

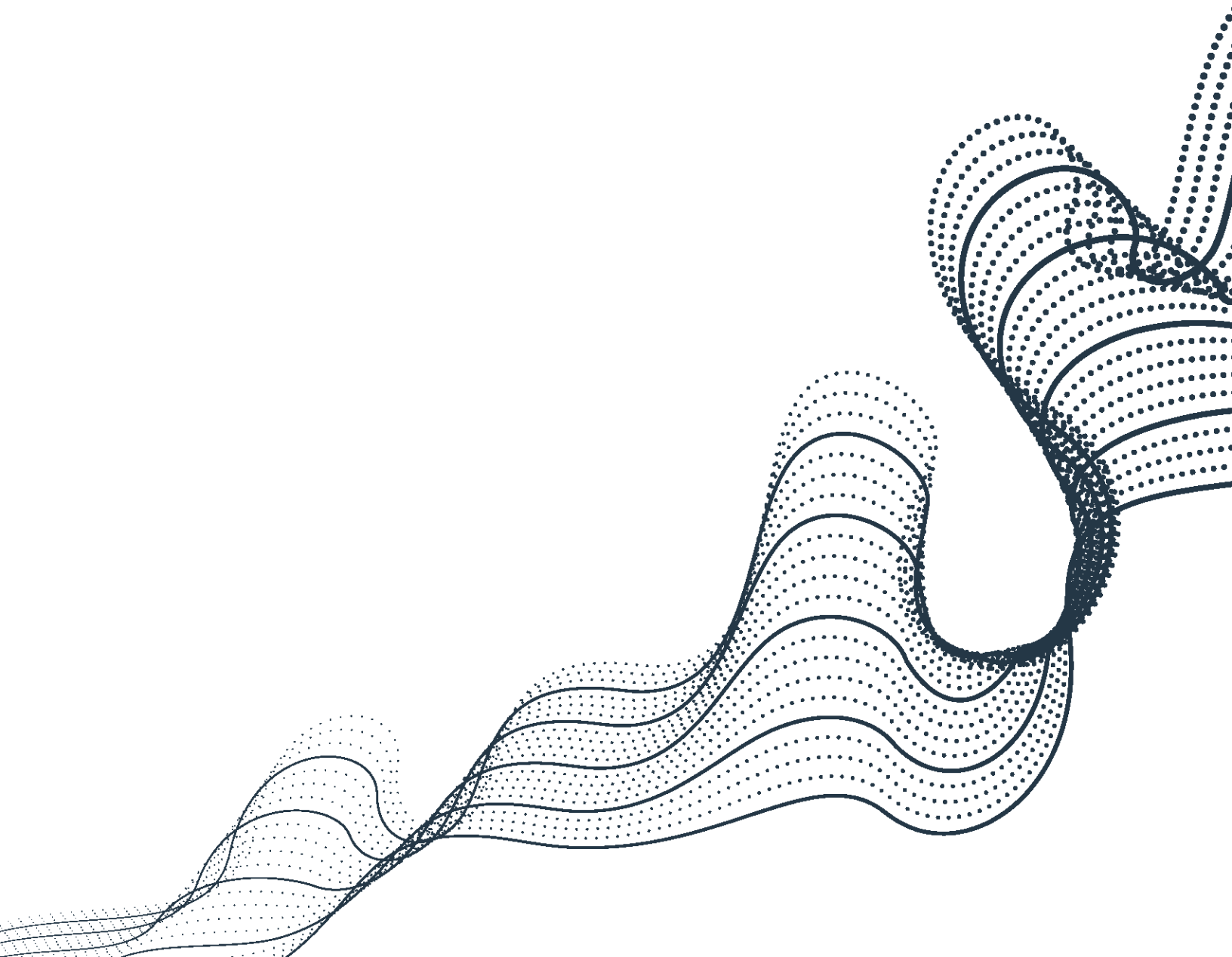


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Commander  
Version 8.1.5

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# Release Notes



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# New in Version 8.1

Commander Version 8.1 introduces significant new enhancements that bring increased flexibility in cost reporting and analysis. You can now use billing tags to filter your view of cost dashboards and reports with more detail. If you're using a showback or chargeback billing model, you can now enter additional fixed line items and SKU-based markup to customize your end user charges. In addition, costs can now be displayed in the Service Portal with any international currency you specify.

