

State of Ohio

Technology Standards Document

Revision History:

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03/30/2022	Original Version
05/31/2022	Content updated based on the feedback provided by SMEs
06/15/2022	Updates to Security Domain after discussion with OISP
10/11/2022	Updates to Disaster Recovery and Analytics Services
01/27/2023	Updates to Enterprise Shared Services, Infrastructure Services and Data Analytics
09/26/2023	Updates to Information Security and Privacy
02/23/2024	Updates to Collaboration and Content Management, Data Analytics
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1 Purpose

This document aims to capture the State of Ohio Services that are standards, that apply to Infrastructure, Security, Information (Data), and Application domains. The primary audience of this artifact is the technology workforce in the State. This document is intended to serve as reference material during the technological decision-making process. This document will be part of the architectural repository organized and maintained by the DAS OIT Strategic Investment and Architecture (SIA) team.

1.1 *Guidance on how to use this document.*

1. Refer to the domain that corresponds to the technology requirements for your agency.
2. Under each domain, check the sections to find technology match with the services provided by DAS.
3. If a service is listed, to understand details further, visit State of Ohio Service Catalog via link, <https://stateofohio.service-now.com>
4. If further interested, contact the service owner to discuss the agency requirements or reach out DAS Customer Service Center at csc@ohio.gov

2 Standards

2.1 *Infrastructure Domain*

2.1.1 Data Center Services

The Table below lists the on-prem hosting services offered by DAS:

State of Ohio Computer Center (SOCC) Co-Location	Provides Tier 3 capable, secure data center environment with reliable uptime, power redundancy, and redundant cooling to ensure uninterrupted access of critical data and applications.
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2.1.2 Disaster Recovery Services (DRaaS)

The Table below lists the disaster recovery services offered by DAS:

Metro Site Facility	Provides a secondary, near real-time (measured in milliseconds) failover from the SOCC.
Open Systems Disaster Recovery	Provides server imaging and storage at a geographically disparate site from Columbus, Ohio.
Mainframe DRaaS	Provides failover and fallback for State of Ohio mainframe environments at a geographically disparate site from Columbus, Ohio.

2.1.3 Cloud Brokerage services

The Table below lists the cloud hosting services provided by DAS in these Public Cloud Platforms, AWS, Azure, Google, Oracle, and IBM:

Infrastructure as a Service (IaaS)	This environment is managed like the Private Data Center where the customer has read access to the infrastructure via dedicated private connections.
Platform as a Service (PaaS)	Customers can request an environment in one of the public clouds per the Master Cloud Service Agreement (MCSA) and consume the native PaaS cloud services.
Vendor Managed Services	This environment allows the customer to enter a contract with a vendor to manage application infrastructure within the State's Public Cloud Framework.

2.1.4 Data Storage Services

The Table below lists the storage services offered by DAS:

Enterprise Backup Services	This service provides nightly backups of customer data. It also provides for necessary restores due to data loss or corruption.
Enterprise Data Storage	This service offers high-performance, high-capacity, secure storage designed to deliver the highest levels of performance, flexibility, scalability, and resiliency.

2.1.5 Networking / Wireless

The Table below lists the network services offered by DAS:

Ohio One Network	This service is a unified solution that brings together design, engineering, operations, service delivery, security, mobility, management, and network infrastructure to target and solve key government challenges by focusing on processes, procedures, consistency, and accountability across all aspects of state, city, and local government.
Wireless as a Service (WaaS)	This service allows customers to connect laptops and devices to data via a wireless interface. It is an all-inclusive enterprise level wireless LAN solution that offers guest, employee, voice, and location-based services with 24/7 target availability.

Secure Authentication	This service offers two-factor authentication which can be integrated with websites, VPNs, and cloud services.
Mobile Device Management (MDM)	This service supports workforce mobility and enables management of cell phones and tables.

2.1.6 Unified Communications

The Table below lists the telecommunication, call center and mobile management services offered by DAS:

VoIP Phone Services	To make phone calls through the internet connection instead of regular land line or a mobile network.
Desktop Electronic Faxing	To send and receive faxes through an internet connection.
VoIP Call Center	VoIP for call centers is internet-based calling technology that allows call centers to monitor their agents, adapt to change and keep productivity high.
Mobile Device Plans & Carriers	Services offered to help customers manage enterprise mobile assets.
Short Code Service	Short codes are used to send and receive SMS messages to and from mobile phones.
State Alert Notification System	State Alert is a mass notification system that sends audio, text, and images to mobile and on-premises devices. It increases the speed, reach, and success rate for emergency notification communications to get critical information to the people that need it.
Microsoft Teams	Microsoft Teams is a proprietary business communication platform developed by Microsoft, as part of the Microsoft 365 family of products. Teams primarily compete with the similar service Slack, offering workspace chat and videoconferencing, file storage, and application integration. This service is used in document sharing, online meetings, groups, and chat function (retention policy is set for 7 days).

