How to Use Tagging to Enable Showbacks and Chargebacks

Tagging Overview

Resource Tags

- Provide the ability to organize and search within and across resources
- Filterable and Searchable
- Do not appear in Detail Billing Report

Cost Allocation Tags

- Provide the ability to map AWS **charges** to organizational attributes for accounting purposes
- Information presented in Detailed Billing Report and Cost Explorer
- Only available on certain services or limited to components within a service (e.g. S3 bucket but not objects)

Tagging Restrictions

- Key (Attribute): 127 Unicode characters
- Value (Detail): 255 Unicode characters
- Tags per resource: 10 tags

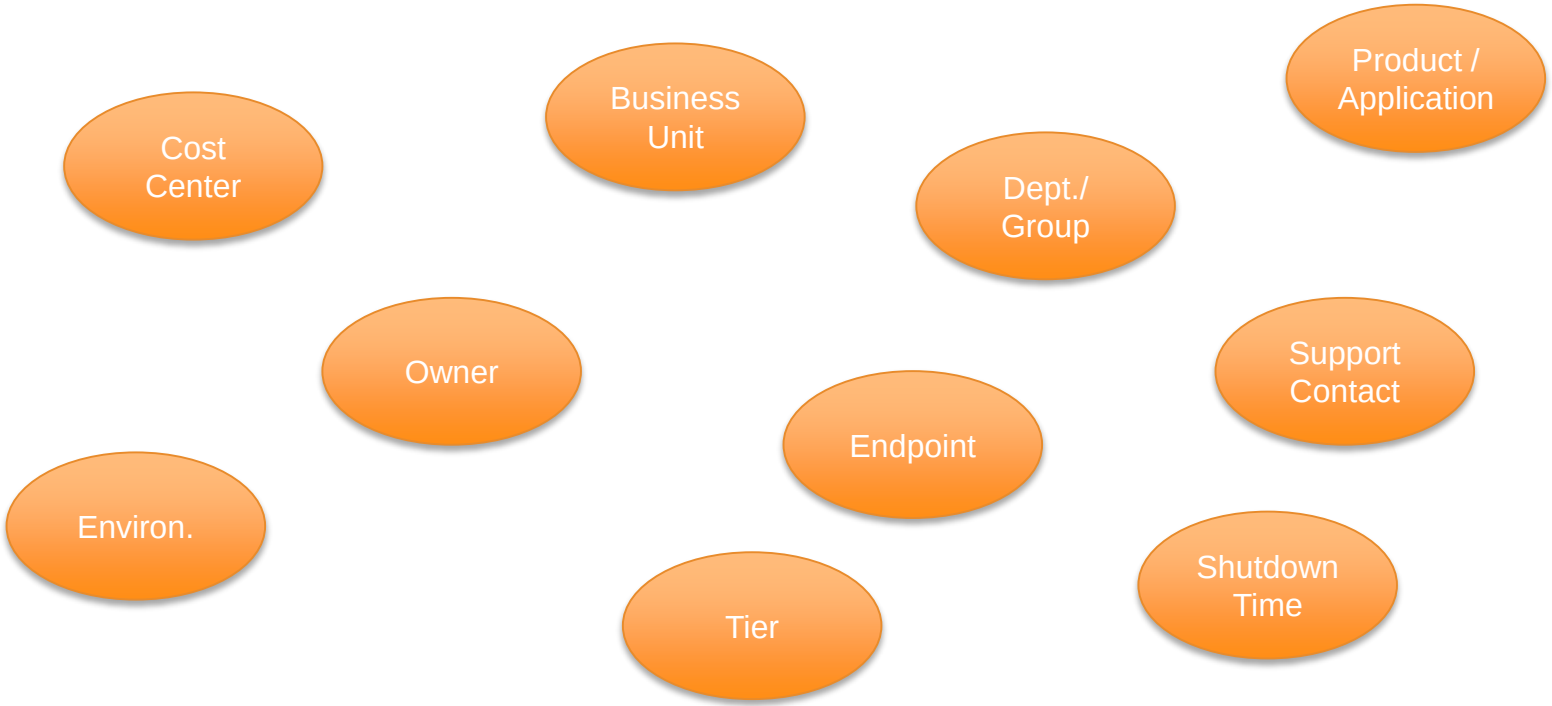
Other Limitations

- Tags are account specific
- Tag keys and values are case sensitive
- Tags are unique per resource
- Resources cannot be stopped, terminated or deleted solely based on a tag
- Tags cannot begin with “aws:” as a prefix (reserved for AWS use)

