



From the Vendor Trace document or declaration, identify all documents that incorporate the Configuration Management Plan. Each submitted (Vol. 1, Sect. 1.1) Technical Data Package document (Vol.2 Sect. 6.6) is reviewed (Vol. 1, Sect. 1.6.2.2).

Note about revisions: The first time a review form is completed, the form revision number is 01. As the review process continues, newer versions of vendor documents, or additional documents, will be submitted to close discrepancies. Each time new versions of documents are examined, the review form is saved with a new revision number. Save the form with the new revision (Save As) before you update the document names, versions and/or file names. Enter your name and date on the new revision.

Applicable TDP Documents table: List each applicable TDP document. Put the Title from inside the document in the first column, along with the version and date. Under "File name," copy the full document file name.

Trace Table: Verify whether the vendor correctly documented each applicable VVSG requirement listed in this template. Use the following notations to indicate results:

- **Traced** column: For each positive finding, enter the document number(s) corresponding to the **Applicable TDP Documents** Table below, with the section number(s) in each applicable document where the requirement is fulfilled. (Example: Doc. 2, Sec. 1.2)
- **Comments** column:
 - "Y" indicates that the document(s) fulfill the requirement.
 - "N" indicates that the document(s) do not fulfill the requirement.
 - "P" indicates that the document(s) partially fulfill the requirement
 - "NT" (not tested) indicates documents that are part of the system configuration but outside the scope of this certification review effort (only if not a full cert).
 - "NS" (not supported) indicates requirements that apply to features that are not supported in the configuration being tested (such as paper ballots).
 - Explain "P", "N", "NT" or "NS" findings here.
 - In addition, use the Comments column to enter any comments that would be helpful throughout the project.
 - **Discrepancies:**
 - List discrepancies in red
 - A Documentation discrepancy is written when a VVSG requirement is not fulfilled or is partially fulfilled in the TDP.
 - An Informational discrepancy is written when the issue is outside the scope of the certification; Informational discrepancies are provided to the client but do not preclude certification.
 - Enter the discrepancy number of any discrepancies written (from the separate discrepancy report), with a short description in the Comments column.

Vendor :	Hart InterCivic, Inc.	Reviewer(s):	Lesley Hoppert
Voting System:	Verity 1.0	Review Date:	2/16/2015

Applicable TDP Documents

Document Title (from cover pg), version, date	Doc #	File name
Verity Operations PRD – Ops/Services/Supply Chain Planning Document, A.01, 12/11/14	#1	Verity OPS-Services-SC Plan 4005302 A01.pdf



Document Title (from cover pg), version, date	Doc #	File name
Configuration Management Process, Rev B.01, 2/19/2013	#2	Configuration Management Process - 1001074 B01.pdf
Verity Voting Verity Operational Environment, A.07, 2/5/2015	#3	Verity Operational Environment 4005515 A07.pdf
Software Versioning Procedure, C.00, 8/17/12	#4	Software Versioning Procedure - 1001070 C00.pdf
Voting System Implementation and Maintenance, C.00, 2/19/13	#5	Voting System Implementation and Maintenance GÇô 1000745 C00.pdf
VSTL Product Submission Procedure, D.01, 3/6/13	#6	VSTL Product Submission Procedure - 1000565 D01.pdf
Verity Trace - Configuration Management Plan, 2/10/2015	#7	Verity Trace - Configuration Management Plan
Document Control Procedure, v E.04, 2/10/15	#8	Document Control Procedure 1000538 E04
Hardware Design and Development Procedure, v D.00, 03/07/2013	#9	Hardware Design Development Procedure - 1000513 D00
Verity Service and Maintenance Operations Technical Reference Manual 6610-001 A05, No Date	#10	Verity Service and Maintenance Operations Technical Reference Manual 6610-001 A05.pdf
Verity Voting National Certification Test Specification, A.00, 12/18/14	#11	Verity Voting National Certification Test Specification 4005527 A00.pdf

