

Avoiding the Pitfalls of Cloud Storage for AI Applications



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Dictionary

pit·fall

/ˈpɪtˌfɔːl/

noun

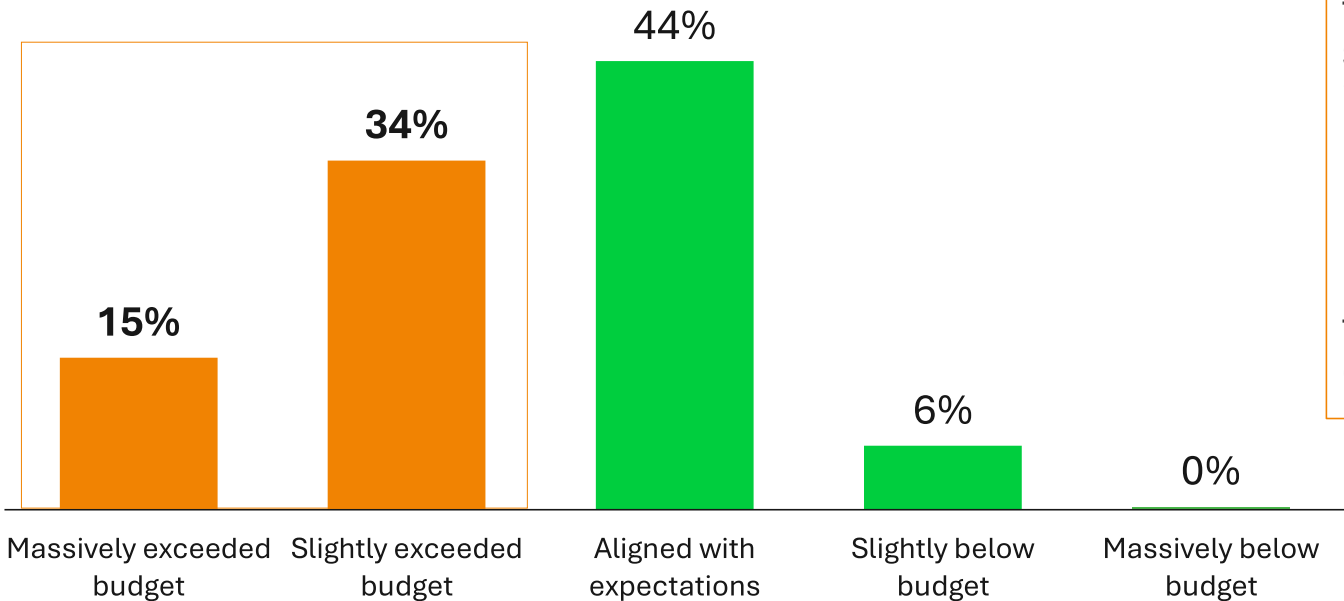
a hidden or unsuspected danger or difficulty.



wasabi
hot cloud storage

Spending Overruns Remain a Challenge; Half of Organizations Exceeded Cloud Storage Budgets in 2025

Over the last year, how has your organization's actual spending on public cloud storage aligned with budget expectations?



49% of organizations say they **exceeded budgeted spending** for cloud storage in 2025.

Good news? This is a big improvement over last year (62% excess), but still work to be done with approx. half of the market exceeding budget, overall.



