

# Democracy Suite<sup>®</sup> EMS Mobile Ballot Production User Guide

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# CHAPTER 1: INTRODUCTION

Mobile Ballot Production is a Windows application that is used to search, preview and print ballots via a local printer device. The application makes use of ballot information and PDFs produced by the Election Event Designer (EED) application and minimizes the time it takes to search for, and print the ballots required for the election. It allows the voter who is unable to vote at their designated polling location, to go to any other location which supports this functionality and cast their vote.

## 1.1 Relevant Disclaimers

This document may make reference to certain Democracy Suite functionalities that are not part of the current 5.11 campaign and should be disregarded throughout the document.

For a full list of relevant disclaimers, please see the “Relevant Disclaimers” section in the *2.02 - Democracy Suite System Overview* Document.

## CHAPTER 2: USING THE APPLICATION

### 2.1 Installing Mobile Ballot Production

This section outlines how to install the EMS Mobile Ballot Production application using the EMS Installation DVD. Please note that you must first install prerequisites before you continue with Mobile Ballot Production application installation.

#### Mobile Ballot Production prerequisites are:

- Microsoft SQL Server 2016 Express
- Adobe Acrobat Reader 11.0 or newer.

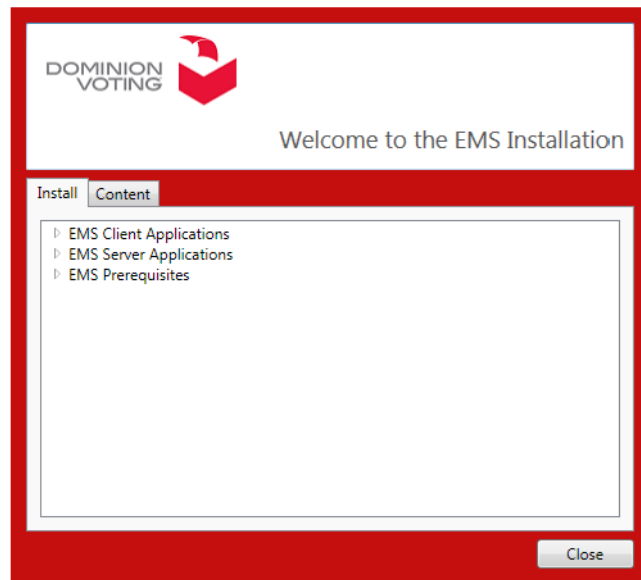


Figure 2-1: EMS installer screen

### 2.2 Installing Prerequisites

#### 2.2.1 Installing Microsoft SQL Server 2016 Express Installation

1. To install Microsoft SQL Server 2016 Express, insert the EMS Installation DVD, and click the Install tab.
2. Expand the EMS Prerequisites item, and select Microsoft SQL Server 2016 SP1 Express With Advanced Services.
3. Choose directory for extracted files screen appears.

4. Click OK.

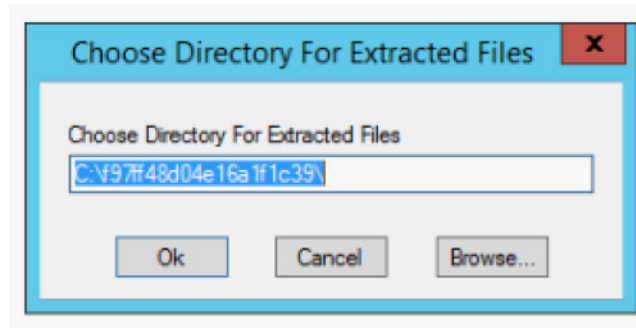


Figure 2-2: Choose directory for extracted files Screen

5. Setup extracts the installation files.
6. Depending on your security settings, a Security Warning dialog may appear.
7. Click Run to start the installation.

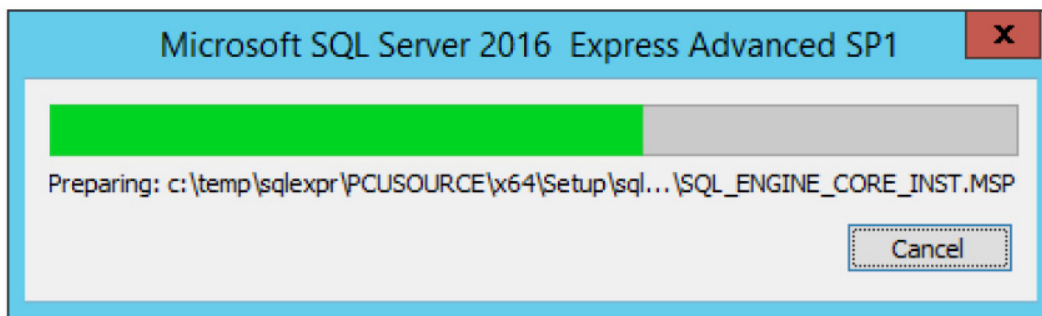


Figure 2-3: Extracting Files Screen

8. The SQL Server Installation Center screen appears.
9. Click the New SQL Server stand- alone installation or add features to an

existing installation option.

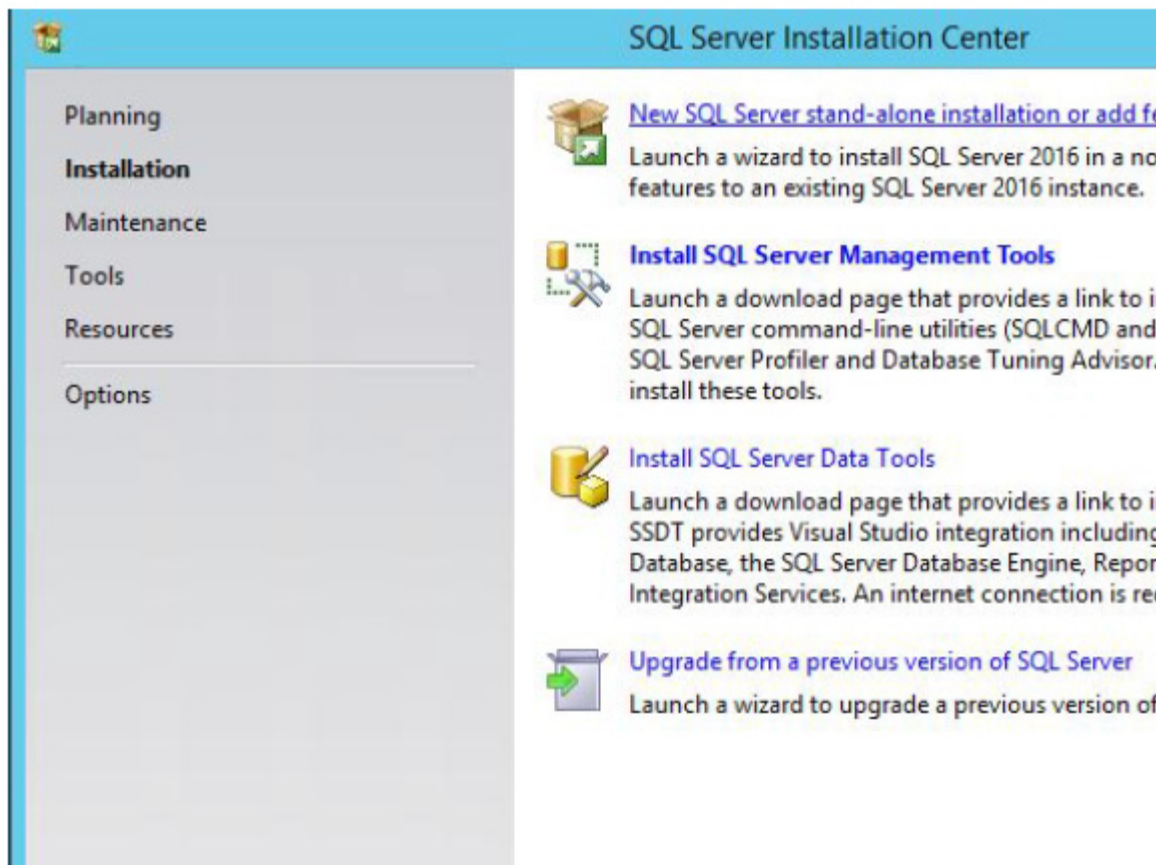


Figure 2-4: SQL Server Installation Center Screen

10. The License Terms screen appears.

11. Check the I accept the license terms box and click Next.

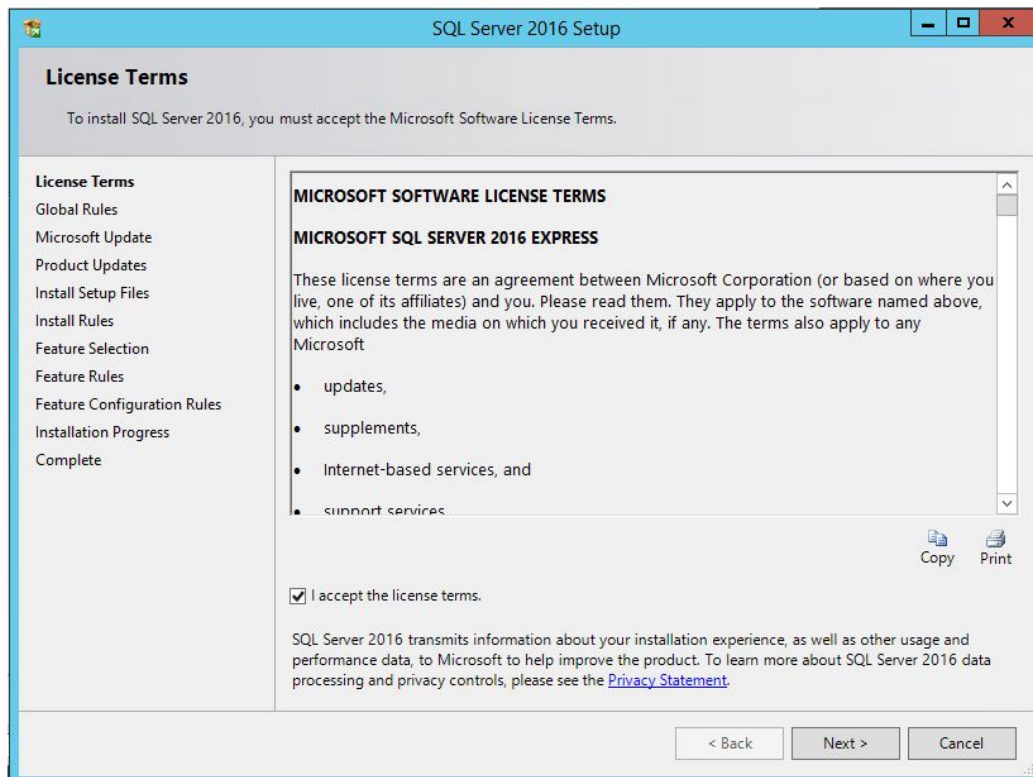


Figure 2-5: License Terms Screen

12. The Microsoft Update screen appears.
13. On the Microsoft Update screen, click Next.



**NOTE:** Do not select the checkbox in the Update Screen.

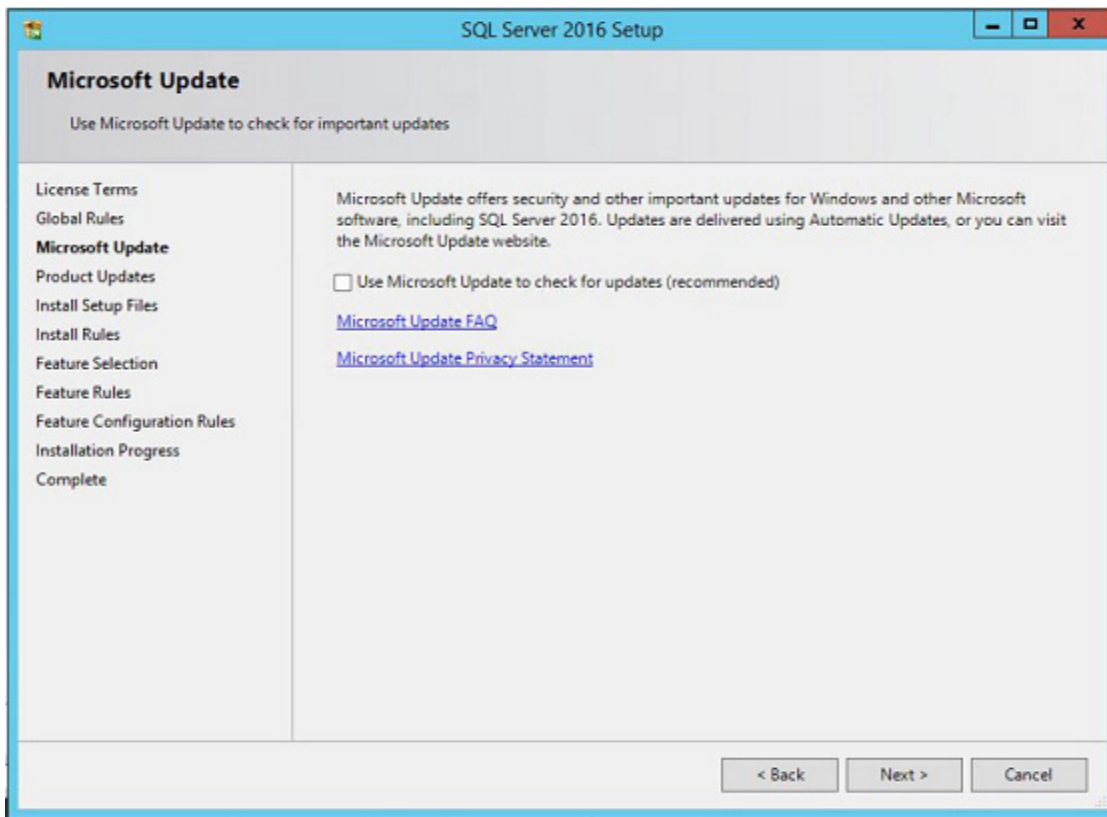


Figure 2-6: Microsoft Update Screen

14. The Product Updates screen appears.

15. Click Next to continue.

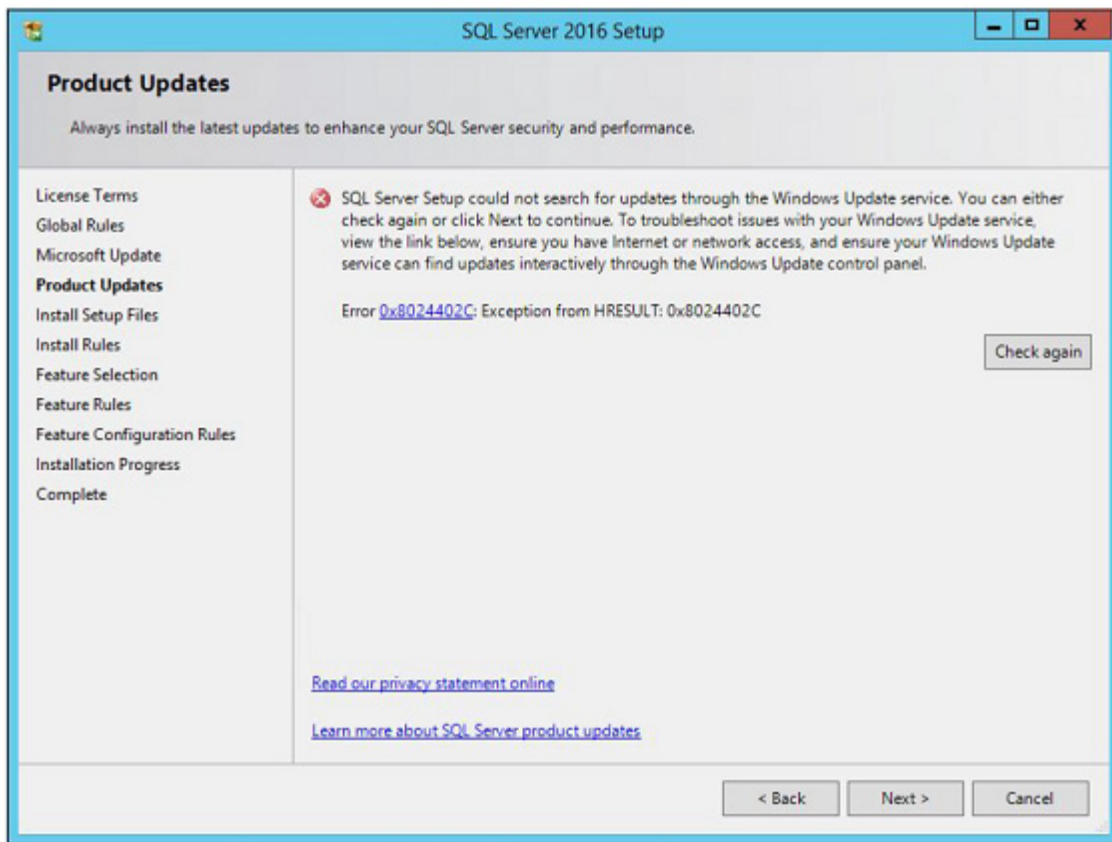


Figure 2-7: Product Updates Screen

16. The Install Rules screen appears.

17. Click Next to continue.

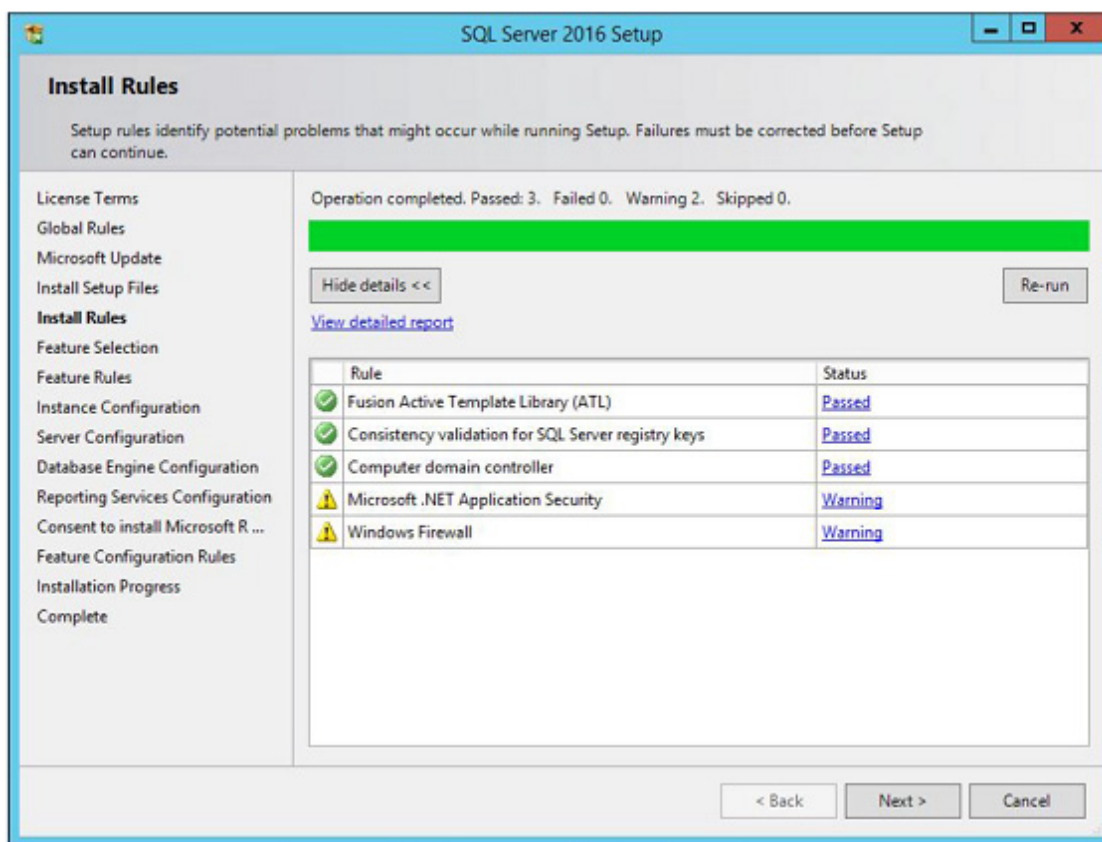


Figure 2-8: Install Rules Screen

18. In the Feature Selection screen , select the Microsoft SQL Server 2016 Express features to be installed.
19. Check Database Engine Services, Full Text Search and Reporting Services

Native and click Next to continue.

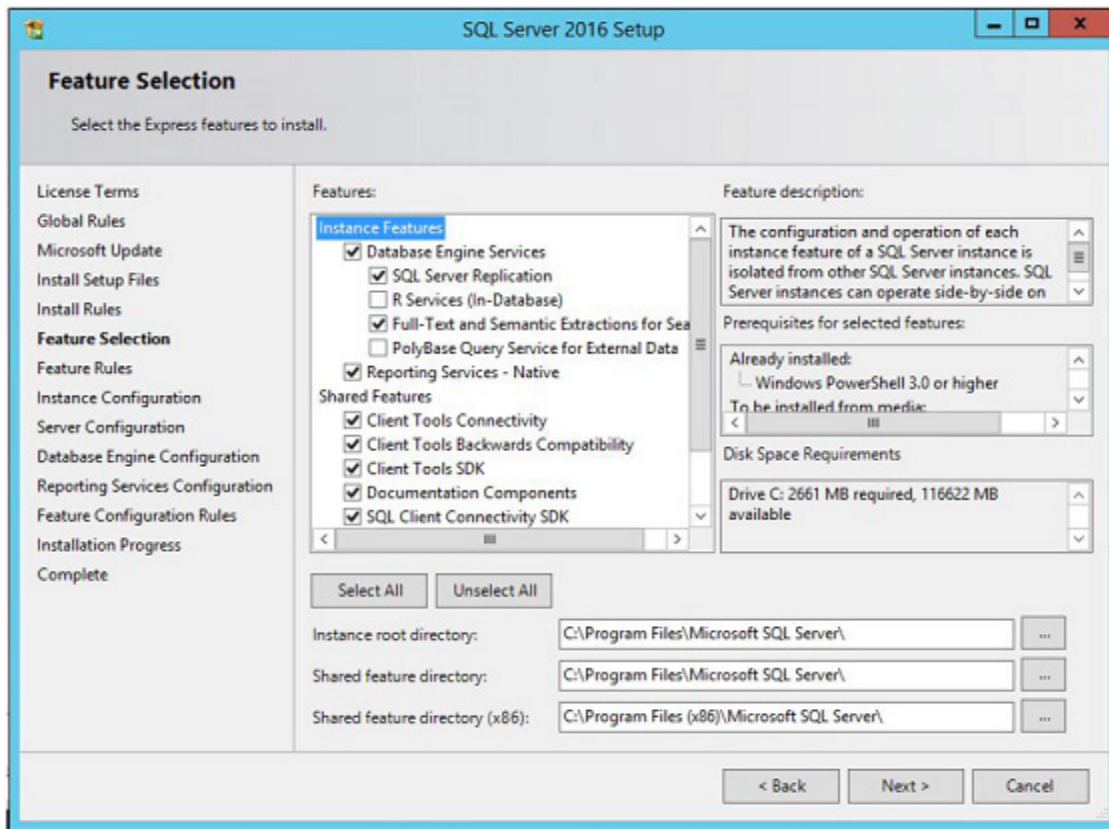


Figure 2-9: Feature Selection Screen

20. In the Instance Configuration screen, select Default instance and click Next

to continue.

