

Foglight® Cost Director 7.1.0
User and Administration Guide



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Legend

- **WARNING:** A WARNING icon indicates a potential for property damage, personal injury, or death.

- ! **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

- ⓘ **IMPORTANT NOTE, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

Foglight Cost Director User and Administration Guide
Foglight Version - 7.1.0
Software Version - 7.1.0

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Understanding Foglight Cost Director

- [About Foglight Cost Director](#)
- [Installation Requirements](#)
- [Getting Started](#)
- [Recommended additional reading](#)

About Foglight Cost Director

Business are challenged with know which workloads to move to the cloud. Foglight® Cost Director alleviates this problem by allowing businesses to know the true costs associated with running your data center to help you truly understand the cost of new VMs, environment growth, planned changes, and whether or not Cloud is going to really save you money.

There are two versions for Foglight Cost Director. Some of the functions are not available on the Lite version.

Installation Requirements

Foglight Cost Director comes installed on Foglight Evolve and can be installed on a Foglight Management Server.

Foglight Cost Director requires the following cartridges for data collection:

1 *Virtual-VMware-Lite-7.1.0.car*

i | **NOTE:** After installing the *Virtual-VMware-7.1.0.car* cartridge, existing vCenter agents (VC agents) must be updated using the Update Agent button in the *VMware Environment > Administration* tab.

2 *OptimizerAutomation-7.1.0.car*

3 *CommonAnalytics-7.1.0.car*

4 *Virtual-HyperV-Lite-7.1.0.car*

5 *Cost-Director-7.1.0.car*

6 *Cost-Director-Lite-7.1.0.car*

While Foglight Evolve comes with these cartridges pre-installed and enabled, a standalone Foglight release requires that these components be installed on the Foglight Management Server. The sequence of cartridge installation is important because of their dependencies. For more information about installing Foglight Cost Director, and for details about system requirements and version compatibility, see the *Foglight Cost Director Release Notes*.

Getting Started

- [Enabling the Quest Pricing Cloud & Data Protection Portal Integration](#)
- [Creating a default Price Plan](#)

Enabling the Quest Pricing Cloud & Data Protection Portal Integration

The Quest Pricing Cloud is a live DB of Infrastructure as a Service Offerings and their associated costs. Pricing data is collected daily from the leading public cloud and participating managed service providers (MSPs). You can select the *Enabling the Quest Pricing Cloud & Data Protection Portal Integration* checkbox, and then click **Start** to interface with Foglight Cost Director. Then you will be directed to the **Initialize Cost Director** dashboard. For more information, see [Creating a default Price Plan](#) on page 6.

Creating a default Price Plan

When you start up Foglight Cost Director the first time, you will be directed to the **Initialize Cost Director** dialog box which walks you through the procedure of setting up the default Price Plan.

To create the default Price Plan:

- 1 Log in to the Foglight browser interface and make sure the left navigation panel is open.
- 2 On the navigation panel, under *Homes*, click **Cost Director**.
The **Cost Director** dashboard opens.
- 3 In the **Cost Director** dashboard, click **Activate**.
The **Initialize Cost Director** dashboard opens.

Figure 1. Initialize Cost Director

The screenshot displays the 'Datacenter Costs' configuration page. On the left is a navigation menu with 'Datacenter Costs' selected, and sub-items for 'VM Ownership' and 'Costs Summary'. The main content area is titled 'Datacenter Costs' and includes an introductory paragraph: 'Datacenter costs vary, we need the basics to help expose what is driving your budget and to help provide guidance on where money may be saved. This step will create the default cost structures for all VMs. Additional cost structure templates can be created.' Below this, it states 'Set your local currency: JPY(¥)'. The configuration is split into two columns: 'Compute Price Plan' and 'Storage Price Plan'. The 'Compute Price Plan' section includes: CPU Unit Cost per Month (322,826 ¥/GHz), Memory Unit Cost per Month (96,739 ¥/GB), License & Add-on Cost per VM (Electricity Cost per Year: 7065,217 ¥; Facility Cost per Year: 1614,13 ¥; Guest OS License Cost per Year: 0,0 ¥; Hypervisor Cost per Year: 5760,87 ¥), and a 'Reset to System Compute Price Plan' button. The 'Storage Price Plan' section includes: Storage Cost per Month (6,413 ¥/GB) and I/O Operation Cost per 100,000 (2,5 ¥), with a 'Reset to System Storage Price Plan' button. At the bottom right, there are navigation buttons: 'Previous', 'Next', 'Finish', and 'Cancel'.