Source: Wasabi 2026 Cloud Storage Index, n=1,700 respondents

The Fee Problem

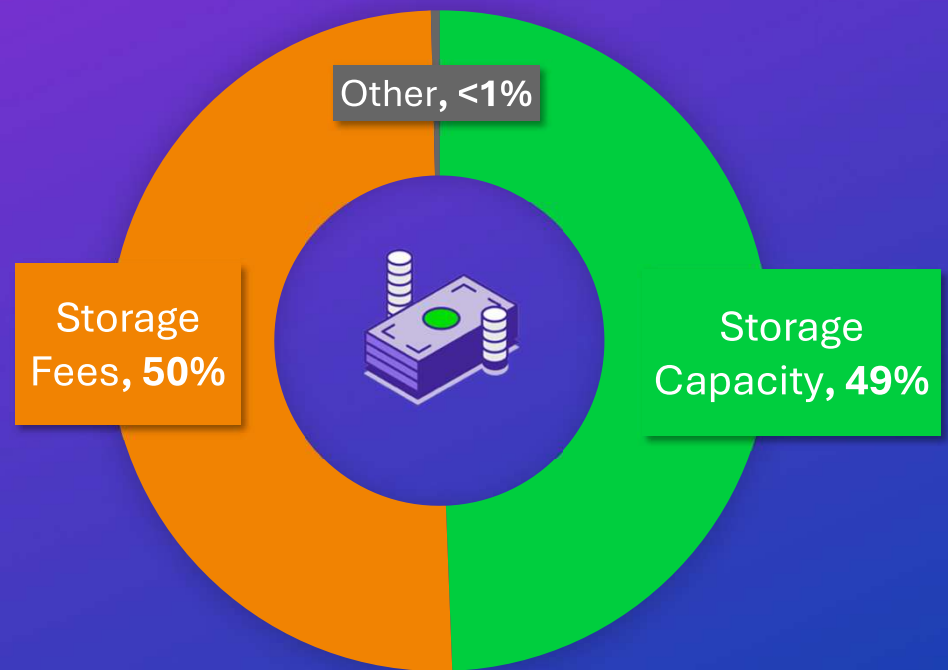
Fee vs. usage billing split remains consistent: **approx. 50% of user spending is on FEES**, not capacity

Unfortunately, the proportion of spending on **fees** remains consistent over time:

- **2025:** 49% Fees
- **2024:** 47% Fees
- **2023:** 48% Fees



Approximately, what percentage of your organization's total public cloud storage subscription/bill is allocated to the following areas?



Don't watch TV tonight. Play it!



If cloud storage was a game.....



Plenty of examples of cloud pitfalls

7 hidden AWS costs that could be killing your budget  ITProPortal
By Alex Lesser September 06, 2017 Business

Is There a Landmine Hidden in Amazon's Glacier? 

A Look At Hidden Costs In Cloud Solutions 

HOW-TO
6 Hidden Costs of Cloud Migration
As organizations flock to the cloud—94 percent of enterprises are at least discussing cloud or cloud services—

stop acting like CIO JOURNAL
expensive.

CIOs Still Waiting for Cloud Investments to Pay Off

CLOUD INFRASTRUCTURE
3 Hidden Public Cloud Costs
Hybrid or multi-cloud strategies offer public cloud costs for your organization
By Pete Brey
MAY 30, 2018

Unrealistic expectations are forcing some tech leaders to rethink cloud costs; 'You discover your cloud architecture is immature when you're surprised by the bill'

Hidden Costs Every CIO Needs to Avoid

The Hidden Costs of Cloud Migration
March 6, 2018 by George Leopold

What are the Hidden Costs of Cloud Migration?
Sasha Banks-Louie
Oracle BRANDVOICE | Paid Program
Innovation

ARE YOU AWARE OF THE HIDDEN COSTS OF STORING DATA IN THE CLOUD?
The Hidden Costs of Moving Infrastructure to AWS Public Cloud

February 1, 2018 | By Steve Brown | Enterprise Data Management

Beware the hidden costs of cloud computing
The costs of public cloud may be attractive but there are many other factors to include and without careful planning costs can quickly spiral.



Pitfall!: Complex Architectures

| aws |
|-------------------------------|
| S3 Standard |
| S3 Intelligent-Tiering |
| S3 Standard Infrequent Access |
| S3 One Zone-Infrequent Access |
| S3 Glacier |
| S3 Glacier Deep Archive |

| Azure |
|-----------------|
| Premium Storage |
| Hot Storage |
| Cool Storage |
| Archive Storage |

| Google Cloud Platform |
|-----------------------|
| Regional |
| Multi-Regional |
| Nearline |
| Coldline |