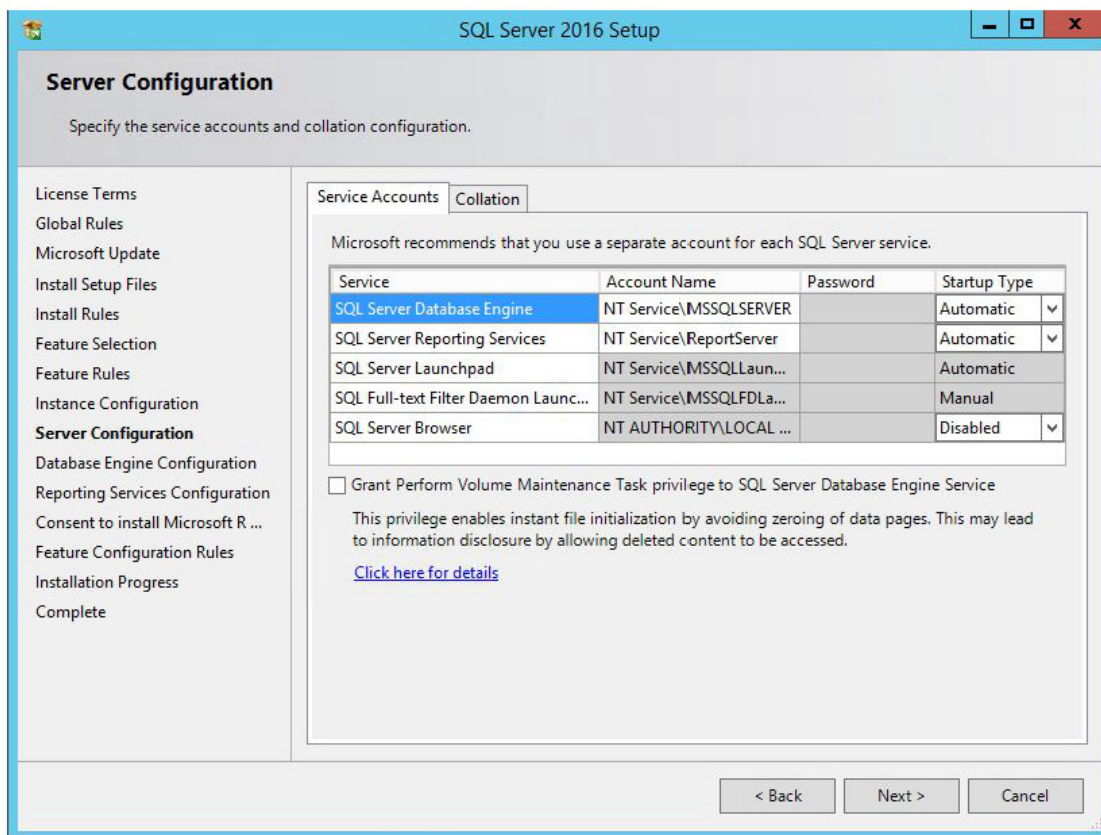


Figure 2-10: Instance Configuration Screen

21. In the Server Configuration screen, set NT AUTHORITY\SYSTEM as the Account Name for SQL Server Database Engine and SQL Server Reporting

Services items.

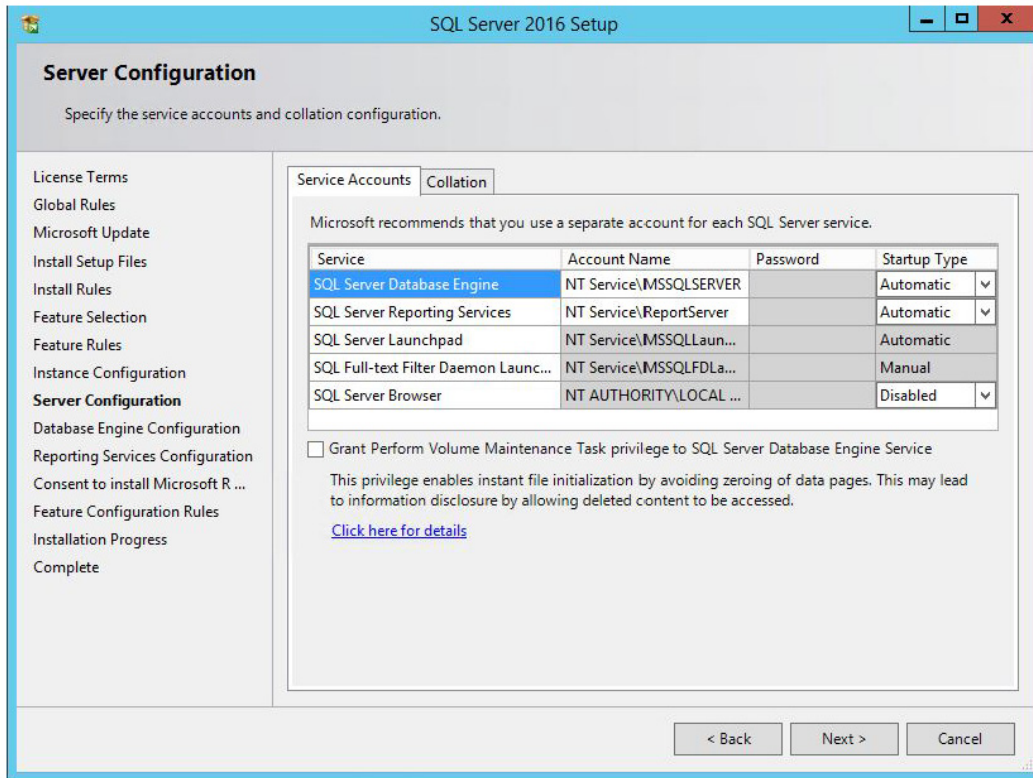


Figure 2-11: Server Configuration Screen

22. In the screen that appears, from the combo box select Account Name for



SQL Server Database Engine and click Browse.

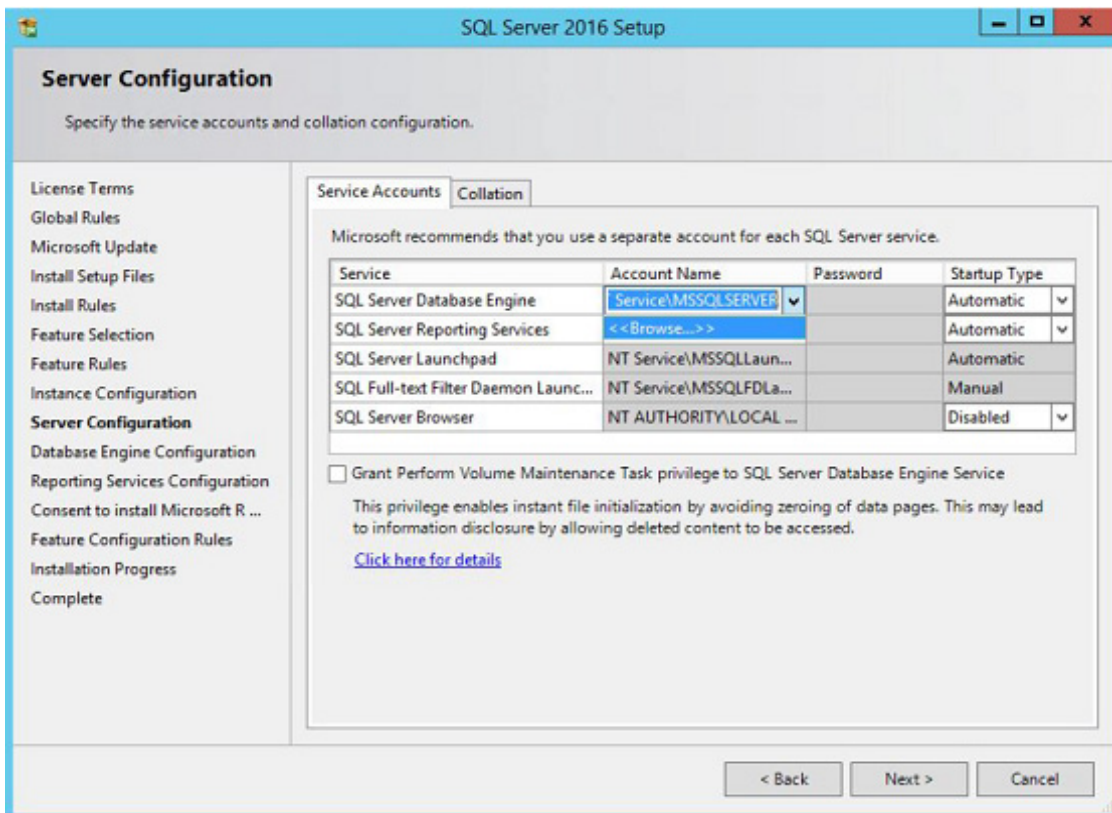


Figure 2-12: Server Configuration Screen

23. On the Select User or Group screen, type SYSTEM and click OK.

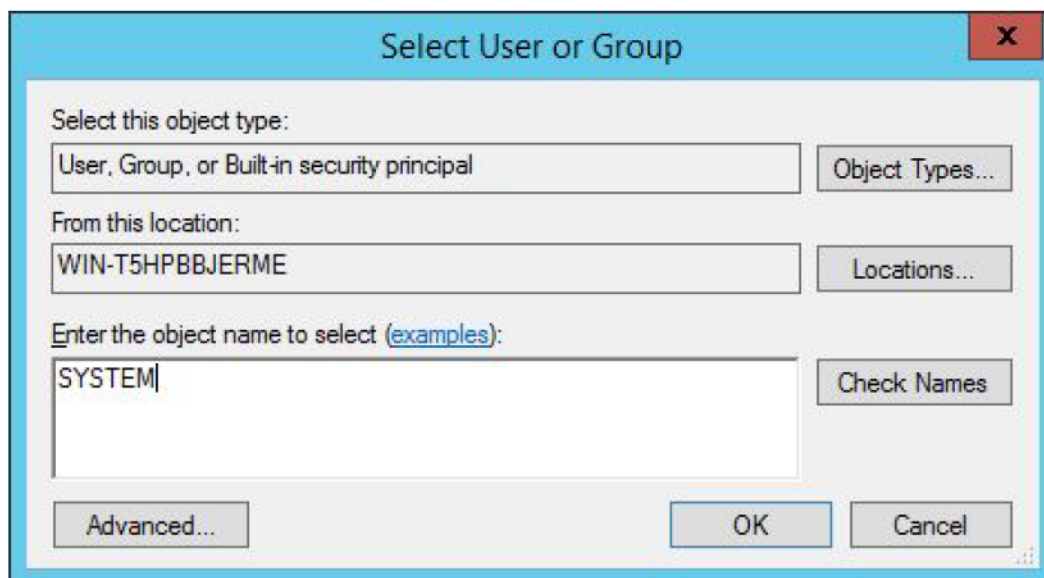


Figure 2-13: Select User or Group Screen

24. In the screen that appears, from the combo box, select Account Name for SQL Server Reporting Services and click Browse.
25. On the Select User or Group dialog, type SYSTEM and click OK.

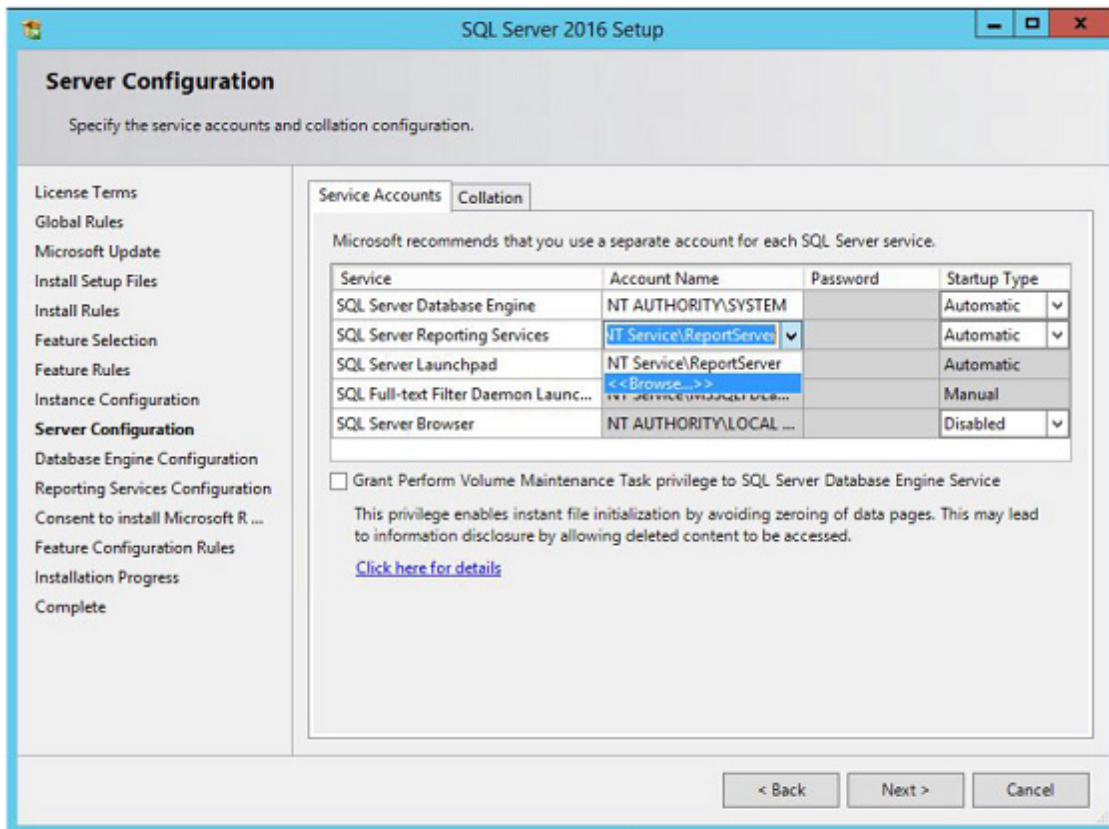


Figure 2-14: Server Configuration Screen



26. Click Next in the Server Configuration screen to proceed.

Service	Account Name	Password	Startup Type
SQL Server Database Engine	NT AUTHORITY\SYSTEM		Automatic
SQL Server Reporting Services	NT AUTHORITY\SYSTEM		Automatic
SQL Full-text Filter Daemon Launc...	NT Service\MSSQLFDLa...		Manual
SQL Server Browser	NT AUTHORITY\LOCAL ...		Disabled

Figure 2-15: Server Configuration Screen

27. In the Database Engine Configuration screen, select the option Windows authentication mode.
28. Click Add Current User to add the server administrator account as an SQL Server administrator.

