exivity

Automated usage metering & billing within CGI's Data Center

Case study:
Exivity helped CGI US by improving and automating the reporting of all on-prem commodity billing.

CGI

Founded
1976

Employees
80,000

Locations worldwide
400

Industries
Telecommunications, health, manufacturing, oil and gas, retail and consumer services, transportation, systems integration and IT managed services, and intellectual property(IP) solutions

Clients through their IP-based solutions
50,000

Benefits Realized

By choosing Exivity, CGI gained the following:

- Changes in resource allocation are reflected in Billing within hours, versus at the end of the month or via manual corrections
- Changes are reflected in customer billing more quickly
- Clear, and more detailed views of current consumption are available on a per-customer basis via the Exivity Web Interface
- Cost Savings: fewer FTEs involved with billing through fully automating an otherwise manual process
- Ability to compare customer contract value with actual spend
- Fewer errors in billing workflows resulting in minimal administrative overhead
- CGI uses Exivity for monitoring internal resource usage, allowing better cost containment due to tracking of cost against service offerings

Challenges and needs

The challenges for CGI revolved around two main topics; data unavailability and the lack of automation. Originally, services were charged monthly, with a summary available only at the end of the month bill. The billing data was collected manually, which represented a significant effort for the individuals assigned to collect raw usage and then additional staff to compile it to produce billing.

Exivity automates all these processes. It has a powerful data collection capability where Exivity either pulls or accepts billing data from US GTO's systems that manage service delivery such as the Configuration Management DB (CMDB), hypervisors, Storage management, Backup, and Networking. Via Transform, this data is correlated with service profiles and customer identifiers to compile usage records. Usage data is then further processed with rate cards to populate the charge database that users can access as needed via Exivity's Web interface.

Where usage data used to be compiled once a month and was only current as of the last tower report, GTO now has a system where staff can view usage via their browser where the data is current as of that morning. If a VM is created today, it will be reflected in Exivity no later than the following morning.

To their pleasure, Delivery Tower staff no longer have to create monthly reports. Instead, they can look into Exivity to view data needed such as trending for a given Delivery Tower. Further usage data is extracted and passed to our financial system to update accounts on our ERP.

Another benefit is US GTO uses Exivity to track its own resource usage. There are real costs associated with the IT resources they use to support service delivery. Having detailed visibility into those costs and related drivers allows US GTO to better manage those costs. Savings here drop directly to the bottom line.

Exivity's mechanism at a glance
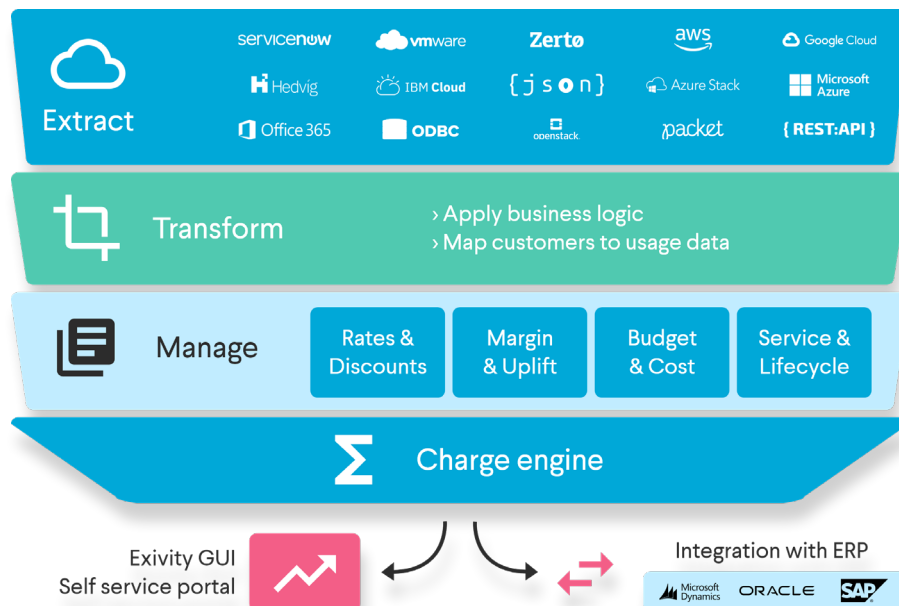
Solution and Implementation

1. Data Extractors

GTO wanted to measure and apply metrics to the data stored in the CMDB.