2.1.7 IT Service Management

The Table below lists the service offered by DAS:

IT Service Management	This service provides incident, problem, change, configuration management database, customer service management and release management modules. In addition, asset management and service desk operations are provided via this cloud platform. OIT Customer Service Center uses this platform to serve agencies.
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2.1.8 Multi Agency Radio Communication Services (MARCS)

The Table below lists the service offered by DAS:

MARCS	MARCS (Multi-Agency Radio Communication System) is an 700/800 MHz radio and data network that utilizes state-of-the-art trunked technology to provide statewide interoperability in digital clarity to its subscribers throughout Ohio and a 10-mile radius outside of Ohio. The MARCS system provides statewide, secure, reliable public service wireless communication for public safety and first responders.
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2.2 Security Domain

2.2.1 Information Security and Privacy

The Table below lists the security services offered by DAS:

Web Filtering	The service restricts browsers and other programs from reaching out to malicious sites.
Web Application Firewall	This service protects the web applications by filtering, monitoring, and blocking any malicious HTTP/S traffic traveling to the application and prevents any unauthorized data from leaving the application.
Malware Defenses	Safeguards to prevent or control the installation, spread and execution of malicious applications, code and scripts on enterprise assets.
Enterprise Security Information and Event Management	Cybersecurity technology that provides a single, streamlined view of your data, insight into security activities, and operational capabilities so you can effectively detect, investigate, and respond to security threats.

Enterprise Vulnerability Management	A continuous, proactive, and often automated process that keeps your computer systems, networks, and enterprise applications safe from cyberattacks and data breaches.
Penetration Testing & Threat Simulation	The OISP Red Team provides penetration testing and threat simulation services to identify IT infrastructure and web application vulnerabilities, and test threat detection controls.

2.2.2 InnovateOhio Platform - Identity Management

InnovateOhio Platform SSO for Citizens and Workforce	With one OH ID account, citizens or businesses can sign into multiple government agency systems more securely. OH ID encrypts the personal information of each user separately, using a unique value generated from each user's password. For further information on this service, refer to the link below, https://ohid.ohio.gov
InnovateOhio Platform Identity Proofing	IOP provides a standard identity proofing platform that combines identity proofing, A.I., & machine learning to detect & prevent fraudulent OHID account creation & malicious account takeover. Also, if a user's risk score prevents them from successfully validating their identity, IOP can compare users to their State-issued IDs for unprecedented accuracy, as another option.

2.3 Information (Data) Domain

2.3.1 InnovateOhio Platform - Data and Analytics

The Table below lists the Data and Analytics services offered by DAS:

DataOhio Portal	The DataOhio Portal (DOP) displays public datasets and facilitates the request, approval, and delivery of secured datasets. With the ability to easily browse and view data, the Portal allows the public to access information with transparency and ease, thereby improving customer interactions with state agencies and institutions. https://data.ohio.gov
IOP Data Analytics Platform	This is a storage repository that holds a vast amount of raw data in its native format. The Platform has multi-parallel compute capacity for executing simple to complex workloads. The Platform capabilities and governance enable

	secure data sharing for agency specific or multi-agency analytics applications.
Analytics Services	The Platform offers several services including predictive analytics, data analysis, data insights, visual analytics, and analytic frameworks to name a few. https://ohid.ohio.gov/wps/myportal/gov/iop/data-analytics
Engagement Services	Engagement Services facilitate brainstorming sessions to help generate ideas for data-driven use cases that can benefit from leveraging the InnovateOhio Data Analytics ecosystem and turn them into actionable projects, with the necessary agreements, to progress from ideas to solutions. Organizational Change Management (OCM) Services provide overviews and discussions to better understand what data analytics is in general, how it is used in today's business world, best practices, and benefits. Adoption Services include self-directed and instructor-led training materials to learn about data analytics and the InnovateOhio Data Analytics ecosystem, including what it is and how to use it.
Data Catalog	The data catalog enables a business-led approach to data for agencies, facilitating data governance, expediting data discovery, and supporting a better understanding of data assets.
Self Service Data Management	Provides enhanced streaming, an API Gateway allowing users to build, manage, and deploy APIs and securely share data on the IOP using APIs. Provides data quality and profiling which examines and scores data structure and quality and identifies issues, enabling proactive investigation and resolution by agencies before the data is consumed.
Advanced Analytics	Includes machine learning and graph. ML allows building and testing of models, proving a scalable and secure development experience for powerful data discovery. Graph is a database technology that connects data through key relationships creating a visual network that allows for flexibility, understanding, and interacting with data.
Cloud Data Warehouse	A powerful cloud solution which aggregates, unifies, and manages data from different sources, providing a data warehouse capability within the IOP ecosystem.