29. Once the current user is added, click Next to continue.

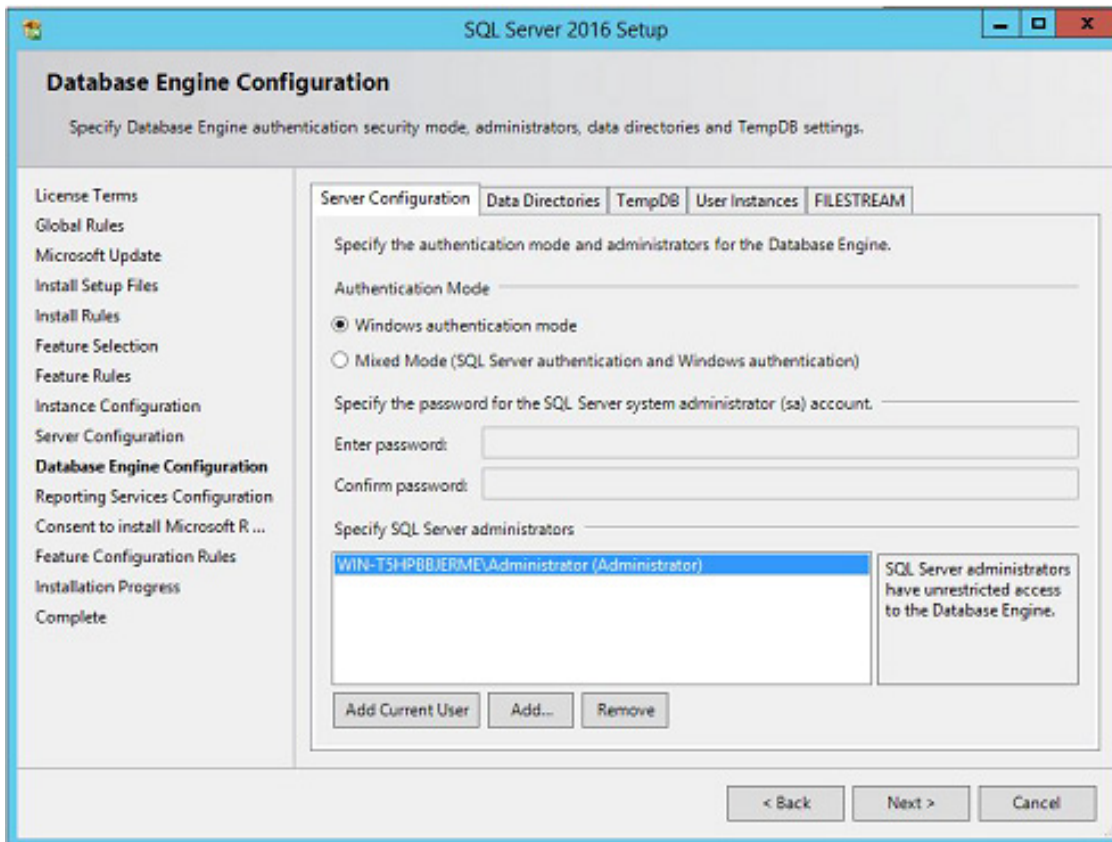


Figure 2-16: Database Engine Configuration Screen

30. On the Reporting Services Configuration screen, select Install and configure.

31. Click Next to continue.

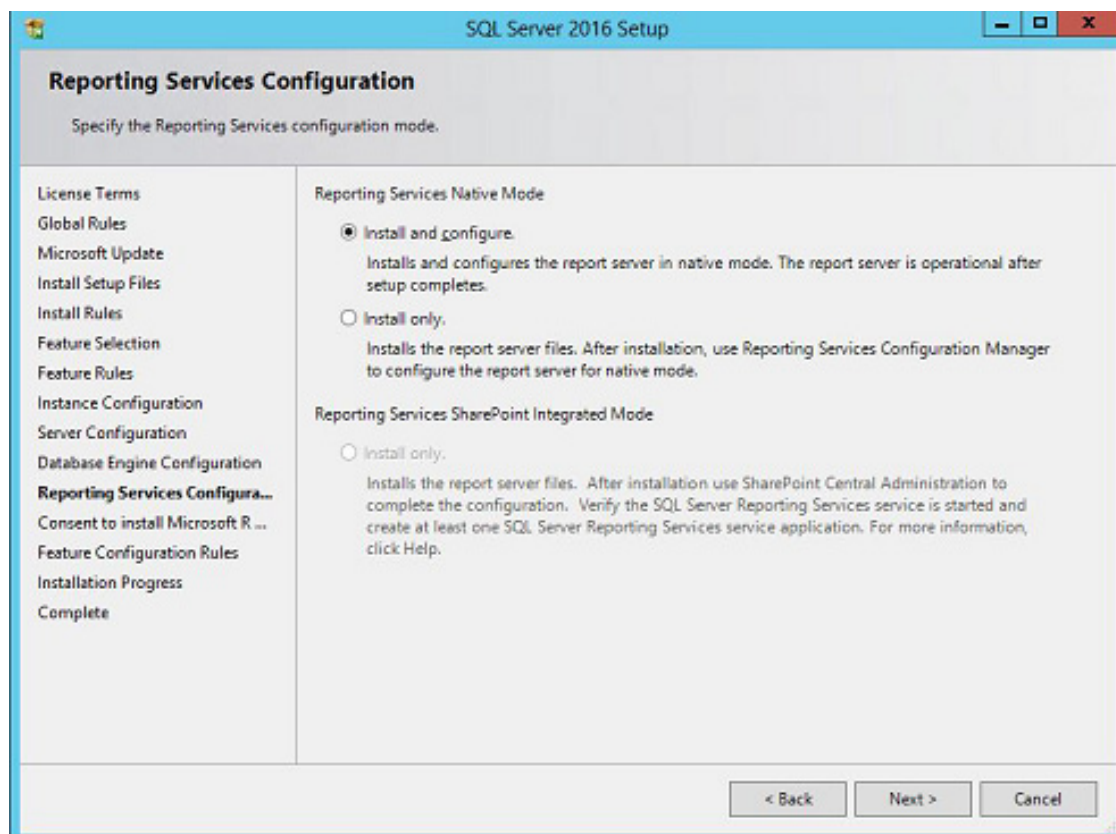


Figure 2-17: Reporting Services Configuration Screen

32. Setup begins the installation process.

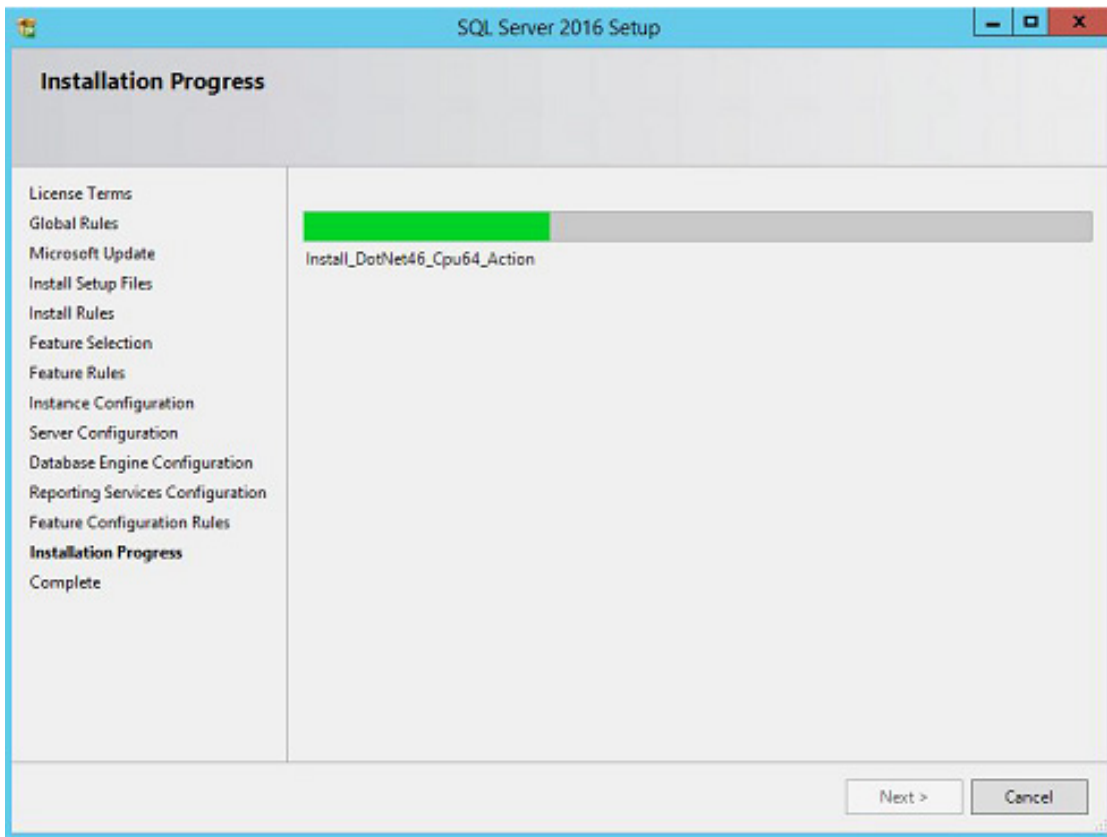


Figure 2-18: Installation Progress Screen

33. If Computer restart dialog box appears, you must restart your computer after the setup process is completed.

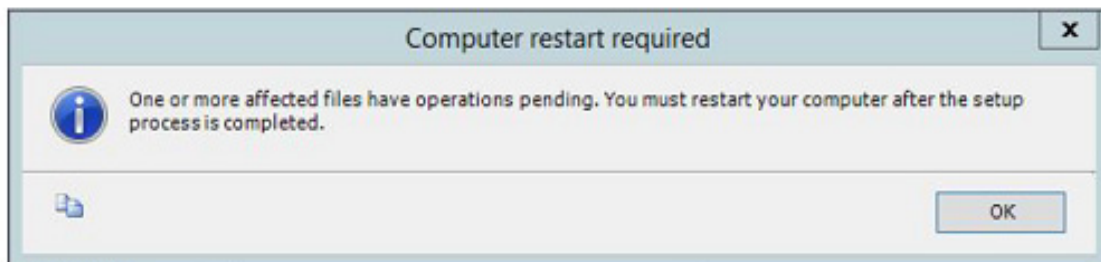


Figure 2-19: Restart Required Screen

34. Once the installation is complete, click Close on the Complete screen.

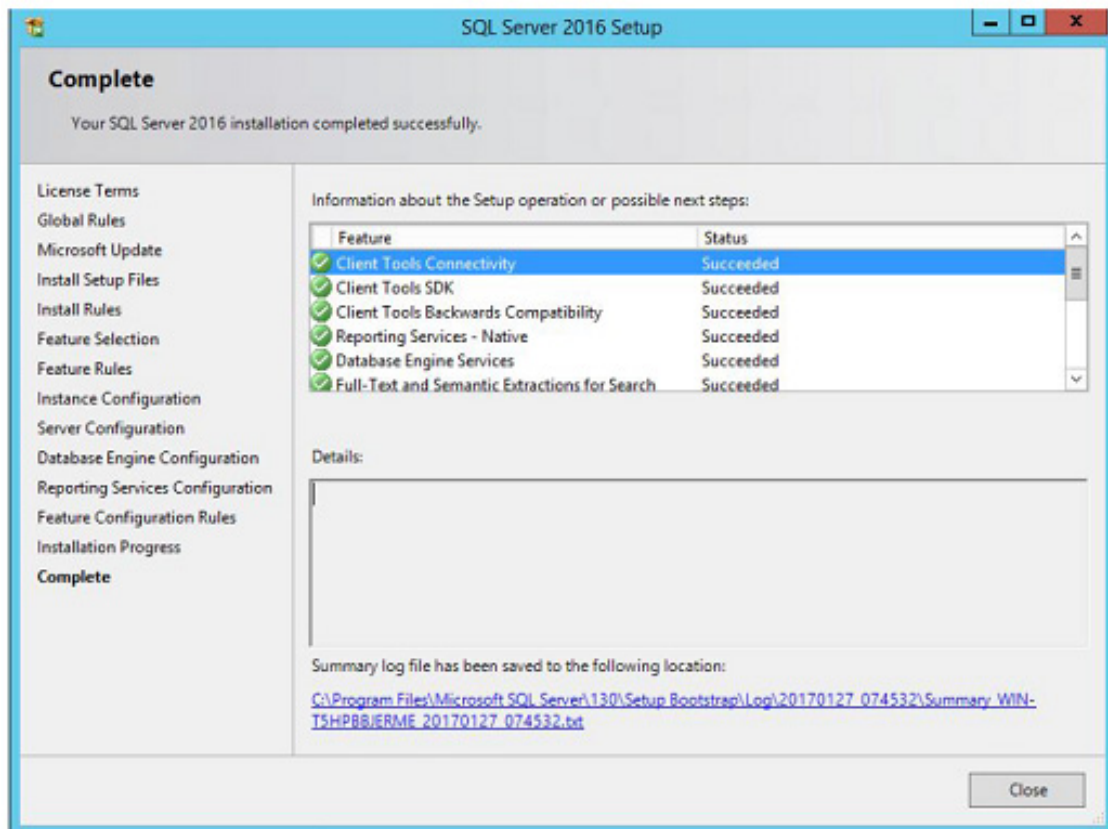


Figure 2-20: Complete Screen

35. Close the SQL Server Installation Center screen.

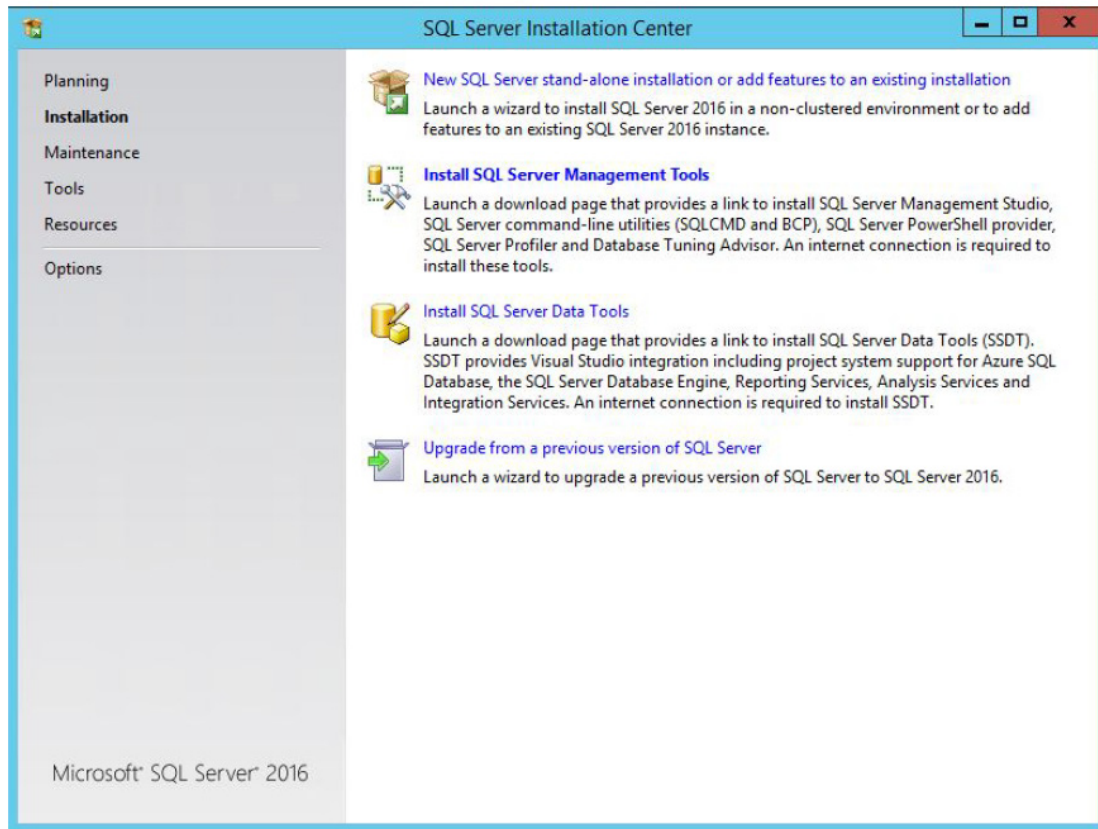


Figure 2-21: SQL Server Installation Center Screen

### 2.2.1.1 Configuring SQL Server Reporting Services Database

To ensure Reporting Service stability in case of host renaming, do the following reconfiguration:

1. Start the Reporting Services Configuration Manager tool.

2. Connect to the report server.

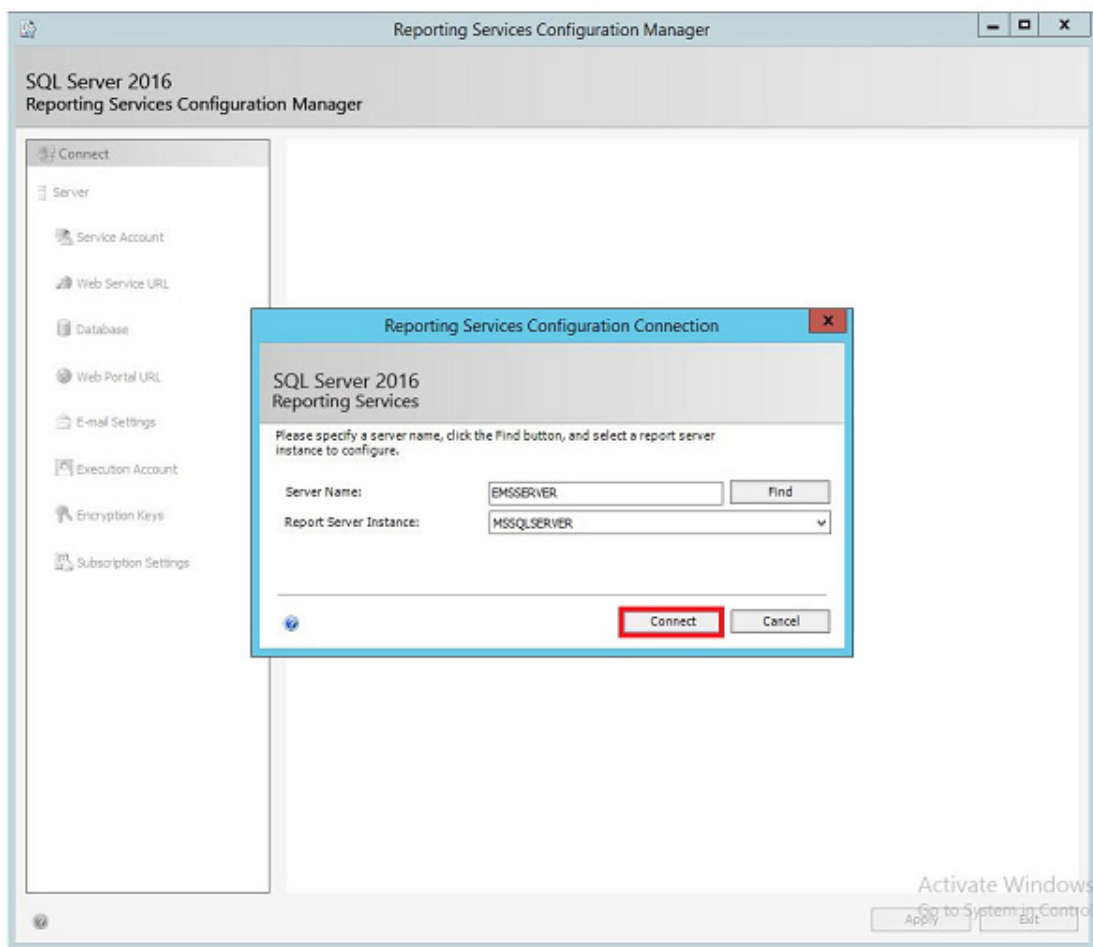


Figure 2-22: Configuring SQL Server Reporting Services Database - Connect to SSRS

3. Open the Database Setup page.



#### 4. Click Change database button.

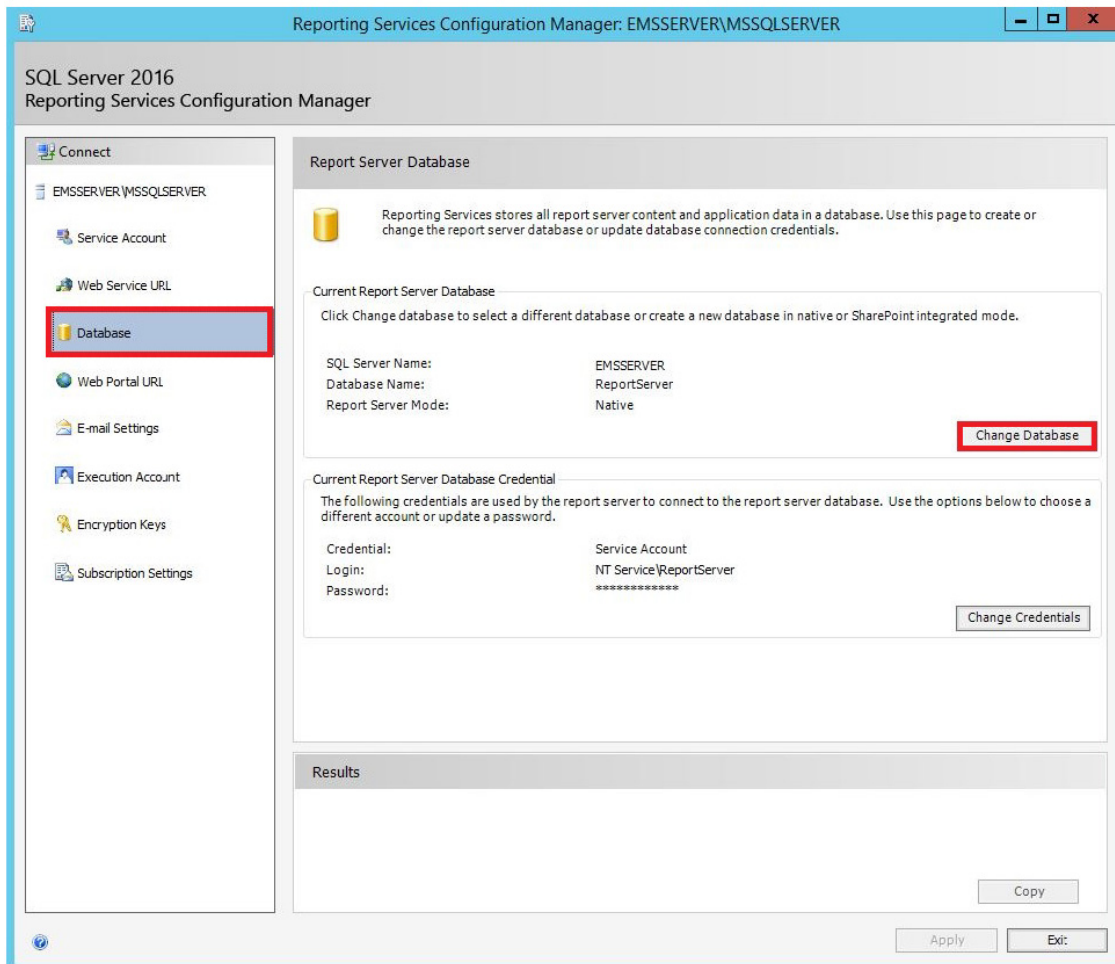


Figure 2-23: Configuring SQL Server Reporting Services Database - Select Database



5. Select Choose an existing report server database and click Next.

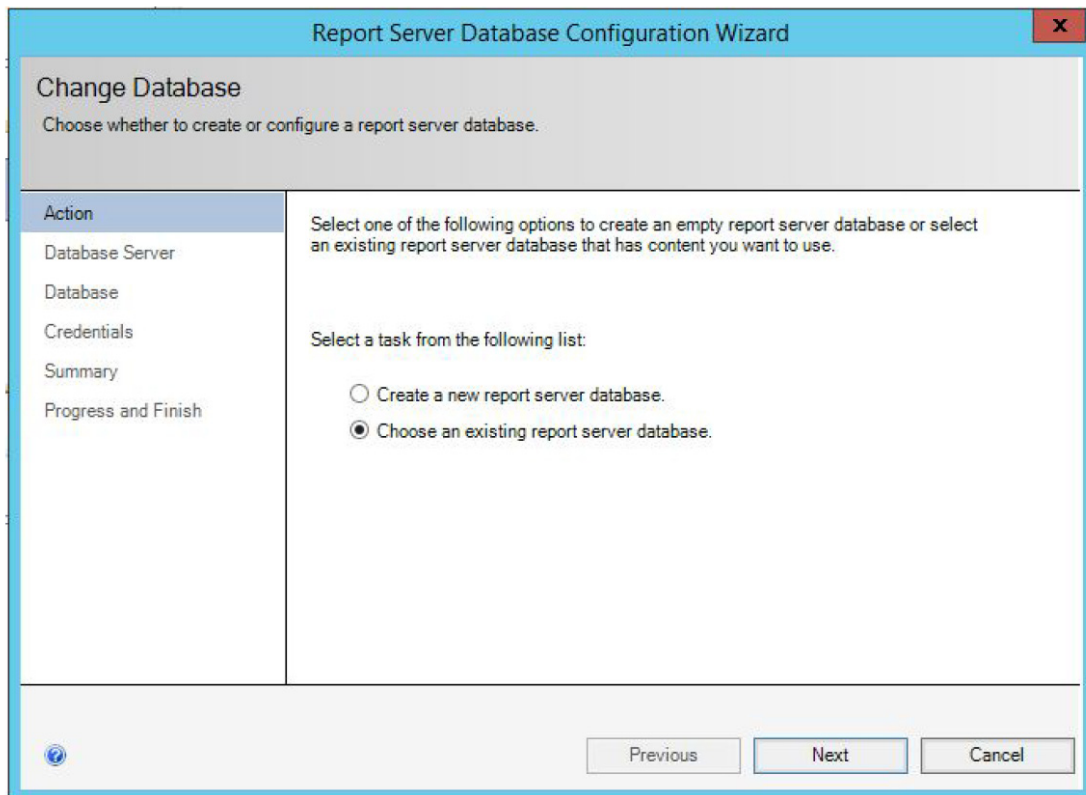


Figure 2-24: Configuring SQL Server Reporting Services Database - Choose Existing Database

6. Type localhost in Server Name and click Test Connection. If test connection

succeeded, click Next.

The screenshot shows the 'Report Server Database Configuration Wizard' window. The title bar is blue with the text 'Report Server Database Configuration Wizard' and a close button. The main area has a light gray background. At the top, it says 'Change Database' and 'Choose whether to create or configure a report server database.' Below this is a vertical list of steps: 'Action', 'Database Server' (highlighted), 'Database', 'Credentials', 'Summary', and 'Progress and Finish'. The main content area is titled 'Choose a local or remote instance of a SQL Server Database Engine and specify credentials that have permission to connect to that server.' It contains the text 'Connect to the Database Server:' followed by four input fields: 'Server Name' (containing 'localhost'), 'Authentication Type' (a dropdown menu showing 'Current User - Integrated Security'), 'Username' (containing 'EMSSERVER\emsadmin'), and 'Password' (empty). A 'Test Connection' button is located below the password field. At the bottom of the window are three buttons: 'Previous', 'Next' (highlighted), and 'Cancel'.

Figure 2-25: Configuring SQL Server Reporting Services Database - Type localhost

7. Change combo box Report Server Database to Report- Server (it can vary depend of instance name for example Report- Server MSSQLSERVER) and

click Next.

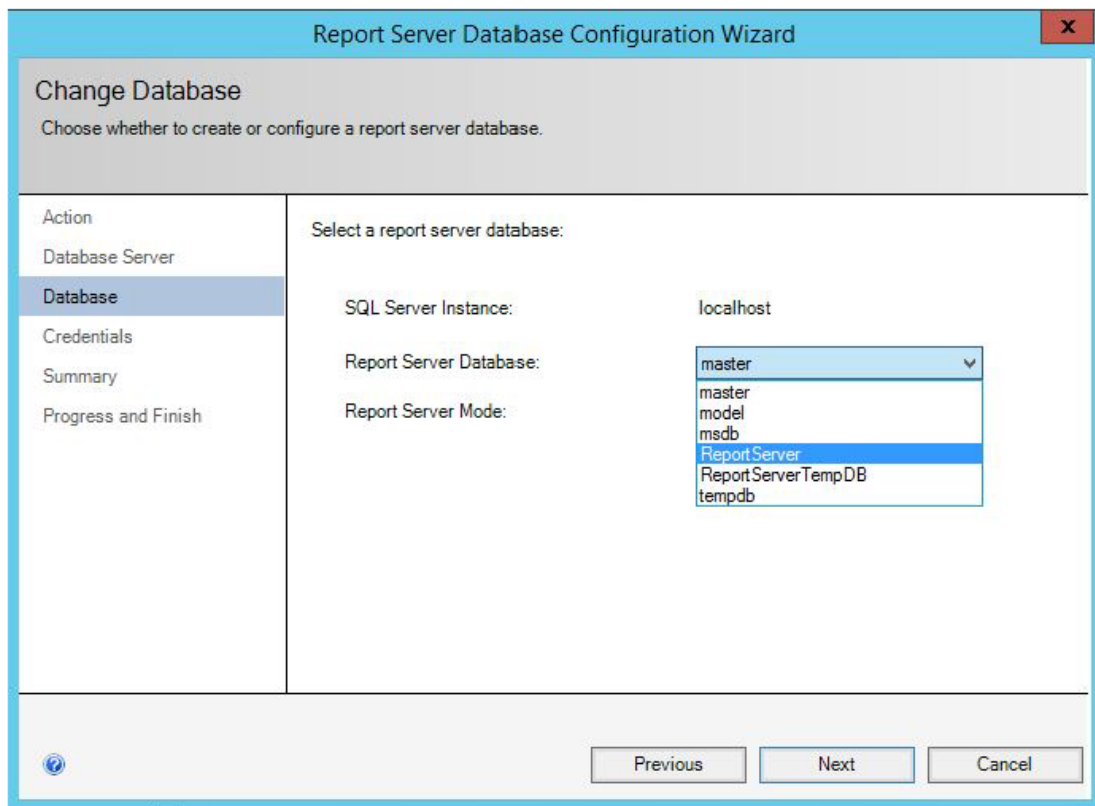


Figure 2-26: Configuring SQL Server Reporting Services Database - Select Report Server Database

## 8. Leave Service Credential and click Next.

The screenshot shows the 'Report Server Database Configuration Wizard' window. The title bar is blue with a red close button. The main window has a light blue header with the text 'Change Database' and a subtitle 'Choose whether to create or configure a report server database.' Below this is a navigation pane on the left with a list of steps: 'Action', 'Database Server', 'Database', 'Credentials' (which is highlighted with a blue background), 'Summary', and 'Progress and Finish'. The main area of the wizard is white and contains the following text: 'Specify the credentials of an existing account that the report server will use to connect to the report server database. Permission to access the report server database will be automatically granted to the account you specify.' Below this text is the 'Credentials:' section, which includes three fields: 'Authentication Type:' with a dropdown menu showing 'Service Credentials', 'User name:' with a text box containing 'NT Service\ReportServer', and 'Password:' with an empty text box. At the bottom of the wizard, there is a light blue bar containing a help icon (a question mark in a circle) on the left and three buttons: 'Previous', 'Next' (which is highlighted with a blue border), and 'Cancel'.