Tagging Considerations

- Timing is important! Tags…
  - **Can be applied anytime:** Tags can be created/applied after a resource is created, however no information will be captured between the time the resource was created and when the tag was applied
  - **Are not retroactive:** Cost Allocation reports are only available from the point in time they were activated (i.e. if Cost Allocation in activated in October, no information from September will be displayed)
  - **Are static snapshots in time:** Changes made to tags after a report is run will not be reflected in reports previously run
  - **Must explicitly be denoted for cost allocation**: After creating a new tag [key], it must be marked/activated/added as a cost allocation tag (if applicable) otherwise it will not be visible in the DBR or Cost Explorer.

Tag Key Examples



Tagging Strategies

- Define naming convention – Tag key names should use upper CamelCase (or PascalCase) for manual creation
- Standardize delimiters and do not use as part of tag values
- Utilize concatenated/compound tagging – combine multiple values for a tag key (i.e. Owner = JohnDoe | johndoe@company.com | 8005551234)

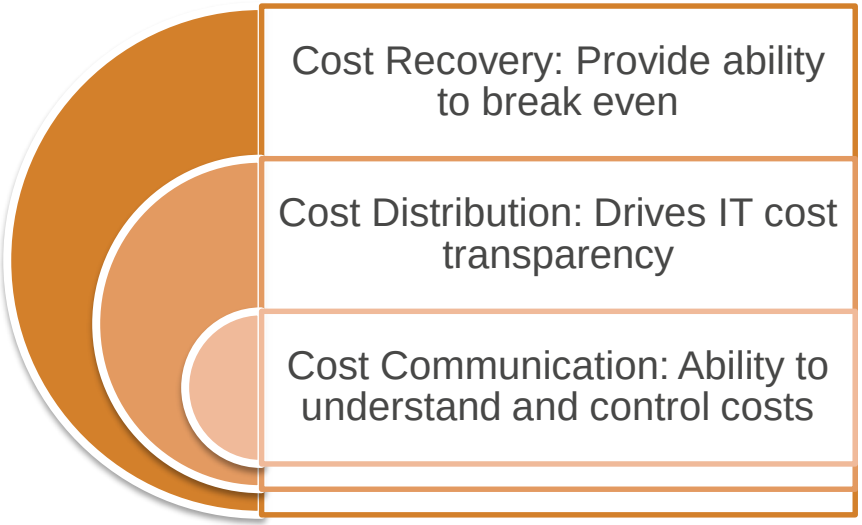
Customer Challenges to Tagging

- Governance and Monitoring
- Standards and Processes
- Decentralized vs. Centralized environment

Value of Chargeback / Showback

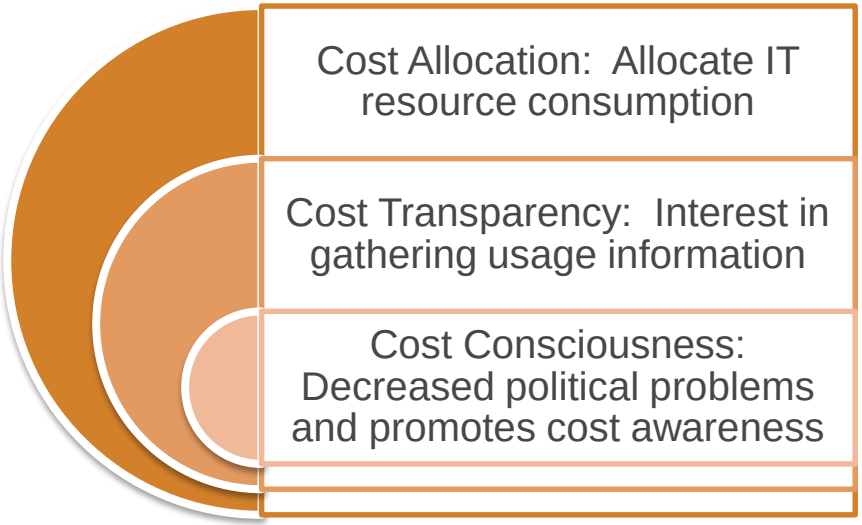
To Chargeback or Showback – That is the Question…