The configuration and status of various GTO systems constitute a valuable source for billable metrics. Recalling the fourth principle of FinOps (" FinOps reports should be accessible and timely "), Exivity's mechanisms gather data, process it and deliver it rapidly, making it available earlier than the classic/usual end-of-the-month timestamp. Exivity helps with the collection of this information, accepting data pushed from the CMDB nightly. Using a workflow (via Exivity's built-in scheduler), Exivity process the extracted data files and publishes them automatically every morning. For each data source, the extracted data is written to dated files called Datasets. Each day Exivity loads whatever Datasets files exist for that given day to Exivity's charge engine. The charges will then be available via the Exivity GUI. For instance, even though OS support is a monthly charge, the data is written daily. After the first day of each month, the data is there in draft form, so draft monthly bills can be previewed and are available when needed given the varying monthly financial schedules. If during a billing period, the quantity of units used varies, the highest consumed quantity is charged.

2. Billing Transformers

Transformers take incoming data and prepare it to be loaded as usage records. During the Transform data is normalized and mapped to customer information.

Moreover, when no logical mapping can be done from certain resources, Exivity offers the possibility to close this gap in the data feed. This is done with a useful feature called Lookup files. Once a Lookup is created, it is possible to import it into a Transformer as a Dataset. Exivity uses multiple datasets while normalizing and enhancing the data collected. Or to identify exceptions to normal processing for given customers and services, for example when mapping customer's alias with the actual customer ID, or when applying business logic to resources like predefined VM sizes.

In the case of CGI, we created Transformers for processing data about Customers, Services and Prices, Mapping Customers with Aliases and Services used by the internal towers and the Federal Cloud Customers.

US GTO's implementation of Exivity currently meters and reports commodity usage across approximately 195 different accounts each using a subset of over 200 active services. On a normal day, approximately 40,000 usage records are compiled.

3. Charge & Usage Reporting

After the report preparation step, the GUI delivers a detailed report view for each account. CGI staff log into the GUI via their browser where they can look at current usage, past history, and trending. They are free to export data as needed.
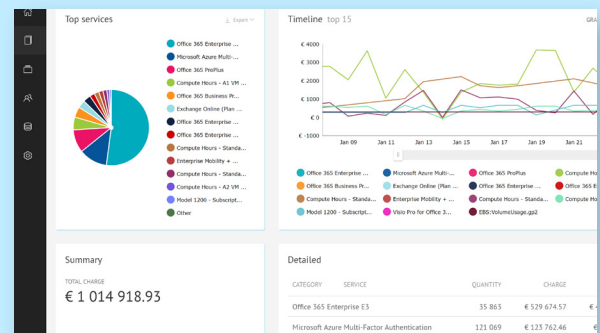
Advanced Functionalities

Exivity's solution for CGI provides a full spectrum of functionalities, among which:

- **Workflows:** allow users to schedule various tasks and execute them at a specific date and time. This permits the execution of different Extractors and Transformers so that they are tightly chained together.
- **Budgets and Notifications:** it is possible to create Budgets for different Accounts and enable notifications to inform users when a threshold has been reached.
- **Audit Trail & Log viewer:** Exivity allows users to view logs and track audit trails that provide change and error information about various system components (Extractors, Transformers, Services, Rates, etc).
- **SAML2 integration:** Exivity supports automatic user and access provisioning for 3rd party Identity Providers.
- **Rate adjustments:** allows users to create rate and cost adjustments for services (e.g. apply Discounts).
- **Automated Billing and Chargeback reports:** Exivity enables customers to generate summaries of the cloud spend on a schedule, reducing manual labour.
- US GTO has gained the ability to be more dynamic in charging such as daily usage VS monthly.

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Learn more
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