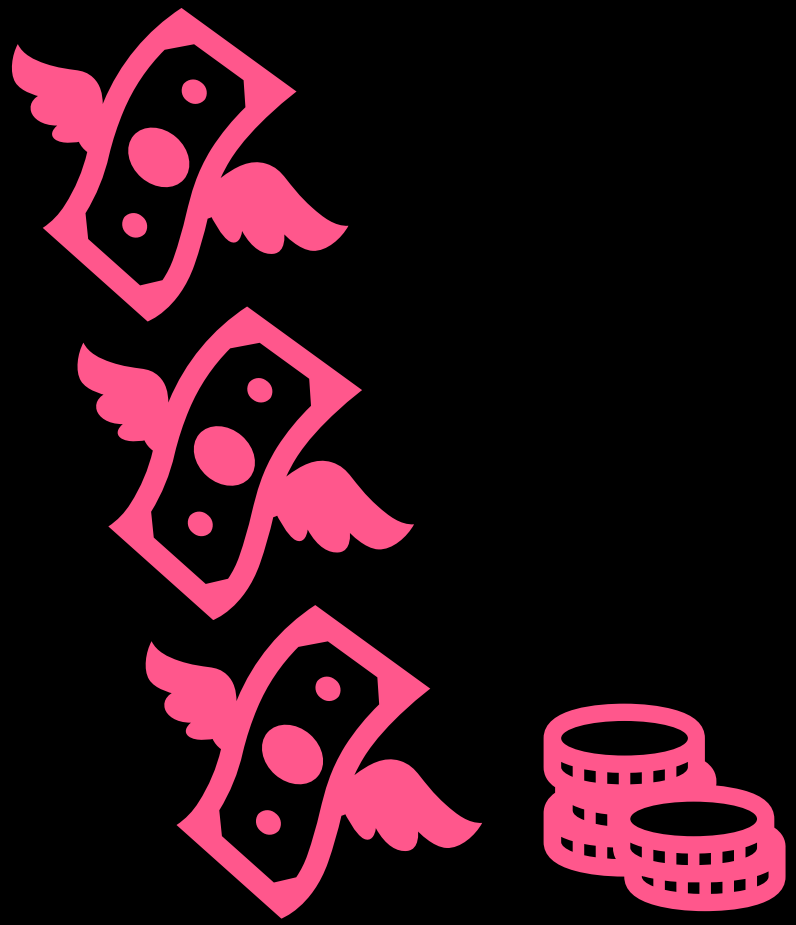
Cost management and optimization

Cost Management



- Make sure alerts are generated about costs. Decide on a budget and follow up on anomalies
- Bigger discounts are offered for more traditional workloads with longer-term commitment (1-3 years)
- Make cloud users aware of the cost and act transparently
- Monitor unused resources
- Shut down unnecessarily on test environments

