Course Guide

IBM Datacap 9.0.1: Configuration

Course code F256 ERC 2.0

IBM Training

February 2017 edition

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Contents

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Course description

IBM Datacap 9.0.1: Configuration

Duration: 8 hours

Overview

This course shows you to how configure Datacap Server, Datacap Web Server, and Client on a single and multiple system configuration. You also learn how to configure other Datacap components.

You work with a fully functioning IBM FileNet Content Manager system configured with IBM Content Navigator and IBM Datacap 9.0.1 for students to practice the skills that are required to implement and configure data capture solutions.

Audience

- Administrators who are responsible for configuring and administering Datacap system
- Anyone who needs to know the Datacap system administration

Prerequisites

The following courses or equivalent knowledge are required:

- IBM Datacap 9.0.1: Introduction (F251)

Course objectives

Upon completion of this course, participants will be able to:

- Configure Datacap Server Service and Web Access
- Setup Datacap Authentication modes and Encryption
- Create Datacap security users and groups
- Configure Datacap Server for LLLDAP User Authentication
- Setup the Datacap Server, Datacap Web Server, and client in a multiple system configuration
- Configure Rulerunner and Datacap Maintenance Manager
- Configure Datacap Web Services (wTM)
- Configure Datacap Dashboard and monitor system performance
- Configure Datacap Report Manager (optional)

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Course Topics

Refer to the “Contents” section (TOC) for course content.

Curriculum relationship

Prerequisite for this course

- F251 IBM Datacap 9.0.1: Introduction

For anyone involved in Datacap Configuration, Maintenance, or Administration, the following classes should be taken as a set.

- F256 IBM Datacap 9.0.1: Configuration
- F257 IBM Datacap 9.0.1: Datacap Navigator Configuration
- F258 IBM Datacap 9.0.1: Administration

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Agenda

Note

The following lesson durations are estimates, and might not reflect every class experience.

Day 1

Unit 1. System Configuration

- (01:00) Lesson 1 - Datacap Single-system Configuration
- (01:00) Lesson 2 - Maintain Users and Groups, and Configure Security
- (01:00) Lesson 3 - Authentication and Encryption
- (01:00) Lesson 4 - Multi-system Configuration Considerations

Unit 2. Component Configuration

- (01:00) Lesson 1 - Configure Rulerunner
- (01:00) Lesson 2 - Configure Maintenance Manager

Day 2

Unit 2. Component Configuration

- (01:00) Lesson 3 - Configure Datacap Web Services
- (01:00) Lesson 4 - Configure Datacap Dashboard

Appendix. Component Configuration (Optional)

- (01:00) Appendix A1 - Configure Datacap Report Manager (optional)

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Unit 1. System Configuration

Estimated time

04:00

Overview

In this unit, you learn how to configure the basic functionality of the Datacap Server, Datacap Web Server, and Datacap Web Client on a single system configuration. You also learn how to setup Datacap on a multiple system configuration.

How you will check your progress

- Successfully complete the activities in the Student Workbook.

References

IBM Knowledge Center

http://www.ibm.com/support/knowledgecenter/SSZRWV_9.0.1/com.ibm.datacaptoc.doc/datacap_9.0.1.htm

Installing and configuring on one system

www.ibm.com/support/knowledgecenter/SSZRWV_9.0.1/com.ibm.dc.install.doc/dcain433.htm?lang=en

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Unit objectives

- Configure a basic single-system Datacap configuration
- Define users and groups and configure security
- Select and configure one of the five supported authentication systems
- Configure a multi-system Datacap configuration
- Configure a multi-system Configuration Considerations

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Figure 1-1. Unit objectives

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Lesson 1.1. Single-system Configuration

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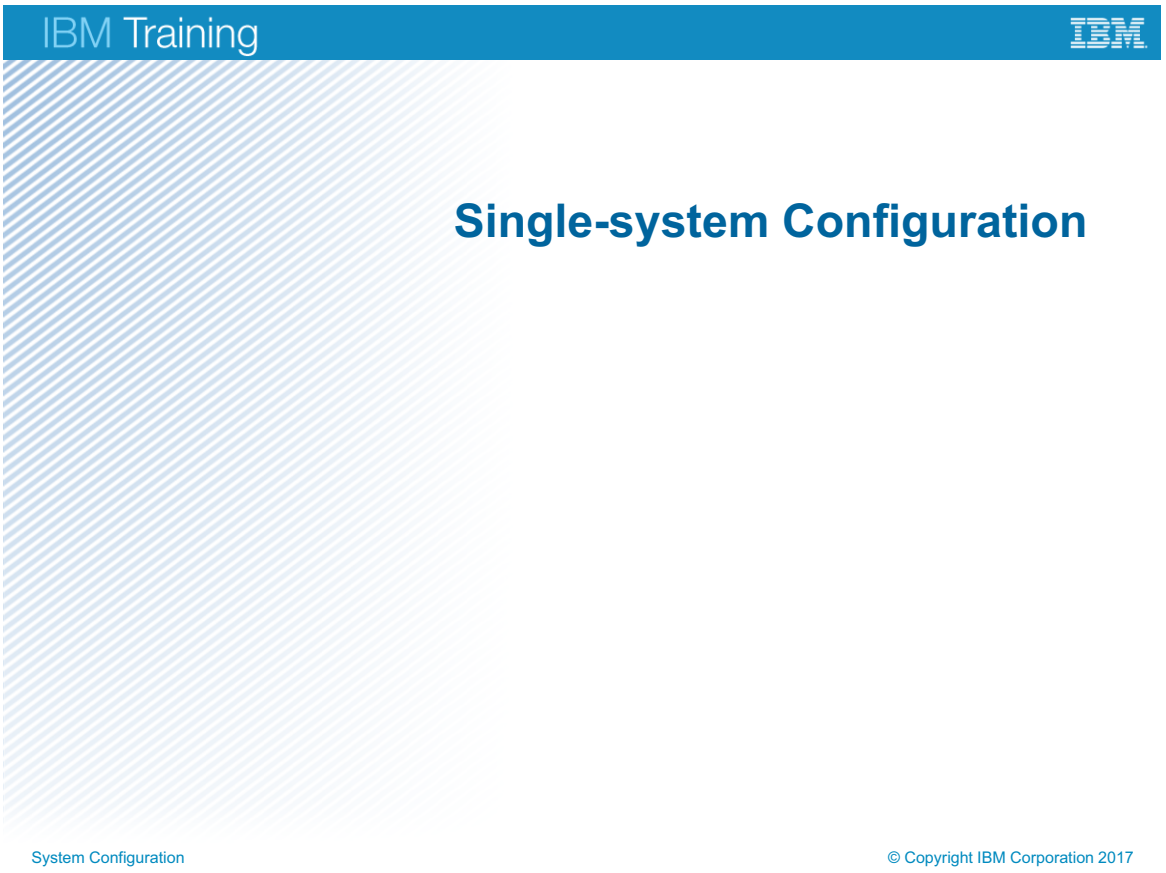

Figure 1-2. Single-system Configuration

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Topics

- Single-system Configuration
  - Maintain Users and Groups, and Configure Security
  - Authentication and Encryption
  - Multi-system Configuration Considerations

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Figure 1-3. Topics

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Why is this lesson important to you?

- As an administrator of an IBM Datacap capture system, you must be familiar with all configuration tasks for a functional IBM Datacap system.
- In this lesson, you configure the Datacap components that are required for manual Document capture processing.

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Figure 1-4. Why is this lesson important to you?

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Datacap Configurations

- Datacap is designed to run on a multi-system configuration. (Normal installation configuration)
- Datacap also runs in a single-system configuration. This configuration can be used for:
  - Training installations
  - Development environments
  - Testing installations

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Figure 1-5. Datacap Configurations

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Configure a Single-system

- For a single-system installation, Windows 7 is the recommended platform.
- Minimal single-system configuration for demonstration purposes:
  - Datacap Server
  - Datacap Client
  - Datacap Web
  - Datacap Web Client
  - Datacap Rulerunner Service (single thread)

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Figure 1-6. Configure a Single-system

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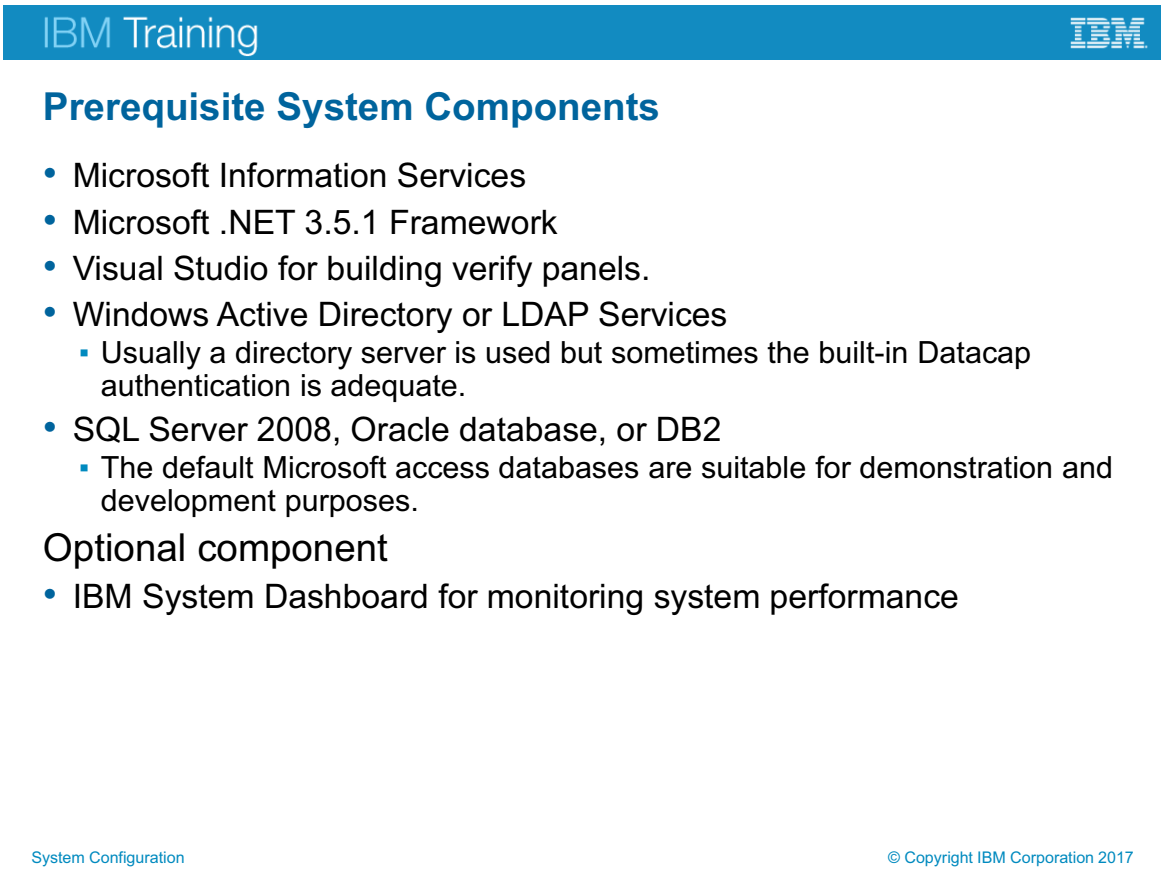

Figure 1-7. Prerequisite System Components

Help path

- Datacap 9.0.1>Preparing prerequisite software
- Datacap 9.0.1>Preparing prerequisite software>Prerequisites for installing Datacap>Microsoft Internet Information Services and Microsoft .NET Framework
- Datacap 9.0.1>Datacap application development>Datacap application development>Data verification>Field data verification>Options for data verification
- Datacap 9.0.1>Configuring Datacap databases
- Datacap 9.0.1>Administering your system>Monitoring system performance with IBM System Dashboard for Enterprise Content Management

Authentication

Usually a directory server is used for authentication but sometimes the built-in Datacap authentication is used.

Databases

The included Access databases are acceptable for demonstration and often development purposes. Microsoft SQL Server or Oracle databases are most often used in production installations.

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Single system Configuration Checklist

- Assuming that prerequisites and full Datacap 9.0 installation is complete
- Export the encryption keys
- Configure and start the Datacap Server Service
- Configure Datacap Web
- Configure Internet Explorer
- Configure the Datacap Rulerunner Service to run tasks on a single thread

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Figure 1-8. Single system Configuration Checklist

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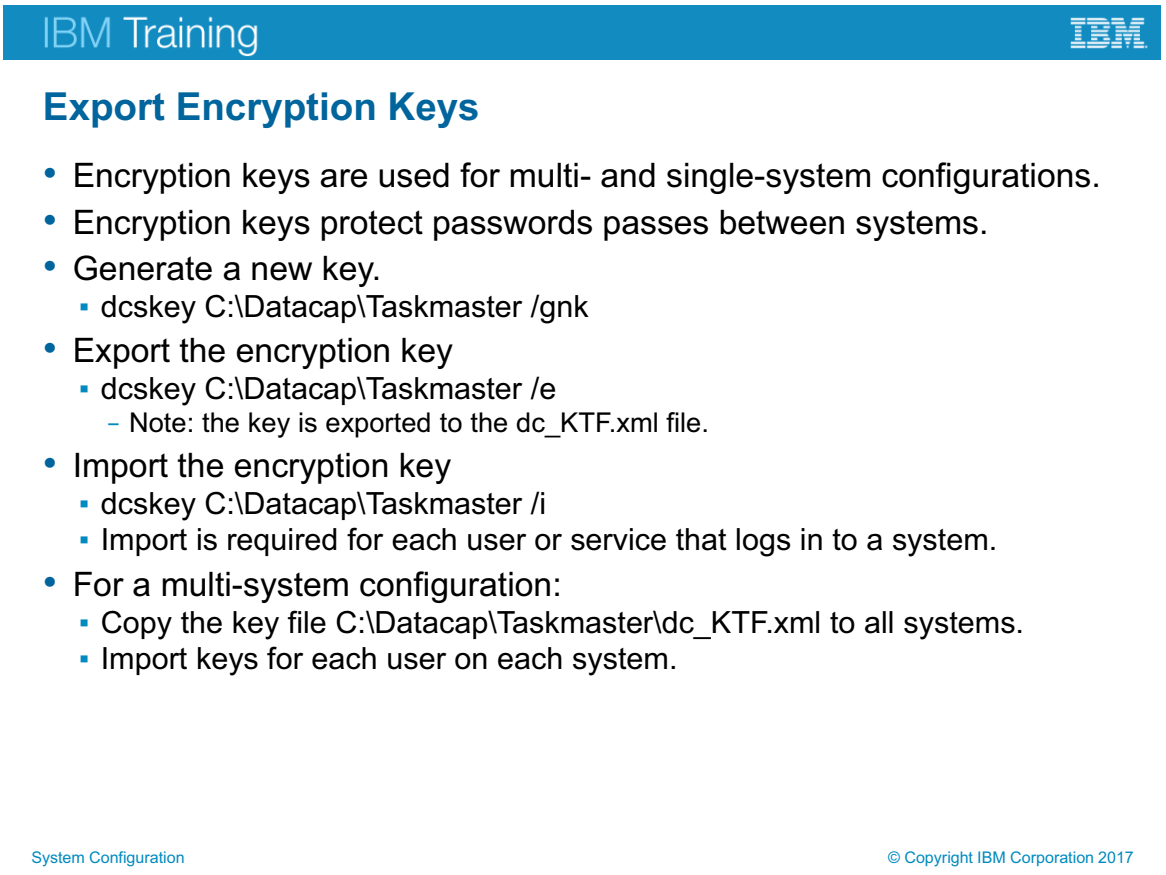

Figure 1-9. Export Encryption Keys

Help path

- Datacap 9.0.1>Installing and configuring on one system>Installing Datacap on one system>Exporting encryption keys

If the dc_ktf.xml file is in the folder with the Datacap executable that first uses encryption, it is automatically imported.

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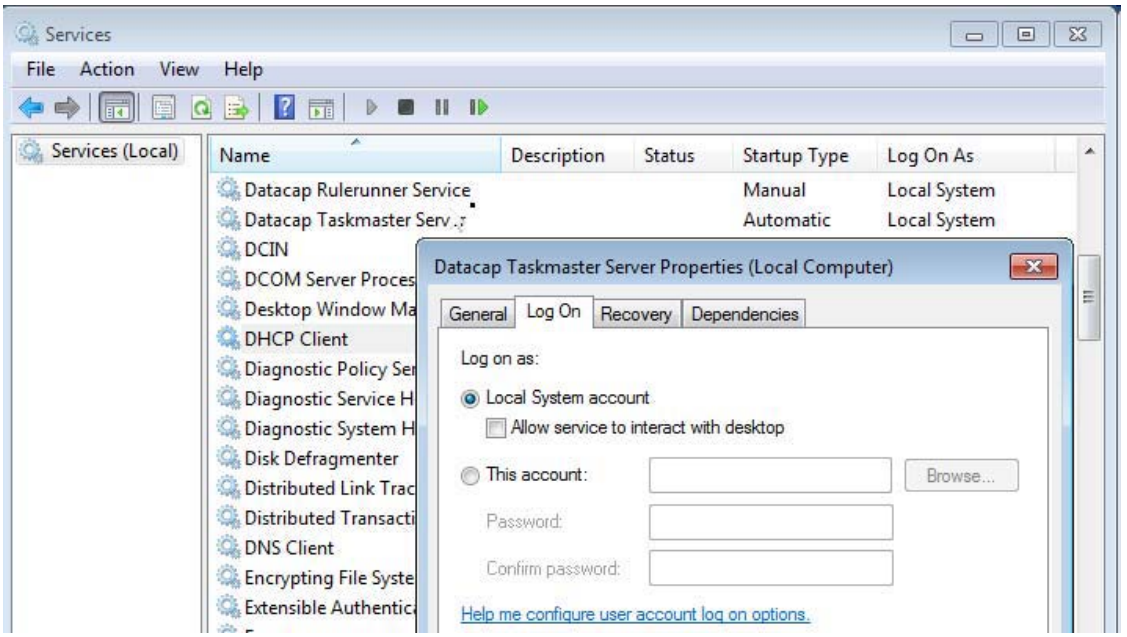
Configure Datacap Server Service



System Configuration

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Figure 1-10. Configure Datacap Server Service

Help path

- Datacap 9.0.1>Installing and configuring on one system>Installing Datacap on one system>Rulerunner Service (single thread)

Notes

- Datacap Server Service must be running before you can start an application or Datacap component.
- In a single system configuration, the Datacap Server Service uses the Local System account. The default account is the one you were logged in as while you were installing Datacap.
- In a client/server configuration, the Datacap Server Service uses the domain account that you set up for it. Permission requirements are discussed in Lesson 4.
- Set account for Datacap Server Service.
  - Start > Administrative Tools > Services
  - Datacap Taskmaster Service > Properties
    - On the General tab, select Startup type Automatic.
    - On the Log On tab

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- For a Single-system, installation a local account is adequate.
- Select Local System account No credentials need to be provided. It uses the installers account information, which is typically Administrator.
- For a multi-system, it must be a domain account.
- Select This account and use user domain\tmservice for example.

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Configure Datacap Web

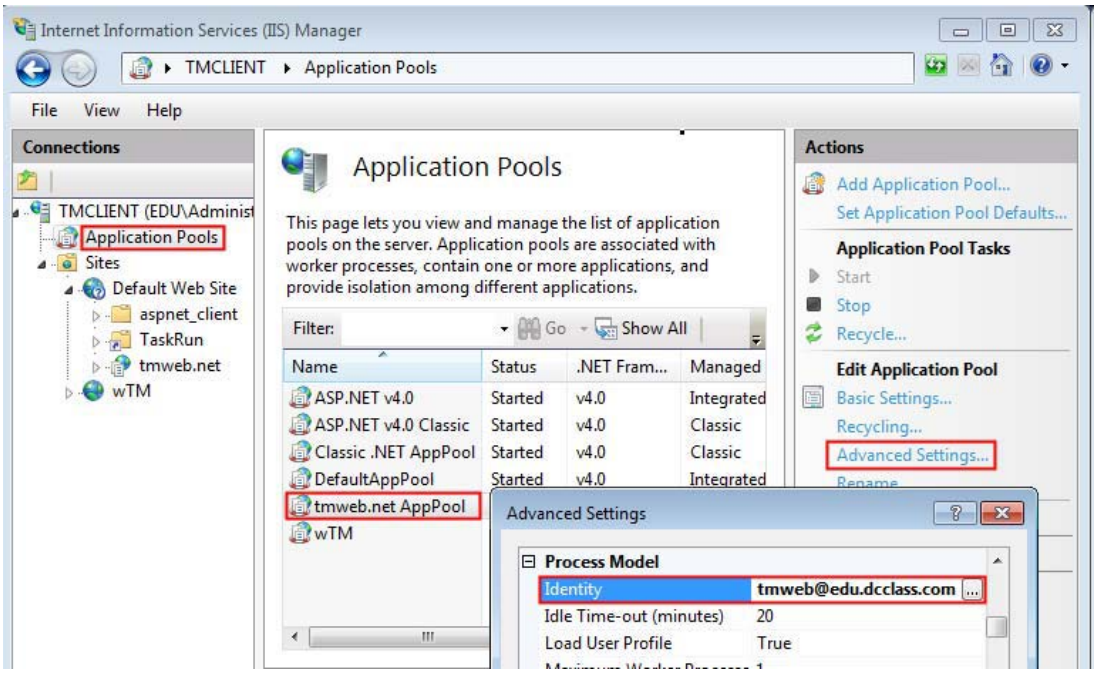

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Figure 1-11. Configure Datacap Web

Help path

- Datacap 9.0.1>Installing and configuring on one system>Installing Datacap on one system>Datacap Web Client installation and configuration>Single system installation: Creating the Datacap Web Client site
- Datacap 9.0.1>Preparing prerequisite software>Prerequisites for installing Datacap>Verifying that IIS components are installed

Verify that all IIS components are found.

- Click > Start menu, select All Programs > IBM Datacap Web Datacap Web Server Configuration
- Verify that all components were found. If components were not found, then use the **Verify that IIS components are installed** link to the information center documentation to resolve the issue.
- Click OK and Exit

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Configure Application Pools

- Click Start > Administrative Tools, > Internet Information Services (IIS) Manager.
- In the Connections pane, expand the computer node, Sites node, and the Default Web Site. The tmweb.net site is displayed. If it is not displayed, right-click the site and select Refresh.
- In the Application Pools pane, select the tmweb.net application pool then, in the Actions pane, in the Edit Application Pool section, click Advanced Settings.
- In the Process Model section, click the browse button to the right of Identity.
- In the Application Pool Identity window, change the Built-in account to Local System, then click OK.
- In the Process Model section, set Load User Profile to True.
- Click OK.

Set cookies unique name

- In the Connections pane, expand the Sites node, and expand the Default Web Site.
- Select the tmweb.net site, and in the middle pane, double-click Session State.
- Under Cookie Settings, change the Name to tmweb or another unique name; then, in the Actions pane, click Apply.
- Restart the Default Web Site
- In the Connections pane, select the Default Web Site; then, in the Actions pane, under Manage Web Site, click Restart.

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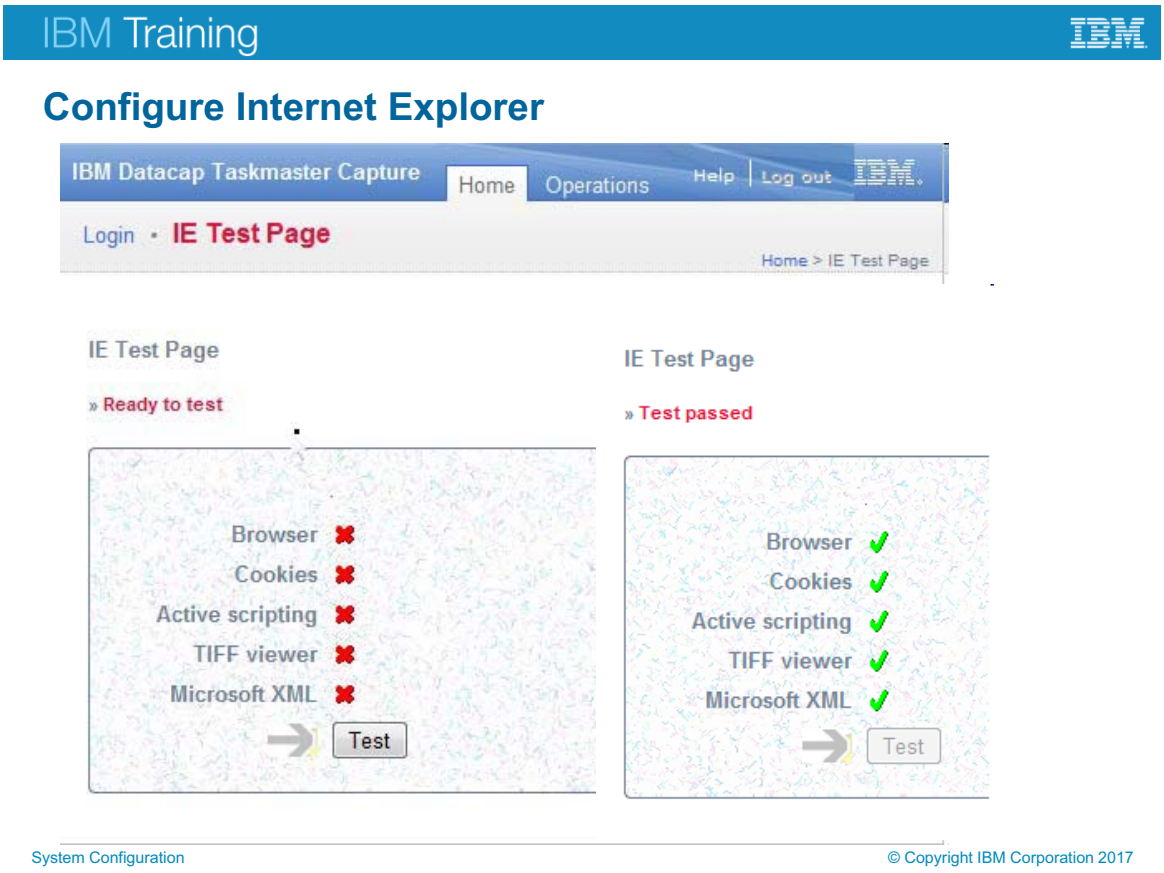

Figure 1-12. Configure Internet Explorer

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring and testing the remote workstation>Testing Internet Explorer

Important – Configure for each tmweb.net user.

The following configuration must be done for every desktop user that needs to use tmweb.net to view or control Datacap configuration and monitor batch status.

Add Web server to the Internet Explorer trusted sites (http:/webservername).

- Open Internet Explorer.
- On the Tools menu, select Internet Options. The Internet Options dialog opens.
- Click the Security tab to display it.
- Select Trusted sites, then click Sites. The Trusted Sites dialog opens.
- Enter the default server address (http://webservername) in the Add this website to the zone field, then click Add
- Close Trusted Sites window.

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Enable ActiveX controls

- Click Custom Level
- Click Enable for the Download signed ActiveX controls.
- Click Enable for the Initialize and script ActiveX controls not marked as safe for scripting.
- Click OK. The Internet Options dialog is redisplayed.
- Click OK. The Internet Options dialog closes.

Run the tmweb IE test

Important: On a system that has a 64-bit operating system, you must use the 32-bit version of Internet Explorer to access Datacap Web.

From the Windows Start menu, select All Programs > IBM Datacap Web > Datacap Web Client Configuration.

- Ensure that http://webservername is the default URL that is displayed.
- Click Configure.
- Click OK, then click Exit.
- Start Internet Explorer and enter the URL for Datacap Web followed by the tmweb.net virtual directory and the test page: http://localhost/tmweb.net/ietest.aspx, then press <Enter>.
- Click Test. The red Xs change to green check marks when the test completes successfully.

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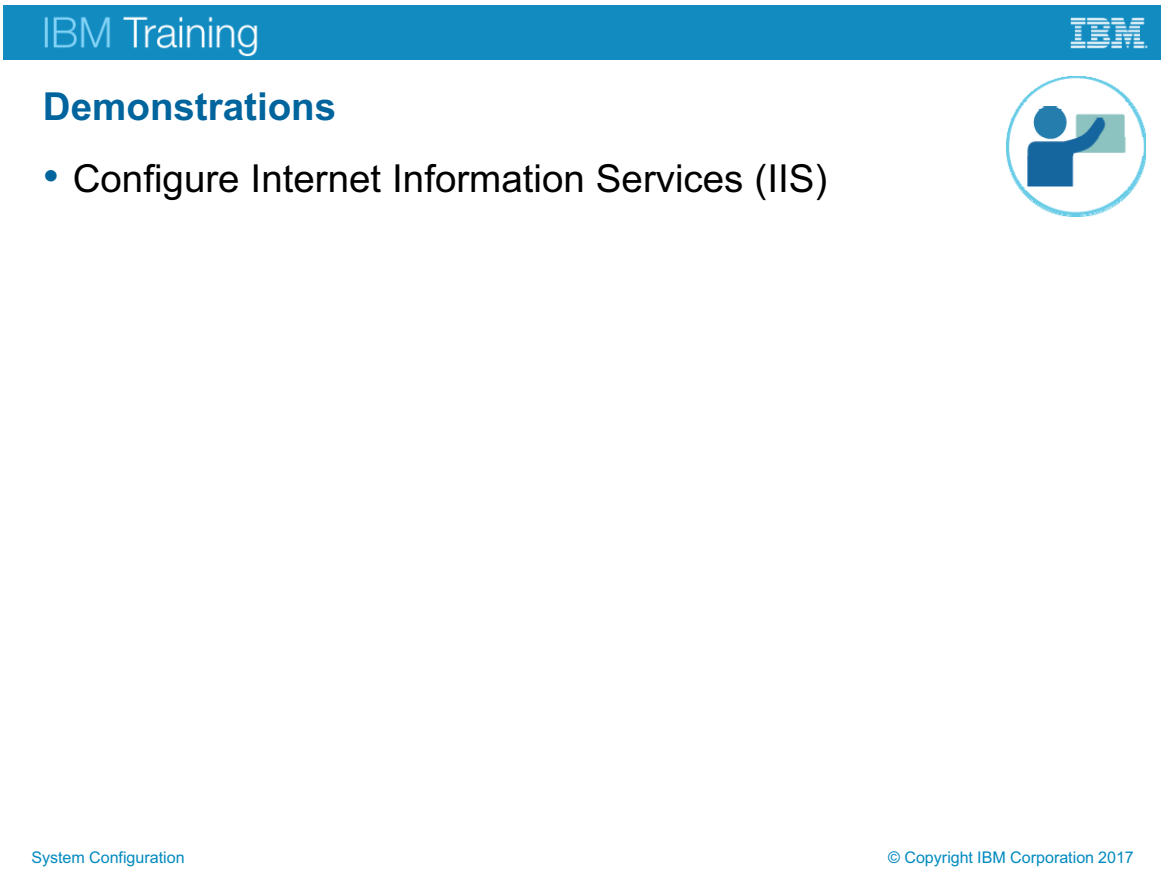

Figure 1-13. Demonstrations

If you are taking this course as a self-paced virtual course, return to the main course menu to play the pre-recorded demonstrations.

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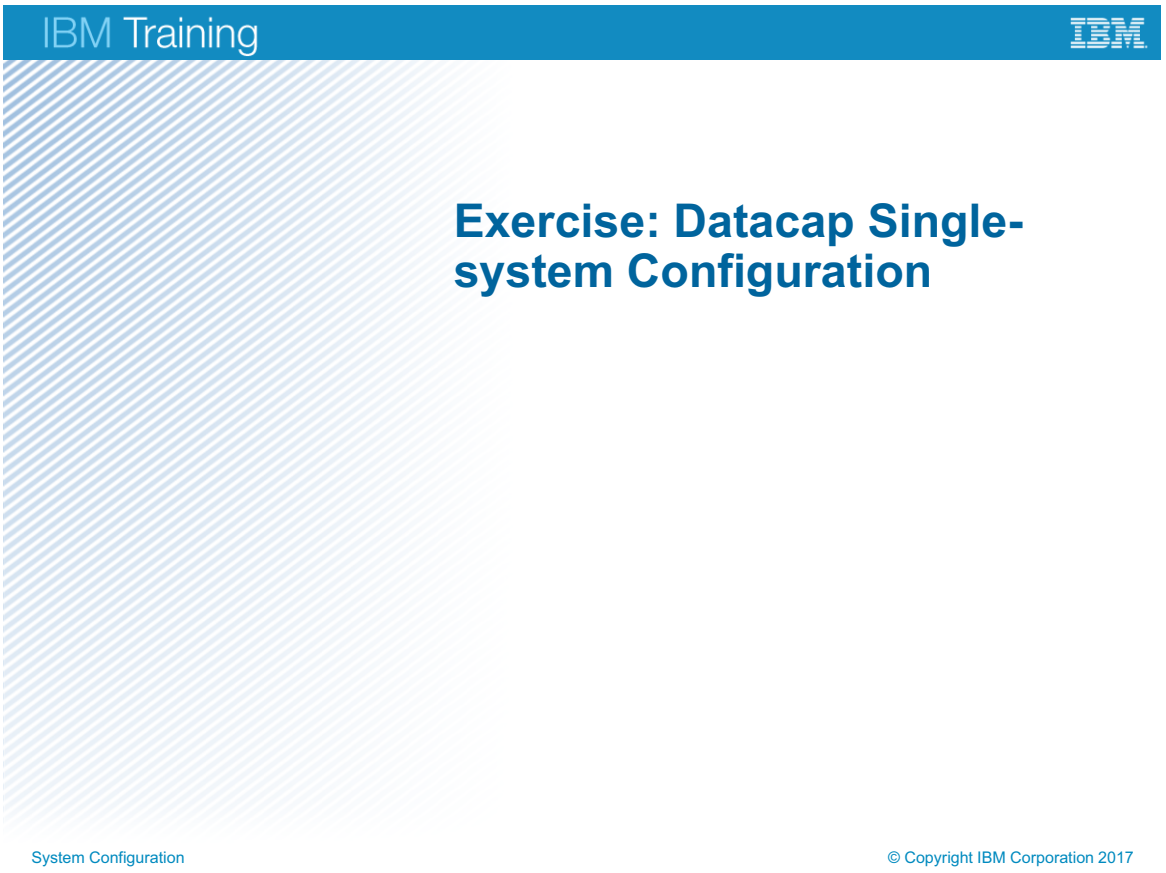

Figure 1-14. Exercise: Datacap Single-system Configuration

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Exercise objectives

- Configure Datacap Server Service and Web Access

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Figure 1-15. Exercise objectives

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Lesson 1.2. Maintain Users and Groups, and Configure Security

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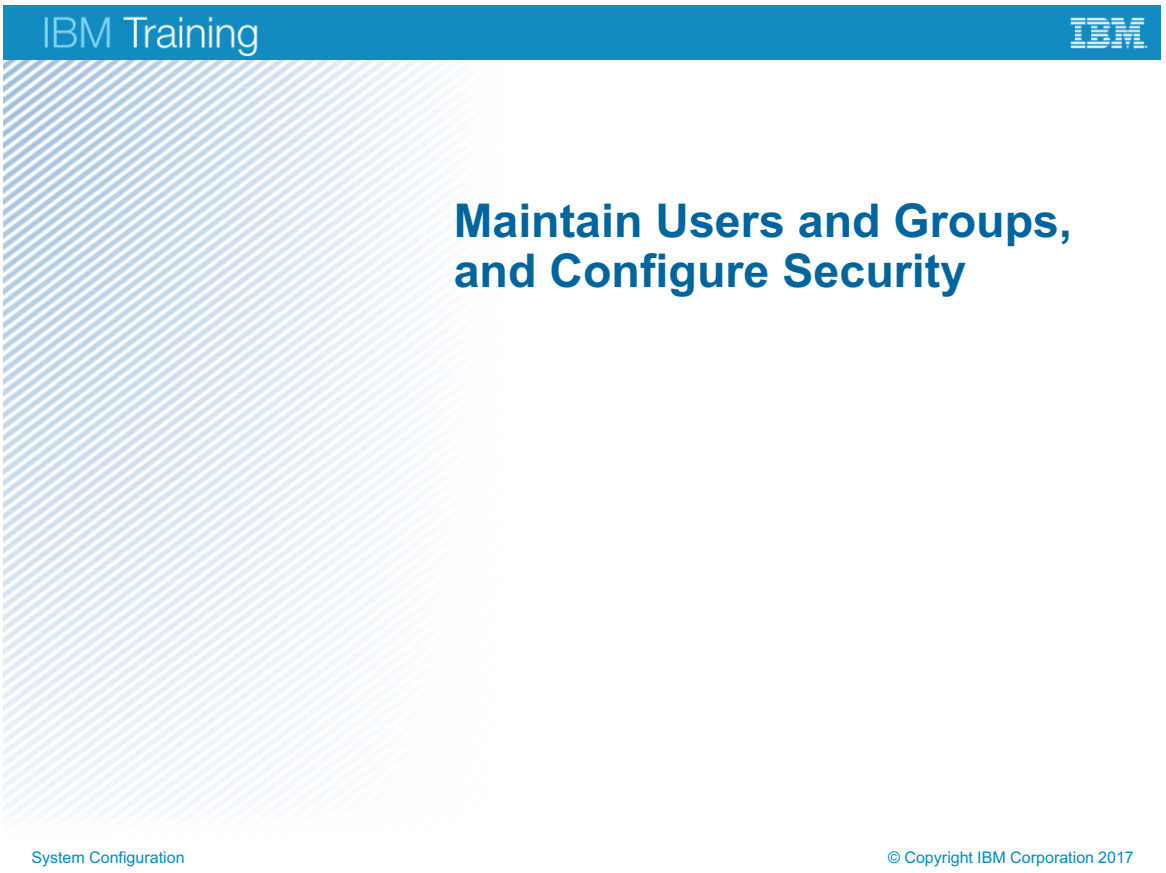

Figure 1-16. Maintain Users and Groups, and Configure Security

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Topics

- Single-system Configuration
- Maintain Users and Groups, and Configure Security
- Authentication and Encryption
- Multi-system Configuration Considerations

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Figure 1-17. Topics

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Why is this lesson important to you?

- As an administrator of an IBM Datacap capture system, you must be familiar with all configuration tasks for a functional IBM Datacap 9.0.1 system.
- You must configure users and groups for each task of the document acquisition process.

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Figure 1-18. Why is this lesson important to you?

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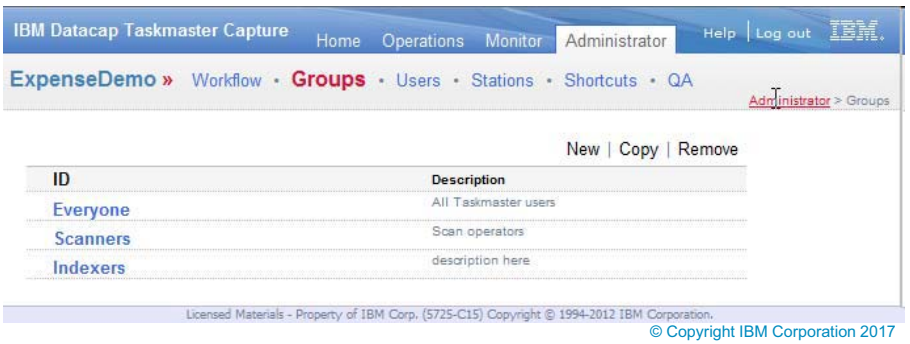
Datacap Web Client

- Operations – Task Processing.
- Monitor – Job and Task progress and statistics.
- Administrator – Configuration
  - Workflow
  - Groups
  - Users
  - Stations
  - Shortcuts



System Configuration

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Figure 1-19. Datacap Web Client

Help path

- Datacap 9.0.1>Administering your system>Datacap web clients administration

Log in to Datacap Web Client

Use Internet Explorer to:

- Browse to http:/localhost/tmweb.net.
- Log in using a valid user for the authentication mode that you selected.

Operations – Task Processing

The Operations tab displays shortcuts to the tasks in a Datacap application workflow that are configured to run through the Datacap Web client. You can start a task by clicking the name of the shortcut.

Tasks that are configured to run in Datacap Desktop, or by Rulerunner, do not appear on the Operations tab. You must complete these tasks in the program to which they are configured to run.

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Monitor – Job and Task progress and statistics.

During the data capture process, documents go through a workflow that consists of several discrete tasks: scanning, upload (if scanned from a remote client), page identification, recognition, validation, verification, and export. Datacap uses a queuing mechanism to move batches of documents through the workflow. On the Job Monitor tab, you view the status of all batches.

To open the Job Monitor, click the Monitor tab in the Datacap Web Client.

Administrator – Configuration

On the Datacap Web Client Administrator tab, you configure your application and the application components.

All configuration that is done on the Administrator sub menus is stored in the Admin database. Default is C:\Datacap\<application>\<app name>Adm.mdb.

- Workflow tasks are stored in task table
- Users are stored in tmuser table
- Groups are stored in tmgroup table
- Stations are stored in the station table
- Shortcuts are stored in the Buttons table

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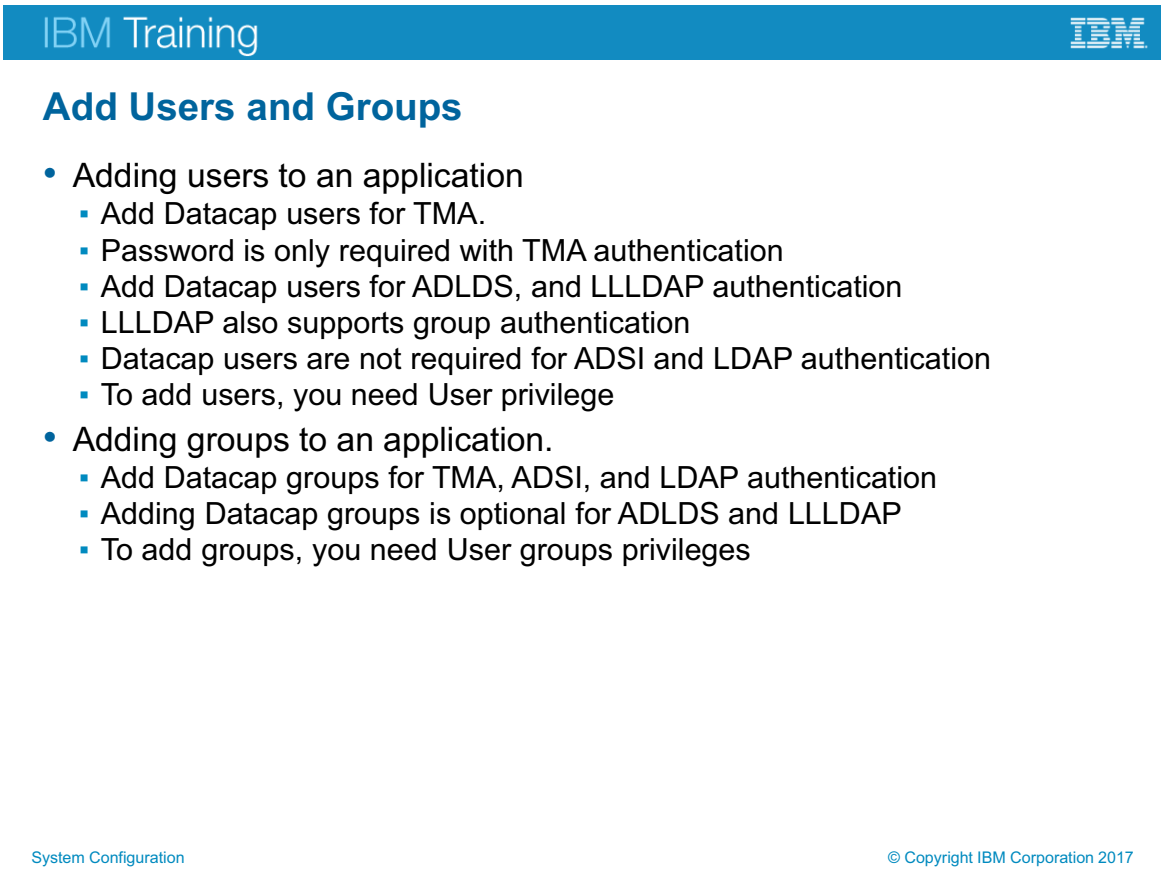

Figure 1-20. Add Users and Groups

Authentication systems are covered in more detail in the next lesson.

