FinOps on Autopilot

Cloud-spend management that keeps your system secure and lowers costs
Why do we need Cloud-Spend Management?

*Cost saving and FinOps are* the top initiatives for cloud users for the 6th year in a row, according to the Flexera 2022 State of the Cloud Report.

### Top Cloud Initiatives for 2022

- **Optimizing existing use of cloud (cost savings)**: 59%
- **Migrating more workloads to cloud**: 57%
- **Move from on-premises software to SaaS**: 42%
- **Progressing on a cloud-first strategy**: 40%
- **Better financial reporting on cloud costs**: 38%
- **Automated policies for governance**: 36%
- **Expand use of containers**: 35%
- **Manage software licenses in the cloud**: 33%

*Source: Flexera 2022 Start of the Cloud Report*
What causes Cloud Costs to increase?

The cloud, by nature, allows self-service and rapid scaling. Without management controls, these quickly contribute to large costs.

- Lack of Developer Awareness
- Complex pricing structures that change constantly
- Limitations of Native Cloud Tooling
- Lack of Visibility on Spend
- Disconnect between Resource Creator & Bill Payer
- Lack of Governance

The diagram above illustrates these factors, with arrows pointing towards the central question, highlighting the interconnectedness of these issues in contributing to increased cloud costs.
The Solution
FinOps on Autopilot
CloudMonitor

FinOps on Autopilot: Reduce your Cloud Spend with Automated Cost Governance

https://cloudmonitor.ai

Your customers are online only 40 hours a week - Why run your services overnight? Auto-pause or scale-down according to your custom business schedules.

CloudMonitor Bot embeds directly into your Teams workflow to catch expensive mishaps educate developers.

Delegate responsibility to your Project Managers for costs & budgets.

Extensible self-service, reporting to match your business processes and the ability to subscribe to period reports.

Smart Scheduling

Intelligent, real-time Alerting

Extensible Security Model

Customizable Reports

Recommendations

Cost Anomaly Detection

Smart Budgets & Forecasting

Ownership & Accountability

Personalized, cost-saving opportunities and security recommendations.

If you spent more than the day before you want to know why.

Budgets and forecasts at the Cost Group level with real-time alerting.

Every resource has an Owner, Created By and a Created Date. Create Cost Groups that match your business units.
What Makes CloudMonitor Different?

We do things a bit differently compared to the other cloud spend management tools on the market:

1. **Your cost data stays inside your organization**
   Cost data is highly sensitive and confidential. Other tools extract your data and give you access to their SaaS app. With CloudMonitor, you own your cost analytics and it lives inside of your Azure cloud.

2. **Map your Business Units/Projects to flexible Cost Groups**
   Allocating costs and chargeback is essential and it needs to be done by Business Unit or Cost Centre. CloudMonitor uses native Cost Groups (i.e., no tagging) as logical groupings of costs by business function.

3. **Customize Power BI reports to suit your business**
   Our reports cover most cost scenarios; however, you can easily build your own reports on top of the CloudMonitor cost analytics in Power BI to suit your business requirements and IT spend reporting needs.

4. **Easier procurement & security clearance with Microsoft Marketplace**
   Stay on the freemium version or purchase your CloudMonitor subscription directly from Microsoft in the Azure Marketplace. As a Microsoft Certified Preferred Solution there's no 3rd party vendor contracts, SOWs or procurement/security headaches.

5. **Add accountability & cost awareness into your Development workflow from Day 1**
   Cost and security needs to be considered as non-functional requirements during development. The CloudMonitor Bot alerts and educates your Dev team during your project build so that costs are not an afterthought for the Production Ops team.
Configure the Security Access Model to suit your business with Cost Group Roles

Example Access Configuration

CFO/CIO/CEOs
Overall Executive Summary and KPIs

Project/Program Managers
KPIs/Summary per Project (Cost Group)

Engineers / Consultants
Creating Resources at Project Level (Cost Group)

CloudMonitor
Power BI Reporting

Cost Group Viewer
View Cost Reports
Top Insights

Cost Group Admin
Create Cost Groups
Assign Users

Cost Group Editor
Act on Recommendations
Monitor Cost Anomalies
Create Audit Trails
Receive Alerts

CloudMonitor Application

CloudMonitor Teams/Slack Bot
How It Works
The CloudMonitor Solution lives inside of your Azure cloud Tenancy. Your data never leaves.

