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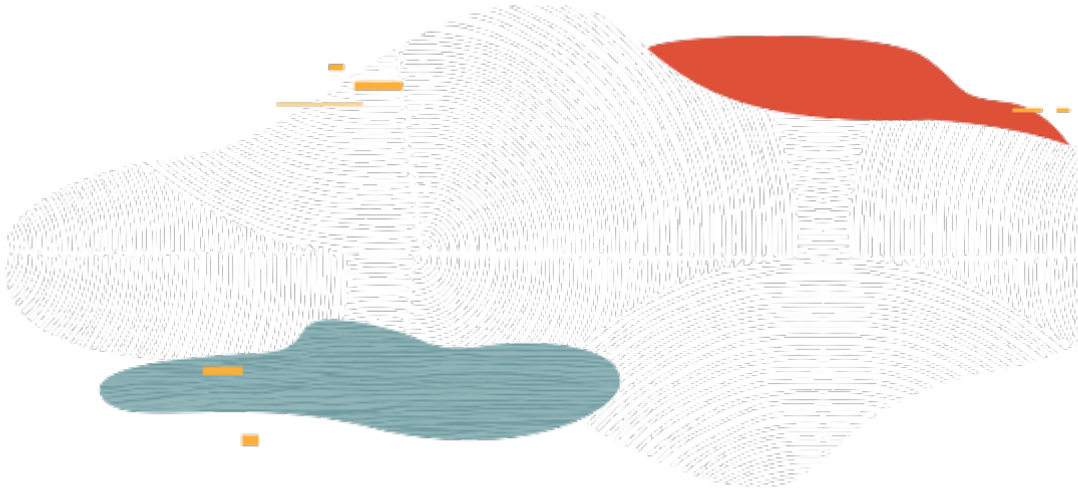

Billing and Cost Management

Level 100

KD Singh
Oracle Cloud Infrastructure
September, 2019

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Topics

Billing and account management options in OCI Console
Cost Analysis
Budgets
Usage Reports
Service limits and usage
Compartment Quotas
Cost management best practices

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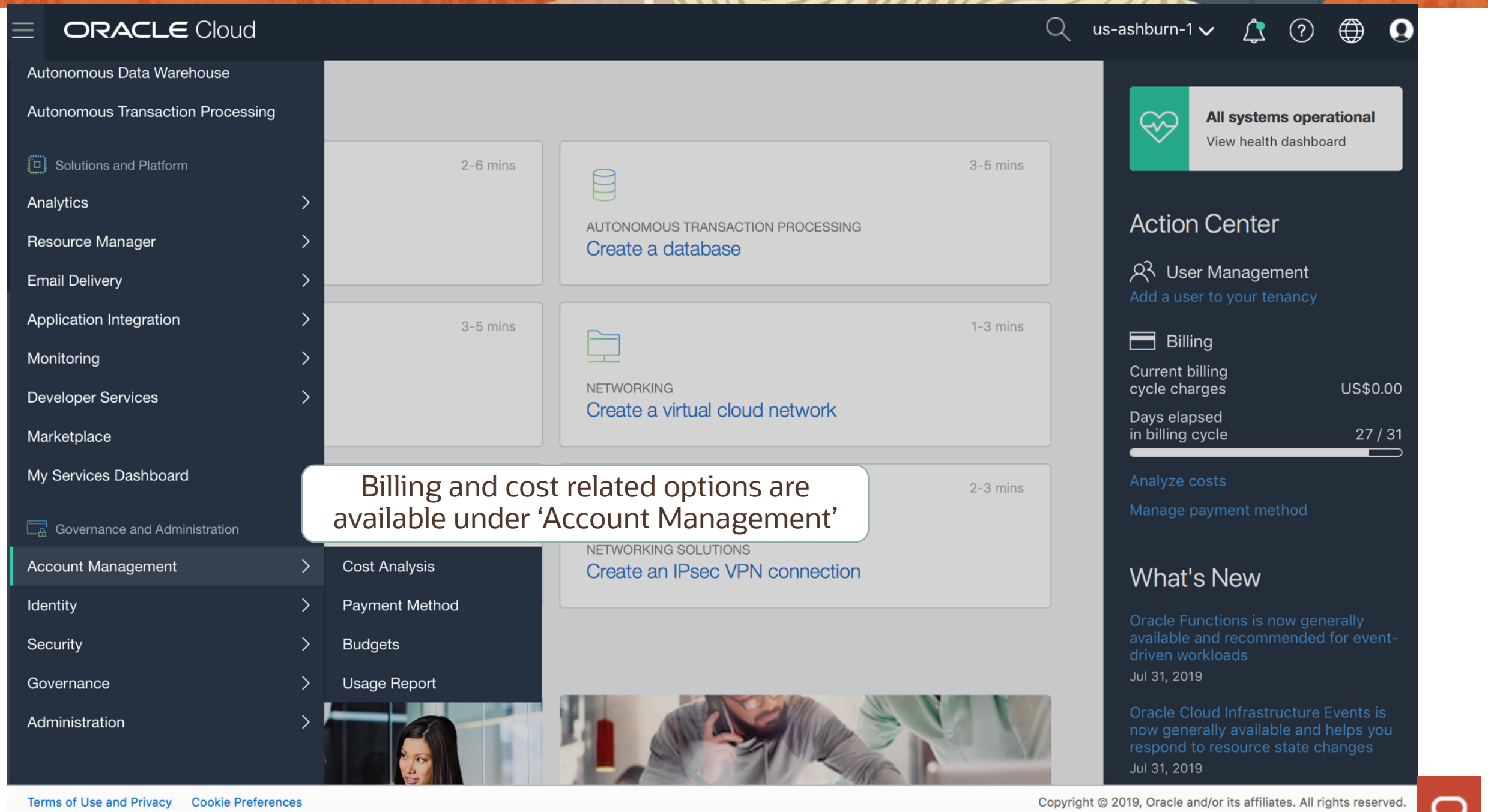