4 **Datacenter Costs:** This step creates the default cost structures for all VMs, which includes the following parts:

- **Set your local currency:** Specify the cost currency by clicking the currency and a Currency Configuration dialog box will open. The supported currency includes USD, EUR, GBP, JPY, and CNY. Exchange Rate to USD can also be set on this page.
- **Compute Price Plan**
 - CPU Unit Cost per Month
 - Memory Unit Cost per Month
- **License & Add-on Cost per VM**
 - Electricity Cost per Year
 - Facility Cost per Year
 - Guest OS License Cost per Year
 - Hypervisor Cost per Year
 - **Reset to System Compute Price Plan** button
- **Storage Price Plan**
 - Storage Cost per Month
 - I/O Operation Cost per 100,000
 - **Reset to System Storage Price Plan** button

The following lists the formula of populating:

- $CPU\ Unit\ Cost\ per\ Month = (Total\ Servers\ Cost \times CPU\ Cost\ Weight\%) / (Server\ Lifecycle\ Year \times 12\ month) \times Active\ Server\ Count \times Server\ CPU\ Cores \times CPU\ Speed \times vCPU/Coors\ Ratio \times (1 - CPU\ Reservation\%)$
- $Memory\ Unit\ Cost\ per\ Month = (Total\ Servers\ Cost \times Memory\ Cost\ Weight) / (Server\ Lifecycle\ Year \times 12\ month) \times Active\ Server\ Count \times Server\ RAM \times (1 - RAM\ Reservation\%)$
- $Storage\ Cost\ per\ Month = (Total\ Storage\ Cost \times Space\ Cost\ Weight\%) / (Storage\ Lifecycle\ Year \times 12\ month) \times (Total\ Storage\ Space \times 1024)$
- $I/O\ Operation\ Cost\ per\ 100000 = 100000 \times (Total\ Storage\ Cost \times IO\ Cost\ Weight\%) / (IOPS\ Capacity \times Storage\ Lifecycle\ Year \times 365 \times 24 \times 3600)$

Taking numbers in the above figure for example, you can get the following values:

- $CPU\ Unit\ Cost\ per\ Month = 600 \times 0.3 / 6 \times 12 \times 3 \times 2 \times 5 \times 1 \times (1 - 50\%) = 0.167$
- $Memory\ Unit\ Cost\ per\ Month = 600 \times 0.7 / 6 \times 12 \times 3 \times 3 \times (1 - 50\%) = 1.296$
- $Storage\ Cost\ per\ Month = 6000000 \times 50\% / 6 \times 12 \times 500 \times 1024 = 0.081$
- $I/O\ Operation\ Cost\ per\ 100000 = 100000 \times 6000000 \times 50\% / 100000 \times 6 \times 365 \times 24 \times 3600 = 0.016$

5 **VM Ownership:**

- a Add Business Unit. Click the  button and an *Add new business unit* dialog box opens. Specify the required information.

Add new business unit

Name

Location Name

Longitude

Latitude

Description

- b Select the unallocated VMs from the left table, and then click **Move In** to assign the selected virtual machines to the specified Business Unit, as needed. Click **Next**.