The internal authentication system is TMA.

The external or third-party authentication systems are ASDI, LDAP, ADLDS, and LLLDAP.

Adding users to an application

Defining users enables users to work on the Datacap system. They must have a user ID to authenticate with. The user-defined privileges, permissions, and group associations determine what the user is allowed to do.

- TMA is the only authentication system that uses the Datacap user for authentication. Therefore, it is the only system that requires a user for the Datacap user.
- ADLDS and LLLDAP do not support group authentication. It is necessary to define Datacap users for the application for each user that is defined in the external authentication system.
- ADSI and LDAP do support group authentication. Therefore, it is not necessary to define Datacap users for the application. Datacap users can be optionally defined whether you need to give a particular user special privilege or set permission different from the rest of its group.
- If you are defining Datacap users for an application, the Datacap user name must match exactly the user name in the external system.

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Adding groups to an application

Defining groups enables groups of users to be associated and to all have the same access credentials.

- ADLDS does not support group authentication. It is not necessary to define Datacap groups for the application. Groups can be defined optionally to define privileges and permissions for groups of users but the groups are not used for authentication.
- LLLDAP supports user and group authentication. It is not necessary to define Datacap groups for the application. If you define groups, they define privileges and permissions for groups of users and group authentication can be done without having any users who are defined in the application.
- ADSI and LDAP do support group authentication. Therefore, it is necessary to define Datacap groups for the application for each ADSI or LDAP group.
- If you are defining Datacap groups for an application, the Datacap group name must match exactly the domain group name with the domain name added.

  For Example for ADSI:

  External group name = DCScanners

  Internal Datacap group name = DCScanners.EDU.

  For Example for LLLDAP:

  External group name = DCScanners

  Internal Datacap group name = DCScanners

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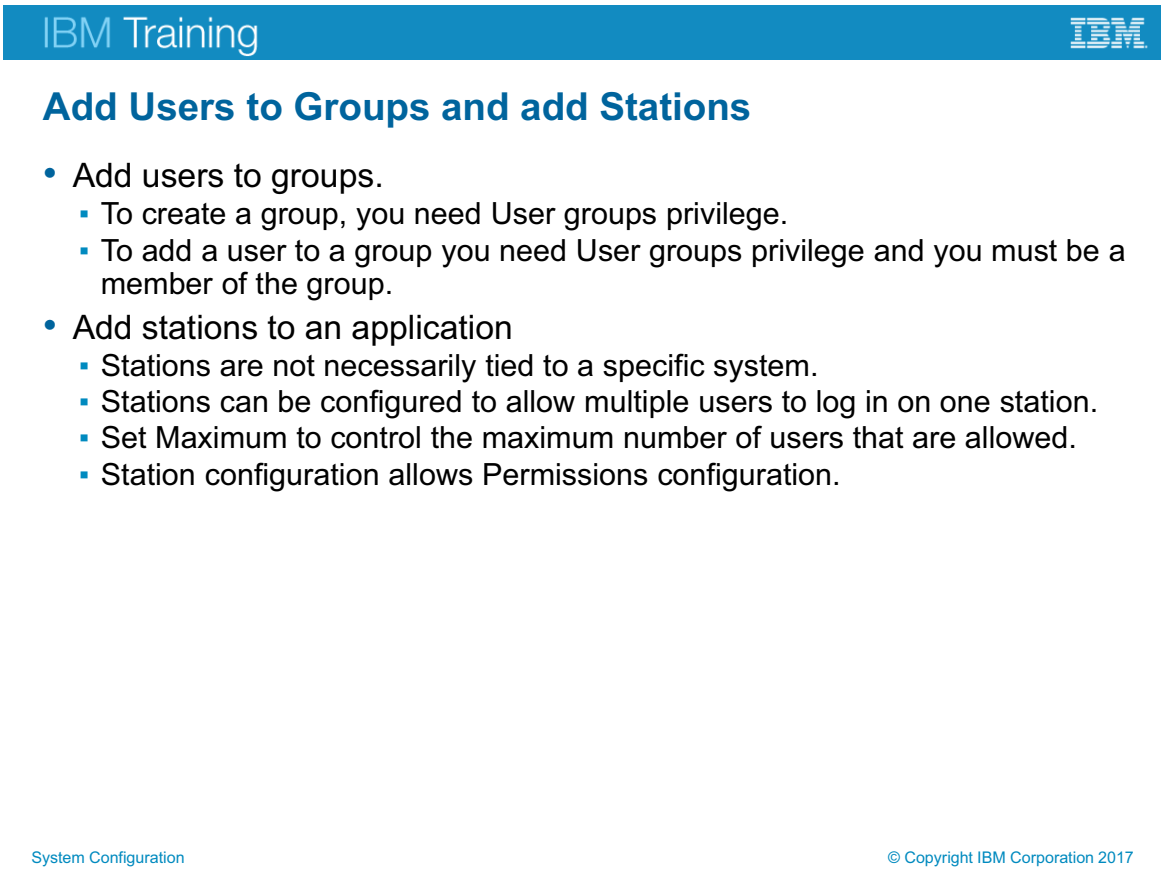

Figure 1-21. Add Users to Groups and add Stations

Adding users to groups

Any user can create a group provided they have the User groups privilege. When the group is created; only a user who is a member of the group and also has User groups privilege can modify it. The restriction of allowing only the member of a group to change a group is by design. There is a work-around method for an administrator who is not a group member. You can select the option to copy a group, and make your wanted changes. Then, delete the old group and rename the new group to have the original name.

Adding stations to an application

The Stations tab within Datacap Web provides you with the ability to create a station, and assign it a unique identifier. You can also define which applications, workflows, and job-task pairs can be run when a user logs in to Datacap with that station ID.

A station ID does not have a one-to-one correspondence with a physical workstation. You can enable the Datacap feature called virtual stations. Virtual stations are set up by setting the Maximum number greater than zero. When a virtual station in configured then different users them to log in on different physical workstations simultaneously.

When a virtual station is configured, Datacap assigns a unique substation identifier to each login and allows multiple logged in users up to the maximum specified. When the Maximum number of

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virtual stations is set to zero, Datacap prevents multiple users from logging in with the same station ID.

Datacap Web sessions can timeout, and users can close their browser windows without logging out properly. When these occurrences happen, setting a Maximum number of virtual stations that is greater than zero allows users to log back in. Otherwise, system administrator support is requiring to log back in. When the Maximum number of virtual stations for a station ID is set to zero, the user's next attempt to log in fails. Also, if the Maximum number of virtual stations is reached the next login fails. In this situation, the system administrator must clear the virtual stations for that station ID to allow the user to log in again.

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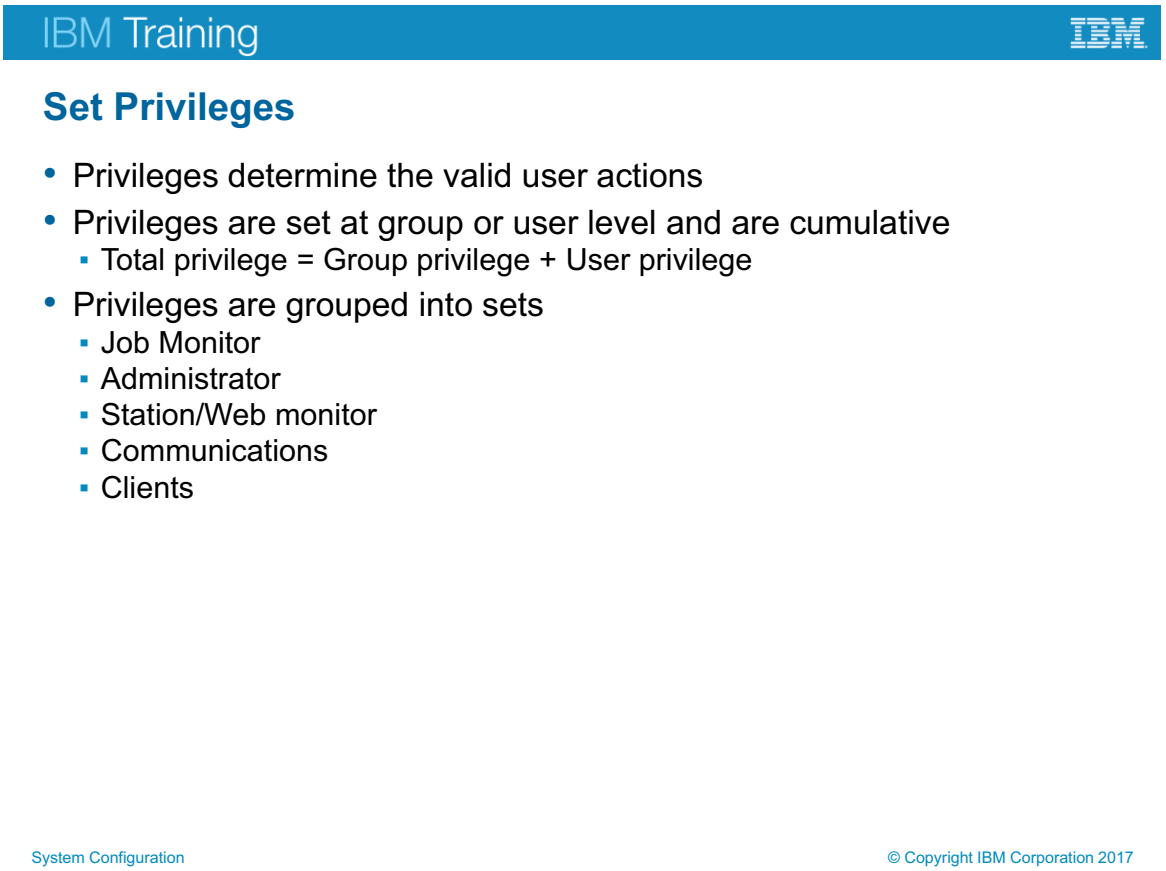

Figure 1-22. Set Privileges

Set Privileges

Selecting privileges determines specific actions that the user or group that you are configuring can do. Privileges are arranged in sets.

The following are privilege sets:

Job Monitor

- This set configures the job monitoring actions a user can control.

Administrator

- This set determines the system administrative functions a user can do

Station/Web monitor

- This privilege allows access to the Station monitor and Web monitor view in the Datacap Web client.

Communications

- The Communications > Remote administration option allows the user to do administration on remote systems.

Clients

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This set allows access to the Report Viewer, Datacap Web, and Datacap Studio clients.

Privilege options that are no longer supported.

‘Run Task’ dialog

- This option is no longer valid and will be removed from the interface in a future release.

General settings dialog

- This option is no longer valid and will be removed from the interface in a future release.

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Set Permissions

- Permissions define what job tasks the user can run
- Permissions can be selected for users, groups, and station configuration
- Task permissions are in groups by job on user, group, and station property pages
  - Main Job – Defines what tasks can run with Datacap Desktop, FastDoc, and Rulerunner
  - Fixup Job – Defines when the Fixup job can run
  - Web Job – Defines what tasks the Web Client can run
  - Navigator Job – Defines what Tasks the Datacap Navigator Client can run

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Figure 1-23. Set Permissions

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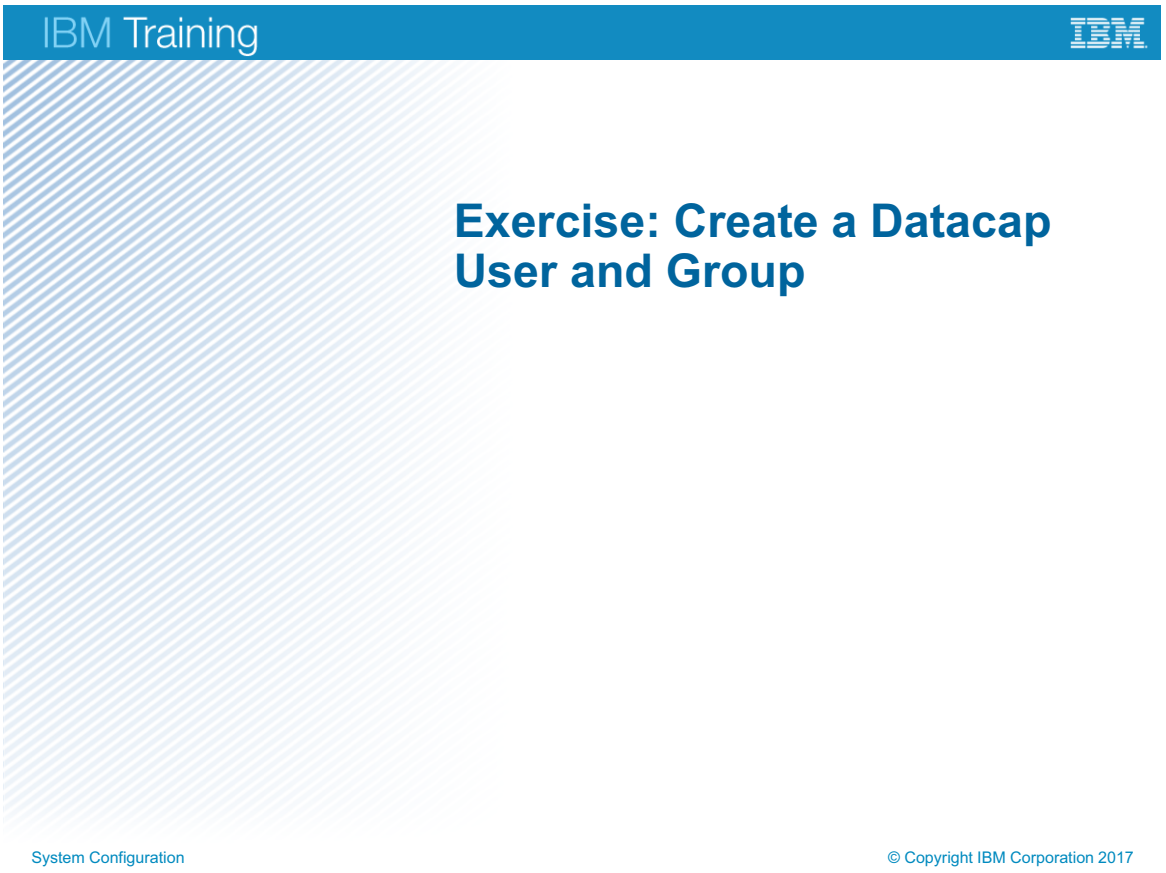

Figure 1-24. Exercise: Create a Datacap User and Group

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Exercise objectives

- Create a Datacap User and Group

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Figure 1-25. Exercise objectives

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Lesson 1.3. Authentication and Encryption

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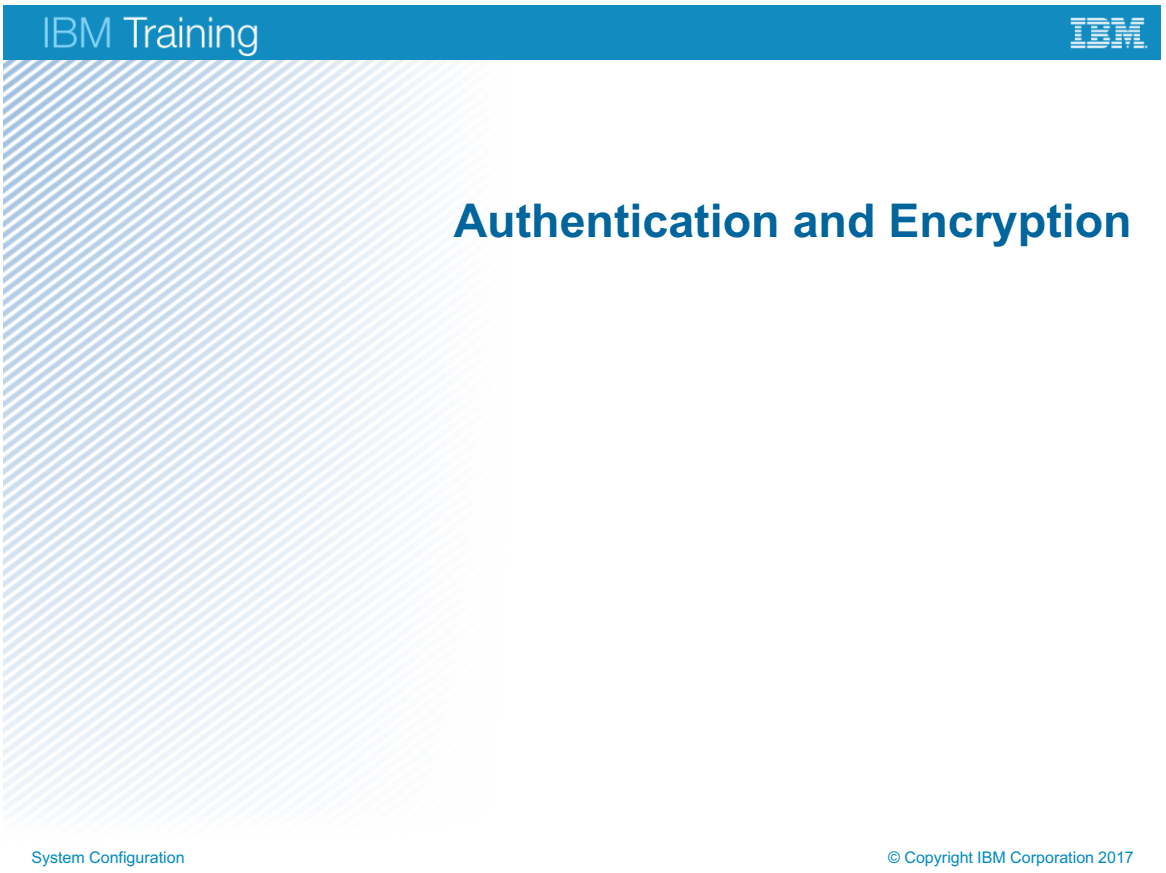

Figure 1-26. Authentication and Encryption

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Topics

- Single-system Configuration
- Maintain Users and Groups, and Configure Security
- Authentication and Encryption
- Multi-system Configuration Considerations

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Figure 1-27. Topics

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Why is this lesson important to you?

- As an administrator of an IBM Datacap capture system, you must be familiar with all configuration tasks for a functional IBM Datacap 9.0 system.
- Datacap currently supports five user authentication methods. You must select the method that integrates best with your existing corporate security authentication method.

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Figure 1-28. Why is this lesson important to you?

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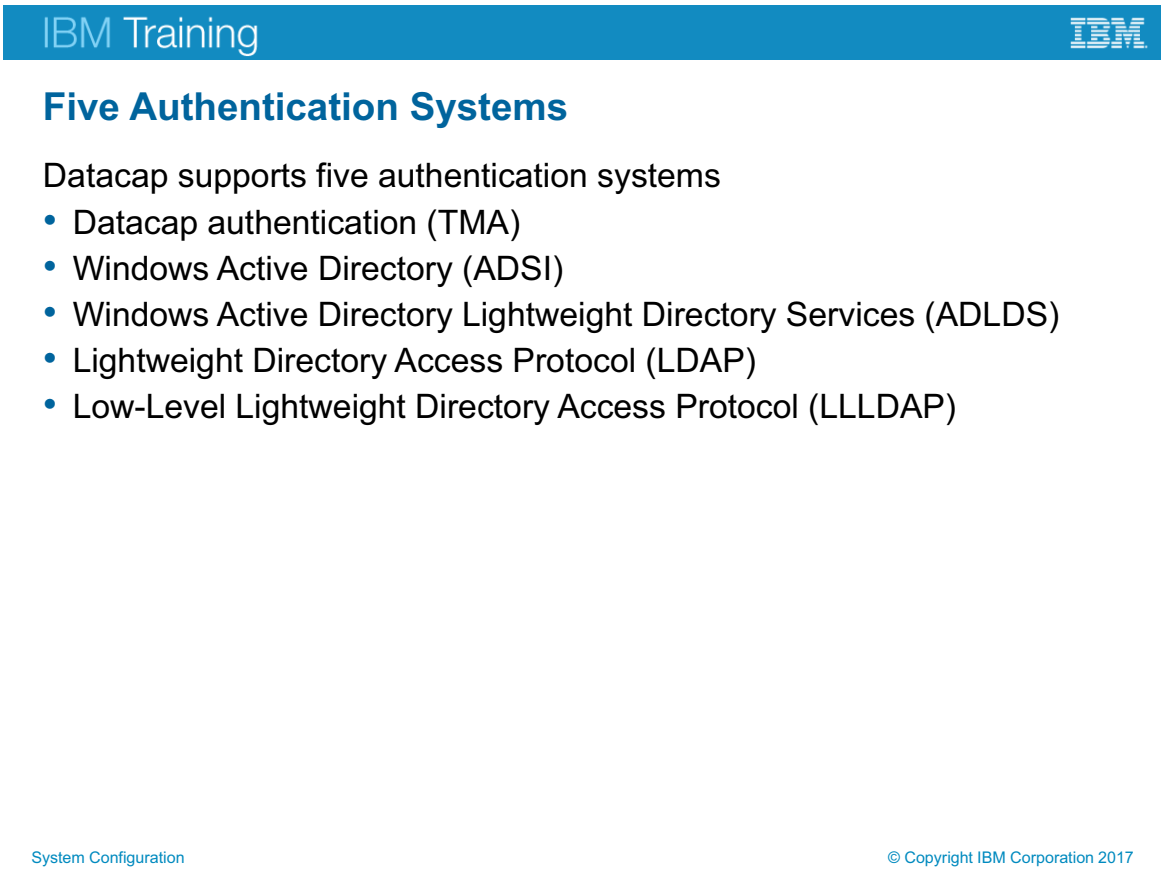

Figure 1-29. Five Authentication Systems

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap

Internal authentication system

- **TMA –** Internal Datacap authentication supports user and group authentication.

External authentication systems

- **ADSI and ADLDS** – External Windows Active Directory authentication. ADSI supports user and group authentication. ADLDS does not support group authentication.
- **LDAP and LLLDAP** – External authentication systems other than Windows Active Directory. Select this option when you are using providers such as IBM Tivoli Access Manager or Sun Directory Server Enterprise Edition. LDAP and LLLDAP support user and group authentication.

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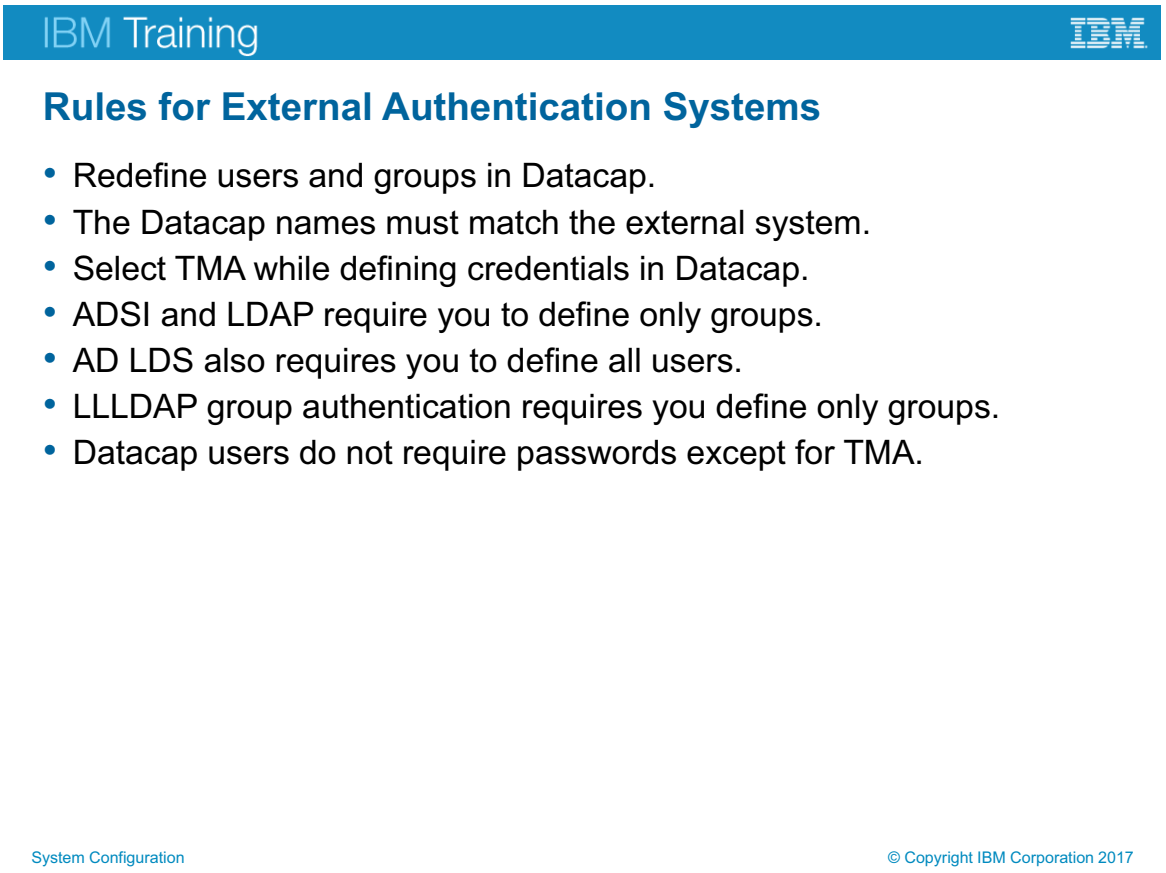

Figure 1-30. Rules for External Authentication Systems

Rules

- For ADSI and LDAP groups that are defined in the external Active Directory or LDAP system must also be defined in Datacap.
- For ADLDS users and groups that are defined in the external Active Directory or LDAP system must also be defined in Datacap.
- For LLLDAP users and groups that are defined in the external Active Directory or LDAP system you can define users or groups in Datacap. That is, LLLDAP can do either user or group authentication.
- The user and group names that are defined in Datacap must match identically the names that are used in the external authentication system.
- Irrespective of the chosen authentication system, you must always select the TMA authentication before you define the users, groups, and stations in Datacap Server Manager. When the Datacap definitions are complete, then the chosen authentication system can be reselected in the Datacap Server Manager.
- ADSI and LDAP support group authentication. Therefore, it is not necessary to redefine all the users in Datacap if either of these authentication systems are used.

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- AD LDS and LLLDAP support user authentication. Therefore, it is necessary to redefine all the users in Datacap if either of these authentication systems are used. AD LDS does not support group authentication.
- LLLDAP also supports group authentication. Therefore, it is only necessary to define the groups in Datacap for LLLDAP group authentication.
- Because the chosen external authentication system does the authentication, it is not necessary to define a password for the internal Datacap user. The internal Datacap user definitions determine the privileges and permissions but the chosen external authentication system does the user authentication.

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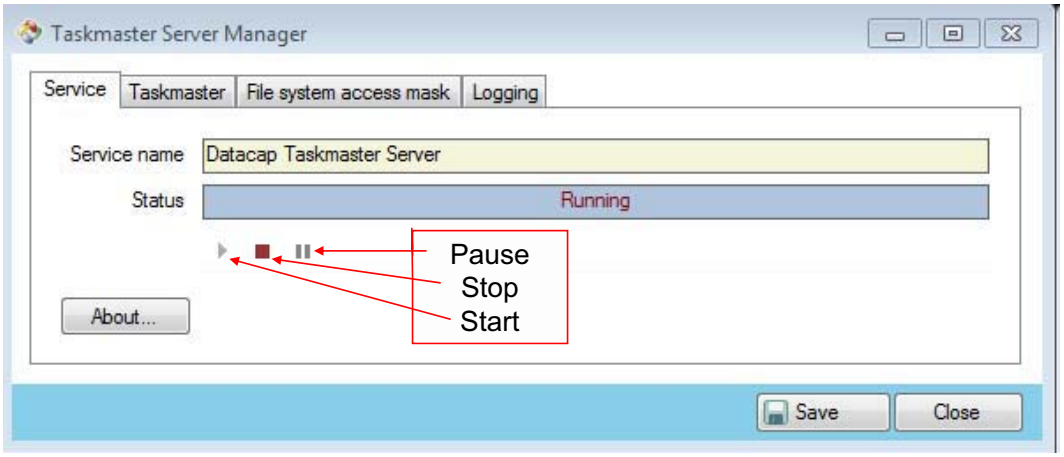
IBM Training

Datacap Server Service Control

- Open the Datacap Server Manager.
- Start > All Programs > IBM Datacap Services> Datacap Server Manager



System Configuration

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Figure 1-31. Datacap Server Service Control

When you configure users, groups, and stations in the Datacap always use the following procedure:

1. Stop the Datacap Server Service in the Datacap Server Manager.
2. On the Datacap tab > Advanced Settings, select the TMA authentication system.
3. Start the Datacap Server Service in the Datacap Server Manager.
4. Open the IE browser, click the tmweb link, log in to the application that you are configuring.
5. Configure users, groups, and stations for the application.
6. Stop the Datacap Server Service in the Datacap Server Manager.
7. On the Datacap tab > Advanced Settings, select the preferred authentication system (ADSI, LDAP, LLDAP, or ADLDS).
8. Start the Datacap Server Service in the Datacap Server Manager.

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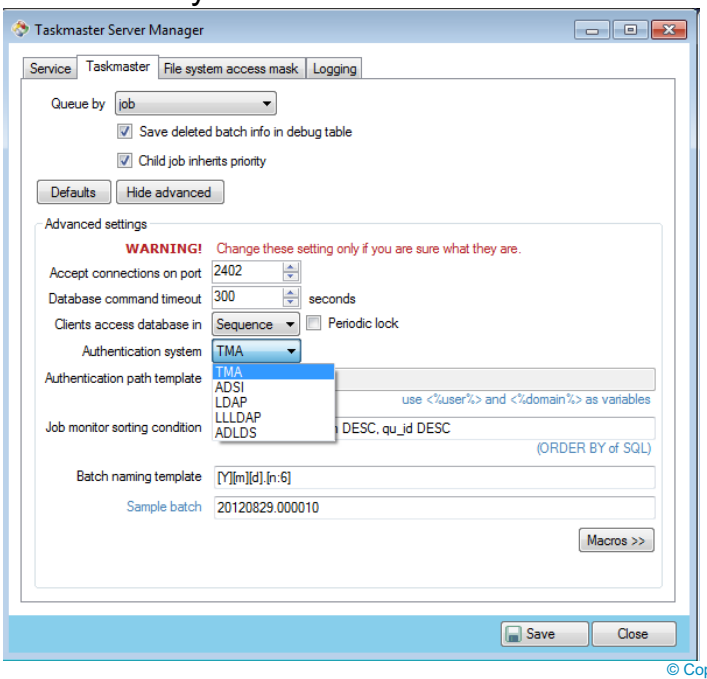
IBM Training

Select Authentication System

- Select authentication system



System Configuration

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Figure 1-32. Select Authentication System

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap

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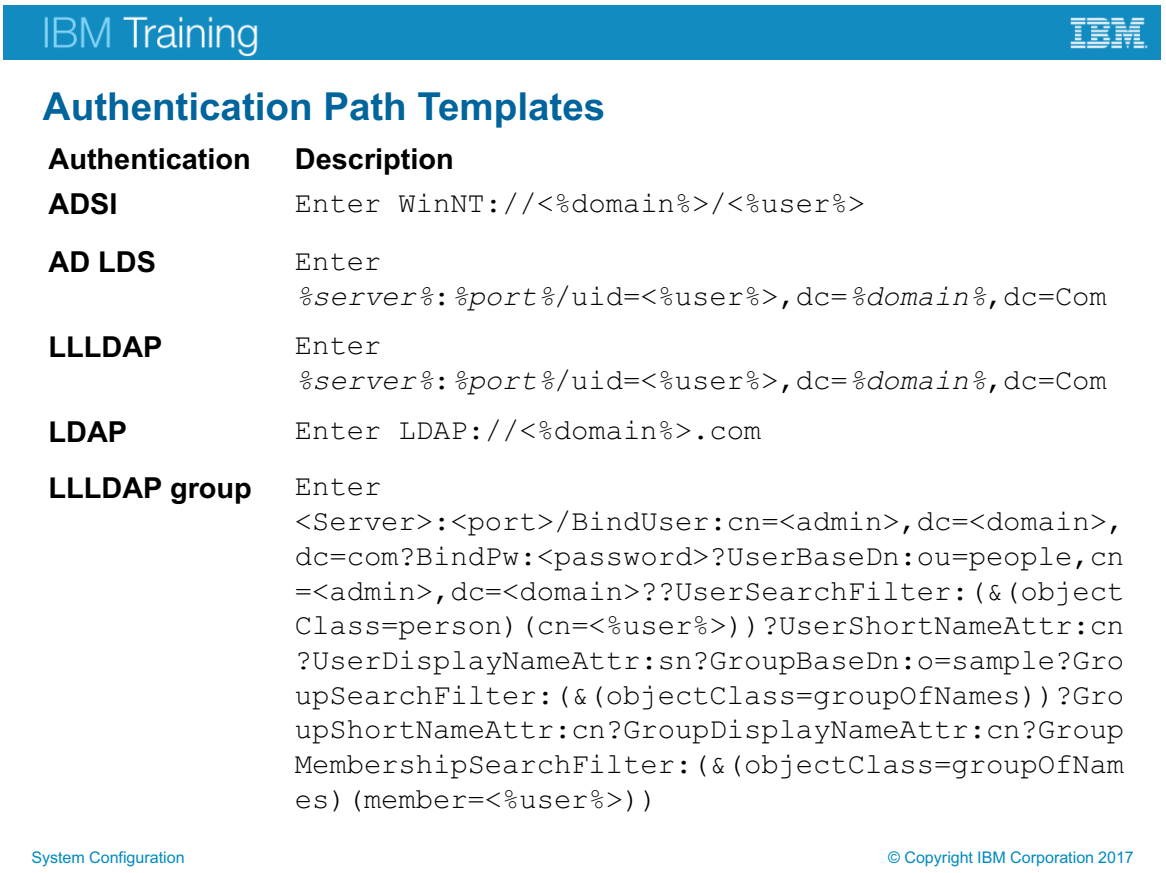

Figure 1-33. [No title]

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>Configuring the Datacap Server service to use an external authentication system
- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>LLLDAP group authentication

Important: For AD LDS and LLLDAP options only, you must enter actual values in the template path for *%server%*, *%port%*, and *%domain%*. The <%user%> variable entry must be retained as shown.

As an example, you might enter a template path:
server01:1099/uid=<%user%>,dc=domain02,dc=com

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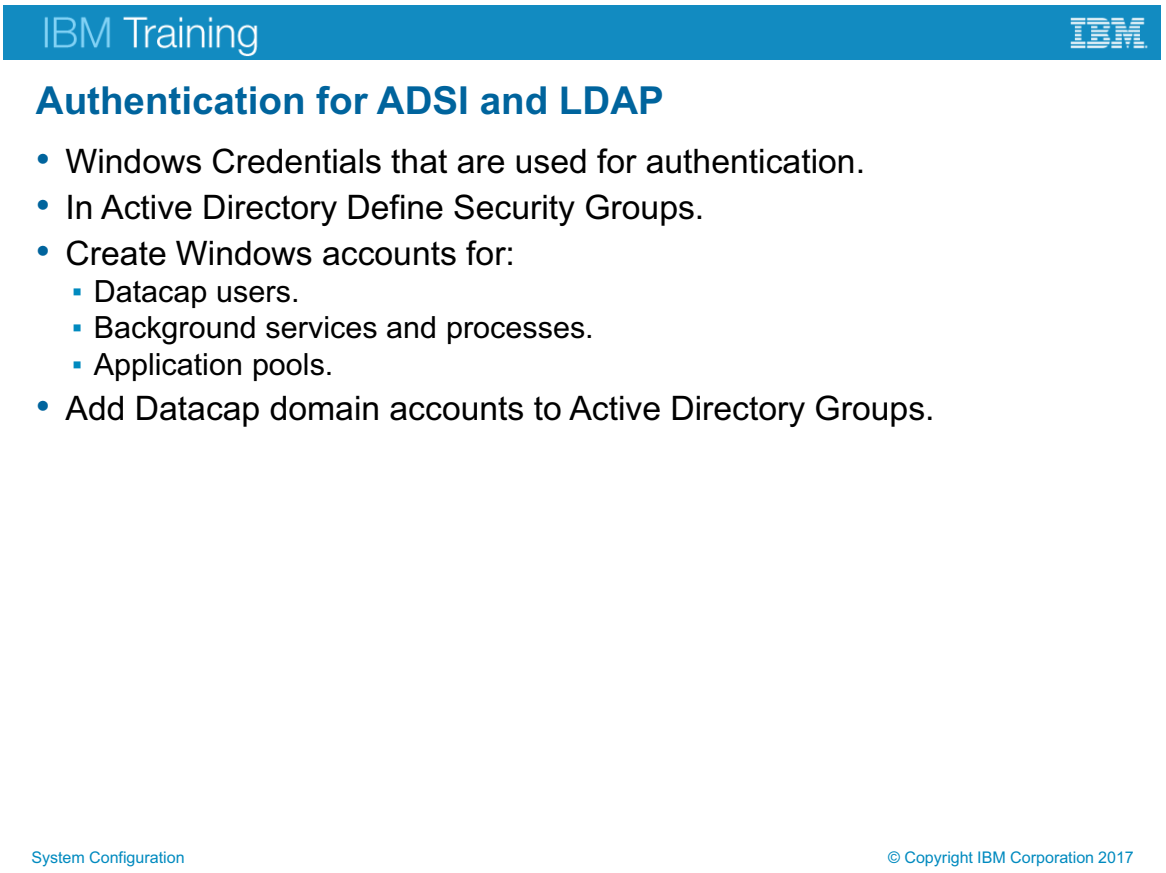

Figure 1-34. Authentication for ADSI and LDAP

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>Active Directory ADSI and LDAP authentication systems

AD (ADSI) or LDAP authentication in Datacap

Active Directory (AD) is referred to as ADSI in Datacap. When either the ADSI or LDAP authentication system is used, the credentials from the Windows account in use are the credentials that are used for authentication.

When you are using the ADSI or LDAP authentication system, you must:

- In Active Directory, create appropriate security groups
- Create Windows accounts for Datacap users, background services and processes, and application pools.
  - Datacap users are people who log in to do work.
  - Background Services and Processes are Datacap Server Service and Fingerprint Service.
  - Application pools are applications that are hosted on the web applications on the web server (Datacap Web and Report Viewer).

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- In Active Directory, add the Datacap related Windows accounts to the appropriate Active Directory security group or groups.

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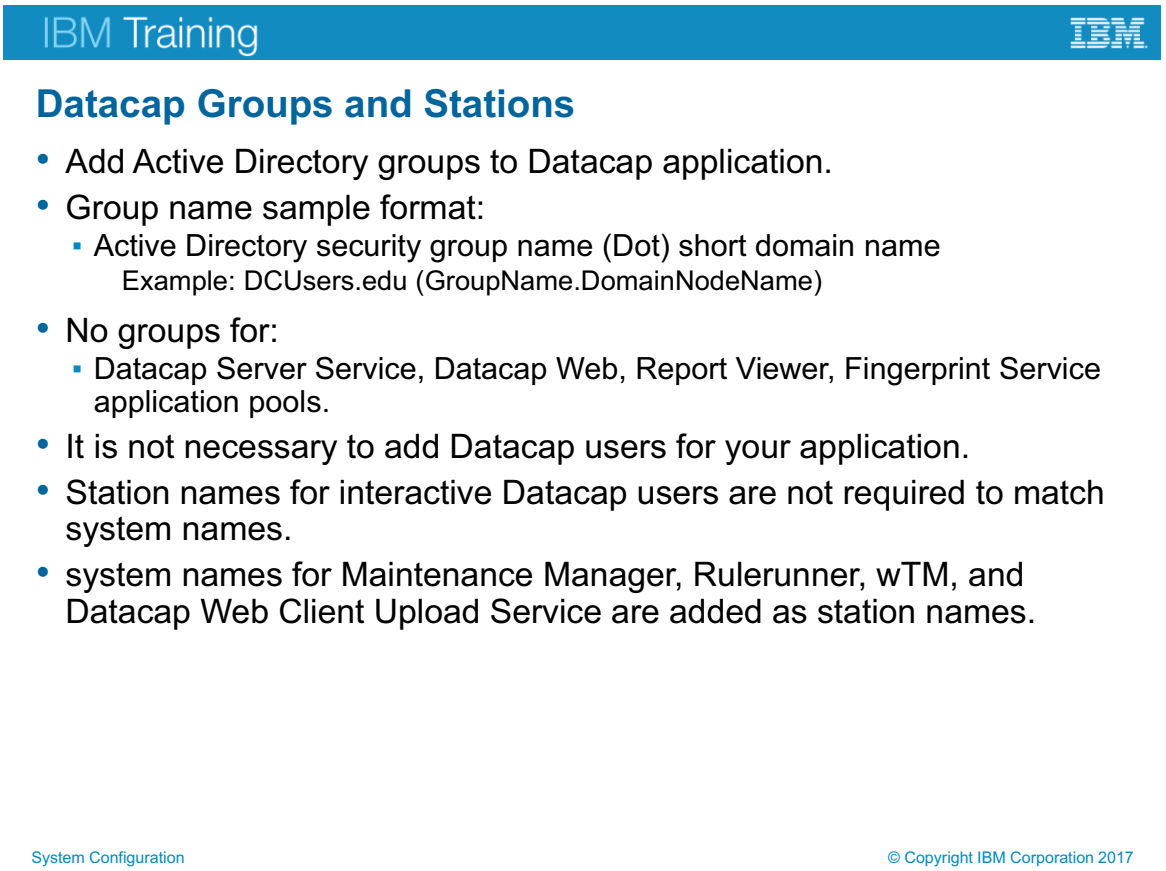

Figure 1-35. Datacap Groups and Stations

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>Active Directory ADSI and LDAP authentication systems

ADSI or LDAP Datacap groups and stations

For each ADSI or LDAP security groups you created, add corresponding groups to your Datacap application. Also, assign the appropriate Datacap permissions to each group. The Datacap Group name must be in the following format:

- Active Directory security group name
- A dot
- Short domain name (domain without top level)

  For example, if the Active Directory security group name is DCUsers and the full domain name is edu.domain02.com, then the Datacap Group name must be: DCUsers.edu.

There is no need to create Datacap groups for Datacap Server Service, or the Datacap Web, Report Viewer, and Fingerprint Service application pools.

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Add Datacap stations to your application with the appropriate permissions. Users that use interactive Datacap software components enter station names manually so the station names for these users do not have to match their system names.

For Maintenance Manager, Rulerunner, wTM, and Datacap Web Client Upload Service, the system names are provided automatically as the station name. These system names must be added to your Datacap application as station names. Station names are case-sensitive.

When you use ADSI or LDAP, authentication is performed at the group level and there is no need to add Datacap users to your Datacap applications.

