Oracle Focus for Academic Research

Collaborate, innovate, accelerate

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How do we see research evolving?

COVID-19 refocused minds and resources



Better, faster and more flexible



Increased commitment to research

More crosscollaboration



Focus on tools and techniques



Our mission is to help people see data in new ways, discover insights, unlock endless possibilities.



Why are researchers working with Oracle?

Supporting more and more researchers to perform ground-breaking research



Experience

Technology

- Worked with researchers for many years
- Understand how to help research projects

- Mature and proven solutions
- Every layer of the technology stack

Collaboration

- Great partnerships for researchers
- Making experiments and analysis easier and faster

Cost-effective

- Better price-performance infrastructure
- Independent benchmarks to prove the value and benefit

How is Oracle collaborating to help advance research?

Forging partnerships to support the research ecosystem



Independent benchmarks prove we are invested

Investment

- Strategic focus
- Partnerships
- Expansion of data centers

Performance

- True bare metal compute
- Specialized low-latency networks
- Fastest, most cost-efficient local storage

Price

- Competitive
- Billing per second
- Flexible, transparent and accessible







Oracle has key technology partnerships that you can leverage



What solutions does Oracle have to support research? Oracle Cloud Marketplace of pre-built images and applications – Get setup and going quicker



Oracle Cloud for research – a toolbox



Oracle Cloud for research – a toolbox



	Bare Metal	VM	S	Containe	rs	Functions			
Compute	Instance isolation Highest IOPS High throughput Low latency	Secu hype Flexi Dens Dedi optic	rity- hardened rvisor ble sizing se IO and cated host ons	Bare metal performance Self-healing clusters		Pay only for usage Serverless Container-native Open source			
Compute services for any enterprise use case	AMD EPYC		Intel Xeo	on	NV	IDIA GPUs			
	Local Attache	d Stoi	rage	Remote Attached Storage					
	NVMe SSDs Up to 51.2 TB Millions of IOPS			NVMe Block Volumes up to 1PB 32 TB / volume 75 IOPS / GB					

OCI HPC Powers Integrated Research

Why use High Performance Computing

Able to complete design in much shorter time period and at a much lower cost.

Providing better and faster weather forecasts using numerical simulations.

Instead of building expensive prototypes, testing and design can be done on HPC using computer simulation Accelerated discovery in fields of chemistry, biology - new drug and cure research.

What do we define as HPC?

Small input datasets (50-5000GB) **Engineering Applications** Tightly couple, "Chatty" Specialized Networking

Spark (with a K)

Choose the tools that work

Gartner: Oracle #1 in Data Management for Analytics

Gartner Magic Quadrant

"Oracle's ADW ... offering not only reduced management overheads but also reduced effort to analyze performance issues and correct them."

"Oracle received the highest score for product capabilities from its reference customers."

"The Oracle Database has ... robust capabilities honed by thousands of production use cases."

Oracle Autonomous Data Warehouse

Integrated cloud data service to empower innovators

Oracle Analytics Cloud Service integration with ADW

Oracle Analytics Cloud (OAC)

- Data visualization
 - Data preparation

Autonomous Data Warehouse (ADW)

- Auto securing
- Auto patching

Governed analytics **`**(c)

Augmented

analytics

- Semantic models

 - Pixel-perfect reports

- Fast performance
- Auto scaling
- Auto tuning

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- Natural language
- Business ML

Machine learning

- Native ML
- Invoke R / Python

Choose the tools that work

Bring your own – or use a managed environment Oracle's end-to-end Cloudera-focused Big Data and Al Platform

Oracle Cloud Infrastructure: Built for Artificial Intelligence and High Performance Computing Workloads

Choose the tools that work

OCI Data Science

Making data scientists more collaborative, scalable, and powerful

Building, Training & Deploying AI/ML on Oracle Cloud

Collaborative

Project-driven UI enables teams to easily work together on end-to-end modeling workflows with self-service access to data and resources

Integrated with Open Source

 Support for latest open source tools and tight integration with OCI Platform and core, developer, and data/AI services

Enterprise-Grade

A fully-managed platform built to meet the needs of the modern enterprise

A summary of Oracle's solution capability to support academic research

Research proposal Project fund		t fundin	g	Proje	Project formation		Project management			Research execution			Outcomes publication			Impact and discovery		
Idea and hypothesisAvailable funding sourcesdevelopmentanalysis and reporting		Projec onboa	Project team recruitment and onboarding		Project team development, retention and management		:	IT infrastructure provisioning		Funder/institutional policies review and compliance		licies	Funder/institutional policies review and compliance					
Funder/institutional p review and complianc	nstitutional policies Funding applicability review and compliance		Projeo mana	Project team HR record management		Equipment and facilities management			IT applications provisioning and development			Content production			Long-term content storage and accessibility			
Project timeline, activ resources planning	ities, and	s, and Funder/institutional policies review and compliance		Equip procu	Equipment and facilities procurement		Grants management			IT infrastructure and applications management			Content management			Content management		
Full costing and pre-award proposal		Funding processProsupport assistancesch		Projeo sched	ct planning and Con duling col		Content m collaborat	Content management and collaboration		Experiment execution and management			Content publication			On-going collaboration and management		
Success rate analysis a reporting	and	Funding applicationsProtracking and reportingass		Projec assista	ect formation support P stance a		Project tracking, replanning, and reporting		,	Outcomes analysis and reporting		and	Publication analysis and reporting		I	Follow-on/new-idea management		
Human resources	HR records	s management Recruiting and talent management		lent	Workforce management		Compensation and incentives		Payro	Payroll Benefits		Work life solutions		solutions	HR help desk			
Finance and accounting	Core accou reconciliatio	ccounting and Procurement illiations		t	Grants and projects		S	Planning and b	budgeting pro ma		profitabilit manageme	y and cost ent	and cost t Finan		icial close and reporting		Funder reporting	
Information technology	Compute an network	Compute and network Storage Inte		Integratio	n	Database and big data management i		urity and ntity	Data and systems Ap management de		ns App dev	lication elopment	Analytics and data warehousing		Content management		IT and desktop help desk	
Facilities	Facilities cataloging F				Facilities booking			Facilities maintenance					Facilities reporting and analysis					
Research services	Research project support policy review and compl					review and complian	nce Co			Communication support				Commercial and legal support				

Thank you

www.oracle.com/research www.oracle.com/oracle-for-research