Naming and tagging

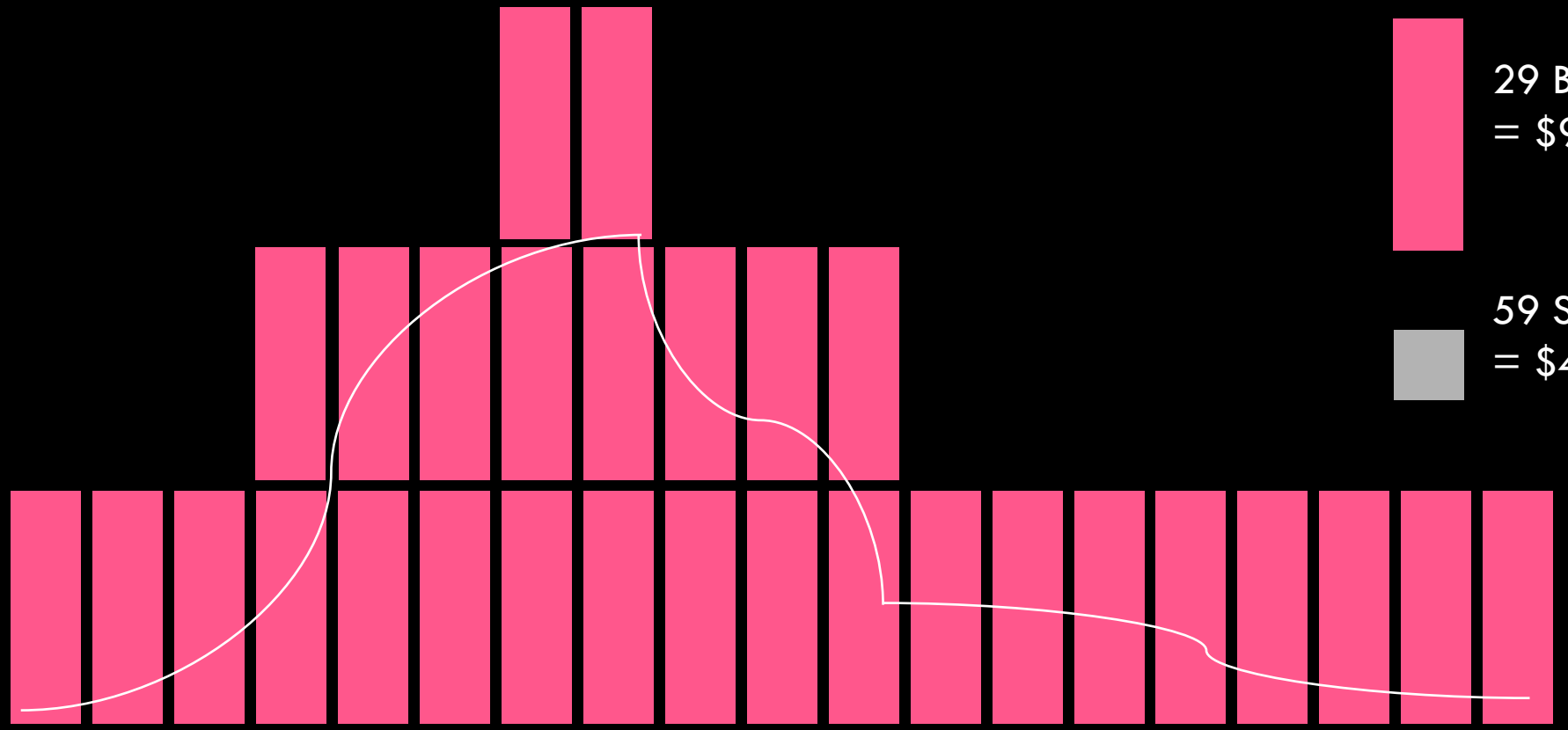
A well-thought-out naming convention allows for good documentation and tracking of resources in cloud environments and data centers.

Consistent and descriptive naming of resources has many benefits: Indicates the role and ownership of the resource.

- Indicates the role and ownership of the resource.
- Helps shape expectations and promote unity within the infrastructure.
- Prevents name conflicts when resource names must be unique.
- Makes it easier to find resources.
- Reduces the hassle of understanding the code and allows developers to focus on more important aspects than the controversy over naming standards.
- You can sort and filter resources quickly.
- It is a prerequisite for good cloud management and the utilization of automation

Right Sizing

More small ones vs. Less big ones



29 Big ones @ $0.32/hr
= $9.28

59 Small ones @ $0.08/hr
= $4.72

Cost management and optimization

Principle	Implementation
Pre-agreed naming and tagging practices should be followed in environments	required
Alerts should be issued for costs.	required
The cost of services must be monitored	required
Try to use FaaS (Function-as-a-service) services instead of IaaS capacity, which costs only based on running time. Using FaaS-type solutions lowers costs because they are billed only on a per-use basis and result in less maintenance compared to servers.	recommended
Try to use the database services provided as PaaS services. These require significantly less maintenance than implementing similar functionality as a server installation, thus reducing maintenance costs.	recommended
Use automatic scaling features and try to shut down servers that are not in constant use. In many environments, automatic scaling can be used to reduce or increase servers as needed. Servers should be shut down in development environments when they are not needed, such as in the evenings and on weekends.	recommended

Technical design principles

BEST
PRACTI(

- Operational excellence
- Security
- Reliability
- Performance efficiency and optimization
- Cost management and optimization
- **Sustainability**

Sustainability pillar focuses on minimizing the environmental impact of cloud workloads. Key issues are the solidarity model for sustainable development, understanding the impact and maximizing use to minimize the resources required and reduce downstream impacts.