To improve your experience using Commander, we've remodeled our script editor, changed the naming of managed systems to cloud accounts, and improved our SSH Workflow options.

Finally, to allow you to work more efficiently using our REST interface, we've added some new features to our REST API.

For more information, see the following:

- [Cloud Expense Management Enhancements](#)
- [User Experience Improvements](#)
- [Enhanced SSH Workflow](#)
- [New Features in REST](#)

## Cloud Expense Management Enhancements

The following cloud expense management enhancements are included in this release:

- [Billing Tags](#)
- [Additional Line Items](#)
- [Markups/discounts based on SKU](#)
- [International currencies](#)

## Billing Tags

Billing Tags are tags or labels that are applied to resources in your public cloud. They bring more flexibility to your cost analysis by allowing you to group and filter your cloud expenses in more detail. Commander now retrieves ALL billing tags, which you can use to filter expenses in Cost Analytics, the Service Portal Cost Dashboard, and the Cloud Billing Report. This provides full visibility and cost analysis specific to your reporting needs. You can also incorporate Billing Tags into formulas for additional line items, so you'll be able to filter for costs based on tags.

For Azure and GCP cloud accounts, tags (called labels in GCP) are assigned automatically by the cloud provider. For AWS cloud accounts, you must configure which tags should be transformed to billing records. For public cloud accounts, tags or labels are automatically imported when you retrieve billing data. For private clouds, Billing Tags are generated from custom attributes.

Note that Billing Tags will only be retrieved from version 8.1 and forward, unless billing records are reset. If you want to reset billing records, contact [support@embotics.com](mailto:support@embotics.com).

For information on using Billing Tags in formulas for Additional Line Items, see "Additional Line Items page" in the Commander User Guide.

## Additional Line Items

With the new Additional Line Items features of the Cost Model wizard, you can set up fixed monthly or calculated daily costs such as extra maintenance or support fees.

The new Add Fixed Monthly Charge dialog lets you configure these additional charges for any public or private cloud environment.

Add Fixed Monthly Charge

Name:

Enhanced Services Fee

Cloud Account:

AWS

Amount:

235

Time Span

Start Date:

2020/03/10

Never Expires:

☐

Number of Months:

6

Last charge will be on 2020/08/10

Report Headings ?

Service Name:

Enhanced Services Fee

Service Type:

Enhanced Services Fee

Cost Category:

Enhanced Services Fee

Help

OK

Cancel

To custom-design the daily additional fees, you can use the new formula-based feature to specify costs based on a range of input parameters. You can also control how long the charges will be applied and how they will appear in reports.

The Additional Line Items are accessed through the cost model configuration. This provides the ability to configure line items on different cloud accounts or per customer tenant organization.

Edit Cost Model

Additional Line Items

Additional billing items calculated at defined time intervals and added to the billing records.

Name and Targets

Resources

Operating System

Support

Markups and Discounts

Additional Line Items

Custom

VM Uptime

Summary

Maintenance

Type: Fixed Monthly Charge

Amount: \$240

Start Date: 2020/02/23

End Date: 2020/08/23

Actions

Premium Service Fee

Type: Calculated Daily Charge

Amount Formula:  $\text{sum}(\text{"service.name -eq 'premium'"} * 0.50)$

Start Date: 2020/02/23

End Date: 2021/02/22

Actions

Edit

Copy

Remove

Support Fee

Type: Calculated Daily Charge

Amount Formula:  $\text{sum}() * 0.20$

Start Date: 2020/03/01

End Date:

Actions

Add Line Item

Remove Expired Line Items

Help

Back

Next

Finish

Cancel

The Additional Line Items charges appear in Cost Analytics and Dashboard charts and tables. This charge will also show up in the Cloud Billing Report and is classified as a “Custom” Charge Type. It can be filtered out of the Cloud Billing Report using Advanced Filters as shown in the Cloud Billing Report generator dialog:

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 Cloud Account availability.