Figure 2-27: Configuring SQL Server Reporting Services Database - Select Credentials

9. Confirm configuration and click Next.

The screenshot shows the 'Report Server Database Configuration Wizard' window. The title bar is blue with a close button (X) on the right. The main window has a light blue header with the text 'Change Database' and a subtitle 'Choose whether to create or configure a report server database.' Below this is a list of steps on the left: 'Action', 'Database Server', 'Database', 'Credentials', 'Summary' (highlighted), and 'Progress and Finish'. The main area displays the following configuration details:

The following information will be used to connect to an existing report server database. Verify this information is correct before you continue.	
SQL Server Instance:	localhost
Report Server Database:	ReportServer
Report Server Mode:	Native
Authentication Type:	Service Account
Username:	NT Service\ReportServer
Password:	*****

At the bottom of the window, there are three buttons: 'Previous', 'Next' (highlighted), and 'Cancel'. A small help icon is visible in the bottom left corner.

Figure 2-28: Configuring SQL Server Reporting Services Database - Summary

10. Wait Report Server to configure databases. It might take several minutes to complete and click Finish.

## 11. Restart Report server service.

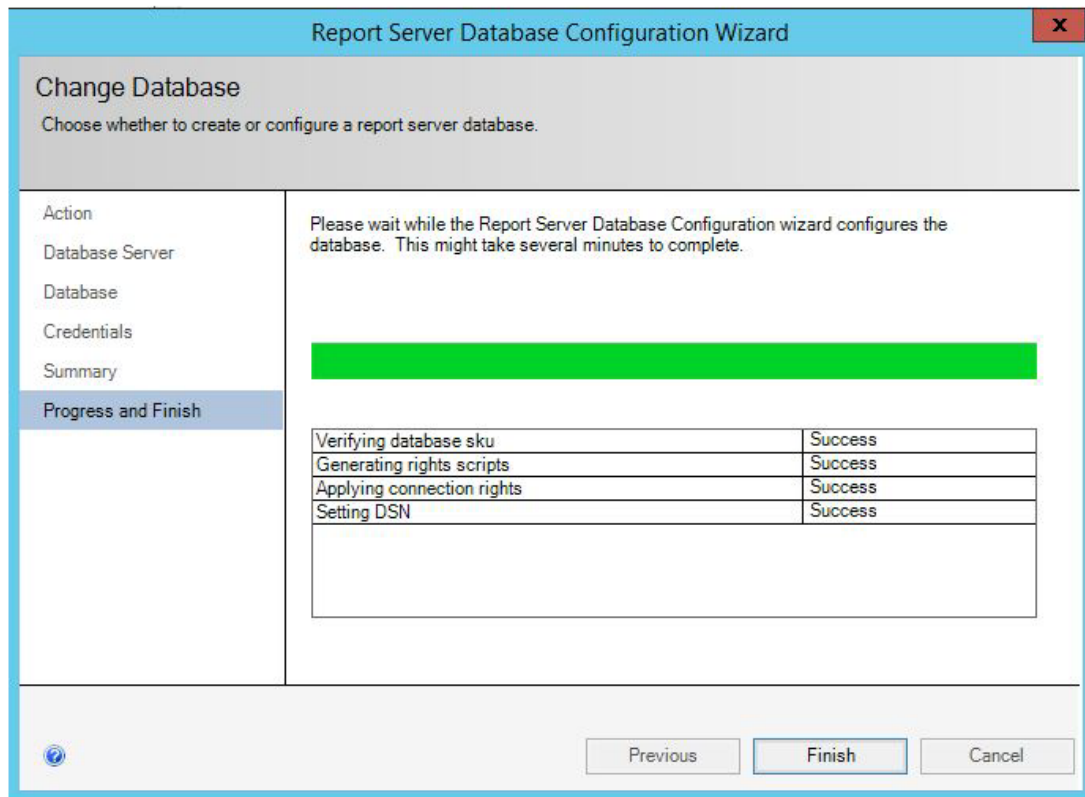


Figure 2-29: Configuring SQL Server Reporting Services Database - Finish

### 2.2.2 Adobe Reader Installation

1. To install Adobe Reader, insert the EMS Installation DVD, and click the Install tab.
2. Expand the EMS Prerequisites item, select Adobe Reader and double-click on the 32 bit version option.
3. The User Account Control (UAC) screen appears.
4. Click Yes to proceed.

5. On the Ready For Install Adobe Reader screen click Install.

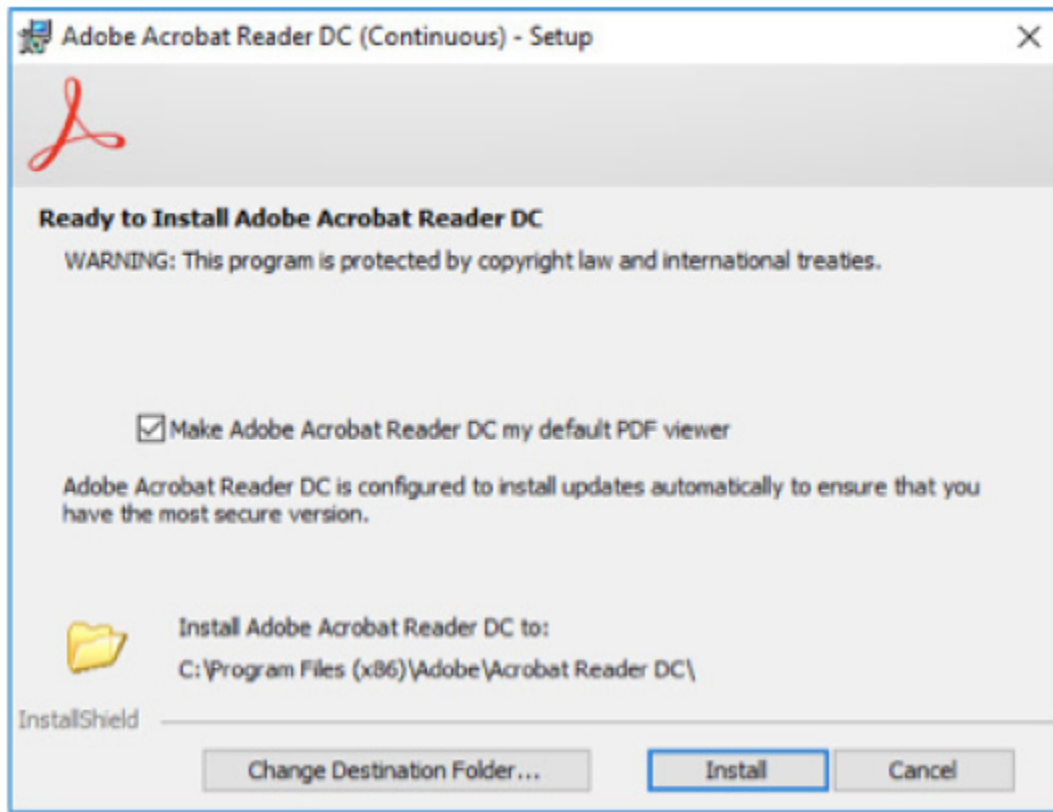


Figure 2-30: Ready to Install screen

6. When setup finishes the installation process, click Finish to complete the

installation.

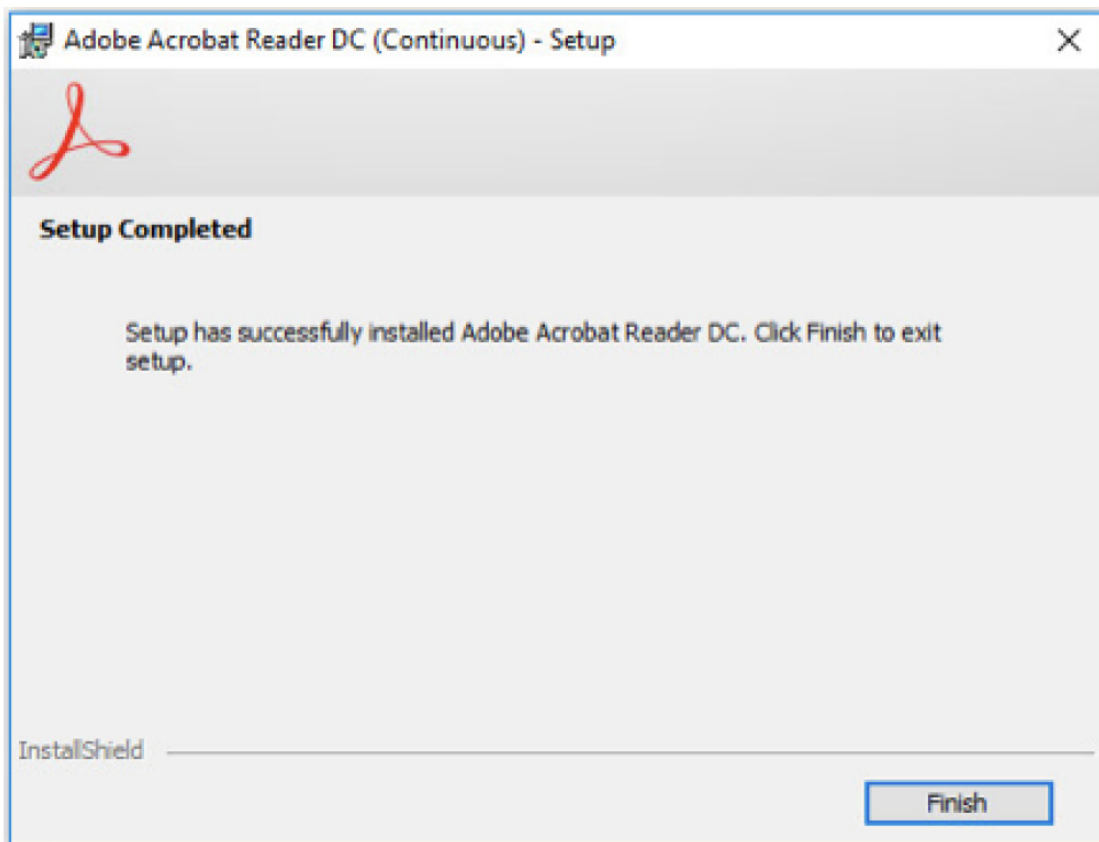


Figure 2-31: Installation Complete screen

### 2.2.3 Disabling Protected Mode in Adobe Reader

1. Right-click on the icon. (If it does not start up when double click, open task manage, and find all adobe reader processes from the background and stop them).
2. Run as Administrator.
3. Go to Edit/Preferences.
4. Go to Security (Enhanced) item from the list on the left.



5. Uncheck: Enable protected mode at startup.

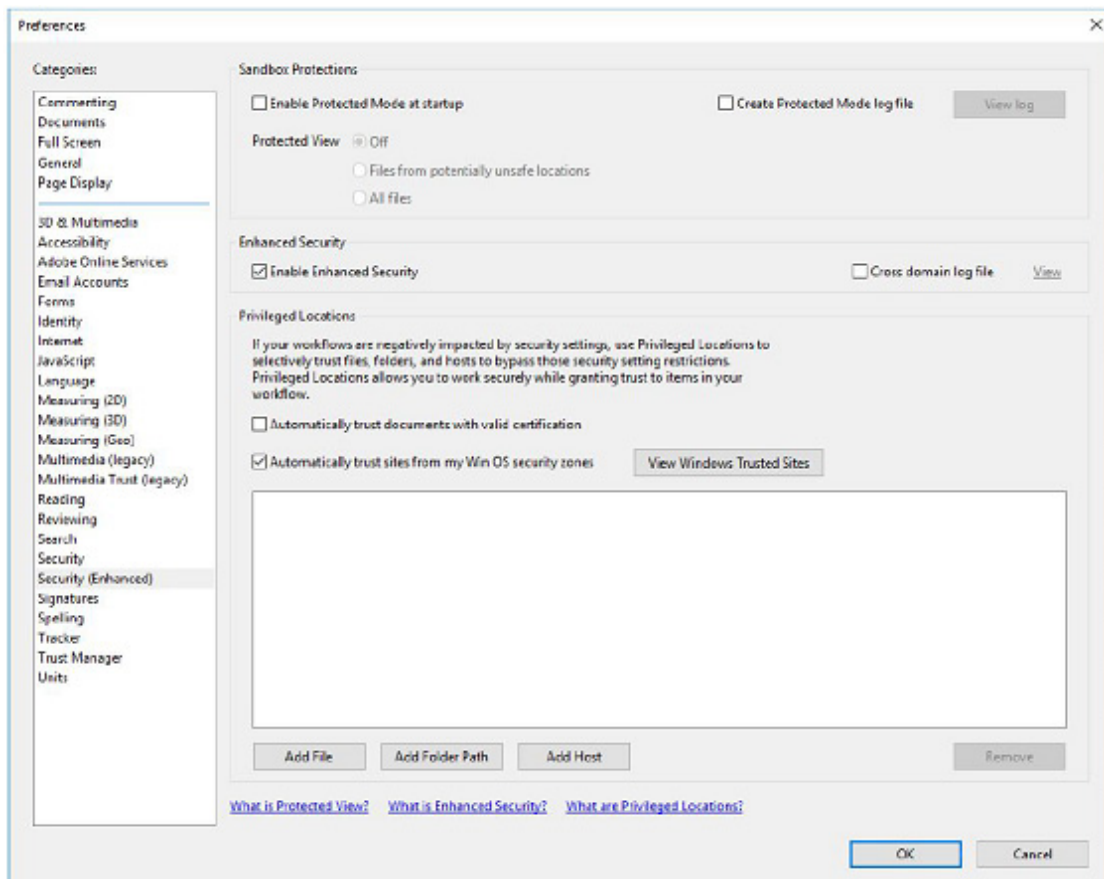


Figure 2-32: Edit Preferences security screen

6. Click Yes to confirm changes.
7. Close Adobe Reader application.

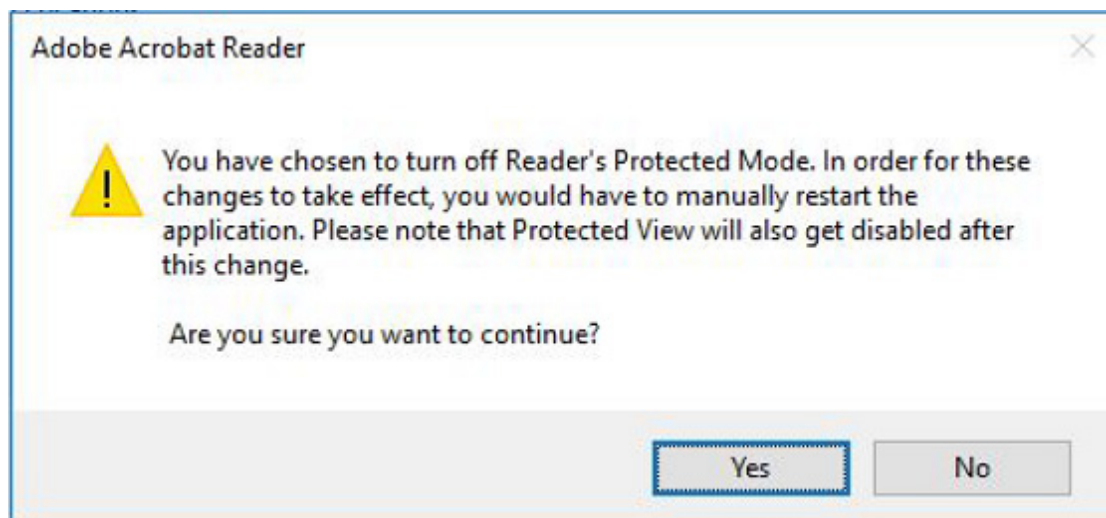


Figure 2-33: Enable protected Mode Startup

## 2.3 Installation Procedures

If a previous version of Mobile Ballot Production exists on your workstation, perform the following:

1. On your workstation, navigate to the Start menu on the bottom right of your screen.
2. Right click on Start and select Control Panel . An All Control Panel Items screen appears.
3. Within this screen, select Programs and Features.
4. A list of all installed programs appears. From this list, highlight EMS Mobile Ballot Production, and click Uninstall on the grey toolbar.
5. Click Yes to confirm and begin the uninstall process.
6. Once uninstalled, close all open windows and perform a fresh installation as outlined in the following Section.
7. Insert the EMS Installation DVD into your CD/DVD ROM drive. If the DVD AutoPlay option is enabled on your workstation, the software installation application will begin automatically and an AutoPlay window appears on your screen. Click Run Setup.exe item. If the software installation does not begin automatically, please navigate to the CD/DVD ROM drive, and double-click on the file named “EMSInstallation” to start this installation process.
8. The EMS Installation Welcome screen appears.
9. Click on the Install tab and expand the options listed under EMS Client Applications by clicking on the arrow beside it.
10. Choose EMS Mobile Ballot Production from the list of client applications, and expand the options listed under it by clicking on its arrow.
11. Double click on the 32 bit version.

12. The Mobile Ballot Production Setup Wizard Welcome screen appears.

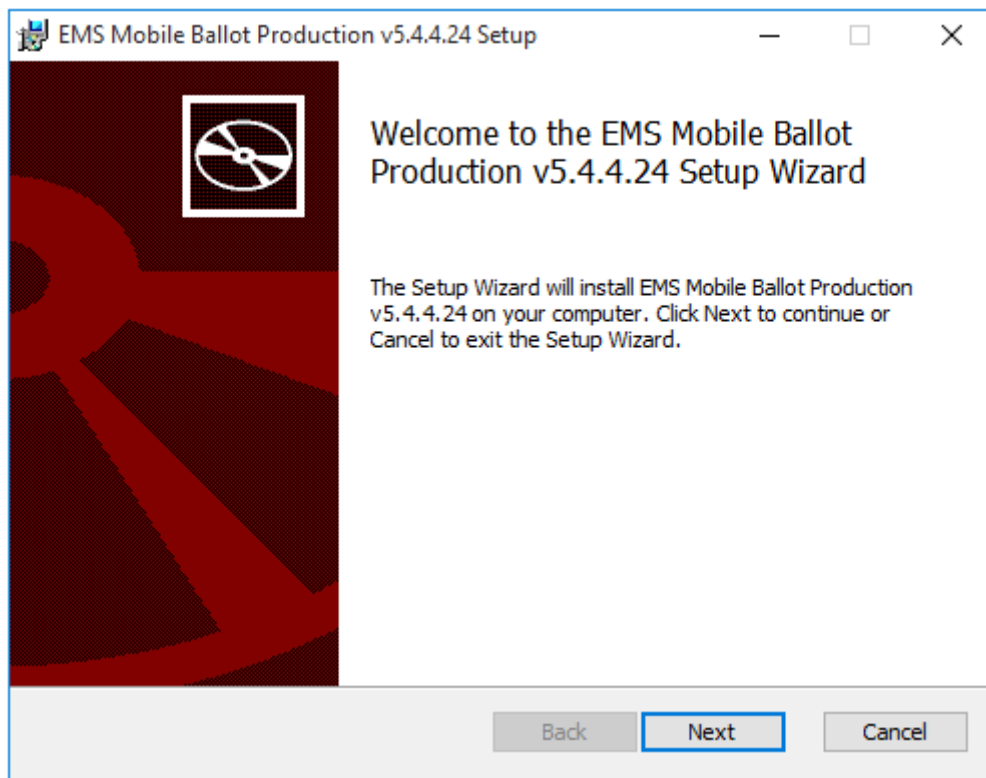


Figure 2-34: Setup Wizard Welcome Screen

13. Click Next to begin your installation.
14. The License Agreement screen appears. Read the License Agreement.
15. If you understand and agree to all the terms contained within the License Agreement, select the I Agree option and click Next.

**NOTE:** You cannot proceed with the installation if you do not agree to the

terms and conditions outlined in the License Agreement.

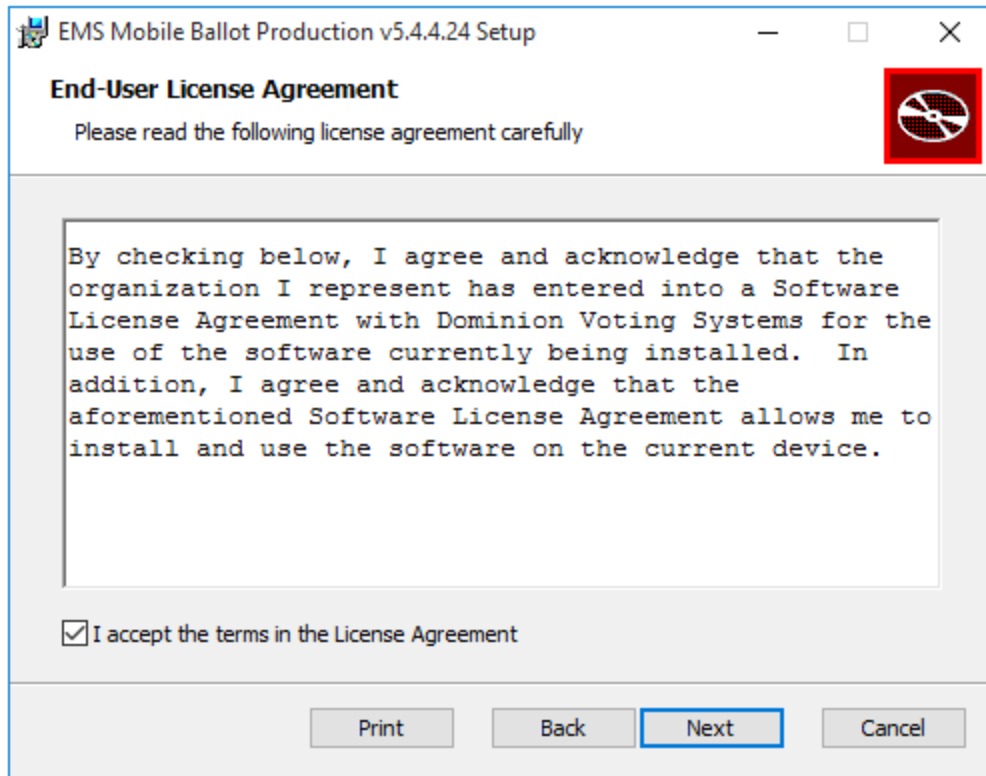


Figure 2-35: License Agreement Screen

16. The Destination Folder screen appears. Keep the default file path listed in the Folder field. This is the location to which Mobile Ballot Production will be installed.

