

OFFICIAL MICROSOFT LEARNING PRODUCT

10747C

**Administering System Center 2012 R2  
Configuration Manager**

*Companion Content*

Information in this document, including URL and other Internet Web site references, is subject to change without notice. Unless otherwise noted, the example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted herein are fictitious, and no association with any real company, organization, product, domain name, e-mail address, logo, person, place or event is intended or should be inferred. Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Microsoft Corporation.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property.

The names of manufacturers, products, or URLs are provided for informational purposes only and Microsoft makes no representations and warranties, either expressed, implied, or statutory, regarding these manufacturers or the use of the products with any Microsoft technologies. The inclusion of a manufacturer or product does not imply endorsement of Microsoft of the manufacturer or product. Links may be provided to third party sites. Such sites are not under the control of Microsoft and Microsoft is not responsible for the contents of any linked site or any link contained in a linked site, or any changes or updates to such sites. Microsoft is not responsible for webcasting or any other form of transmission received from any linked site. Microsoft is providing these links to you only as a convenience, and the inclusion of any link does not imply endorsement of Microsoft of the site or the products contained therein.

© 2013 Microsoft Corporation. All rights reserved.

Microsoft and the trademarks listed at <http://www.microsoft.com/about/legal/en/us/IntellectualProperty/Trademarks/EN-US.aspx> are trademarks of the Microsoft group of companies. All other trademarks are property of their respective owners.

Product Number: 10747C

Released: 11/2013

## **MICROSOFT LICENSE TERMS MICROSOFT INSTRUCTOR-LED COURSEWARE**

---

These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to your use of the content accompanying this agreement which includes the media on which you received it, if any. These license terms also apply to Trainer Content and any updates and supplements for the Licensed Content unless other terms accompany those items. If so, those terms apply.

**BY ACCESSING, DOWNLOADING OR USING THE LICENSED CONTENT, YOU ACCEPT THESE TERMS.  
IF YOU DO NOT ACCEPT THEM, DO NOT ACCESS, DOWNLOAD OR USE THE LICENSED CONTENT.**

---

**If you comply with these license terms, you have the rights below for each license you acquire.**

### **1. DEFINITIONS.**

- a. "Authorized Learning Center" means a Microsoft IT Academy Program Member, Microsoft Learning Competency Member, or such other entity as Microsoft may designate from time to time.
- b. "Authorized Training Session" means the instructor-led training class using Microsoft Instructor-Led Courseware conducted by a Trainer at or through an Authorized Learning Center.
- c. "Classroom Device" means one (1) dedicated, secure computer that an Authorized Learning Center owns or controls that is located at an Authorized Learning Center's training facilities that meets or exceeds the hardware level specified for the particular Microsoft Instructor-Led Courseware.
- d. "End User" means an individual who is (i) duly enrolled in and attending an Authorized Training Session or Private Training Session, (ii) an employee of a MPN Member, or (iii) a Microsoft full-time employee.
- e. "Licensed Content" means the content accompanying this agreement which may include the Microsoft Instructor-Led Courseware or Trainer Content.
- f. "Microsoft Certified Trainer" or "MCT" means an individual who is (i) engaged to teach a training session to End Users on behalf of an Authorized Learning Center or MPN Member, and (ii) currently certified as a Microsoft Certified Trainer under the Microsoft Certification Program.
- g. "Microsoft Instructor-Led Courseware" means the Microsoft-branded instructor-led training course that educates IT professionals and developers on Microsoft technologies. A Microsoft Instructor-Led Courseware title may be branded as MOC, Microsoft Dynamics or Microsoft Business Group courseware.
- h. "Microsoft IT Academy Program Member" means an active member of the Microsoft IT Academy Program.
- i. "Microsoft Learning Competency Member" means an active member of the Microsoft Partner Network program in good standing that currently holds the Learning Competency status.
- j. "MOC" means the "Official Microsoft Learning Product" instructor-led courseware known as Microsoft Official Course that educates IT professionals and developers on Microsoft technologies.
- k. "MPN Member" means an active Microsoft Partner Network program member in good standing.