Chargeback Overview



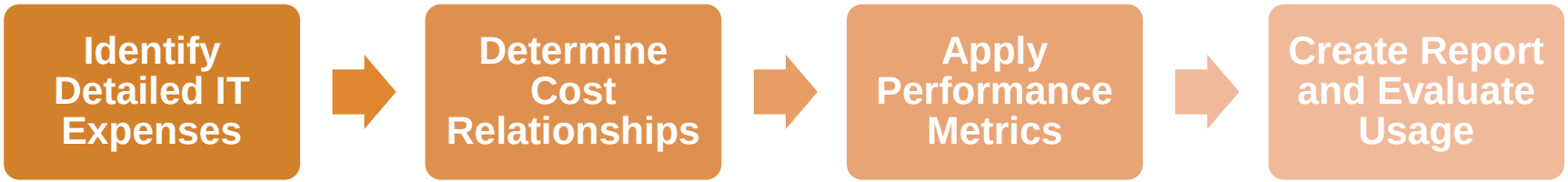
- Internal Bill or “Cross Charge” for costs directly associated to the infrastructure, data transfer, application licenses, training, etc., generated by usage.
- Makes business departments responsible in their usage.
- Increase accountability to validate IT expenditures.

Showback Overview



- Visibility into **who** is using **what** resources, and the cost breakdown of those resources
- Allows IT to maintain control over AWS deployment, at a usage and cost level.
- Increased awareness of IT spend with the value of achieving business objectives.

Showback Usage Strategy



Pillars for Enterprise Account Creation

AWS Account Governance

- Payer and Linked Accounts
- Transparency Considerations
- IAM Management

Financial Governance

- Consolidated Billing Report
- Blended & Unblended Rates
- Public vs. Private Pricing Plans

Operating Expenses

- Trusted Advisor
- Detailed billing
- Instance Purchasing Strategy

Cost Allocation

- Tagging
- Timing of End-of-Month Reports
- Discounts, Credits, Rebates

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Account Setup – Key Considerations