Organization:

Any Organization

Include all VMs assigned to chosen organization.

Cost Adjustments:

Include Markup and Discounts

Group By:

None

Comment:

Remove Advanced Filters

+

Charge Type

is

Custom

Help

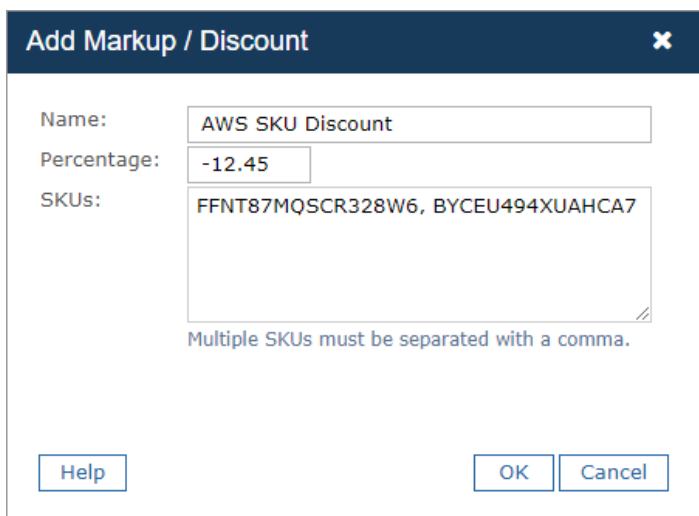
Generate

For more information, see "Additional Line Items page" in the Commander User Guide.

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## Markups/discounts based on SKU

Building upon the Service-based markup/discount capabilities delivered in Commander 8.0, we have further enhanced this ability to add SKU-based markups and discounts for public cloud accounts. This allows you to adjust your cloud services costs before you reveal them to your users.



**Add Markup / Discount**

Name: AWS SKU Discount

Percentage: -12.45

SKUs: FFNT87MQSCR328W6, BYCEU494XUAHCA7


Multiple SKUs must be separated with a comma.

Help OK Cancel

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

## International currencies

You can now configure any international currency as the default currency code. Costs in Commander and the Service Portal will be displayed with the currency code you specify. Previously, only a short list of default currencies was available and costs were displayed with the currency symbol. For more information, see "Default currency" in the Commander User Guide.

 **Note:** This capability only changes the currency code, and must be used in conjunction with the Knowledge Base article mentioned below to perform the exchange rate conversion.

In combination with the new default currency code, you can now use an extension to update the exchange rate associated with a cost model. This capability allows Service Portal users to see costs in their local currency. Note that only some costs in the Commander UI will reflect the updated currency. For more information about the currency exchange rate extension, see [Automatically Syncing Foreign Exchange Rate to Commander](#) in the Knowledge Base. If you plan to use this capability, contact [support@embotics.com](mailto:support@embotics.com).

 **Note:** Future enhancements are planned to provide additional multi-currency capabilities.

## User Experience Improvements

The following user experience improvements are included in this release:

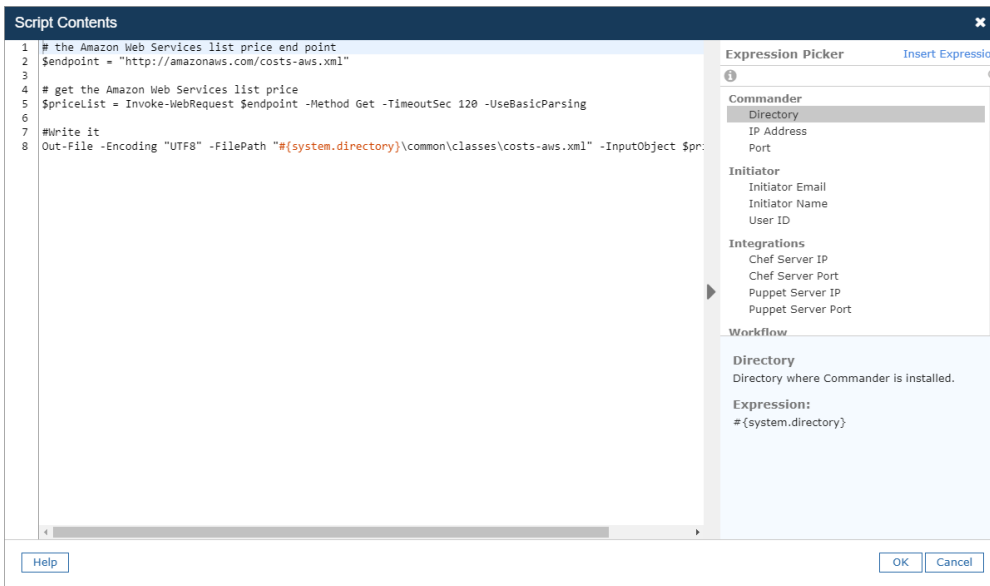
- [Script editor](#)
- [Changed "managed systems" to "cloud accounts"](#)

## Script editor

The script editor now provides syntax highlighting and a larger text field to edit multiple lines. In addition, you can now use keyboard shortcuts to expedite common actions, such as finding and replacing.

You can use the script editor for:

- Workflow steps
- Dynamic list scripts
- Email body for expiry policy notifications



For more information, see "Using the script editor" in the Commander User Guide.

## Changed "managed systems" to "cloud accounts"

"Managed system" is now renamed to "cloud account". The changes apply to the Commander user interface, variables, and also to REST endpoints, properties, and filters.

## Enhanced SSH Workflow

You can now specify an SSH port when creating a workflow step. Because public cloud SSH ports may be different for each case, you can now customize the SSH port during execution of the SSH command step.

You can set the port value using either a fixed integer, such as 22, or a variable.

Execute SSH Command

Step Name:

Execute SSH Command

Step Execution:

Always execute

Edit

Timeout:

300

seconds

Enter '0' for no timeout.

When Program Fails:

Mark workflow step as failed: do not proceed

Program Output:

Capture program output as comment

Credentials:

AWS

Add Credentials

Host:

:

22

Command Line:

You can pass arguments into a program.

[Click here for more details.](#)

To accommodate workflow steps from previous releases, you can leave the port field empty and the system will use port 22. If you have an invalid variable, the system will also use port 22.

## New Features in REST

We're continuing to expand version 3 of Commander's REST API. In this release, we've added a number of new features in the areas of billing records, cloud accounts, tasks, events, and recommendations.

For more information, see [Get Started](#) in the REST API Guide. To browse the API reference, see [Snow Commander REST API](#).

## Browse billing records

Using REST, billing records can now be retrieved and filtered on several properties including:

- cloud account
- date
- charge type
- billing record tag

## Manage cloud accounts

We've expanded cloud account management with a number of new features. These include:

- creating, retrieving, and updating cloud accounts
- managing the custom attributes on cloud accounts
- assigning ownership to the child resources of a cloud account
- managing access rights to a cloud account
- reconnecting to a cloud account

## Browse tasks and events

You can now query and filter system tasks and events. This allows you to create audit trails of important system events and to monitor the state of long running tasks for completion.



## Browse recommendations

You can now browse active and ignored recommendations. This includes rightsizing, power scheduling, and reserved instance purchase recommendations for virtual machines and AWS regions.

## 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 8.1.5, 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.

## Supported upgrade paths

Consult the following table to see whether a direct upgrade from your currently installed version is supported.

Current installed version	Direct upgrade supported to
8.0.x	8.1.x
7.5.x	8.0.x
7.1.x	7.5.x
7.0.x	7.1.x
6.1.x	7.0.x, 7.1.x

## Deprecated and Removed Features and Platforms

The following features or platforms have been removed or deprecated for the 8.1 release. If you need more information about any deprecated or removed features, contact [support@embotics.com](mailto:support@embotics.com).

