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2.10 - DEMOCRACY SUITE PERSONNEL DEPLOYMENT AND TRAINING REQUIREMENTS

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Chapter 1

INTRODUCTION

1.1 Document Use

This document is intended for use with the Democracy Suite[®] 4.16 platform.

1.2 Purpose

This document describes the number of personnel resources and training required for a jurisdiction to operate and maintain Democracy Suite[®] per the Voluntary Voting System Guidelines 2005.

It is important to note that while this document is all-encompassing in its description of the required personnel deployment and training in order to successfully operate Democracy Suite[®] , not all configurations of the system may be components of the current certification campaign or jurisdiction in which this document is deployed.

Please refer to the "Relevant Disclaimers" section at the beginning of this document for a listing of the configurations that should be disregarded.

Chapter 2

PERSONNEL



VVSG 2005 VII, 2.10.1

This chapter specifies the number of personnel and skill levels required to perform each of the following functions:

- Pre-election or election preparation functions (e.g., entering an election, contest and candidate information; designing a ballot; generating pre-election reports.)
- System operations for voting system functions performed at the polling place.
- System operations for voting system functions performed at the central count facility.
- Preventative maintenance tasks.
- Diagnosis of faulty hardware or software.
- Corrective maintenance tasks.
- Testing to verify the correction of problems.

2.1 Pre-Election or Election Preparation Functions

In most cases, at least one person is required for programming, election definition, and pre-election logic and accuracy testing. Other staff may be required for pre-election voting machine readiness. This person should have working knowledge of Democracy Suite[®]'s Election Management System, and its various configurations and applications. As a result, knowledge on computer functionality and networking is also required.

For detailed activities, please refer to the *Election Event Designer User's Guide*.

2.2 System Operations for Voting System Functions Performed at the Polling Place

At least one person is required at the polling place to properly perform system operations for voting system functions. Dominion offers an extensive training program on how to operate the tabulators at the polling place. This training, in conjunction with the training offered by the jurisdiction, is the skill level that is required for the functions performed at the polling place.

Basic computer skills, and election-specific details that must be understood to properly operate the system. For the most part, these details are not technical in nature. However, a working knowledge in EMS programming through Dominion's training programs is beneficial in the event that, if permitted by the jurisdiction, corrupted compact flash memory cards need to be replaced within the units.

There are no maintenance or repair actions that need to be performed by polling place staff. Rather, these are performed by Level 1 or Level 2 Technicians that have been trained by Dominion.

2.3 System Operations for Voting System Functions Performed at the Central Count Facility

Six roles have been defined for, and are required at, the central count location to properly perform system operations for voting system functions. Dominion offers an extensive training program on how to operate the tabulators within the central count facility. This training, in conjunction with the training offered by the jurisdiction, is the skill level that is required for the functions performed at the central count facility.

A working knowledge in EMS programming through Dominion's training programs is beneficial in the event that, if permitted by the jurisdiction, corrupted compact flash memory cards need to be replaced within the units.

The six roles are as follows:

1. **Ballot Handler:** Opens ballot boxes, prepares ballot decks, checks paperwork, repackages ballots, and places ballots on storage shelves. These are basic operations that do not require any technical skills. Training completed on Central Count Unit for usage and troubleshooting. Training requirements for these individuals is less than one day. Two ballot handlers are required for each central scanning system unit with an additional 10% allocated to relief work.
2. **Scanner Maintenance:** Removal of foreign objects from the scanner, typically arriving from the ballots (paper flakes, ink flakes, lint/dust) can be performed by the scanner operator if that individual has received proper training on cleaning the scanner. Changing the wheels, belts, and other parts of the scanner itself requires action by individuals with such additional training as Technician Training.
3. **Scanner Operator:** This person operates the scanner and performs the following actions:
 - (a) Verifying any paperwork.
 - (b) Scanning the ballot decks.
 - (c) Verifying the central count by using manual records, if applicable.

The central scanning system uses a COTS PC workstation, thus requiring the scanner operator to have a working knowledge of computers. It is imperative to have received training on how to operate the central scanners and on how to troubleshoot them.

One operator is required per machine with an additional 10% allocated to relief work.

4. **Deputy Returning Officer (DRO):** The DRO performs adjudication-related activities on out-stacked or ambiguous ballots that require further review through the Democracy Suite[®] Adjudication application. The Adjudication application uses a COTS PC workstation, thus requiring the DRO to have a working knowledge of computers. One DRO is required for every 2000 expected adjudications.