YOUR Azure Active Directory

Azure APIs

Read-Only Service Principal

Azure Managed Resource Group

CloudMonitor Analytics Engine

CloudMonitor Power BI Reporting
Cost Visibility and Dashboards

CloudMonitor Admin App
Cost Groups and Audit Logging

CloudMonitor Bot (Teams or Slack)
Dev Workflow
Recommendations & Alerts

Your Azure Subscription

Your Cloud/Organization
CloudMonitor pricing scales to match your cloud expenditure with no locked-in contracts and PAYG pricing. Prices in USD per Month.

### Always Free
- $0
  - Power BI Reports
  - Monitor 3 Subscriptions
  - 3 Cost Groups
  - 1 Year of Cost Data
  - 10 Users
  - White Labelled
  - Recommendations
  - Cost Anomalies
  - Admin App
  - Teams Bot Alerts

### Professional
- **$199**
  - Everything in Free Plus:
    - Monitor 10 Subscriptions
    - 10 Cost Groups
    - 5 Years of Cost Data
    - 30 Users
    - White Labelled

### Enterprise
- **$399**
  - Everything in Free Plus:
    - Monitor 50 Subscriptions
    - 50 Cost Groups
    - Unlimited Cost Data
    - Unlimited Users
    - White Labelled
    - 2 Cost Consultations

### CSP / MSP
- Everything in Enterprise:
  - Volume Discount
  - Reseller License
  - CSP Insights Module
  - Branding
  - KYC
  - White Labelled

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### Pricing Details
- Prices in **USD per Month** with no lock-in contracts (Billing is done through Microsoft marketplace in the currency of your choice).
- In addition to the CloudMonitor license, each Reporting user will require a **Power BI Pro** license.
- CloudMonitor Infrastructure costs will be covered by the customer and billed by Microsoft as a standard cloud service (**Azure benefits eligible**).
- All Plans included all future updates and enhancements during your subscription.

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**For Small Businesses**

**For Enterprises**

**For CSP/MSP**
Free versus Paid Plans

Trial CloudMonitor in your organization with no obligation to buy or upgrade. There are no contracts with any 3rd party vendor besides Microsoft.

<table>
<thead>
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<th>Cost Insight Reporting + Analytics Engine</th>
<th>ALWAYS FREE $0</th>
<th>STANDARD $199 per Month</th>
<th>PROFESSIONAL $399 per Month</th>
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<td>White-labelled</td>
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<tr>
<td>Years of Historical Cost Data</td>
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</table>
## Extend the Azure Cost Management Portal

Combine the power of the native Cost Management with customisable reports for the business and development workflows.

### Azure Portal Cost Management

- **Target audience:** Technical Users/IT
- Costs surfaced in the Azure Portal (Desktop-only)
- Follows Azure technical resource hierarchy – IT controls access to costs via RBAC
- 3 years of historical cost data
- Azure Advisor Recommendations
- IT can configure pre-defined alerts to users via email
- Does not show costs of ADF or Synapse Pipelines
- Does not show who created a resource and when. Relies on Tagging

### CloudMonitor

- **Target audience:** CxOs, Business users and Project Teams
- KPI dashboards for CxOs and customizable Power BI reports for Project Managers & Business Users (Desktop, table and mobile apps).
- Email Subscriptions to periodic reporting
- Flexible Cost Groups allow you to allocate your costs to business units, projects or cost centers. Business users choose who has access to see their project costs
- Unlimited number of years of historical cost data
- Additional personalized recommendations for cost-saving, security and governance
- Teams Bot embeds into your workflow and raises real-time alerts for recommendations and cost anomalies.
- Monitor your ADF/Synapse pipelines and view Pipeline costs
- Natively track Created By User, Owner and Created Date of all Resources
CloudMonitor
Partner Program for CSPs and MSPs
Microsoft Partner to Partner Channel

