

Government
Information
Technology
Agency

Statewide
STANDARD

P800-S815 Rev 4.0

TITLE: Configuration
Management

Effective Date: September 14,
2007

1. AUTHORITY

The Government Information Technology Agency (GITA) shall develop, implement and maintain a coordinated statewide plan for information technology (IT) (A.R.S. § 41-3504(A (1))), including the formation of policies to effectuate the purposes of the agency (A.R.S. § 41-3504(A (13))) and adopting statewide technical, coordination, and security standards (A.R.S. § 41-3504 (A (1(a))).

2. PURPOSE

For all budget units to establish and maintain a statewide inventory program of IT devices (servers, storage, clients), network components, and associated software products, and IT business applications supported by the *Information Services Inventory System (ISIS)* web-based application. The standard also provides requirements for the tracking of changes to system and software components.

3. SCOPE

This applies to all budget units. A budget unit is defined as a department, commission, board, institution or other agency of the state receiving, expending or disbursing state funds or incurring obligations of the state including the Arizona board of regents but excluding the universities under the jurisdiction of the Arizona board of regents, the community college districts and the legislative or judicial branches A.R.S. § 41-3501(2).

The Budget Unit Chief Executive Officer (CEO), working in conjunction with the Budget Unit Chief Information Officer (CIO), shall be responsible for ensuring the effective implementation of Statewide Information Technology Policies, Standards, and Procedures (PSPs) within each budget unit.

4. STANDARD

4.1. Configuration management is a best practices process which refers to the unique identification, controlled storage, change control and perpetual reporting of IT components as a baseline of inventory for the agency. Each budget unit shall establish a configuration management program that defines organizational responsibilities and processes that document and provide accountability for changes to IT infrastructure and configurations and associated software components in an IT environment. Configuration management programs shall contain the following elements:

4.1.1 Consistent, unique identification of the configurations of IT devices, network components and/or associated software components over the lifecycle of a system, from development through testing and ultimately, operations.

- 4.1.2 Documented change control for coordination of all changes/updates to infrastructure configuration changes consisting of IT devices, operating systems and application software versions/releases, including when and by whom.
 - 4.1.3 Status accounting to track the state of all configuration items, pending changes, and approved changes to configuration items.
 - 4.1.4 On a periodic basis each Budget Unit shall conduct a performance audit to ensure that the infrastructure configurations are well documented and current. In addition, ISO 10007:2003, *Quality Management – Guidelines for Configuration Management* and ANSI/EIA 649:1998, *National Consensus Standard for Configuration Management* provides broad, general guidance, applicable to both hardware and software components, on how to design, structure and implement configuration management programs.
- 4.2 Each budget unit shall maintain a perpetual inventory of all IT hardware devices and associated software assets and IT custom software applications, on the Information Services Inventory System (ISIS).
- 4.2.1 ISIS can be accessed through the web site at <http://www.azgita.gov/apps>. Please call GITA at (602) 364-4790 or email ITplanning@azgita.gov for a username and password. Changes to ISIS asset codes and manufacturers can be requested at the above email address.
 - 4.2.2 ISIS is an online application allowing compilation of data and searches across the IT asset groups identified below and detailed in the *IT Inventory Asset Type Nomenclature* link on <http://www.azgita.gov/apps>.
 - a. **End User Devices** – Mac’s, PC’s, Network Computers, etc.
 - b. **Mainframes** - EX80, etc.
 - c. **Minicomputers** –AS400, VS7310, etc.
 - d. **Server** –MAC, UNIX, WinTel etc.
 - e. **Software** –Operating Systems, Databases, E-mail, Antivirus, Web development, etc.
 - f. **Telecommunications** – ATM Switches, Bridges, Gateways, Hubs, Routers, Voice Power Equipment etc.
 - 4.2.3 Each budget unit shall update its inventory annually and ensure that it is as accurate as possible prior to September 30th of each fiscal year. ISIS is available online by each fiscal year in maintaining a perpetual IT inventory. Rollover is performed in late May or early June to ensure that each budget unit has sufficient time to update IT assets acquired that year.
 - 4.2.4 The budget unit shall use the standard names, values and format as described in the *IT Inventory Asset Type Nomenclature*, Inventory

Naming Conventions for Manufacturers, IT Inventory Software Product Codes, which are periodically updated to stay current with the technology refer to the GITA web site at:

<http://www.azgita.gov/apps>.