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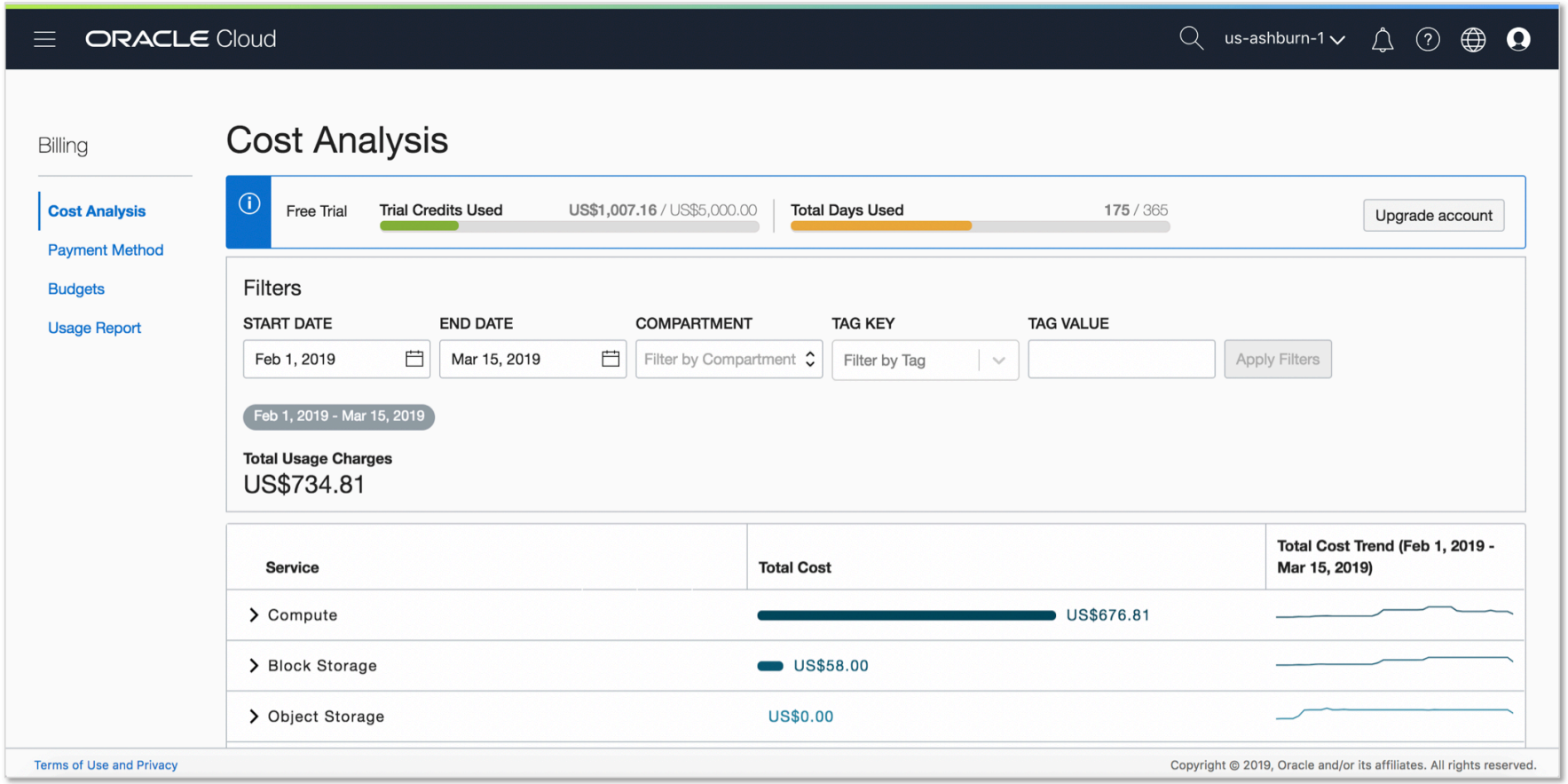
OCI Cost Analysis

- Visualization tools Help understand spending patterns at a glance
- Filter costs by Date, Tags and Compartments
- Trend lines show how spending patterns are changing
- To use Cost Analysis you must be a member of the Administrators group



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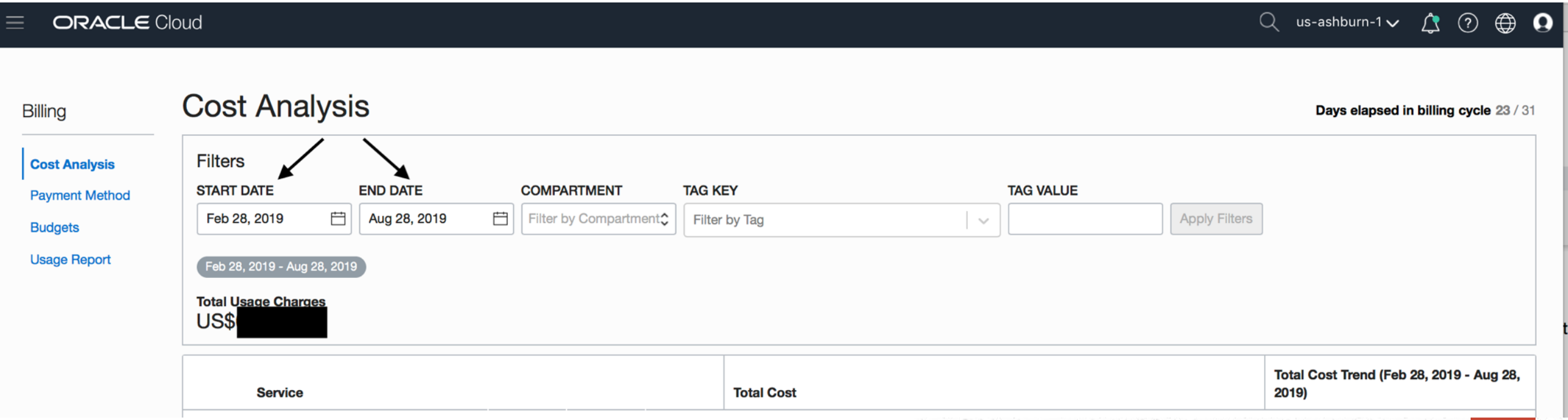
Cost Analysis: Filter Costs by Date