How it Works
Private offer created for CSP in Microsoft Partner Portal with X% discount off retail price

Read more about the Microsoft ISV to CSP Marketplace Reseller model
Learn how Microsoft has enabled the Partner to Partner channel

CSP / MSP Benefits

1. Expand your Capabilities & Solution Catalog for Customers
2. Bundle CloudMonitor with your Services or as an Add-On
3. Manage your own Customer Relationships and pricing
4. White label CloudMonitor with your own branding and logo
Model 1: CSP Pays for Infrastructure and provides reports/remediation to Customer as a Service

CloudMonitor

Customer 1
Active Directory
Customer 1 Read-Only Service Principal
Customer 1 Azure APIs

Customer 2
Active Directory
Customer 2 Read-Only Service Principal
Customer 2 Azure APIs

Your CSP
Active Directory
Your CSP Azure Subscription

Customer 1
CloudMonitor Analytics Engine

Customer 1
CloudMonitor Power BI Reporting

Customer 1
CloudMonitor Admin App

Customer 2
CloudMonitor Analytics Engine

Customer 2
CloudMonitor Power BI Reporting

Customer 2
CloudMonitor Admin App

AD B2B

Customer 1

Customer 2
Example of CSP White-labeling

Your Customers' Logo

Your CSP Brand

Cost by Cost Group

TOTAL PERIOD COST: $10,070
-13% prev period

PROJECTED FY COST: $636,408
130% prev FY

POTENTIAL MONTHLY SAVING: $4,424
314 recommendations

COST GROUPS:
- Subscriptions: 24
- Resource Groups: 64
- Owners: 4
- Cost Anomalies: 36

DISTRIBUTION

DevOps Build Agents: 2.4K
Data Lakehouse: 2.1K
Example Project 1: 2.1K
Example Project 2: 2.1K
Example Project 3: 2.1K
Unallocated: 0.7K
Executive Summary

**Total Period Cost**
- $127,282
- **-17%** prev period

**Projected FY Cost**
- $636,408
- **130%** prev FY

**Potential Monthly Saving**
- $4,424
- 314 recommendations

**Cost Groups**
- 5

**Subscriptions**
- 25

**Resources**
- 1,504

**Cost Anomalies**
- 36

**Top Insights**
- Cost has decreased 28% ▼ ($7,933) compared to last month.
- Avg. cost per day for Mar 22 ($1.543) was lower than Feb 22 ($1.856).

License: Always Free
Open CloudMonitor Admin App
CloudMonitor

CSP Customer Insights Module

Coming September 2022
CSP/MSP Hub and Spoke

Provide your customers with CloudMonitor to perform self-service governance, improve their security posture and lower their costs.

Your CSP/MSP

CloudMonitor CSP Insights App

Customer 1

Customer 2

Customer 3

Customer 4

Customer 5

Customer 6
CSP Insights - Know your Customer

Another value-add for your CSP service offering to help your customers get better value for their spend and for you to understand what your customers need.

Cost Spend Visibility
Gain visibility and understanding of what your customers are buying on Azure to better support them.

Value-Add for your Customers
Differentiate your CSP/MSP with another value-adding service for your customers.

Predict Customer Spend & Wastage
Better budgeting for your business and reduced wastage for your customers.

Single Pane of Glass
View all of your customer systems in one place.
Free Plan (for small Azure footprints)

Frictionless-install with low operational costs for handling up to 3 Azure Subscriptions
Enterprise Plan (Big Data ready)

Powered by a low-cost data lake + Synapse, unlimited cost history, 50+ Azure Subscriptions and capable of huge scale analytics
CloudMonitor

Screenshots
CloudMonitor
Reduce your Cloud Spend with Automated Cost Governance

**TOTAL PERIOD COST**
$19,584.4

**PROJECTED FY COST**
$19,584.4

**POTENTIAL MONTHLY SAVING**
$69.3

83 recommendations

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**SUBSCRIPTIONS**
- AJ - MSDN...
- CloudMonitor...
- CloudMonitor...