Trace Table

Req #	VVSG 2005 Testing Standards - Vol.2 unless otherwise specified	Traced	Comments
2	Technical Data Package		
2.1	Scope		
2.1.1	Content and Format		
2.1.1.1	Required Content for Initial Certification (<i>Indicate "*" if this document does not fall into the identified category of documentation.</i>)		
j.	At minimum, the TDP shall contain the following documentation: Configuration management plan;	Doc #2 - Entire document	Y
2.1.1.3	Format		
	The requirements for formatting the TDP are general in nature; specific format details are of the vendor's	Doc #2 - Entire document Doc #7 - Entire document	Y



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	choosing. The TDP shall include a detailed table of contents for the required documents, an abstract of each document and a listing of each of the informational sections and appendices presented. A cross-index shall be provided indicating the portions of the documents that are responsive to documentation requirements for any item presented.		
2.1.3	Protection of Proprietary Information		
	The vendor shall identify all documents, or portions of documents, containing proprietary information not approved for public release. Any person or test agency receiving proprietary information shall agree to use it solely for the purpose of analyzing and testing the system, and shall agree to refrain from otherwise using the proprietary information or disclosing it to any other person or agency without the prior written consent of the vendor, unless disclosure is legally compelled.	The document "Verity 1.0 TDP Overview 4005511 A04", at the top level of the TDP. identifies which documents are considered proprietary.	Y
2.11	Configuration Management Plan		
	Vendors shall submit a Configuration Management Plan that addresses the configuration management requirements of Volume I, Section 9. This plan shall describe all policies, processes, and procedures employed by the vendor to carry out these requirements. Information submitted by the vendor shall be used by the accredited test lab to assist in developing and executing the system certification test plan. This information is particularly important to support the design of test plans for system modifications. A well-organized, robust and detailed Configuration Management Plan will enable the accredited test lab to more readily determine the nature and scope of tests needed to fully test the modifications. The Configuration Management Plan shall contain the sections identified below.		



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2.11.1	Configuration Management Policy		
	The vendor shall provide a description of its organizational policies for configuration management, addressing the specific requirements of Volume I, Subsection 9.2.		
a.	These requirements pertain to: Scope and nature of configuration management program activities;	Doc #2 - Section 2, pg. 4	Y
b.	These requirements pertain to: Breadth of application of vendor's policy and practices to the voting system.	Doc #2 - Section 3.1-3.2, pgs. 4-5	Y
2.11.2	Configuration Identification		
	The vendor shall provide a description of the procedures and naming conventions used to address the specific requirements of Volume I, Section 9.3.		
a.	These requirements pertain to: Classifying configuration items (encompasses all system components) into categories and subcategories;	Doc #2 sec 3.3 Doc #4 sec 2 (SYSTEM RELEASES CONTAINING MULTIPLE PRODUCTS OR COMPONENTS) Doc #9 sec 4	Y
b.	These requirements pertain to: Uniquely numbering or otherwise identifying configuration items;	Doc #2 sec 3.3 Doc #4 covers numbering of software versions (Sec. 2) Doc #8 covers document numbering (Sec. 4.1.2-4.1.5) Doc #8 covers numbering of components/parts (Sec. 4.1.6)	Y - DISC VTY-19 Unable to locate the procedures and naming conventions used to uniquely number or otherwise identify hardware configuration items (Note that the Configuration Management Processes document section 3.3 states that naming and numbering conventions are contained in the HARDWARE DESIGN AND DEVELOPMENT document, but the numbering convention for hardware components isn't described in the referenced document.) CLOSED 1/27/15: Traced to Document Control Procedure 1000538 E03



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c.	These requirements pertain to: Naming configuration items.	Doc #8 covers document naming (Sec. 4.1.3) Doc #8 covers component naming/branding (Sec. 4.1.1)	Y - DISC VTY-20 Unable to locate the procedures and naming conventions used to name software and hardware items (Note that the Configuration Management Processes document section 3.3 states that naming and numbering conventions are contained in the HARDWARE DESIGN AND DEVELOPMENT and SOFTWARE DESIGN AND DEVELOPMENT documents, but the naming procedures/conventions for hardware and software components aren't described in the referenced documents.) CLOSED 1/27/15: Traced to Document Control Procedure 1000538 E03
Vol 1, 9.3.2	Versioning Conventions		
	When a system component is part of a higher level system element such as a subsystem, the vendor shall describe the conventions used to:		
a.	Identify the specific versions of individual configuration items and sets of items that are incorporated in higher level system elements such as subsystems	Doc #2 sec 3.3 references the Software Versioning Procedure Doc #4 section "SYSTEM RELEASES CONTAINING MULTIPLE PRODUCTS OR COMPONENTS" on pgs 9-10	Y
b.	Uniquely number or otherwise identify versions	Doc #2 sec 3.3 references the Software Versioning Procedure Doc #4 section "SYSTEM RELEASES CONTAINING MULTIPLE PRODUCTS OR COMPONENTS" on pgs 9-10	Y
c.	Name versions	Doc #2 sec 3.3 references the Software Versioning Procedure Doc #4 section "SYSTEM RELEASES	Y