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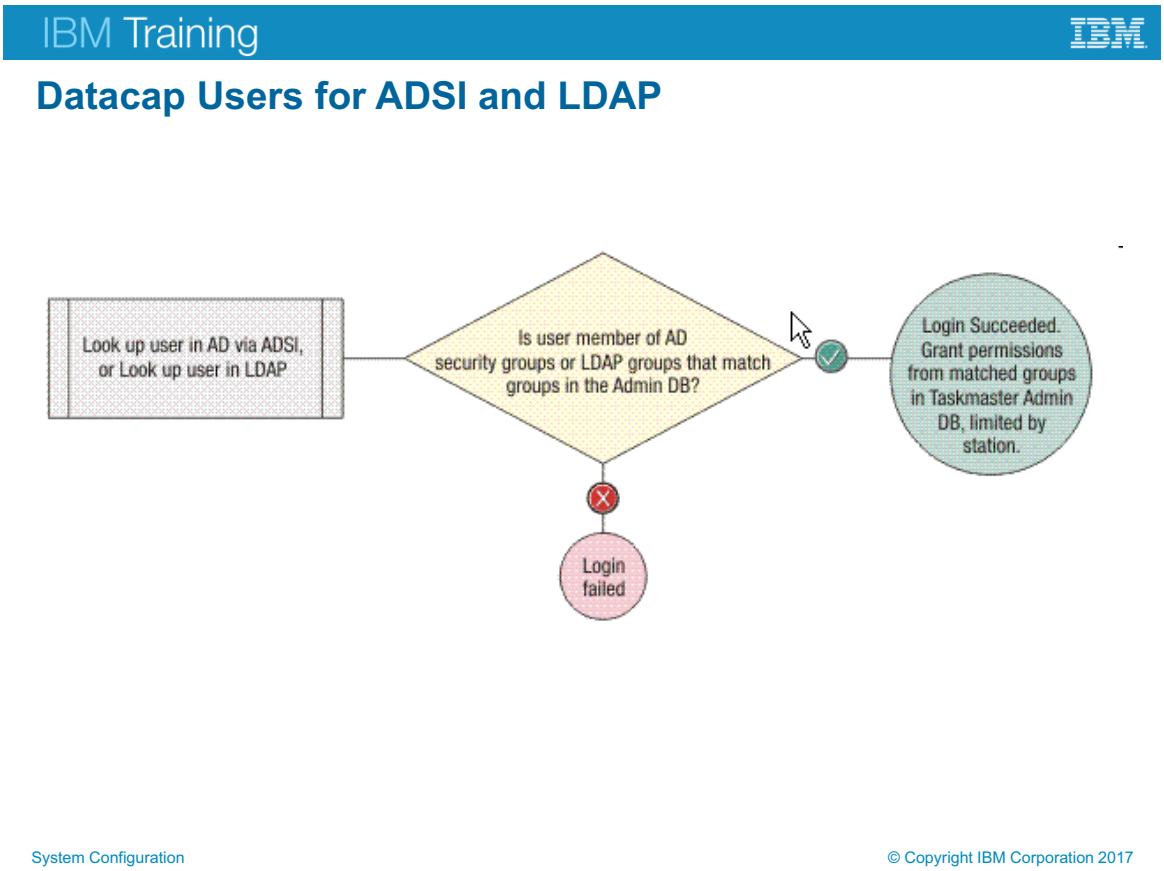

Figure 1-36. Datacap Users for ADSI and LDAP

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>Active Directory ADSI and LDAP authentication systems

ADSI or LDAP Datacap users

The Windows account that the user, background service, or process that is used to log in to the computer is used for authentication.

- Users logging in to interactive Datacap software components either provide a user name or leave it blank. Datacap uses windows user name that you used to log in to the desktop. You must leave the password blank, and you must enter a station name.
- Background services or processes must leave user name, password, and station name blank. The Windows account information is used for authentication and the system name is used as the station name.

ADSI or LDAP Datacap Studio users

Users logging in to Datacap Studio must select the NT Authentication check box the first time that they start Datacap Studio.

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ADSI or LDAP Maintenance Manager

The Windows Scheduler runs the Maintenance Manager application automatically. Maintenance Manager uses the Windows account that the application used and the computer name for authentication.

- Add a Datacap station to your application for Maintenance Manager that has the same name as the system name and assign appropriate permissions.
- In the Maintenance Manager application, set the authentication parameters:
- SetUser as domain\username,
- SetPassword do no use this action for ADSI and LDAP
- SetStation use a valid station ID or do not use this action and station defaults to host station name. Host station name must be defined as a station.
- In Windows Scheduler, set the account in Security Options to the Windows account used by Maintenance Manager to run with highest privileges.

ADSI or LDAP Rulerunner Service

The Datacap Rulerunner Service is a background service that supplies its credentials automatically.

- Add a Datacap station to your application for each Rulerunner Server and assign appropriate permissions. The station name in Datacap is case-sensitive and must match the system name as it is maintained in the Domain Controller.
- To set up Rulerunner credentials when you use either the ADSI or LDAP system; in each Rulerunner Manager, select the Windows Authentication option on the Rulerunner Login tab.

ADSI or LDAP Datacap Web Client Upload Service

The Datacap Web Client Upload Service is a Windows service that supplies its credentials automatically.

- Add a Datacap station for the Upload Service to the Datacap application and assign appropriate permissions.
- Set up the Upload Service to use a blank password: In Datacap Application Manager, select the application and add an Advanced values name-value pair on the Custom values tab for the blank password:
  - Value name – must be dc2run.User
  - Value – Leave this field blank.
- In the Datacap Web Client Upload configuration file, set the value of the <setting name="User" node to the domain and Windows account of the Datacap Upload Service user. (for example DOMAIN\UserID)
- In the Web Client Upload configuration file, set the value of the <setting name="Station" node to the Datacap Upload Service station.

ADSI or LDAP Application Pools

Datacap uses application pools for Datacap Web, Report Viewer, and the Fingerprint Service. When Datacap Web and Report Viewer are installed on the same web server, they must use the same Windows account. When the Fingerprint Service is also installed on the same web server, it

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can use the same Windows account or a different one. The Windows account that is assigned to the application pool allows the application pool to function. When you assign the Windows account to the application pool, you provide the Windows credentials that the application pool uses.

There is no need to set up ADSI or LDAP groups, or Datacap users, stations, or groups for application pools.

ADSI or LDAP Datacap Web Services (wTM)

Datacap Web Services supplies its credentials automatically.

- Add a Datacap station to your application for wTM that is the same name as the system name and assign appropriate permissions.
- To set up wTM credentials when you use ADSI or LDAP: In Datacap Application Manager, select the application.
  - Add a General string name-value pair on the Custom values tab for the blank user name:
    - Value name – wTMUser
    - Value – Leave this field blank.
  - Add a General string name-value pair on the Custom values tab to hold the Datacap station name:
    - Value name – wTMStation
    - Value – Set to the Datacap station name.
  - Add an Advanced values name-value pair on the Custom values tab for the blank password:
    - Value name – wTMPassword
    - Value – Leave this field blank.

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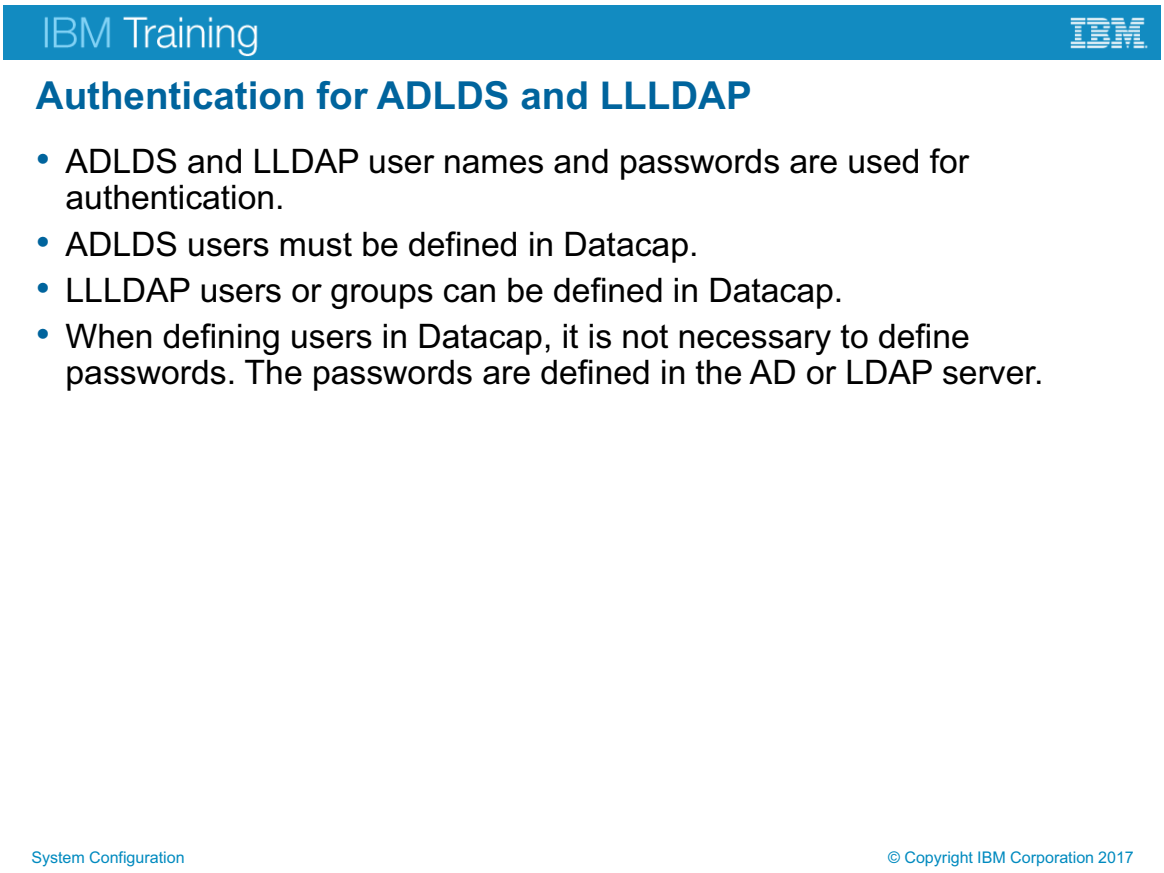

Figure 1-37. Authentication for ADLDS and LLLDAP

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>ADLDS and LLLDAP authentication systems

ADLDS or LLLDAP authentication in Datacap

- When the ADLDS or LLLDAP authentication system is used, the user names and passwords that are entered on Datacap login windows are used for authentication. For background services, the service credentials that are passed to Datacap are used for authentication.
- You must create accounts in ADLDS or LLLDAP for Datacap users, background services, and processes. The user names and passwords of these accounts are what interactive users must enter on Datacap login windows. Background services and processes must also supply the credentials automatically.
- You must also set up the same user names into the Datacap application. Passwords are not necessary in the application.

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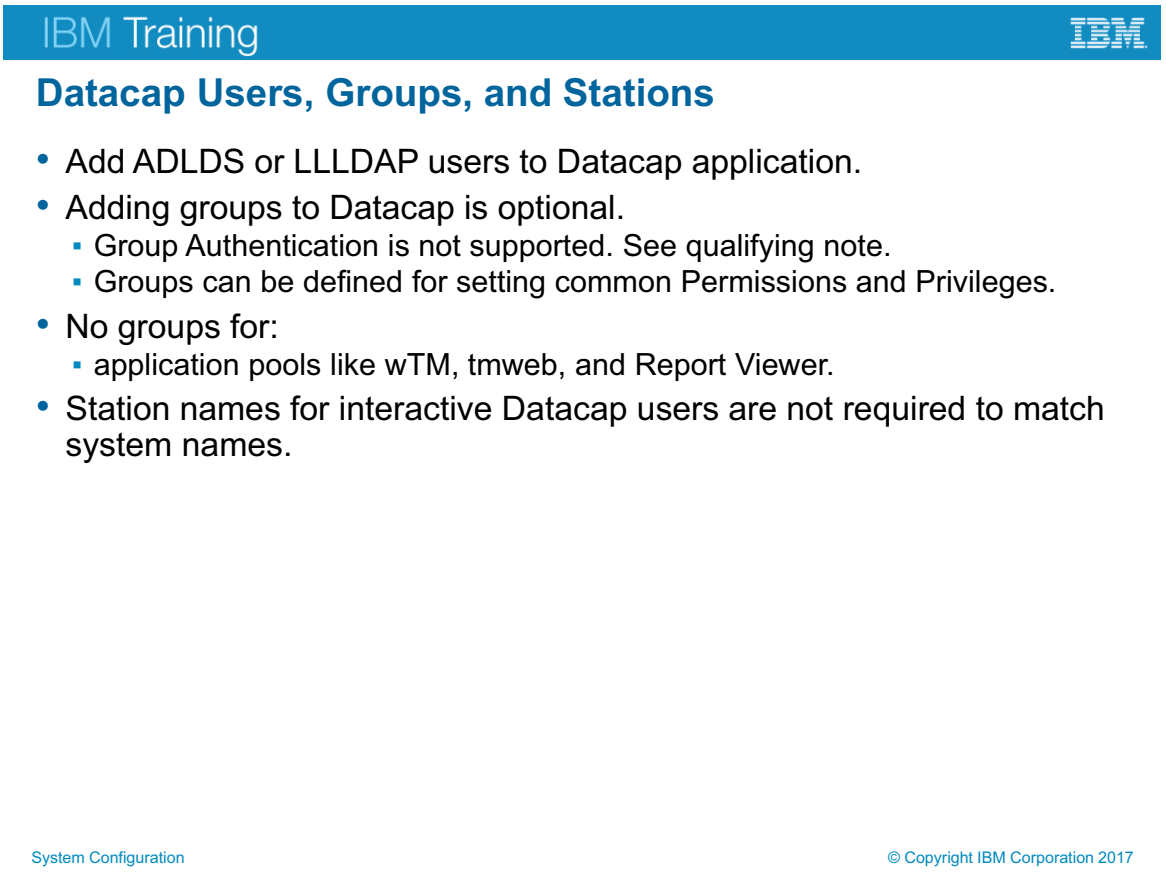

Figure 1-38. Datacap Users, Groups, and Stations

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>ADLDS and LLLDAP authentication systems

ADLDS or LLLDAP Datacap users, groups, stations

- Add Datacap users to your application with the same names and passwords that were set up in the ADLDS or LLLDAP authentication system. These credentials are the credentials the user or background service or process uses when they log in to Datacap.
- Datacap groups are optional. Add Datacap groups to your application when you want to manage permissions at the group level in addition to or instead of managing individual permissions. You can add groups to Datacap for: users, automatic users, and background services and processes. The Datacap Group name can be any name that you want. There is no need to create Datacap groups for Datacap Server Service, wTM, or application pools.
- When appropriate, add Datacap users to one or more Datacap group or groups.
- Add Datacap stations to your application with the appropriate permissions. Station names can be any name that you want.

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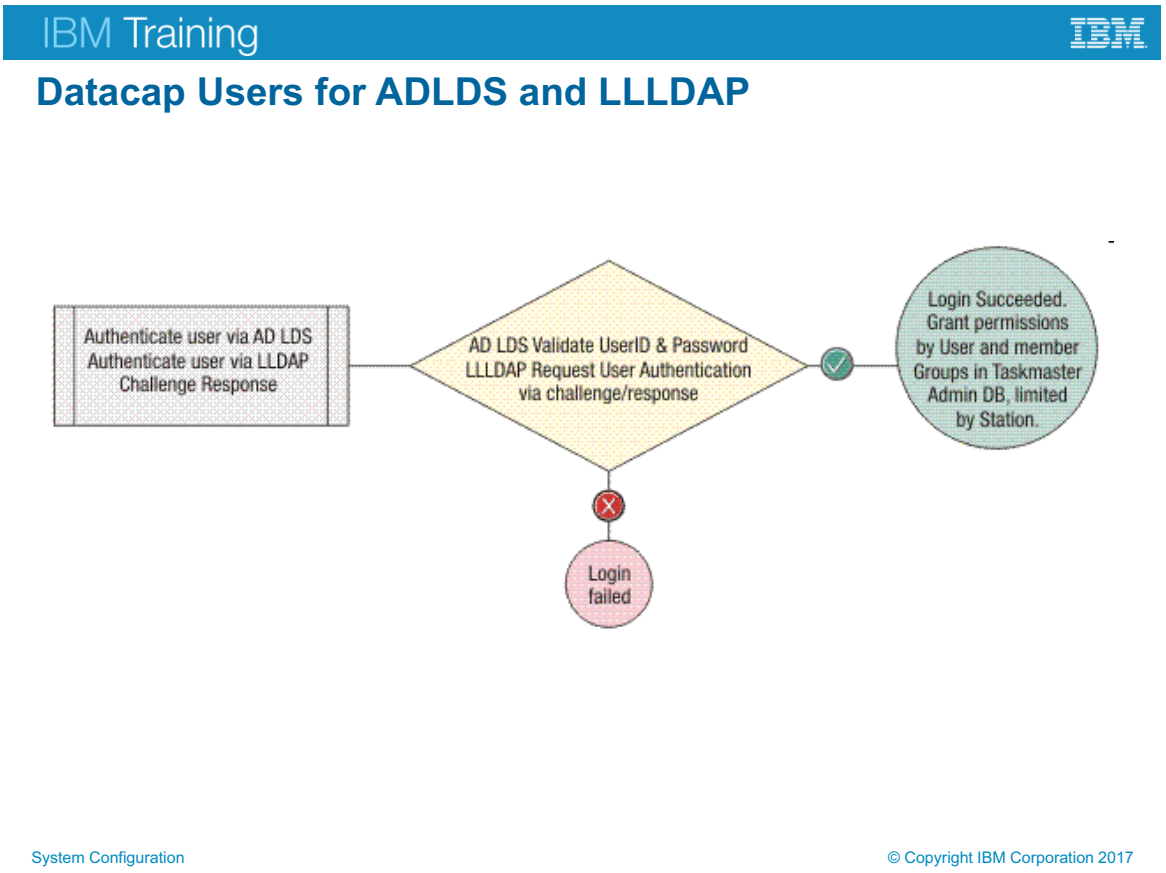

Figure 1-39. Datacap Users for ADLDS and LLLDAP

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring authentication for Datacap>ADLDS and LLLDAP authentication systems

ADLDS or LLLDAP Maintenance Manager

The Windows Scheduler runs the Maintenance Manager application automatically, and the Maintenance Manager application supplies its credentials automatically. When a Maintenance Manager ruleset is added to a Datacap application, the rules supply credentials automatically.

- Add a Datacap user and password to your application for Maintenance Manager, or use an existing Datacap user with appropriate permissions. The user name and password must match a user name and password that is set up in the ADLDS or LLLDAP authentication system.
- Add a Datacap station to your application for Maintenance Manager and assign appropriate permissions, or use an existing Datacap station with appropriate permissions.
- To set up Maintenance Manager credentials when you use ADLDS or LLLDAP: In Datacap Application Manager, select the application.

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  - Add a General string name-value pair on the Custom values tab to hold the user name of the Maintenance Manager user as found in Datacap.
  - Add an Advanced values name-value pair on the Custom values tab to hold the password for the Maintenance Manager Datacap user.
  - Add one General string name-value pair on the Custom values tab to hold the Maintenance Manager station name as found in Datacap.
- In the Maintenance Manager application, use the SetUser action. Set the value to use the APPVAR smart parameter to retrieve the Maintenance Manager user name from Datacap Application Service.
- In the Maintenance Manager application, use the SetPassword action. Set the value to use the APPVAR smart parameter to retrieve the Maintenance Manager user password from Datacap Application Service.
- In the Maintenance Manager application, use the SetStation action. Set the value to use the APPVAR smart parameter to retrieve the Maintenance Manager station name from Datacap Application Service.
- In Windows Scheduler, set the account in Security Options to the Windows account used by Maintenance Manager to run with highest privileges.

ADLDS or LLLDAP Rulerunner Service

The Datacap Rulerunner Service is a background service that supplies its credentials automatically.

- Add at least one Datacap user for Rulerunner to the Datacap application, or use an existing Datacap user with appropriate permissions. The user name and password must match a user name and password that is set up in the ADLDS or LLLDAP authentication system. If one instance of Rulerunner is set up to process tasks from multiple applications, the same Datacap credentials must be added to all of the applications. If multiple instances of Rulerunner are set up, they can all use the same Datacap user.
- Add one Datacap station for each Rulerunner, or create one Datacap station for the Rulerunners to share, or use an existing Datacap station with appropriate permissions.
- To set up the credentials that Rulerunner uses when you use ADLDS or LLLDAP: In each Rulerunner Manager, select the Datacap Authentication option on the Rulerunner Login tab. Then, enter the Datacap user name, password, and station for this Rulerunner instance.

ADLDS or LLLDAP Datacap Web Client Upload Service

The Datacap Web Client Upload Service is a Windows service that supplies its credentials automatically.

- Add at least one Datacap user for the Upload Service to the Datacap application, or use an existing Datacap user with appropriate permissions. The user name and password must match a user name and password that is set up in the ADLDS or LLLDAP authentication system.
- Add at least one Datacap station for the Upload Service to the Datacap application, or use an existing Datacap station with appropriate permissions.
- To set up the credentials that the Upload Service uses when you use ADLDS or LLLDAP: In Datacap Application Manager, select the application and add an Advanced values name-value pair on the Custom values tab for the Datacap Upload Service user password.

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  - Value name – must be dc2run.User
  - Value – Enter the password of the Datacap Upload Service user.
- In the Datacap Web Client Upload configuration file, set the value of the <setting name="User" node to the Datacap Upload Service user.
- In the Web Client Upload configuration file, set the value of the <setting name="Station" node to the Datacap Upload Service station.

ADLDS or LLLDAP Application Pools

- Datacap uses application pools for Datacap Web, Report Viewer, and the Fingerprint Service. When Datacap Web and Report Viewer are installed on the same web server, they must use the same Windows account. When the Fingerprint Service is also installed on the same web server, it can use the same Windows account or a different one. The Windows account that is assigned to the application pool allows the application pool to function. When you assign the Windows account to the application pool, you provide the Windows credentials that the application pool uses.
- There is no need to set up Datacap users, stations, or groups for application pools.

ADLDS or LLLDAP Datacap Web Services (wTM)

Datacap Web Services supplies its credentials automatically.

- Add a Datacap user for wTM to the Datacap application, or use an existing Datacap user with appropriate permissions. The user name and password must match a user name and password that is set up in the ADLDS or LLLDAP authentication system.
- Add a Datacap station for wTM to the Datacap application, or use an existing Datacap station with appropriate permissions.
- To set up the credentials that wTM uses when you use ADLDS or LLLDAP: In Datacap Application Manager, select the application.
  - Add a General string value name-value pair on the Custom values tab to hold the user name:
    - Value name – wTMUser
    - Value – Enter the user name for wTM
  - Add a General string value name-value pair on the Custom values tab to hold the station name:
    - Value name – wTMStation
    - Value – Enter the user name for wTM
  - Enter an Advanced values name-value pair on the Custom values tab to hold the password for the wTM user:
    - Value name – wTMPassword
    - Value – Enter the password for the wTM user

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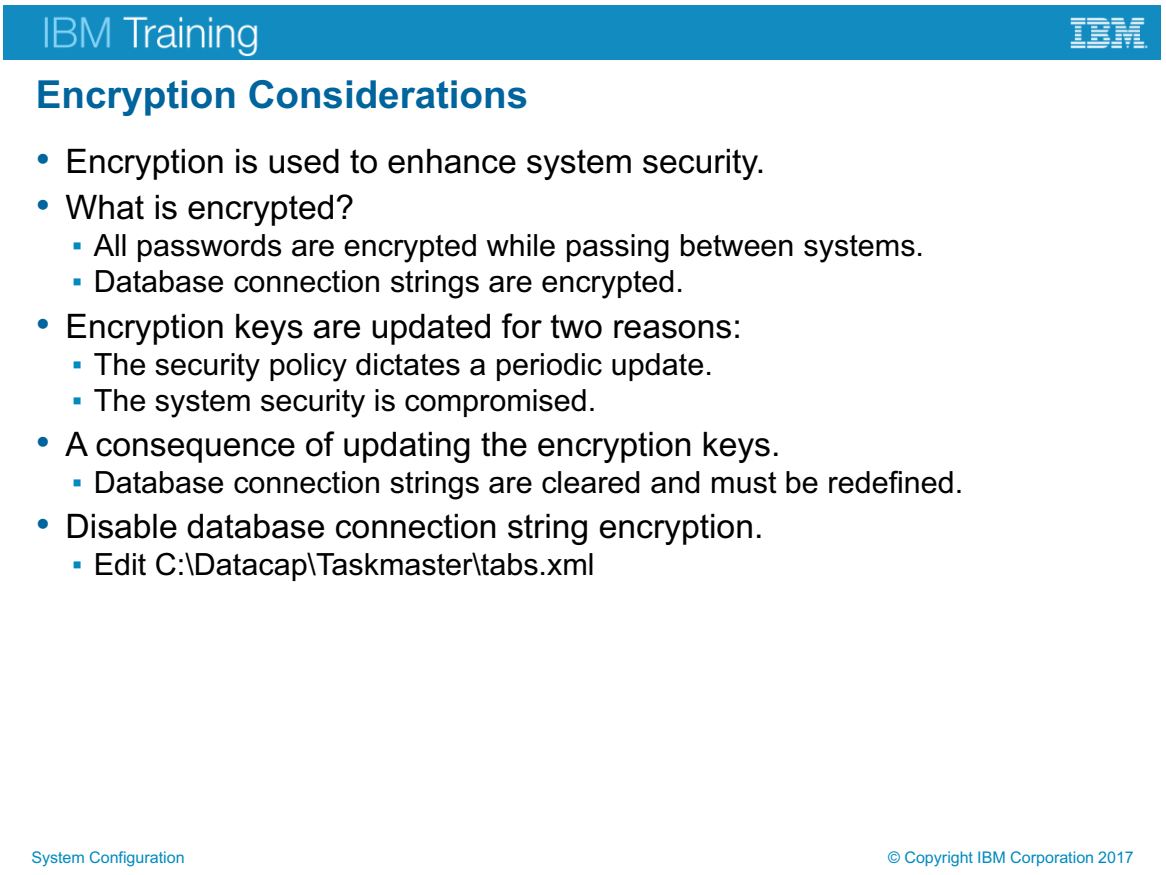

Figure 1-40. Encryption Considerations

Encryption enhanced security

Datacap is a distributed system that communicates across the internet in some configurations.

In all configurations of IBM Datacap Capture, you must generate and use the security encryption keys. This requirement secures any passwords that are passed over or received from the network by the Datacap component.

What is Encrypted?

Encryption keys allow Datacap to encrypt and decrypt:

- Passwords that are used to access the Datacap Server Service, and to log in to databases.
- Database connection strings that are used to locate and access Datacap system databases.

Encryption keys are updated for two reasons.

The most likely reasons for updating the Encryption keys are:

- The security policy of the installation dictates that a particular time schedule for changing the encryption keys.

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- The system security is compromised in some way and the encryption keys must be changed to restore optimum security.

A consequence of updating the encryption key.

The database connection strings are cleared and must be redefined. Redefining the connection stings causes them to be regenerated with the new keys, which, reestablishes the integrity of database connections. If updating database access strings is not a high security consideration or updating the stings is too much effort, then connection string encryption can be disabled.

Disable database connection string encryption.

Edit the file c:\datacap\Taskmaster\tabs.xml, and for each database connection string line remove the skn.res attribute.

Here are the database connection string lines in their default format from tabs.xml file:

<dsn.tm skn.res="sknAdmDB" name="Administrator" name.res="lblAdminDB" kxp="tmadmin:cs" tip.res="tipAdminDB"/>

<dsn.tm skn.res="sknEngDB" name="Engine" name.res="lblEngineDB" kxp="tmengine:cs" tip.res="tipEngineDB"/>

<dsn skn.res="sknLookupDB" name="Lookup database" name.res=".lblLookupDB" kxp="lookupdb:cs" tip.res=".tipLookupDB"/>

<dsn skn.res="sknFPDB" name="Fingerprint database" name.res=".lblFPDB" kxp="fingerprintconn:cs" tip.res=".tipFPDB"/>

<dsn skn.res="sknExpDB" name="Export database" name.res=".lblExportDB" kxp="exportdb:cs" tip.res=".tipExportDB"/>

<dsn skn.res="sknCustDB" name="CS" name.res="lblCS" kxp=":cs"/>

Here are the database connection string lines after removing encryption:

<dsn.tm name="Administrator" name.res="lblAdminDB" kxp="tmadmin:cs" tip.res="tipAdminDB"/>

<dsn.tm name="Engine" name.res="lblEngineDB" kxp="tmengine:cs" tip.res="tipEngineDB"/>

<dsn name="Lookup database" name.res=".lblLookupDB" kxp="lookupdb:cs" tip.res=".tipLookupDB"/>

<dsn name="Fingerprint database" name.res=".lblFPDB" kxp="fingerprintconn:cs" tip.res=".tipFPDB"/>

<dsn name="Export database" name.res=".lblExportDB" kxp="exportdb:cs" tip.res=".tipExportDB"/>

<dsn name="CS" name.res="lblCS" kxp=":cs"/>

Note: You do not need to modify them all, modify the records for the databases that you want to leave unencrypted.

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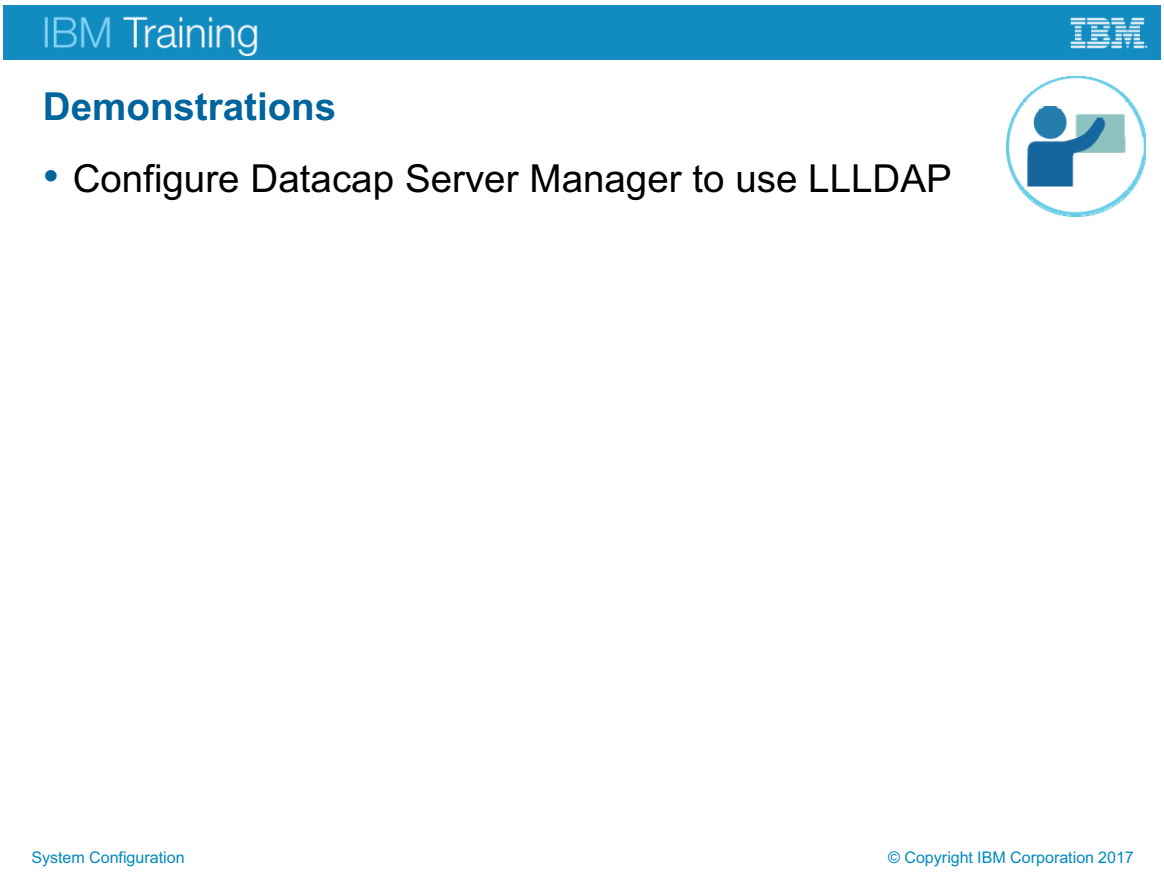

Figure 1-41. Demonstrations

If you are taking this course as a self-paced virtual course, return to the main course menu to play the pre-recorded demonstrations.

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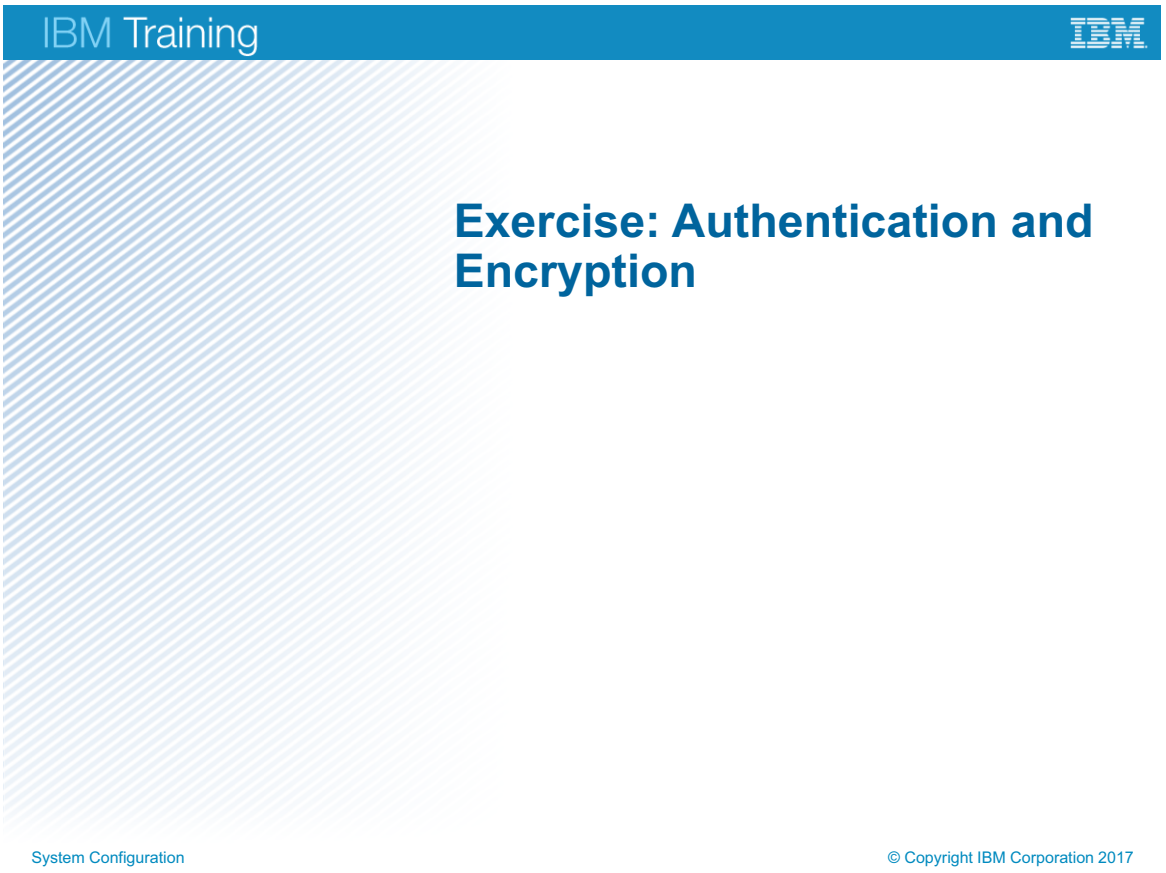

Figure 1-42. Exercise: Authentication and Encryption

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IBM Training

Exercise objectives

- Configure Datacap Server for LLLDAP User Authentication

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Figure 1-43. Exercise objectives

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Lesson 1.4. Multi-system Configuration Considerations

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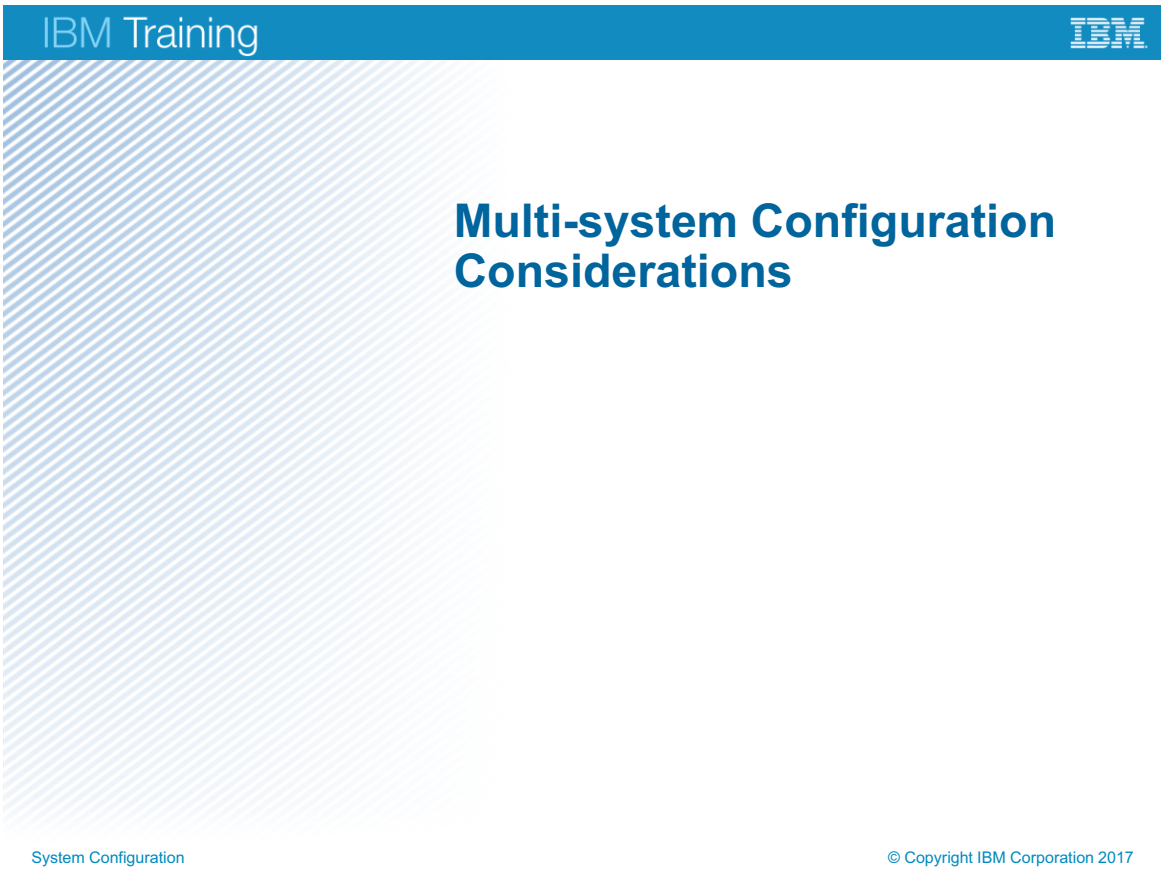

Figure 1-44. Multi-system Configuration Considerations

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IBM Training

Topics

- Single-system Configuration
- Maintain Users and Groups, and Configure Security
- Authentication and Encryption
- Multi-system Configuration Considerations

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Figure 1-45. Topics

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Why is this lesson important to you?

- As an administrator of an IBM Datacap capture system, you must be familiar with all configuration tasks for a functional IBM Datacap 9.0 system.
- In this lesson, you consider the complexities of configuring Datacap components for a multi-system configuration.

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Figure 1-46. Why is this lesson important to you?

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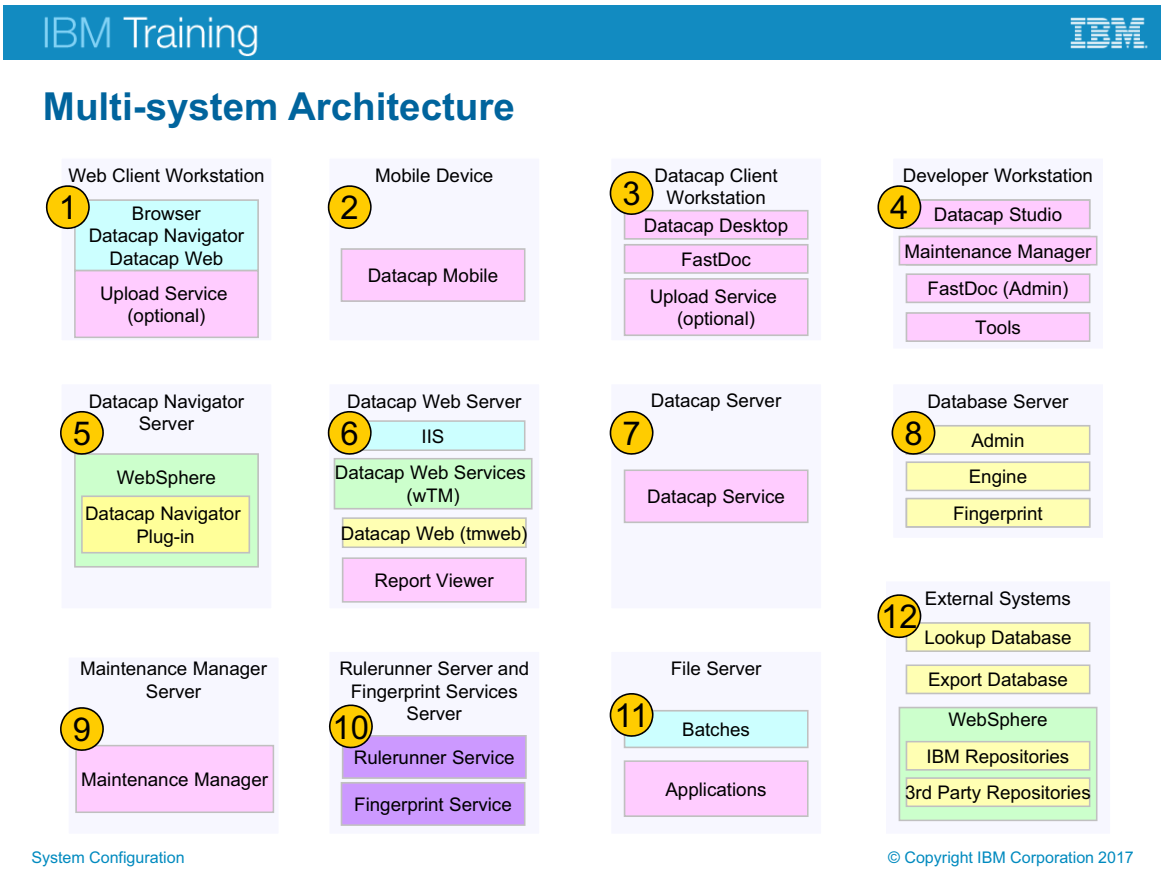

Figure 1-47. Multi-system Architecture

Help path

- Datacap 9.0.1>Planning your Datacap system>Planning your system architecture

IBM Datacap Capture provides a flexible and scalable architecture for distributing tasks across systems according to the anticipated processing load.

Single-system

At one end of the spectrum is the single system configuration, where all Datacap software components are installed on the same system. This configuration is typically used for providing product demonstrations, in a proof of concept environment, or during initial product evaluation.

Multi-system

At the other end of the spectrum is the client/server configuration, where the Datacap software components are installed on dedicated systems. (web servers, database servers, and so on) This configuration can support hundreds of simultaneous users, and uses centralized application management and shared databases.

Hybrid

Spanning the center of the spectrum, are various hybrid configurations in which two or more Datacap software components are installed on the same system. For example, you might install

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and run Datacap Web and Report Viewer on the same web server. You might also install and run the Datacap Rulerunner Service and the Fingerprint Service on another server.