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5. **Assistant Returning Officer:** The Assistant Returning Officer manages inventory control processes (e.g., the receipt and handling of ballot boxes), and is also available to perform secondary adjudication activities, if required. This person must have a comprehensive understanding of election practices.

It is imperative to have received training on how to operate the central scanners and on how to troubleshoot them.

It is recommended to have one Assistant Returning Officer for every 25 voting locations.

6. **Senior Returning Officer:** The Senior Returning Officer verifies election results and releases them to external sources. They also ensure that all election activities are correct, and instigate changes if there are problems that need correction.

It is imperative to have received training on how to operate the central scanners and on how to troubleshoot them.

Each central count facility requires at least one Senior Returning Officer. This role also exists for elections using precinct-based systems. This position requires a complete and comprehensive understanding of election auditing and accounting practices. It is essential that this person understand all aspects of the election process.

2.3.1 Central Count Facility Technical Staff

In addition to the six roles, each team will consist of technical and engineering staff members to address and resolve any specific technical and procedural issues. This team is comprised of:

- One Network Engineer per site for internet and local area network issues.
- One Software Engineer per 20 scanning units who can address scanning, adjudication, and tally software questions. These individuals are also trained scanner technicians who can diagnose and resolve scanner issues.
- One Project Manager per 20 scanning units to act as an observer and to ensure that ballot handling processes are followed correctly. In addition, these people are available to handle problem items and answer inquiries.
- One Maintenance technician for every 10 scanning units. These individuals will perform preventative maintenance tasks, diagnose faulty hardware or software, perform corrective maintenance tasks, and test to verify the correction of any problems.

2.4 Preventative Maintenance Tasks

Preventative maintenance tasks to be performed on components of the Democracy Suite[®] platform can be found in the following Technical Data Package documents:

- *2.09 - EMS System Maintenance Manual*
- *2.09 - ImageCast[®] Evolution System Maintenance Manual*
- *2.09 - ImageCast[®] Precinct System Maintenance Manual*
- *ImageCast[®] Central User's Guide*

**NOTE:**

ImageCast[®] Central COTS scanners are accompanied by third party vendor documentation that may include maintenance tasks to be performed on the scanners. Please consult with Dominion Voting Systems prior to deploying third party maintenance schedules.

At least one person is needed to perform preventative maintenance tasks. Poll worker training must be undertaken, and a familiarity with Democracy Suite[®] is required. A working knowledge in EMS programming through Dominion's training programs is beneficial in the event that server backups need to be performed.

2.5 Diagnosis of Faulty Hardware or Software

At least one person is needed for the diagnosis of faulty hardware or software. Pollworker and level one technician training must be undertaken. A familiarity with Democracy Suite[®] is required.

While basic diagnosis can be completed by the user, hardware issues may require additional phone support and/or onsite service from Dominion Voting Systems.

2.6 Corrective Maintenance Tasks

Corrective maintenance tasks to be performed on components of the Democracy Suite[®] platform can be found in the following Technical Data Package documents:

- *2.09 - EMS System Maintenance Manual*
- *2.09 - ImageCast[®] Evolution System Maintenance Manual*
- *2.09 - ImageCast[®] Precinct System Maintenance Manual*
- *ImageCast[®] Central User's Guide*

**NOTE:**

ImageCast[®] Central COTS scanners are accompanied by third party vendor documentation that may include maintenance tasks to be performed on the scanners. Please consult with Dominion Voting Systems prior to deploying third party maintenance schedules.

At least one person is needed to perform corrective maintenance tasks. It is recommended that county technicians and personnel with an extensive understanding of the machines are assigned to perform corrective maintenance tasks. Poll worker, and level one technician training must be undertaken, and a familiarity with Democracy Suite[®] is required.

Corrective maintenance may require additional phone support and/or onsite service from Dominion Voting Systems depending on the severity of the issue.

2.7 Testing to Verify the Correction of Problems

At least one person is needed to test to verify the correction of problems.

It is recommended that county technicians and personnel with an extensive understanding of the machines are assigned to perform these tasks. Poll worker, and level one technician training must be undertaken,

and a familiarity with Democracy Suite[®] is required. A general knowledge of Quality Assurance and/or testing practices, as well as EMS programming, is beneficial.

2.8 User Personnel Tasks

Users are encouraged to perform as many of the election-related tasks as possible, as this makes for the most efficient usage of local resources, and ensures that constituents within the jurisdiction understand the details of the electoral process and election system.

Specific tools have been developed to allow election administrators and locally-based support staff to perform a majority of critical functions with a limited amount of training.

