

Al Services in Oracle Cloud Infrastructure (OCI)

smarterp.com

mythics.com



Partner



Smart ERP Solutions Offerings



Business applications that offer organizations an end-to-end solution providing the right design and implementation from start to finish.



A 24/7 seasoned and experienced staff of experts to help you implement, upgrade, and manage your business solutions efficiently and effectively at a cost-effective rate.



Cloud applications
provide solutions and
services built on proven
enterprise-class
architecture that enable
high configurability and
ease of monitoring









SERVICES

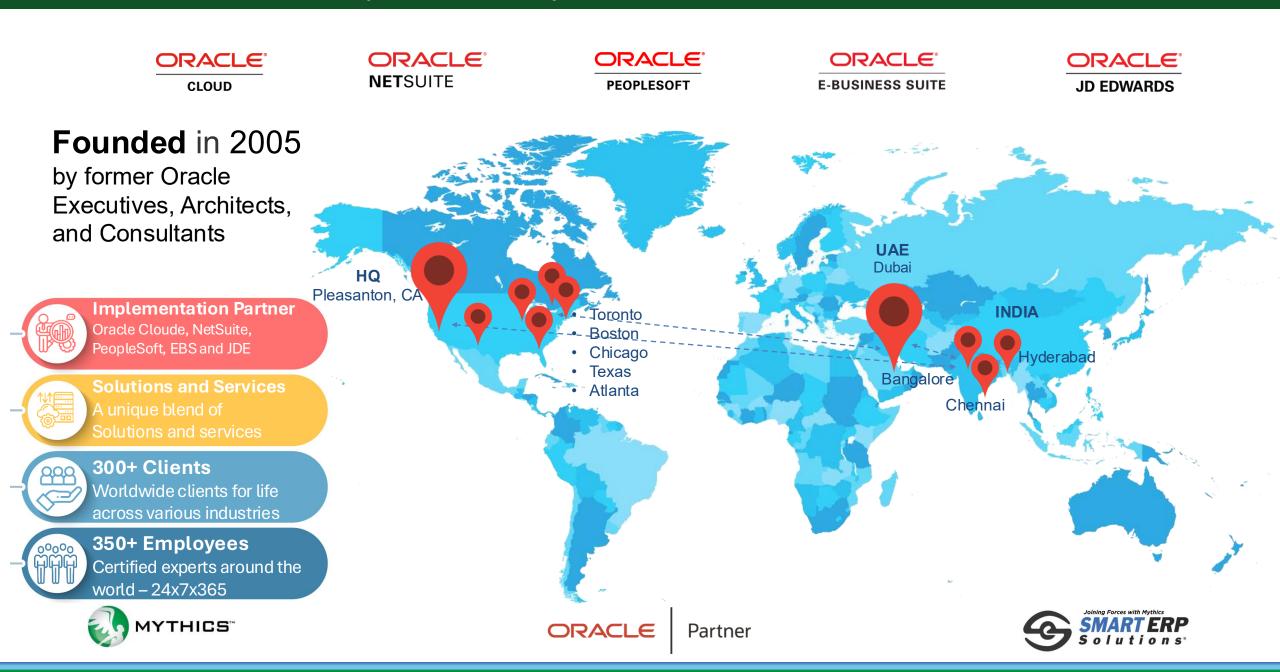








SmartERP Solutions | Global Expertise with Local Presence



Industry and Domain Expertise

SmartERP has relevant domain expertise across a wide range of the industries and micro-verticals



Wine Distribution, Industrial Products, Solar, Electrical and Furniture Supply



CPG, Food and Beverage



Healthcare, Consulting, Logistics & Transportation, Insurance, Staffing & Legal



Fin-Tech and Software – SaaS, Platform, Web Services



Industrial, Semi-Conductor, Lifesciences – Pharma, Bio-Tech and Medical Devices



Higher Education, Green Energy & Solar and Engineering & Construction and Entertainment & Gaming



Core Competencies

Financials, HRMS, Payroll, SCM, ESA, Manufacturing, CRM















Applications Supported

- Oracle Cloud
- PeopleSoft
- NetSuite
- JD Edwards
- •E-Business Suite
- •BI Publisher
- Business Services/SOA suite
- Value Chain Planning





Technical Delivery

- World and EONE Development
- Output Management
- Advanced Integrations
- ADF/Mobility