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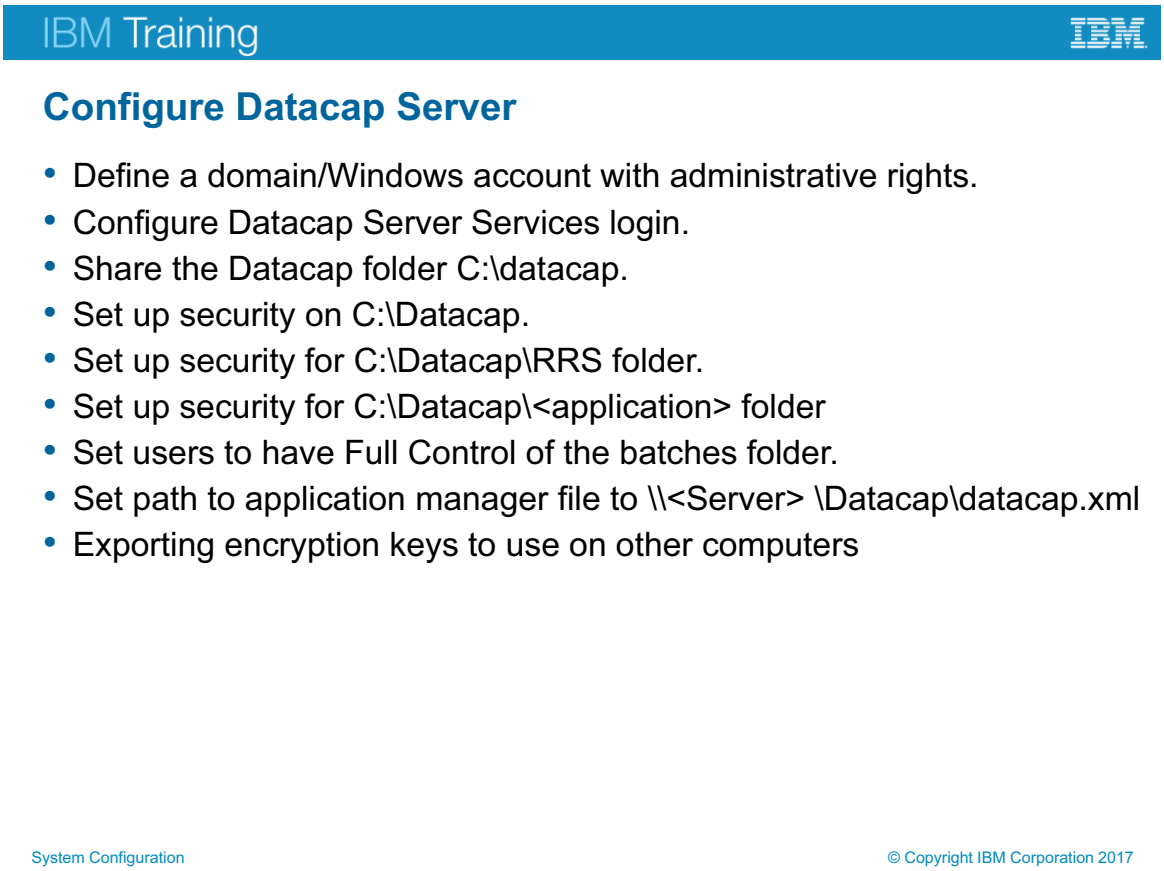

Figure 1-48. Configure Datacap Server

Help path

Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installation instructions for Datacap server>Client/server environment: Importing encryption keys to Datacap computers

Configure Datacap on the Server

You must enable the Datacap Server Service and grant the appropriate users permissions to folders that are shared across systems.

Define a domain/Windows account with administrative rights.

When you do the default IBM Datacap Capture installation and configuration, the Datacap Server Service uses the Local System account to log in to the Server.

In a client/server environment, create or ensure that a domain/Windows account exists for the Datacap Server Service. Datacap does not require that a unique Windows account is set up for the Datacap Server Service. The Datacap Server Service can use any Windows account if account can be set up with the appropriate sharing and security permissions. If you have multiple Datacap Servers, you can set up individual Windows accounts, or you can set up a single Windows account that is shared.

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Configure Datacap Server Services login.

You must ensure that the domain account that the Datacap Server Service uses, is granted the Log On as a Service right on the Server. Optionally also, change the Service start behavior when the Server is restarted. These instructions apply to Windows 2008.

If you have multiple Datacap Servers, repeat this process for each server.

- Click Start > Administrative Tools > Services.
- Right-click Datacap Taskmaster Server and select Properties.
- Optionally set Datacap Server to start automatically.
- Click the Log On tab, then select This account.
- Locate or enter the domain name, user name, and password of the Windows account that the Datacap Server Service uses.

Share the Datacap folder C:\datacap and set sharing permissions.

You must share and set up the appropriate sharing permissions for the C:\Datacap folder when the operating system for the Server is Windows 2008.

- On the Server, go to and select Properties for the C:\Datacap folder.
- Click Advanced Sharing on the Sharing tab.
- Click “Share this Folder” and keep Datacap as the Share name.
- For Permissions.
- Set the NETWORK SERVICE and local IUSR accounts are set to allow Full Control.
- Set the domain/Windows user IDs of developers are set to allow Full Control.
- Set the domain/Windows user ID of Datacap Server Service is set to allow Full Control.
- Set the domain/Windows user ID of Datacap Web is set to allow Read.
- If the batches folders stay in the c:\Datacap\<application> folder set Datacap users to have Full Control of the batches folder.

Set up Security on C:\Datacap folder.

You must set up the appropriate security for the shared C:\Datacap folder when the Server operating system is Windows 2008.

- On the Server, go to and select Properties for the C:\Datacap folder.
- On the Security tab set permissions.
- Set the domain/Windows user IDs of developers are set to allow Full Control. These users can create new applications.
- Set the domain/Windows user IDs of developers are set to allow Read & Execute. These users can change existing applications.
- Set the domain/Windows user ID of Datacap Server Service is set to allow Write, Read, and Execute.
- Set the domain/Windows user ID of Datacap Web is set to allow Write, Read, and Execute.

Set up security for C:\Datacap\RRS folder.

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You must set up the appropriate security permissions for the C:\Datacap\RRS folder on the Server when the operating system for the Server is Windows 2008.

- On the Server, go to and select Properties for the C:\Datacap\RRS folder.
- On the Security tab click Edit. When User Account Control (UAC) is on, the User Account Control window is displayed. Click Yes.
- For Permissions.
- Set the NETWORK SERVICE and local IUSR accounts are set to allow Write, Read, and Execute.

Exporting encryption keys to use on other computers.

In all configurations of IBM Datacap Capture, you must generate and use the security encryption keys. Encryption keys allow Datacap to encrypt and decrypt the passwords that are used to access the Datacap Server Service, and to log in to databases.

In a client/server configuration, you must generate encryption keys from the server on which the Datacap Server software component is installed. Then, export the encryption keys to all of the computers on which any Datacap component is installed. This requirement secures any passwords that are passed over or received from the network by the Datacap component.

To generate encryption keys and export them:

- Open a command prompt and go to the C:\Datacap\Taskmaster folder. In a client/server configuration, do this step on the computer on which the Datacap Server software component is installed.
- Run the key management program, dcskey.exe, inserting one or more of the following options in the command. For example, to export keys during a new Datacap installation, you would enter dcskey.exe e.

  e - Exports the encryption keys from the local keystore to a dc_KTF.xml key transport file. You can use this file to import the keys to other computers. If no keys exist in the keystore, the e option generates new ones before the export. If keys exist in the keystore, the e option exports those keys.

  gnk - Generates, but does not export, encryption keys in the local keystore. Use this option any time you need to replace existing keys with new keys. For example, you would run the command dcskey.exe gnk e to replace existing keys and export them. The newly exported keys must be imported onto all other Datacap computers in your configuration.

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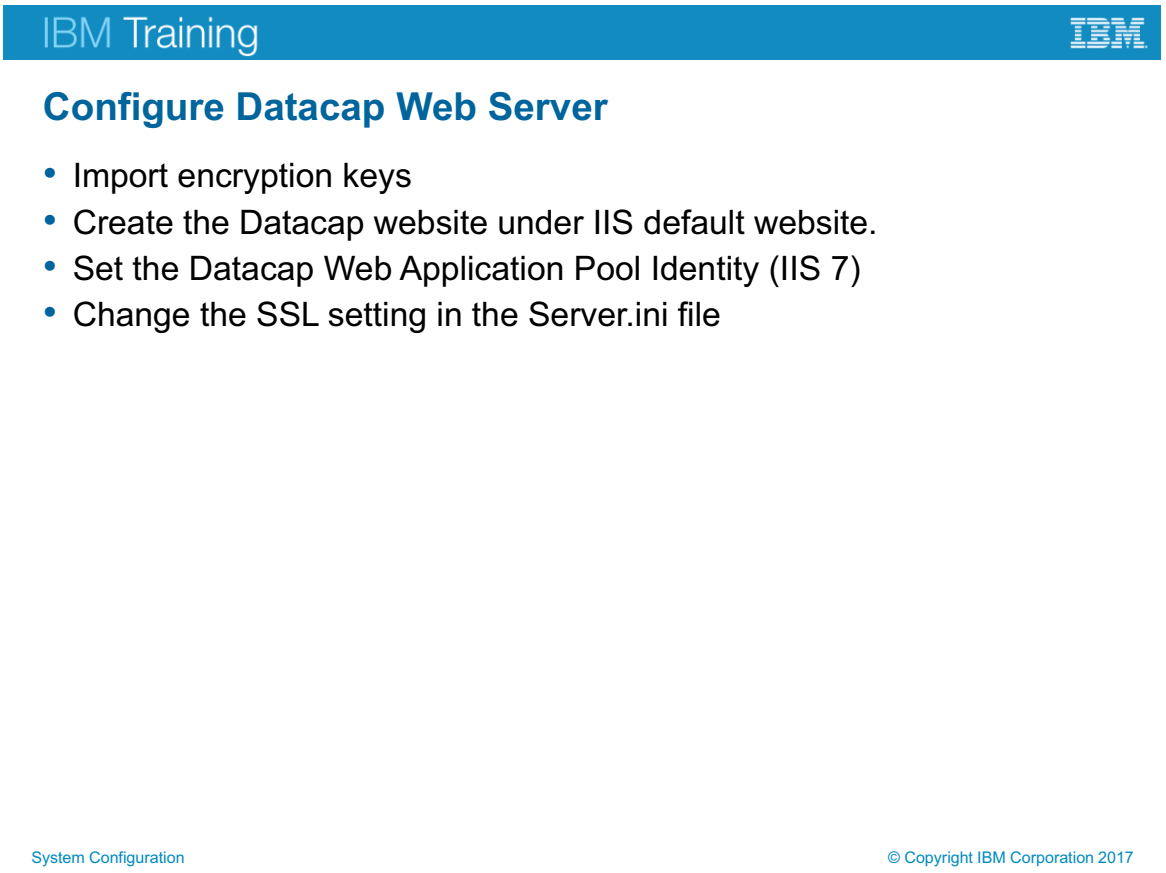

Figure 1-49. Configure Datacap Web Server

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Client/server environment: Datacap Web Client installation and configuration

Datacap Web server allows users to do Datacap tasks from remote systems on which only the Internet Explorer browser is installed.

Import encryption keys

In a client/server configuration, you must import security encryption keys to the computer where you are installing and configuring each IBM Datacap Capture component. This requirement secures any passwords that are passed over the network between Datacap Capture servers and clients.

- Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Datacap Web Server computer.

The encryption keys will be applied automatically to the keystore the next time you start or restart the Datacap component.

Create the Datacap website under IIS default website.

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- The website was created in an earlier exercise.

Set the Datacap Web Application Pool Identity (IIS 7).

- From the Windows Start menu, select Control Panel > Administrative Tools > Internet Information Services Manager.
- In the Connections pane, expand the server node and select Application Pools.
- In the Application Pools pane, select tmweb.net AppPool then, in the Actions pane, in the Edit Application Pool section, click Advanced Settings.
- In the Process Model section, click browse to the right of Identity.
- In the Application Pool Identity window, select Custom account and click Set.
- In the Set Credentials window, enter the Datacap Web domain/Windows account information in the format: accountname@domainname, enter the account password twice, then click OK.
- In the Process Model section, set Load User Profile to True.
- Click OK.
- Confirm all of the following are started: WebServer, Application Pool, and Default Web Site.

Change the SSL setting in the Server.ini file.

If you are using Secure Socket Layer to encrypt communications between Datacap Web and the Datacap Web Clients, then special configuration is necessary.

This procedure provides instructions on how to change the value of the SSL setting in the Server.ini file that controls the SSL behavior of Datacap Web.

- On the WebServer, start Windows Explorer, go to and use a text editor such as Notepad to open the C:\Datacap\tmweb.net\server.ini file.
- Change the UseSSL=0 setting to UseSSL=1 then save the change and close the server.ini file.

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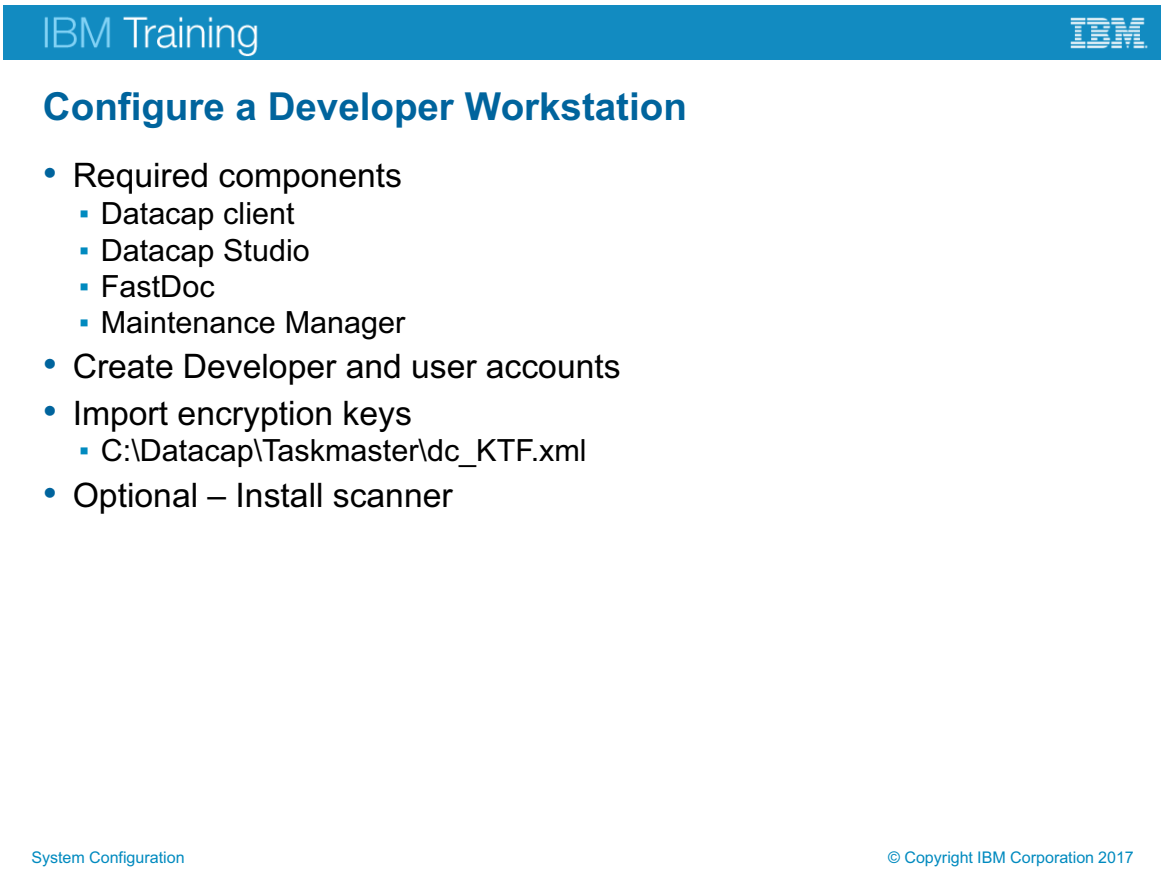

Figure 1-50. Configure a Developer Workstation

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installing the developer workstation software components

Create Domain Accounts

Create or ensure that a domain/Windows account exists for each Datacap developer. Datacap does not require that a unique Windows account is set up for each developer. A developer can use any Windows account if the account can be set up with the appropriate sharing and security permissions.

Import encryption keys

- Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Datacap Web Server computer.

Install Scanner

- Install scanner by following manufacturers instructions.
- Make sure you can scan successfully with a scan product other than Datacap.

Configure Internet Explorer

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- Each workstation that runs Datacap Web Client must configure internet explorer.
- Set the webserver name as a trusted site
  - Start explorer and configure http://<*WebServerName*> as a trusted site.
  - Tools > Internet Options > Security tab > Trusted Sites > Site
  - Clear the Required server verification option and enter the web server address http://<*WebServerName*>.
- Set security for Active X
  - On Security tab > Custom Level, enable these three options:
    - Download signed ActiveX controls.
    - Initialize and script ActiveX controls not marked as safe for scripting.
    - Include local directory path when uploading files to a server.

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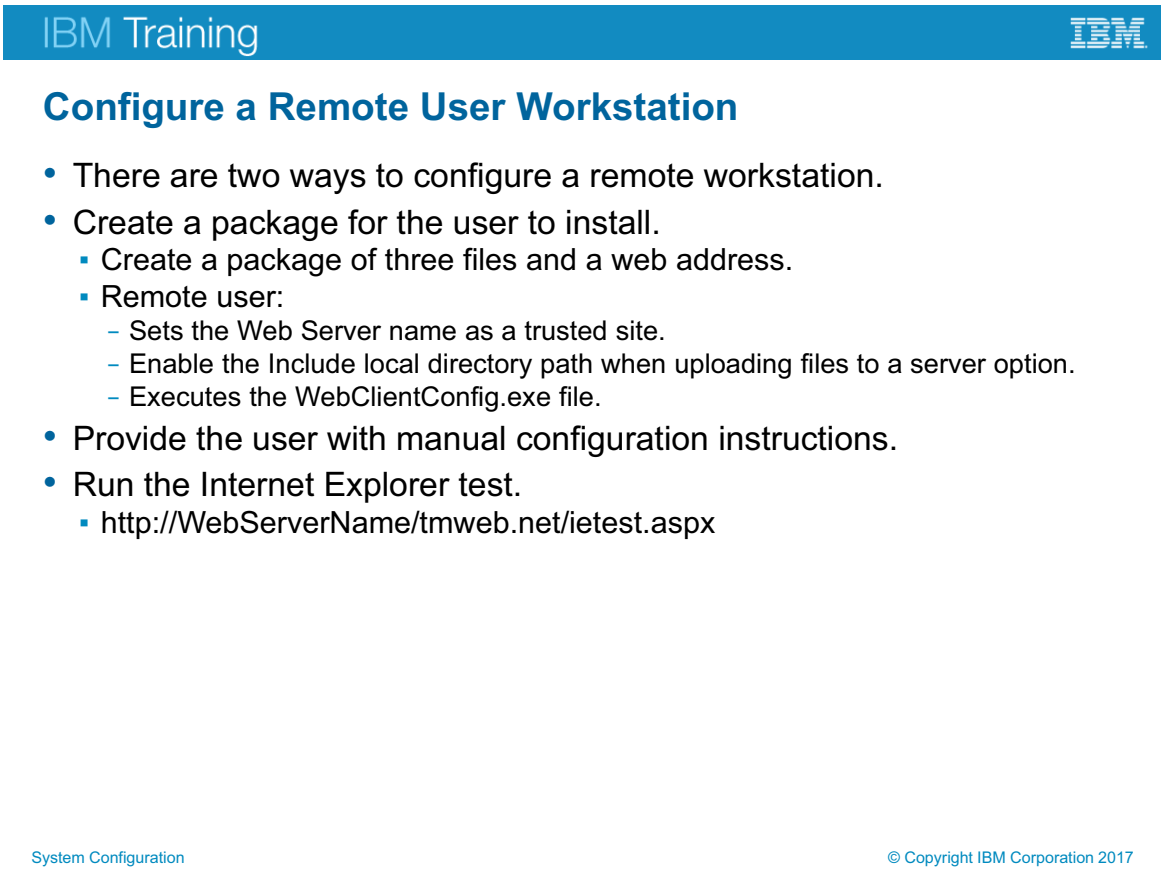

Figure 1-51. Configure a Remote User Workstation

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Configuring and testing the remote workstation

You can configure a thin client workstation, that is, a remote workstation that uses Internet Explorer to access Datacap Web. You need to know the IP address or the server name of your Datacap Web server before you can configure a remote workstation. The remote station must use 32-bit IE.

There are two ways to configure a remote workstation.

Determine the way that you want to configure the remote workstation.

Configure Internet Explorer manually

Set the Web Server name as a trusted site.

Set security for ActiveX controls.

Enable Include local directory path.

Create a package for the user to install.

You can package the Datacap Web Client Configuration tool, and then send the package to the user at a remote site. The user runs the configuration tool to configure Internet Explorer.

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- Edit C:\Datacap\support\WebConfiguration\WebClientConfig.exe.config file.

  Locate <value>http://localhost/tmweb.net</value> and

  Change to <value>http://<*WebServerName*>/tmweb.net</value>
- Provide the user with these resources:
  - WebClientConfig.exe.config
  - Datacap.Config.dll
  - WebClientConfig.exe
  - Web address for the Datacap Web Internet Explorer test page, such as:

    http://<*WebServerName*>/tmweb.net/ietest.aspx.

Configure Internet Explorer manually.

Provide the user with these instructions. This procedure is the manual procedure that was described **Configure a developer workstation** block.

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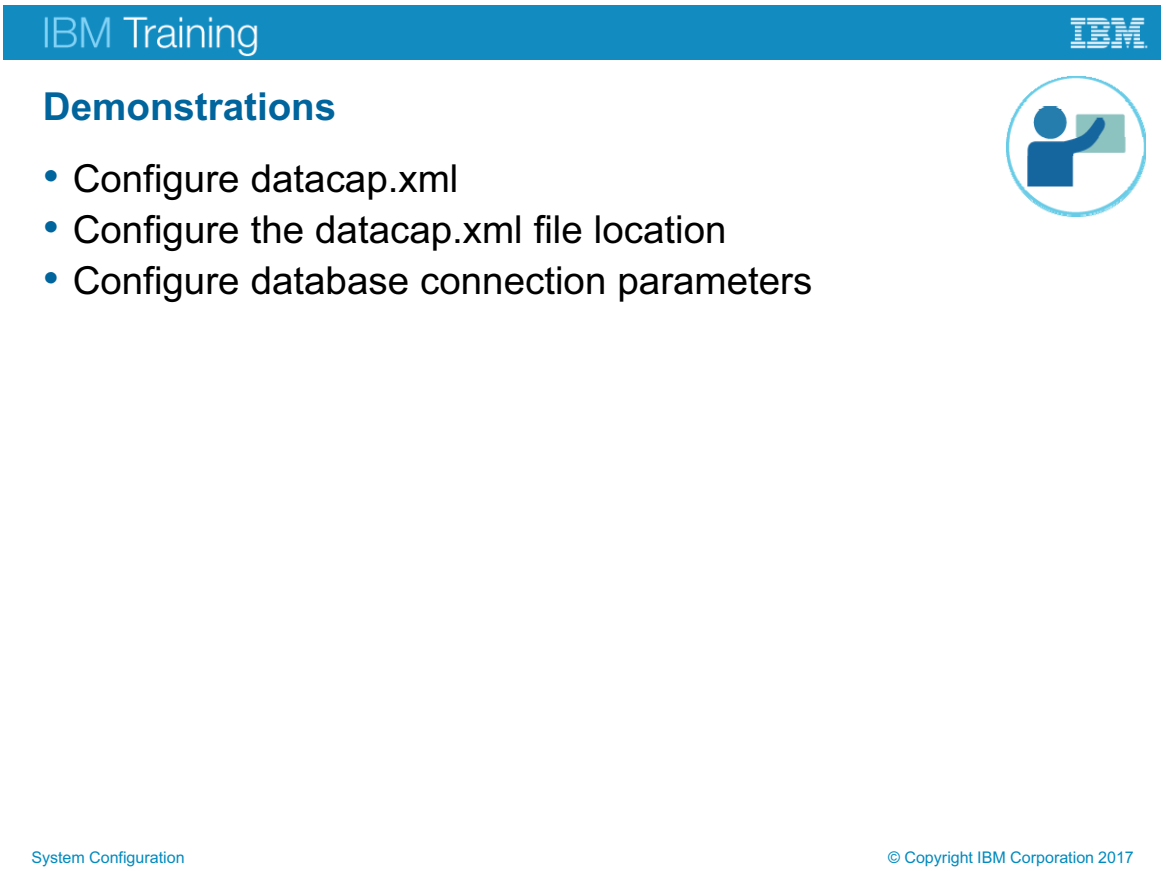

Figure 1-52. Demonstrations

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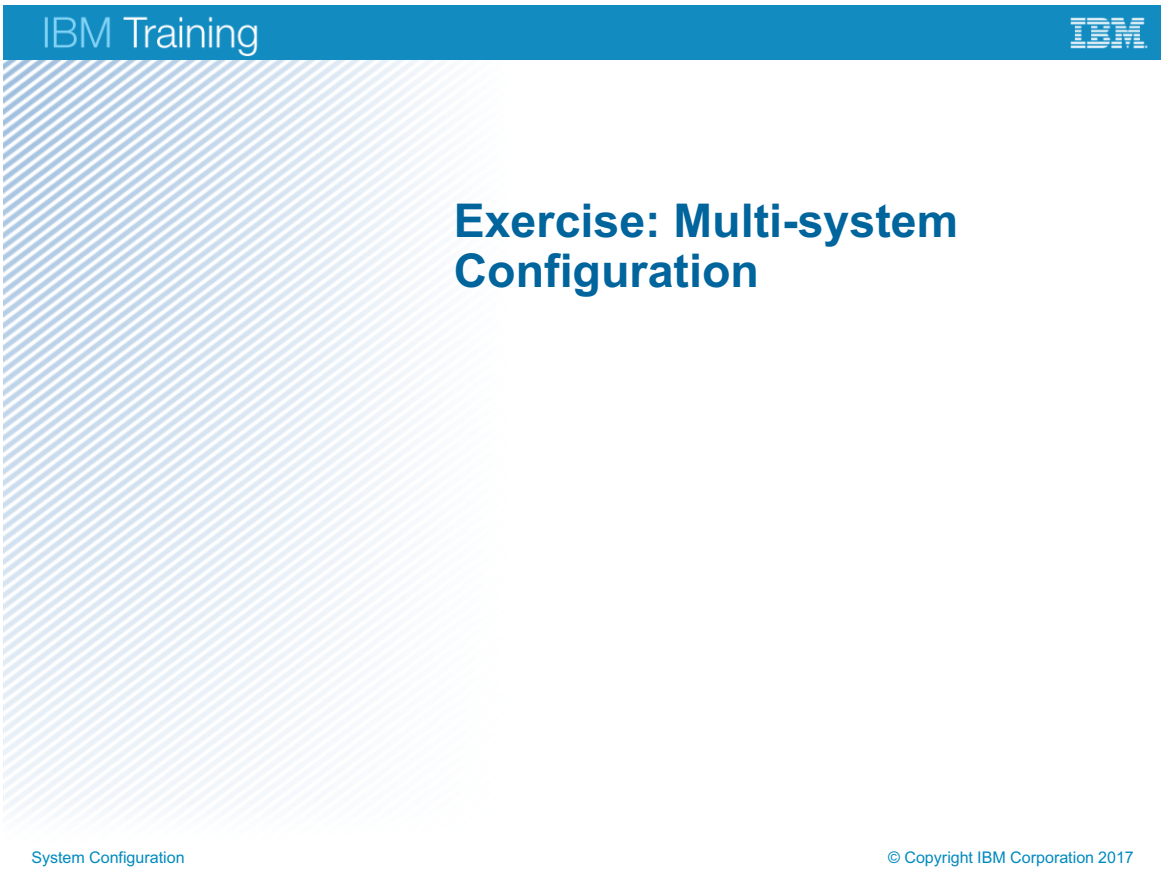

Figure 1-53. Exercise: Multi-system Configuration

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Exercise objectives

- Configure the Datacap Server
- Configure a Datacap Workstation
- Configure the Datacap Web Server

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Figure 1-54. Exercise objectives

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IBM Training

Unit summary

- Configure a basic single-system Datacap configuration
- Define users and groups and configure security
- Select and configure one of the five supported authentication systems
- Configure a multi-system Datacap configuration
- Configure a multi-system Configuration Considerations

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Figure 1-55. Unit summary

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Unit 2. Component Configuration

Estimated time

04:00

Overview

This unit describes how to configure the following Datacap components: Rulerunner, Datacap Maintenance Manager (NENU), taskmaster web services (wTM), and Datacap Dashboard

How you will check your progress

- Successfully complete the activities in the Student Workbook.

References

IBM Knowledge Center

http://www.ibm.com/support/knowledgecenter/SSZRWV_9.0.1/com.ibm.datacaptoc.doc/datacap_9.0.1.htm

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Unit objectives

- Configure Datacap Rulerunner
- Configure Datacap Maintenance Manager (NENU)
- Configure Datacap Web Services (wTM)
- Configure Datacap Dashboard

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Figure 2-1. Unit objectives

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Lesson 2.1. Configure Datacap Rulerunner

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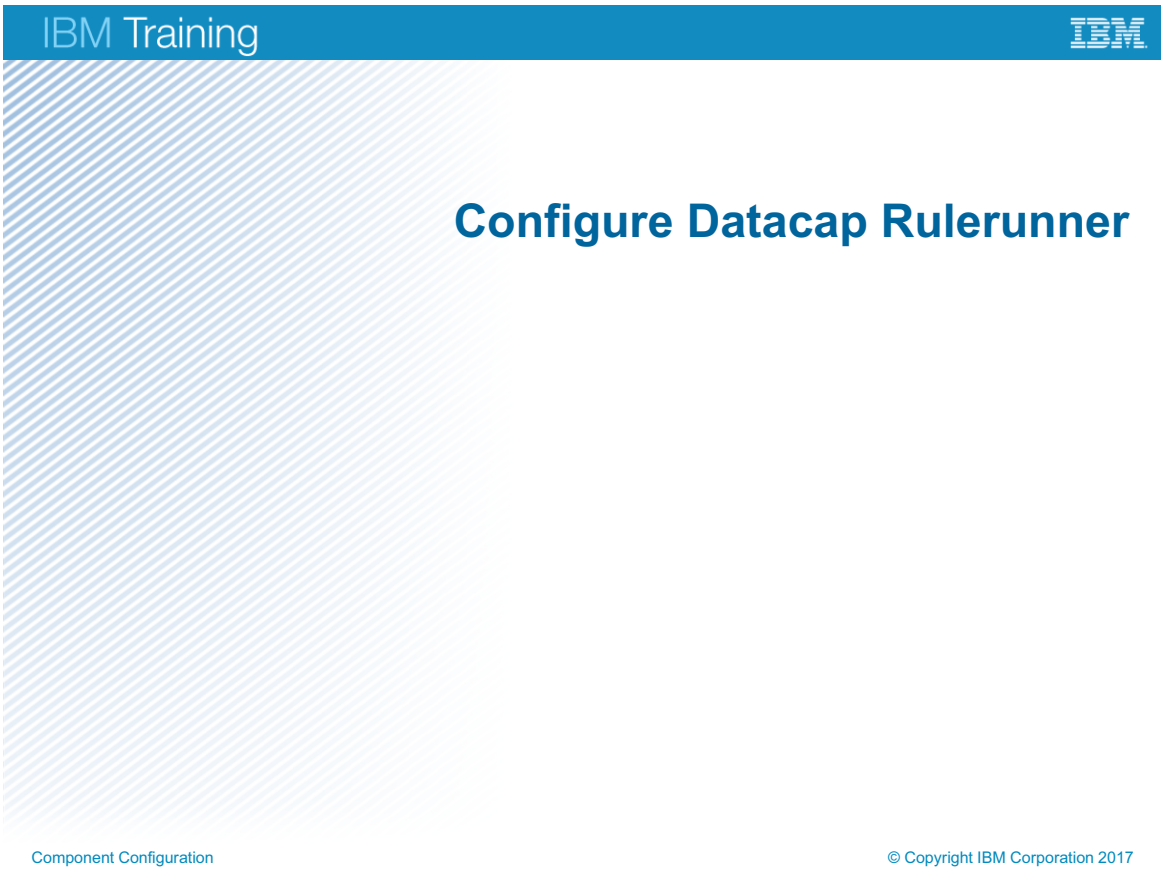

Figure 2-2. Configure Datacap Rulerunner

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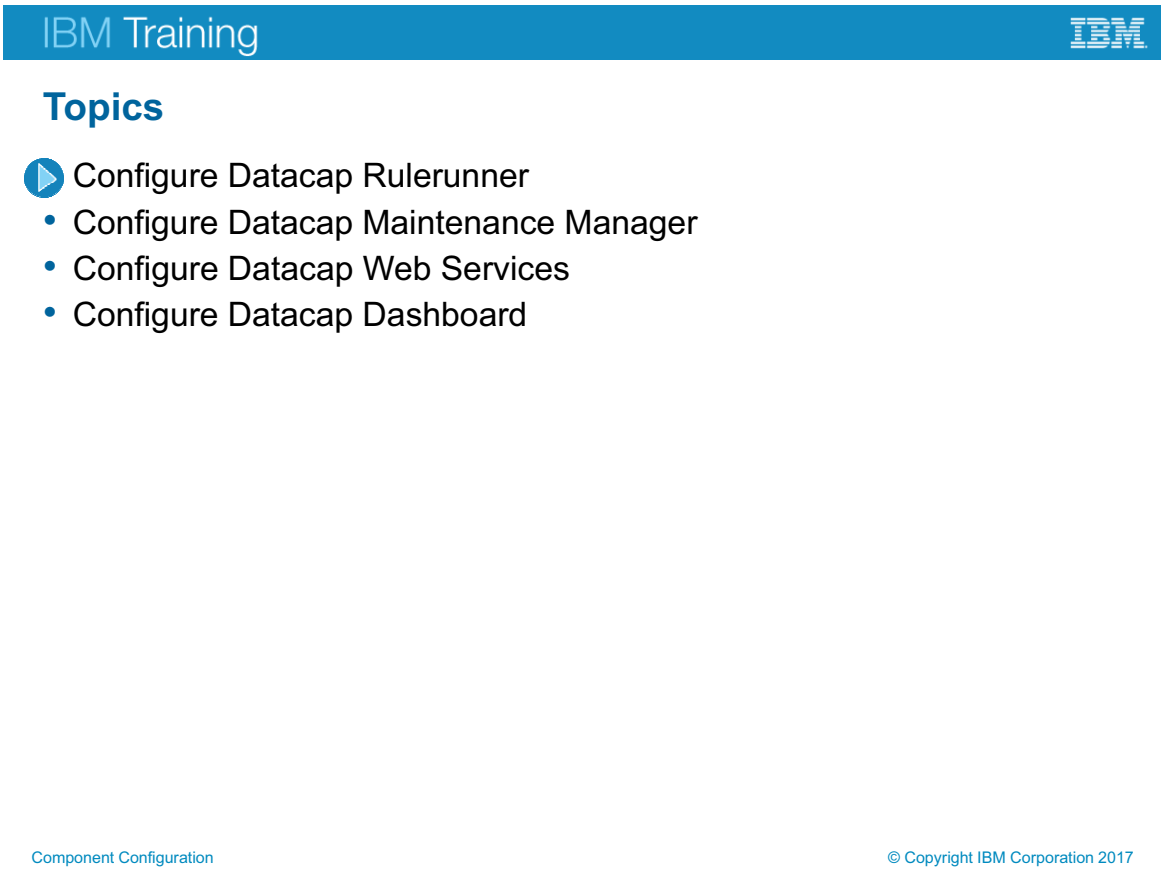

Figure 2-3. Topics

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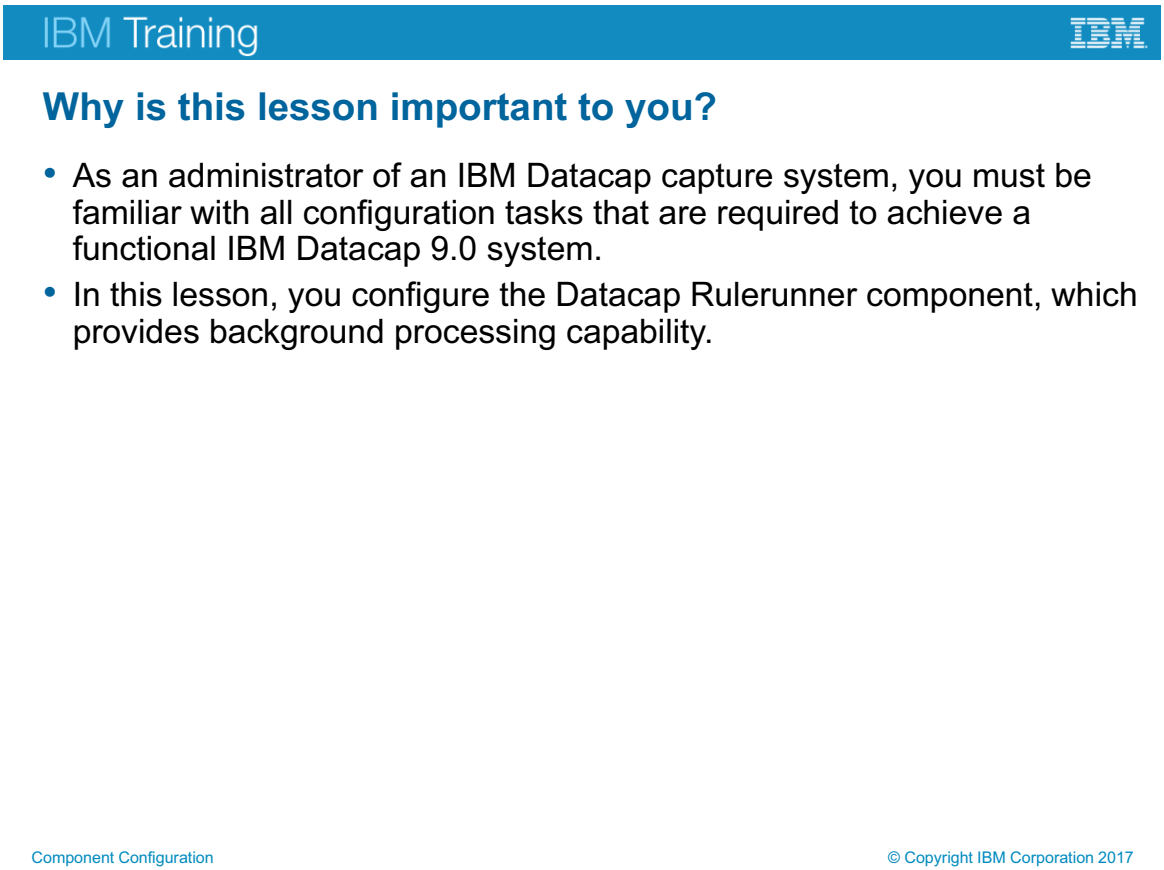

Figure 2-4. Why is this lesson important to you?

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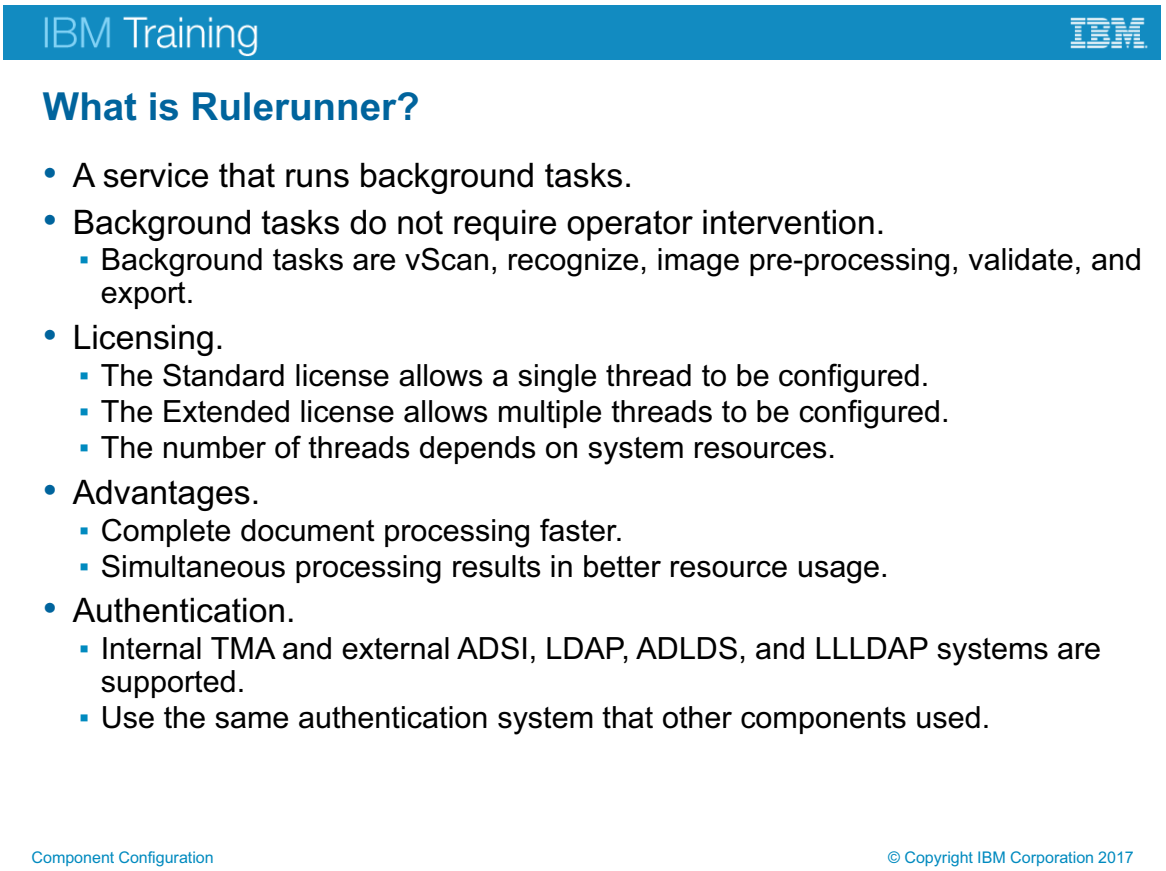

Figure 2-5. What is Rulerunner?

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installing and configuring the Rulerunner Service>Overview of Rulerunner installation in a client/server environment

The advantages of running Datacap Rulerunner are:

- You can complete your document processing work faster. Faster turn-around of documents such as claims, contracts, tax returns, and invoices improves responsiveness and shortens capture cycle times.
- When Rulerunner runs multiple processes, more of the physical resources of each system are used which can reduce the total number of servers that are dedicated to the capture process.

Authentication

Rulerunner authenticates the same way the rest of the Datacap components authenticate. Instructions are provided for authenticating Rulerunner with either Datacap authentication or an external authentication system (ADSI, LDAP, AD LDS, LLLDAP).