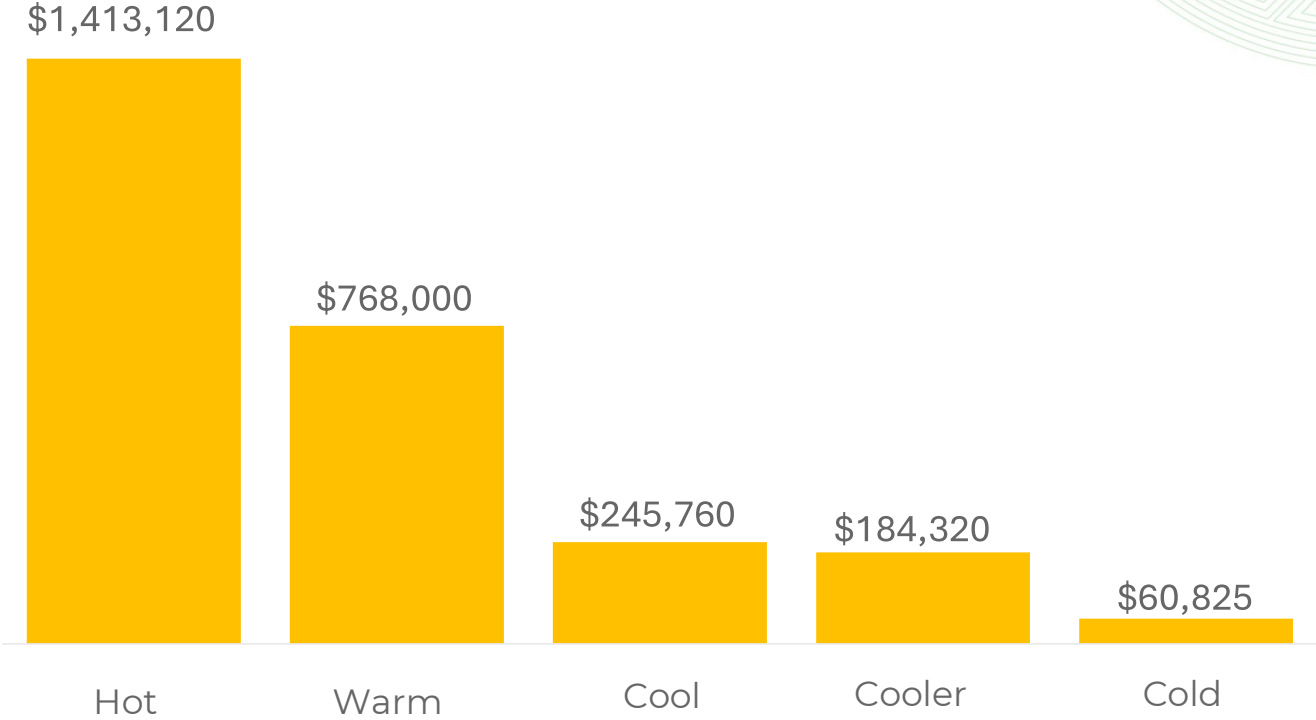


Cloud Object Storage – 1 year

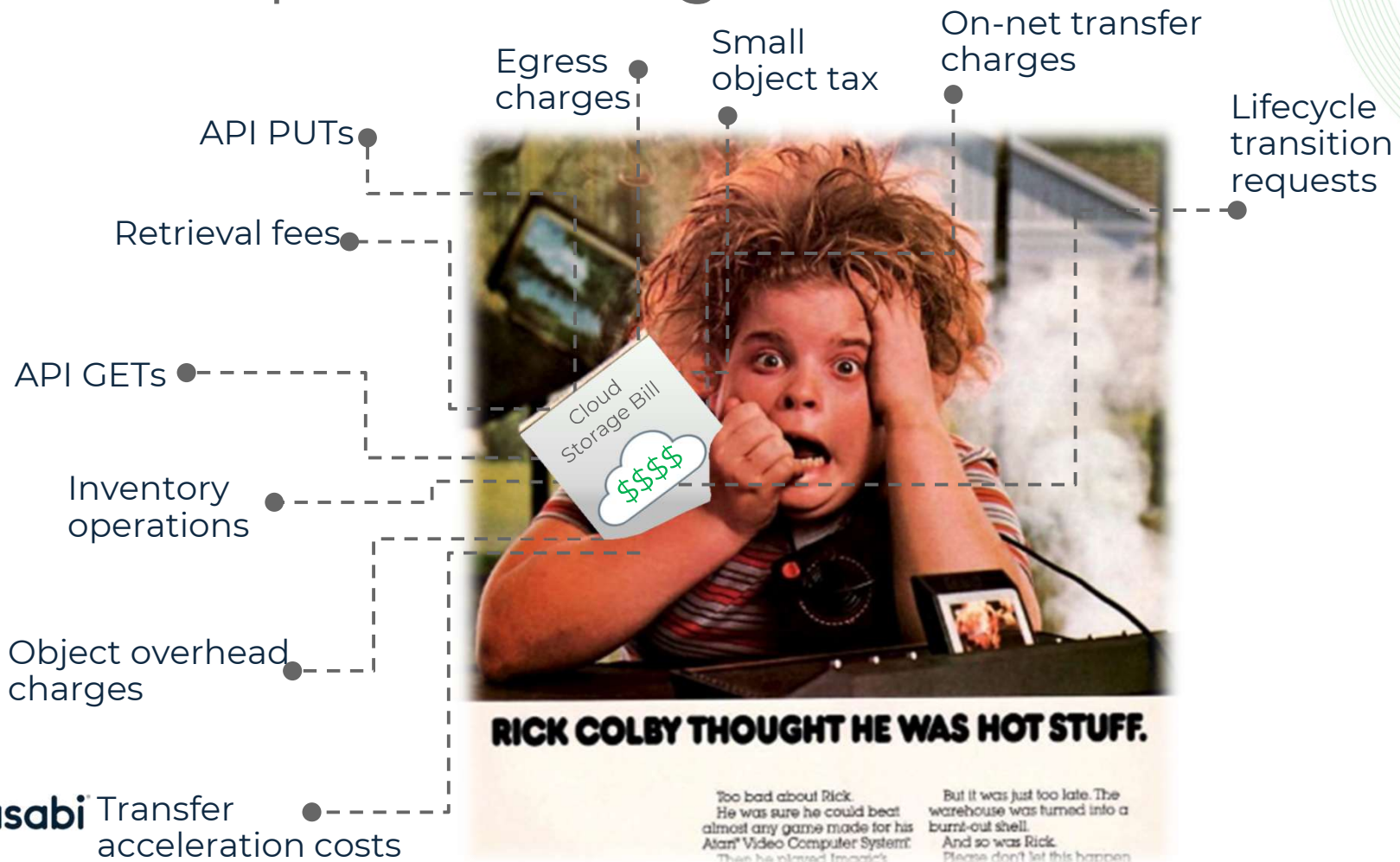
Which tier would you choose?



**5
Petabytes**



Pitfall: Unexpected charges



RICK COLBY THOUGHT HE WAS HOT STUFF.

Too bad about Rick. He was sure he could beat almost any game made for his Atari® Video Computer System. Then he played Imagic's

But it was just too late. The warehouse was turned into a burnt-out shell. And so was Rick. Please don't let this happen