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		CONTAINING MULTIPLE PRODUCTS OR COMPONENTS" on pgs 9-10	
2.11.3	Baseline and Promotion		
	The vendor shall provide a description of the procedures and naming conventions used to address the specific requirements of Volume I, Subsection 9.4.		
a.	These requirements pertain to: Establishing a particular instance of a system component as the starting baseline;	Doc #4 - Section 2. VERSION & RELEASE, pgs. 5-10	Y
b.	These requirements pertain to: Promoting subsequent instances of a component to baseline throughout the system development process for the first complete version of the system submitted for testing;	Doc #4 - Section 2 BUILD RELEASE, pgs. 9-10	Y
c.	These requirements pertain to: Promoting subsequent instances of a component to baseline status as the component is maintained throughout its life cycle until system retirement (i.e., the system is no longer sold or maintained)	Doc #4 - Section 2 SYSTEM RELEASES CONTAINING MULTIPLE PRODUCTS OR COMPONENTS, pgs. 9-10 and Section 2 COMPATIBILITY, pgs. 10-11	Y
2.11.4	Configuration Control Procedures		
	The vendor shall provide a description of the procedures used by the vendor to approve and implement changes to a configuration item to prevent unauthorized additions, changes, or deletions to address the specific requirements of Volume I, Subsection 9.5.		
a.	These requirements pertain to: Developing and maintaining internally developed items;	Doc #4 Section 2 Version & Release, Section 3 Version Control, Section 4 Build Archiving, Section 5 Build Labels Doc #8 - Section 4.1.5	Y
b.	These requirements pertain to: Developing, acquiring and maintaining third-party items;	Doc #1 Section 6.10	Y
c.	These requirements pertain to: Resolving internally identified defects;	Doc #2, Sections 3.3, 3.4 Doc #8, Section 4	Y



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d.	These requirements pertain to: Resolving externally identified and reported defects.	Doc #2, Sections 3.3, 3.4 Doc #8, Section 4	Y
2.11.5	Release Process		
	The vendor shall provide a description of the contents of a system release, and the procedures and related conventions by which the vendor installs, transfers, or migrates the system to accredited voting system testing laboratories and customers to address the specific requirements of Volume I, Subsection 9.6.		
a.	These requirements pertain to: A first release of the system to an accredited test lab;	Doc #6 Section 3, 4.1, 4.2	Y
b.	These requirements pertain to: A subsequent maintenance or upgrade release of a system, or particular components, to an accredited test lab;	Doc #6, Section 4.3 Doc #4 Section 2 MINOR RELEASE, MAJOR RELEASE, REVISION RELEASE	Y
c.	These requirements pertain to: The initial delivery and installation of the system to a customer;	Doc #5 Section 3.2 Customer Software System Installation, Section 3.3 Customer Hardware Delivery and Testing	Y
d.	These requirements pertain to: A subsequent maintenance or upgrade release of a system, or particular components, to a customer, including confirmation that the installed version of the system matches exactly the certified system version	Doc #5 Section 4 VOTING SYSTEM MAINTENANCE PROCESSES	Y
2.11.6	Configuration Audits		
	The vendor shall provide a description of the procedures and related conventions for the two audits required by Volume I, Subsection 9.7.		
a.	These requirements pertain to: Physical configuration audit that verifies the voting system components submitted for certification to the vendor's technical documentation;	Doc #6, Section 4	Y
b.	These requirements pertain to: Functional configuration audit that verifies the system performs all the functions described in the system	Doc #6, Section 4	Y



