**Cabinet for Health and Family Services (CHFS)**

**Office of Application & Technology Services (OATS) Standards:**

**Category: 4000 Data Domain**

**4100 Interoperability and Portability Standards**

**Definition:**

Interoperability and portability allow for seamless exchange and use of data and services among various infrastructure offerings.

**System** in this document means an individual application or combination of applications, resources and services that make up a business solution.

This document focuses on the following:

* **System Interoperability –** enabling of disparate systems to operate effectively together by defining connections at the system boundaries. This allows for the removal and replacement of system components, or whole systems, with minimal risk to disrupting the program.
* **System Portability** – packaging of system components to allow the components to be moved from one environment to another with minimal risk and effort.
* **Data Portability** – packaging of data that enables use by others, by efficiently moving data between systems, while retaining data organization and associated metadata.

**Approved Standard(s):**

CHFS is comprised of multiple divisions which develop many applications/ modules delivered by the Commonwealth and partners. As solutions have been divided up to provide a more Service Oriented Architecture, the ability to package data and services for use/reuse in new technologies has grown in value. The disparate business modules are able to interoperate to provide a unified solution by utilizing industry standard processes and guidelines. Continuous monitoring and regular system back-ups are utilized to minimize the risk of individual module disruptions.

**System Interoperability –** System interoperability is possible because of consistent connectivity standards, secure connections, and system monitoring.

* Connectivity Standards – Connectivity standards reduce the level of risk and effort during implementation and ongoing maintenance by maintaining basic communications between systems. Common connectivity allows for easier system replacement and is the key to managing system component architecture. Business solutions will be expected to utilize the CHFS Enterprise Connectivity Standards referenced in this document for connectivity between modules.
* Security – Solution vendors must follow the Commonwealth authentication and security controls for interoperability between systems.
* Performance – Business solutions will monitor interfaces, provide performance reporting, and alert CHFS of any delays or problems that may affect an individual system or the program as a whole.

**System Portability** – System portability has become more important for business continuity, disaster recovery, and to move systems quickly and seamlessly between cloud service providers.

* Vendors should regularly package their virtual appliances and software for recovery efforts using Open Virtualization Format (OVF). OVF is an open standard for packaging and distributing virtual appliances and adopted by the International Organization for Standardization (ISO), the American National Standards Institute (ANSI), and several virtualization providers such as Microsoft and Amazon.
* Vendors should package applications for portability including code and dependencies. As cloud solutions become more mature and align to multivendor cloud environments, a standard packaging or container solution may be added as a standard.
* Operational components including system workflows must be considered as part of vendor turnover or transition.

**Data Portability** – Data is exchanged between business solutions using files,Application Programming Interfaces (JSON), and/or webservices (XML). This data is understood by the source and target modules because of the use of industry messaging format standards and a common vocabulary, the program Business Data Glossary.

* Messaging Standards – Utilizing industry standard message formats allow for the data to be understood, transferred, and utilized effectively between modules. Business Solutions will utilize the CHFS Enterprise Messaging Standards referenced in this document.
* Common Vocabulary – The program Business Data Glossary provides a common understanding and consistent vocabulary across the program and is used in all vendor user interfaces, reports, and deliverables. Solution vendors are required to submit a data dictionary consistent with the Data Dictionary Template. Within this dictionary, the data elements for each vendor are cross referenced to the program Business Data Glossary.
* Transferability/Turnover – When transitioning from one vendor and/or technology platform to another, vendors must provide data to CHFS in a usable standard data format (ex. asci, csv, etc.). Vendors must provide all agency data, including business rules, in a form that can be converted to any subsequent system of CHFS’s choice.
* Data modeling/formatting – The Vendor’s data modeling/formatting should be compatible CHFS modeling tools.

**Approved Product(s) for New Applications:**

N/A

**Exceptions:**

Any exceptions to this standard must follow the procedures established in CHFS IT Policy #070.203.

**Review Cycle:**

Annually

**Timeline:**

Last reviewed: 01/31/2024

Next review: 01/02/2025

**Cross Reference:**

COT Standard #5515 – Secure Transport

CHFS Standard #4090 – Enterprise Connectivity Standards

CHFS Standard #4350 – Enterprise Messaging Standards

**Link to all COT Software Domain Standards:**

[KITS\_Report.pdf (ky.gov)](https://cgp.ky.gov/sites/COTPUBDOCS/Standards/KITS_Report.pdf)

**Link to all CHFS IT Standards:**

[CHFS IT Standards - Cabinet for Health and Family Services (ky.gov)](https://chfs.ky.gov/agencies/os/oats/Pages/itstandards.aspx)

**Link to all CHFS IT Policies:**

[CHFS IT Policies - Cabinet for Health and Family Services (ky.gov)](https://chfs.ky.gov/agencies/os/oats/Pages/ITpolicies.aspx)