- 4.2.5 The budget unit shall add and maintain its software and hardware IT assets online using the Drop down lists in the ISIS application.
- 4.2.6 Alternatively, the budget unit shall import its IT inventory data from its own asset tracking system by uploading a Comma Separated Values (.csv) file using Excel or Access in the ISIS Required Import File Format listed at the following web site <http://www.azgita.gov/apps>. Definitions for each field can be found in Attachment A, *Hardware and Software Asset Data Fields*. Required and optional data fields can be found in Attachment C, ISIS Required Import File Format.
- 4.3 Each budget unit shall maintain a perpetual inventory for its IT custom software applications and customized commercial off the shelf (COTS) applications on the Information Services Inventory System (ISIS).
 - 4.3.1 The budget unit shall identify and maintain all of its custom applications in ISIS, ensuring that it is up-to-date as of September 30th of each fiscal year.
 - 4.3.2 The budget unit shall include all of the information about the applications as described in Attachment B, *Custom Software Application Data Fields*.
 - 4.3.3 Applications shall be categorized as critical, essential, or administrative functions consistent with each budget unit's Business Continuity Plan.
- 4.4 Each budget unit shall maintain a high-level budget unit network/systems diagram, supported by detail diagrams identifying the underlying structures of its computer/systems network. This diagram includes all major IT devices, network components (including all nodes and connections), communication equipment, software, links and services, etc., used in communicating reliable transfers of information as indicated in ISIS and is maintained under configuration control. These diagrams map the budget unit's architecture and infrastructure which can then be used for information systems planning.
 - 4.4.1 Network/systems diagrams shall be submitted to GITA by September 30th of each fiscal year, along with the budget unit's perpetual inventory. Budget units should use a software business/technical diagramming tool for recording network/systems designs.
 - 4.4.2 Network/systems diagrams shall be computer-generated, using software tools, checked periodically to ensure that no unauthorized

changes have been made, and readily accessible to authorized budget unit personnel.

5. DEFINITIONS AND ABBREVIATIONS

Refer to the PSP Glossary of Terms located on the GITA web site at http://www.azgita.gov/policies_standard/ for definitions and abbreviations.

6. REFERENCES

- 6.1. A. R. S. § 41-621 et seq., “Purchase of Insurance; coverage; limitations, exclusions; definitions.”
- 6.2. A. R. S. § 41-1335 ((A (6 & 7))), “State Agency Information.”
- 6.3. A. R. S. § 41-1339 (A), “Depository of State Archives.”
- 6.4. A. R. S. § 41-1461, “Definitions.”
- 6.5. A. R. S. § 41-1463, “Discrimination; unlawful practices; definition.”
- 6.6. A. R. S. § 41-1492 et seq., “Prohibition of Discrimination by Public Entities.”
- 6.7. A. R. S. § 41-2501 et seq., “Arizona Procurement Codes, Applicability.”
- 6.8. A. R. S. § 41-3501, “Definitions.”
- 6.9. A. R. S. § 41-3504, “Powers and Duties of the Agency.”
- 6.10. A. R. S. § 41-3521, “Information Technology Authorization Committee; members; terms; duties; compensation; definition.”
- 6.11. A. R. S. § 44-7041, “Governmental Electronic Records.”
- 6.12. Arizona Administrative Code, Title 2, Chapter 7.
- 6.13. Arizona Administrative Code, Title 2, Chapter 10.
- 6.14. Arizona Administrative Code, Title 2, Chapter 18.
- 6.15. [Statewide Policy P100, Information Technology.](#)
- 6.16. [Statewide Standard P740-S741, Classification and Categorization of Data.](#)
- 6.17. [Statewide Policy P800, IT Security.](#)
- 6.18. State of Arizona Target Security Architecture, http://www.azgita.gov/enterprise_architecture.
- 6.19. Arizona Division of Emergency Management’s Business Continuity Planning (BCP) for State Agencies.

7. ATTACHMENTS

- Attachment A – Hardware and Software Asset Data Fields.
- Attachment B – Custom Software Application Data Fields.
- Attachment C – ISIS Required Import File Format.