Business Delivery

- Application Sales
- Implementation and **Transformation**
- Mergers, Acquisitions and Divestitures
- Assessments and **Training**





Infrastructure Solutions

- Architecture Design
- •OCI Lift and Shift
- Load Testing/Performance **Tuning**
- Application and Tools Upgrade
- •CNC Managed Services and SAAS









Partner Solutions & Integration

- Avalara Taxation
- Magic Software
- Insight Software
- Bottomline **Technologies**
- Data Collection/Bar Coding
- Mobiles Sales
- Field Service

Proprietary Solutions

- COA Design
- Security **Implementations**
- Knowledge Management
- Change Control
- Project Management



On-Demand Staffing Services

Al Services in OCI

JAMES BLACK

MYTHICS LLC



Poll Question

What is your current level of familiarity with Generative Al?



- 1. VERY FAMILIAR
- 2. Somewhat familiar (I have heard about several services)
- 3. Not very familiar
- 4. NOT AT ALL FAMILIAR



Oracle Digital Assistant (ODA) The conversational frontline

KEY FEATURES:

- Modular Skill: Independent components handling specific tasks.
- Skill routing with NLP (Natural Language Processing): NLP automatically directs requests to the right skill.
- Skill Integration:
 Prebuilt, custom or template-based skills.
- Unified Skill Orchestration:
 SEAMLESSLY SWITCHES BETWEEN SKILLS FOR COMPLETE RESPONSES.
- DYNAMIC SKILL MANAGEMENT: ADD, REMOVE OR UPDATE SKILLS ON-DEMAND.
- SKILL-TO-SKILL COMMUNICATION:
 SKILLS CAN CALL EACH OTHER FOR COMPLEX WORKFLOWS.
- SKILLS-BASED TROUBLESHOOTING:
 PROMPT THE USER IF A SKILL IS UNABLE TO RESOLVE THE DESIRE BUT HAND IT OFF TO A DIFFERENT SKILL.
- LOW-CODE DEVELOPMENT
 BUILD AND DEPLOY WITH MINIMAL CODING



Example

- Imagine a call center that handles customer support, order placement, and account management.
 - Use three distinct skills: "SupportBot," "OrderBot," and "AccountBot."
 - When a user asks about a pending order, the ODA would route the request to the "OrderBot" skill.
 - If the user then asks a question about their account balance, ODA would automatically switch to the "AccountBot" skill.
- Benefits of Using ODA for Call Centers:
 - Reduced Agent Load: Can handle a large volume of routine inquiries, freeing up agents to focus on more complex issues.
 - Improved Customer Experience: Provides a consistent and personalized experience across different call center functions.
 - Increased Efficiency: Automated routing and skill orchestration improve efficiency and reduce call handling times.
 - Scalability: Can be easily scaled to handle growing customer volumes.
 - **Reduced Costs:** By automating tasks and reducing the need for manual agent intervention, Can lead to significant cost savings.



Oracle Integration Cloud (OIC) The Nervous System

FACILITATES THE INTEGRATION OF VARIOUS APPLICATIONS, INCLUDING CALL CENTERS, WITHIN A UNIFIED CLOUD ENVIRONMENT. IT ENABLES ORGANIZATIONS TO CONNECT AND AUTOMATE PROCESSES ACROSS DIFFERENT SYSTEMS, IMPROVING EFFICIENCY AND AGILITY. OIC SUPPORTS BOTH APPLICATION INTEGRATION AND PROCESS AUTOMATIONS, ALLOWING FOR SEAMLESS DATA FLOW AND WORKFLOW ORCHESTRATION.

KEY FEATURES:

- APPLICATION INTEGRATION:
 CONNECTS ON-PREM AND CLOUD SYSTEMS FOR SEAMLESS DATA EXCHANGE.
- EVENT-DRIVEN WORKFLOWS:
 AUTOMATED TRIGGERS BASED ON SPECIFIC CONDITIONS (E.G., FRAUD ALERTS)
- PROCESS AUTOMATION:
 END-TO-END BUSINESS PROCESS AUTOMATION WITH REDUCED MANUAL EFFORT.
- Data integration:
 Transforms and moves data between system for comprehensive insights.
- Low-code and visual design:
 User-friendly interface for building integrations without extensive coding.
- OCI Integration: Leverages OCI for security, scalability and reliability
- PRE-BUILT SERVICE CONNECTIONS
 READY-MADE ADAPTERS FOR CONNECTING TO SPECIFIC APPLICATION INSTANCES.