1. Open the navigation menu. Under **Governance and Administration**, go to **Billing** and click **Cost Analysis**.
2. In **Start Date**, select a date.
3. In **End Date**, select a date (within six months of the start date).
4. Click **Apply Filters**.



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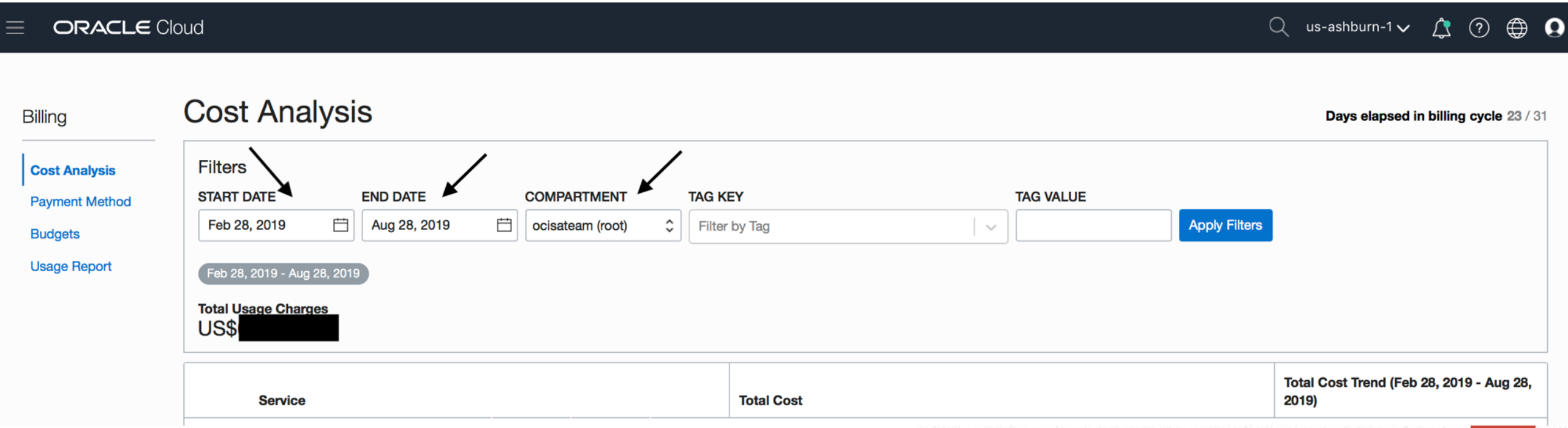
Cost Analysis: Filter Costs by Tags

1. Open the navigation menu. Under **Governance and Administration**, go to **Billing** and click **Cost Analysis**.
2. From **Tag Key**, select a tag.
3. Click **Apply Filters**.



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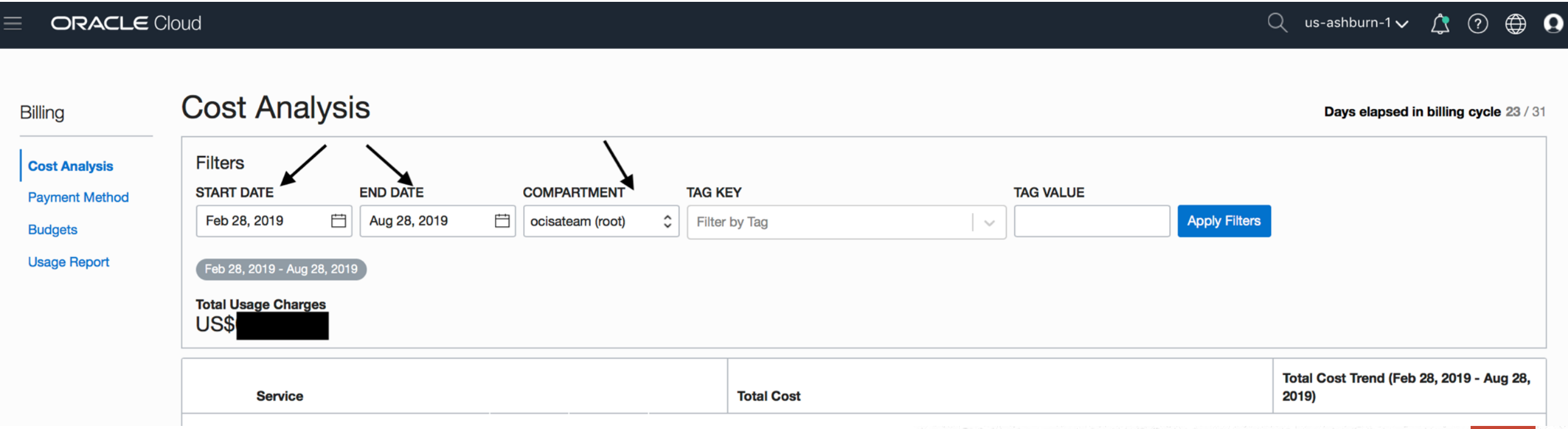
Cost Analysis: Filter Costs by Compartments

1. Open the navigation menu. Under **Governance and Administration**, go to **Billing** and click **Cost Analysis**.
2. From **Compartment**, select a compartment.
3. Click **Apply Filters**.