9% 7% 7% 9% 32% 7%

**RESOURCE GROUPS**
- datadriven-rg-dev-data...
- DefaultResource...

94%

---

Cost $19,584.4

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**2021 February KS-VM Cost**
$26.7
**2021 March KS-VM Cost**
$5.9
**Cost Change**
($20.8) (-78.05%)
**2021 February KS-VM Rank**
2
**2021 March KS-VM Rank**
5
**Rank Change**
▼3

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https://cloudmonitor.ai
## Executive Summary

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<th>Value</th>
<th>Change</th>
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<td>Potential Monthly Saving</td>
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### Costs by Time

[Chart showing costs by time]

https://cloudmonitor.ai
Example of an Azure Invoice vs CloudMonitor

The granular data gives you analytical ability to understand your costs

When looking at the bill, you don't know how to judge whether your organisation has gotten good value for the money spent. Traditional IT Budgeting and procurement-controlled infrastructure spending does not work for public cloud services.
# Recommendations

**POTENTIAL MONTHLY SAVING**

$69.3

83 recommendations

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<tr>
<th>Recommendation</th>
<th>Cost Group</th>
<th>Subscription</th>
<th>Resource Group</th>
<th>Resource</th>
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### Cost Anomalies

**Daily Cost Alert**

#### Cost Anomalies Table

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<th>Date</th>
<th>Resource</th>
<th>Previous Cost</th>
<th>New Cost</th>
<th>Cost Change</th>
<th>% Change</th>
<th>Cost Group</th>
<th>Subscription</th>
<th>Resource Group</th>
<th>Owner</th>
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<td><a href="mailto:nolnyjy@data-driven.com">nolnyjy@data-driven.com</a></td>
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<td>100.0%</td>
<td>Unallocated</td>
<td>PRD - Build Server - DevOps-Build-Agents</td>
<td>DevOps-Build-Agents</td>
<td><a href="mailto:nolnyjy@data-driven.com">nolnyjy@data-driven.com</a></td>
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**Previous Cost**  **New Cost**  **Cost Change**  **% Change**

| $45.4 | $22.7 | $22.7 ▼ | 50.0% |
| $21.6 | $10.8 | $10.8 ▼ | 50.0% |
| $10.8 | $1.3 | $9.4 ▼ | 87.5% |
| $4.9 | $10.8 | $5.8 ▲ | 118.2% |
| $0    | $5.8  | $5.8 ▲  | N/A  |

https://cloudmonitor.ai
## CloudMonitor

**Screenshot – Search for any Resources**

### Search Resources

<table>
<thead>
<tr>
<th>COST GROUP</th>
<th>ALL</th>
<th>FINANCIAL YEAR</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESOURCES</td>
<td>214</td>
<td>OWNERS</td>
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<td>COST GROUPS</td>
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<td>SUBSCRIPTIONS</td>
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<td>RESOURCE GROUPS</td>
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### RESOURCES Table

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<th>Resource Group</th>
<th>Subscription</th>
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<td><a href="mailto:rodney.joyce@data-driven.com">rodney.joyce@data-driven.com</a></td>
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<td>PokerDIY</td>
<td>RJ (QueMesai - MPN)</td>
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<td>QueMesai</td>
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<td><a href="mailto:rodney.joyce@data-driven.com">rodney.joyce@data-driven.com</a></td>
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<td>February 25, 2021</td>
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</tbody>
</table>

https://cloudmonitor.ai
Screenshot – Drill into the detail

CloudMonitor

RESOURCE - DevOpsBuildAgentProdWindowsPoolVM

OVERVIEW

MONTHLY SAVING: $0.0
RECOMMENDATIONS: 0
COST ANOMALIES: 3
TAGS: 1
AUDIT LOG: 0

SUBSCRIPTION: PROD - Build Server - MPN
OWNER: rodney.joyce@data-driven.com
RESOURCE GROUP: DevOps-Build-Agents
LOCATION: Australia East
CREATED ON: June 14, 2021
RESOURCE TYPE: microsoft.compute/virtualmachines