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	documentation.		
Vol. 1, 9.7.1	Physical Configuration Audit		
	The Physical Configuration Audit is conducted by the accredited test lab to compare the voting system components submitted for certification to the vendor's technical documentation. For the PCA, a vendor shall provide:		
a	Identification of all items that are to be a part of the software release	Doc #6, Section 4.1	Y
b	Specification of compiler (or choice of compilers) to be used to generate executable programs	Confirmed that Hart delivered 2 build documents within the Software Design & Specifications section of the TDP covering this information	Y
c	Identification of all hardware that interfaces with the software	Doc #6, Section 4.2	Y
d	Configuration baseline data for all hardware that is unique to the system	Doc #11, Section 2.2.3	Y - DISC VTY-21 - Unable to locate a statement that Hart will provide to the VSTL the detailed Configuration baseline data for all hardware that is unique to the system, and unable to find this configuration baseline data in the TDP. CLOSED - Traced to Verity Voting National Certification Test Specification 4005527 A00, Section 2.2.3
e	Copies of all software documentation intended for distribution to users, including program listings, specifications, operations manual, voter manual, and maintenance manual	Doc #6, Section 4.1 and confirmed that Hart delivered the required manuals in the 9/29/14 TDP.	Y
f	User acceptance test procedures and acceptance criteria	Doc #10, Appendix C	Y - DISC VTY-22 - Unable to locate a statement that Hart will provide to the VSTL the user acceptance test procedures and acceptance criteria and unable to find the procedures and



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			acceptance data in the TDP. CLOSED - "See Verity Service and Maintenance Operations Technical Reference Manual, Acceptance Test appendix C"
g	Identification of any changes between the physical configuration of the system submitted for the PCA and that submitted for the FCA, with a certification that any differences do not degrade the functional characteristics	Vendor stated there are no differences and provided a detailed list of configuration items in Doc #11, sections 2.2.2, 2.2.3	Y - DISC VTY-23 - Although there is a change management procedure within Hart's Document Control Procedure, the configuration management process documents do not describe the process for communicating to the VSTL any changes to the configuration that occur during the certification process (other than in response to VSTL findings). Closed - Traced to Verity Voting National Certification Test Specification 4005527 A00, Sections 2.2.2-2.2.3
h	Complete descriptions of its procedures and related conventions used to support this audit by:		Y - see below
i	Establishing a configuration baseline of the software and hardware to be tested	Doc #11, sections 2.2.2, 2.2.3	Y - DISC VTY-24 - Unable to locate a statement that Hart will provide to the VSTL a configuration baseline of the software and hardware to be tested and unable to find a documented baseline. Closed - Traced to Verity Voting National Certification Test Specification 4005527 A00, Sections 2.2.2-2.2.3
ii	Confirming whether the system documentation matches the corresponding system components	Doc #11, sections 2.2.2, 2.2.3	Y - DISC VTY-25 - Unable to locate a statement that Hart will confirm whether the system documentation matches the corresponding system components. Closed - Traced to Verity Voting National Certification Test Specification 4005527 A00,



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			Sections 2.2.2-2.2.3
Vol. 1, 9.7.2	Functional Configuration Audit		
	The Functional Configuration Audit is conducted by the accredited test lab to verify that the system performs all the functions described in the system documentation. The vendor shall:		
a	Completely describe its procedures and related conventions used to support this audit for all system components	Doc #6, Sections 4.1-4.3	Y
b	Provide the following information to support this audit:		Y - See below
i	Copies of all procedures used for module or unit testing, integration testing, and system testing		Y - DISC VTY-26 - Unable to locate a statement that Hart will provide to the VSTL copies of all procedures used for module or unit testing, integration testing, and system testing, and unable to find these procedures. CLOSED - Hart has provided access to our HPQC system to allow VSTL to review all module, unit, integration, system testing.
ii	Copies of all test cases generated for each module and integration test, and sample ballot formats or other test cases used for system tests		Y - DISC VTY-27 - Unable to locate a statement that Hart will provide to the VSTL Copies of all test cases generated for each module and integration test, and sample ballot formats or other test cases used for system tests, and unable to find these test records. CLOSED - Hart has provided access to our HPQC system to allow VSTL to review all module, unit, integration, system testing.
iii	Records of all tests performed by the procedures listed above, including error corrections and retests		Y - DISC VTY-28 - Unable to locate a statement that Hart will provide to the VSTL records of all tests performed by the procedures