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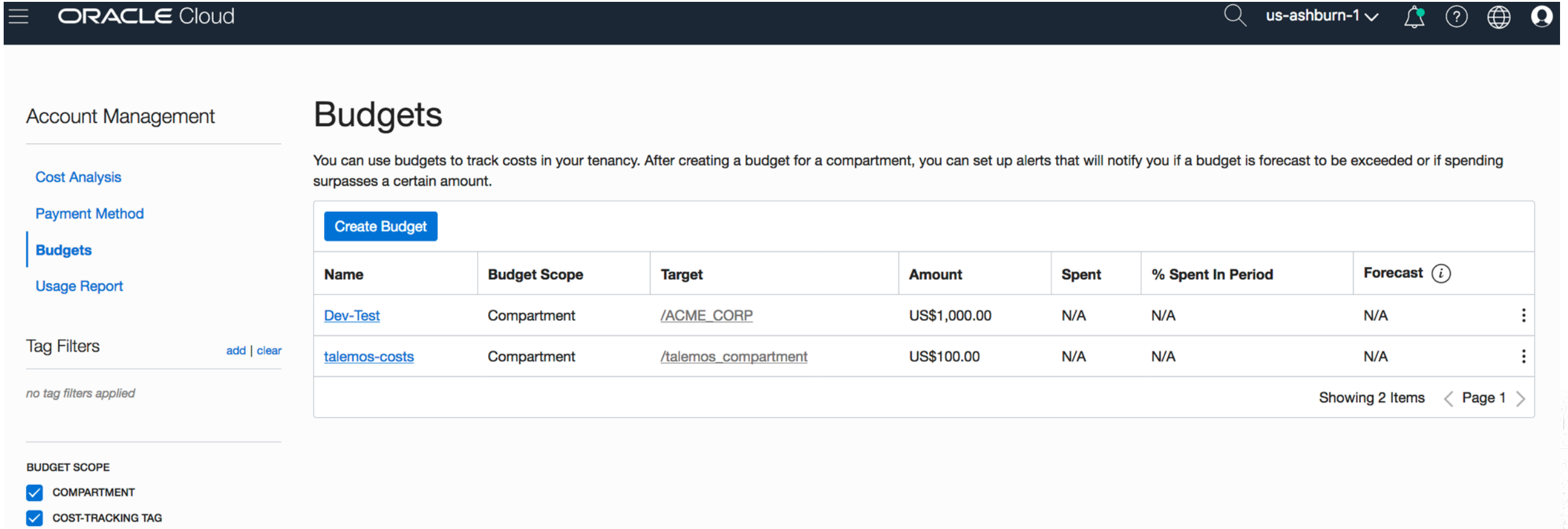
OCI Budgets

- Track actual and forecasted spending for the entire tenancy or per compartment
- Set alerts on your budgets at predefined thresholds to get notified
- View all of your budgets and spending from one dashboard



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Accessing OCI Budgets

- To use budgets, you must be in a group that can use "usage-budgets" in the tenancy
- All budgets are created in the root compartment, regardless of the compartment they are targeting

IAM Policy	Description
Allow group accountants to inspect usage-budgets in tenancy	Accountants can inspect budgets including spend.
Allow group accountants to read usage-budgets in tenancy	Accountants can read budgets including spend (same as list).
Allow group accountants to use usage-budgets in tenancy	Accountants can create and edit budgets and alerts rules.
Allow group accountants to manage usage-budgets in tenancy	Accountants can create, edit, and delete budgets and alerts rules.

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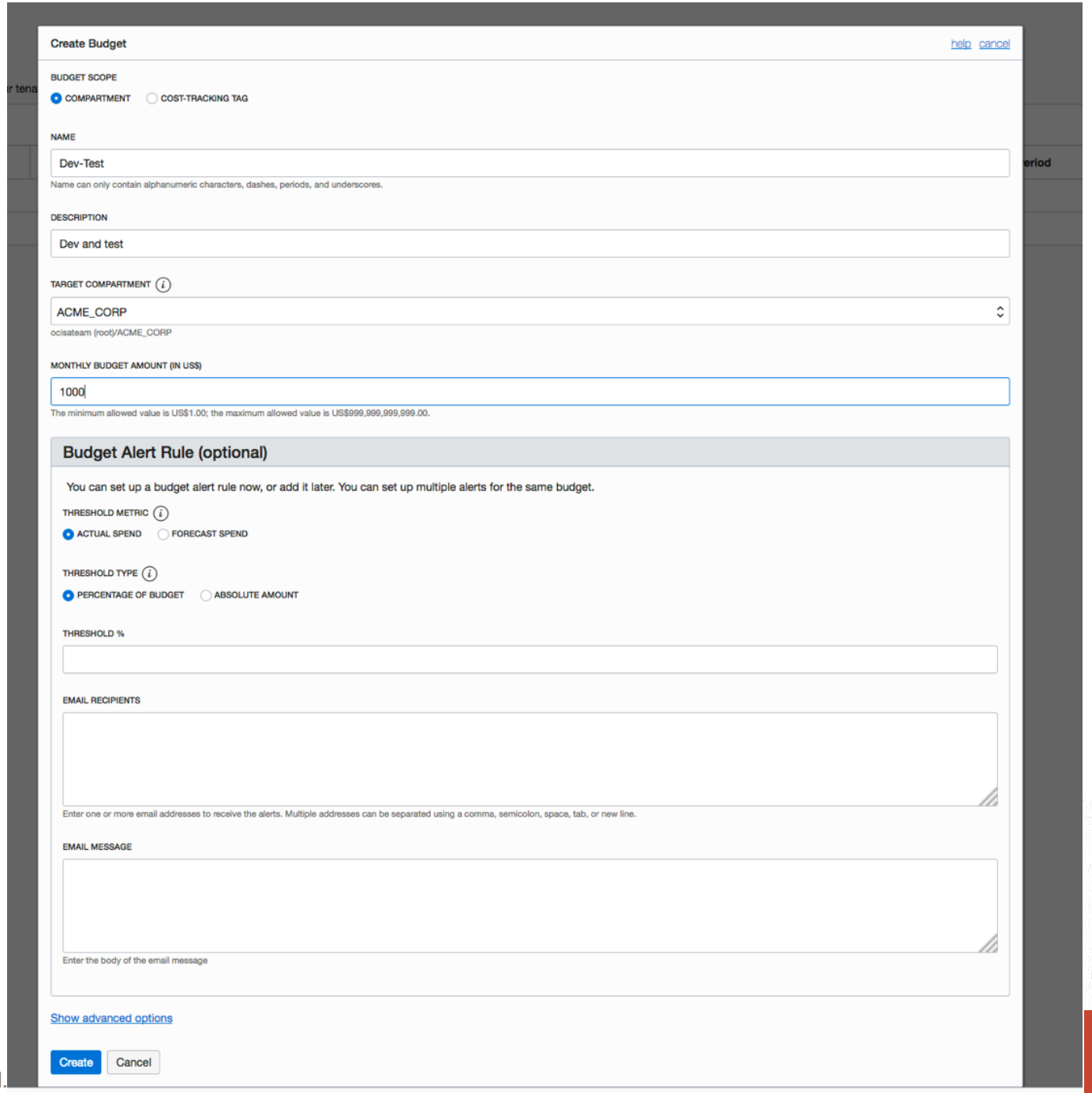
Create Budgets