Cost Director > Initialize Cost Director

▼ Datacenter Costs

▶ VM Ownership

○ Costs Summary

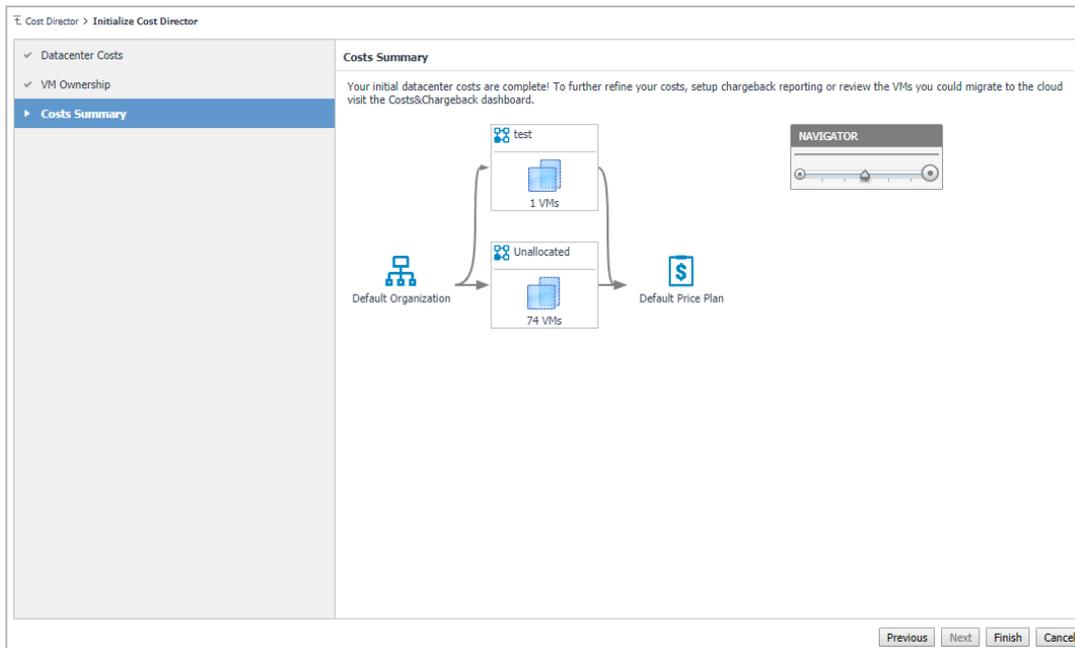
VM Ownership

Showback, chargeback and cross-charge rely on virtual machines being correctly allocated to business units or similar organization groups such as application teams.

Search

- VMware
 - 10.101.100.100
 - Hosts And Clusters
 - Datacenter
 - 10.101.100.100
 - Microsoft Azure Central S.D-500004627
 - Microsoft Azure Migration
 - New Resource Pool
 - ACPI
 - ACPI
 - KVM
 - Pkg_1000_VM with REXM
 - Pkg_1000_VM?_4708 Clab
 - replica-SPE/2de-7000-4225-810F-9
 - Netcol
 - Netcol
 - Netcol
 - S1010
 - S1010

- 6 *Costs Summary*: View the topology dependency on the *Costs Summary* view, and then click **Finish**.



- 7 The creation of the default Price Plan is completed, and then the *Cost Director > On-Premises* dashboard opens by default. Also you can view the detailed information about created *Organization*, *Business Unit*, *Default Price Plan*, and *Topology* dependency view through the *Cost Director > On-Premises > Administration* dashboard.

Recommended additional reading

As tasks on the **Chargeback** dashboard, the **Cloud Cost** dashboard, and the **Container Cost** dashboard are commonly used throughout Foglight and Foglight Evolve products. Quest recommends that you read the following guides to understand both dashboards and the relevant tasks.