- l. "Personal Device" means one (1) personal computer, device, workstation or other digital electronic device that you personally own or control that meets or exceeds the hardware level specified for the particular Microsoft Instructor-Led Courseware.
- m. "Private Training Session" means the instructor-led training classes provided by MPN Members for corporate customers to teach a predefined learning objective using Microsoft Instructor-Led Courseware. These classes are not advertised or promoted to the general public and class attendance is restricted to individuals employed by or contracted by the corporate customer.
- n. "Trainer" means (i) an academically accredited educator engaged by a Microsoft IT Academy Program Member to teach an Authorized Training Session, and/or (ii) a MCT.
- o. "Trainer Content" means the trainer version of the Microsoft Instructor-Led Courseware and additional supplemental content designated solely for Trainers' use to teach a training session using the Microsoft Instructor-Led Courseware. Trainer Content may include Microsoft PowerPoint presentations, trainer preparation guide, train the trainer materials, Microsoft One Note packs, classroom setup guide and Pre-release course feedback form. To clarify, Trainer Content does not include any software, virtual hard disks or virtual machines.

**2. USE RIGHTS.** The Licensed Content is licensed not sold. The Licensed Content is licensed on a **one copy per user basis**, such that you must acquire a license for each individual that accesses or uses the Licensed Content.

2.1 Below are five separate sets of use rights. Only one set of rights apply to you.

**a. If you are a Microsoft IT Academy Program Member:**

- i. Each license acquired on behalf of yourself may only be used to review one (1) copy of the Microsoft Instructor-Led Courseware in the form provided to you. If the Microsoft Instructor-Led Courseware is in digital format, you may install one (1) copy on up to three (3) Personal Devices. You may not install the Microsoft Instructor-Led Courseware on a device you do not own or control.
- ii. For each license you acquire on behalf of an End User or Trainer, you may either:
  - 1. distribute one (1) hard copy version of the Microsoft Instructor-Led Courseware to one (1) End User who is enrolled in the Authorized Training Session, and only immediately prior to the commencement of the Authorized Training Session that is the subject matter of the Microsoft Instructor-Led Courseware being provided, **or**
  - 2. provide one (1) End User with the unique redemption code and instructions on how they can access one (1) digital version of the Microsoft Instructor-Led Courseware, **or**
  - 3. provide one (1) Trainer with the unique redemption code and instructions on how they can access one (1) Trainer Content,

**provided you comply with the following:**
- iii. you will only provide access to the Licensed Content to those individuals who have acquired a valid license to the Licensed Content,
- iv. you will ensure each End User attending an Authorized Training Session has their own valid licensed copy of the Microsoft Instructor-Led Courseware that is the subject of the Authorized Training Session,
- v. you will ensure that each End User provided with the hard-copy version of the Microsoft Instructor-Led Courseware will be presented with a copy of this agreement and each End User will agree that their use of the Microsoft Instructor-Led Courseware will be subject to the terms in this agreement prior to providing them with the Microsoft Instructor-Led Courseware. Each individual will be required to denote their acceptance of this agreement in a manner that is enforceable under local law prior to their accessing the Microsoft Instructor-Led Courseware,
- vi. you will ensure that each Trainer teaching an Authorized Training Session has their own valid licensed copy of the Trainer Content that is the subject of the Authorized Training Session,

- vii. you will only use qualified Trainers who have in-depth knowledge of and experience with the Microsoft technology that is the subject of the Microsoft Instructor-Led Courseware being taught for all your Authorized Training Sessions,
- viii. you will only deliver a maximum of 15 hours of training per week for each Authorized Training Session that uses a MOC title, and
- ix. you acknowledge that Trainers that are not MCTs will not have access to all of the trainer resources for the Microsoft Instructor-Led Courseware.