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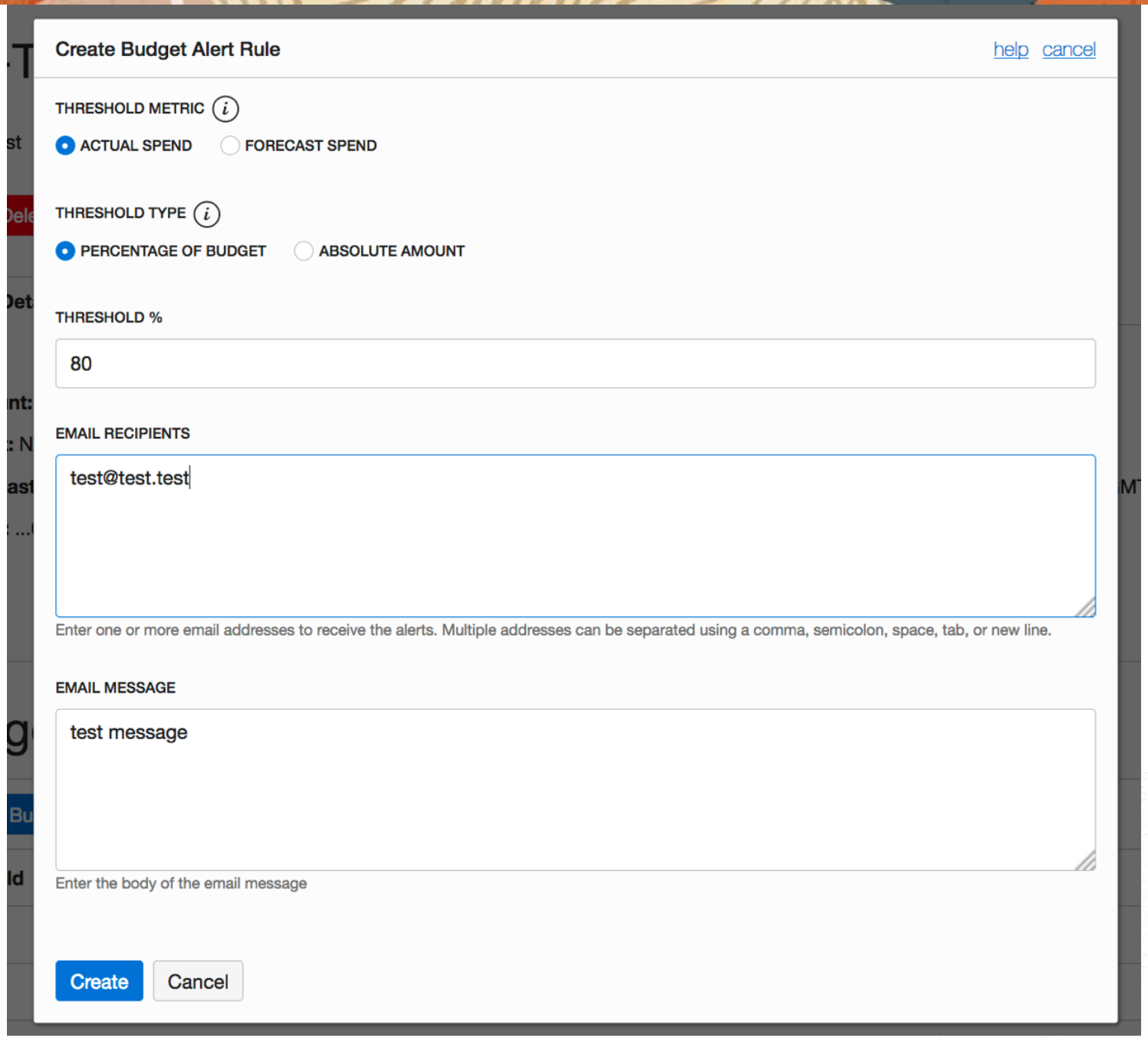
Budgets Alerts



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Budget Alert Emails

ORACLE Cloud

Compartment:	philpoc
Budget:	Tenancy_Commitment
Monthly budget:	$700.00
Alert Type:	Forecast
Threshold:	100%
Spend in cycle:	$362.49
Forecast:	$749.14
Time in cycle:	15 / 31 days

Message from your administrator

You are getting this alert because you are forecasted to overspend your budget this month. Please take action to reduce your spending. If your increase in spending is required and you cannot find ways to save money, refer to internal guidelines at http://myintranetsite.com/accounting/budgets.