FINANCIAL YEAR: 2021

https://cloudmonitor.ai
CloudMonitor

Screenshot – Find Unusual Costs

https://cloudmonitor.ai
### CloudMonitor

**Screenshot – Cost by Owner View**

**Cost by Owner**

<table>
<thead>
<tr>
<th>OWNERS</th>
<th>COST GROUPS</th>
<th>SUBSCRIPTIONS</th>
<th>RESOURCE GROUPS</th>
<th>RESOURCES</th>
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<td>44</td>
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<table>
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<th>Subscriptions</th>
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<tr>
<td><a href="mailto:rshil.kumar@data-driven.com">rshil.kumar@data-driven.com</a></td>
<td>$11,045.3</td>
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<td>8</td>
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<td><a href="mailto:sushma.sarejaka@data-driven.com">sushma.sarejaka@data-driven.com</a></td>
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<td>1</td>
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Customer Success Stories
Reducing Azure Spend & DevOps Improvement

The Challenge

After a period of increased growth and additional customers the costs on the Azure platform increased significantly as more developers worked on the system. This resulted in a large Azure bill each month which increased over time. In addition to this the DevOps solution needed to be updated to match recent platform enhancements.

The Solution & Business Value

We identified under-utilised resources and recommended a series of actions to remove or scale down services in order of benefit and risk. Over a 2-week period we implemented and measured the changes to ensure the system performance remained unaffected. This resulted in a 46% reduction in Azure spend and better awareness amongst the development team of their actions regarding costs.

"Data-Driven did a comprehensive audit of our Azure infrastructure and DevOps processes. They identified and improved several areas, saving our company thousands of dollars each month in subscription costs."

Rafic Habib,
Clinic to Cloud CEO
Enabling Self-Service and Advanced Analytics

Customer Success Story – Data Foundation – [Read Online]

Transport for NSW

Transport for NSW (TfNSW) manages one of the largest fleets of vehicles in Australia, including Buses, Ferries, Light Rail, Trains and Metro. The real-time data generated by these vehicles provides valuable analytical opportunities to improve transport services by measuring service performance and optimising routes, however, the sheer volume of data presents data management challenges.

Data-Driven partnered with TfNSW to deliver the Operational Data Lake (ODL) platform on Azure to enable self-service and advanced analytics capabilities previously not possible. Data-Driven’s ODL included CloudMonitor as a tool to reduce and manage the consumption costs.

The Challenge

Historical GTFS transport data has always been too large and costly to store efficiently and analyse. Each TfNSW vehicle sends its location every 10 seconds which results in a huge stockpile of data containing valuable insights.

In the past, this data was not stored which made insights from past vehicle trips almost impossible to obtain and ruled out the ability to predict trip delays or optimise trip routes. It also made it difficult to report on and analyse service performance and reduced the ability to improve customer services.

The Solution & Business Value

The Data Foundation solution by Data-Driven was the perfect starting point as it was designed to be highly scalable and extensible whilst providing an analytics platform for citizen data scientists and business users. The DevOps-first mindset meant it was east to extend for new use-cases.

This met TfNSW’s vision to build the Operational Data Lake (ODL); a unified, next-generation data and analytics platform, leveraging native Azure services to enable the continuous collection/curation of diverse transport operational data sets, allowing self-service analytics and machine learning to gain further insights to improve transport customer services.

“TfNSW needed a solution to capture real-time data for every vehicle in motion across the state. This solution just gives us that so that we mine nuggets from this data.”

Sandeep Mathur
TfNSW Program Manager
Next Steps
Trial it in your Organization

Install the “Always Free” license and see how CloudMonitor helps you govern your Azure estate and lower costs. There's no contracts and no obligations.

1) Install the Power BI App
   Click here to download the free Power BI application from the Microsoft AppSource Marketplace

2) Install the Analytics Engine
   Click here to download the free CloudMonitor Analytics Engine from the Microsoft Azure Marketplace

3) Connect Power BI
   Contact us for your Power BI login details and we'll let you know your CloudMonitor username and password