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**GCP Services Cost Estimation**

| **Service** | **Usage Assumption** | **Unit Price** | **Monthly Estimate (USD)** | **Notes** |
| --- | --- | --- | --- | --- |
| **Document AI** | 100,000 pages/month using Form Parser | $30 per 1,000 pages | $3,000 | Form Parser processes structured data extraction. Volume discounts apply for higher usage. |
|  | Custom Processor Hosting | $0.05 per hour | $36 | Hosting cost for deployed custom processor versions. Calculated as $0.05 \* 24 hours \* 30 days. |
|  | OCR Add-ons | $6 per 1,000 pages | $600 | Additional OCR features like handwriting recognition. |
| **Vertex AI - Model Training** | 10 hours using n1-standard-4 VM | $0.379 per node hour | $3.79 | Training cost. Additional storage costs may apply based on data size. |
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| **Vertex AI Notebooks** | n1-standard-4, 8 hrs/day, 20 days/month | $0.19 per hour | $30.40 | Interactive development environment. |
| **AI and Data Kit (ADK)** | 10 hours of pipeline execution, 10 GB data storage | Execution: $0.10 per hour Storage: $0.026 per GB/month | $1.26 | Costs for data processing pipelines and storage. |
| **Agentspace** | 1 user | $25 per user per month | $25 | AI agent platform for enterprise applications. |

Second Slide :

| **Recommendation** | **GCP Implementation** | **GCP Services Involved** | **Monthly Cost Estimate (USD)** | **Notes** |
| --- | --- | --- | --- | --- |
| **Project Structure** | Review resource hierarchy: Org > Folder > Projects. Organize based on team/env/application. | Resource Manager | $0 | No direct cost. Best practice for manageability. |
| **Naming & Tagging** | Use labels and naming conventions to enforce policies and billing segmentation. | Labels, Resource Manager | $0 | Improves visibility and governance. |
| **Identity & Access Mgmt** | Use IAM roles with minimum privilege. Integrate Cloud Identity or Google Workspace with Identity Federation. | IAM, Cloud Identity | $6/user (Cloud Identity Premium) | Secure access and SSO. |
| **Network Architecture** | Hub-and-spoke VPC design with Shared VPC. Use Cloud NAT for egress, Cloud Armor for L7 firewalling. | VPC, Cloud NAT, Cloud Armor | $100–$300 | Costs depend on egress traffic and Cloud Armor rule evaluations. |
| **Logging & Monitoring** | Centralized logs via Cloud Logging. Set up metrics and alerts using Cloud Monitoring. Forward logs to Splunk via Pub/Sub and Dataflow. | Cloud Logging, Monitoring, Pub/Sub, Dataflow | $200+ | Logging: $0.50/GB ingestion. Splunk export depends on volume. |
| **Security & Compliance** | Use Security Command Center (Premium) to manage vulnerabilities. Set up policy checks and integrate with third-party tools (e.g., Wiz.io via SCC findings export). | SCC Premium, Assured Workloads, Org Policy, Forseti (optional) | $1000+ | SCC Premium required for enterprise security integrations and export. |

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Slide 3

**Cost Estimate (Typical Monthly)**

| **Service** | **Usage (Example)** | **Est. Cost (USD)** | **Notes** |
| --- | --- | --- | --- |
| Cloud Functions | 2M invocations/month | Free | First 2M free |
| Cloud Pub/Sub | 100 GB data | ~$40 | $0.40/GB beyond free tier |
| Cloud Storage | 50 GB | ~$10 | Standard tier |
| Dataflow | 50 hours | ~$75 | Pay-as-you-go |
| BigQuery | 1 TB processed, 100 GB stored | ~$20 | $5 per TB queried |
| Looker Studio | Free | $0 | Dashboarding tool |

**Integration Flow Diagram**

Already provided earlier – shows:  
UKG → Cloud Functions → Pub/Sub/Dataflow → BigQuery/Cloud Storage → Looker

**Integration Architecture Overview**

| **Layer** | **Tool/Service** | **Purpose** |
| --- | --- | --- |
| **Source** | UKG/Kronos (API, FTP, DB extracts) | Source of raw HR/time data |
| **Ingestion** | Cloud Functions, Cloud Run, or App Engine | Triggered jobs to pull data |
| **Streaming (optional)** | Cloud Pub/Sub | Buffer real-time data streams |
| **Transformation** | Dataflow (Apache Beam) / Cloud Composer | Normalize, clean, format data |
| **Storage** | Cloud Storage (raw), BigQuery (processed) | Centralized warehouse |
| **Visualization** | Looker, Data Studio | Dashboards, KPIs |
| **Security** | Cloud IAM, VPC-SC, Secret Manager | Control access, protect credentials |

A diagram of a cloud

AI-generated content may be incorrect.

**Why Integrate Kronos (UKG) with GCP?**

**1. Centralized Data Analytics & Reporting**

* **Problem**: Kronos has powerful data but limited analytics capabilities.
* **Solution**: Integrate with **BigQuery** + **Looker/Data Studio** to:
  + Visualize trends (e.g., absenteeism, overtime).
  + Create custom KPIs and dashboards.
  + Perform historical and real-time analysis.

**2. Data Consolidation Across Systems**

* **Problem**: Workforce data is often siloed (HRMS, payroll, IT systems).
* **Solution**: Bring Kronos data into GCP to **join with other data sources**:
  + ERP systems (SAP, Oracle)
  + CRM (Salesforce)
  + Financial systems
  + Facilities or security logs

**3. Machine Learning & Forecasting**

* **Use Case Examples**:
  + Predict no-shows or late clock-ins using **Vertex AI**.
  + Optimize staffing levels based on historical patterns.
  + Classify anomalies in punch-in/out data.

**4. Real-Time Monitoring & Alerts**

* **Problem**: Manual monitoring of shift issues or late arrivals.
* **Solution**: With **Cloud Pub/Sub + Cloud Functions**:
  + Trigger alerts when employees don’t clock in on time.
  + Send Slack or email notifications in real time.

**5. Compliance & Auditing**

* **Benefit**: Push Kronos logs to **Cloud Storage + BigQuery** for:
  + Secure historical archiving
  + HR audits and compliance checks
  + SOC2/ISO 27001 data retention policies

**6. Automation & Workflow Integration**

* Trigger actions like:
  + Auto-approvals based on thresholds
  + Exporting approved timesheets to payroll
  + Integrating with **GCP Workflows or Cloud Scheduler**

**7. Scalability & Cost Efficiency**

* GCP provides:
  + **Serverless ingestion** (Cloud Functions)
  + **Pay-as-you-go analytics** (BigQuery)
  + **Auto-scaling pipelines** (Dataflow)
  + **Free tiers for many services**

**🚀 Typical Business Outcomes**

| **Before Integration** | **After Integration with GCP** |
| --- | --- |
| Static reports, limited visibility | Real-time, interactive dashboards (Looker, Data Studio) |
| Manual data exports | Automated ingestion and processing (Cloud Functions) |
| No predictive capabilities | Forecasting via ML (Vertex AI) |
| Compliance burden | Auditable data warehouse (BigQuery + IAM + Logging) |