17. Click Next to continue.

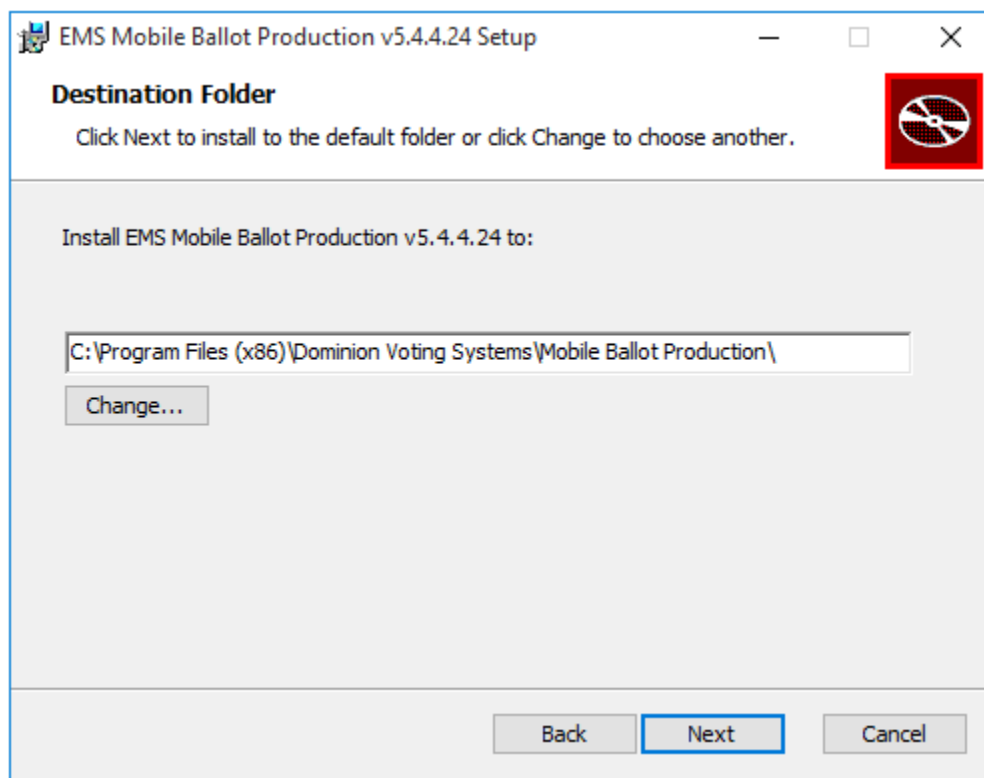


Figure 2-36: Destination Folder Screen

18. A Confirm Installation screen appears.

19. Click Install to begin your installation.

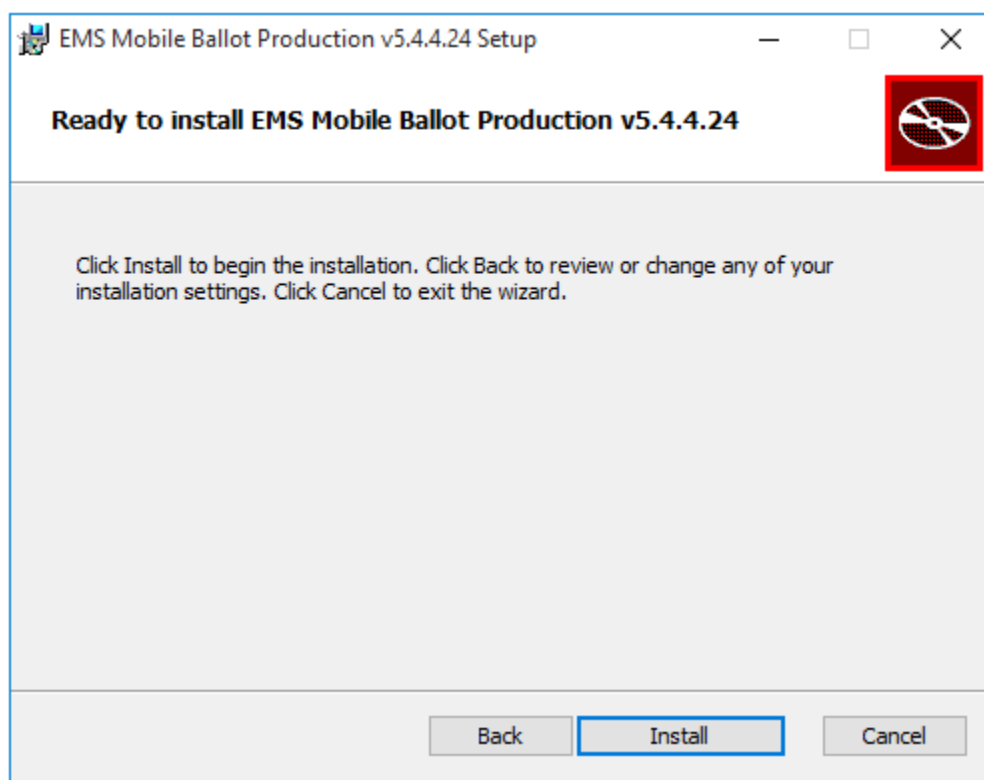


Figure 2-37: Confirm Installation Screen

20. Mobile Ballot Production will begin to install.

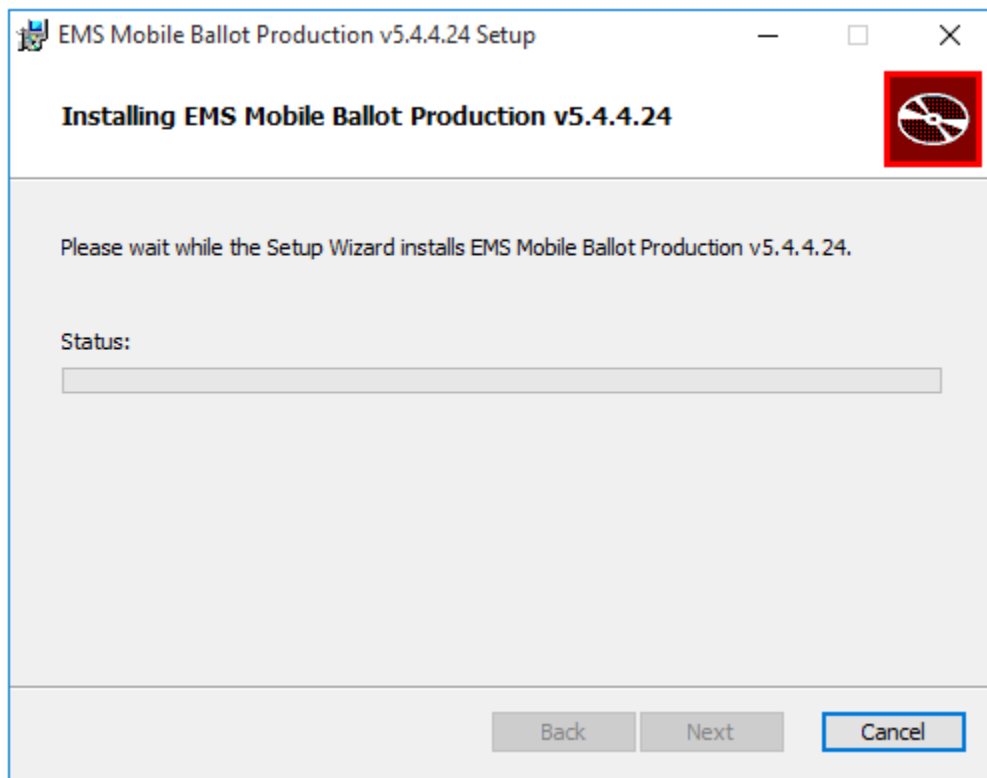


Figure 2-38: Installation Progress Screen

21. You will receive confirmation that the installation has completed. The Mobile Ballot Production is now installed on your workstation. If this is your first time installing Mobile Ballot Production on your workstation, you may need to restart your computer. When prompted, click Yes to restart the computer immediately, or No to restart manually at a later time and proceed to the next step.

22. Click Finish to exit the Mobile Ballot Production Installation Wizard.

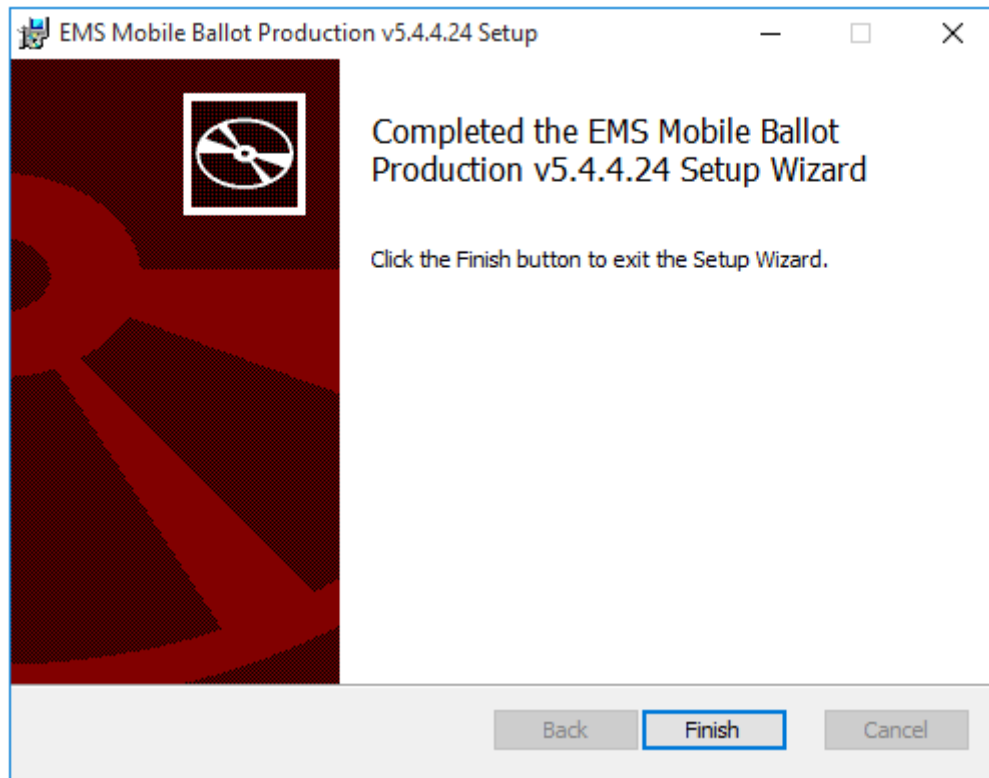


Figure 2-39: Installation Complete Screen

## 2.4 Configuring the Application

To start the Mobile Ballot Production client application, perform the following steps:

1. When the application is installed, you need to configure the Mobile Ballot Production environment (set the Database server, configure Reporting Services and manage the MBP users).
2. For these actions you need to be administrator and start the application as an administrator because administrator's privileges are required.
3. To run this application as an administrator, press the SHIFT button and right click on the desktop icon and then click the Run as Administrator option from the menu.
4. If the User Account Control (UAC) screen appears, click Yes to continue.
5. MBP Configuration screen will appear.
6. Users that want to use the Mobile Ballot Production application and are not local system administrators, need to be members of the MBP Users or MBP Admins group. The MBP Users group represents the regular poll workers. The MBP Admins group represents the election officials with elevated



privileges in MBP.

**NOTE:** Non Administrator user cannot configure MBP application, create new Windows account and assign user to MBP Users group.

7. If you want to assign a user to the MBP Users group, select that user from the Users drop down menu and click Assign as user. To assign a user to the MBP Admins group, click Assign as admin.
8. The assigned user will appear in the corresponding list.
9. To remove a user from the MBP Users group, select the desired user from the MBP Users list and click Remove from group.
10. If you want to create a new MBP user on the local machine, click Create New.

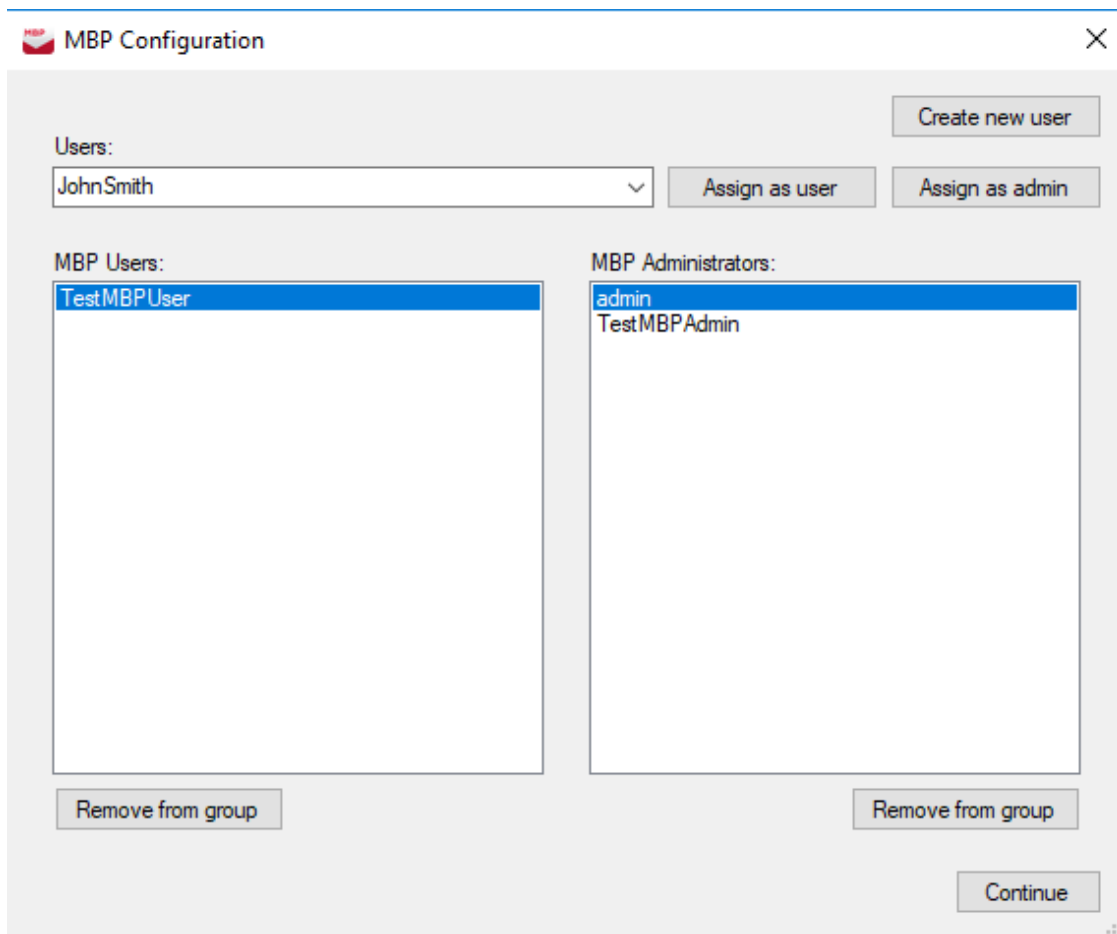


Figure 2-40: MBP Configuration dialog

11. The New User screen appears. Enter User Name and Password. Select whether the new user will be an MBP User or an MBP Admin. Click Apply.
12. An Information screen appears indicating that a new user has been created and assigned to the MBP Users group. Click Close.

13. Click Close to close the New User screen.

**NOTE:** Password must contain characters (at least one) from three of the following four categories:

- English uppercase characters (A through Z)
- English lowercase characters (a through z)
- Base 10 digits (0 through 9)
- Non-alphabetic character
- Also the password cannot contain spaces at the start or end of the password string

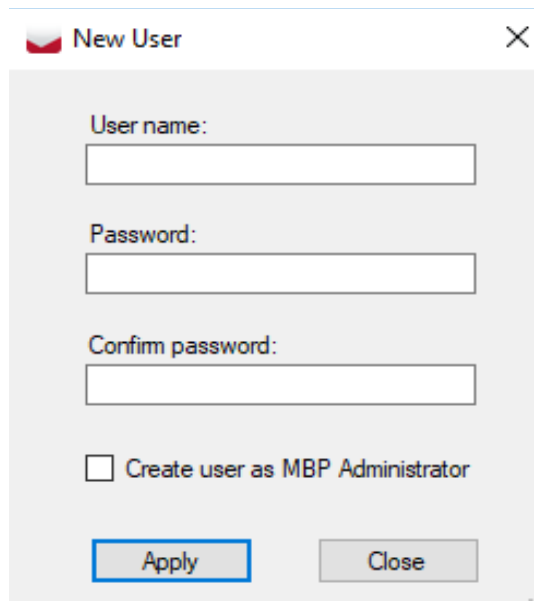
A screenshot of a 'New User' dialog box. The dialog has a title bar with a red icon and the text 'New User' and a close button (X). The main area is light gray and contains three text input fields labeled 'User name:', 'Password:', and 'Confirm password:'. Below these fields is a checkbox labeled 'Create user as MBP Administrator'. At the bottom are two buttons: 'Apply' (highlighted with a blue border) and 'Close'.

Figure 2-41: New User dialog

14. In the MBP Users list, a new user will appear. Click Close to close the MBP Configuration dialog.
15. The introduction screen appears.



Figure 2-42: Welcome Splash screen

16. The Application will open.
17. If you want to change the MBP Configuration settings, the configuration dialog can be opened afterward by running the application as an administrator (press SHIFT and right click on the desktop icon and then click Run as Administrator from the menu) and using the File menu option, followed by the Configuration option.

## 2.5 Run Application As member of MBP Users Group

To run the application as a member of an MBP group who is not a local system administrator, you must configure application as a system administrator user, otherwise an error message will appear. New windows users that are members of the MBP User or MBP Admin group can be created during the configuration procedure (see Section Configuring the (see Section Configuring the Application step 11.).

If a user is not administrator or member of the MBP groups, an Error message will appear.

If a member of the MBP Users group would access a feature that is restricted to members of the MBP Admins group, such as resetting the number of prints, a

prompt appears requiring an MBP Admin to authorize that action.

## 2.6 Preparing Ballot Definition Data

Ballot definition data will be exported from Election Event Designer application. To export a project data file, perform the following steps:

1. Expand the Election Project menu on the top toolbar and click Export. Select Mobile Ballot Production Definition File..
2. Export Data screen appears.
3. Browse to location export file will be saved and click OK.
4. After the export is finished, you will be informed that requested export is created successfully.
5. Click OK.

## 2.7 Project Creation and Configuration

1. After having configured the application you will be presented with the main application screen. All action buttons are disabled until you open or create a Mobile Ballot Production project.

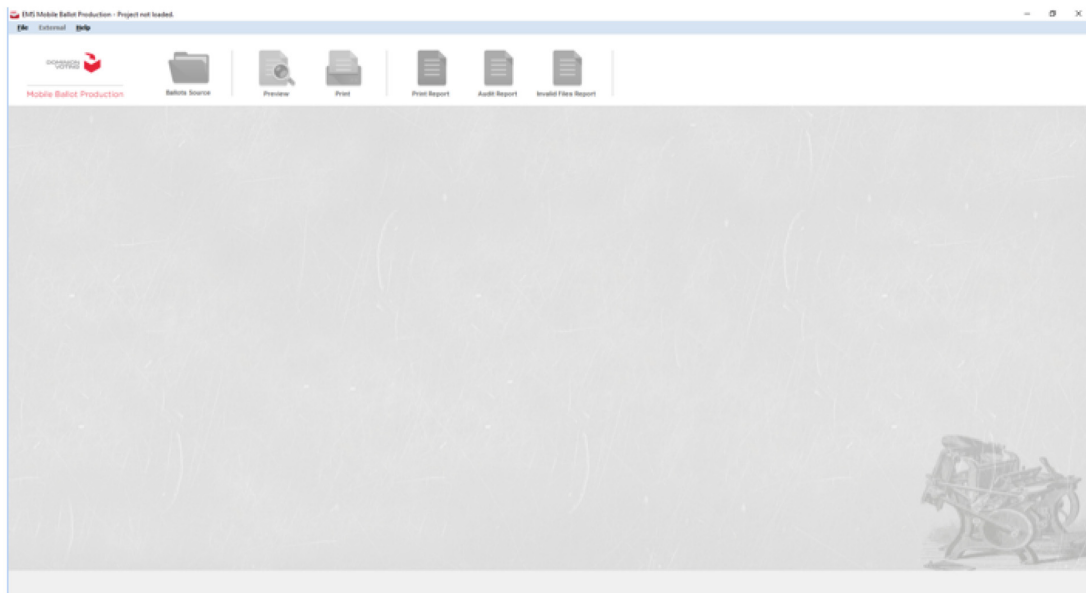


Figure 2-43: MBP Main screen

2. To create a new Mobile Ballot Production project, you must first select File and then Import option from the menu. This will allow you to specify the location of an MBP project archive produced by the EMS system containing all ballot definitions that will be loaded into the Mobile Ballot Production project. The system will detect and require a password, if one is set for the

archive. You have the choice to use the project name specified in the XML file itself (and in the process overwrite any existing database with that name) or to specify the name of the project explicitly. By pressing the Load button the data is imported into the database. The ballot PDF files contained in the archive will be unpacked and used from the location set in the Project destination path box.

3. After importing the data you will be returned to the main screen and will be connected to the newly created project. Alternatively, you can open an existing project by selecting the File - Open Project from the menu. A screen appears listing all Mobile Ballot Production projects. Select the project you wish to open and press the OK button to open it.
4. After opening a newly created project all actions except Ballots Source, Print Report and Audit Report will be disabled.

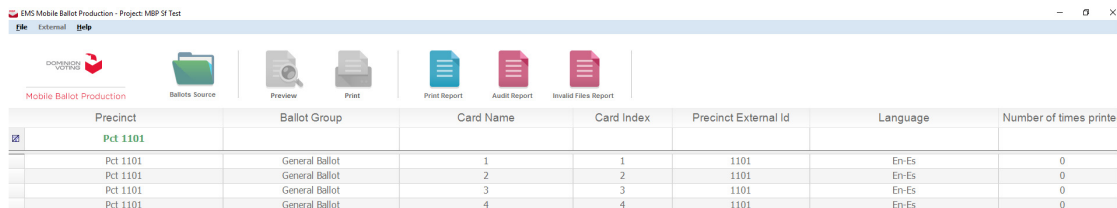


Figure 2-44: Mobile Ballot Production screen

5. By selecting the Ballots Source action, you can specify the folder where the ballot artwork is located.

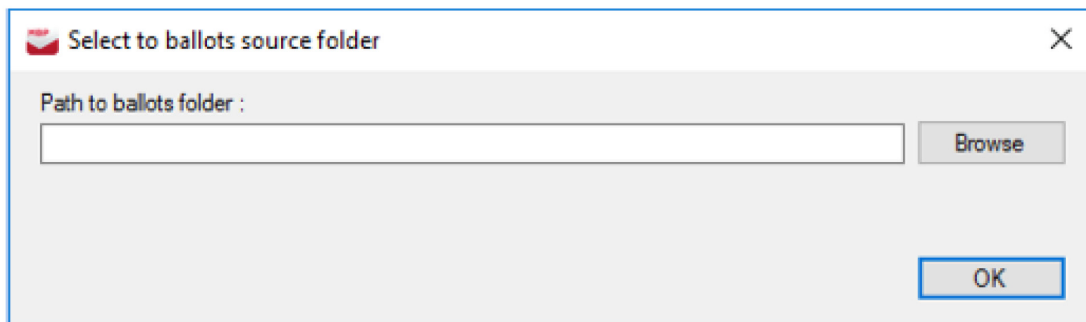


Figure 2-45: Ballot Source location selection screen

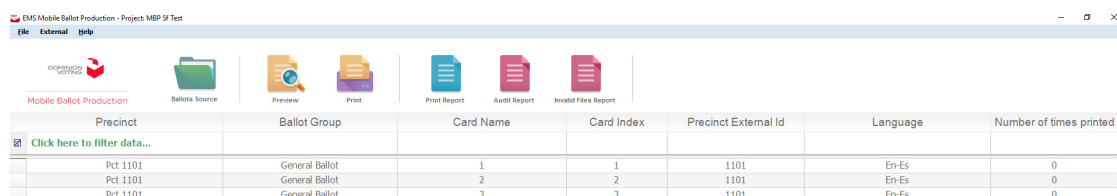


Figure 2-46: MBP screen

6. The next step is to select the printer that will be used to print the actual ballots.

**NOTE:** The printer must be connected to the computer that is running the Mobile Ballot Production application

7. Select File - Default Printer from the menu to open up the printer selection screen.
8. On the Default Printer Selection screen, select a printer from the drop down menu and click OK.