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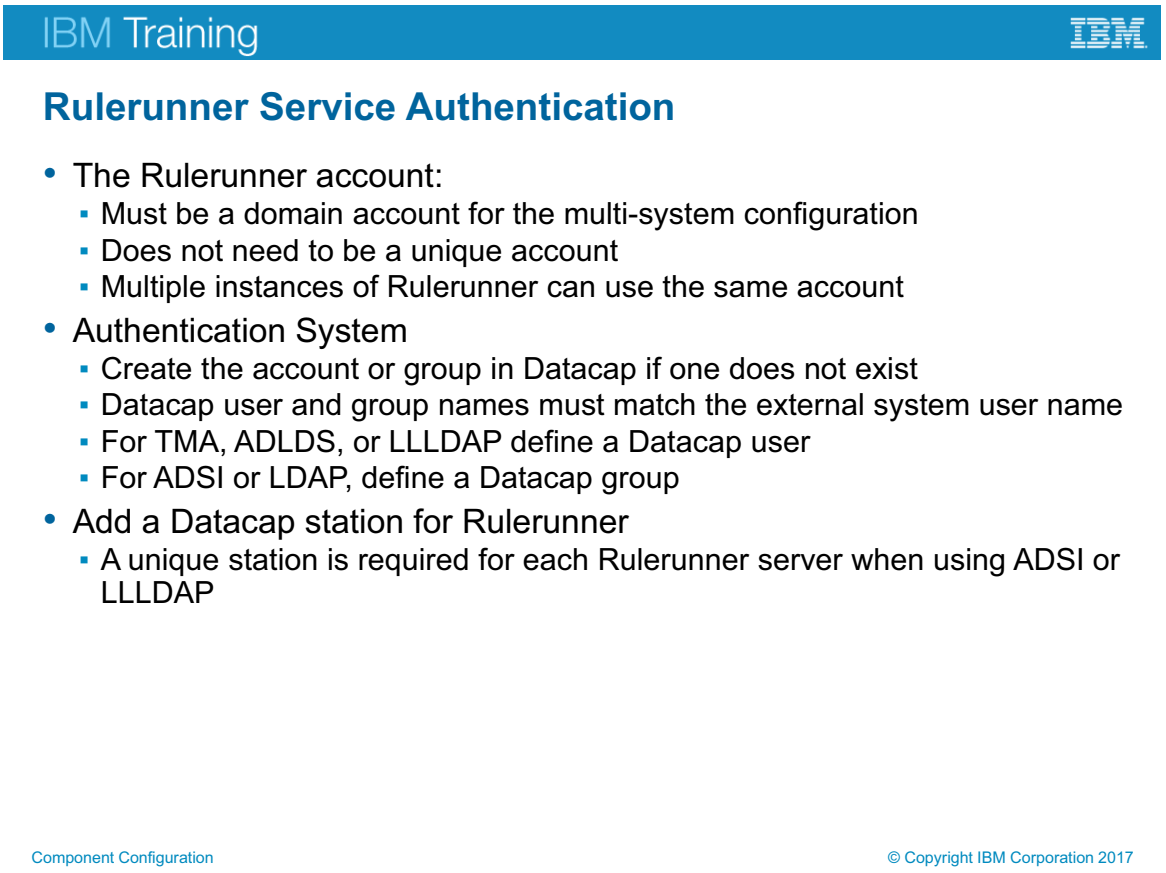

Figure 2-6. Rulerunner Service Authentication

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installing and configuring the Rulerunner Service>Configuring Rulerunner authentication>Authenticating Rulerunner with Datacap authentication

Create a Rulerunner Account.

Create or ensure that a domain/Windows account exists for the Datacap Rulerunner Service. Datacap does not require that a unique Windows account for Rulerunner. Rulerunner can use any Windows account if the account can be set up with the appropriate sharing and security permissions. For example, all instances of Rulerunner can use the same account.

Authentication System

- If ADSI, LDAP, ADLDS, or LLLDAP authentication system is used then the Datacap user and group names must match the external system user name.
- If TMA, ADLDS, or LLLDAP authentication is used then you must define a Datacap user. For ADLDS and LLLDAP, the user name must match the external system user name.

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- If ADSI or LDAP authentication is used, then, you need only to define a Datacap group to match the external system.

Add a Datacap station for Rulerunner.

- Add the required Datacap station to your application for the Datacap Rulerunner Service when using either the AD (ADSI) or LLLDAP external authentication system.

  Note: Use the name of the Rulerunner Server as the station name. You must enter the Rulerunner Server name exactly as it is identified to the Domain Controller. (That is, if the system name identified in the Domain Controller is in all capital letters, be sure to enter the name here in all capitals).

- If you are setting up more than one Rulerunner Server, add a station definition for each Rulerunner Server.

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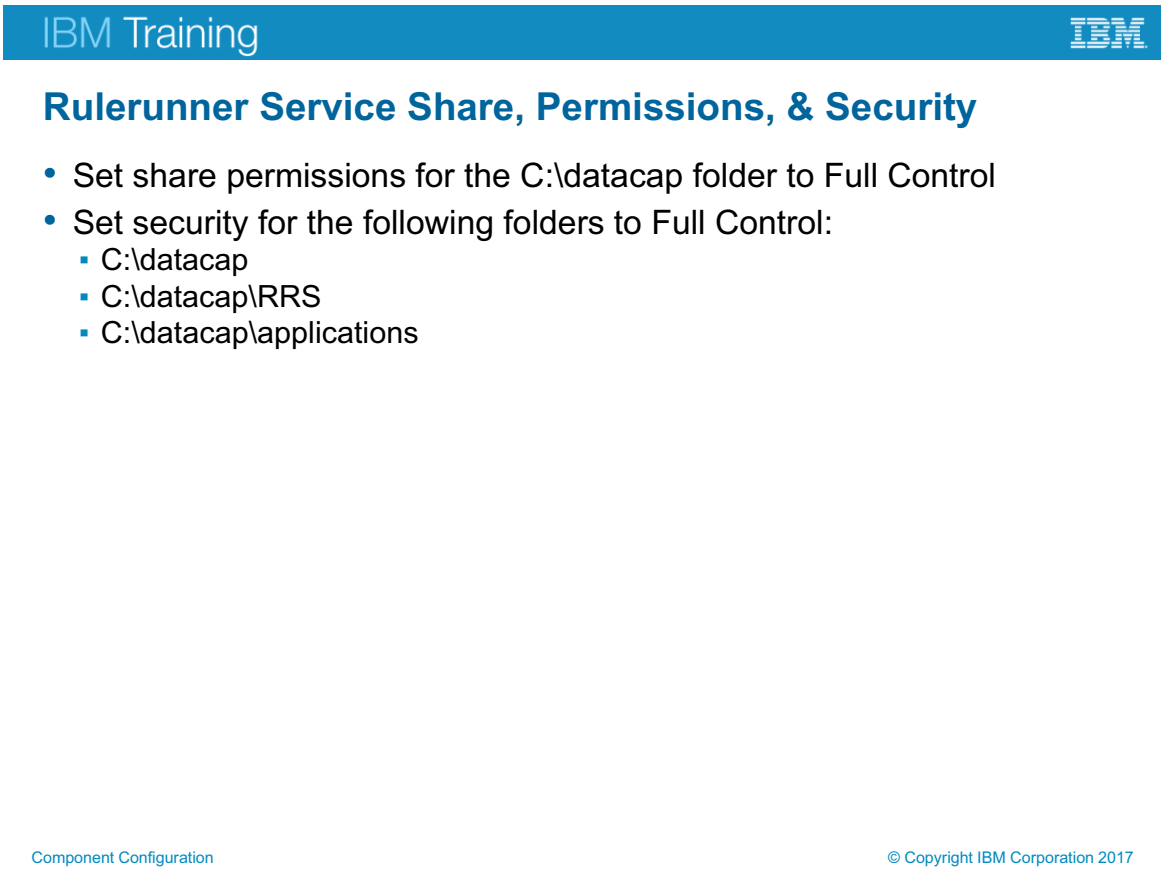

Figure 2-7. Rulerunner Service Share, Permissions, & Security

Share permissions for the C:\datacap folder

Share with the share name of Datacap.

Set the sharing permissions for the Rulerunner Services account to Full Control on the Properties > Share > Advanced Sharing window for the C:\datacap folder.

Set security for the C:\datacap folder

Set the security for the Rulerunner Services account to Full Control on the Properties > Security > Edit window for the C:\datacap folder.

Set security for the C:\datacap\RRS folder

Set the security for the Rulerunner Services account to Full Control on the Properties > Security > Edit window for the C:\datacap\RRS folder.

Set security for the C:\datacap\applications folder

Set the security for the Rulerunner Services account to Full Control on the Properties > Security > Edit window for the C:\datacap\applications folder.

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Import Encryption Key and Set Datacap.xml Location

- Import encryption keys for the Rulerunner Server
  - If Rulerunner is on its own server, then import Encryption key from the Datacap server.
  - Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Rulerunner Server.
  - Import the keys with dcskey /i
  - Repeat the encryption file import step for each Rulerunner server.
- Set the location of the Datacap.xml file
  - From the Windows Start menu, select All Programs > IBM DatacapServices > Datacap Application Manager > Service tab.
  - Ensure that the path reflects the correct location of the datacap.xml file. Example: \\<Datacap Server Name>\Datacap\datacap.xml.

Component Configuration

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Figure 2-8. Import Encryption Key and Set Datacap.xml Location

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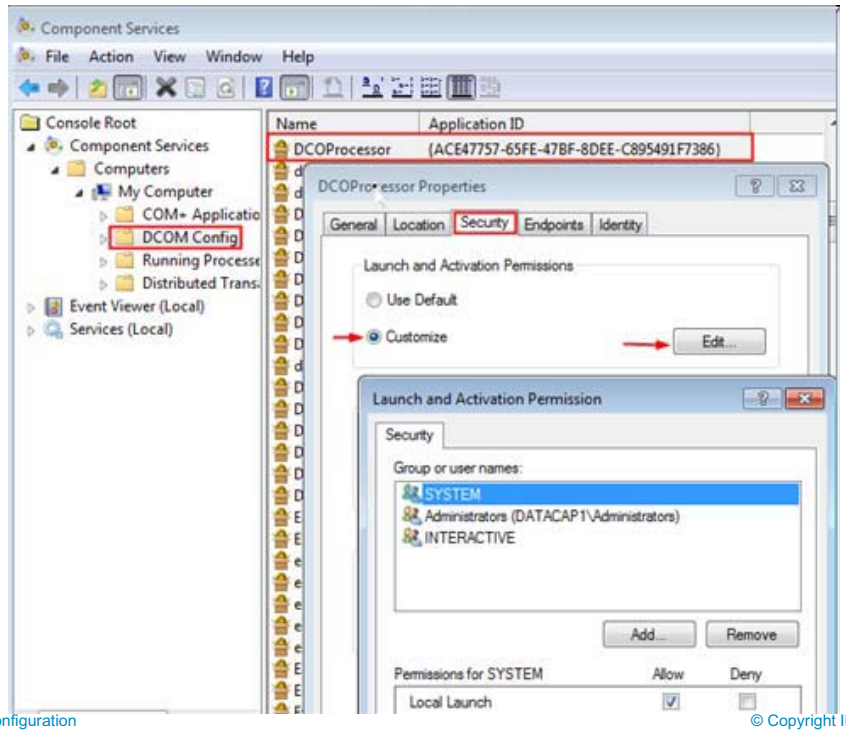
Set DCOProcessor Permissions



Component Configuration

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Figure 2-9. Set DCOProcessor Permissions

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Client/server installation checklist>Rulerunner installation and configuration>Configure Rulerunner account permissions

Set permissions to the Rulerunner account on the Rulerunner Server.

You must grant the Rulerunner domain/Windows account the appropriate permissions on the host Rulerunner Server, Component Services window, and the DCOM Config folder. If you are configuring multiple Rulerunner servers, then this procedure must be repeated for each server.

- From the Rulerunner Server Windows Start menu, select Administrative Tools > Component Services > Computers > My Computer > DCOM Config.
- In the middle pane, right-click the DCOProcessor application then. select Properties > Security tab.
- Under Launch and Activate Permissions, select Customize, then click Edit.
- Add the Rulerunner domain/Windows account and set Local Launch and Local Activation to Allow.
- Click OK twice.

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- In the middle pane, locate and right-click the RRProcessor application then. select Properties and click the Security tab.
- Under Launch and Activate Permissions, select Customize, then click Edit.
- Add the Rulerunner domain/Windows account and set Local Launch and Local Activation to Allow.
- Click OK twice.
- Close the Component Services window.

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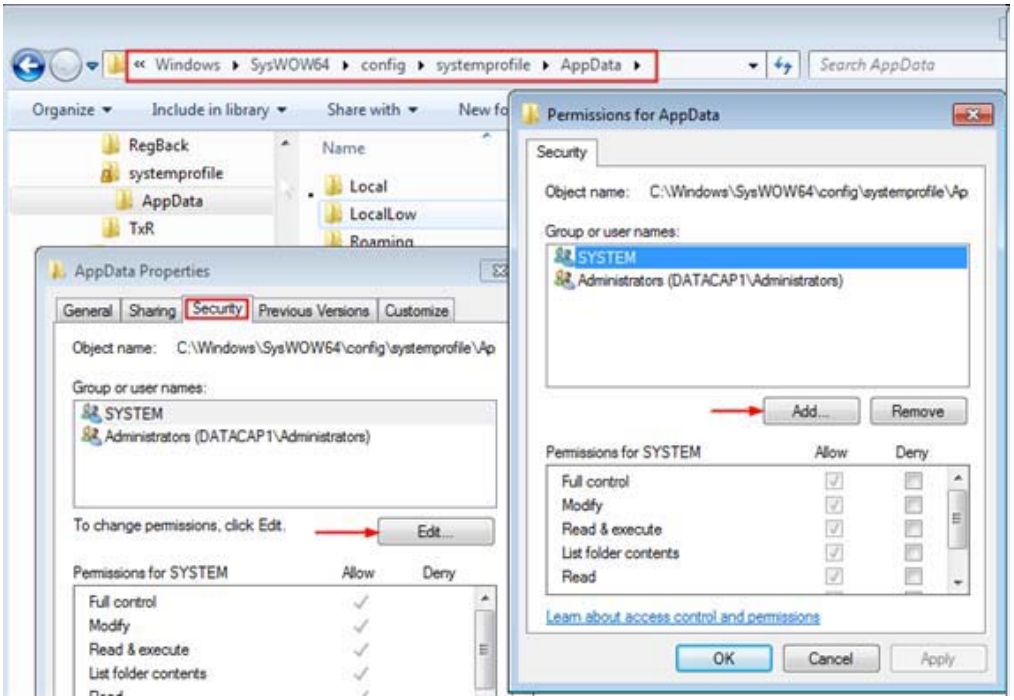
Set Security on the systemprofile\AppData



Component Configuration

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Figure 2-10. Set Security on the systemprofile\AppData

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installing and configuring the Rulerunner Service>Installing and configuring the Rulerunner Service>Setting up security on the systemprofile\AppData folder for Rulerunner

Set security on the systemprofile\AppData folder for Rulerunner

Set up the appropriate security permissions for Rulerunner on the c:\Windows\SysWOW64\config\systemprofile\AppData folder on the Rulerunner Server when the Rulerunner Server operating system is Windows 2008. If you are setting up multiple Rulerunner Servers, repeat these instructions on each Rulerunner Server.

- On the Rulerunner Server, go to the c:\Windows\SysWOW64\config\systemprofile\AppData folder, right-click, and select Properties > Security tab > Edit.
- Add or ensure that the domain/Windows user name of the Datacap Rulerunner Service is set to allow Modify.

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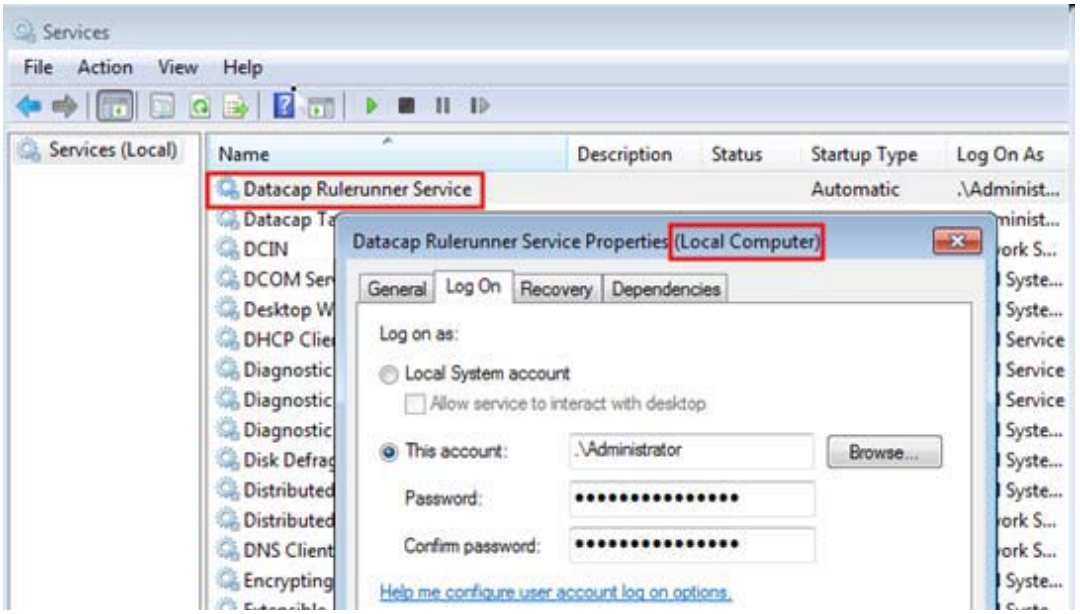
Grant Log On as Service Right



Component Configuration

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Figure 2-11. Grant Log On as Service Right

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Installing and configuring the Rulerunner Service>Installing and configuring the Rulerunner Service>Granting Rulerunner the Log On as Service privilege

Grant Rulerunner Service the Log On as Service Right.

- Datacap Rulerunner Service must be running before the Document capture process can be completed.
- In a single system configuration, the Datacap Rulerunner Service authenticates with the Local System account.
- In a client/server configuration, the Datacap Server Service authenticates with the domain account that you set up for it.

The following instructions show how to ensure the **Local Computer** or **Domain** account used by Rulerunner is granted the Log On as a Service right on its Rulerunner Server. This right allows Datacap Rulerunner Service to run as a service.

If you have multiple Rulerunner Servers, repeat this process on each server.

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- From the Rulerunner Server Windows Start menu > Administrative Tools > Services > Datacap Rulerunner Service.
- Right-click and select Properties and click the Log On tab.
- Select This account and click Browse.
- Select the domain/Windows account for Datacap Rulerunner Service, enter the account password twice, click Apply, and close all open windows.

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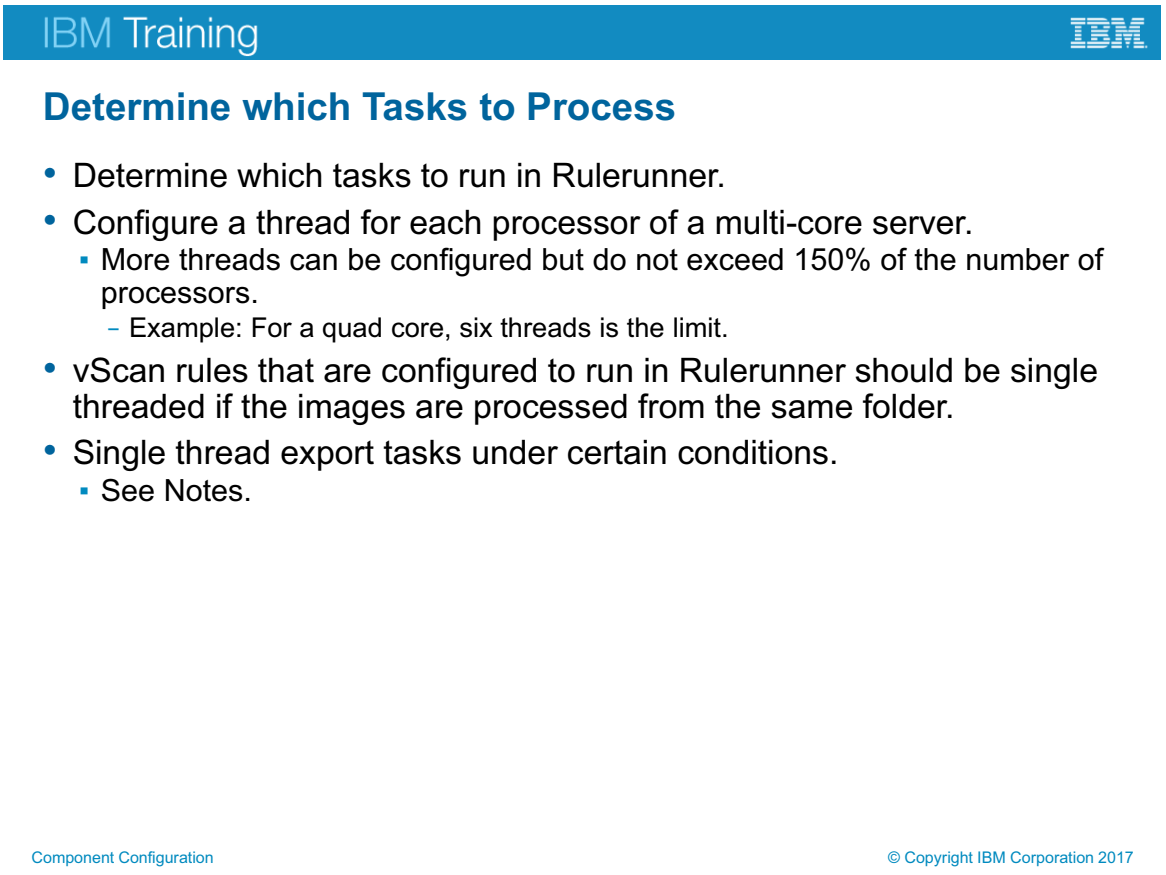

Figure 2-12. Determine which Tasks to Process

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Client/server installation checklist>Rulerunner installation and configuration>Configure Rulerunner to run application tasks

Determine which Tasks to Process

- To determine which tasks to run in Rulerunner, the criteria are:
  - They should be rules-based.
  - Background tasks.
  - Tasks that do not require any human interaction.
- You can configure a thread for each processor of a multi-core server. More threads can be configured but do not exceed 150% of the number of processors. For a quad core, six threads is the limit.
- vScan rules that are configured to run in Rulerunner should be single threaded if the images are processed from the same folder.
- Single thread Export tasks under the following conditions:

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- If exporting Text files to an Access database.
- If downstream system behavior is unpredictable, when multiple threads export files.
- If field values are updated in the DCO, and interlocking mechanisms might cause long delays.
- If fingerprints are being updated with locking mechanisms for preventing simultaneous updates.

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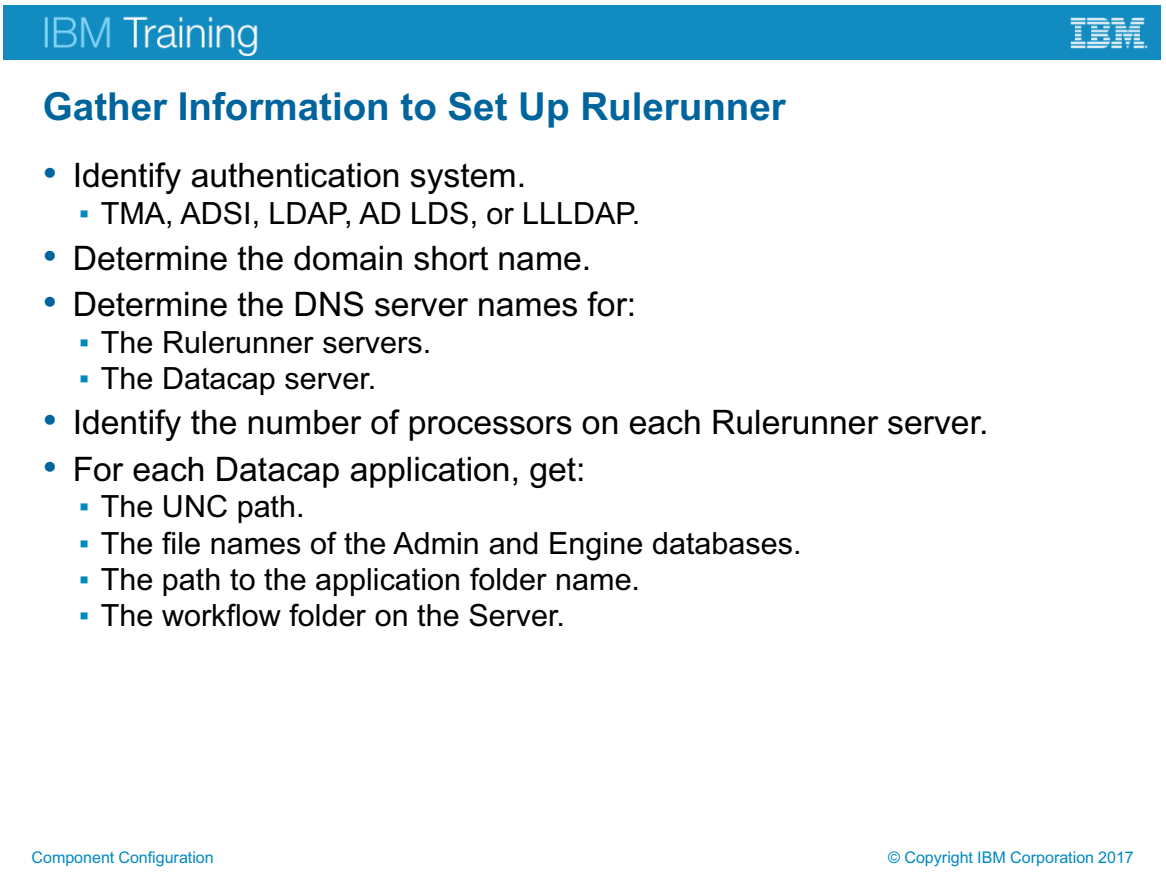

Figure 2-13. Gather Information to Set Up Rulerunner

Identify authentication system

- Start the Datacap Server Service.
  - Start > All Programs > IBM Datacap Services > Datacap Server Services.
  - Click the Datacap tab.
  - Note the value of the Authentication system field.

Determine the domain short name

- On the DNS server
  - Click Start
  - Right-click Computer and select Properties
  - Note the first section of the domain name. Example: edu from edu.dcclass.com

Determine the DNS server names for:

- The Rulerunner servers and the Datacap server. For each server:
  - Click Start
  - Right-click Computer and select Properties

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- Note the Computer name

Identify the number of processors on each Rulerunner server

- For the Rulerunner servers while the computer properties page is open.
  - Note the number of processors on the processor line in the System data block.

For each Datacap application:

Get the full UNC path for the databases.

Get the file names of the Admin and Engine databases.

- Start the Datacap Application Manager,
  - Start > All Programs > IBM Datacap Services > Datacap Application Manager.
  - Select the application.
  - Click the Datacap tab.
  - Note the value of the Administration and Engine databases.
    - UNC is **\\TMSERVER\Datacap\TravelDocs**
    - File names are: **TravelDocsADM.mdb** and **TravlDocsEng.mdb**

For each of your Datacap applications:

- Get the path to the application folder name.
- Get the workflow folder on the Server.
- Get these parameters also from the Datacap Application Manager.

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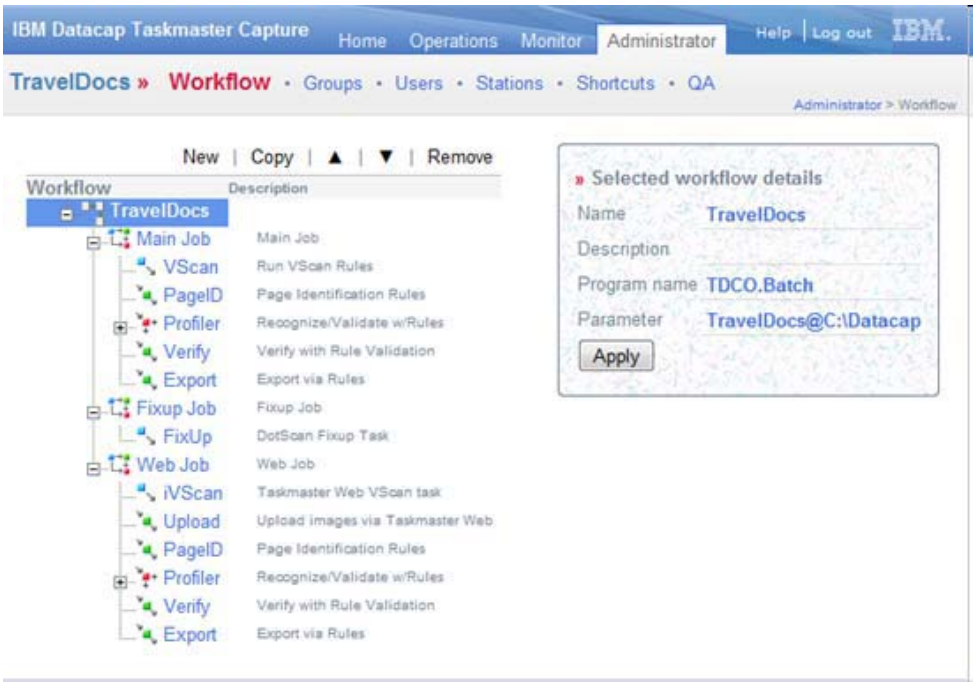
Get Job and Task Names



Component Configuration

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Figure 2-14. Get Job and Task Names

Gather information to set up Rulerunner

- For each of your Datacap applications, obtain the Workflow, Job, and Task name of each background task that you want Rulerunner to process.
  - To see these names, log in to your application with Datacap Web and select the Administrator tab.
  - Make a note of the workflow name.
  - Expand the workflow, and make a note of the Job Name.
  - Expand the job, and make a note of the Task Name.

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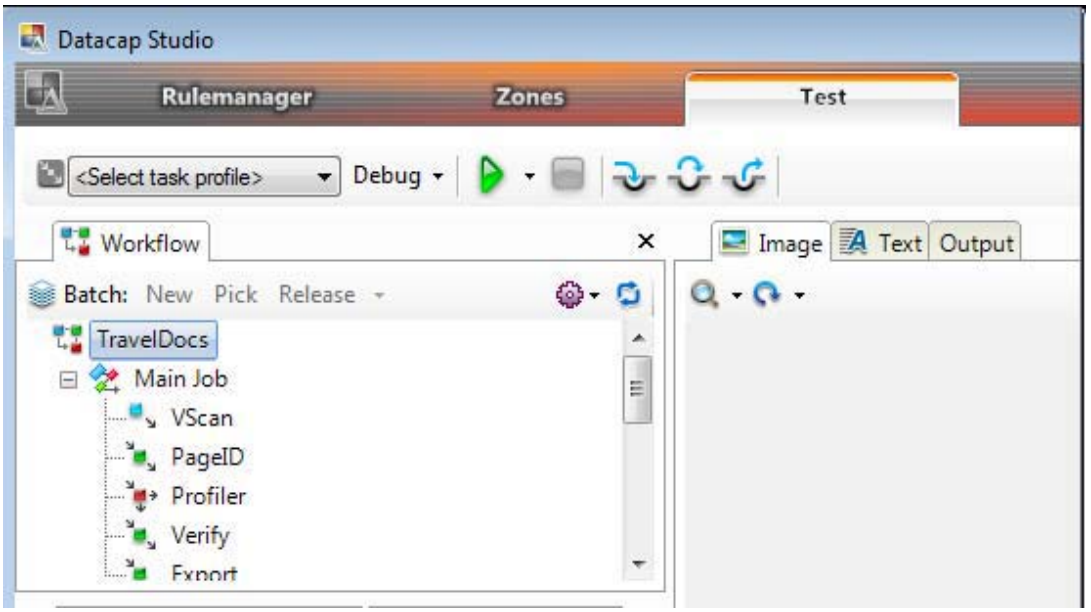
Identify the Task Profile Names



Component Configuration

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Figure 2-15. Identify the Task Profile Names

Gather information to set up Rulerunner

- Identify the Task profile name of each background task that you want Rulerunner to process. Normally, the Task Profile Name is the same as the Task Name.
  - To see these names, start Datacap Studio, log in to your application and select the Test tab.
  - On the Workflow tab, expand the job, and make a note of the Task Profile Name.

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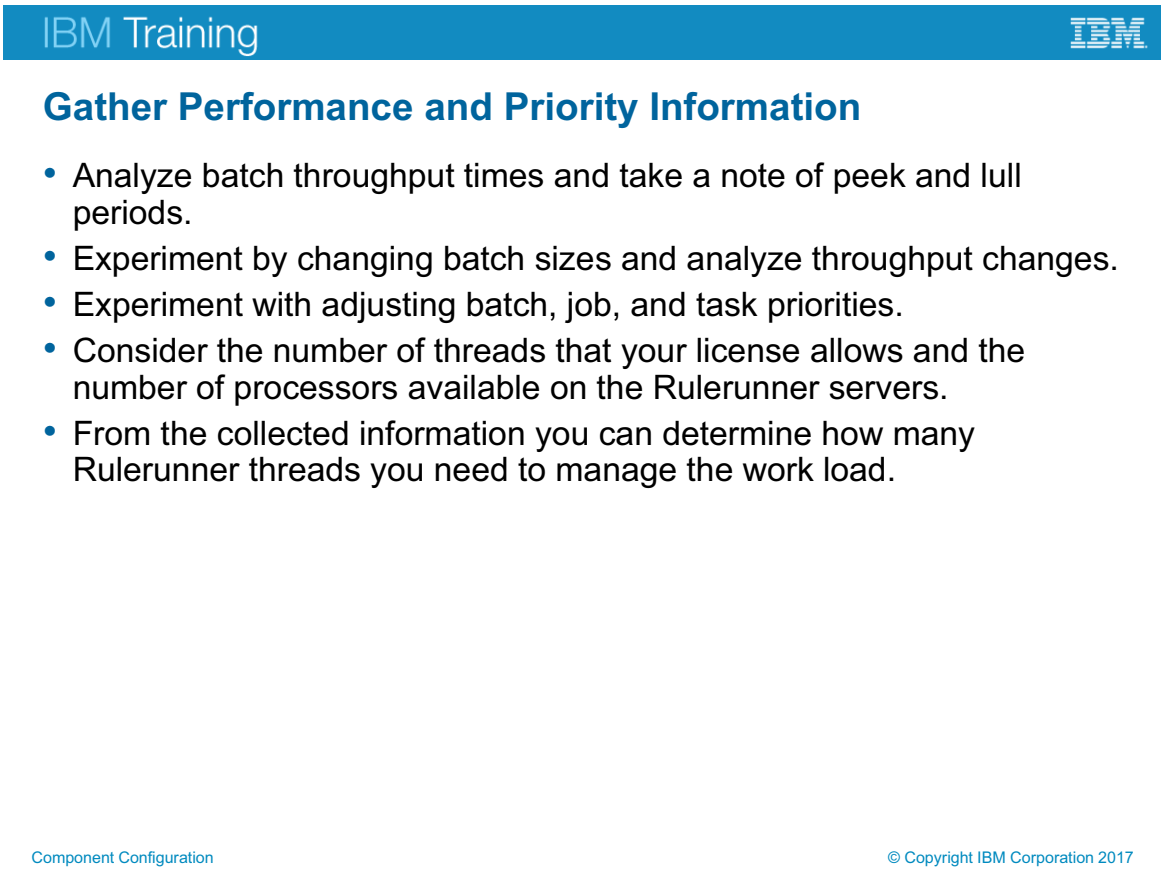

Figure 2-16. Gather Performance and Priority Information

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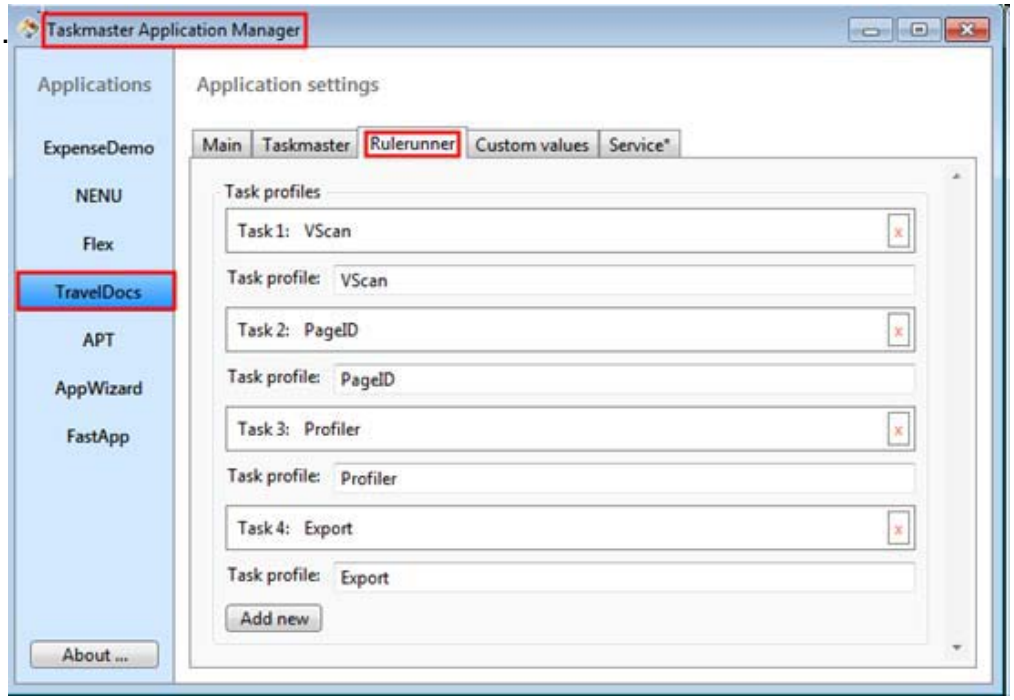
Configure the Task Profiles to Run in Rulerunner



Component Configuration

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Figure 2-17. Configure the Task Profiles to Run in Rulerunner

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Client/server installation checklist>Rulerunner installation and configuration>Configure Rulerunner to run application tasks

Configure the task profiles to run in Rulerunner.

- On the DevWorkstation Windows Start menu.
- Select All Programs > IBM Datacap Services > Datacap Application Manager.
- Select your application. Paths appear in the fields on the Main tab.
- Ensure that all of the paths are correct.
- The Rulerunner tab to display it. This tab should display only the task profiles that Rulerunner is to process.
- Click the red X to the right of the profile name to remove a task
- Click Add new To add a task profile. Then, enter the name of the task in the first field, and enter the name of the task profile in the second field, ensuring that the spelling and case are correct.

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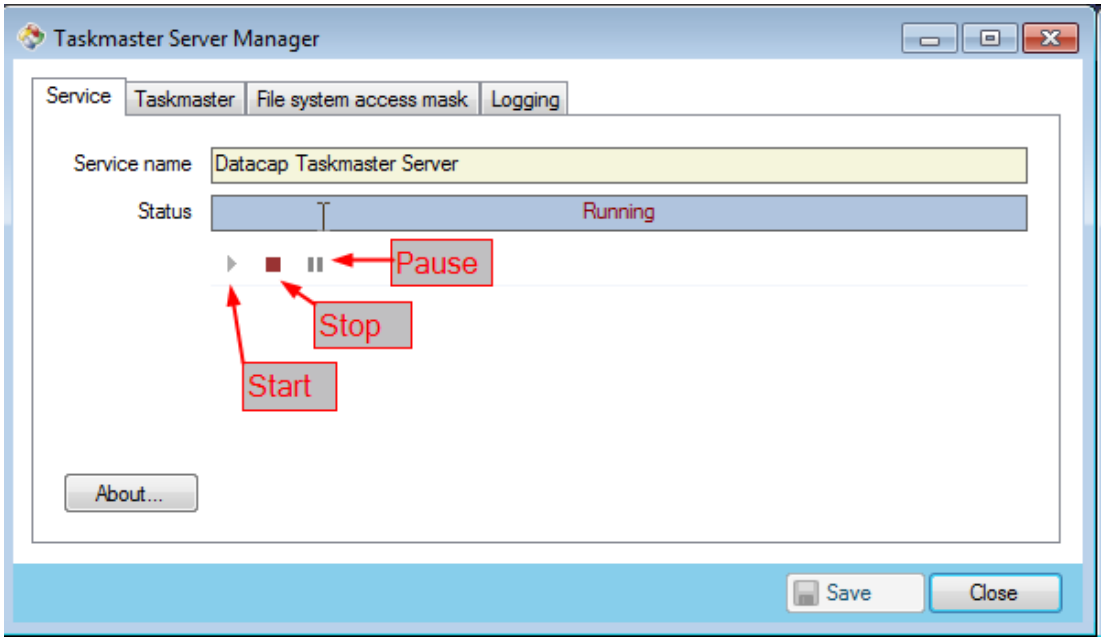
Stop and Restart the Datacap Server Service



Component Configuration

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Figure 2-18. Stop and Restart the Datacap Server Service

Stop and Restart the Datacap Server Service

- On the Datacap server click Start.
- Select All Programs > IBM Datacap Services > Datacap Server Manager.

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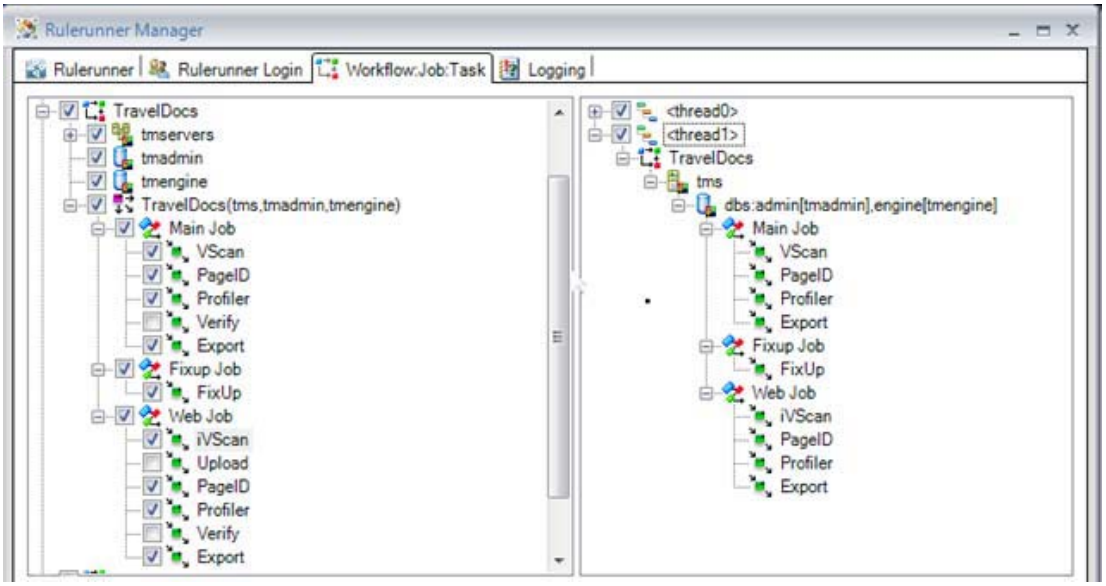
Configure Rulerunner to Run Tasks



Component Configuration

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Figure 2-19. Configure Rulerunner to Run Tasks

Configure Rulerunner to Run Tasks

- On the Rulerunner Server Start menu.
- Select All Programs > IBM Datacap Services > Datacap Rulerunner Manager.
- Stop the Rulerunner if it is running.
- Click the Rulerunner Login tab.
- Select the Datacap Authentication option and enter:

  User ID "admin", Password "admin", and Station ID of "1", then click Connect.

  View the thread options

  - In the left pane, click in the check box to the left of the application you want to work with. The application tree expands with the Server, Administrator, and Engine databases selected.
  - Right-click in the right pane to display the menu items:
    - Expand all: Expands the details of all existing threads
    - Collapse all: Collapses the details of all existing threads

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- Threads > Clear: Deletes all existing threads
- Threads > Add Thread: Adds a new, empty thread
- Threads > Add Threads: Adds multiple threads with a template.
- Copy: Makes a copy of the selected thread
- Paste: Creates a thread with the copied thread as a template
- Remove: Deletes the selected thread

Add and configure threads

See detailed options on Info center.

- Save your changes save the configuration file.

Set more configuration parameters

Priority:

- To set a batch processing task to a higher priority than a batch creation task, select the task in the right pane. The task ID and default Settings appear in the lower left.
- Change the value in the priority field.

Skip Same Batch:

- When the task is a batch creation task like VScan, increase the value for the skipsamebatch field.

Set Rulerunner settings and Advanced Settings

- Change the settings on the Rulerunner Settings tab.
- Change the settings on the Advanced Settings tabs.
- Click Save or CTRL+S to save your changes.

Set logging options

- Click the Logging tab to display it. When you select the Number of Messages setting on the Quick Log tab, the same level of logging is automatically applied to the ATM Log, Rulerunner Log, and the RRS Log tabs.
- Click the ATM Log tab and change the settings.
- Click the Rulerunner Log tab and change the settings.
- Click the RRS Log tab and change to the settings.
- Click Save to save your changes.

