

Module 1: Exivity for Engineer & Leads

1. Cost & Usage Management for Engineers
 - Overview of FinOps framework
 - Comparing development from an engineer's and an analyst's viewpoints
 - Evaluating FinOps maturity and creating a roadmap for progress
2. Core Components Roles & Responsibilities:
 - Extractors, Transformers, Loaders, Report Engine, APIs, Integrations
1. Use Case Creation:
 - Cost planning and setup for a single cloud
 - Aggregation and normalization of costs across multiple clouds
 - Consolidating and integrating on-premises usage data
 - Planning showback and chargeback processes using tagging
 - Integrating data with existing ITSM systems (such as ServiceNow)

Module 2: Architecture, Deployment & Environment Management

2. Detailed System Architecture for Engineers
 - Processing Pipeline Internals (ETL Core)
 - Exivity handles concurrency & large datasets
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3. Environment Planning:

- Sizing based on projected data across Ecosystem.
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4. Deployment Scenarios:

- On-premises: single-node or HA
- Cloud: VMs , containers & Serverless

5. Real-World Deployment Challenges:

- Latency & Data Volume constraints
- Integrating with existing authentication systems (AD, LDAP, SSO , SAML)

Module 3: Advanced Data Extraction

1. Building & Customizing Extractors:

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- Using Pre-Built Extractors (AWS, Azure, GCP,)
 - Writing 5 Custom Extractors in Python/PowerShell/Bash

2. Engineering Use Cases:

- Extracting legacy billing CSVs
- Real-time metrics usage Via APIs

3. Troubleshooting Extraction:

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- Debugging API authentication failures
 - Recovery from incomplete data pulls

Module 4: Data Transformation Mastery

1. Complex Data Mapping:

- Multi-cloud to unified schema conversion
- Normalizing resource tags across environments

2. Real-World Transformation Use Cases:

- Developing specialized groupings of services to improve cost efficiency
- Allocating Split costs across departments

3. Troubleshooting Transformation Failures:

- Detecting misaligned fields
 - Performance bottlenecks in transformation scripts
 - Debugging incorrect aggregations
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Module 5: Optimized Data Loading & Storage

1. Loader Configuration Best Practices:

- Incremental vs full refresh strategies
- Optimizing large-volume loads

2. Common Issues & Fixes:

- Duplicate data handling
- Stalled load jobs
- Managing retention policies without data loss

Module 6: Engineer-Focused Reporting

1. Building Engineer-Grade Reports:

- Cost anomaly detection reporting
- Usage spike identification
- Service-level chargeback processes

2. Use Cases:

- Monitoring how reserved instances are being used
- Analyzing spending patterns in hybrid cloud environments

3. Debugging Report Issues:

- Datasets with no content
- Incorrect aggregation methods
- Delays in generating reports

Module 7: Automation & Integrations

1. REST API for Engineers:

- Bulk data import/export
- Automated extractor execution using APIs

2. Integration Use Cases:

- Transmitting cost data to the ServiceNow CMDB
- Integrating usage data into Splunk/Elastic for correlation purposes

3. Troubleshooting API Failures:

- API token expiry
- Connection resets & rate limits

Module 8: Monitoring, Logs & Troubleshooting Toolkit

1. Understanding Exivity Logs:

- ETL logs
- API request/response logs

2. Setting Up Monitoring:

- Health checks
- Error alerting

3. Troubleshooting Scenarios:

- Failed data pipeline runs
- API endpoint returning partial results

Module 9: Maintenance, Scaling & Performance Tuning

1. Backup & Restore Procedures for Engineers

Module 10: Security, Compliance & Audit

1. Role-Based Access Control (RBAC) Deep Dive

2. Audit Logging:

- Tracking user changes in ETL pipelines
- Forensic analysis of data changes

3. Compliance Use Cases:

- Generating reports for internal audits
- Regulatory cost transparency (ISO, SOC2, FinOps)