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Usage Reports

- Detailed information about your OCI consumption
- CSV file with one record per resource per hour with metadata and tags
- Automatically generated daily, and stored in an Oracle-owned object storage bucket
- Contain 24 hours of usage data
- Retained for one year
- Can be used in conjunction with your rate card for:
  - Invoice reconciliation
  - Custom reporting
  - Cross-charging
  - Cost optimization
  - Resource inventory

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Accessing Usage Reports

- Reports are generated in another tenancy and stored in an Oracle-owned object storage bucket
- Set up a cross-tenancy IAM policy to access your usage reports

define tenancy usage-report as ocid1.tenancy.oc1..abc..

endorse group MyGroupName to read objects in tenancy usage-report

Download using console

1. Open the navigation menu. Under Governance and Administration, go to Billing and select Usage Report.
2. Click the report you want to download from the list, and follow your browser's instructions for downloading.

Download using API

- Use the Object Storage APIs
- stored in the tenancy's home region
- Object storage namespace used for the reports is bling; the bucket name is the tenancy OCID

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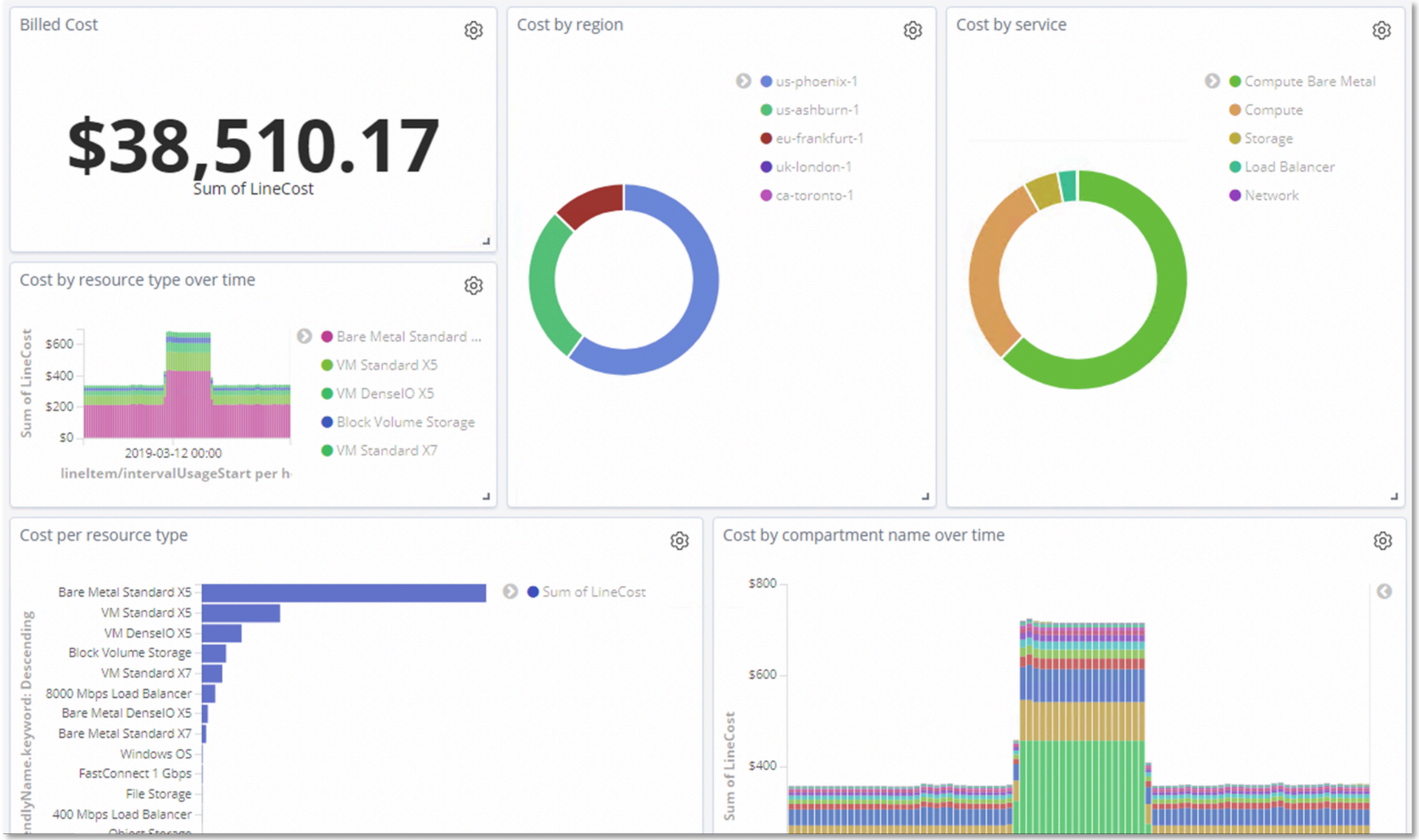
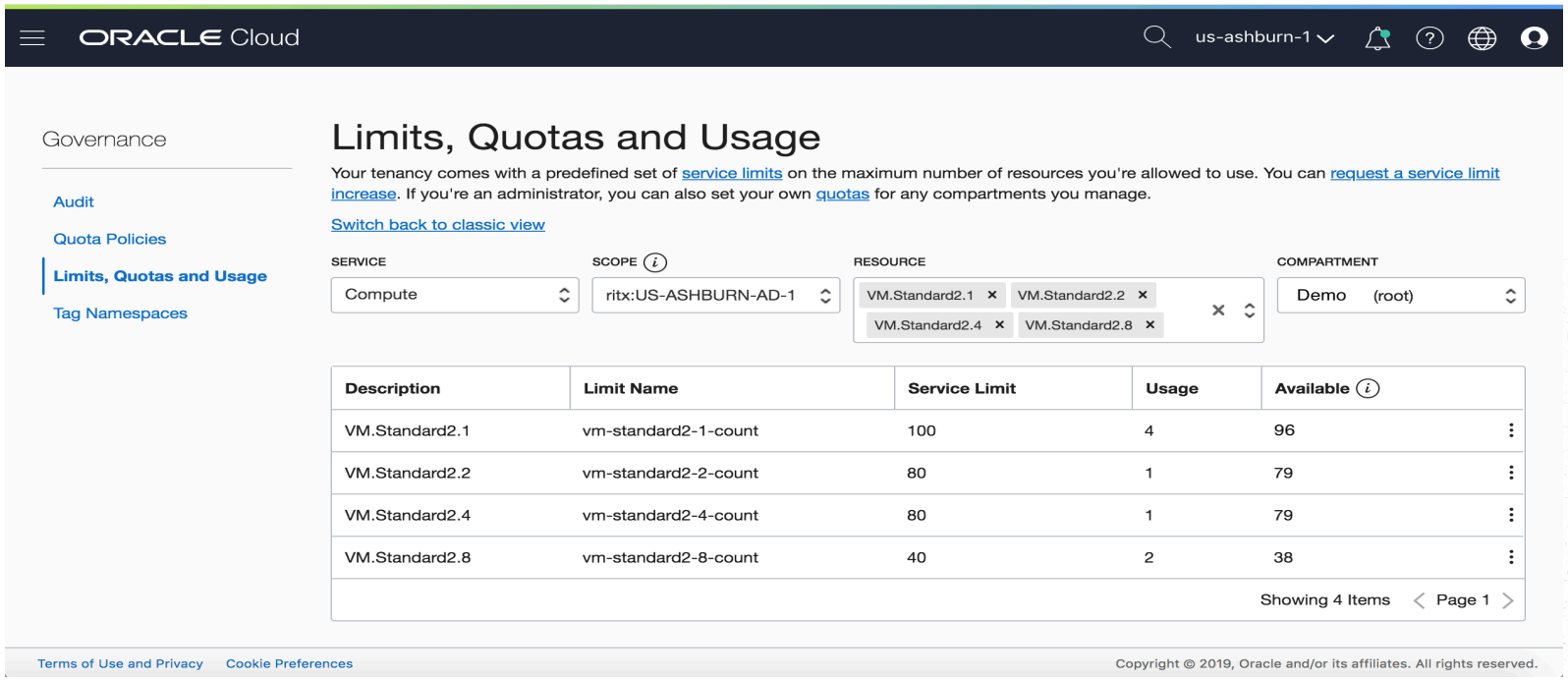
Sample Dashboard from a Usage Report