Generative Agent Services

- AGENTS ARE AI-POWERED WORKERS THAT PERFORM TASKS AUTONOMOUSLY
- SCALABLE, EXPLAINABLE AND SECURE TASK DELEGATION WITH HUMAN-IN-THE-LOOP.
- EXAMPLE:
 AFTER CALL AGENT HANDLES TRANSCRIPTION -> SUMMARY -> SENTIMENT -> TICKETING

Add prebuilt tools or define custom tools for your agent

RAG

Retrieval-Augmented
Generation combines
retrieval of information
from knowledge
bases with text generation for more accurate and contextually
relevant responses.

SQL

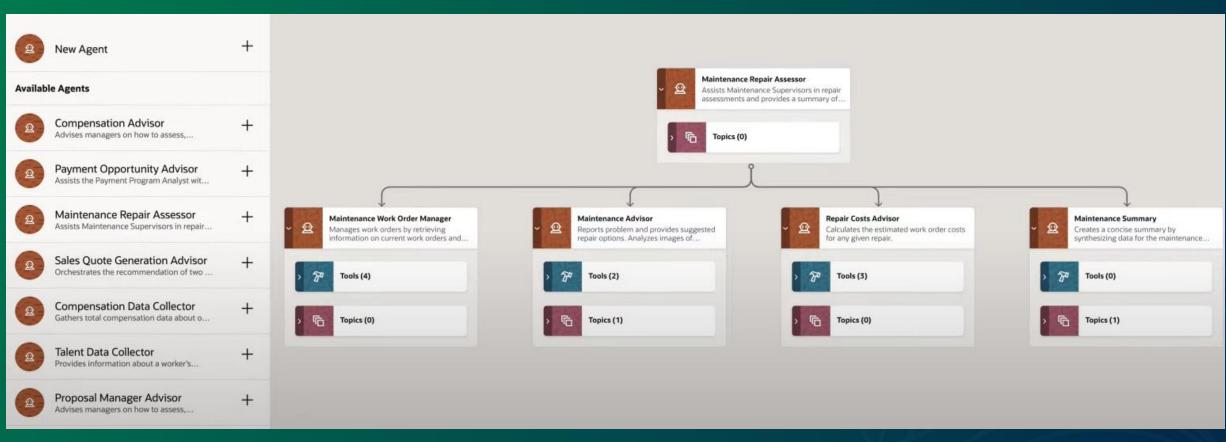
Converts natural language queries into SQL statements for seamless database interactions.

Custom tool

Define tools for function calls (client execution) or API endpoints (agent execution).



Agent Studio (cont)





Poll Question

When evaluating Gen Al services what is the MOST important factor for you? Give each a rating.

*PLEASE RANK – 1 Being the highest, 5 being the lowest



- 2. Ease of Use/Implementation
- 3. ACCURACY AND RELIABILITY OF RESULTS
- 4. SECURITY AND DATA PRIVACY
- 5. Integration with Existing Systems



Generative Al

KEY FEATURES

- Assisted authoring: Using a short prompt, generative AI capabilities can quickly create content, such as job or new product descriptions, for review, revision, and approval.
- SUGGESTIONS: QUICKLY GUIDE USERS TO BETTER RESULTS BASED ON NATURAL LANGUAGE PROCESSING AND BEST PRACTICES. GENERATIVE AI CAN ALSO OFFER RECOMMENDATIONS FOR SURVEY QUESTIONS OR PROFESSIONAL DEVELOPMENT TIPS FOR MANAGERS TO PROVIDE TO EMPLOYEES.
- Summarization Increase efficiency by identifying key insights from one or more data sources.

 New generative AI capabilities can explain the key elements of content for simple and impactful consumption.