**b. If you are a Microsoft Learning Competency Member:**

- i. Each license acquired on behalf of yourself may only be used to review one (1) copy of the Microsoft Instructor-Led Courseware in the form provided to you. If the Microsoft Instructor-Led Courseware is in digital format, you may install one (1) copy on up to three (3) Personal Devices. You may not install the Microsoft Instructor-Led Courseware on a device you do not own or control.
- ii. For each license you acquire on behalf of an End User or Trainer, you may either:
  - 1. distribute one (1) hard copy version of the Microsoft Instructor-Led Courseware to one (1) End User attending the Authorized Training Session and only immediately prior to the commencement of the Authorized Training Session that is the subject matter of the Microsoft Instructor-Led Courseware provided, **or**
  - 2. provide one (1) End User attending the Authorized Training Session with the unique redemption code and instructions on how they can access one (1) digital version of the Microsoft Instructor-Led Courseware, **or**
  - 3. you will provide one (1) Trainer with the unique redemption code and instructions on how they can access one (1) Trainer Content,  
**provided you comply with the following:**
- iii. you will only provide access to the Licensed Content to those individuals who have acquired a valid license to the Licensed Content,
- iv. you will ensure that each End User attending an Authorized Training Session has their own valid licensed copy of the Microsoft Instructor-Led Courseware that is the subject of the Authorized Training Session,
- v. you will ensure that each End User provided with a hard-copy version of the Microsoft Instructor-Led Courseware will be presented with a copy of this agreement and each End User will agree that their use of the Microsoft Instructor-Led Courseware will be subject to the terms in this agreement prior to providing them with the Microsoft Instructor-Led Courseware. Each individual will be required to denote their acceptance of this agreement in a manner that is enforceable under local law prior to their accessing the Microsoft Instructor-Led Courseware,
- vi. you will ensure that each Trainer teaching an Authorized Training Session has their own valid licensed copy of the Trainer Content that is the subject of the Authorized Training Session,
- vii. you will only use qualified Trainers who hold the applicable Microsoft Certification credential that is the subject of the Microsoft Instructor-Led Courseware being taught for your Authorized Training Sessions,
- viii. you will only use qualified MCTs who also hold the applicable Microsoft Certification credential that is the subject of the MOC title being taught for all your Authorized Training Sessions using MOC,
- ix. you will only provide access to the Microsoft Instructor-Led Courseware to End Users, and
- x. you will only provide access to the Trainer Content to Trainers.

**c. If you are a MPN Member:**

- i. Each license acquired on behalf of yourself may only be used to review one (1) copy of the Microsoft Instructor-Led Courseware in the form provided to you. If the Microsoft Instructor-Led Courseware is in digital format, you may install one (1) copy on up to three (3) Personal Devices. You may not install the Microsoft Instructor-Led Courseware on a device you do not own or control.
- ii. For each license you acquire on behalf of an End User or Trainer, you may either:
  1. distribute one (1) hard copy version of the Microsoft Instructor-Led Courseware to one (1) End User attending the Private Training Session, and only immediately prior to the commencement of the Private Training Session that is the subject matter of the Microsoft Instructor-Led Courseware being provided, **or**
  2. provide one (1) End User who is attending the Private Training Session with the unique redemption code and instructions on how they can access one (1) digital version of the Microsoft Instructor-Led Courseware, **or**
  3. you will provide one (1) Trainer who is teaching the Private Training Session with the unique redemption code and instructions on how they can access one (1) Trainer Content,  
**provided you comply with the following:**
- iii. you will only provide access to the Licensed Content to those individuals who have acquired a valid license to the Licensed Content,
- iv. you will ensure that each End User attending an Private Training Session has their own valid licensed copy of the Microsoft Instructor-Led Courseware that is the subject of the Private Training Session,
- v. you will ensure that each End User provided with a hard copy version of the Microsoft Instructor-Led Courseware will be presented with a copy of this agreement and each End User will agree that their use of the Microsoft Instructor-Led Courseware will be subject to the terms in this agreement prior to providing them with the Microsoft Instructor-Led Courseware. Each individual will be required to denote their acceptance of this agreement in a manner that is enforceable under local law prior to their accessing the Microsoft Instructor-Led Courseware,
- vi. you will ensure that each Trainer teaching an Private Training Session has their own valid licensed copy of the Trainer Content that is the subject of the Private Training Session,
- vii. you will only use qualified Trainers who hold the applicable Microsoft Certification credential that is the subject of the Microsoft Instructor-Led Courseware being taught for all your Private Training Sessions,
- viii. you will only use qualified MCTs who hold the applicable Microsoft Certification credential that is the subject of the MOC title being taught for all your Private Training Sessions using MOC,
- ix. you will only provide access to the Microsoft Instructor-Led Courseware to End Users, and
- x. you will only provide access to the Trainer Content to Trainers.

**d. If you are an End User:**

For each license you acquire, you may use the Microsoft Instructor-Led Courseware solely for your personal training use. If the Microsoft Instructor-Led Courseware is in digital format, you may access the Microsoft Instructor-Led Courseware online using the unique redemption code provided to you by the training provider and install and use one (1) copy of the Microsoft Instructor-Led Courseware on up to three (3) Personal Devices. You may also print one (1) copy of the Microsoft Instructor-Led Courseware. You may not install the Microsoft Instructor-Led Courseware on a device you do not own or control.

**e. If you are a Trainer.**

- i. For each license you acquire, you may install and use one (1) copy of the Trainer Content in the form provided to you on one (1) Personal Device solely to prepare and deliver an Authorized Training Session or Private Training Session, and install one (1) additional copy on another Personal Device as a backup copy, which may be used only to reinstall the Trainer Content. You may not install or use a copy of the Trainer Content on a device you do not own or control. You may also print one (1) copy of the Trainer Content solely to prepare for and deliver an Authorized Training Session or Private Training Session.