ATTACHMENT A. Hardware and Software Asset Data Fields

Data fields for hardware and software inventory records are as follows:

Data Field	Optional or Required	Definition
Location	Optional	A budget unit-defined field for the location of the asset.
City	Optional	This field is for budget unit use.
Manufacturer	Required	The field contains the manufacturer of the item. A menu of hardware and software manufacturers is provided for the budget unit to choose from. If the manufacturer of the product is unknown, choose OTHER.
Asset Group	Required	This field organizes all assets into one of six high level categories. Choose from the drop down list in the field. Whatever is selected in Asset Group will determine choices in Asset Type.
Asset Type	Required	This field that organizes assets into types. Choose from the drop down list in the field. Whatever is selected in Asset Type determines choices in Asset Code. Choose "Other" if the asset does not fall into any other category.
Asset Code	Required	This field is the lowest level used to organize assets by products. This field also has "Other" as an alternate selection, in case the asset is truly unique.
Asset Status	Required	This field identifies State assets that are owned, leased or employed by the State. Employed means an asset in use by State employees while doing their jobs, but owned by another entity such as the federal government.
Maintenance Type	Optional	This field provides a way for the budget unit to track how the hardware asset is maintained. Select from one of the options in the drop down list.
Disposition	Optional	This field is used by a budget unit to retire an asset while keeping a record of it. The drop down list provides a variety of ways an asset may leave State service.
Disposition Date	Optional	This field identifies the date the asset leaves State service and is a required field if Disposition is present.
Version	Optional	This field contains the version of the software asset. This file is only present when inputting software assets.

Data Field	Optional or Required	Definition
Number of Licenses	Required	This field is for software assets only. This enables the reporting of software assets in aggregate. For Example: If the budget unit had 100 copies of Microsoft Office XP/2000, then you would place "100" in this field. However, budget units may report software individually, inputting serial numbers for each registered copy, if they so desire. In this case, number of licenses would be recorded as "1" per record.
Model	Optional	This field contains the model of the hardware asset. This file is only present when inputting hardware assets.
Serial Number	Required	For hardware and software assets, either the Serial Number or the Asset Tag Number must be provided in order to save the information.
Asset Tag Number	Required	Either the Asset Tag Number or the Serial Number must be provided in order to save the asset information.
Unit Cost	Optional	This field contains the cost of the asset.
Acquisition Date	Optional	This optional field allows the budget unit to capture the date the asset was purchased. Budget units can also use this field to capture the received date, billed date, or any other alternative date that is more useful to them.
Maintenance Vendor	Optional	This field contains the vendor that maintains the hardware asset.
Lease Number	Optional	This field contains the lease number.
Comments	Optional	This field is for a budget unit to use in any manner they choose. Any additional information about the asset can be placed here.
Agency AFIS Code	Optional	This field contains Arizona's Financial Information System code for the budget unit.
Sub Organization	Optional	This field is used only when sub organizations are used.
Inventory Fiscal Year	Required	The field refers to the fiscal year in which the inventory is completed.

ATTACHMENT B. Custom Software Application Data Fields

Data fields for custom software applications are as follows:

Data Field	Optional or Required	Definition
Application Name	Required	This field contains the full name of the application followed by its acronym. For example: Arizona's Financial Information System (AFIS) or Human Resource Management System (HRMS).
Application Description	Required	This field provides a brief description of the application.
High Level Category	Required	This field provides eight categorizations of applications, namely Public Information, Public Transaction, Agency Administration, Intergovernmental Transactions, Program Management, Government-To-Business, Criminal Justice, and E-Government. Choose "Agency Administration" if none of these categories apply.
Functional Adequacy	Required	This field signifies the budget unit's evaluation of how functionally adequate the application is in providing the desired service. Select high, medium or low.
General Category	Required	This field reflects a functional level of categorization of applications, namely Asset Management, Case Management, Data Warehouse, Data Mining, Document Management, Financial, Geographic Information System, Grant Application, Human Resources, and Licensing. Use "Other" if none of the categories is applicable.
Strategic Importance	Required	This field specifies the budget unit's evaluation of the applications' strategic importance to the budget unit's mission. It is possible for an application to have high strategic importance and yet be listed as non-critical. Select high, medium or low.
Application Platform	Required	This field identifies the platform type on which the application is built. There are four selections: Mainframe, Minicomputer, Server, and Stand Alone PC. For UNIX systems, select Server for any multi-tasking application running on a UNIX platform: i.e., more than one person has simultaneous access. Choose Standalone PC for UNIX applications where the software is directly accessed using the computer in which the application resides.
Lifecycle	Required	This field specifies the applications' lifecycle stage. Choose Development if the application has not been placed in production and Maintenance if the application is in production. Choose Enhancement if the application is