Software can be installed by technicians employed by the jurisdiction, and Dominion Voting Systems can provide staff to assist by request.

2.9 Vendor Personnel Tasks

The following personnel tasks are undertaken and/or provided by Dominion Voting Systems:

1. **Jurisdiction Managers:** Dominion provides a project manager for each jurisdiction in which Democracy Suite[®] is deployed. This individual will have a working knowledge of local election law and practice in the jurisdiction in which they are deployed, and will follow approved project management practices approved by Dominion Voting Systems.
2. **Software Application Technician:** Software is installed by technicians employed by the jurisdiction, and Dominion can provide staff to assist by request.
3. **Call Centre/Help Desk Staff:** During the voting and post-voting stages of the election, technical support will be provided. The approach is that a call centre be established, which contains all on-site personnel. Any issue that is reported is tracked using an issue tracker provided by the jurisdiction, and the most experienced technical resources are contacted and deployed to resolve any given issue. Dominion provides sufficient call centre/help desk resources.

Chapter 3

TRAINING



VVSG 2005 VII, 2.10.2

This chapter specifies the requirements for the orientation and training of the following personnel:

- Poll workers supporting polling place operations.
- System support personnel involved in election programming.
- User system maintenance technicians.
- Network/system administration personnel (if a network is used).
- Information systems personnel.
- Vendor personnel.

3.1 Poll Workers Supporting Polling Place Operations

Poll worker training and orientation has been completely defined in both printed materials and interactive training.

It is recommended that poll workers should be literate in English and any other relevant local language (if applicable) and possess good communication and interpersonal skills. It is also recommended that poll workers are assigned to locations close to their primary place of residency. There is no need to possess specialized computer and/or technical skills.

A suggested training program for these individuals consists of:

- One primary in-person training day with hands-on training, tutored seminars, and final quiz.
- One follow-up day with hands-on training.
- Provision of written reference and instruction materials.
- Provision of interactive learning CD-ROM or DVD for follow up learning.

Dominion has materials for each aspect of training.

3.2 System Support Personnel Involved in Election Programming

Training EMS personnel is conducted on-site by Dominion at a customer location and using customer equipment. Class takes place over a duration of five days. One instructor per eight students should be provided.

3.3 User System Maintenance Technicians

Machine Technicians require a poll worker training pre-requisite.

- Level 1 technician class: 2 days, 2 instructors; 12-14 students
- Level 2 technician class: 2 days, 2 instructors; 8-10 students

3.4 Network/System Administration Personnel

A suggested training program for these individuals consists of:

- One primary training day with hands-on training, and tutored seminars,
- Provision of written reference and instruction materials.

Dominion has materials for each aspect of training.

3.5 Information Systems Personnel

The orientation and training of information systems personnel have been completely defined in both printed materials and interactive training.

It is suggested that these individuals should be literate in English and possess good communication skills. Beyond those required in their normal daily activities with information systems, there is no need to have specialized computer or technical skills, but experience and comfort with computers is required.

A suggested training program for these individuals consists of:

- One primary training day with hands-on training, and tutored seminars,
- Provision of written reference and instruction materials.

Dominion has materials for each aspect of training.

3.6 Vendor Personnel Training

Dominion personnel receive month-long training with Quality Assurance in order to ensure that all personnel have an in-depth, and equal, understanding of Dominion's products and services. This program generally dedicates two weeks to ImageCast[®] Precinct testing and two weeks to ImageCast[®] Evolution testing. Training on EMS is thread through this month-long program due to its complex nature. With that said, trainees learn how to design and detail projects throughout the entire testing phase.

Trainees are advised to write down any questions, suggestions, or issues they have during the testing phase. These notes are discussed with a Quality Assurance Analyst at the end of each training day. This exchange allows the trainee to garner further information and knowledge about Dominion's products that may not be contained within Dominion's QA test plans. Issues that the trainee has with testing can also result in the creation of a new bug or improvement. Defining these issues further expands the trainee's training, as it teaches him/her how to effectively use Dominion's issue-tracking system, *JIRA*, and demonstrates how Dominion's products and services are developed and improved over time using change management procedures. Using *JIRA* also exemplifies how each department is interconnected and broadens the trainee's understanding of each employee's role within the company.

After the month of training has been completed, the trainee is phased into his/her role and department within Dominion. Training on how to perform department-specific tasks is ongoing and varies from department to department. Typically, senior personnel within the trainee's department will undertake to mentor and advise the new hire until he/she is comfortable and confident in performing tasks on his/her own.