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			<p>listed in Vol 1, 9.7.2.b.i, including error corrections and retests, and unable to find these records.</p> <p>CLOSED - Hart has provided access to our HPQC system to allow VSTL to review all module, unit, integration, system testing.</p>
2.11.7	Configuration Management Resources		
	The vendor shall provide a description of the procedures and related conventions for maintaining information about configuration management tools required by Volume I, Subsection 9.8.		
a.	These requirements pertain to information regarding: Specific tools used, current version, and operating environment;	<p>Marked as n/a on the trace due to "VVSG Vol 1, 9.8 is a May clause"</p> <p>While the vendors "may" choose the specific tools they use to perform the record keeping, audit and reporting activities of the configuration management standards, they are still required to provide a description of the procedures.</p> <p>Doc #8, section 4.1.2</p>	<p>Y - DISC VTY-29 Unable to locate a description of the procedures and related conventions for maintaining information about configuration management tools required by Volume I, Subsection 9.8 - information regarding specific tools used, current version, and operating environment. (While the vendor may choose the specific tools they use to perform the record keeping, audit and reporting activities of the configuration management standards, the VVSG requires a description of the procedures.)</p> <p>Update 1/28/15: 2.11.7 a-c are still not clearly met in the vendor's referenced documents. This requirement focuses on the configuration management tools used by the vendor, not the system configuration. It requires the vendor to provide procedures and conventions for maintaining information about the vendor's configuration management tools. For instance, in 2.11.7.a, the standard is looking for how the</p>



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			vendor maintains information about the CM tools, the version of those tools, and the operating environment for those tools, not for the voting system but for the CM tools. CLOSED 2/16/15, L. Hoppert: Added to Doc "Document Control Procedure 1000538 E04".
b.	These requirements pertain to information regarding: Physical location of the tools, including designation of computer directories and files;	Marked as n/a on the trace due to "VVSG Vol 1, 9.8 is a May clause" While the vendors "may" choose the specific tools they use to perform the record keeping, audit and reporting activities of the configuration management standards, they are still required to provide a description of the procedures. Doc #8, section 4.1.2	Y - DISC VTY-30 Unable to locate a description of the procedures and related conventions for maintaining information about configuration management tools required by Volume I, Subsection 9.8. - information regarding: Physical location of the tools, including designation of computer directories and files . (While the vendor may choose the specific tools they use to perform the record keeping, audit and reporting activities of the configuration management standards, the VVSG requires a description of the procedures.) Update 1/28/15: 2.11.7 a-c are still not clearly met in the vendor's referenced documents. This requirement focuses on the configuration management tools used by the vendor, not the voting system configuration. It requires the vendor to provide procedures and conventions for maintaining information about the vendor's configuration management tools. CLOSED 2/16/15, L. Hoppert: Added to Doc "Document Control Procedure 1000538 E04".
c.	These requirements pertain to information regarding: Procedures and training materials for using the tools.	Marked as n/a on the trace due to "VVSG Vol 1, 9.8 is a May clause" While the vendors "may" choose the specific tools they use to perform the record keeping,	Y - DISC VTY-31 Unable to locate a description of the procedures and related conventions for maintaining information about configuration management tools required by



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		audit and reporting activities of the configuration management standards, they are still required to provide a description of the procedures. Doc #8, section 4.1	Volume I, Subsection 9.8. - information regarding: Procedures and training materials for using the tools. (While the vendor may choose the specific tools they use to perform the record keeping, audit and reporting activities of the configuration management standards, the VVSG requires a description of the procedures.) Update 1/28/15: 2.11.7 a-c are still not clearly met in the vendor's referenced documents. This requirement focuses on the configuration management tools used by the vendor, not the voting system configuration. It requires the vendor to provide procedures and conventions for maintaining information about the vendor's configuration management tools. Part c requires a description of the procedures and training for using the CM tools. CLOSED 2/16/15, L. Hoppert: Added to Doc "Document Control Procedure 1000538 E04".

End of Document