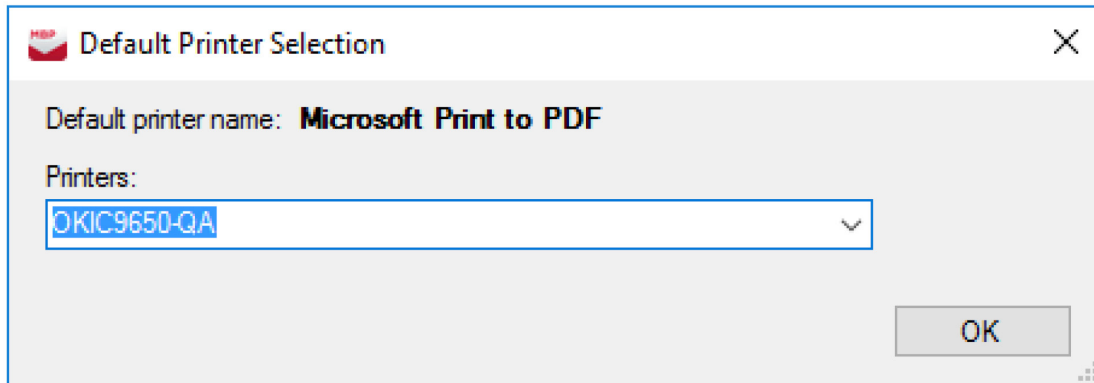


Figure 2-47: Printer Selection dialog

9. To configure printer settings on the project level, select File - Printing Configuration from the menu to open up the Printing Configuration.
10. If you always want to print all ballot cards related to a requested ballot style at once, check the Print multiscard ballot at once checkbox and when you select a ballot for printing, all ballot cards associated to the requested ballot will be sent to the printer.
11. If you want to include a sample ballot watermark on the print-out, check the Sample Ballot checkbox. Also you can specify the number of copies to print for the selected ballot.
12. Click Save to save printing settings.

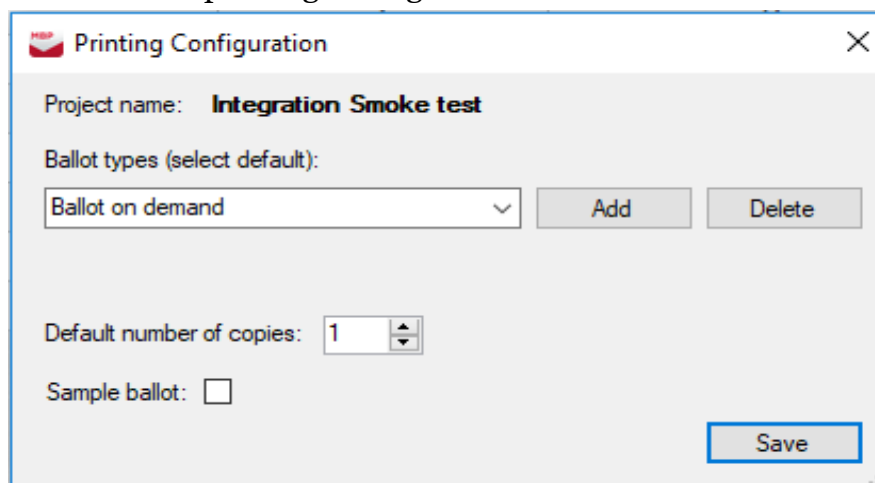


Figure 2-48: Printing Configuration dialog

13. It is possible to delete old, unnecessary projects from the Mobile Ballot Production. This is done by clicking Delete in the Open Project screen. After clicking Delete, the selected project will be deleted from the database and the system. Any remaining PDF files will remain in the project folder and, if needed, can be removed manually.

### 2.7.1 Preview Errors

It might occur that Preview of ballots doesn't work. In that case, blank gray screen will appear or a Warning dialog.

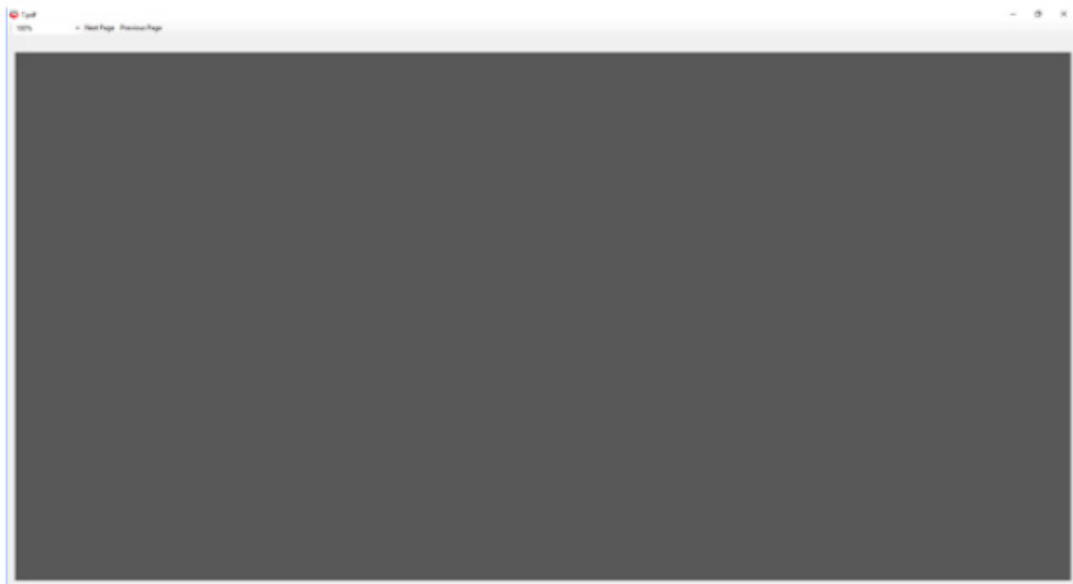


Figure 2-49: Preview of the ballots screen

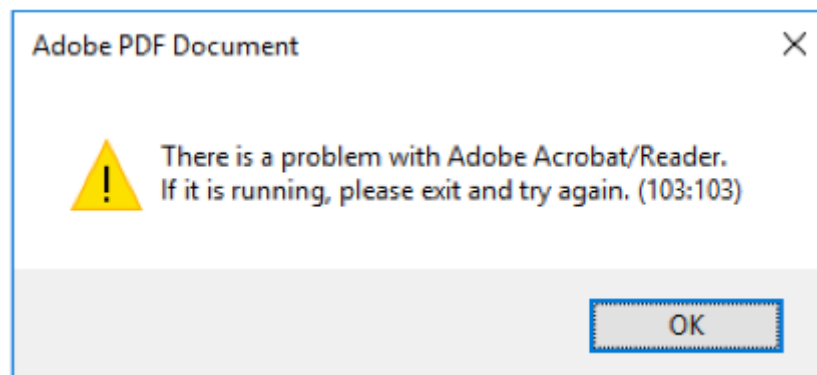


Figure 2-50: Warning dialog

It is required to perform following actions from section Disabling Protected Mode in Adobe Reader.

## 2.7.2 Sequencing Numbers

Sequenced numbers are assigned to ballots for purposes such as ballot identification and auditing. They are incremented after every print. If an imported project contains sequence numbers, their style can be modified using the option File -> Document Elements window.

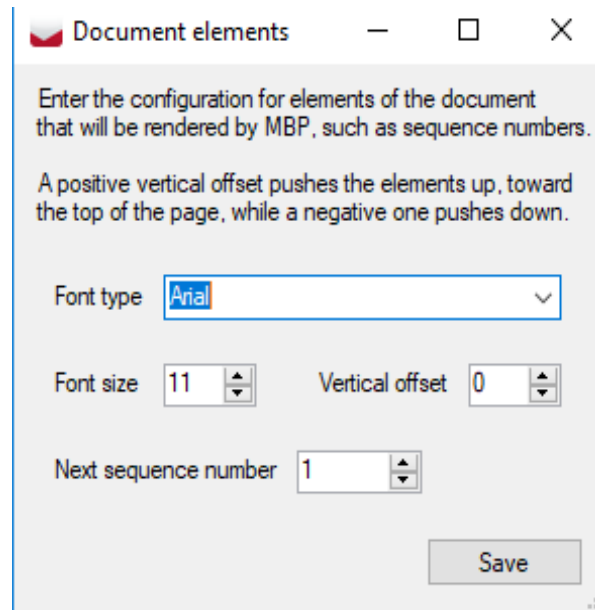


Figure 2-51: Document Elements screen

We cannot choose which ballots and in which location the Sequencing numbers will appear, as this is defined in the Election Event Designer and imported into Mobile Ballot Production. However, we can style and adjust them in several ways, including setting their font type, size, vertical offset and value. Any sequenced numbers appearing in the project will take on the shape and size set in the Document Elements window.

## 2.8 Integration with External Voter Registration Systems

The Mobile Ballot Production application has the ability to automatically print ballots based on requests originating from external voter registration systems. These requests come in the form of .csv or .txt files (See subsection Voter Registration File Format).

1. To configure VR Integration, select External - VR Integration Configuration from the menu.
2. The Print Integration screen appears.
3. Click Browse to select the folder where the voter registration requests are



located.

4. Click on Import VRS Definition button and select one or more XML with appropriate mapping for VR print integration.

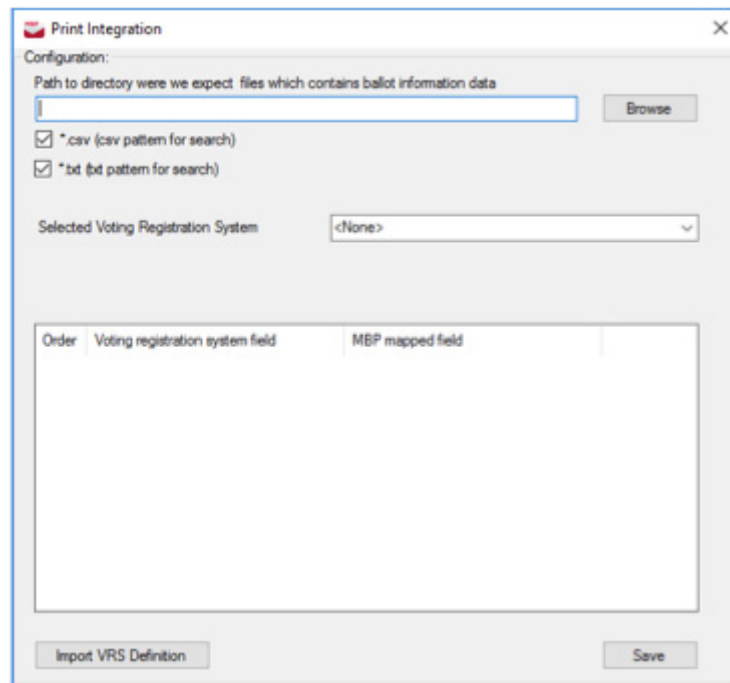


Figure 2-52: Print Integration dialog

5. Select your VR system that was imported from drop-down list Selected Voting Registration System.
6. Appropriate mapping will be displayed.
7. Click Save and then close the screen.

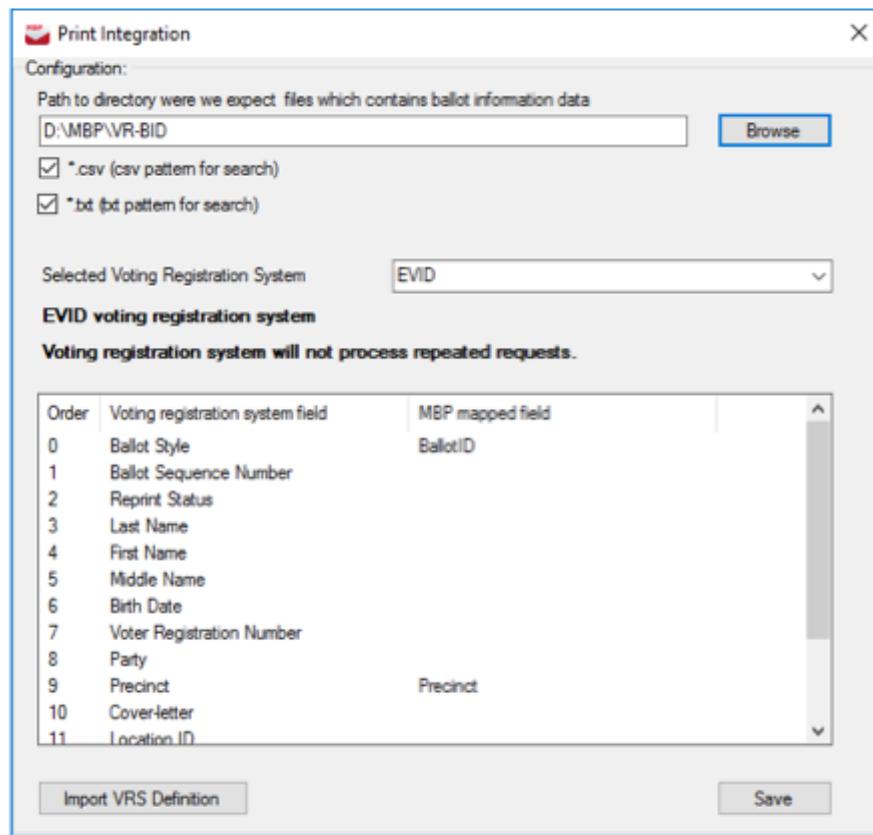


Figure 2-53: Print Integration dialog with VR integration set up

8. To manage VR Integration, select External - VR Integration Status from the menu.
9. The Integration Pending and Print status screen appears.
10. On the Pending for printing tab you can see a list of pending requests. Pending request contains information about file name, file status, time loaded in system.
  - Status can be:
    - Pending - file is imported in system and waiting to be printed.
    - Empty - file is empty.
    - Corrupted - cannot read file, or it is locked, etc.
    - Sent to printer - file is sent to print, for all voter sessions from file (lines in file) we tried to acquire corresponding ballot(s) and send them to printing.
11. You can print ballot only for request that are in Sent to printer status. Click Print to send file for print.

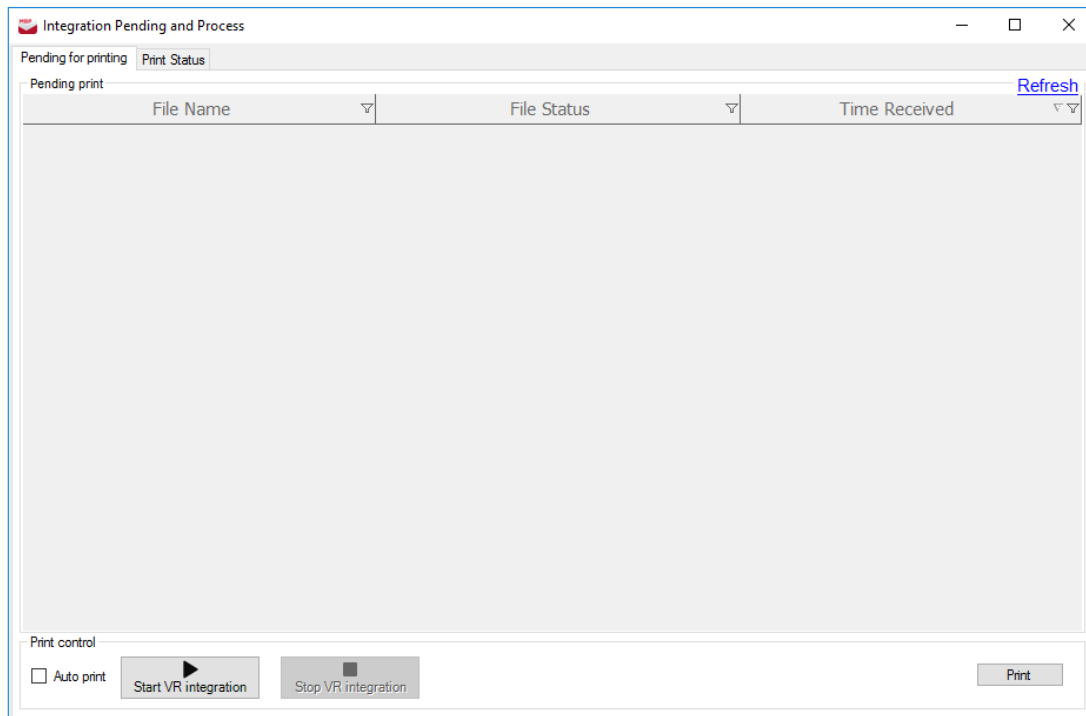


Figure 2-54: Integration Pending and Print status dialog

12. You can start or stop request files handling by clicking Start or Stop buttons. Only newly requests will be processed after restart (Stop/Start). For reloading and processing all request data, please click Refresh.
13. If the Auto Print checkbox is checked, voter registration print request will be immediately sent to the printer without managing requests.

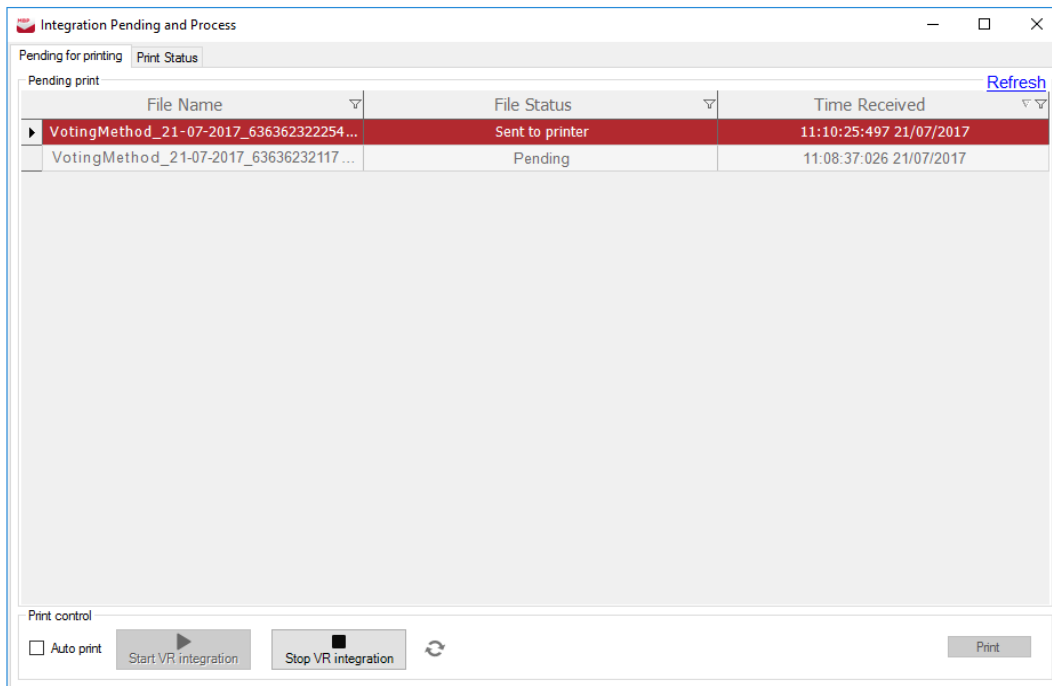


Figure 2-55: Integration Pending dialog

14. On the Print status tab, you can see for each voter session from imported file, grid lists all corresponding ballots related and their print status. Data grid is now showing the following info:

- Card Name - ballot name
- Size - Height of pdf file
- Lead - if ballot is lead
- Print Status
  - Missing ballot
    - We don't have this ballot on file system or
    - Data received from VR system is not correct - we can't find ballot in database either per "Ballot name" or "Activation code & language"
  - Wrong size - ballot and printer settings have mismatch for Height value
  - Sent to printer - ballot is sent to printer
  - Session – Unique (auto increment) voter session identifier
  - VR File Name - name of file from which we got this ballot/voter session
  - Language

- Time received
  - Session Status
    - Partial- some of the ballots from request are in Sent to printer status but some of them are not
    - Successful - all ballots related to request are in Sent to printer status.
    - Failed - all ballots related to request are in some invalid status (Invalid Data, Missing or similar...)
15. In the Print request action field, by clicking the Print button, you can print your requests as many times as you want. Also you can select more than one file to be printed.
16. Filtering: added filter per Print status and per File date. By clicking Refresh, you will reload all processed and pending requests information based on filters set.

Integration Pending and Process

Pending for printing | **Print Status**

Filters

Print status: All | From: 7/11/17 16:20 | To: 7/25/17 16:51 | Refresh

Records found: 10

Card Name	Size	Lead	Print Status	Session	VR File Name	Language	Time Received	Session Status
1	11	<input checked="" type="checkbox"/>	Sent to printer	1787	VotingMethod_2...	En-Es	18:07:09:637 24/07/...	Successful
2	11	<input type="checkbox"/>	Sent to printer	1787	VotingMethod_2...	En-Es	18:07:09:637 24/07/...	Successful
3	11	<input type="checkbox"/>	Sent to printer	1787	VotingMethod_2...	En-Es	18:07:09:637 24/07/...	Successful
4	11	<input type="checkbox"/>	Sent to printer	1787	VotingMethod_2...	En-Es	18:07:09:637 24/07/...	Successful
5	11	<input type="checkbox"/>	Sent to printer	1787	VotingMethod_2...	En-Es	18:07:09:637 24/07/...	Successful
1	11	<input checked="" type="checkbox"/>	Sent to printer	1786	VotingMethod_2...	En-Es	18:07:09:403 24/07/...	Successful
2	11	<input type="checkbox"/>	Sent to printer	1786	VotingMethod_2...	En-Es	18:07:09:403 24/07/...	Successful
3	11	<input type="checkbox"/>	Sent to printer	1786	VotingMethod_2...	En-Es	18:07:09:403 24/07/...	Successful
4	11	<input type="checkbox"/>	Sent to printer	1786	VotingMethod_2...	En-Es	18:07:09:403 24/07/...	Successful
5	11	<input type="checkbox"/>	Sent to printer	1786	VotingMethod_2...	En-Es	18:07:09:403 24/07/...	Successful

Print request action

Print

Figure 2-56: Integration Print status dialog

## 2.8.1 Voter Registration File Format

- Field 1: Ballot Style (represents PDF file name - mandatory)
- Field 2: Ballot Sequence Number (N) (optional for information use)
- Field 3: Reprint status (a 'Y' if it is a reprint, an 'N' if not) (optional for

information use)

- Field 4: Last Name (represents voter's last name) (optional for information use)
- Field 5: First Name (represents voter's first name) (optional for information use)
- Field 6: Middle Name (represents voter's middle name) (optional for information use)
- Field 7: Birthdate (MM/dd/yyyy) (represents voter's birthdate) (optional for information use)
- Field 8: Voter Registration Number (represents voter's registration number) (optional for information use)
- Field 9: Party (represents political party external Id) (optional for information use)
- Field 10: Precinct (represents precinct external Id) (optional for information use but can be used as external Id)
- Field 11: No Coverletter Option ('Y' for no coverletter, 'N' to keep the coverletter) (optional for information use)
- Field 12: Location ID (represent pooling location) (optional for information use)
- Field 13: VR Operator Initials (optional for information use)
- Field 14: VR ID (based on serial \#) (optional for information use)
- Field 15: Security hash" (mandatory, request with the same security hash will be skipped)

## 2.8.2 Voter Registration Configuration File

Following elements and fields are used in Voter Registration Configuration file:

Root element – main element containing data about VR system itself

- vr – a unique name for VR system
- description – verbose description of VR system
- acceptDuplicateFiles – should MBP accept duplicate files from VR system
- keyFields – unique key fields in file, ex. Voter ID
- filesContainHeader – does csv/txt files contain headers

File Fields – fields from VR files that will be mapped in MBP

- name – field name
- hasQuotes – does column contains data with quotes
- order – order of field in file starting from

Request Fields – fields from VR files that will be mapped in MBP

- name – field name
- order - order of field in file to be used in MBP starting from 0

### Example XML:

```
<?xml version="1.0" encoding="utf-8" ?>
<root vr="EVID" description="EVID voting registration system"
acceptDuplicateFiles="false" keyFields="14"
filesContainHeader="false">
  <RequestedFields>
    <Field name="BallotID" order="0"></Field>
    <Field name="Precinct" order="9"></Field>
    <Field name="VoterID" order="14"></Field>
    <Field name="FileName" order="15"></Field> <!-- Append
automatically -->
    <Field name="LastWriteTime" order="16"></Field> <!-- Append
automatically -->
  </RequestedFields>
  <FileFields>
    <Field name="Ballot Style" hasQuotes="false" order="0"></Field>
    <Field name="Ballot Sequence Number" hasQuotes="false"
order="1"></Field>
    <Field name="Reprint Status" hasQuotes="false" order="2"></
Field>
    <Field name="Last Name" hasQuotes="false" order="3"></Field>
    <Field name="First Name" hasQuotes="false" order="4"></Field>
    <Field name="Middle Name" hasQuotes="false" order="5"></Field>
    <Field name="Birth Date" hasQuotes="false" order="6"></Field>
    <Field name="Voter Registration Number" hasQuotes="false"
order="7"></Field>
    <Field name="Party" hasQuotes="false" order="8"></Field>
    <Field name="Precinct" hasQuotes="false" order="9"></Field>
    <Field name="Cover-letter" hasQuotes="false" order="10"></Field>
    <Field name="Location ID" hasQuotes="false" order="11"></Field>
    <Field name="Operator Initials" hasQuotes="false" order="12"></
Field>
    <Field name="EVID ID initials" hasQuotes="false" order="13"></
```

```
Field>
  <Field name="Security hash" hasQuotes="false" order="14"></
Field> </FileFields>
</root>
```

**NOTE:** Note that two fields FileName and LastWriteTime are appended automatically in import but are still required to be set in Request Fields with order number after the last order number in File Fields.