Vector Search

KEY FEATURES

- Vector Data Type:
 - THE NEW NATIVE VECTOR DATA TYPE ALLOWS FOR DIRECT STORAGE OF VECTOR EMBEDDINGS WITHIN DATABASE TABLES.
 - THIS ELIMINATES THE NEED FOR EXTERNAL VECTOR STORES AND STREAMLINES DATA MANAGEMENT.
- FLEXIBLE VECTOR GENERATION:
 - SUPPORT FOR IMPORTING ONNX EMBEDDING MODELS ALLOWS FOR CUSTOMIZATION OF VECTOR GENERATION PROCESSES.
 - DATABASE APIS CAN BE USED TO GENERATE VECTORS FROM EXTERNAL EMBEDDING SERVICES, PROVIDING FLEXIBILITY IN MODEL SELECTION.
- SIMPLE SQL FOR SIMILARITY SEARCH:
 - STANDARD SQL SYNTAX CAN BE USED TO PERFORM SIMILARITY SEARCHES ON VECTORS, MAKING IT EASY FOR DEVELOPERS TO INTEGRATE SEMANTIC SEARCH
 INTO EXISTING APPLICATIONS.
 - SQL can be used to combine vector similarity searches with relational, text, JSON and other data types within a single query.
- Integration with Business Data:
 - SEAMLESSLY INTEGRATES WITH OTHER ORACLE DATABASE FEATURES LIKE JSON, GRAPH, TEXT, SPATIAL AND RELATIONAL DATA.
- Vector Indexes:
 - VARIOUS VECTOR INDEXES (E.G., IVF FLAT, HNSW) ARE SUPPORTED FOR EFFICIENT SIMILARITY SEARCHES.
 - HYBRID VECTOR INDEXES COMBINE DIFFERENT INDEXING STRATEGIES FOR OPTIMAL PERFORMANCE.
- Support for Retrieval-Augmented Generation (RAG):
 - ENABLES RAG BY FACILITATING THE RETRIEVAL OF RELEVANT INFORMATION FROM THE DATABASE AND AUGMENTING IT WITH GENERATIVE AI RESPONSES.



Oracle Al Language Services

KEY FEATURES

- Real-time translation: Converts French chat to English for agents
- SENTIMENT ANALYSIS: FLAGS ANGRY CUSTOMERS (E.G., "THIS IS RIDICULOUS" = 95% NEGATIVE)
- Keyword Extraction: Recognize at least 100 languages and 18 entity types
- CONTENT CATEGORIZATION: GROUP TEXTUAL CONTENT FROM MULTIPLE LANGUAGES INTO MORE THAN 600 CATEGORIES

SCENARIO:

- GERMAN CUSTOMER TWEETS: "@YOURSUPPORT MEIN INTERNET IST LANGSAM!"
- OCI Language:
 - Translates to "My internet is slow!"
 - Detects frustration (88% negative)
 - ROUTES TO TIER-2 SUPPORT WITH PRIORITY TAG



Oracle Al Speech Services

KEY FEATURES:

- Real-time transcription: Converts calls to text for compliance logging
- SPEAKER DIARIZATION: IDENTIFIES AGENT VS CUSTOMER IN TRANSCRIPTS
- SPEECH TO TEXT: GET TEXT FROM AUDIO AND VIDEO FILES
- TEXT TO SPEECH: 7 LANGUAGES SUPPORTED, WITH AT LEAST A MALE AND FEMALE VOICE AVAILABLE FOR EACH LANGUAGE.
- Multilingual: 7 Languages supported but there are 50 others that use the OpenAI whisper model

SCENARIO:

- Customer calls: "I need help resetting my password!"
- OCI Speech:
 - TRANSCRIBES TO TEXT
 - OCI Language detects intent ("password reset")
 - ODA auto-generates a reset link



Oracle Al Vision/Document Understanding The Document Processor

KEY FEATURES

- Document Understanding: Extract text and tables from scanned documents or images.
- IMAGE RECOGNITION:
 - CLASSIFY IMAGES INTO THOUSANDS OF CATEGORIES.
 - LOCALIZE CERTAIN OBJECTS TO ALLOW COUNTING.
- FACIAL DETECTION: DETECT FACES IN AN IMAGE WITH COORDINATES OF FACIAL FEATURES AND CONFIDENCE LEVELS.
- Customize models using your data through an interface; no expertise required

SCENARIO

- CUSTOMER UPLOADS A BLURRY ID PHOTO.
- OCI Vision:
 - ENHANCES THE IMAGE.
 - EXTRACTS NAME/ADDRESS
 - Populates the CRM



Poll Question

What is the primary reason you are interested in Gen Al?



- 1. IMPROVING EFFICIENCY
- 2. AUTOMATING TASKS
- 3. INNOVATION AND PRODUCT DEVELOPMENT
- 4. EXPORTING NEW TECHNOLOGIES
- 5. OTHER



OML4SQL & OML4PY

- Key Features
- OML4SQL: UTILIZE MACHINE LEARNING DIRECTLY WITHIN THE DATABASE THROUGH SQL AND PL/SQL
- OML4PY: Provides a python interface for database-resident data, leveraging the database's power for scalable processing and embedded execution
- BOTH MINIMIZE DATA MOVEMENT AND OFFER SCALABLE, SECURE IN-DATABASE MACHINE LEARNING SOLUTIONS.



