumer groups, and delegate administrative tasks.

16 unfiltered rows

Issue	Organization Name
	Integrations
	IT
	Management
	Performance
	pvAutomation
⚠	QA
	QA - Production
	Sales
	Test

Organization Details

**Name:** pvAutomation

**Quotas:** No Quota Limit

**Members:** pvauto@automation.com

Help Refresh

## New Features in REST

We're continuing to expand version 3 of Commander's REST API. In v3, we've added the ability to apply ownership and attributes to VMs using REST v3.

In REST v2, we've added the ability to create blueprints based on multi-cloud templates.

To get started, see "Getting Started with the Commander REST API v3" in the REST APIs Guide. To browse the API reference, see "Embotix REST API" at <https://docs.embotix.com/REST-API/V3/>.

# Installation and Upgrade Notes


- If you're going to perform a first installation of Commander, refer to the Installation Guide for an overview of the Commander requirements and for instructions on how to install Commander.
- If you're going to upgrade an existing vCommander or Commander installation to 8.0.2, see the "Upgrading Commander" section of the Installation Guide for **important information** before starting the upgrade process and for instructions on how to upgrade a Commander installation.

# Deprecated and Removed Features and Platforms

This section lists features and platforms that have been removed or are deprecated. Support for deprecated features and platforms will be removed in a future release. If you need more information about any deprecated or removed features, contact [support@embotics.com](mailto:support@embotics.com). See also "System Requirements" in the Installation Guide.

- **Projected cost model option in Reports:** The Projected option for the Cost Model setting in the VM Billing Report and the VM Comparative Economics Report is deprecated and will be removed in a future release.
- **User-specific component forms for new service requests:** With the introduction in vCommander 5.7 of the blueprint service catalog model, user-specific component forms for new service requests (that is, component forms created in the Form Designer) are deprecated and will be removed in a future release.
- **End of Life Policy, Suspect Policy and Approval Policy:** The End of Life policy, Suspect policy and Approval policy and the relevant VM states are deprecated and will be removed in a future release.

# Issues Resolved in the Release

 To access release notes for previous Commander releases, go to the [Embotics Release Notes Archive](#).

## Resolved in version 8.0.2

Issue	Description
2028	When doing a manual billing retrieval of a cloud account with linked accounts, the linked accounts are now synced as expected.

## Resolved in version 8.0.1

Issue	Description
26973	The Service Portal Dashboard has been updated to improve screen rendering.
1747	For some Azure deployments, rightsizing recommendations were created that crossed instance families creating inconsistent behavior. Recommendations now correctly suggest instance types within the same family.
1722	In Azure, using REST v2, you can now create ownership policies on resource groups so that ownership is set properly when resources are deployed into resource groups.
1721	You can no longer add duplicate AWS cloud accounts through the Commander admin console.
1717	The properties returned from a REST v3 API call of GET <code>/rest/v3/organizations/&lt;name&gt;</code> now includes the current cost quota usage of an organization.
1711	With REST v3, you can now filter resource groups by organization.
1699	REST v3 requests were intermittently failing and resulting in incorrect error messages due to issues with concurrent use. This has been fixed, so multiple requests are now handled appropriately.
1583	When using REST v2 to create an Azure deployment destination, validation now occurs as expected to ensure that the resource group is valid for the cloud account.
1480	Multiple Azure Enterprise Agreement accounts now show separate data for each account.
1451	A REST v3 API <code>/internal/system-health</code> endpoint is now available. This endpoint provides metrics on the health of Commander.
1450	If the advanced system property <code>embotics.execute.command.task.succeed.unknown.exitcode</code> is set to true, when a workflow step returns an unknown exit code, the system now behaves as expected: a warning will be recorded in the comment log, and the step will complete. If false, Commander continues to query for the result until the timeout is reached.
1449	The maximum allowed lengths for list-based custom attribute values and organization names have been increased.
1107	For Service Portal users that are permitted to modify VM networks, you can now limit the networks available to those users according to their organization membership and the VM placement destination.

## Resolved in version 8.0.0

Issue	Description
27633	The <code>/webservices/services/rest/v2/security/sessions/count</code> endpoint now returns the number of active sessions and the configured maximums as expected.
27621	The VM Billing Report now takes into consideration the digit-separating commas in 4-digit or higher numbers so that billing totals are correct.
27555	For an Azure deployment, the variable <code>#{target.region.name}</code> is now populated with the region of the target's placement destination.