Restore login options to the runtime requirement

- When you complete your changes, click the Rulerunner Login tab to display it.
- Click Disconnect. Important: Complete the following steps to ensure that the authentication credentials for Rulerunner are set properly.
- When using:
- Windows authentication - Select the Windows Authentication option.

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- Datacap authentication - Select the Datacap Authentication option, enter the user ID of the Rulerunner domain/Windows account, the Password, and the name of the Rulerunner Server as the Station ID.
- Click Save.
- Close the Rulerunner Manager window.

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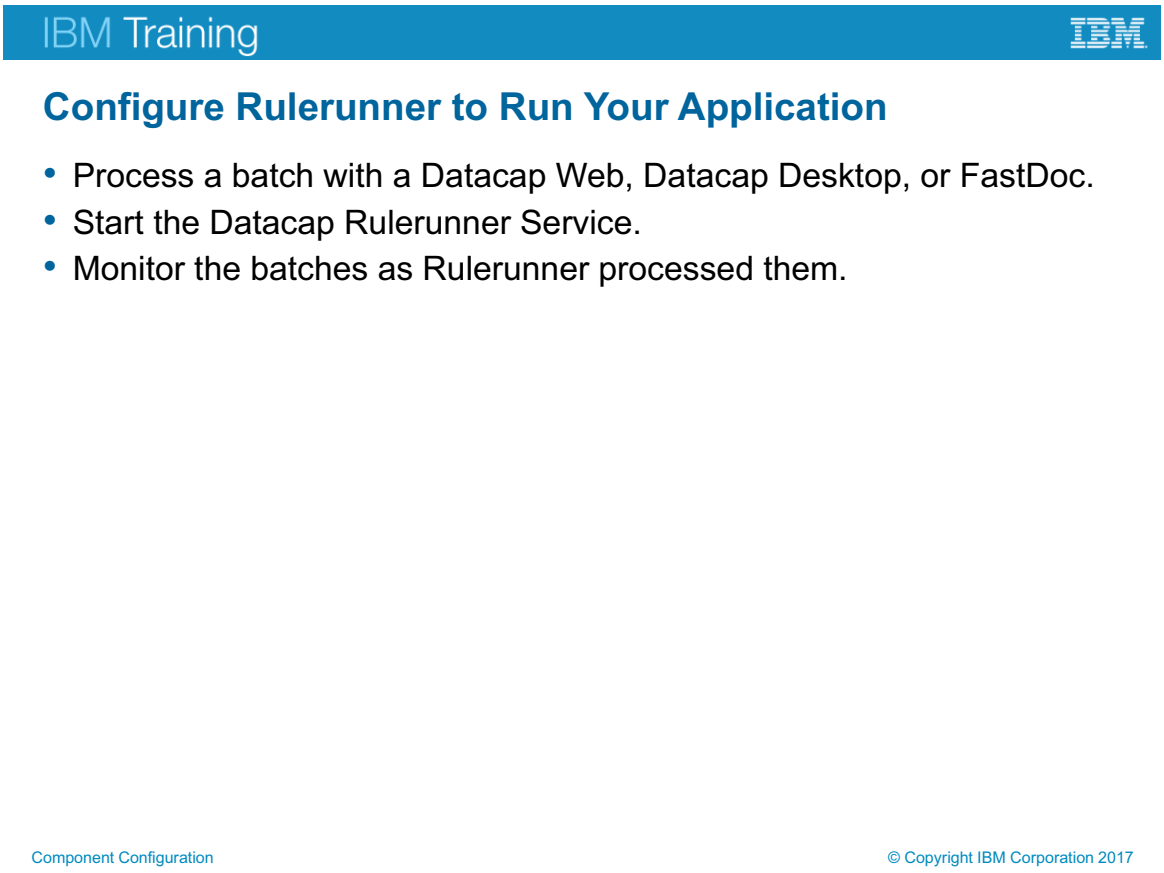

Figure 2-20. Configure Rulerunner to Run Your Application

Process a batch with a Datacap Client

- From a Workstation, start your Datacap Client application. Use your admin user ID, password, and Station ID.
- Run your application or applications so that there are pending batches for the tasks that Rulerunner is configured to process.

Start the Datacap Rulerunner Service

- On the Rulerunner Server click Start menu, select: All Programs > IBM Datacap Services > Datacap Rulerunner Manager
- If the Status displayed is Stopped, continue with the next step. If the Status displayed is Running, skip to the last step.
- Click Start.

Monitor the batches as the Rulerunner processes them

- Monitor your batches with the Datacap Web Job Monitor to watch batches change status as Rulerunner processes them.

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IBM Training

Sequence for Restarting Datacap Software

- If there is a need to restart Datacap in a multi-system configuration, Shut down in the following order:
  - Datacap Client software like Datacap Client, Datacap Web Client, Datacap Studio, and any of the other Datacap Clients.
  - Datacap Web and any Datacap web services, such as Report Viewer, wTM, and Fingerprint Service
  - Datacap Server Service
  - Databases
- Restart in the reverse order:
  - Databases
  - Datacap Server Service
  - Datacap Web and any Datacap web services, such as Report Viewer, wTM, and Fingerprint Service
  - Datacap Client software like Datacap Client, Datacap Web Client, Datacap Studio, and any of the other Datacap Clients.

Component Configuration

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Figure 2-21. Sequence for Restarting Datacap Software

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Figure 2-22. Demonstrations

If you are taking this course as a self-paced virtual course, return to the main course menu to play the pre-recorded demonstrations.

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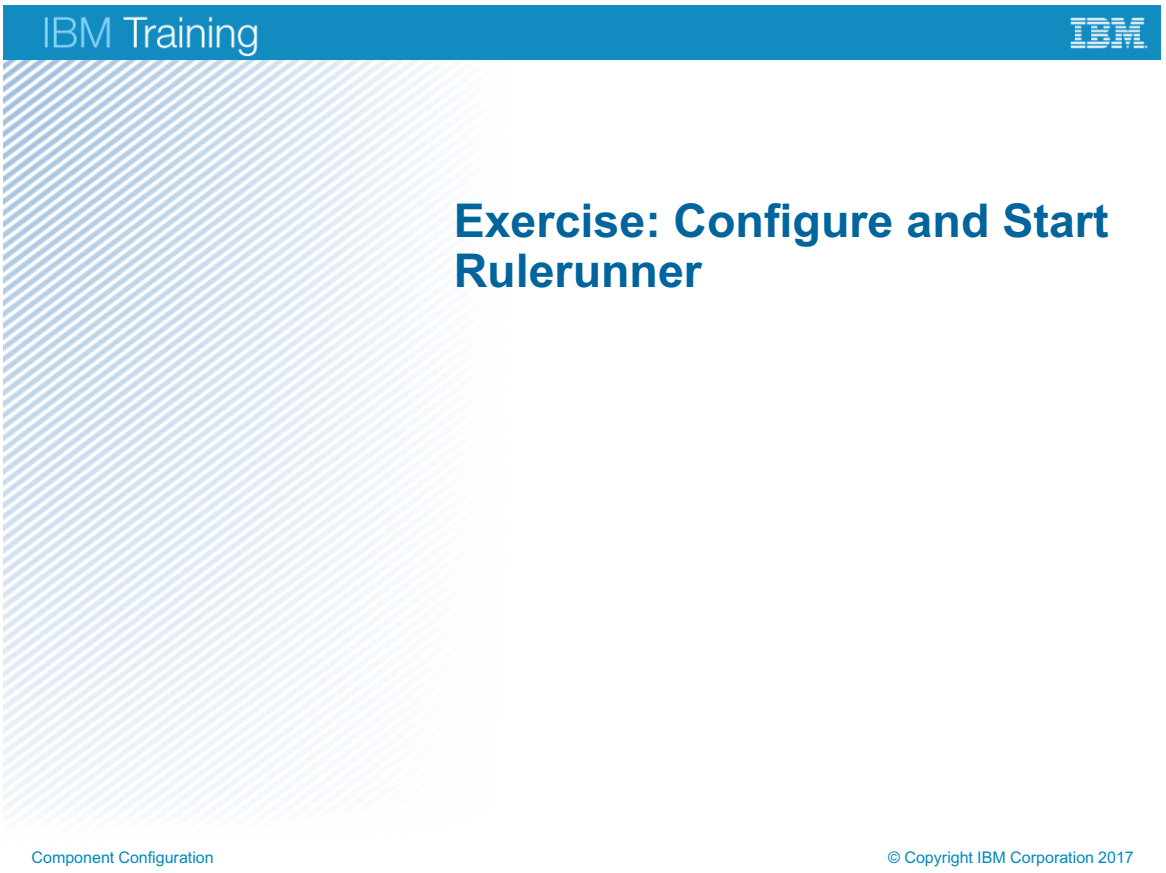

Figure 2-23. Exercise: Configure and Start Rulerunner

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IBM Training

Exercise objectives

- Configure and Start Rulerunner

Component Configuration

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Figure 2-24. Exercise objectives

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Lesson 2.2. Configure Datacap Maintenance Manager

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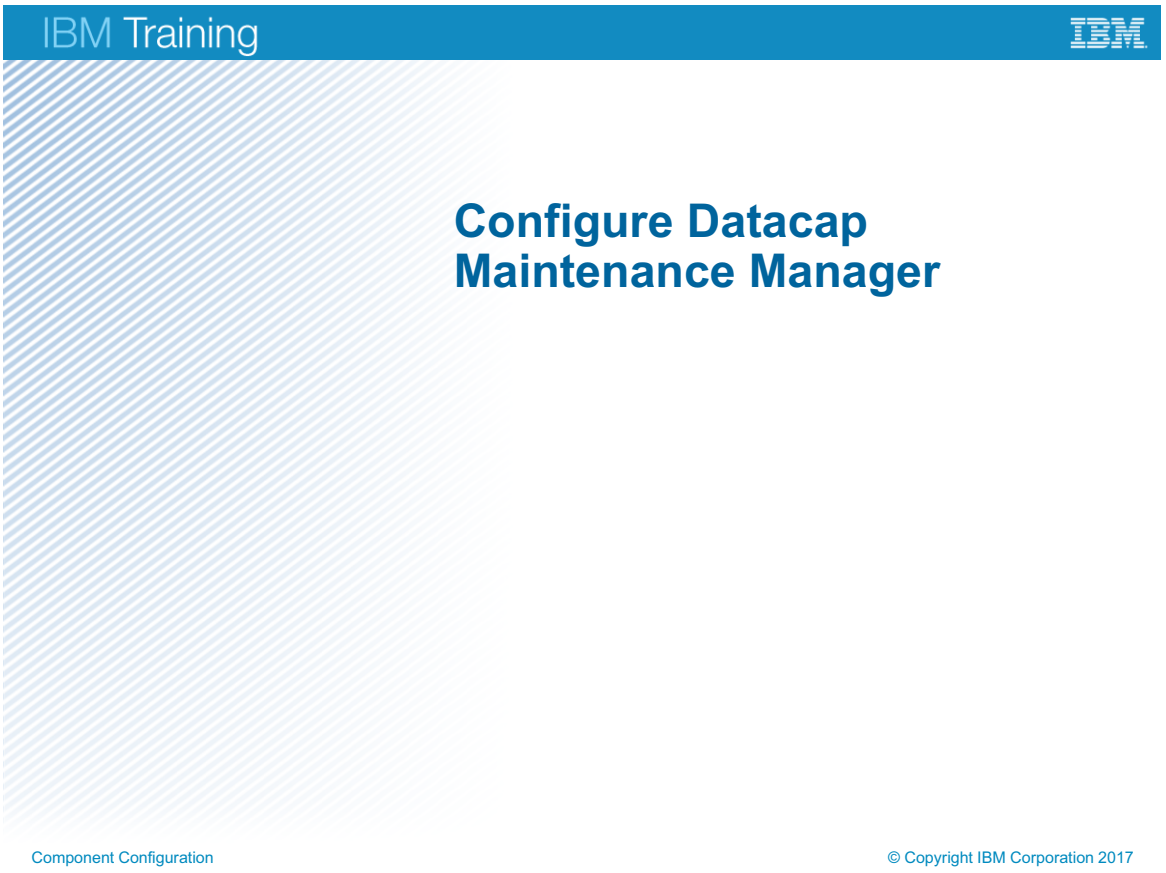

Figure 2-25. Configure Datacap Maintenance Manager

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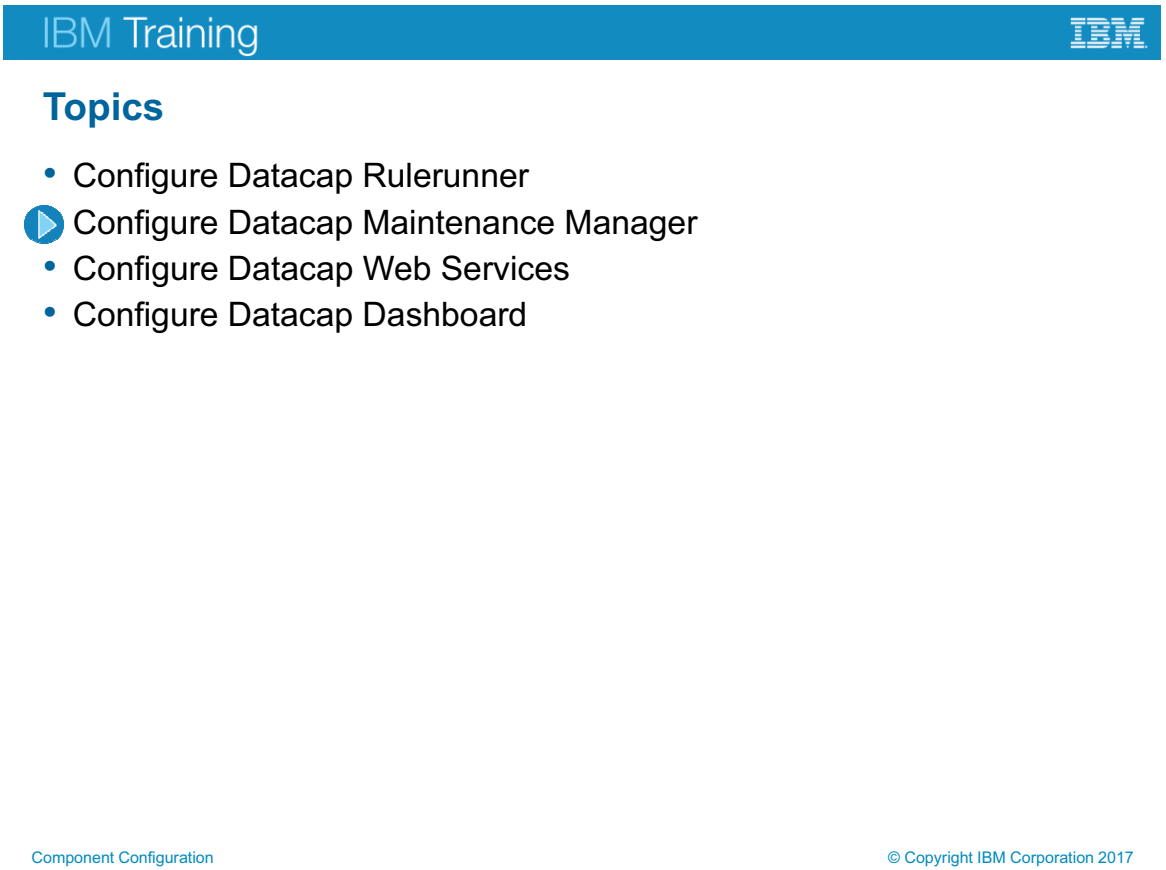

Figure 2-26. Topics

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IBM Training

Why is this lesson important to you?

- As an administrator of an IBM Datacap capture system, you must be familiar with all configuration tasks that are required to achieve a functional IBM Datacap 9.0 system.
- In this lesson, you configure the Datacap Maintenance Manager component, which provides batch task cleanup capability.

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Figure 2-27. Why is this lesson important to you?

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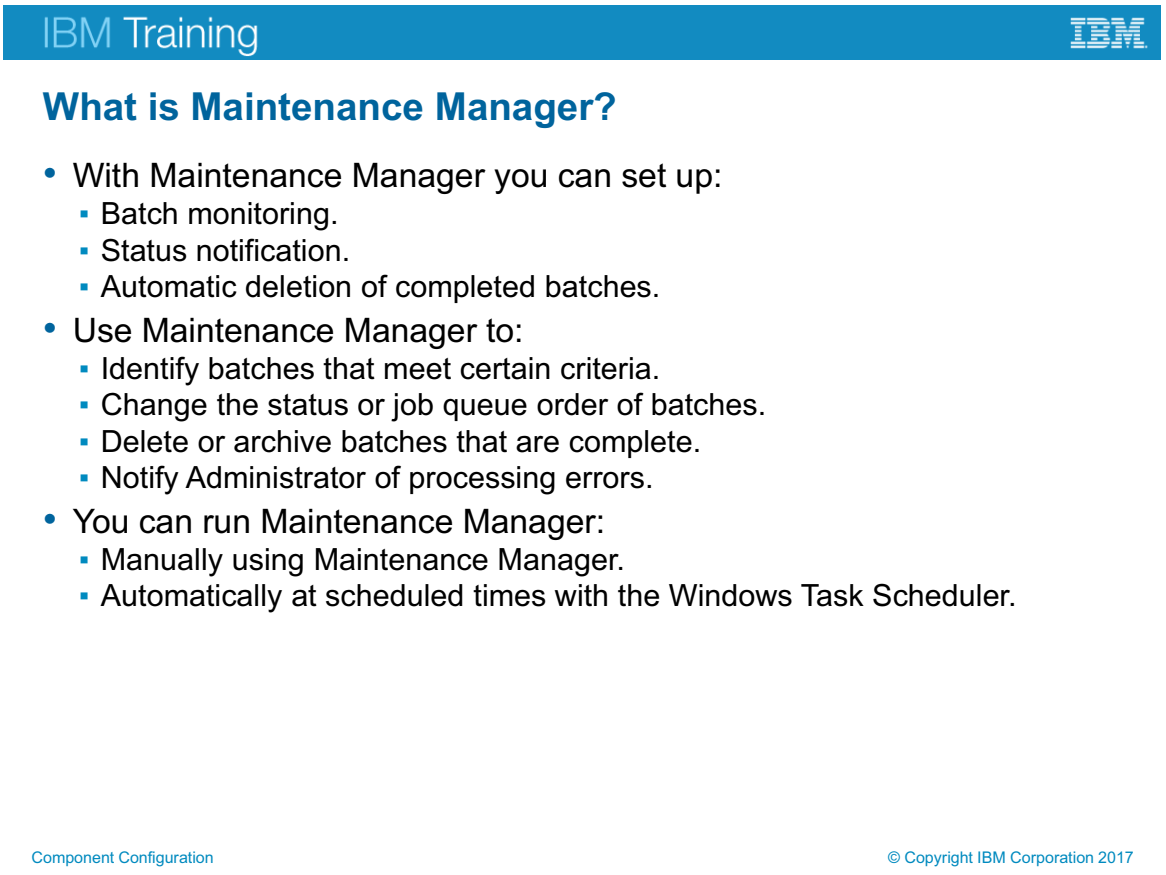

Figure 2-28. What is Maintenance Manager?

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Install and configure Datacap Maintenance Manager

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IBM Training

Maintenance Manager Components

- Maintenance Manager a configuration utility for:
  - Creating the required settings file.
  - Running Maintenance Manager rulesets manually.
- Maintenance Manager actions library
  - A library of actions to connect to a Datacap application.
  - Query the database for batch information.
  - Modify information in the database.
  - Move or delete batches.
  - Send notifications.
- You can use these actions in:
  - Rulesets in an existing Datacap application.
  - A new application specifically for batch monitoring.

Component Configuration

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Figure 2-29. Maintenance Manager Components

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IBM Training

Prerequisites for Maintenance Manager installation

- An account with appropriate sharing and security permissions.
  - Window/domain account does not need to be unique.
  - On the Maintenance Manager system, add the Maintenance Manager account to be a group member of the Administrator or Backup Operators group.
- For a client/server environment, install Maintenance Manager on the Developer Workstation. It should include:
  - DotScan, and DotEdit.
  - Sample applications.
  - Separately licensed applications and connectors.
  - Datacap Studio.
  - FastDoc (Optional, not required)
  - Maintenance Manager
- Develop your custom Maintenance Manager application.
- Set up Windows Task Scheduler to run your Maintenance Manager application.

Component Configuration

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Figure 2-30. Prerequisites for Maintenance Manager installation

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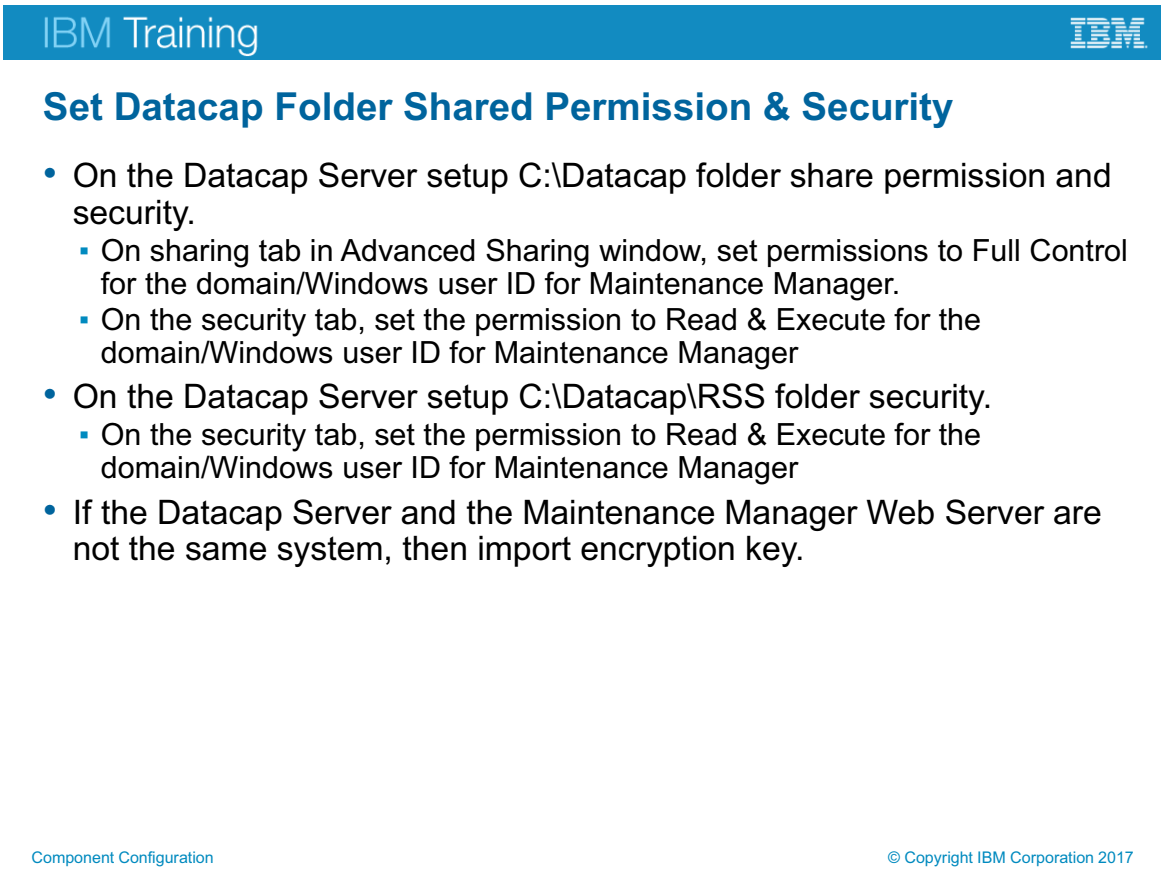

Figure 2-31. Set Datacap Folder Shared Permission & Security

Help paths

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Install and configure Datacap Maintenance Manager>Setting Datacap Maintenance Manager account permissions for sharing
- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Install and configure Datacap Maintenance Manager>Importing encryption keys to Datacap

Import encryption keys if Maintenance Manager is on its own web server.

- Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Datacap Web Server computer

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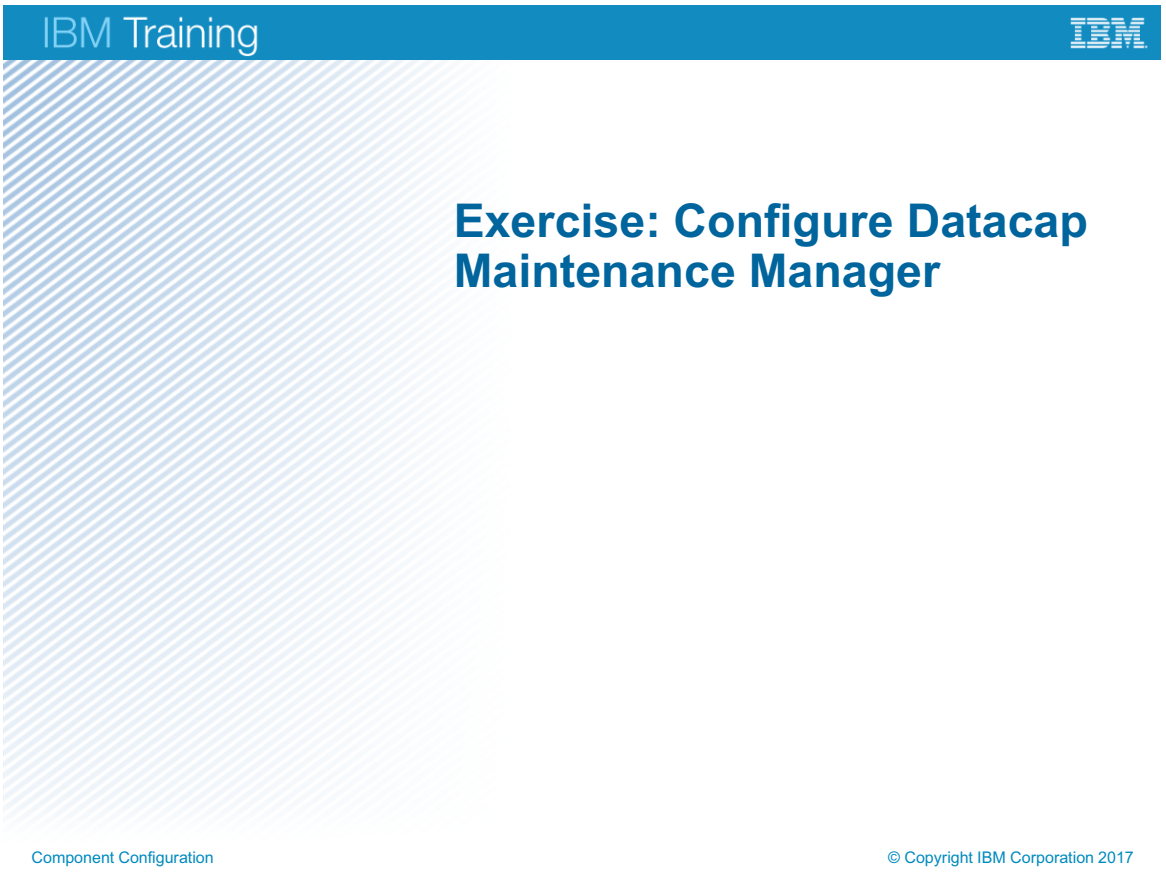

Figure 2-32. Exercise: Configure Datacap Maintenance Manager

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IBM Training

Exercise objectives

- Configure and Start Datacap Maintenance Manager

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Figure 2-33. Exercise objectives

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Lesson 2.3. Configure Datacap Web Services

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Figure 2-34. Configure Datacap Web Services

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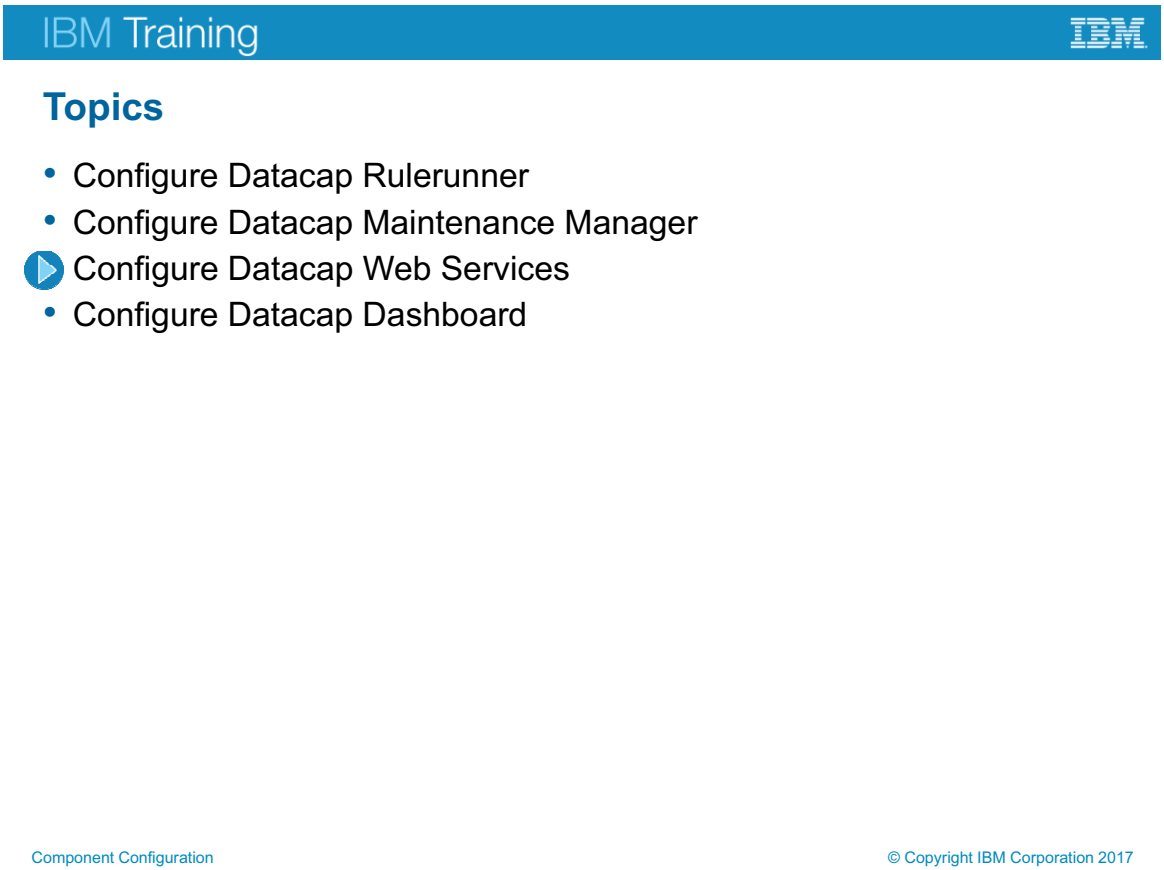

Figure 2-35. Topics

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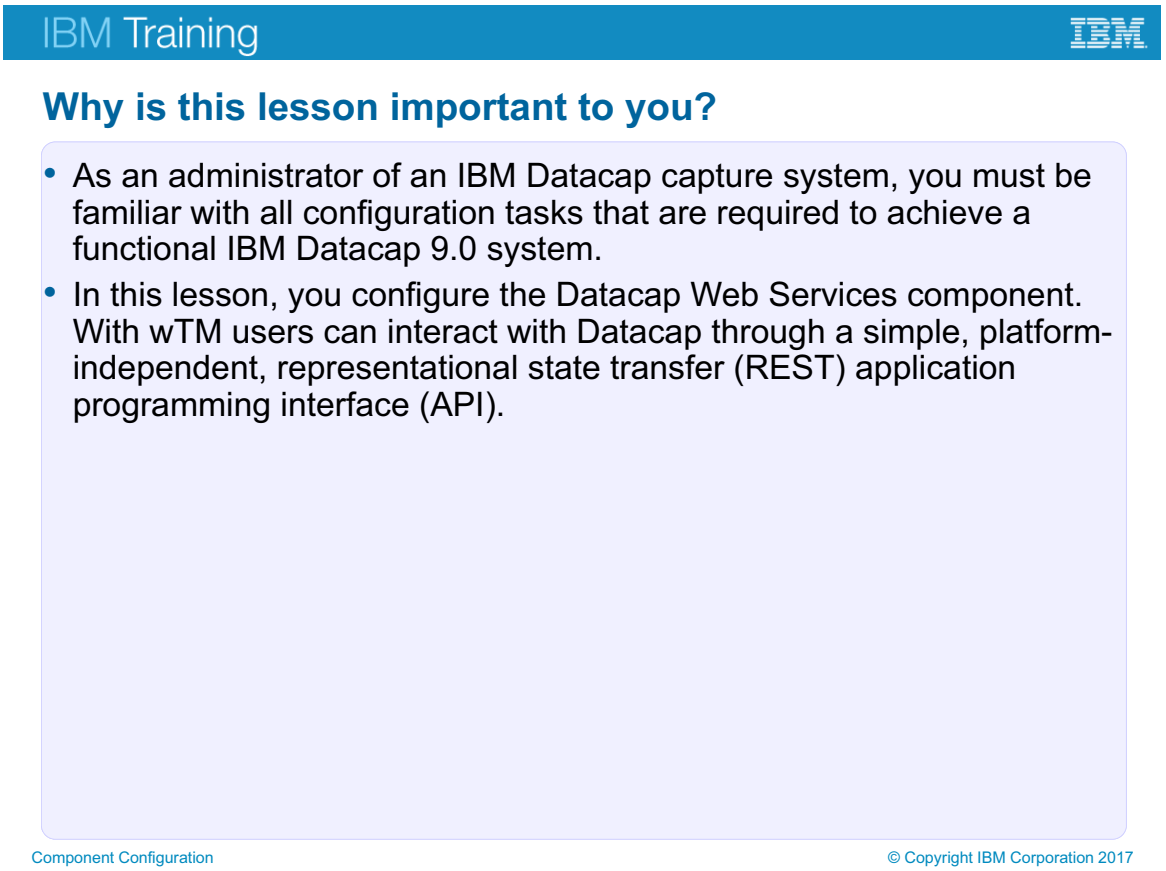

Figure 2-36. Why is this lesson important to you?

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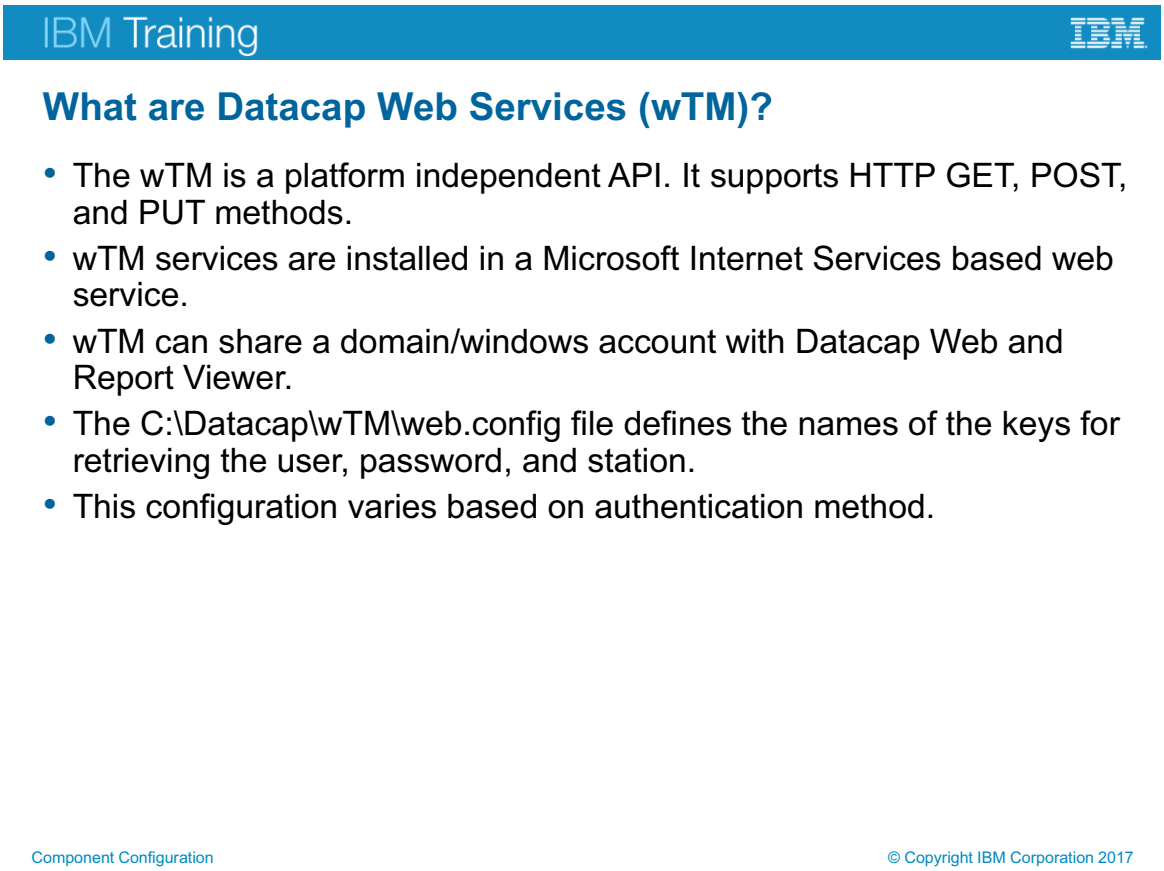

Figure 2-37. What are Datacap Web Services (wTM)?

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap Web Services installation steps

What are wTM Services?

The Datacap Web Services (wTM) software component of IBM Datacap Capture provides you with the ability to interact with Datacap through a simple, platform-independent, representational state transfer (REST), application programming interface (API).

The wTM API supports HTTP GET, POST, and PUT methods. With these methods you can create a batch, upload pages to the batch, set the page file name, and update page allow files. The API also supports release a batch to the next task to retrieve any file in the batch folder (including image files), and to retrieve batch information such as batch ID and batch status.

wTM is a Microsoft Internet Information Services (IIS) based web service that can be installed on a dedicated web server, or can be installed on a web server on which other Datacap web components are installed.

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Create a domain/windows account for wTM.

Create or ensure a domain/Windows account exists for wTM. Datacap does not require that a unique Windows account is set up for wTM. wTM can use any Windows account if the account can be set up with the appropriate sharing and security permissions. When wTM is installed on the same WebServer as Datacap Web or Report Viewer, wTM can use the same Windows account or a different one.

Authenticating wTM

wTM uses settings in the C:\Datacap\wTM\web.config file to determine the names of the keys that are stored in the Datacap Application Manager from which to retrieve the Datacap user, password, and station. The web.config file contains these lines that identify the names of the keys:

```
<setting name="pathUser" serializeAs="String">
<value>values/gen/wTMUser</value>
</setting>
<setting name="pathPassword" serializeAs="String">
<value>values/adv/wTMPassword</value>
</setting>
<setting name="pathStation" serializeAs="String">
<value>values/gen/wTMStation</value>
</setting>
```

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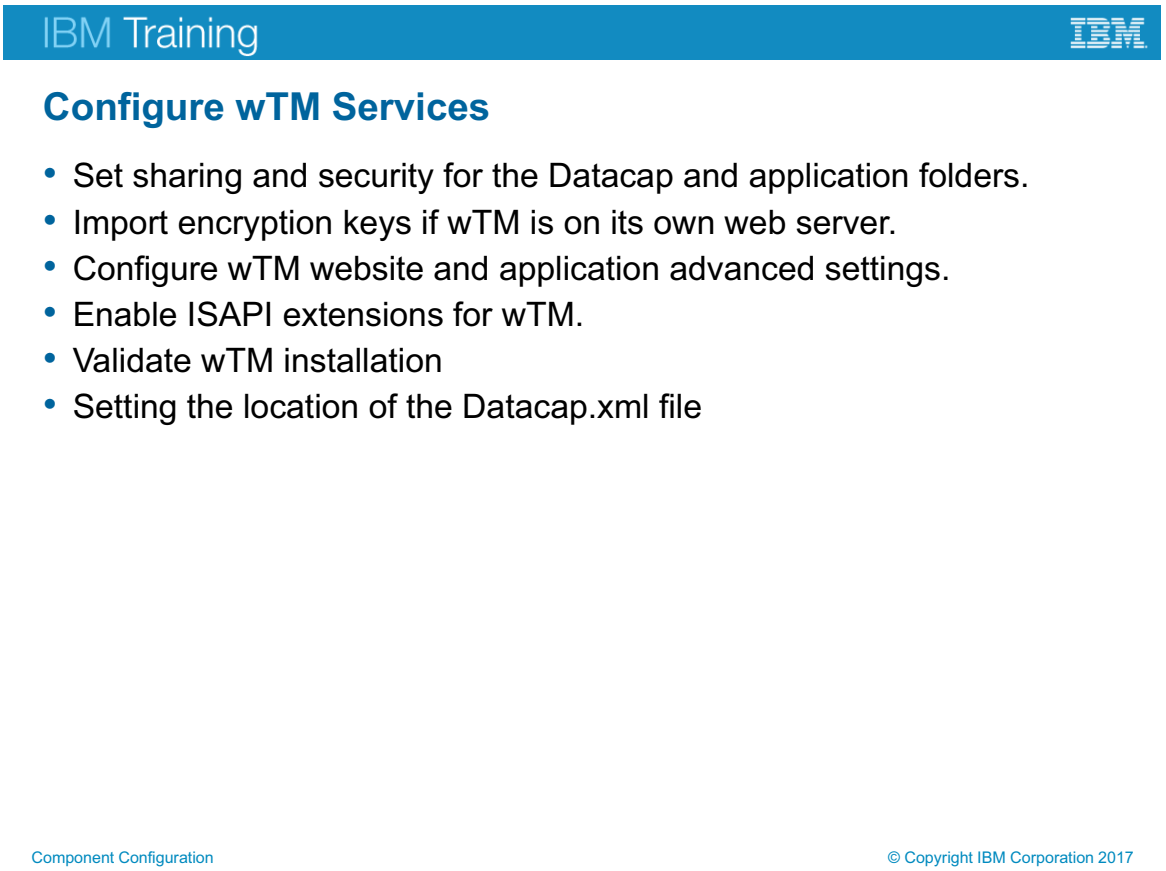

Figure 2-38. Configure wTM Services

Set sharing and security for the Datacap and application folders.

1. On the Server, Properties > Sharing tab for the c:\Datacap folder it should already be shared with the Share name of Datacap.
2. On the Permissions tab, add or ensure that the domain/Windows user ID of wTM is set to allow **Full Control**.
3. On the Server, Properties > security tab for the c:\Datacap folder, add, or ensure that the domain/Windows user ID of wTM is set to allow **Read**.
4. On the Server, Properties > security tab for the c:\Datacap\application folder, add, or ensure that the domain/Windows user ID of wTM is set to allow **Read**.

Import encryption keys if wTM is on its own web server.

- Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Datacap Web Server computer.

Configure wTM website and application advanced settings.

1. From the WebServer Windows Start menu, select Administrative Tools > Internet Information Services (IIS) Manager.

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2. In the Connections pane, expand the computer. Add a Web Site, and set the Site name to wTM. Set the Physical path to C:\Datacap\wTM. Select the IP address of the WebServer and assign a unique Port number. When Datacap Web and wTM are installed on the same WebServer, they be assigned different port numbers.
3. In the Connections pane, select Application Pools, wTM application pool, Advanced Settings, and check the following settings:
   - .NET version is set to v4.0.
   - Enable 32-Bit Applications is set to True.
   - Managed Pipeline Mode is set to Integrated.
   - Start Automatically is set to True.
4. In the Process Model section > Identity > Application Pool Identity window, set the Custom account to wTM domain/Windows account in the format: accountname@domainname.
5. In the Connections pane, select the Default Web Site; then, in the Actions pane, under Manage Web Site, click Restart.
6. Confirm all of the following are started: Web Server, Application Pool, and Default Web Site.

Enable ISAPI extensions for wTM.