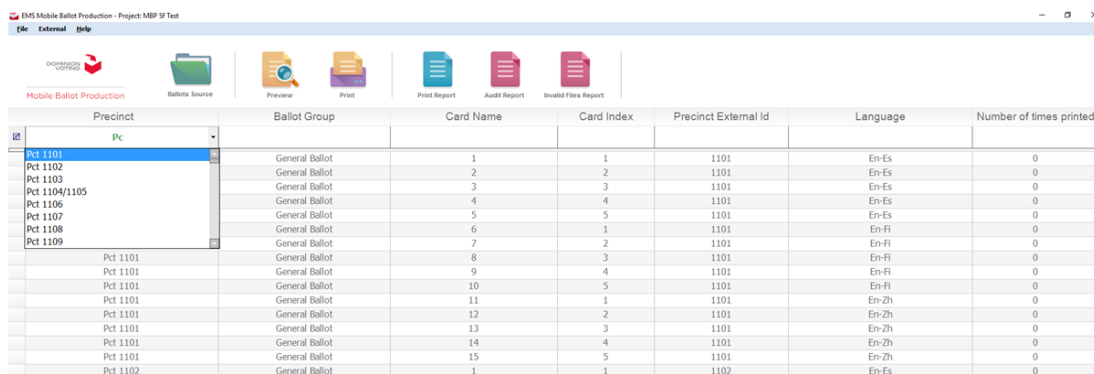
There are two ways of using VR file integration by Ballot ID (pdf file name) and by Activation code, these are the fields required for each of them:

- Ballot Id – Requested Fields are BallotId and Precinct
- Activation code - Requested Fields are ActivationCode and LanguageName  
Both ways must implement VoterID in Request Fields as well.

**NOTE:** Note that MBP supports multiline files, ie. That chunks of VR data can be added to a single file separated by new line.

## 2.9 Filtering Data

1. Data can be filtered by clicking the blank cell at the top of the column you wish to filter by. If list contains more that 100 records data will be filtered by first district value by default.



The screenshot shows the TMS Mobile Ballot Production application interface. At the top, there is a menu bar with 'File', 'External', and 'Help'. Below the menu bar are several icons for 'Mobile Ballot Production', 'Ballot Source', 'Preview', 'Print', 'Print Report', 'Audit Report', and 'Invalid File Report'. The main area displays a table with the following columns: Precinct, Ballot Group, Card Name, Card Index, Precinct External Id, Language, and Number of times printed. The 'Precinct' column has a dropdown menu open, showing a list of precincts including Pct 1101, Pct 1102, Pct 1103, Pct 1104/1105, Pct 1106, Pct 1107, Pct 1108, and Pct 1109. The table data shows various ballot groups (General Ballot) and card indices (1-15) for different precincts, with the 'Number of times printed' column showing 0 for all entries.

Precinct	Ballot Group	Card Name	Card Index	Precinct External Id	Language	Number of times printed
Pct 1101	General Ballot	1	1	1101	En-Es	0
Pct 1102	General Ballot	2	2	1101	En-Es	0
Pct 1103	General Ballot	3	3	1101	En-Es	0
Pct 1104/1105	General Ballot	4	4	1101	En-Es	0
Pct 1106	General Ballot	5	5	1101	En-Es	0
Pct 1107	General Ballot	6	1	1101	En-Fi	0
Pct 1108	General Ballot	7	2	1101	En-Fi	0
Pct 1109	General Ballot	8	3	1101	En-Fi	0
Pct 1101	General Ballot	9	4	1101	En-Fi	0
Pct 1101	General Ballot	10	5	1101	En-Fi	0
Pct 1101	General Ballot	11	1	1101	En-Zh	0
Pct 1101	General Ballot	12	2	1101	En-Zh	0
Pct 1101	General Ballot	13	3	1101	En-Zh	0
Pct 1101	General Ballot	14	4	1101	En-Zh	0
Pct 1101	General Ballot	15	5	1101	En-Zh	0
Pct 1102	General Ballot	1	1	1102	En-Es	0

Figure 2-57: Filtering Data

2. You have option to automatically clear all filters by clicking on image in filter header.



Precinct	Ballot Group	Card Name	Card Index	Precinct External Id	Language	Number of times p
<input checked="" type="checkbox"/> Pct 1101						
Click here to clear all filter criteria.						
Pct 1101	General Ballot	1	1	1101	En-Es	0
Pct 1101	General Ballot	2	2	1101	En-Es	0
Pct 1101	General Ballot	3	3	1101	En-Es	0
Pct 1101	General Ballot	4	4	1101	En-Es	0
Pct 1101	General Ballot	5	5	1101	En-Es	0
Pct 1101	General Ballot	6	1	1101	En-Fi	0
Pct 1101	General Ballot	7	2	1101	En-Fi	0
Pct 1101	General Ballot	8	3	1101	En-Fi	0
Pct 1101	General Ballot	9	4	1101	En-Fi	0
Pct 1101	General Ballot	10	5	1101	En-Fi	0
Pct 1101	General Ballot	11	1	1101	En-Zh	0
Pct 1101	General Ballot	12	2	1101	En-Zh	0
Pct 1101	General Ballot	13	3	1101	En-Zh	0

Figure 2-58: Clear Filtering Data

## 2.10 Printing Ballots

- When the project is created and configured, the application is ready to print ballots. The main screen will list all ballots that are available for printing. The list contains a column which indicates the number of times a particular ballot has been printed. This number can be reset by clicking the Reset number of prints button. Go to File menu and click Reset number of prints button.

Precinct	Ballot Group	Card Name	Card Index	Precinct External Id	Language	Number of times printed
<input checked="" type="checkbox"/> Click here to filter data...						
Pct 1101	General Ballot	1	1	1101	En-Es	0
Pct 1101	General Ballot	2	2	1101	En-Es	0
Pct 1101	General Ballot	3	3	1101	En-Es	0

Figure 2-59: Mobile Ballot Production screen

- Each individual ballot can be selected in the list below and then previewed by selecting the Preview button. This will open a dialog that presents the PDF and provides the user with the ability to zoom in/out and browse to the next or previous page.

1000.pdf

100%    Next Page    Previous Page

At least one signature has problems.    Signature Panel

**FIRST on EACH SIDE**

**FEDERAL**

President	State Senator	Governor
Thomas Jefferson <input type="radio"/>	Lincoln Kearney <input type="radio"/>	Lincoln Diaz-Balart <input type="radio"/>
Abraham Lincoln <input type="radio"/>	Ted Campbell <input type="radio"/>	John Irving Halpern <input type="radio"/>
John F. Kennedy <input type="radio"/>	Martin Gonzalez <input type="radio"/>	Charles H. Bronson <input type="radio"/>
Write-in <input type="radio"/>	Write-in <input type="radio"/>	Write-in <input type="radio"/>
<b>Sheriff</b>	<b>Mayor</b>	<b>END of THIRD COLUMN</b>
Franklin D. Roosevelt <input type="radio"/>	C. K. McElyea <input type="radio"/>	
Bill McCollum <input type="radio"/>	Oscar Hammerstein <input type="radio"/>	
Walter Campbell <input type="radio"/>	Alan Jay Lerner <input type="radio"/>	
Write-in <input type="radio"/>	Write-in <input type="radio"/>	
<b>END of FIRST COLUMN</b>	<b>END of SECOND COLUMN</b>	

8.50 x 11.00 in

Figure 2-60: Sample Ballot

- It is possible to perform printing of different leads for selected ballots, if selected ballot card is not of paper index 1 i.e. Lead ballot, it is possible to select which ballots will be printed with selected ballot (multiple selection is enabled) or just print the selected ballot card.

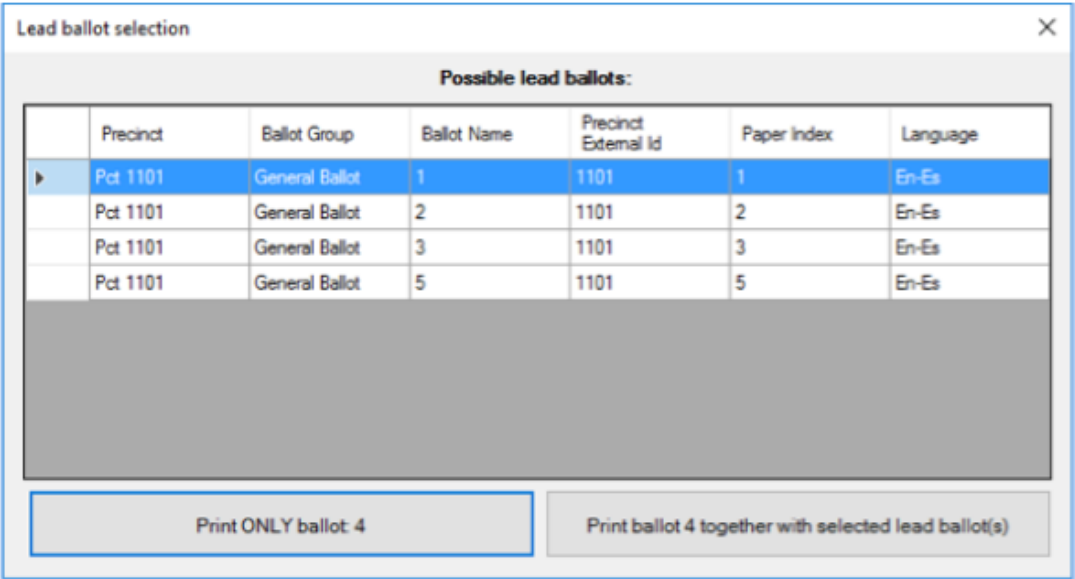


Figure 2-61: Lead ballots selection screen with two options

- 4. If ballot contains multiple cards and Preview is selected, a pop up will be displayed informing the user that multiple cards exists with displaying current ballot paper index and remaining number of cards.

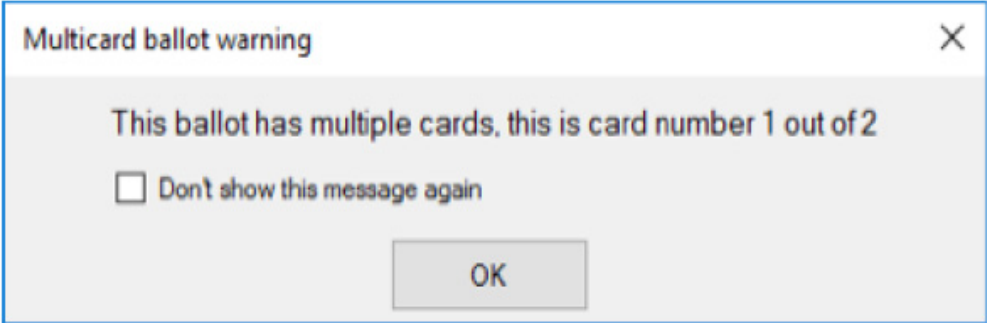


Figure 2-62: Multicard Ballot Warning

- 5. The application allows you to print the selected ballot by using the Print button, which will open up the Printer Settings screen. Here, you can specify the number of copies to print of the selected ballot and whether to include the Sample Ballot watermark on the print-out. Shown on the left side of the screen are the properties of the currently selected printer, which can be compared with the properties of the ballot on the right side of the screen.

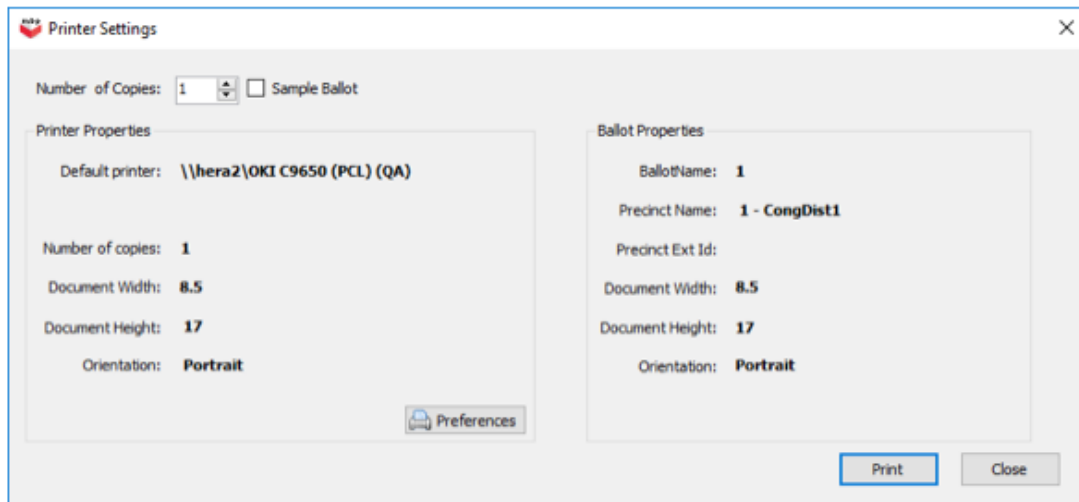


Figure 2-63: Printers Settings dialog

6. Should the width/height properties not correspond between printer settings and ballot dimensions the Document width and height labels will be marked red and the ballot will not be able to be printed.
7. The number of copies is editable through the control marked with a green rectangle.
8. The Default printer settings for number of copies should always be 1 (marked with red rectangle). If this value is greater than 1, the application will report an error when the Print button is pressed.

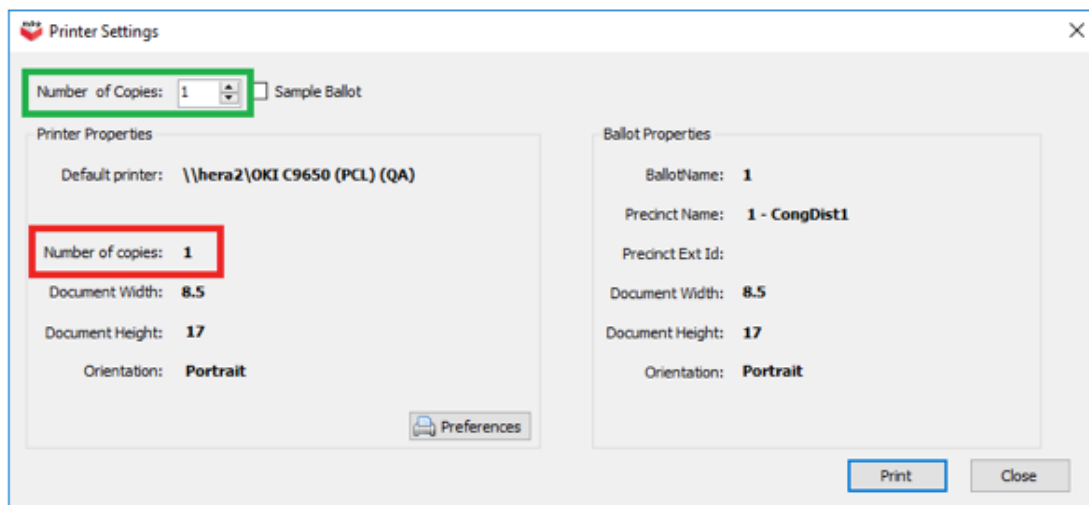


Figure 2-64: Printers Settings dialog

9. In the case that the dimensions do not correspond the printer must be

configured to match the dimensions of the ballot itself. This can be configured by pressing the Preferences button. This will open the printer vendor provided settings control.

**NOTE:** The configuration of the printing properties will vary per vendor (printer preferences for HP Deskjet 6980 series is shown below).

10. After successful configuration you can press Print to initiate printing of the ballot. The ballot list itself will be updated with the number of print-outs made.

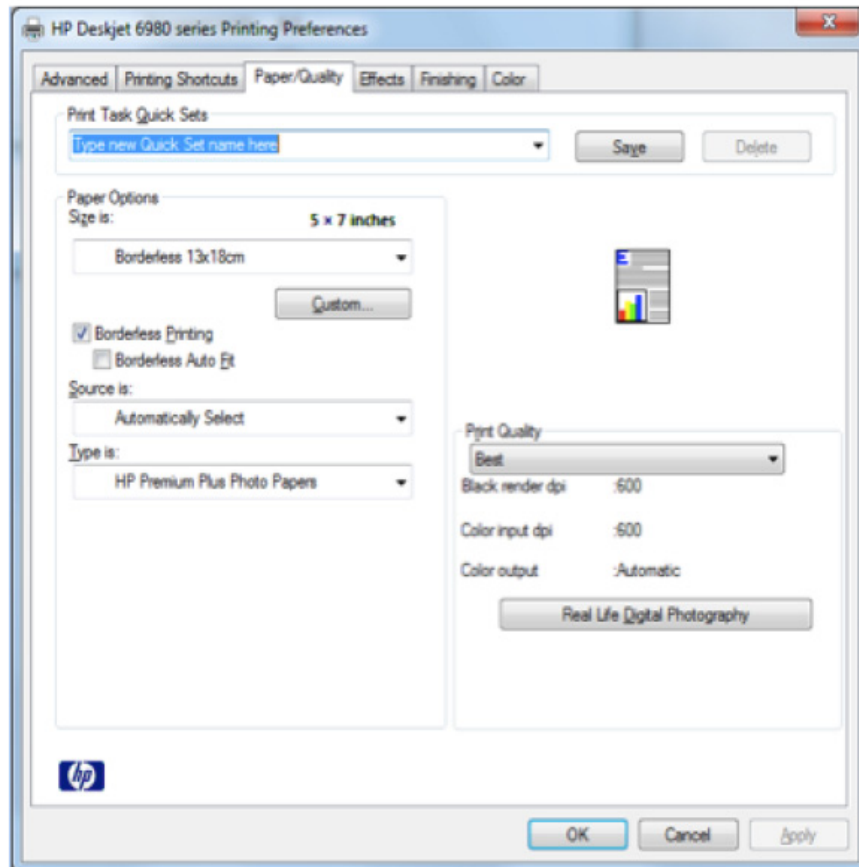


Figure 2-65: Printers Settings dialog

### 2.10.1 Reset Number of Printed Ballots

It is possible to reset number of printed ballots for current project. Option is available under File menu and called Reset number of prints.

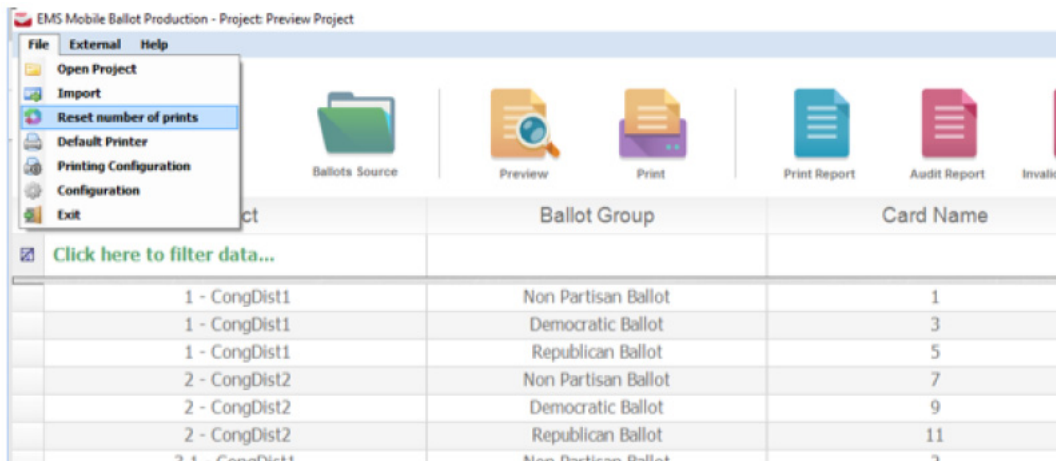


Figure 2-66: Reset Number of printed Ballots option

## 2.11 Reporting

The Print report, Audit report and Invalid Files report can be stored in various formats or printed using the controls shown immediately above the report itself.

### 2.11.1 Print Report

1. You can preview the Print Report by clicking on the Print Report button. This report provides the same information as the list on the main application screen.