Fine-Tuning LLM Models

- Large Language Models (LLMs) are famous for having been trained on large amounts of data.
- Your industry has very specific terminology, such as in medicine or legal areas.
- THE LLM CANNOT HALLUCINATE, OR MAKE UP, TERMS, IN RESPONSES.
- FINE-TUNING IS A WAY TO USE A SMALLER AMOUNT OF DATA TO TRAIN AN LLM ON SPECIFICS IN YOUR INDUSTRY OR TO LEARN A NEW TASK IT HASN'T LEARNED BEFORE.



Sample Flow – Oracle Al in Action

- Customer calls in -> audio processed by Speech Al
- TRANSCRIPT ANALYZED WITH LANGUAGE AI
- AGENTIC AI TRIGGERS WORKFLOWS IN INTEGRATION CLOUD
- SUMMARY + SENTIMENT DELIVERED TO LIVE AGENT
- Post-call: ticket + follow-up email auto-generated using Generative AI



Why Oracle

- END-TO-END PLATFORM: CLOUD INFRASTRUCTURE, APPLICATIONS AND AI SERVICES
- ENTERPRISE-GRADE SECURITY, GOVERNANCE AND EXPLAINABILITY
- DEEP INTEGRATION WITH ORACLE CX, ERP, HCM AND THIRD-PARTY TOOLS



Getting Started

- QUICK-WIN PILOTS USING ORACLE AI PREBUILT SERVICES
- Custom workflows with minimal IT lift
- Leverage Mythics Consulting



GenAl/Data Engineering Maturity Model

Level	Description	Key Capabilities
Ad-Hoc	No formal strategy, experimental	Isolated proofs-of-concept (POCs),
	use cases	no governance
Emerging	Basic workflows in one modality	Some automation, limited
	(e.g., text or images)	scalability
Operational	Cross-functional adaption in >= 2	Governance, fine-tuning,
	modalities	measurable ROI
Advanced	Enterprise-wise integration,	Custom models, real-time
	multimodal AI	deployment, strong ethics
Transformative	AI-driven business innovation	Autonomous AI agents, full
		multimodal orchestration

Generative AI (GenAI) Maturity Model (Covers Text, Image, Audio, Video, Multimodal and Code GenAI)

Data Engineering Maturity Model (Covers Structured, Unstructured, Streaming and Multimodal Data)

Level	Description	Key Capabilities
Fragmented	Siloed data, manual processes	Basic ETL, no real-time processing
Managed	Centralized storage, some	Batch processing, basic governance
	automation	
Optimized	Scalable pipelines, real-time	Advanced ETL, data quality controls
	ingestion	
Al-Ready	Feature stores, multimodal support	ML pipelines, metadata
		management
Autonomous	Self-service, Al-driven data apps	Auto-scaling, predictive data prep

Maturity Level	GenAl Criteria	Data Engineering Criteria
Level 1 (Ad-Hoc)	No formal strategy, experimental	Siloed data, manual processes
	use cases	
Level 2 (Emerging)	Basic workflows in one modality	Centralized storage, some
	(e.g., text or images)	automation
Level 3 (Operational)	Cross-functional adaption in >= 2	Scalable pipelines, real-time
	modalities	ingestion
Level 4 (Advanced)	Enterprise-wise integration,	Feature stores, multimodal support
	multimodal AI	
Level 5 (Transformative)	Al-driven business innovation	Self-service, Al-driven data apps



HR Questions

Is GenAI used for resume screening?
Are chatbots used for employee onboarding?
Is AI used for sentiment analysis in employee surveys?
Are interview summaries AI-generated?
Is NLP used for analyzing exit interviews?
Is AI used for skills gap analysis?
Is synthetic data used for bias testing in hiring?
Are learning recommendations AI-personalized?
Is AI used for workforce planning?

Are performance reviews Al-augmented? Are payroll anomalies detected with Al? Is Al used for predicting attrition risks? Are Al ethics guidelines enforced by HR? Is Al used for mental health monitoring? Is GenAl used for policy do

Questions?

• How can this fit into your companies roadmap?





For More Information



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