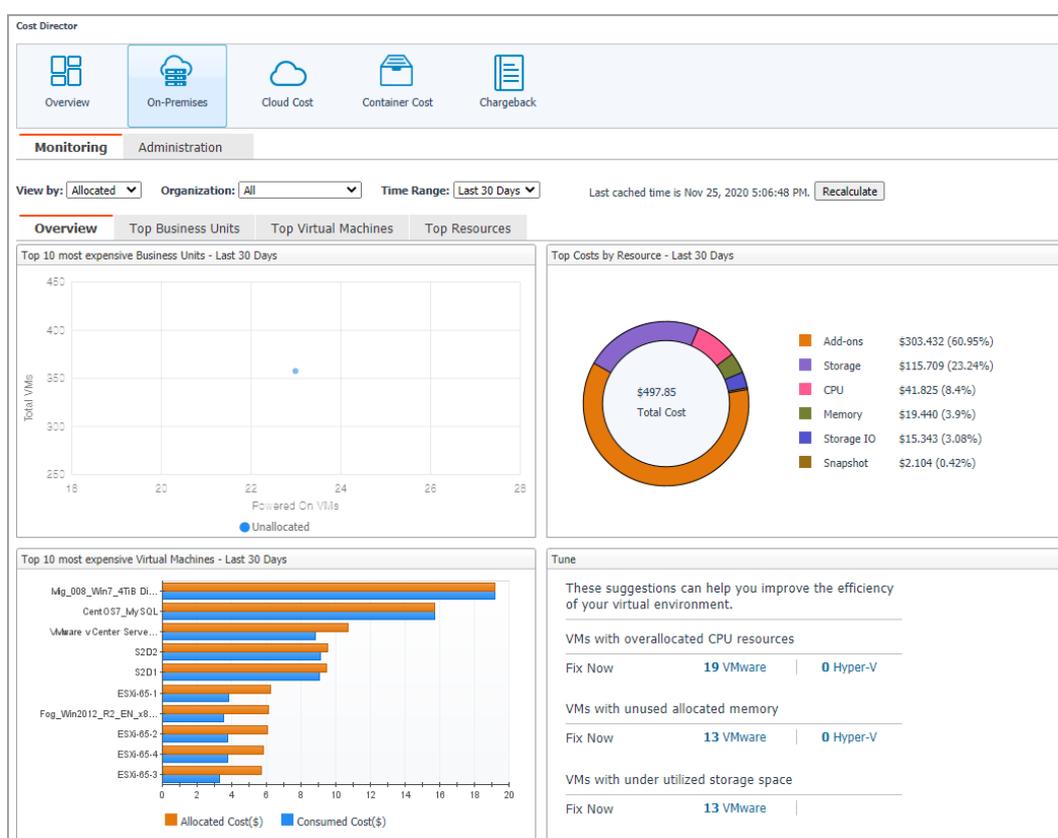
- Chapter *Reporting on Your Enterprise* in the *Foglight User Guide*.
- Chapter *Cost Tab* in the *Foglight Hybrid Cloud Manager for Azure User and Administration Guide*.
- Chapter *Cost* in the *Foglight for Container Management User and Administration Guide*.
- Chapter “*Bubble Chart User Guide*” and “*Scatter Chart User Guide*” in the *Web Component Reference*.

All data and metrics, which are presented and calculated by Foglight Cost Director, are from the Foglight for VMware cartridge. Quest also recommends that you read through the *Foglight for VMware User and Reference Guide & Foglight for VMware Installation Guide* to get a comprehensive understanding about the Foglight for VMware.

Using Foglight Cost Director

On-Premises dashboard

The *On-Premises* dashboard displays the statistic total cost of organizations, business units, and virtual machines in the last 7/30/90 days. Metrics and charts in this tab will be updated every day or you could click the **Recalculate** button to manually update all charts. To access this dashboard, under *Homes*, click **Cost Director**.



This dashboard consists of the following two tabs:

- Monitoring tab
 - Filters for showing resource costs, which includes the following three conditions:
 - *View by*: Calculate the resource costs based on Allocated costs or Consumed costs. *Allocated* is selected by default.
 - *Organization*: Lists all available organizations.
 - *Time Range*: Provides three time period of metrics calculation. *Last 30 Days* is selected by default.
 - The *On-Premises charts*, which appears on the On-Premises dashboard by default after you click **Cost Director > On-Premises**.