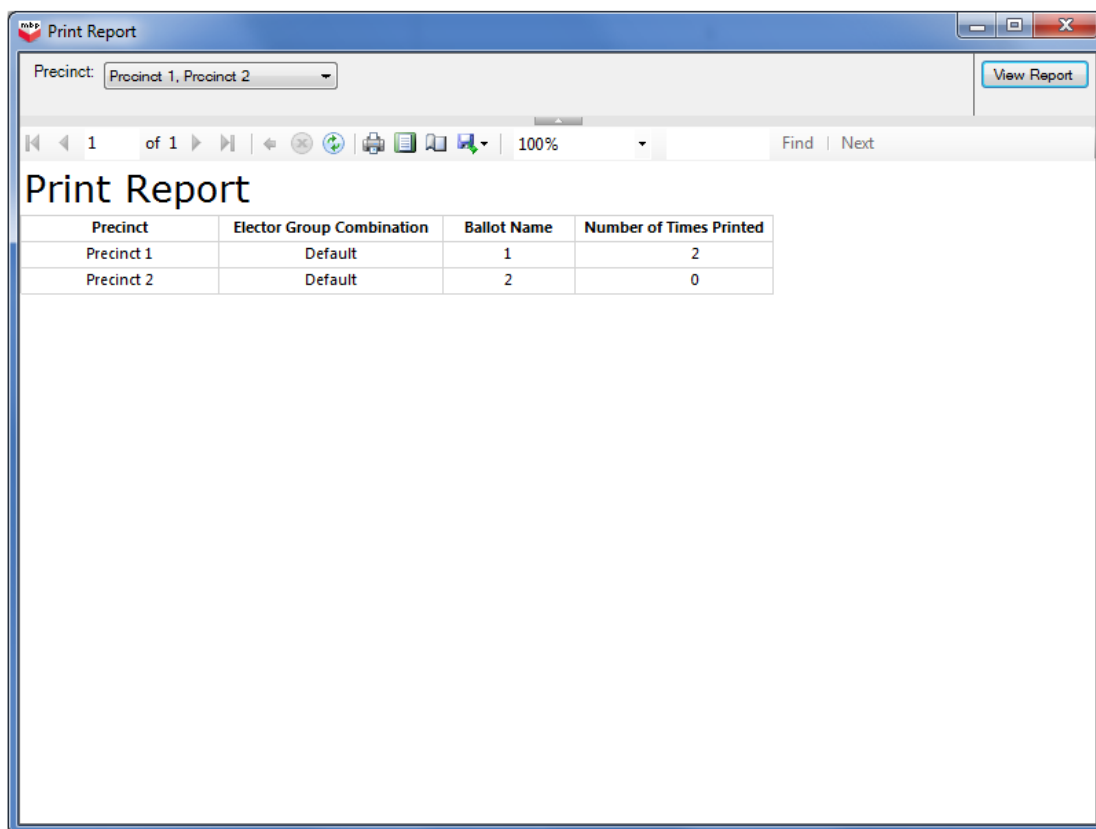


Figure 2-67: Print Report

2. The list of ballots can be filtered by selecting the precinct(s) in the control at the top of the report, and by pressing the View Report button.

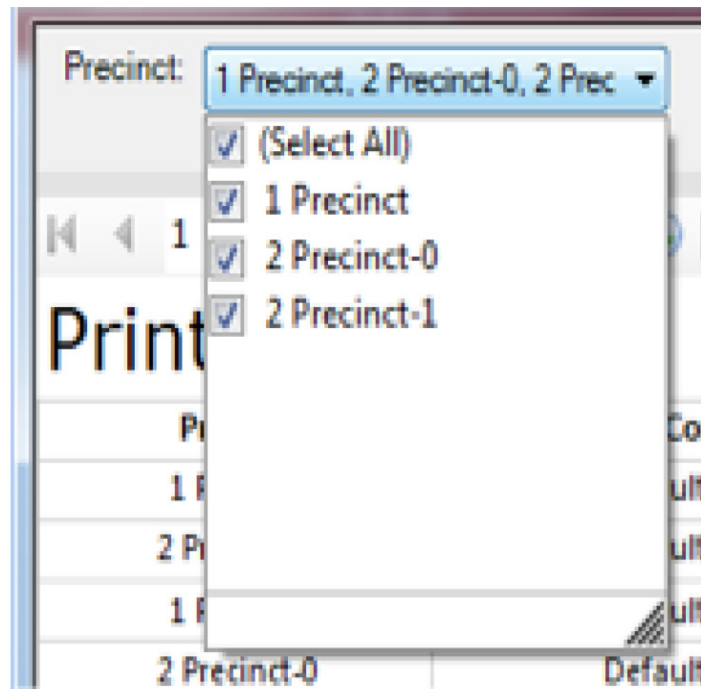


Figure 2-68: Print Report filter

### 2.11.2 Audit Report

1. You can preview the Audit Report by clicking the Audit Report button. This report shows the list of all actions performed on the current project, in chronological order.



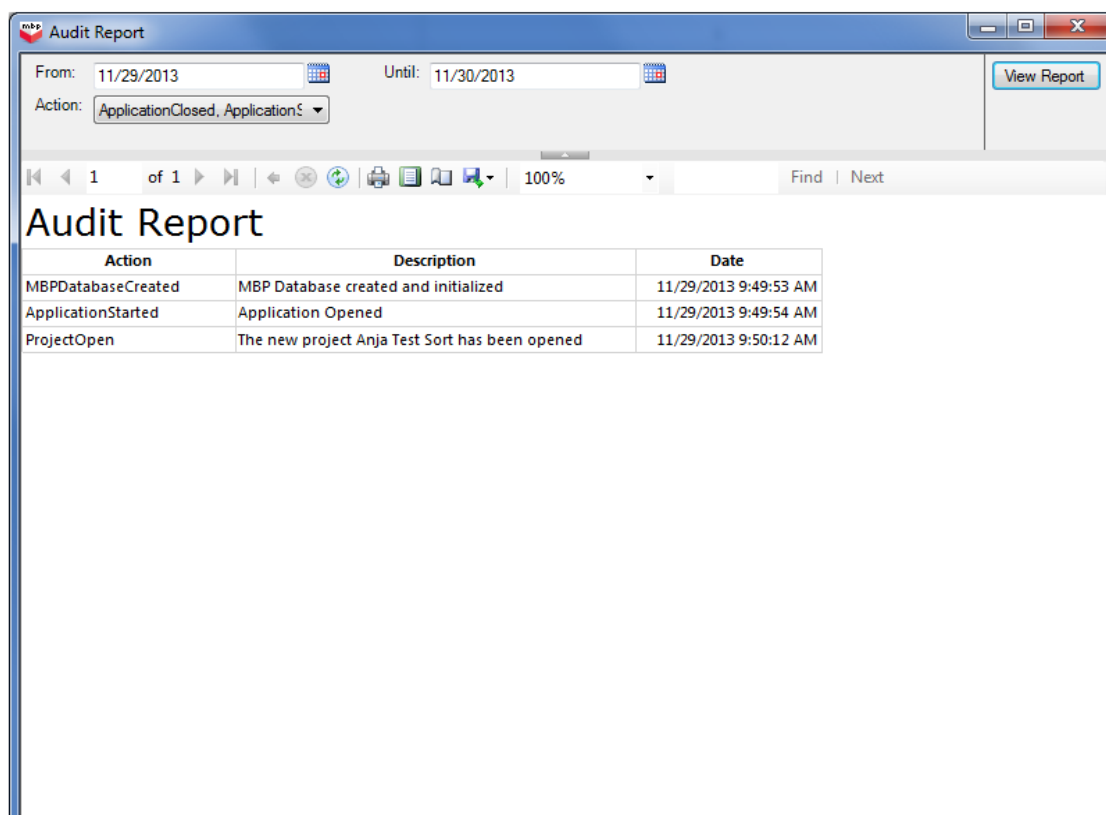


Figure 2-69: Audit Report

2. The list of actions can be filtered by date range, as well as the types of actions performed, in the control at the top of the report, and by pressing the View Report button.

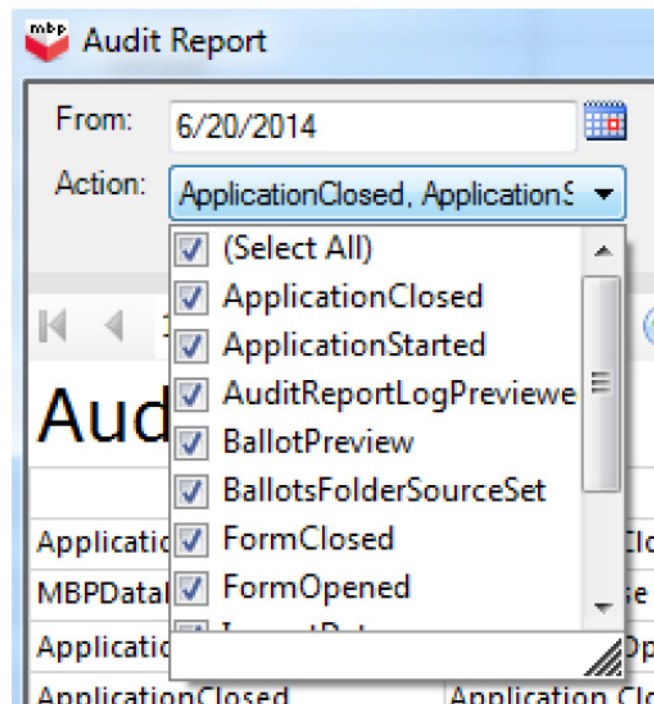
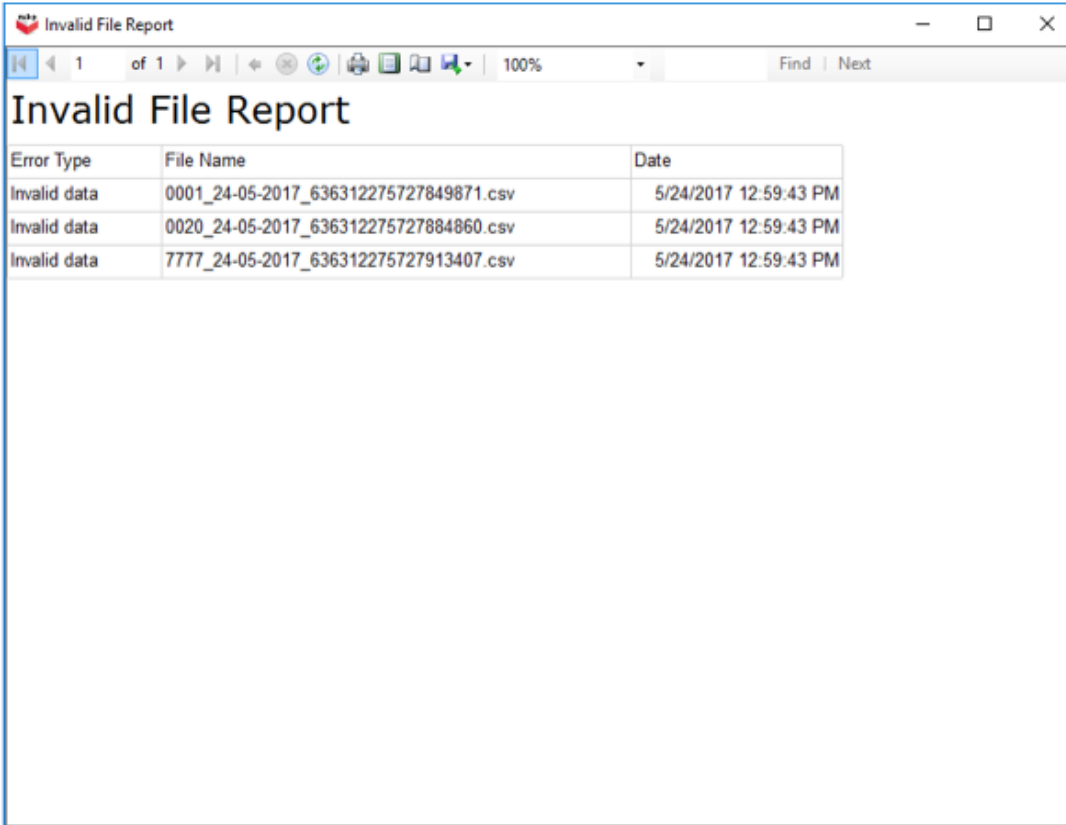


Figure 2-70: Audit Report Filter

### 2.11.3 Invalid Files Report

You can preview Invalid Files Report by clicking Invalid Files Report button. The report shows the list of all invalid data in files, if it is a multi line file with mixed data (invalid and valid) the report will present on which line invalid data occurred.



Error Type	File Name	Date
Invalid data	0001_24-05-2017_636312275727849871.csv	5/24/2017 12:59:43 PM
Invalid data	0020_24-05-2017_636312275727884860.csv	5/24/2017 12:59:43 PM
Invalid data	7777_24-05-2017_636312275727913407.csv	5/24/2017 12:59:43 PM

Figure 2-71: Invalid Files Report screen

## 2.11.4 Inventory Report

You can preview the Inventory Report by clicking the Inventory Report button. The report shows the list of prints with the number of prints in each batch, along with the ballot type or reason for printing, ballot date and the user who committed the print.

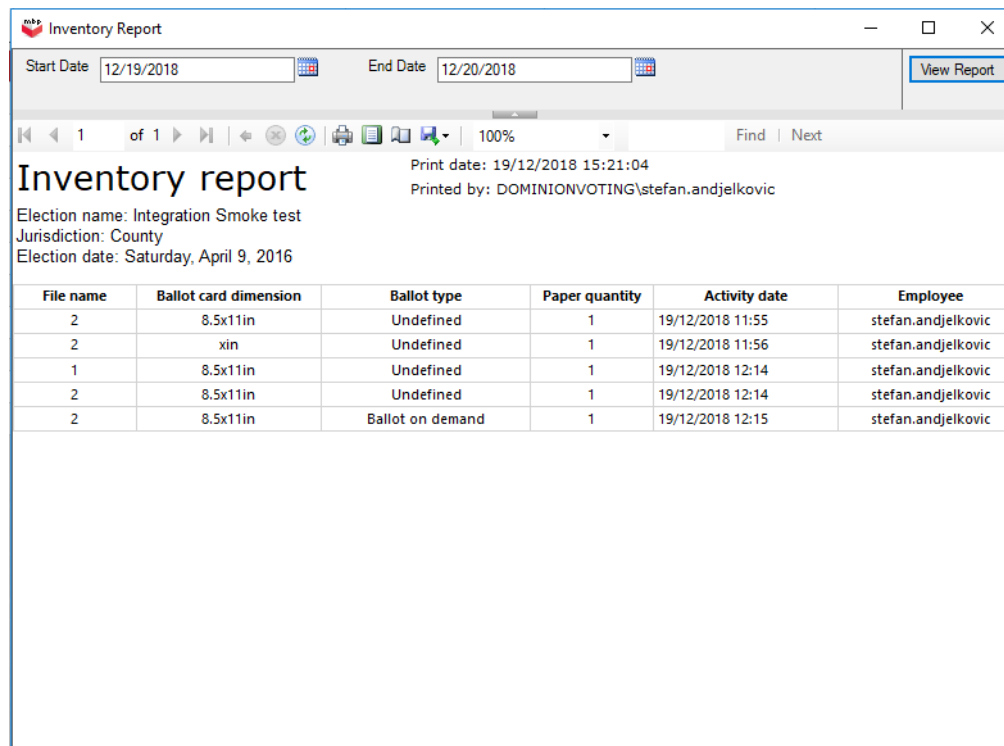


Figure 2-72: Inventory Report

The reason for printing can be chosen with each individual print (in the upper right corner of the print dialog). A default one, along with the customized list to choose from, can be configured on the level of the project by clicking File -> Printing Configuration dialog.

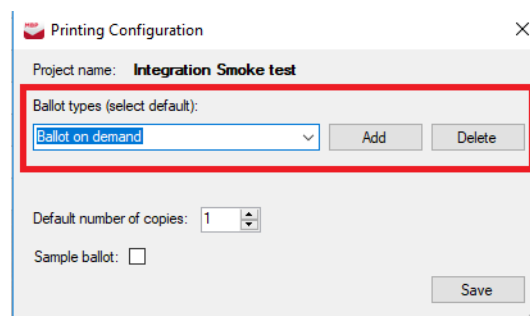


Figure 2-73: Printing Configuration

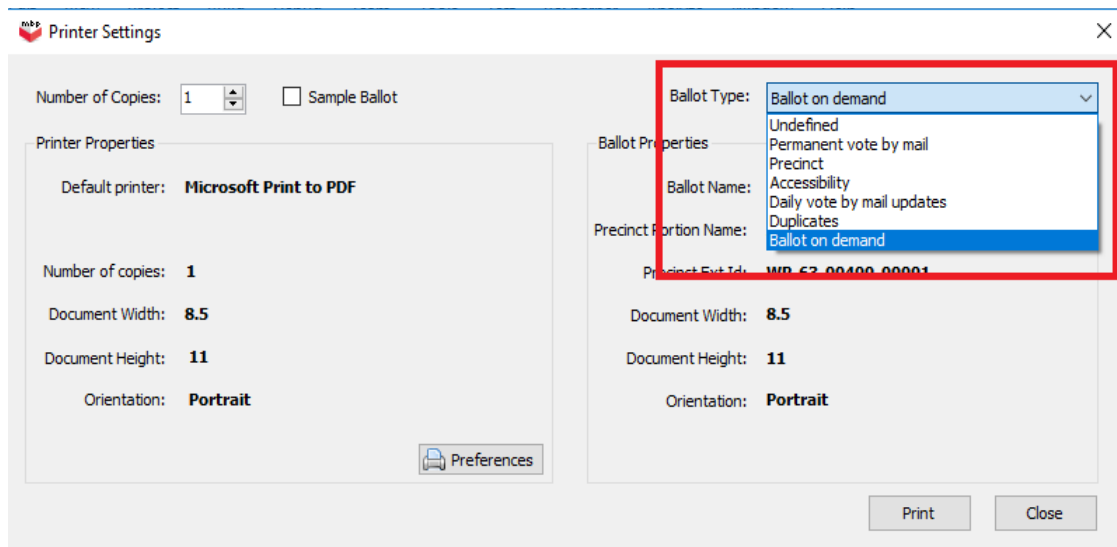


Figure 2-74: Printer Settings

## 2.12 Other Actions

1. You can open the User Guide by selecting Help - Help Documentation from the menu, or alternatively, by pressing F1 on your keyboard.
2. You can view basic information such as the version of the application by selecting Help - About from the menu.

## APPENDIX A: PRINTER SETTINGS FOR PRINTING BALLOTS OKI C712

This section describes printer settings and the setup procedures for printing ballots:

1. Download drivers form the following path: <https://www.oki.com/uk/printing/support/drivers-and-utilities/?id=46591801FZ01&tab=drivers-and-utilities&productCategory=colour&sku=46551103&os=ab1&lang=ac2>
2. Set up the Paper size:
  - Manually from a printer directly
  - Alternatively, user may also access printer > Printer Settings through the MBP.

### A.1 Manual paper size setup

#### To manually setup the paper size for the printer (OKI C712):

1. Use the up and down MENU buttons (marked as 3 in the image bellow-) to move up and down through the available settings for the sub-menu items.
2. When the desired item is displayed, press Enter to display the setting.

**NOTE:** An asterisk (\*) appears next to the setting, indicating that the option is set.



Figure A-1: Operator Panel

Once the device configuration menu is accessed, set up the following properties:

- Admin Setup -> Password: 999999 (down arrow and enter, down arrow and enter...6 times)
- USB Setup
- Offline Receive -> select Enable; Press Back button twice
- Tray Setup

- Unit of Measurement -> select inches; Press Back button three times
- Menus
- Tray Configuration
- MPTray Config
- Paper Size -> select Custom; Press Back button
- X dimension -> 8.5 inches; Press Back button
- Y dimension -> (e.g.)11 inches; Press Back button twice

**NOTE:** There is no need to set up a sleep time mode since the MBP activates the printer when a request is sent.

**NOTE:** We strongly recommendation to set a paper size manually from the printer. This way, no interruptions will occur during the printing.

## **A.2 Printer Settings through the MBP**

### **Setup from the MBP**

If the page size is set up from the MBP, this kind of setup applies only to the current ballot. Repeat this process for all the other ballot types.

1. From MBP navigate to Print button (or alternatively double click your ballot, right click then Print) :
  - a. Please check whether the Document Width and Height from the left panel Printer Properties match the Document Width and Height from the right side – Ballot Properties. If they do not match, Printer Properties will be displayed in red.
  - b. To equalize them, click on Preferences.
  - c. Navigate to the Size drop-down.
  - d. Select User Defined Size and select the appropriate values for Width and Height. i. Click OK.
  - e. Select the recommended paper weight -> Heavy (106-120g/m<sup>2</sup>) or Ultra Heavy 1 (121-188g/m<sup>2</sup>) for larger ballots.
2. To apply the settings, press the On Line button on printer.

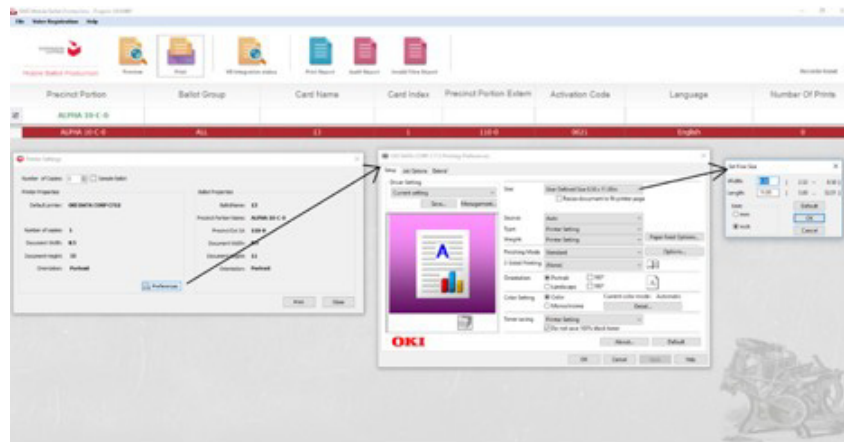


Figure A-2: Printer Settings through the MBP

3. For two sided ballots, set the following:
  - a. Click on Print > Preferences> Paper Feed Options.
    - Make sure that checkbox for Use different source for first page is unchecked in Cover Printing.
    - Select the Multi Purpose Tray option for Media Check.
  - b. From the 2-Sided Printing drop-down, select the Long Edge option on the same Printing Properties window.

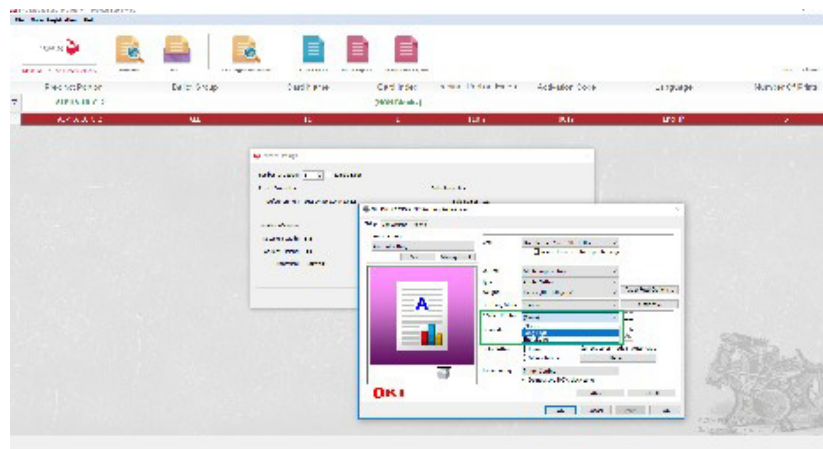


Figure A-3: Printing Preferences



## REVISION HISTORY

Rev.	Date	Author	Summary
1	03-06-2019	tijana.todorovic	Branched for 5.11.

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