Issue	Description
27519	To add a Kubernetes cluster as a managed system, the provided kubeconfig file must be properly encoded in UTF-8. If the file isn't properly encoded, an error is now displayed, and no managed system is added.
27505	The CSV export of the Cloud Billing report no longer rounds cost and usage to 2 decimal places.
27471	The cost associated with recommendations for VMs that have been powered on for long periods now update as expected.
27437	The Azure region selection dialog is now populated with only the Azure regions that support Microsoft Compute to allow integration with Commander.
27433	Resource group names for ARM templates are now generated based on uniqueness across a subscription.
27416	The summary costs in the Cloud billing report are now right-aligned for easier reading.
27398	The following changes were made to the REST v3 API virtual-machines/{id} properties: <ul style="list-style-type: none"> <li>"public_dns_name" and "private_dns_name" properties are now listed under "resources" instead of under "resources/network interfaces"</li> <li>each network interface only displays its own IPs</li> </ul>
27376	Multi-cloud service requests now deploy to the proper destination when component resource settings are modified.
27374	Using the REST v3 API to remove a child organization from a parent organization and then later re-adding it now works as expected.
27310	In the Service Portal, you won't be able to clone published services that are corrupted (for example, the source template was deleted, the snapshot is missing, the credentials were deleted). A notification will let you know that you can't clone and will report the published service state.
27304	When deploying VMs on a distributed port group that has an associated IP pool, in some cases IP addresses weren't assigned to VMs even though there were free IPs in the pool.  The deployed VMs are now assigned IP addresses as expected.
27299	The descriptions for the RolePermission data type values in the REST v2 Reference Docs now align with the permissions described in the service portal documentation.
27285	Making REST v2 API calls with the Commander PowerShell commandlets no longer requires you to configure Internet Explorer before using the commandlets.
27284	The <code>{target.settings.dynamicList['*']}</code> variable is now available. You can use the variable to reference a specified dynamic list for the Deployed Name in a component form.
27272	Change requests that assign ownership to an Active Directory user not directly managed in Commander will now function correctly.
27271	Refactored internal representation of storage tier name identifier so storage tier name handling is now more robust.
27265	When you add an AWS managed system account with the "Add Managed System" API call, Commander now prevents you from adding duplicate AWS managed system accounts. You can't add duplicate managed systems accounts for any managed system type.
27260	Service Portal users are now able to upload files in the New Service Request form when requesting a service catalog item.
27245	Command workflows configured to be visible to users in specific organizations are now consistently displayed in the Service Portal as expected.
27210	For AWS, you can now use REST v3 to deploy a cloud formation template-based service that contains IAM resources such as Roles.
27192	A VM search with a filter of "Version (Guest Tools)" returns the applicable tool information (for example, the VMWare tools version) as expected. However, if the results are sent through scheduled email notification, the "Version (Guest Tools)" information could be listed as "Unknown".  VM search results received in an email notification now present applicable tool information as expected.
27161	A REST v3 API call to get a list of workflows now consistently returns, as expected.
27158	Resource group variable now gets populated with the appropriate resource group.
27152	The DRS setting is now re-enabled as expected when a vCenter VM is deployed through a completion workflow.

Issue	Description
<b>27151</b>	The advanced system property <code>embotics.workflow.customizeos.event.leadinperiod</code> now accepts -1, to be able to look back an unlimited period for the "customization completed" event.
<b>27111</b>	When using Global Text Replacement in names that are applied to deployed VMs, virtual services, and application stacks, variables will now correctly resolve names that contain underscore symbols.
<b>27094</b>	For scheduled tasks, the View Last Report option is now only available for Reports (tasks with a type of Report or Saved Search).
<b>27079</b>	List custom attributes can now be updated using REST v2.
<b>27042</b>	In some cases, errors displayed for service requests with no set expiry date even though they successfully completed. Those errors are no longer displayed.
<b>26830</b>	With the Commander REST v2 API, you can now add existing users to multiple organizations as expected.
<b>26301</b>	When an organization name is changed, using the Organization Name advanced filter for reports that use historical billing data (such as the VM Billing Report) now works as expected for the new organization name. Note that billing data created prior to upgrading to this release won't be included in reports when you filter on the new organization name.
<b>26141</b>	You can now submit service requests as a Service Portal user as expected when using Connect-Client2 to communicate with the Commander REST API.
<b>24428</b>	Update 3 for VMware vCenter 6.7 restores support for deploying linked clones from a template. As a result, linked clone deployments from a template are now also supported for vCenter managed systems in Commander.

# Known Issues

Issue	Description and Solution
27627	The destination control in Commander incorrectly shows costs which include markup.
21870	<p>When you deploy the VM Access Proxy, the <b>Synchronize guest time with host</b> option is disabled.</p> <p><i>In vCenter, right-click the VM Access Proxy deployment and select <b>Edit Settings</b>. On the VM Options tab (the Option tab in the Thick Client), enable the <b>Synchronize guest time with host</b> option in the VMware Tools panel.</i></p>
21477	<p>Google Chrome no longer supports the Common Name in self-signed certificates. Chrome now requires a Subject Alternative Name instead of the Common Name used in the self-signed certificate delivered with Commander.</p> <p><i>If you're using Chrome, generate a self-signed certificate for Commander using the Subject Alternative Name.</i></p>
17455	<p>Performance metrics may not be available immediately after upgrade to vSphere 6. As a result, attempting to run the <b>Update Performance and Capacity</b> command for a cluster immediately after upgrading to vSphere 6 may fail.</p> <p><i>Wait about an hour for vSphere to make performance metrics available, then run the command again.</i></p>
16002	<p>When the WebMKS console connection method is configured, Internet Explorer 11 users may be unable to see the mouse pointer in the console session.</p> <p><i>To open a console to a Windows VM from Internet Explorer 11 when using WebMKS, try enabling mouse trails with the shortest option. Or, use the VMRC plug-in method instead of the WebMKS method. For Linux VMs, use the VMRC plug-in connection method. See <a href="#">About the Console Connection Methods</a> to learn how to change the console connection method for HTML5 browsers.</i></p>
15602	<p>Commander and the Service Portal don't support multiple connections in the same browser. For example, you can connect to Commander in both Firefox and Chrome at the same time, but you can't connect to Commander in two instances of Firefox at the same time.</p> <p><i>Use a different browser to open another session.</i></p>