Data Visualization	Currently Tableau, a leading data visualization tool used for reporting and analyzing data making it easier for agencies to understand their data and drive agency decision making. Tableau can connect to a myriad of data sources, such as relational databases, online analytical processing cubes, cloud databases and spreadsheets to generate visual narratives from data.
Data Analytics Learning Center	The Data Analytics Learning Center provides a comprehensive continuing education curriculum for all State of Ohio staff, specifically data analytics professionals and data leaders. The goal of the Learning Center is to create a culture of data proficiency across the state. The Data Analytics Learning Center is comprised of three focus areas that a State of Ohio employee may select based on their training goals. The first focus area is the Data and Analytics Literacy Program which comprises of learning vignettes that provide basic foundational knowledge of data and analytics proficiency. This area is designed for all State of Ohio staff. The Data Leadership program provides training opportunities to develop future State of Ohio Data Leaders. The Data Professionals Program is designed to enhance analytics capabilities with skills-based modules for all data professions, such as Data Analysts, Data Engineers, and Data Scientists.

2.4 Application Domain

2.4.1 Innovate Ohio Platform - Web hosting, Design and Development

The Table below lists the application services offered by DAS:

Innovate Ohio Platform (IOP) User Experience Services	An accelerator to easily create modern, responsive, and ADA-compliant websites and portals for the Innovate Ohio cloud platform. The Innovate Ohio Portal Builder is available to State of Ohio agencies in a Software as a Service (SaaS) form. https://innovateohio.gov/platform/user-experience
IOP Forms Management	An enterprise class combined form and API data management platform for developers who are

	building their own complex form-based business process applications.
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2.4.2 Enterprise Shared Solutions

The Table below lists the enterprise shared services offered by DAS:

Document Management	The Enterprise Hosted Document Management is a standardized, integrated solution for document and content management. The core components of the solution include document imaging, indexing, retrieving, and workflows.
Electronic Data Interchange (EDI)	EDI/Application Integration service is a combination of Application Integration, Data Exchange, and Electronic Data Interchange (EDI) functionality. This service provides application to application connectivity to support interoperable communication, data transformation, and business process orchestration amongst applications on the same or different computing platforms.
eLicense	Ohio's enterprise online licensing system to issue, administer, and renew professional and occupational licenses and certifications to individuals and businesses throughout the State of Ohio.
ePayment	The payment solution allows State agencies as well as boards and commissions to accept electronic credit card and Automated Clearing House (ACH) payments from customers.
eSignature	This solution provides a secure electronic signature technology for the signing of documents and the creation of document signature workflows.
Learning Management System (LMS)	The Ohio Learn application is used to manage and track employee learning and training information. Ohio Learn can track the learning catalog, as well as user's training history and transcript.
Ohio Business Gateway (OBG)	The Ohio Business Gateway (OBG) provides a centralized portal for Ohio's businesses and municipalities that makes it faster, easier, and more secure to interact with government entities. https://gateway.ohio.gov/services-and-transactions

Time Keeping	This solution is used for reporting time by the State of Ohio workforce.
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2.4.3 Collaboration and Content Management

The Table below lists the content services offered by DAS:

Microsoft 365 Suite	The Microsoft Office 365 suite is a hosted, online version of the Microsoft Office software. Outlook for email and Productivity Suite (Word, PowerPoint, Excel).
Microsoft 365 Features	Microsoft 365 is a cloud-powered productivity platform with a suite of features. Aside from the desktop apps (i.e. - Excel, Outlook, Word), collaboration with Microsoft Teams, and file sharing with OneDrive or SharePoint, there are many solutions available to use. Features include online personal and group appointment scheduling with Bookings, legal and public records content discovery with eDiscovery, surveys, polling, and quizzes with Forms, group task management with Planner, enterprise video management with Stream, personal task management with To Do, workflow diagramming with the Visio web client, and group canvas collaboration with Whiteboard. Add-on features include project and portfolio management with Project for the Web and Project Online as well as workflow diagramming with the Visio desktop client.
Power Platform	Power Platform is a suite of products that allow you to quickly and easily build custom apps using Power Apps, automate workflows to improve business productivity using Power Automate, analyze data for insights using Power BI, rapidly design, configure, and publish modern websites using Power Pages, and build intelligent bots with a no-code interface using Power Virtual Agents (Microsoft Copilot Studio).
OneDrive	This is a shared document repository, which is the Microsoft cloud service that connects you to all your files. It lets you store and protect your files, share them with others, and get to them from anywhere on all your devices through O365 account.
Enterprise SharePoint	This service supports both an on-premises and online (cloud) SharePoint environment.

2.4.4 Geographical information system (GIS)

The Table below lists the Geographic Information Systems (GIS) services offered by DAS:

ARCGIS Geographic Information Systems (GIS)	Leveraging the DAS Enterprise Esri ArcGIS software platform, this service delivers Spatial Analysis, mobile Field Operations, and Interactive Mapping capabilities. Agencies can integrate their business data with other enterprise and authoritative geospatial data and display it in new or existing webpages, applications, and mobile software to uncover patterns, increase field productivity, and make informed data-driven decision.
Enterprise Geocoding	This service will convert street address data into geographic coordinates, standardize addresses, and append other data such as tax and school districts, county, municipality, and township information. Individual addresses can be processed in real-time for online applications or large numbers of addresses can be processed in a batch.

3 Conclusion

Per DAS OIT Governance process, it is expected the agency solutions will consume these technology standards. Any deviation from the technology standards will have to be approved by OIT, during the product research and planning phase.