Service Limits and Usage

- When you sign up for Oracle Cloud Infrastructure, a set of service limits are configured for your tenancy.
- The service limit is the quota or allowance set on a resource.
- You can view your tenancy's limits, quotas, and usage in the Console.
  - You can check Limits and Quotas before a deployment
- You can submit a request to increase your service limits from within the Console.



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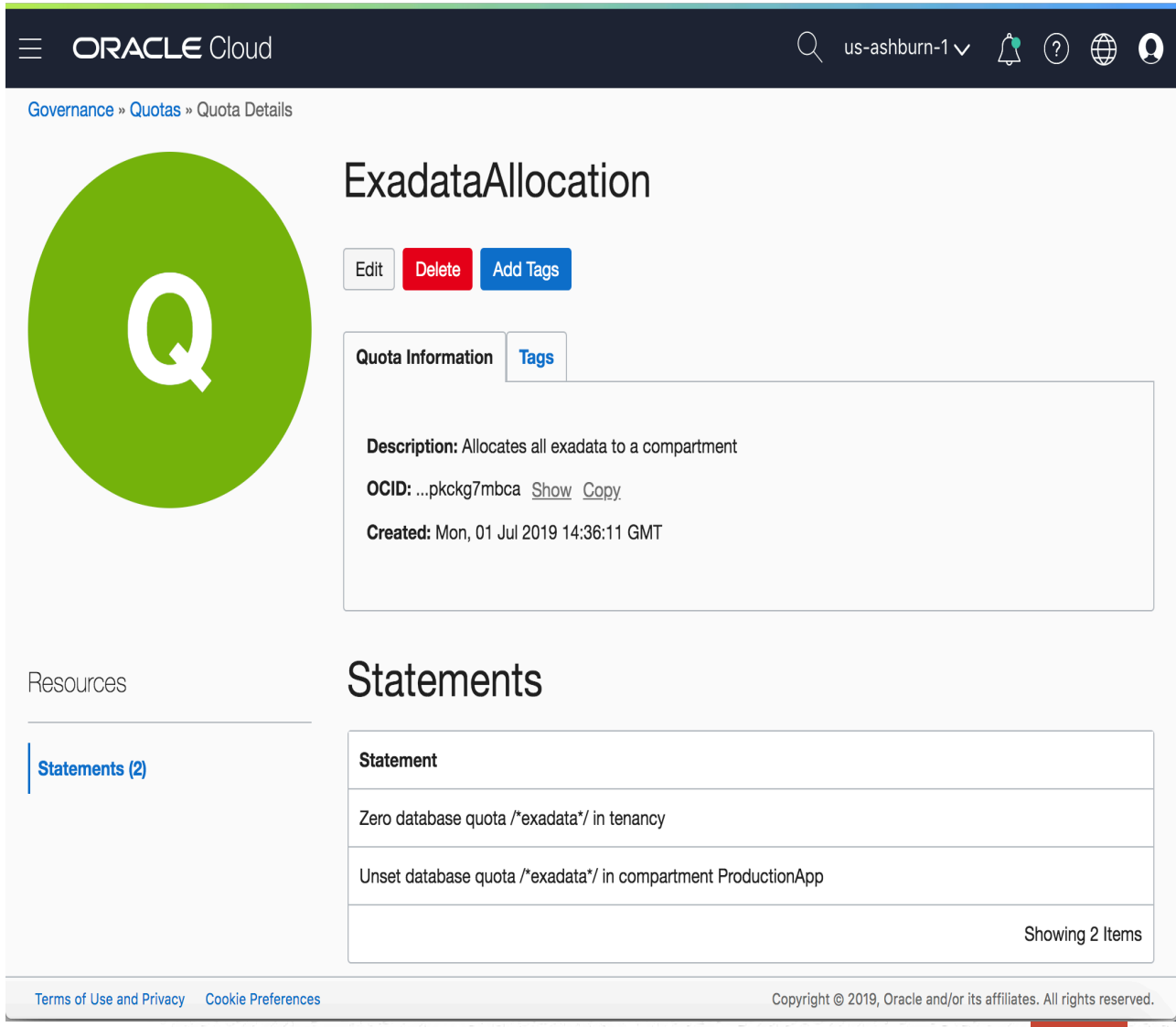
Compartment Quotas