Pitfall!: Operational Charges / API Requests

PutObject

UploadPart

GetObject

CopyObject

HeadObject

ListObject

PostObject

DeleteObject

CreateMultipartUpload

CreateBucket



PUT, COPY, POST, LIST

\$.005 per 1,000

\$.01 per 1,000

\$.02 per 1,000

\$.03 per 1,000

\$.05 per 1,000

GET, SELECT, all

others

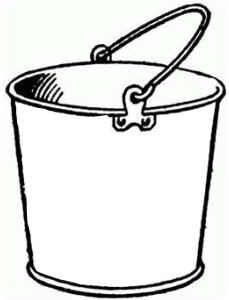
\$.0004 per 1,000

\$.001 per 1,000



Pitfall!: API requests lead to unwelcome surprises

Object size and count matters

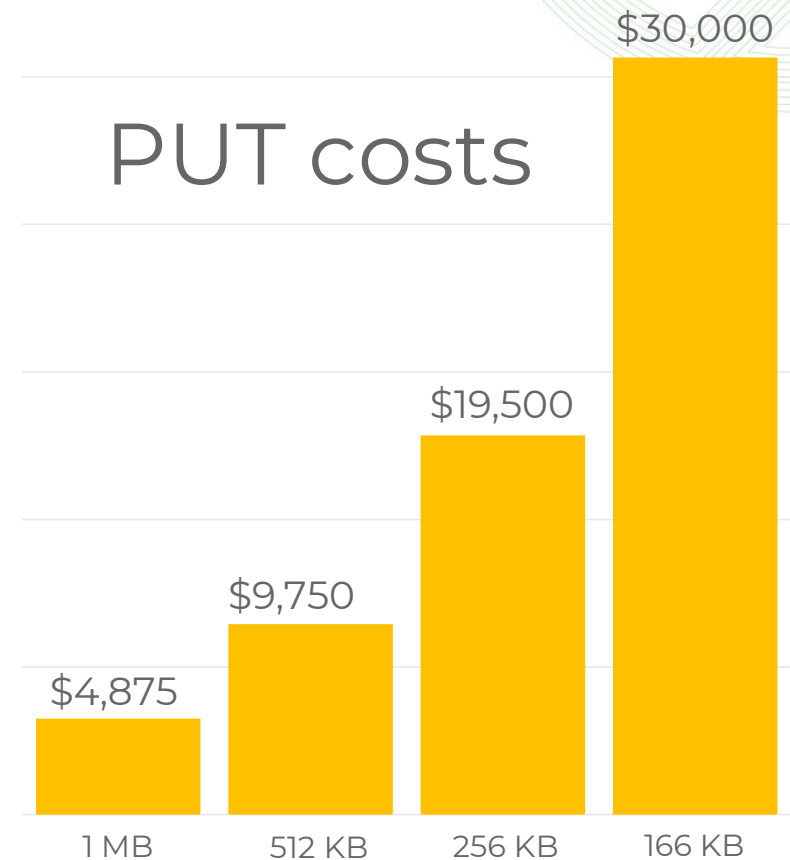


6 Billion PUT Requests @ 166 KB

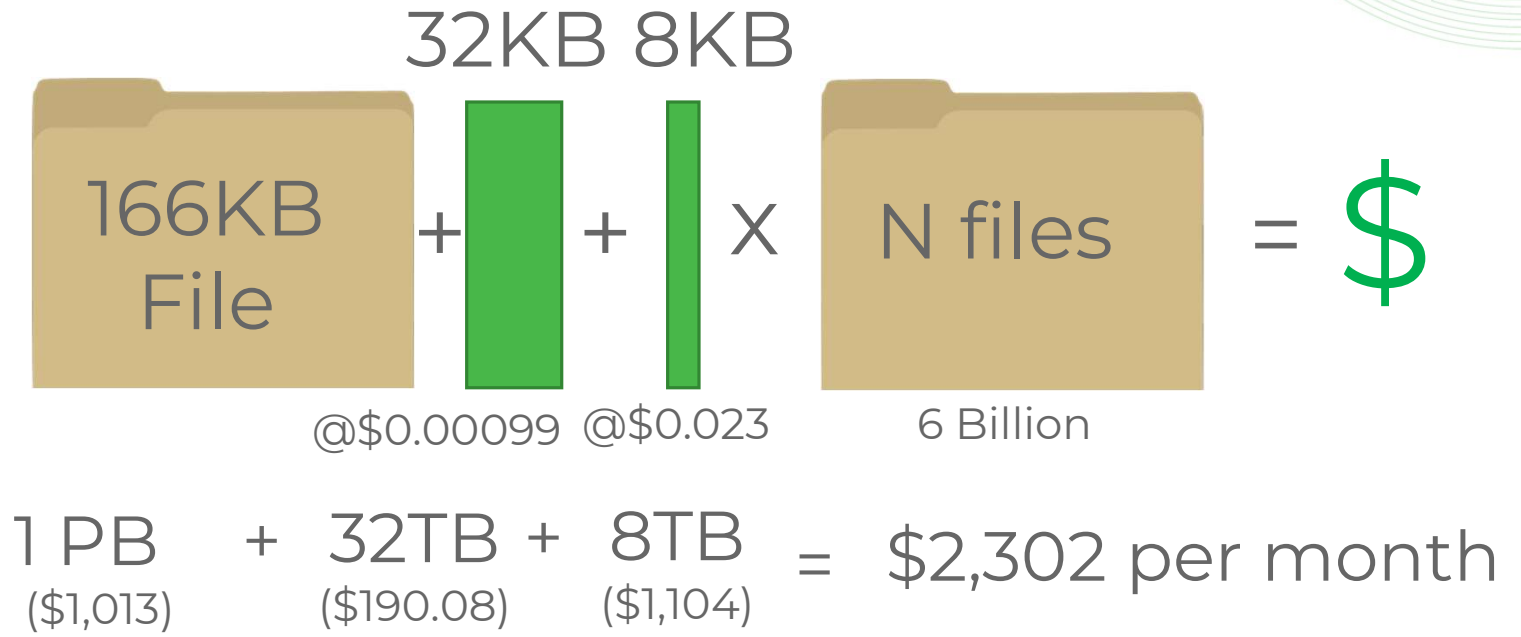
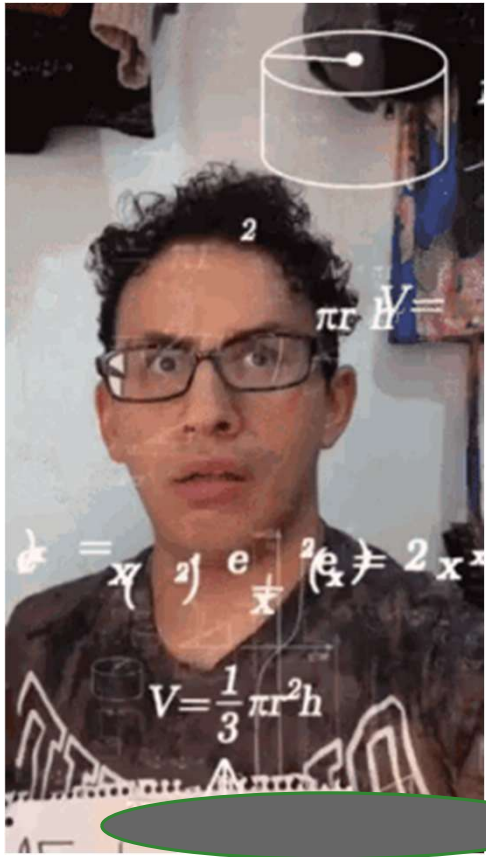
- S3 \$.005 per 1,000 = \$30,000
- IA \$.01 per 1,000 = \$60,000
- GIR \$.02 per 1,000 = \$120,000
- GFR \$.03 per 1,000 = \$180,000
- DA \$.05 per 1,000 = \$300,000

One Petabyte of data
at different sizes

PUT costs



Pitfall!: Object Overhead Charges
 1PB in archive tier = \$1,013 per month... but



Pitfall: Egress Charges

Cloud Egress costs are a nightmare to understand and forecast

Best example of cloud provider lock-in

 wasabi

Price to transfer 10TB of data out of the following providers



Egress Charges

Pitfall!: Cloud lock-in

Vendor “Lock-in” is real and it’s a concern

Most organizations don’t have the:

- Money
- Technical know-how
- Time to move large quantities of data between cloud providers



Enterprises learning to love cloud lock-in too: Is it different this time?
ZDNet

Don't look now but more enterprises are going "all-in" with cloud providers. Will enterprises repeat the same lock-in mistakes made in the big enterprise software era?

InfoWorld

CLOUD COMPUTING
By David Lenthicum, InfoWorld | JUL 2, 2021 3:00 AM PDT

Cloud lock-in is real

Lock-in is the dirty little secret of public cloud computing. It's been whispered it for years, but more and more people are speaking up.

Information Age
Have you traded on-premise lock-in for in-cloud lock-in?