1. WebServer's > Windows Start menu > Administrative Tools > Internet Information Services (IIS) Manager.
2. In the Connections pane > computer > wTM Web Site > Handler Mappings.
3. Enable svc-ISAPI-4.0_32bit.
4. In the Actions pane > Edit Feature Permissions > select Read, Script, and Execute.
5. In the Actions pane > Edit > Request Restrictions > Verbs > All verbs.

Validate wTM installation

You can validate your installation by viewing the wTM help pages.

1. Browse to URL:http://<WebServerName or IP address>:<port number>/ServicewTM.svc/help.
2. Click one of the links in the Method column to display detailed help about the REST request.

Set the location of the Datacap.xml file.

1. From the Windows Start menu, select All Programs > IBM Datacap Services > Datacap Application Manager > Service tab.
2. Ensure that the path reflects the correct location of the datacap.xml file, for example: \\<*Datacap Server Name*>\Datacap\datacap.xml.

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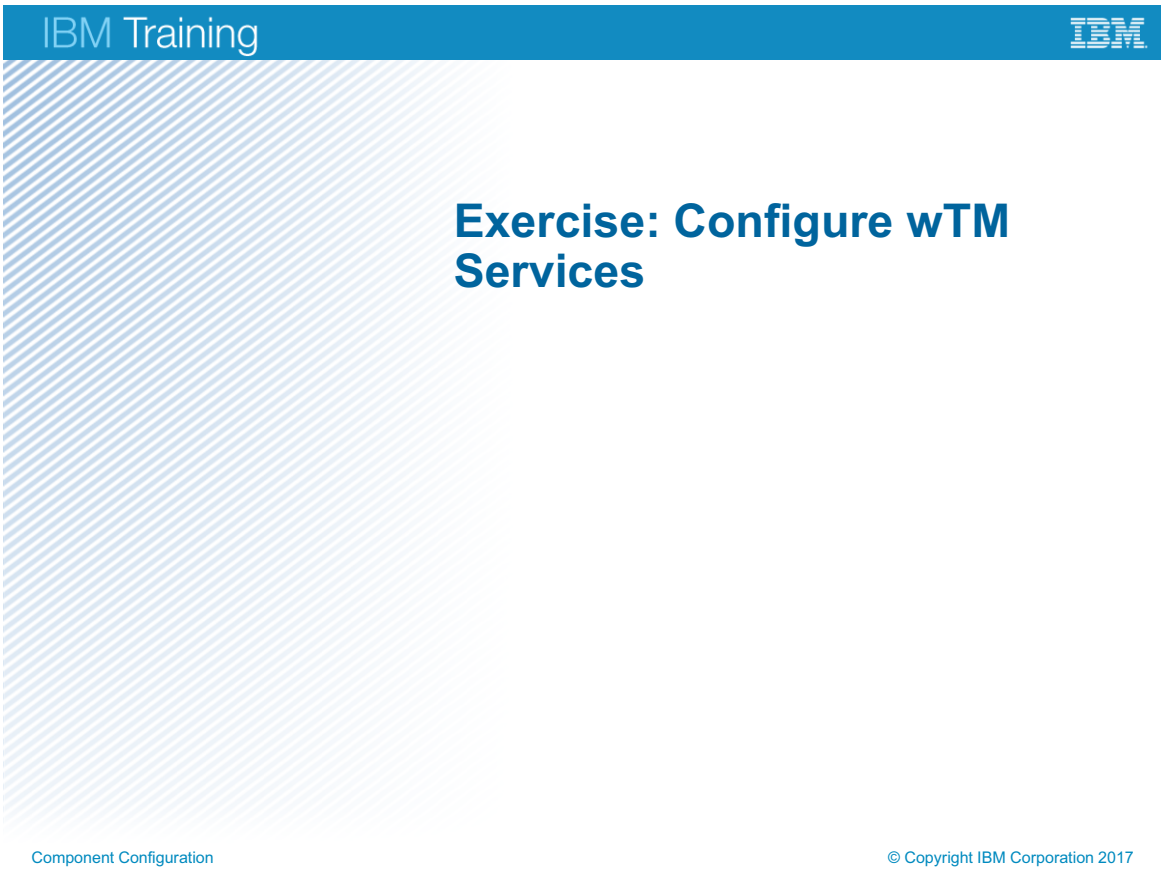

Figure 2-39. Exercise: Configure wTM Services

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IBM Training

Exercise objectives

- Configure wTM Services

Component Configuration

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Figure 2-40. Exercise objectives

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Lesson 2.4. Configure Datacap Dashboard

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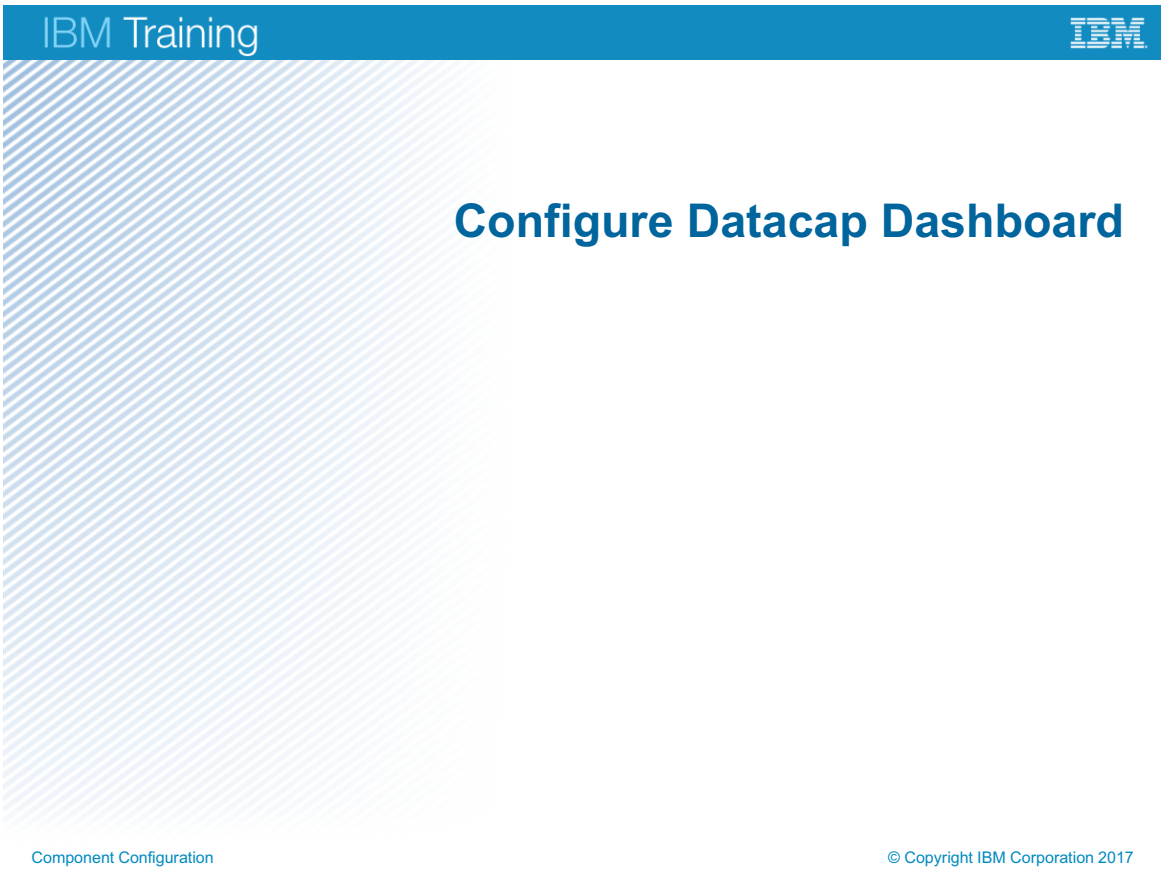

Figure 2-41. Configure Datacap Dashboard

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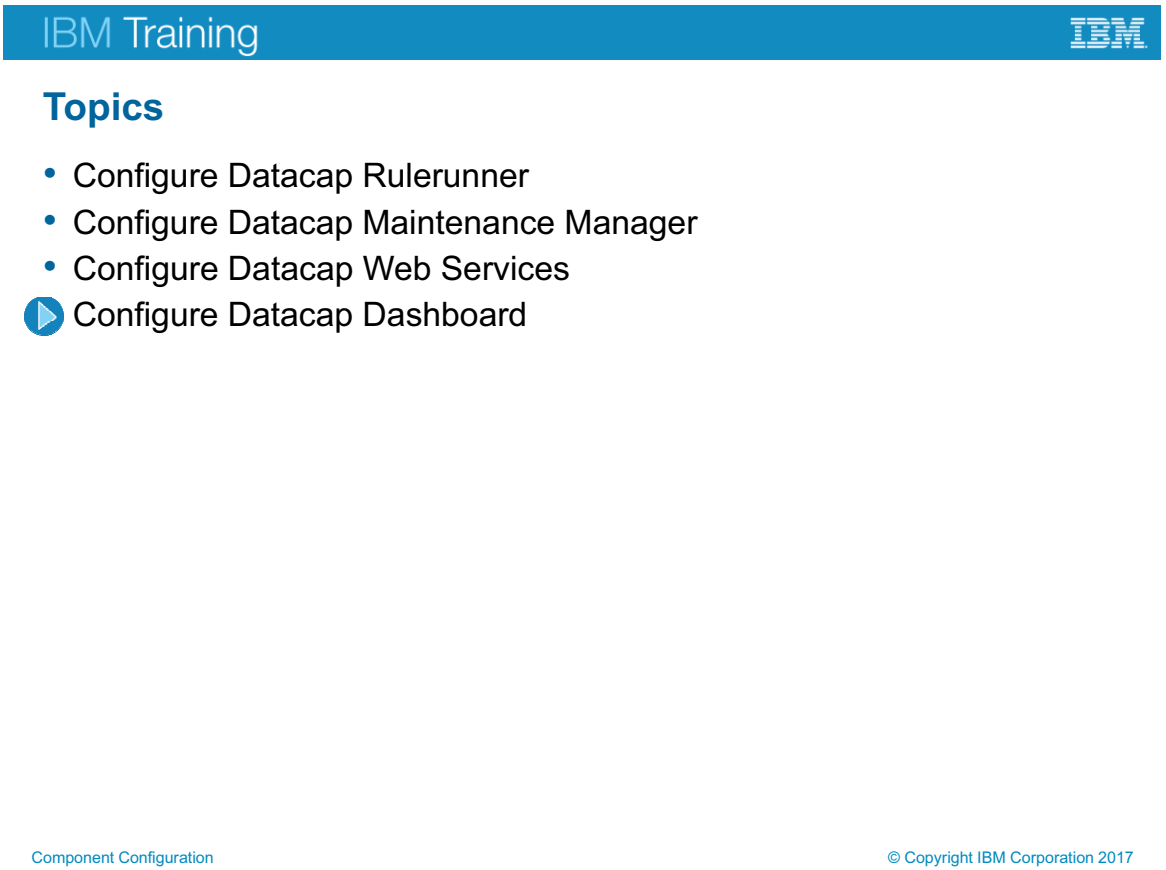

Figure 2-42. Topics

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Why is this lesson important to you?

- As a Business Analyst, you monitor the performance and efficiency of the Datacap Capture installation.
- To do this you must be familiar with the configuration and operation of the Datacap Dashboard.

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Figure 2-43. Why is this lesson important to you?

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IBM Training

What is Datacap Dashboard?

- The Datacap Dashboard is:
  - An IBM Content Navigator (ICN) custom desktop
  - Used to monitor the Datacap system performance
  - Released with Datacap 9.0.1 in the JAR file C:\Datacap\tmweb.java\DatacapWebPlugin.jar file
  - Installed by registering the Datacap Navigator plug-in in IBM Content Navigator
  - Configured by selecting the Datacap Dashboard Page Feature in IBM Content Navigator Admin, Layout tab

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Figure 2-44. What is Datacap Dashboard?

Help Path:

Datacap 9.0.1>Monitoring your system>Monitoring your system with Datacap Navigator>Dashboard feature configuration

http://www.ibm.com/support/knowledgecenter/SSZRWV_9.0.1/com.ibm.dc.admin.doc/dchlp007.htm

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IBM Training

Performance planning consideration

- Page classification and field recognition data collection and computation are resource intensive
- Data collection can cause Datacap tasks to run slower
- Measurements recorded indicate that export tasks can slow down when accuracy statistics collection is enabled
- Decide which application to monitor
- Decide which system should run data collection

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Figure 2-45. Performance planning consideration

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IBM Training

System requirements

- Relational Databases tables need to be properly sized
- Custom statistic data tables are required
  - rb_FieldAccuracyPct
  - rb_FieldAccuracyWeight
  - rb_ClassifyAccuracyPct
  - rb_ClassifyAccuracyWeight
- The Rulerunner system does more database I/O to write statistic data
- The Rulerunner system requires direct access to the Engine database
- Database client software is required on the Rulerunner system to access the database tables, except if a non-production Access database is in use.

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Figure 2-46. System requirements

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IBM Training

Installation and Configuration

- The Datacap Dashboard is a feature of IBM Datacap Navigator (DCN)
- IBM Datacap Navigator is an IBM Content Navigator (ICN) plug-in
- To install Dashboard means:
  - Install IBM Datacap 9.0.1 from installation media
  - Datacap WebPlugin.jar is located in C:\Datacap\tmweb.java
  - Registering IBM Datacap Navigator plug-in with IBM Content Navigator
    - Note: This procedure is covered in the F224 Datacap Configuration class
- Configuring the Dashboard feature in ICN
- Configuring application for accuracy data collection

Component Configuration

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Figure 2-47. Installation and Configuration

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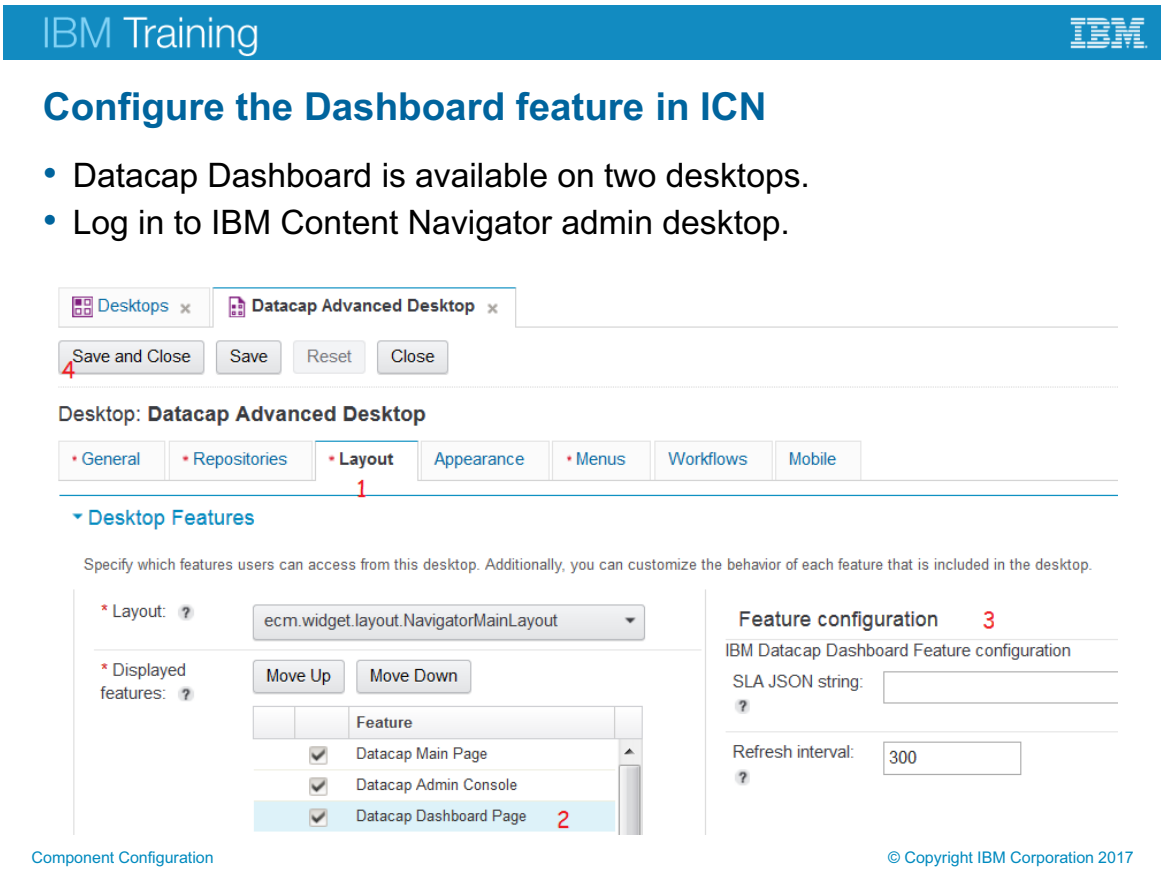

Figure 2-48. Configure the Dashboard feature in ICN

Configuring the Dashboard feature in ICN

1. After IBM Datacap Navigator is Registered, Datacap Dashboard is available on two desktops:
   - The dcAll desktop.
   - The dcadmin desktop
2. Log in to IBM Content Navigator admin desktop.

   http://hostname:port/navigator/?desktop=admin
3. Double click on the desktop with the Dashboard feature, for example, **dcAll** or **dcadmin**
4. Click the **Layout** (1) tab,
5. Click the **Datacap Dashboard Page** check box (2),
6. Cut and paste an SLA JSON into the **SLA JSON string** field if you have such values.
7. Modify the default **Refresh interval** if the default of 300 seconds or 5 minutes (3) is not adequate for your use.
8. Click **“Save and Close”** (4) to save your configuration changes.

Details on the SLA JSON string, an optional configuration

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Use your favorite editor to create a JSON string consisting of these properties and applicable values and then cut and paste into the SLA JSON string field during the configuration;

```
{“SLA”:
    {
        “businessName”: “Company’s name”,
        “appName”: Datacap application name”,
        “batchesAbortedInPresetTime”: 20,
        “batchesPendingInPresetTime”: 100,
        “pageAccurecy”: 97.9,
        “fieldAccurecy”: 96.5
    }
}
```

Notes:

BusinessName – example: IBM Corporation

appName – example: TravelDocs

batchesAbortedInPresetTime - The least acceptable amount of time in minutes that a batch should remain in the aborted status.

batchesPendingInPresetTime - The least acceptable amount of time in minutes that a batch should remain in the pending status.

pageAccurecy - The minimum acceptable page classification accuracy without alerting.

fieldAccurecy - The minimum acceptable field recognition accuracy without alerting.

Note: For both 3 & 4 a warning (!) is indicated on the display if within 10 percent of set value. For example, 88.1 but less than 97.9 receives a warning but less than 88.1 receives an alert. Alert (X) visual if worse than 10 percent off.

The least acceptable amount of time in minutes that a batch should remain in the aborted status. For both 1 and 2 if batches are found during the poll interval to have met this condition, an email if configured is sent with the batch information. The implementation is currently disabled.

The least acceptable amount of time in minutes that a batch should remain in the pending status.

The minimum acceptable page classification accuracy without alerting. For both 3 & 4 a warning is indicated on the display if within 10 percent of set value. For example, 88.1 but less than 97.9 receives a warning but less than 88.1 receives an alert. Alert visual if worse than 10 percent off.

The minimum acceptable field recognition accuracy without alerting.

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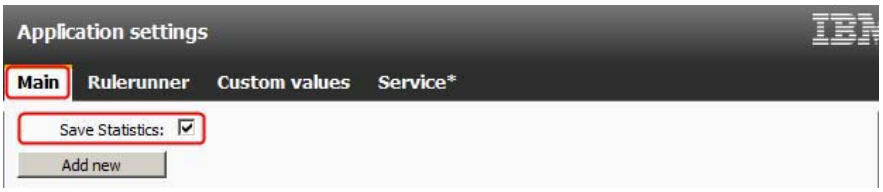
IBM Training

Configuring application for accuracy data collection

- Add statistic collection rulesets to the application.
  - Profile Statistics ruleset in the Profiler task profile.
  - Export Statistics ruleset in the Export task profile.
- Enable statistics collection in Application Manager.



  - This option is recorded in dco_<app>.app

```
<k name="dco_TravelDocs">
        <k name="setupdco" v="TravelDocs.xml"/>
        <k name="rules" v="rules"/>
        <k name="imagefix" v="imagefix.ini"/>
        <k name="UseFPXML" v="True"/>
        ...
        <k name="SaveReportStatistics" v="True"/>
</k>
```

Component Configuration

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Figure 2-49. Configuring application for accuracy data collection

Add statistic collection rulesets to the application

- For accuracy data, the application must be configured to compute and store reports statistics into the reportBatch and reportTotal ENGINE tables.
  - The Profile Statistics and Export Statistics rulesets collect and store the statistics required for the dashboard.
    - These rulesets are included with the sample and template applications in Datacap v9.0.1.
    - To add statistics collection to an existing application:
      - Add the Profile Statistics ruleset after page classification recognition is complete.
      - Add the Export Statistics after the operator verifies the page classification and recognition results.

Enable statistics collection in Application Manager.

Selecting the Save Statistics option in Application manager results in the SaveReportStatistics being set to true in the C:\Datacap\<applicationName>.app application file.

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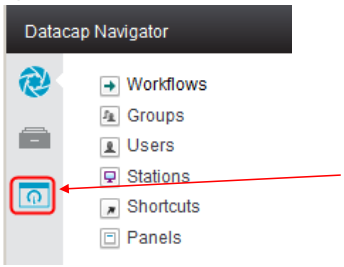
IBM Training

Using Datacap Dashboard

- Log in to the Dashboard enabled Desktop. Dcadmin



When the Dashboard is enabled, the Dashboard feature icon is visible

- Without any application configuration
  - The Dashboard will visualize Current Processes and Team Statistics data on in-progress workflow tasks.
- With configuration,
  - automated classification and recognition Accuracy data is also collected and visualized.
- It monitors and visualizes application data in three ways:

Component Configuration

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Figure 2-50. Using Datacap Dashboard

It monitors and visualizes application data in three ways:

1. Summary data – aggregates for the measured metric – displayed in donut charts with decorations.
2. Activity data over a duration – 24 hour and 7-day – displayed in graphs.
3. Visual alerting when set threshold is reached or has a statistical variant of noteworthiness.
   - Not all visual notifications are problematic
   - But all notifications deserve to be looked at.

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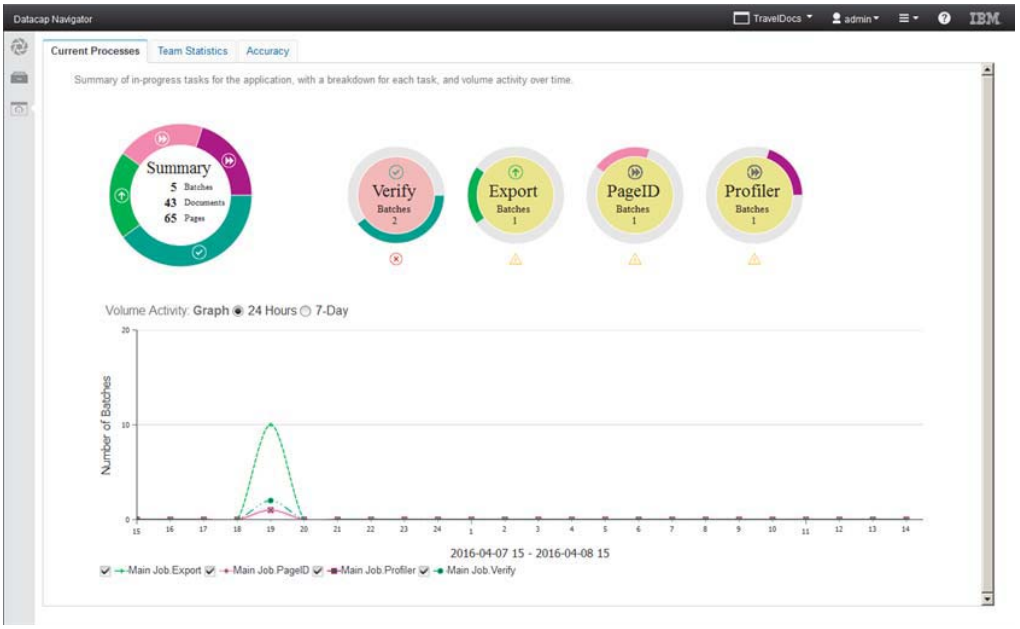
IBM Training

Current Processes

- The Dashboard View



Component Configuration

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Figure 2-51. Current Processes

Summary donut:

- Shows a record of sum at all of the active batches, documents and pages.

Verify, Export, PageID, and Profiler donut:

- Shows a count of the number of active batches at each task.

Volume Activity Graph

- Shows a graphic representation of the activity across a 24-hour or a 7-day period.

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IBM Training

Current Processes with summary

- The Dashboard View

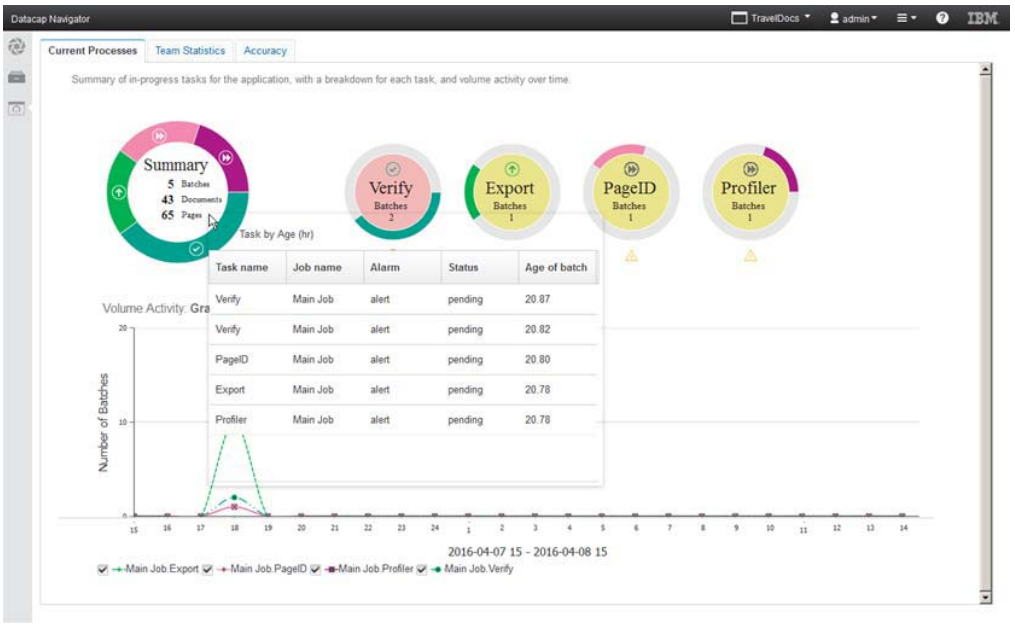

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Figure 2-52. Current Processes with summary

Click the inside of the Summary donut to see task by age data.

- One record in the data table for each active task.
- The “Age of batch’=“ column shows the number of hours that each has been active. That is since it was scanned.

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IBM Training

Current Processes showing activity detail data

- The Dashboard View

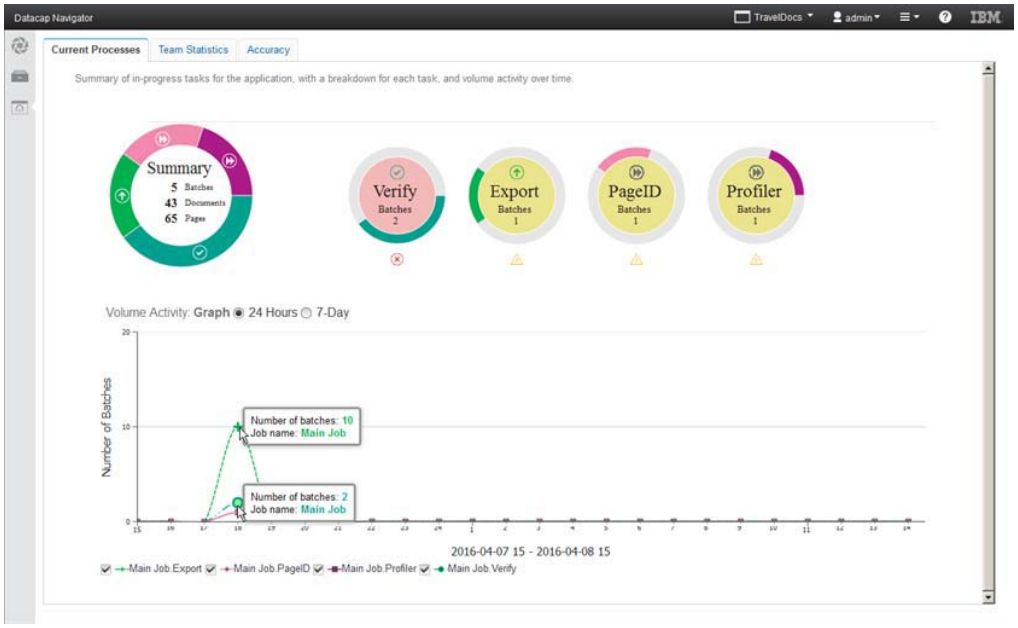

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Figure 2-53. Current Processes showing activity detail data

Graph information boxes

Hover over the peak point of each graph:

- The tallest graph represents the count of batches that are at the Job complete state, 10 batches.
- The next graph represents the Verify task with 2 active batches.
- The next graph represents the Export, PageID, and Profiler, which each have 1 batch.

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Team Statistics (non-automated tasks)

- The Dashboard View

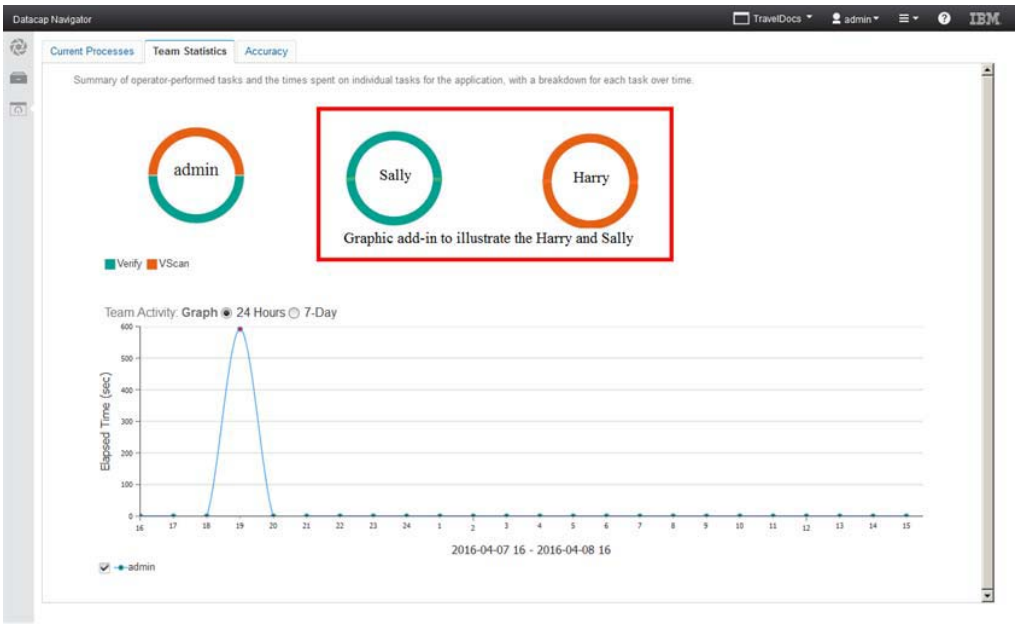

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Figure 2-54. Team Statistics (non-automated tasks)

Donut representation:

The batches represented on the team statistics view shows tasks that require human intervention. That is non-automatic tasks.

- I this sample all manual processing was done by the admin user.
- There is only one user donut.
- The color of the donut indicate the proportion of the Scan verses Verify task done by the admin user.

Scenario:

If one user Harry was doing all the scanning and one user Sally was doing all of the Verify tasks, then the result would be as follows.

- Two donuts. One for Harry and one for Sally.
- Harry's donut is orange.
- Sally's donut is green.

Graphic image

- There is a separate trace for each user.

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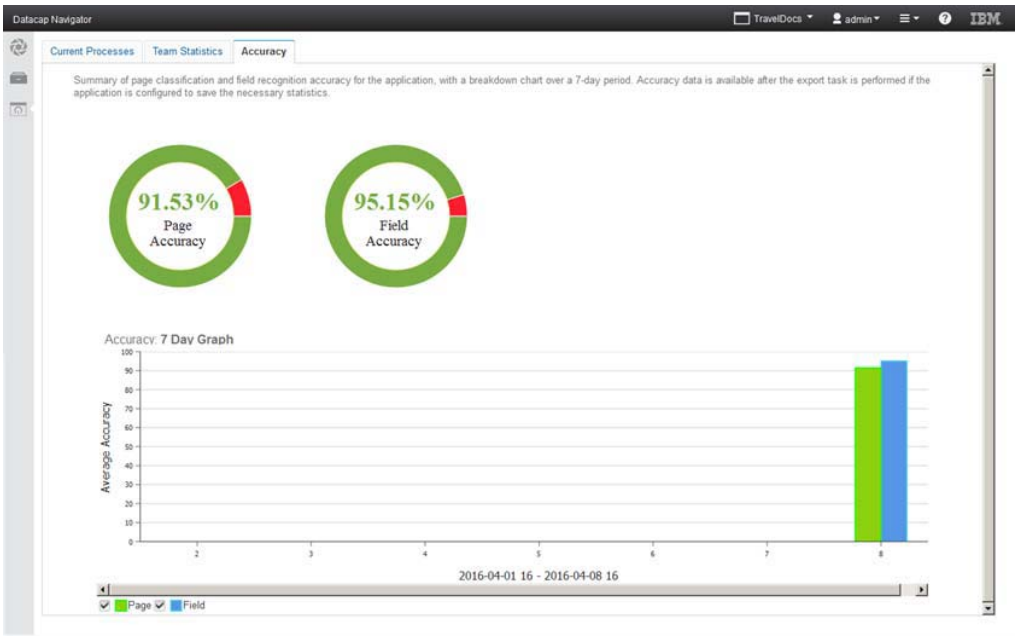
Accuracy

- The Dashboard View



Component Configuration

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Figure 2-55. Accuracy

Page Classification

- Total pages classified correctly divided by total pages processed.
- Pages whose type were set automatically, that are subsequently changed after Calculate Statistics ran (usually by an operator) are considered incorrect.
- However, pages originally classified as Other are always counted as correct

Field Recognition

- Total fields that were recognized correctly divided by total fields recognized.
- Fields that were recognized automatically, that are subsequently changed after Calculate Statistics (usually by a verify operator) are considered incorrect.

Donut chart color reflects overall accuracy

- Green for pass
- Red for fail.
- Inside color could change depending on SLA metrics

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The Dashboard View – Accuracy, X-axis label explained

1. Start date for the graph view
2. Start hour in a 24-hour clock and it's the time on the Datacap Web Service system corresponding to when the request for data was made.
3. End date for the graph view
4. End hour in a 24-hour clock and it's the time on the Datacap Web Service system. Data point on the hour will be shown only after the poll or refresh interval covers the full hour shown. For example, if there is data in say 09:30 and the end hour is 10, the bar graph data will be shown when a poll has taken place at 10 or thereafter. Meaning activities that happen between the hour of 9-10 will be shown at the 10th hour.

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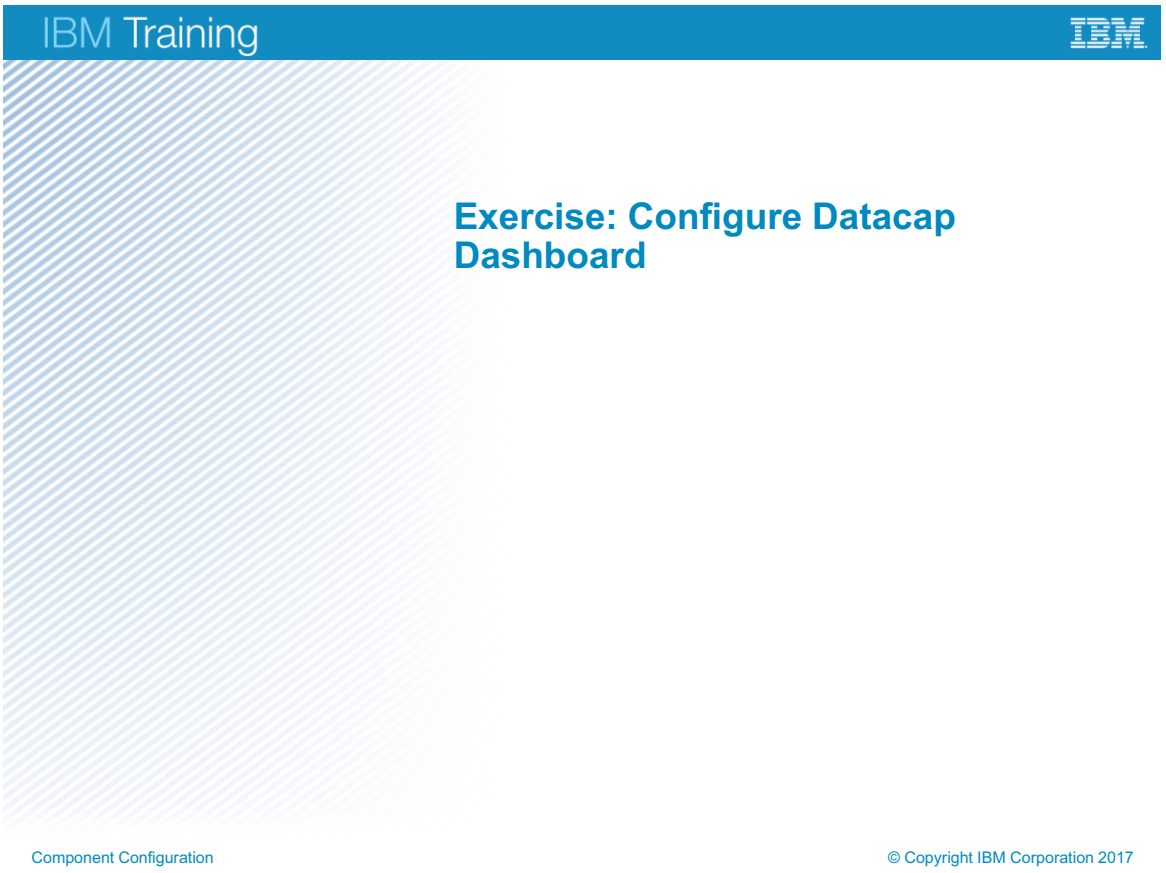

Figure 2-56. Exercise: Configure Datacap Dashboard

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IBM Training

Exercise objectives

- Configure the Datacap Dashboard
- Monitor system performance with Datacap Dashboard

Component Configuration

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Figure 2-57. Exercise objectives

You already tested in the previous exercise if the image has Web access to the Box Web interface

1. If you have access you can proceed with the exercises as written
2. If the Web is not accessible, read through the exercises, and do any exercises that you can do on the student image. You will not have the OAUTH2 parameters for configuring the Box rulesets and will also not be able to process a batch by reading images from Box or writing documents back to Box.

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IBM Training

Unit summary

- Configure Datacap Rulerunner
- Configure Datacap Maintenance Manager (NENU)
- Configure Datacap Web Services (wTM)
- Configure Datacap Dashboard

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Figure 2-58. Unit summary

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Appendix A. Report Viewer

Estimated time

01:00

Overview

This unit describes how to configure Report viewer.

How you will check your progress

- Successfully complete the activities in the Student Workbook.