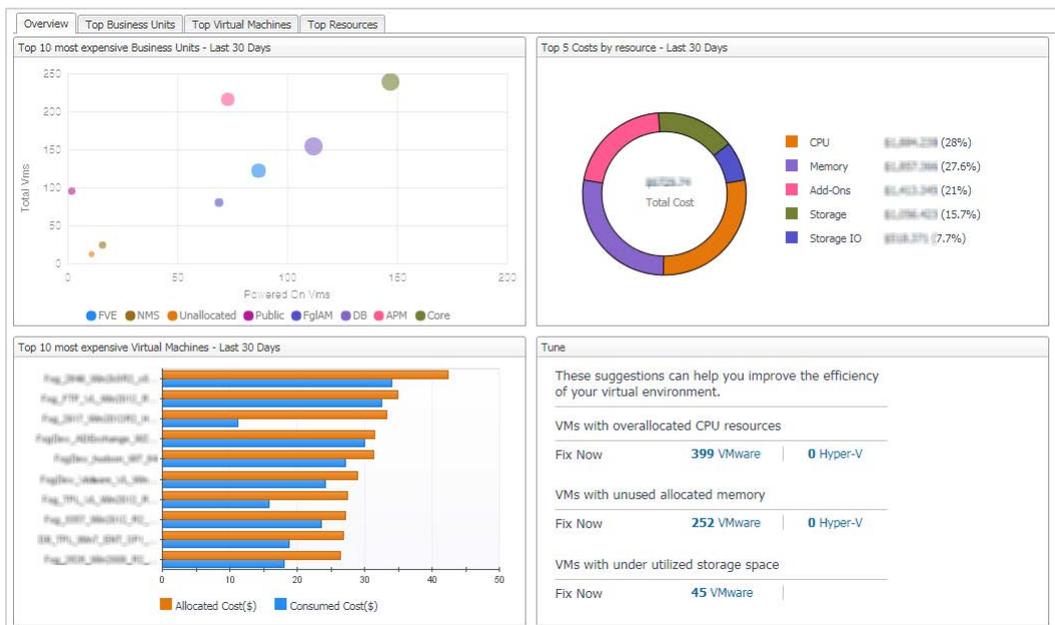
- Administration tab

On-Premises charts

The **On-Premises** charts appear on the On-Premises dashboard by default after you click **Cost Director > On-Premises**, which includes the following four tabs:

- **NOTE:** The *Top Business Units*, *Top Virtual Machines*, and *Top Resources* tabs are not available on the Lite version.
- **Overview:** Shows *top 10 most expensive Business Units - Last N Days*, *Top 5 Costs by resource - Last N Days*, *Top 10 most expensive Virtual Machines - Last N Days*, and Tuning information.
- **Top Business Units:** Shows the detailed information of the Business Unit that allocates or consumes the most costs.
- **Top Virtual Machines:** Shows the detailed information of the Virtual Machines that allocates or consumes the most costs.
- **Top Resources:** Shows the detailed information of the Resource that allocates or consumes the most costs.

Figure 2. Summary - All Servers view



Administration tab

The **Administration** dashboard appears after clicking **Cost Director > On-Premises > Administration**, which sets up and changes the configurations of:

- **Organizations:** Lists the available organizations and provides you with the options to add, delete, and edit the selected organizations.
- **Business Units:** Lists the available business units, provides you with the options to add, delete, and edit the selected business units, and allows you to assign an organization or price plan for the selected business unit.

- *Virtual Machines*: Lists the available virtual machines, provides you with the options to add, delete, and edit the selected business units, and allows you to assign a business unit or price plan for the selected virtual machine.
- *Compute Price Plans*: Lists the available price plans of compute resources and provides you with the options to  Add ,  Delete ,  Set Currency ,  Import ,  Export , and edit  the selected price plan.
- *Storage*: Lists VMware datastore items and assigns the existing storage plan for the selected range.
- *Storage Price Plans*: Lists the available price plans of storage and provides you with the options to  Add ,  Delete ,  Set Currency ,  Import ,  Export , and edit  the selected price plan.

i **NOTE:** In the *Add new price plan* and the *Edit Price Plan* dialog box, click the **Load System Compute Price Plan** button or the **Reset to Load System Compute Price Plan** button to load system default price plan.

NOTE: After setting the currency in the *Currency Configuration* dialog box, all the currency units displayed in the dashboard will be updated. You can also set Exchange Rate to USD on this page.

NOTE: Use the  Import and  Export button to import or export the price plans in .CSV files.

- *Topology*: The *Topology* tab visualizes the relationships between the objects in your environment through an interactive dependency map. The map illustrates how different components relate to each other, and the levels of the available resources available to them. The *Topology* tab provides a quick and easy way to view components grouped by organization.
- *VM Ownership*: The *VM Ownership* tab enables user to assign datacenters, clusters, resource pools, and vfolders to different Business Units.

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