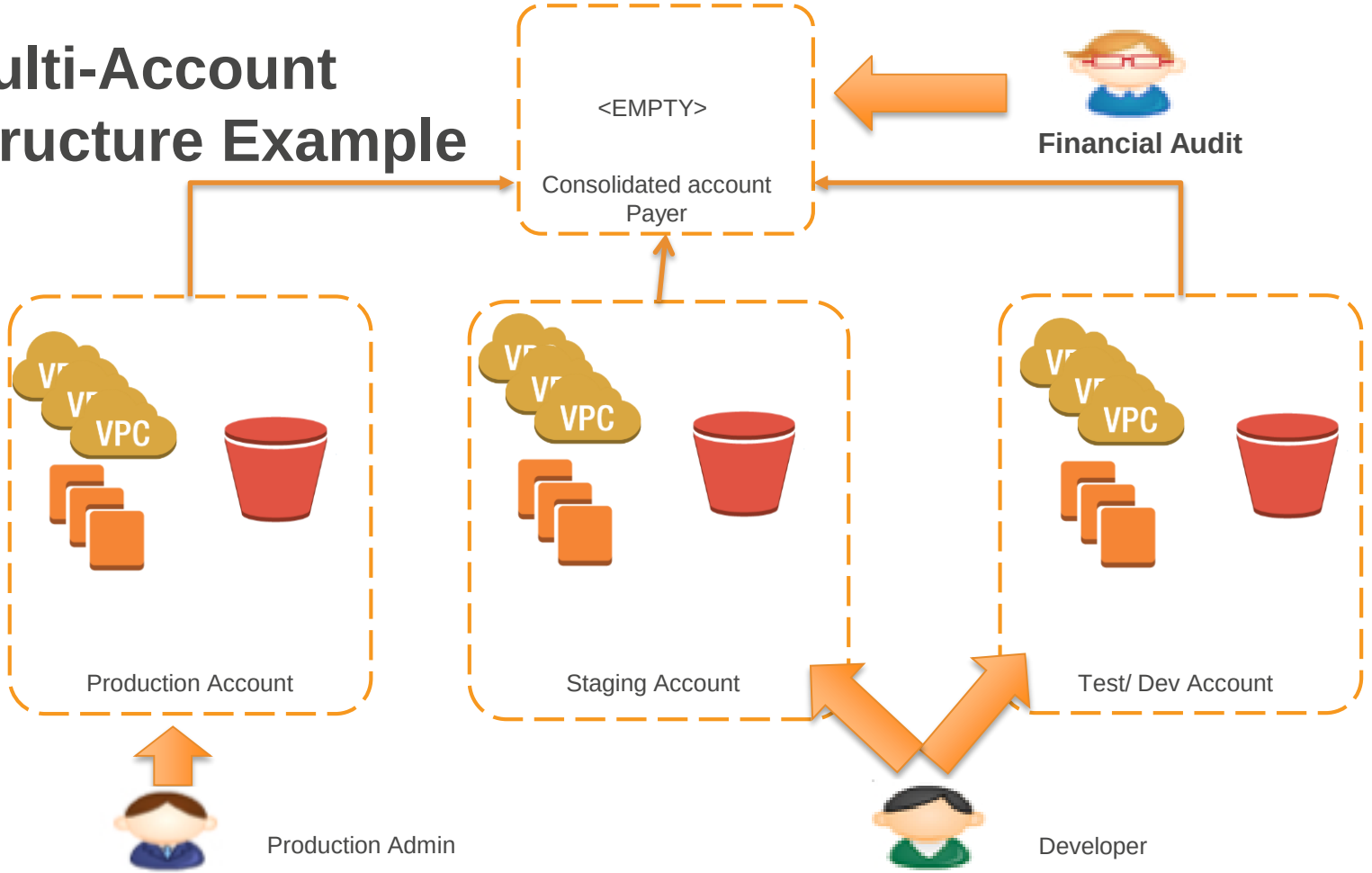
One Account (multiple tags)	Multiple Accounts (handful of tags)
• Less accounts to maintain, track and pay • Requires granular controls for IAM • More susceptible to manual maintenance • Information is more difficult to discern	• Simplifies operational tasks • Minimizes IAM complexities • Reduces tagging efforts • Blast zone minimized • Cost containment • Automation required / highly recommended • Provide granularity

Payer and Linked Accounts

Payer and Linked Accounts

- Ability to have a single (aggregated) bill
- IAM roles support managing multiple accounts to enable a parent child relationships.
- Linked and payer accounts are independent to security and permissions.

Multi-Account Structure Example



Blended vs. Unblended Rates Overview

Blended Rate

- Depicts the rate after all Linked Accounts have been blended into a volume discount
- Average rate calculated for identical instance usage in an AZ for members of a consolidated billing family.

Unblended Rates

- Depicts the rate before discounts are applied
- Published rate - “retail pricing” – no discounts
- Cost per hour for a product, usage type and operation performed (Note: these three fields can be used as a primary key in the DBR for reporting purposes)

Blended vs. Unblended Rates (Cont…)

- For linked accounts, unblended rate reigns. (e.g. unblended rate should be used for charge back)
- For the total bill, blended rate reigns. (e.g. blended rate should be used for calculating the discount)

Example Tools for Billing Analysis

Key Takeaways

- Splitting a bill between departments can be challenging.
  - For example, a centralized IT department controlled resource consumption, but AWS presents the opportunity for individual departments to use their own budgets to pay for IT consumption.
- Showback or Chargeback is still a challenge. Including economic and internal political and issues.
- Customers with On-demand environments have blockers with transparent showback or chargeback simply because divisions of the organization will struggle to budget operating expenditure on an unknown service with an unknown variable requirement.

Questions?