References

IBM Knowledge Center

http://www.ibm.com/support/knowledgecenter/SSZRWV_9.0.1/com.ibm.datacaptoc.doc/datacap_9.0.1.htm

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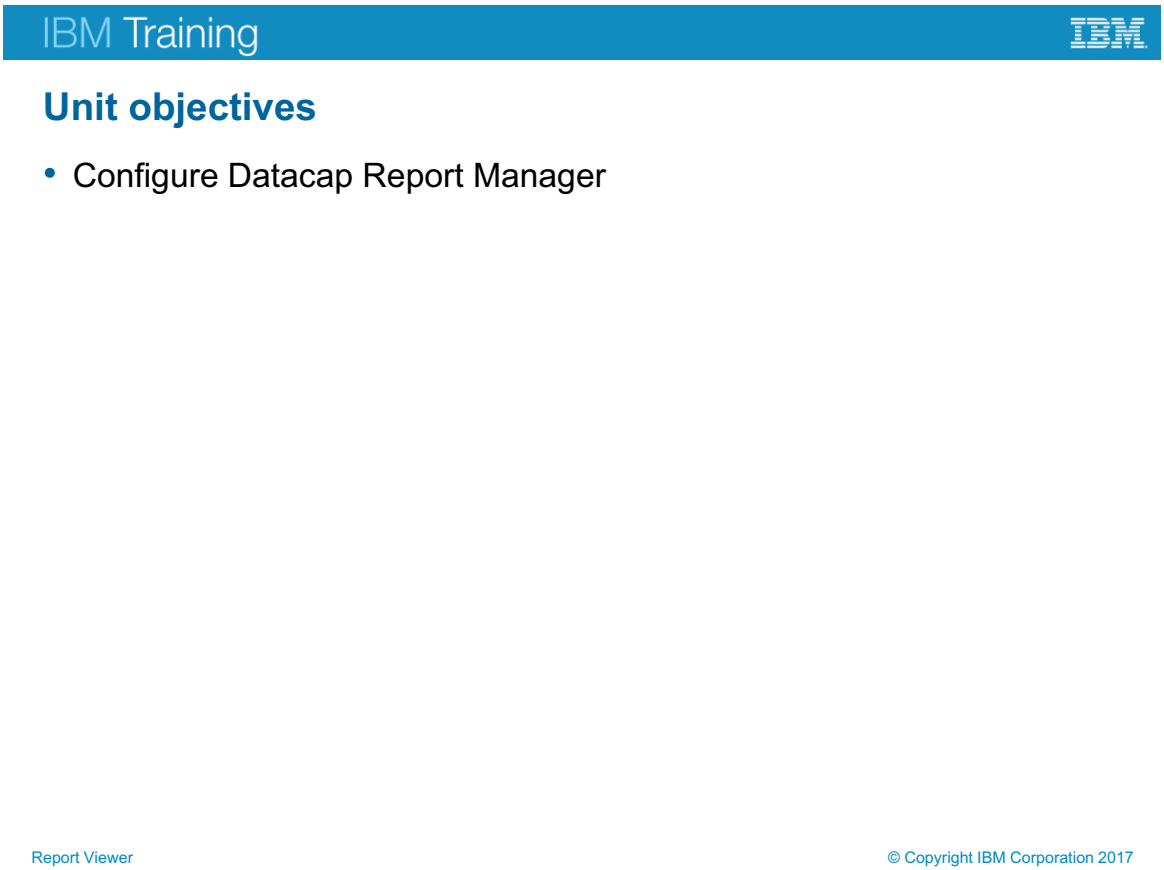

Figure A-1. Unit objectives

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Lesson A.1. Configure Report Viewer

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Figure A-2. Configure Report Viewer

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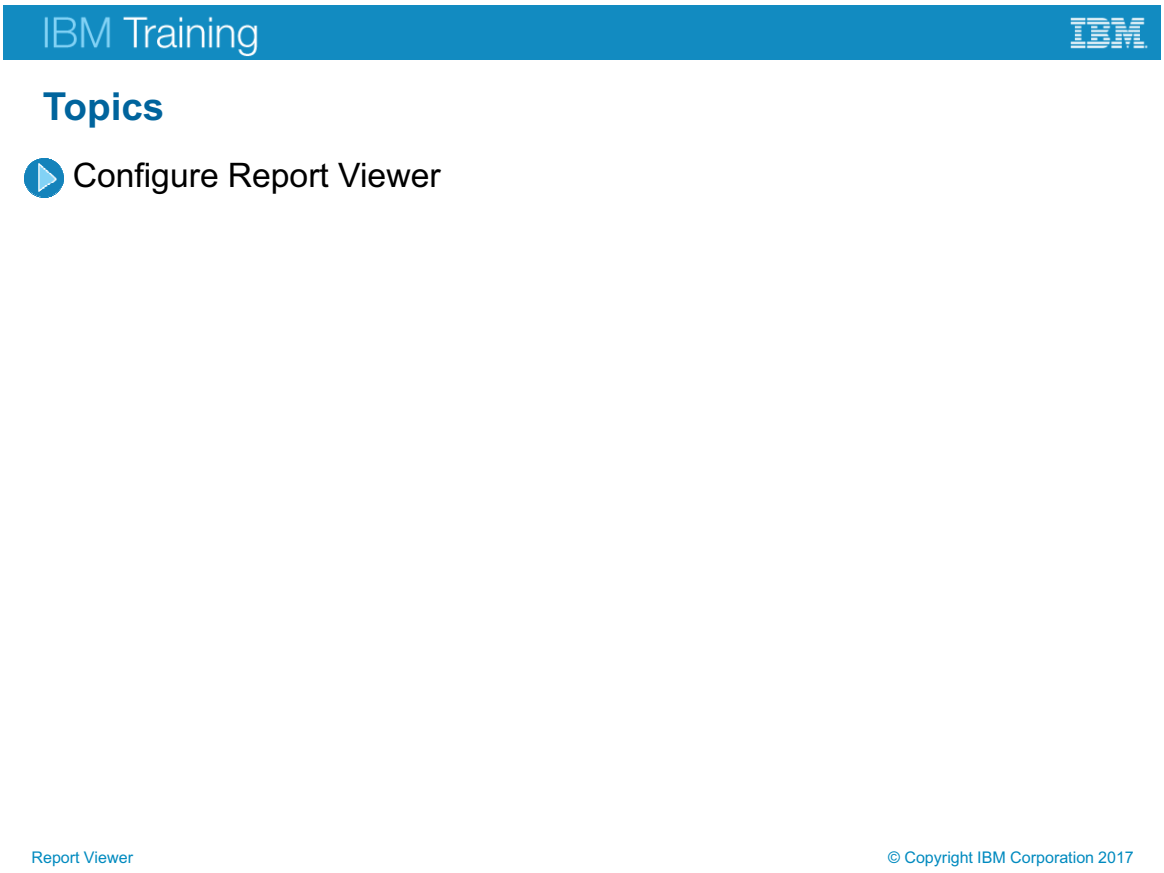

Figure A-3. Topics

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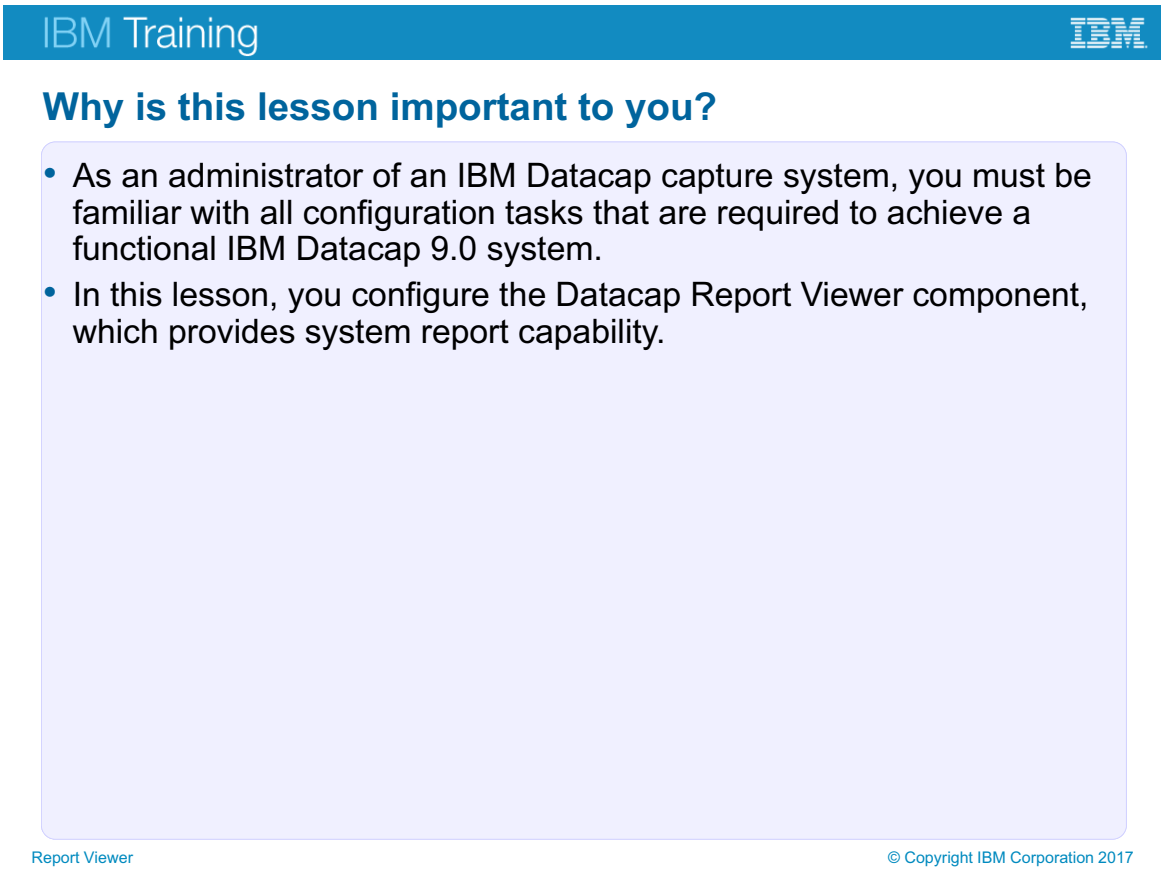

Figure A-4. Why is this lesson important to you?

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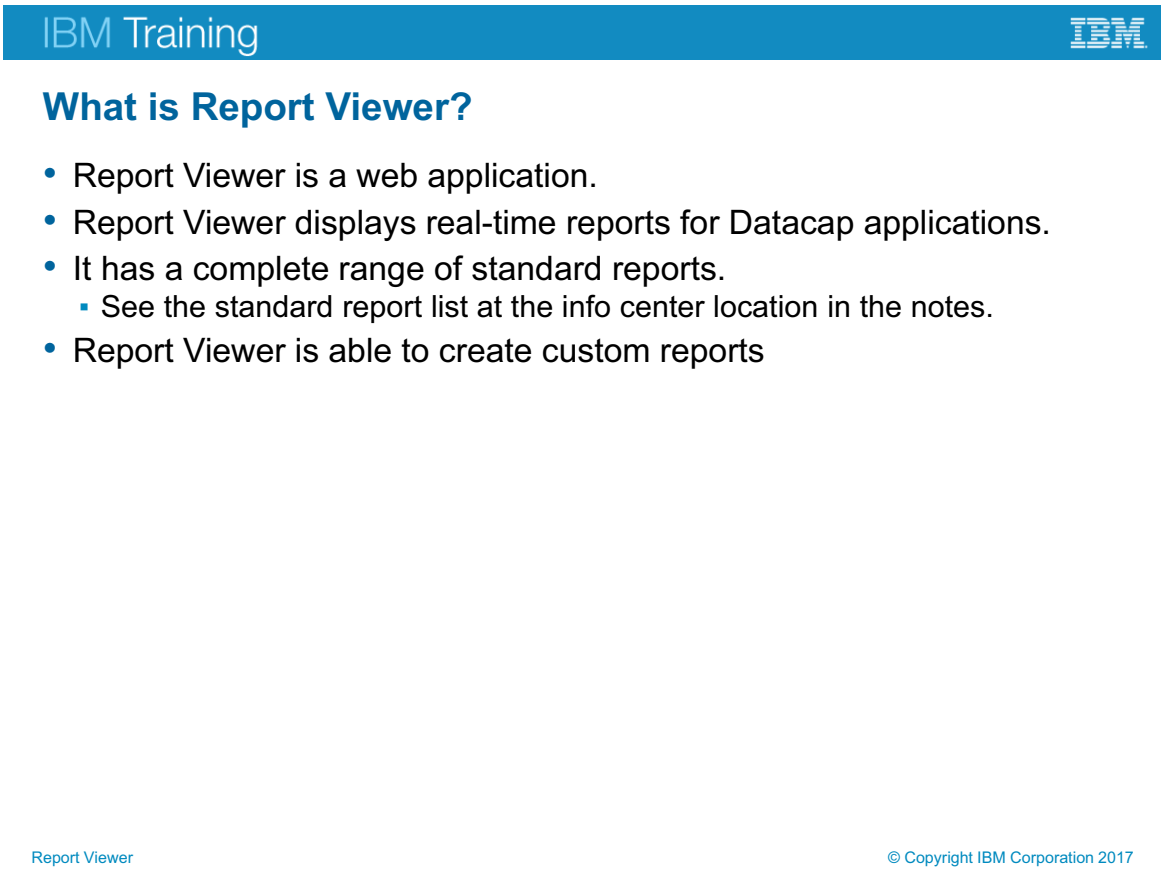

Figure A-5. What is Report Viewer?

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Datacap Report Viewer installation and configuration

IBM Datacap Report Viewer

Report Viewer is a web application that displays real-time reports of activity that is related to your Datacap applications. Datacap Report Viewer provides you with a set of standard reports and the ability to customize existing reports and create new reports.

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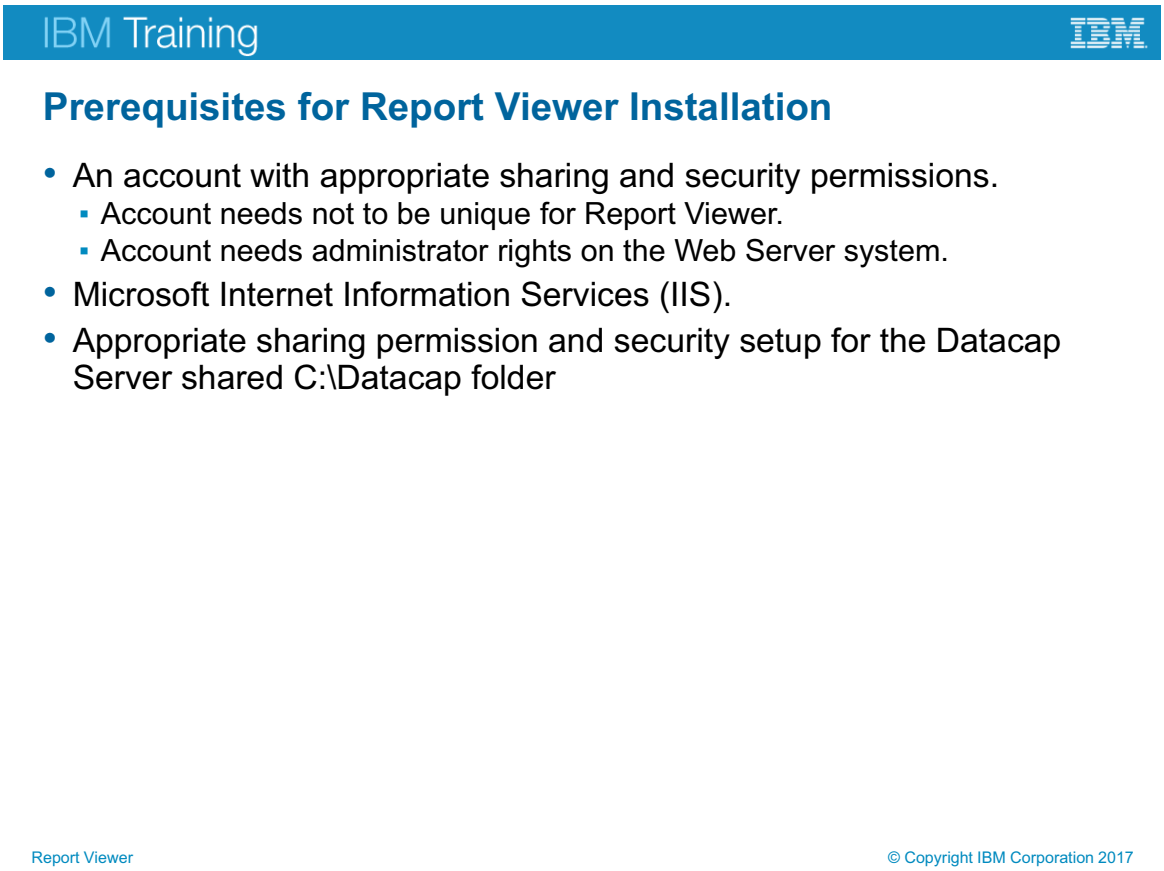

Figure A-6. Prerequisites for Report Viewer Installation

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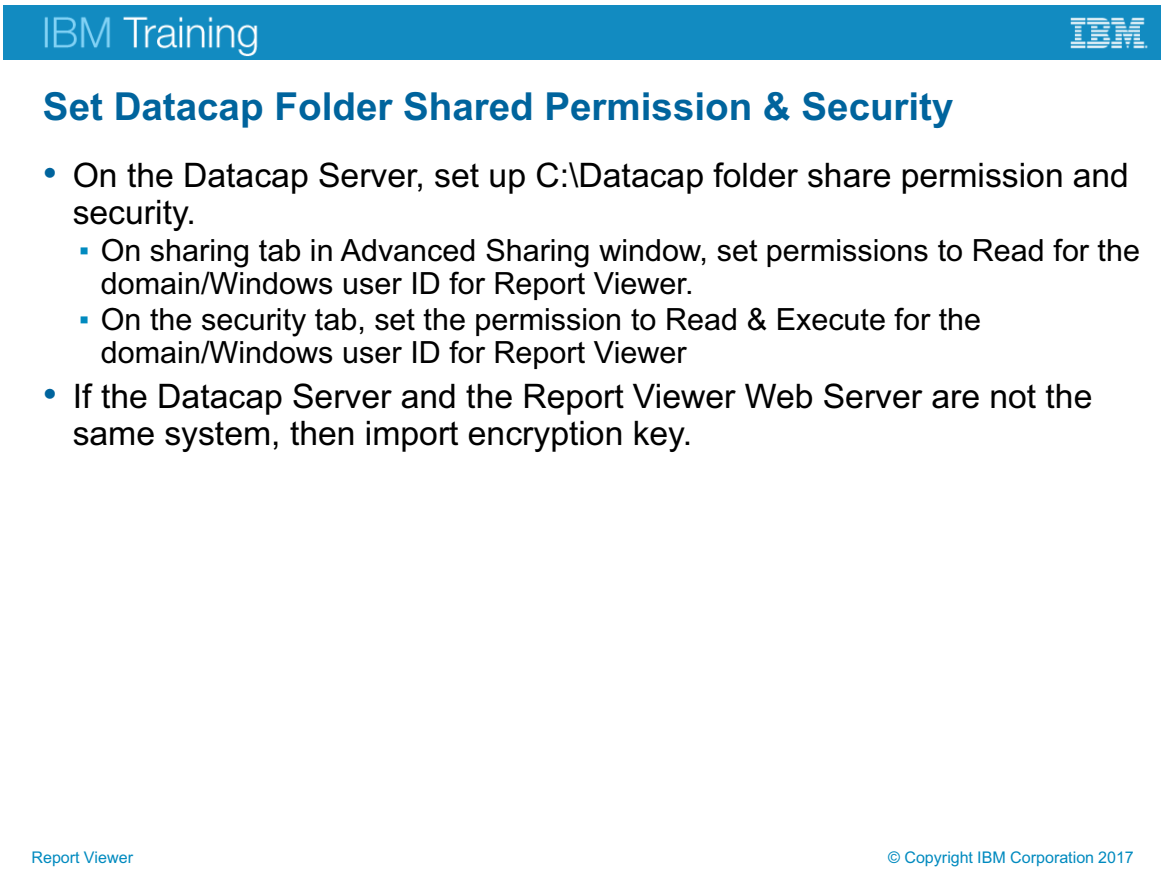

Figure A-7. Set Datacap Folder Shared Permission & Security

Import encryption keys if Report Viewer is on its own web server.

- Copy the C:\Datacap\Taskmaster\dc_KTF.xml key transport file from the Datacap Server to the same folder on the Datacap Web Server computer

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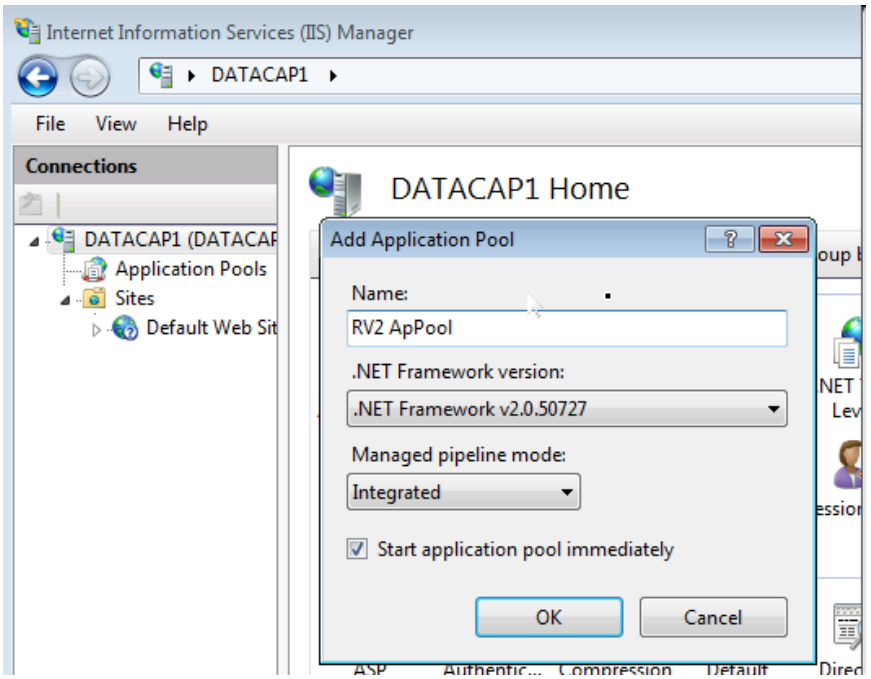
Add an Application Pool for Report Viewer



Report Viewer

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Figure A-8. Add an Application Pool for Report Viewer

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Datacap Report Viewer installation and configuration>Installing and configuring Datacap Report Viewer on a web server>Adding an application pool for Report Viewer

Add an Application Pool for Report Viewer.

- Start > Select Administrative Tools > Internet Information Services (IIS) Manager.
- In the Connections pane, expand the computer, right-click Application Pools, and select Add Application Pool.
- Set the Name to Report Viewer AppPool.
- Set the .NET Framework version to .NET Framework v4.0.30319.
- Set the Managed pipeline mode to Integrated.
- Select the Start application pool immediately option, then click OK.

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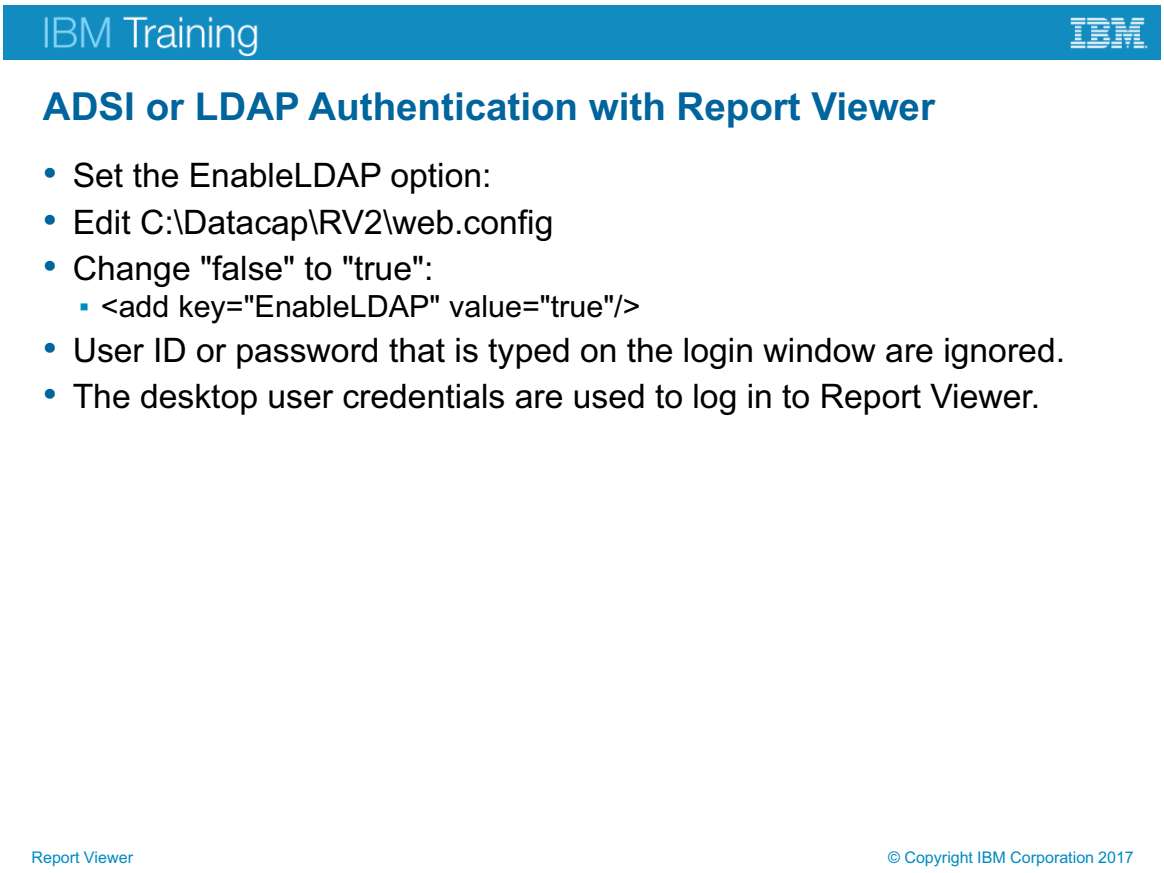

Figure A-9. ADSI or LDAP Authentication with Report Viewer

Help Path:

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Datacap Report Viewer installation and configuration>Installing and configuring Datacap Report Viewer on a web server>Installing Datacap Report Viewer on the web server>Enabling ADSI or LDAP authentication with Report Viewer

How to use ADSI or LDAP authentication with Report Viewer?

- Datacap Server Manager offers multiple authentication systems for login.
- When using ADSI or LDAP authentication, password authentication is not done.
- Login is based on membership within certain AD/LDAP groups and their inclusion within the Datacap Administrator's Groups tab.
- In addition to any configuration within Datacap Server Manager, Report Viewer has its own requirement when using ADSI or LDAP authentication.

Solution

Report Viewer has an EnableLDAP setting specific for ADSI and LDAP authentication.

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If left to the default of false, then login to Report Viewer requires that the operator enters a non-blank password even though password authentication is not done.

Any login attempt with a password fails and the user ID generally include the domain name for example, DOMAIN\username.

Set the EnableLDAP option:

- Stop the Report Viewer. This action can be enforced at server side by stopping IIS or the application pool for Report Viewer.
- Log in to the Report Viewer web server.
- Backup \Datacap\RV2\web.config. Use copy and paste.
- Edit web.config with Notepad.
- Locate the following line:
  - <add key="EnableLDAP" value="……."/>
- Change "false" to "true":
  - <add key="EnableLDAP" value="true"/>
- Save changes.

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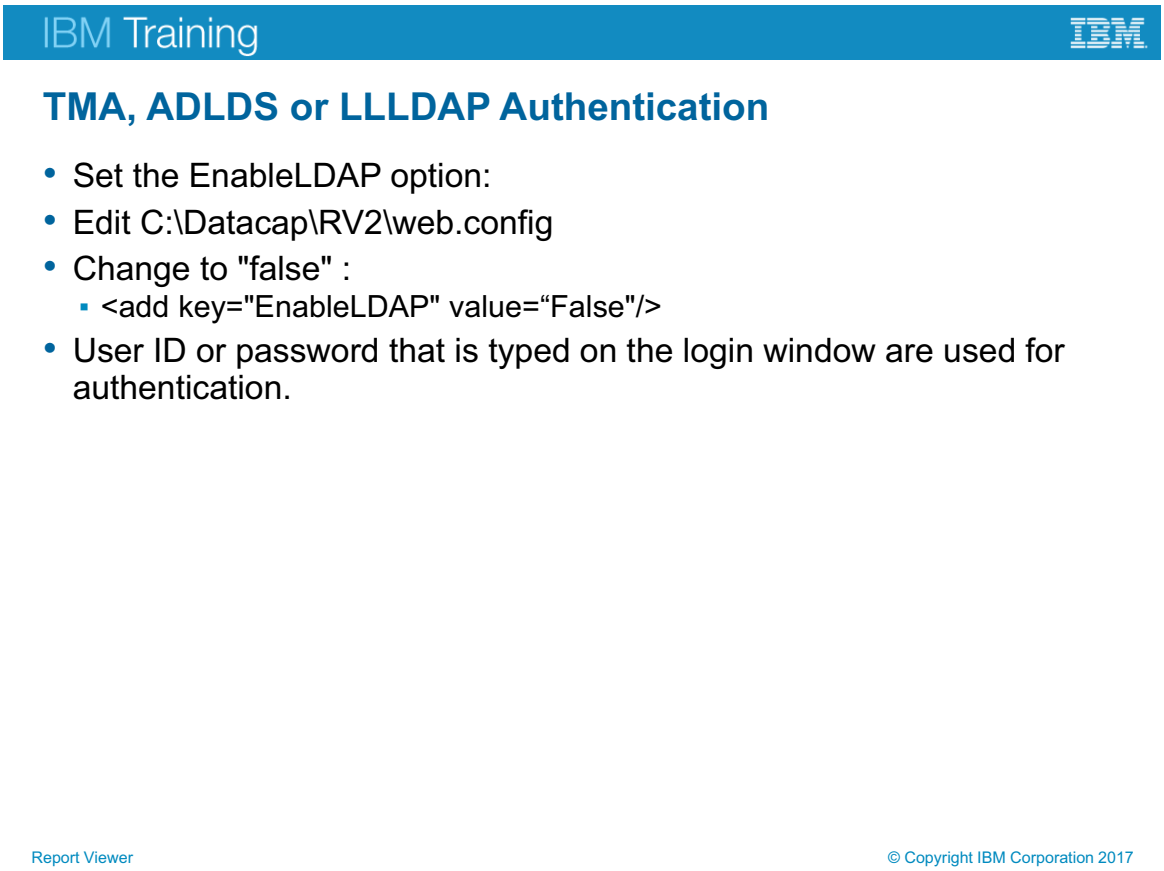

Figure A-10. TMA, ADLDS or LLLDAP Authentication

How to use TMA, ADLDS, or LLLDAP authentication with Report Viewer?

- Datacap Server Manager offers multiple authentication systems for login.
- When using **TMA, ADLDS, or LLLDAP** authentication, password authentication is done.
- Login is based on membership within certain AD/LDAP groups and their inclusion within the Datacap Administrator's Groups tab.

Solution

If the EnableLDAP left to the default of false, then login to Report Viewer requires that the operator enters a non-blank password even though password authentication is not done.

Any login attempt without a password that is specified fails and the user ID generally includes the domain name for example, DOMAIN\username.

Set the EnableLDAP option:

- Stop the Report Viewer. This action can be enforced at server side by stopping IIS or the application pool for Report Viewer.
- Log in to the Report Viewer web server.
- Backup \Datacap\RV2\web.config. Use copy and paste.

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- Edit web.config with Notepad.
- Locate the following line:
  - <add key="EnableLDAP“ value=“……..”/>
- Change the value to "false":
  - <add key="EnableLDAP" value=“false"/>
- Save changes.

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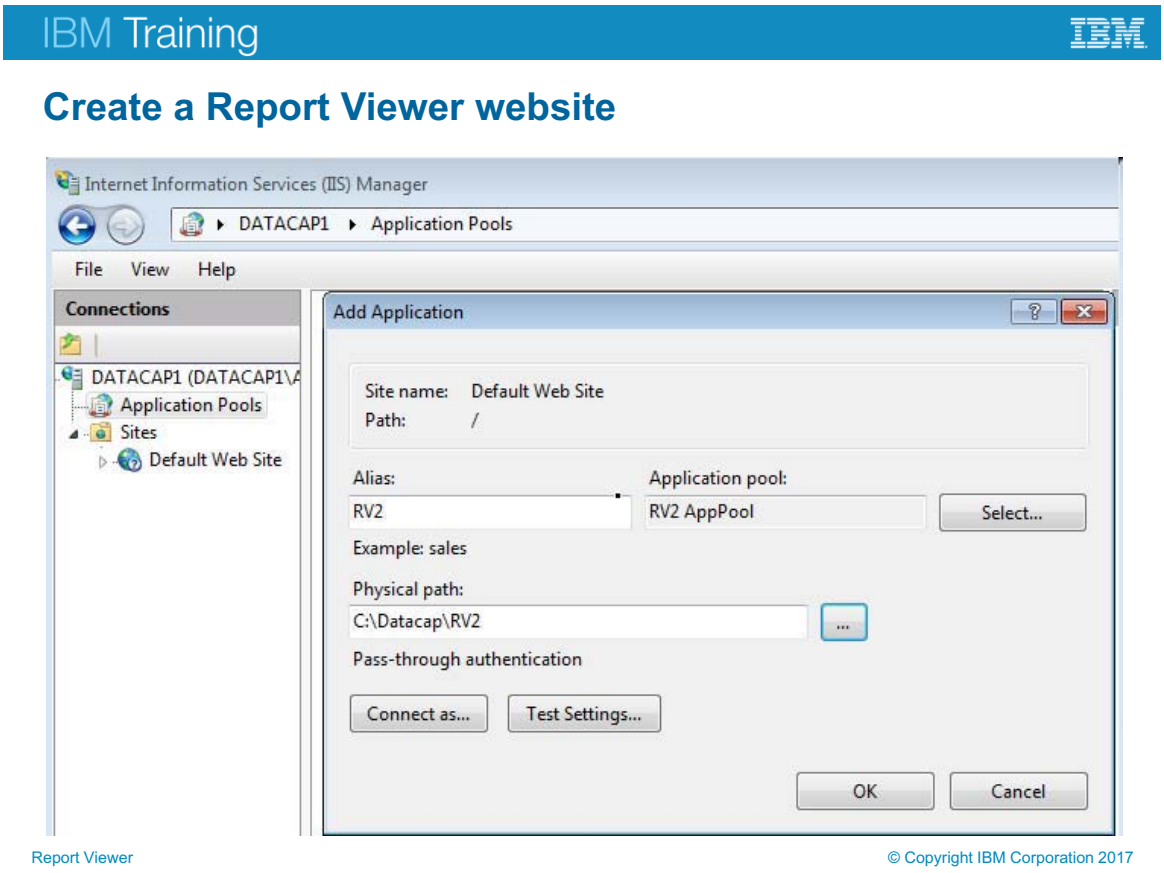

Figure A-11. Create a Report Viewer website

Help path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Datacap Report Viewer installation and configuration>Installing and configuring Datacap Report Viewer on a web server>Client/server environment: Setting up the Datacap Report Viewer website

Create a Report Viewer website.

- Click Start > Select Administrative Tools > Internet Information Services (IIS) Manager.
- In the Connections pane, expand the computer, and Sites nodes. Right-click the Default Web Site and select Add Application.
- Set the Alias to Report Viewer.
- Click Select and select the Report Viewer App Pool that you added, then click OK.
- Set the Physical path by entering or browsing to the installation folder for Report Viewer. The default location is C:\Datacap\RV2.
- Click OK to close the Add Application dialog.

Configure Actions Advanced settings

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- In the Connections pane, select Application Pools.
- In the Application Pools pane, select the Report Viewer App Pool then, in the Actions pane, in the Edit Application Pool section, click Advanced Settings.
- Ensure that the Microsoft .NET version is set to v4.0.
- Ensure that Enable 32-Bit Applications is set to True.
- In the Process Model section, click browse to the right of Identity.
- In the Application Pool Identity window, select Custom account and click Set.
- In the Set Credentials window, enter the Report Viewer domain/Windows account information (the same account that you added to the WebServer Administrators Group) in the format: accountname@domainname, enter the account password twice, then click OK
- In the Process Model section, set Load User Profile to True.
- Click OK.

Change the Cookie settings Name.

- In the Connections pane, expand the computer, Sites, and the Default Web Site nodes, select the Report Viewer site, and in the middle pane, double-click Session State.
- Under Cookie Settings, change the Name to Report Viewer or another unique name; then, in the Actions pane, click Apply.

Restart the Default Web Site.

- In the Connections pane, select the Default Web Site; then, in the Actions pane, under Manage Web Site, click Restart.
- Confirm all of the following are started: Web Server, Application Pool, and Default Web Site.

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Configure the Location of the Datacap.xml File

- Open Datacap Application Manager on the Report Viewer Web Server
  - Start > All Programs > IBM Datacap Services > Datacap Application Manager
  - On the services tab, set the location of the datacap.xml file
    - \\<ServerName>\Datacap\datacap.xml
- Start the Datacap Server Service
- Add the Report Viewer Server Web Server address to the trusted sites.
  - Internet Explorer > Internet Options > Security > Trusted sites > Sites
  - Type http:/WebServerName
- Access the Report Viewer web application
  - Use Internet Explorer to browse to http://WebServer/RV2/Login.aspx

Report Viewer

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Figure A-12. Configure the Location of the Datacap.xml File

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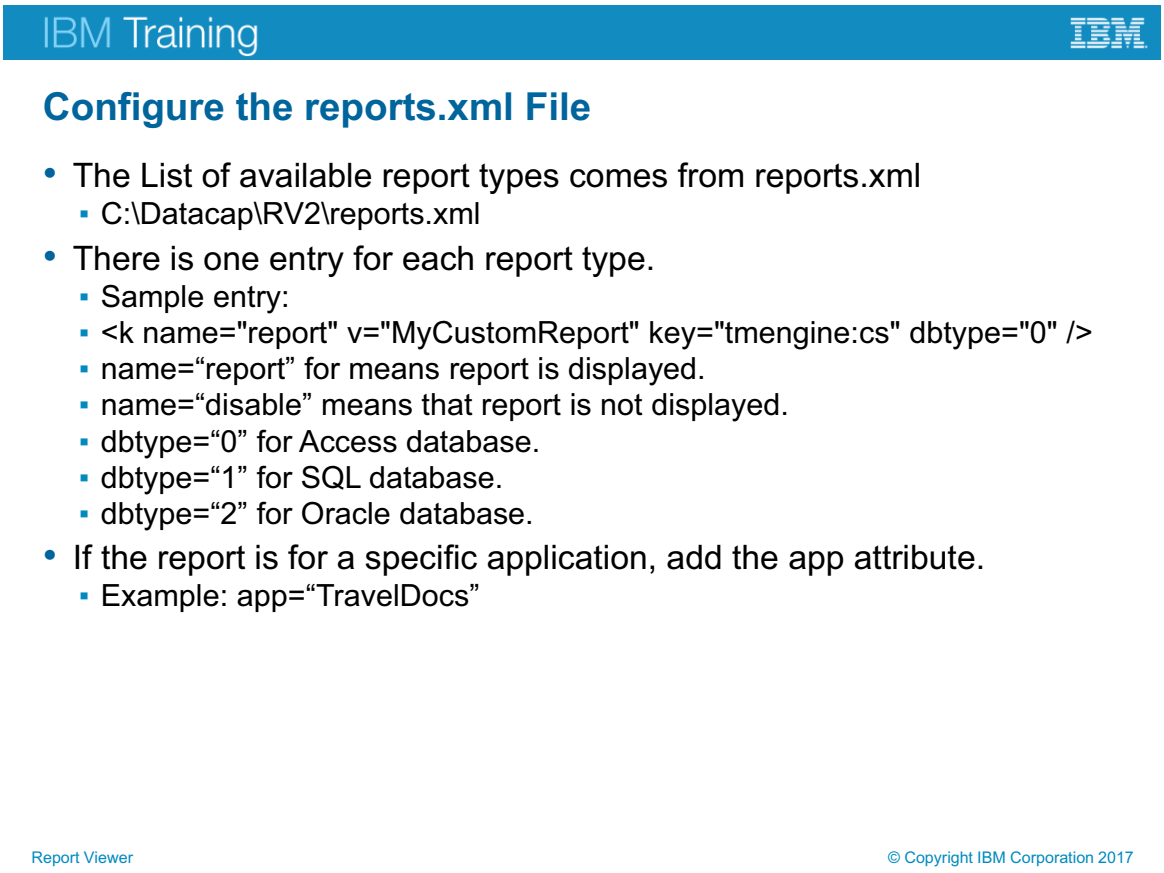

Figure A-13. Configure the reports.xml File

Help Path

- Datacap 9.0.1>Installing and configuring in a client/server environment>Datacap installation and configuration in a client/server environment>Datacap Report Viewer installation and configuration>Installing and configuring Datacap Report Viewer on a web server>Setting the location of the datacap.xml file

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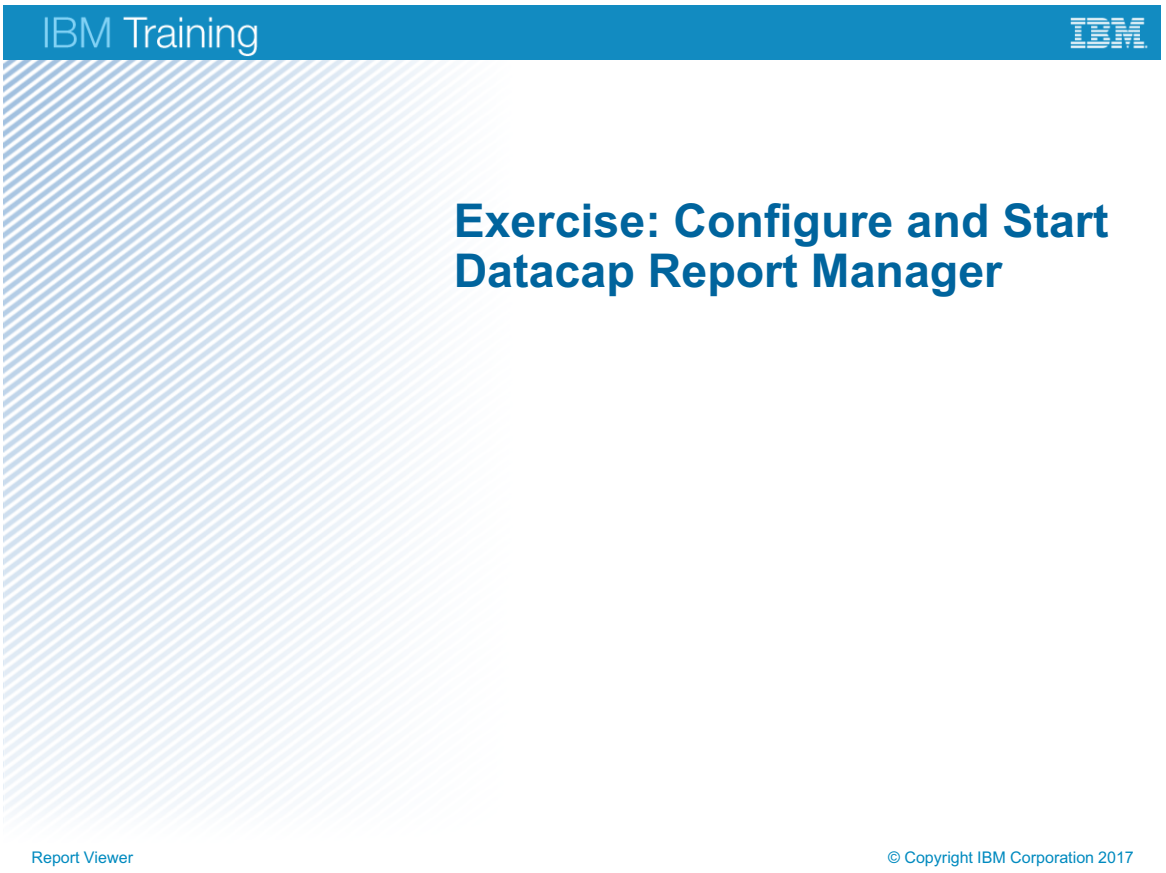

Figure A-14. Exercise: Configure and Start Datacap Report Manager

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Exercise objectives

- Configure and Start Datacap Report Manager

Report Viewer

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Figure A-15. Exercise objectives

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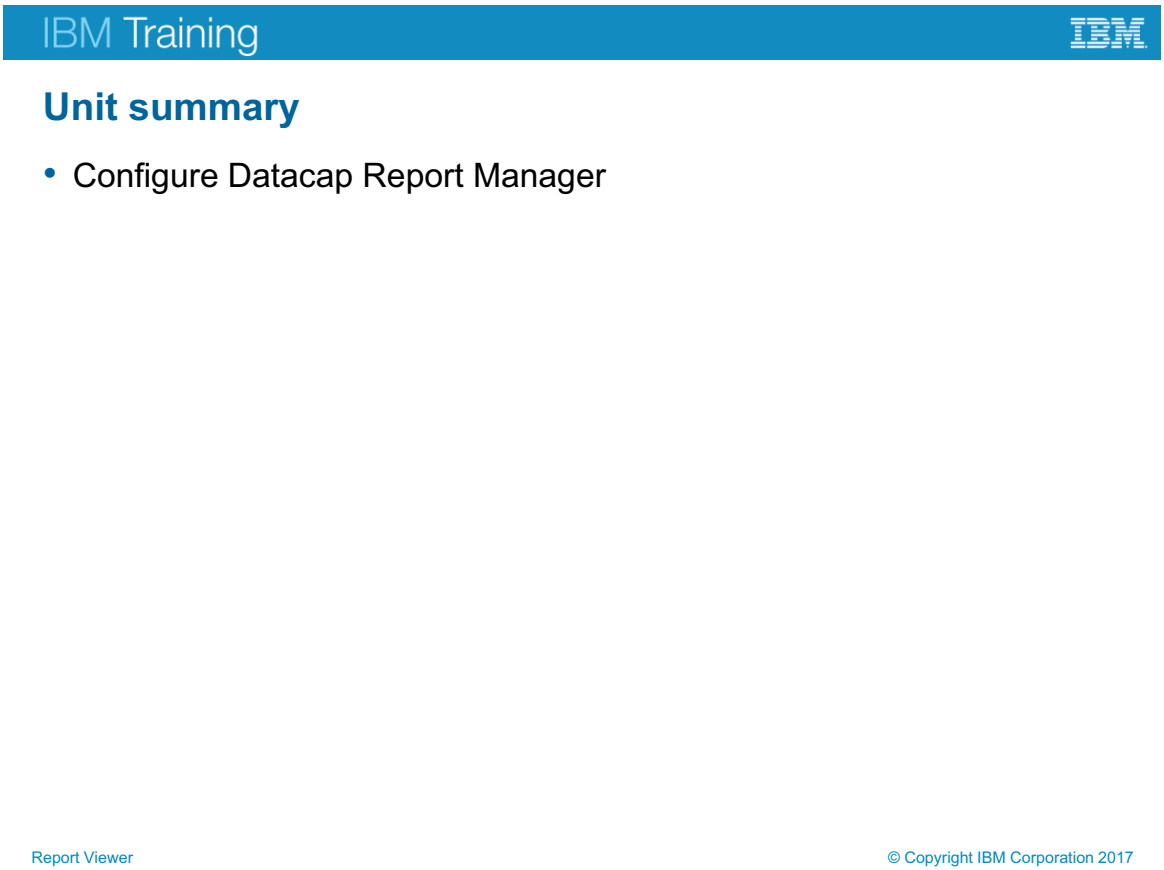

Figure A-16. Unit summary

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