- **Scanning Guest Operating Systems:** The Scanning Guest Operating Systems feature has been deprecated as of Release 8.1 and will be removed in a future release.
- **VM Billing Report for Public Clouds:** You can use the VM Billing Report for private cloud environments; however, for public or hybrid cloud environments it's recommended that you use the Cloud Billing Report. The ability to use the VM Billing Report for public clouds 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 were deprecated as of Release 7.0.2 and will be removed in a future release.
- **Microsoft Windows Server 2012 R2 and Windows Server 2012:** Support for Microsoft Windows Server 2012 R2 and Windows Server 2012 has been removed as of Release 8.1.
- **Microsoft SQL Server 2012:** Our support for Microsoft SQL Server 2012 now requires SP4 as of Release 8.1. However, Microsoft SQL Server 2012 support is now considered deprecated and will be removed in a future release.



**Note:** As of Release 8.1, Microsoft Windows Server 2019 and Microsoft SQL Server 2019 are supported for use with Commander. For information on software, hardware, and other requirements to run Commander, see "System Requirements" in the Installation Guide.

## REST API v3 Changes

In the Commander user interface, "managed system" is now renamed "cloud account". As a result, the following is deprecated:

Deprecated	Replaced with
Endpoints	
GET managed-systems/{id}	GET cloud-accounts/{id}
DELETE managed-systems/{id}	DELETE cloud-accounts/{id}
Properties and filters	
managed_system_name	cloud_account_name
managed_system_type	cloud_account_type
managed_system_id	cloud_account_id
management_server_address	cloud_account_address

Note that the deprecated properties and filters listed in the table above affect the following endpoints:

- GET virtual-machines/{id}
- GET /virtual-machine-images/{id}
- GET /resource-groups/{id}

## Variable changes

In the Commander user interface, "managed system" is now renamed to "cloud account". As a result, the following variables are deprecated:

Deprecated	Replaced with
target.managedSystem.address	target.cloudAccount.address
target.managedSystem.name	target.cloudAccount.name
target.managedSystem.tenantId	target.cloudAccount.tenantId
target.managedSystem.type	target.cloudAccount.type

# Resolved Issues

The following issues have been resolved in this release:

- [Issues resolved in 8.1.5](#)
- [Issues resolved in prior 8.1.x releases](#)

## Issues resolved in 8.1.5

The following issues have been resolved in version 8.1.5.

Issue	Description
16281	In some cases Azure accounts may disconnect. This no longer occurs.

## Issues resolved in prior 8.1.x releases

The following issues have been resolved in prior 8.1.x releases.

Issue	Description
27627	The destination control in the Commander administrator console incorrectly showed costs that included markup. The destination control now shows regular costs in Commander and marked up costs in the Service Portal, as expected.
15816	Quota approval email workflow steps failed to complete if no quota was assigned to an organization. This has been fixed and quota approval email workflow steps now complete as expected.
15506	AWS Reserved Instance Fee costs were inaccurate. This has now been corrected, except as noted in the Known Issues. To correct historical data, you can use the REST API billing reset.
15350	Users that belong to an AD group can now run API V3 calls as expected. They no longer have to be explicitly added to Commander.
15220 15217	Users could not sign in to the Service Portal using the SAML single sign-on (SSO) integration. The SAML SSO integration now works as expected.
15219	In the VM Billing Report, 0 costs are no longer shown as -1.00.
15211	Service Portal users can now submit change requests using REST v2.
15165	Performance optimizations have been made for the retrieval of VM performance data for AWS cloud accounts with large numbers of AMIs.
15163	Performance optimizations have been made for the retrieval of billing records.
15092	Billing retrieval took much longer than expected, and now completes in the expected amount of time.
15019	Inventory synchronization could fail for Azure storage accounts of type FileStorage. Inventory synchronization now works as expected.
2295	You can now skip a workflow step that has an in-progress task. When the step is skipped, the workflow will continue with the next step.
2253	Optimized memory usage during nightly billing record retrieval.