Forbes

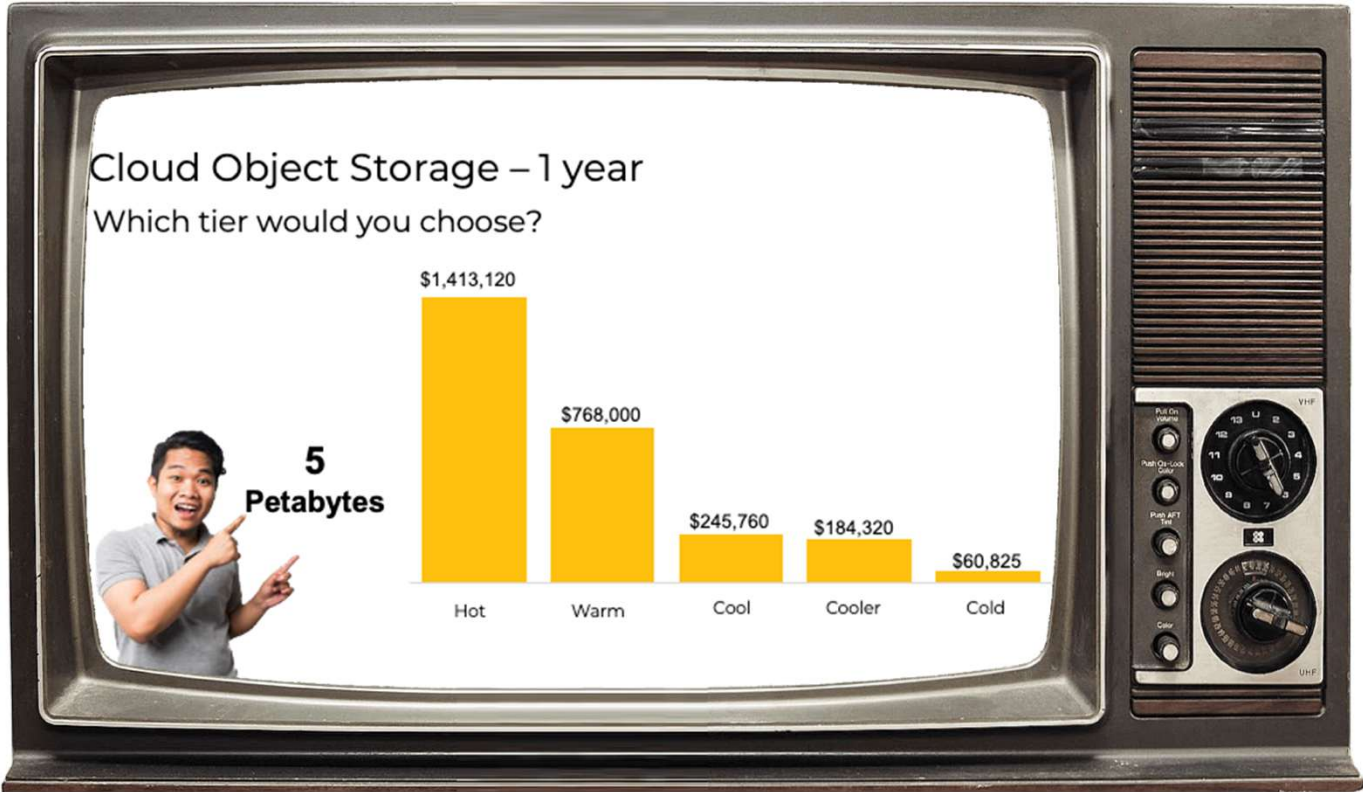
Enterprise & Cloud
Five Ways To Avoid Cloud Lock-in

Entrepreneur

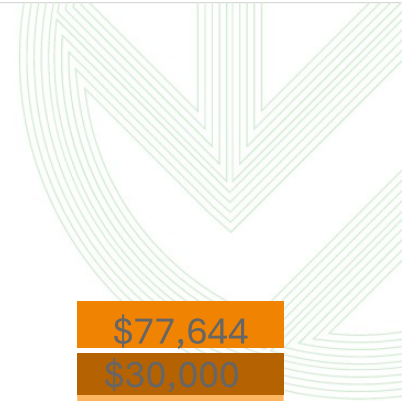
With Rising Costs and Vendor Lock-Ins, Is a Cloud Exodus in the Making?

