Health Computing Core (HC2) Environment Product Comparison Chart

There are multiple computing and storage platform solutions within the Health Computing Core (HC2), that are overseen by the Advanced Computing Committee (ACC). Selecting an environment depends on the requests technical requirements and guided by requester needs. For more information, and a list of frequently asked questions (FAQs), please review the https://health.ucdavis.edu/data/hc2.html or submit . If you do not have access to ServiceNow, please email *hs-hc2contact@health.ucdavis.edu*.

	Advanced Computing Environment (ACE)	**Databricks on AWS Virtual Environment (DAVE)**	**AWS HIPAA Landing Zone**
	To request access, submit a request (ServiceNow)	To request access, submit a request (ServiceNow) To request data, submit a request (ServiceNow)	For more information, submit a request (ServiceNow)
	On-prem self-service environment allowing researchers to provision Linux or Windows compute resources "on demand." These systems are situated in a secure network enclave with limited access to external resources and can be used to process data using open-source tools. ACE systems can be scaled up to include large RAM and CPU allocations, extensive storage, and GPU processors, and are best suited to researchers with experience building, installing, and running their own toolchains.	*HIPAA compliant environment and consists of two main services, namely DAVE Platform and DAVE Data Access. DAVE Platform is a secure environment where authorized users may have access to tools such as Notebooks, Python, and SQL for data analytics, machine learning, and data science development utilizing the Databricks platform. DAVE Data Access is a service that allow authorized users to access identifiable data.*	*Solution, provided by Amazon Web Service (AWS), offers a structured, consistent, and secure foundation for deploying and managing multiple resources. UCDH had designed and implemented technical controls to ensure security compliance and streamline approvals. The UCDH HIPAA Landing Zone can be utilized by researchers to access advanced AWS features such as Sagemaker in compliance with UCDH security requirements.*
Training / IT Support & Data Fluency	Self-service with minimal consultation from HC2 / IT staff	Training support and guidance provided by vendor and UCDH staff	Training support and guidance provided by vendor
Data Source & Storage Limitations	Bring your own data – some limitations on type, size and storage needs	Some enterprise core data sources available, domain owner approval needed	Bring your own data – some limitations on type, size and storage needs
Solution (Project/Code) Mobility Options	Projects built in the ACE using industry-standard open-source software can easily be moved to other platforms as needed	Project is limited to the DAVE ecosystem and requires substantial effort to migrate the solution outside of Databricks	Maximum platform flexibility of cloud-based service offerings, enhanced security frameworks for restricted data sets and compliance requirements
Support for Specialized Data / Information	Bring your own data - limitations on data storage to basic HIPAA classification. NIST-800 or other controlled data sets may not be suitable.	Maybe - Requires Consultation	All data classifications and specialized data including but not limited to criminal justice, veteran, HIV – Requires Consultation for controlled data
Analytical Options	Create your own – Industry Standard and self-developed analytics tools can be used if compliant with UCDH security standards.	Wide variety of Spark-based analytics tools within the Databricks ecosystem. Self-developed analytics tools may be used, requires consultation	Same as ACE, can also leverage unique AWS-based analytics tools/services.
General Uses (use cases or stats)	Self-developed Python-based analytics Docker containerized Jupyter Notebooks Windows-based R, SAS, Excel or other tools, small GPU workloads	Big Data Cohort discovery, Scalable Machine Learning/NLP, Multi-source Data Integration with UCDH curated datasets, Collaborative development	Data requiring security attestations, NIST-800 compliance, or other specialized data classifications

Last updated May 2025