Issue	Description
2198	Billing data for GCP was not displayed if it contained high usage values. The size of numeric fields used to store billing records has been increased to accommodate high usage values. As such, billing data for GCP is now displayed as expected.
2156	The default field size for the CIDR Block field has been increased, so GCP data for this variable won't be truncated.
2153	Nightly billing retrieval didn't finish successfully for all cloud accounts when a retrieval for one cloud account encountered an unexpected error. The result was that billing data wasn't updated for all cloud accounts. This has now been fixed.
2148	For some environments with a large number of cloud accounts, the nightly scheduled task to retrieve billing records could show a decreasing percentage done. Now, as billing records are retrieved, the displayed percentage done will increase, as expected.
2133	Service Portal users were not able to enter any text if the Message of the Day was enabled. Service Portal users can now enter text as expected while the Message of the Day is enabled.
2122	The same AWS account can't be added twice, even if different credentials are used.
2050	When upgrading Commander, the default number of scheduled tasks that can run was reduced from 5 to 1. The default number of scheduled tasks that can run will remain at 5, as expected.
2005	The Cloud Billing report now correctly shows cost entries that were previously missing in the Details table when the "Group By" feature is used.
1966	Usage and costs in the Cloud Billing Report now display as expected when using the Group By filter.
1964	The Send Email step of the Completion Workflow now executes fully when resources are allocated in any order.
1957	vSphere remains connected when datastores are orphaned from their hosts.
1922	In some cases, if Commander failed to retrieve billing data for a cloud account, it wouldn't attempt to retrieve billing data for other subsequent cloud accounts. Now if Commander fails to retrieve billing data, it will log the failure, then continue to retrieve billing data for other cloud accounts.
1888	The Service Portal Cost Dashboard could show totals that include recommendations for resources not owned by an organization. The Service Portal Cost Dashboard now only shows totals that include recommendations for resources owned by an organization.
1855	Total costs in the Cloud Billing Report now display as expected.
1845	If you deleted a subnet in AWS for an Auto Scaling Group with no VMs, Commander could fail to sync with that AWS account and lose the connection to it. Now, for such a scenario, Commander will synchronize with the AWS account and maintain the connection, as expected.
1828	Search terms that contain special characters or non-English characters will no longer return 500 errors.
1823	Service Portal report scheduling is no longer affected by Commander time zone settings.
1820	Refunds for AWS cloud accounts are now categorized as cost adjustments.
1806	You can now assign descriptive names of up to 300 characters to parent organizations. This matches the length allowed for organization names.

Issue	Description
1758	The Choose button for the Upload Files field now displays as expected when using a custom theme.
1753	Scheduled reports that include advanced filters with enumerations now generate as expected.
1741	When creating or editing an Azure blueprint, a validation error occurred if you only specified a variable for the deployed name instead of using the default naming convention. The validation now passes as expected.
1682	The user directory locking mechanism now allows for users to authenticate even when a user directory synchronization is happening.
1681	The REST v3 API documentation now includes Bearer Authorization.
1650	Some region codes used in billing records could cause cost analytics discrepancies because they vary from codes recognized by the Azure API. Support for some additional region codes, such as "all regions" and "krcentral", have been added.
1637	The vSphere server no longer disconnects when one of its hosts is remediated.
1543	Administrators and Service Portal users can now power off suspended VMs with the "Stop VM" and "Power Off" options, respectively.

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

## Known Issues

These are the known issues for Commander 8.1:

Issue	Description and Solution
21870	<p>When you deploy the VM Access Proxy, the <b>Synchronize guest time with host</b> option is disabled.</p> <p>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.</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>If you're using Chrome, generate a self-signed certificate for Commander using the Subject Alternative Name.</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>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.</p>

Issue	Description and Solution
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>Use a different browser to open another session.</p>
15506	<p>Reserved Instance (RI) daily fees may be incorrect in the month that a reserved instance is purchased or expires.</p>
15383	<p>The previous day cost displayed in the Daily Cost Breakdown table may be incorrect if a billing tag was changed in the previous day.</p>