- Quotas give you better control over how resources are consumed by letting you allocate resources to projects or departments
  - Allocate high-value and expensive resources only to specific compartments
  - Restrict a compartment's usage to a small set of resources, restrict resource counts or disable services as necessary
- Similar to *Service Limits*; but service limits are set by Oracle, and compartment quotas are set by administrators
- Set using *policy statements* written in a simple declarative language that is similar to the IAM policy language



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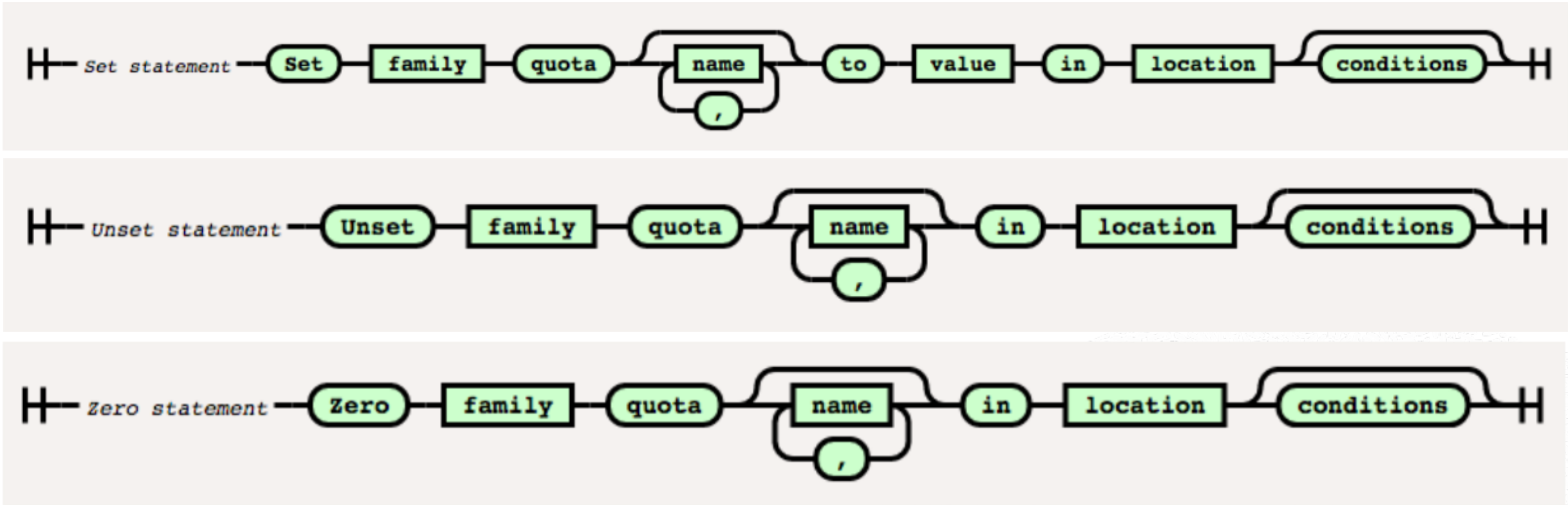
Quota Policies

- **set** - sets the maximum number of a cloud resource that can be used for a compartment
- **unset** - resets quotas back to the default service limits
- **zero** - removes access to a cloud resource for a compartment



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Quota Policies Examples

This example policy statement only allows one VM.Standard2.1 Compute instance in a single compartment in a single region:

```
zero compute quotas in tenancy
set compute quota vm-standard2-1-count to 10 in compartment IT where
request.region = us-phoenix-1
```

You can clear quotas by using an unset statement, which removes the quota for a resource - any limits on this resource will now be enforced by the service limits:

```
zero compute quotas in tenancy
unset compute quota vm-dense-io1-16-count in tenancy
```

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Cost Management Best Practices

- Create a budget that matches your commitment amount and an alert at 100 percent of the forecast.
  - Gives you an early warning if your spending increases and you're at risk of getting an overage.
- Use compartments for cost management along with access-control. Many customers set up one compartment per department for cost management and cross-charging.
- Use cost-tracking tags (like cost-center) to allocate cost in more granular ways.
- Enable monitoring on all resources. You can merge monitoring data with cost data to gain powerful insights on how to improve resource utilization.
- Use the usage report to analyze costs and drive custom solutions.

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