If you can't afford to move, you are “Locked-in”

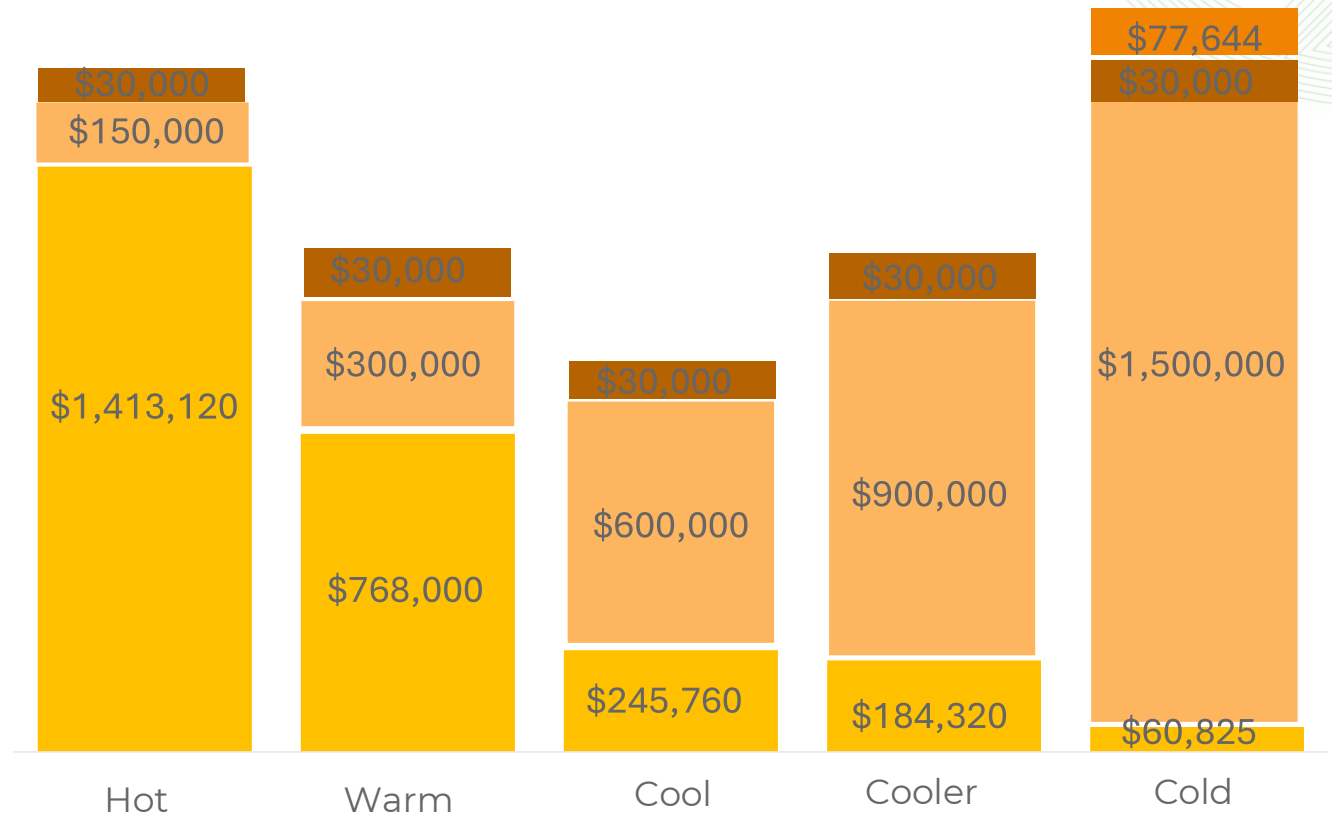
Remember this slide?



The Pitfalls Add Up



5 Petabytes of Cloud Storage
30 Billion PUT Charges
Data Management Charges
Archival Overhead



Winning the game of cloud storage

Understand where the hidden costs are



Storage tiers
API Requests
Data Management
Egress Costs



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hot cloud storage