Data Field	Optional or Required	Definition
		being upgraded/ updated. Choose Retirement if the application will soon be or is no longer in service. Delete the application if it is no longer in service.
Database	Required	This field identifies the database that captures the information within the application. If the database is not listed, select "Other" and type the database name in the "Other" field.
Presentation Type	Required	This field identifies the nature of the user's interaction or experience with the application. Select "Client/Server" for all non-web applications that have graphic user interfaces (GUI). Select CRT for dumb terminals and for DOS applications on PCs. Select "Terminal Emulation" for applications with CRT-like presentations that are accessed using a PC and may have GUI-like characteristics because of third party software. Select "Web" for Internet/Intranet applications using a client browser for presentation.
Origin	Required	This field identifies how the application was originally acquired by the budget unit. Options are Contractor, Purchased, Inhouse Development or Combination. Choose "Combination" if the application was acquired from more than one of the other sources listed.
Critical	Required	<p>This field identifies if an application is critical to the conduct of business by the budget unit.</p> <p>Critical functions are those having a direct and immediate effect on the general public in terms of loss of life, personal injury, loss of property, and/or the ability of government to maintain direction and control. The loss of a critical function may either result in such losses or inhibit government's ability to preclude or minimize such losses.</p> <p>Essential functions while they provide necessary government services to the public are not deemed Critical. It is possible for an application to have high strategic importance and yet be listed as non-critical.</p> <p>Administrative functions relate to the internal control, management and administration of a budget unit supporting its ability to perform business functions. Most budget units will not have Critical functions.</p> <p>Some guidelines to consider include:</p> <ul style="list-style-type: none"> • whether the public health or safety is in jeopardy if this application is not working for longer than 24 hours, • whether the budget unit will likely have lawsuit filed against it if the application is not working

Data Field	Optional or Required	Definition
		<p>within 72 hours,</p> <ul style="list-style-type: none"> if there is a court order or statutory requirement for the application to be available within specific time frames. <p>For details refer to the <i>Business Continuity Planning Workshop</i> document located on the Arizona Division of Emergency Management’s website at http://www.dem.state.az.us/bussines%20continuity/BCP%20-%20final2.pdf.</p>
Program Tools	Required	This field shows various program tools. Select all program tools that your budget unit uses. Hold down the control key while clicking on more than one program tool listed. If you do not see a particular program tool, you may select “Other” and type it in the field.
Estimated Users	Required	This field identifies the number of people that regularly access your application, rounded to the nearest whole number.
FTE State	Required	This field identifies the number of full-time equivalent employees, rounded to the nearest whole number, who maintain the application.
FTE Consultants	Required	This field identifies the number of full-time equivalent consultants (non-state employees), rounded to the nearest whole number, than maintain the application.
Comments	Optional	This field is required if OTHER has been selected in the Database or Program Tools Fields. Any additional information about the software can also be placed here.

ATTACHMENT C. ISIS Required Import File Format

<u>Column</u>	<u>Field Name</u>	<u>Type/Length</u>	<u>Optional/Required</u>
A 1	Location	Text/32	Optional
B 2	City	Text/32	Optional
C 3	Manufacturer Name	Text/32	Required
D 4	Asset Group	Text/32	Required
E 5	Asset Type	Text/32	Required
F 6	Asset Code	Text/32	Required
G 7	Status	Text/32	Required
H 8	Maintenance Type	Text/32	Optional
I 9	Disposition	Text/32	Optional
J 10	Disposition Date	MM/DD/YYYY	Optional
K 11	Software Version	Text/32	Optional
L 12	No. Software Licenses	Numeric	Required
M 13	Model	Text/32	Optional
N 14	Serial Number	Text/32	Either tag or serial required
O 15	Asset Tag Number	Text/32	Either tag or serial required
P 16	Unit Cost	Currency	Optional
Q 17	Acquisition Date	MM/DD/YYYY	Optional
R 18	Maintenance Vendor	Text/32	Optional
S 19	Lease Number	Text/32	Optional
T 20	Comments	Text/32	Optional
U 21	Agency AFIS Code	Text/32	Optional
V 22	Sub Organization	Text/32	Optional

Notes:

*Columns 3 through 6 must use standard naming conventions found under Manufacturer names, Asset Groups, Asset Types, and Software Product Asset Codes.

* Column 7 (Status) is either Owned, Leased Or Employed, where the latter is an asset in use by state employees but owned by an entity such as the Federal Government.

*Column 8 (Maintenance Type) is either In-House, Maintenance contract, Time and Material, Unknown, or Warranty

*Column 9 (Disposition) is either Current, Interagency Transfer, Non-Operative, Risk Mgmt, Surplus Property, Trade In

If the Agency code and/or Sub Organization are missing, the assets will be uploaded to the currently selected Agency and Sub Organization noted at the top of the web page. Very few agencies are making use of the Sub Organization option at this time.

Inventory Year always refers to a fiscal year, so uploads in September of 2007 are for FY 2008 hence Column 23 requires 2008 in it.