- ii. You may customize the written portions of the Trainer Content that are logically associated with instruction of a training session in accordance with the most recent version of the MCT agreement. If you elect to exercise the foregoing rights, you agree to comply with the following: (i) customizations may only be used for teaching Authorized Training Sessions and Private Training Sessions, and (ii) all customizations will comply with this agreement. For clarity, any use of “*customize*” refers only to changing the order of slides and content, and/or not using all the slides or content, it does not mean changing or modifying any slide or content.

2.2 **Separation of Components.** The Licensed Content is licensed as a single unit and you may not separate their components and install them on different devices.

2.3 **Redistribution of Licensed Content.** Except as expressly provided in the use rights above, you may not distribute any Licensed Content or any portion thereof (including any permitted modifications) to any third parties without the express written permission of Microsoft.

2.4 **Third Party Notices.** The Licensed Content may include third party code that Microsoft, not the third party, licenses to you under this agreement. Notices, if any, for the third party code are included for your information only.

2.5 **Additional Terms.** Some Licensed Content may contain components with additional terms, conditions, and licenses regarding its use. Any non-conflicting terms in those conditions and licenses also apply to your use of that respective component and supplements the terms described in this agreement.

3. **LICENSED CONTENT BASED ON PRE-RELEASE TECHNOLOGY.** If the Licensed Content’s subject matter is based on a pre-release version of Microsoft technology (“**Pre-release**”), then in addition to the other provisions in this agreement, these terms also apply:

- a. **Pre-Release Licensed Content.** This Licensed Content subject matter is on the Pre-release version of the Microsoft technology. The technology may not work the way a final version of the technology will and we may change the technology for the final version. We also may not release a final version. Licensed Content based on the final version of the technology may not contain the same information as the Licensed Content based on the Pre-release version. Microsoft is under no obligation to provide you with any further content, including any Licensed Content based on the final version of the technology.
- b. **Feedback.** If you agree to give feedback about the Licensed Content to Microsoft, either directly or through its third party designee, you give to Microsoft without charge, the right to use, share and commercialize your feedback in any way and for any purpose. You also give to third parties, without charge, any patent rights needed for their products, technologies and services to use or interface with any specific parts of a Microsoft technology, Microsoft product, or service that includes the feedback. You will not give feedback that is subject to a license that requires Microsoft to license its technology, technologies, or products to third parties because we include your feedback in them. These rights survive this agreement.
- c. **Pre-release Term.** If you are an Microsoft IT Academy Program Member, Microsoft Learning Competency Member, MPN Member or Trainer, you will cease using all copies of the Licensed Content on the Pre-release technology upon (i) the date which Microsoft informs you is the end date for using the Licensed Content on the Pre-release technology, or (ii) sixty (60) days after the commercial release of the technology that is the subject of the Licensed Content, whichever is earliest (“**Pre-release term**”). Upon expiration or termination of the Pre-release term, you will irretrievably delete and destroy all copies of the Licensed Content in your possession or under your control.

- 4. SCOPE OF LICENSE.** The Licensed Content is licensed, not sold. This agreement only gives you some rights to use the Licensed Content. Microsoft reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the Licensed Content only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the Licensed Content that only allows you to use it in certain ways. Except as expressly permitted in this agreement, you may not:
- access or allow any individual to access the Licensed Content if they have not acquired a valid license for the Licensed Content,
  - alter, remove or obscure any copyright or other protective notices (including watermarks), branding or identifications contained in the Licensed Content,
  - modify or create a derivative work of any Licensed Content,
  - publicly display, or make the Licensed Content available for others to access or use,
  - copy, print, install, sell, publish, transmit, lend, adapt, reuse, link to or post, make available or distribute the Licensed Content to any third party,
  - work around any technical limitations in the Licensed Content, or
  - reverse engineer, decompile, remove or otherwise thwart any protections or disassemble the Licensed Content except and only to the extent that applicable law expressly permits, despite this limitation.
- 5. RESERVATION OF RIGHTS AND OWNERSHIP.** Microsoft reserves all rights not expressly granted to you in this agreement. The Licensed Content is protected by copyright and other intellectual property laws and treaties. Microsoft or its suppliers own the title, copyright, and other intellectual property rights in the Licensed Content.
- 6. EXPORT RESTRICTIONS.** The Licensed Content is subject to United States export laws and regulations. You must comply with all domestic and international export laws and regulations that apply to the Licensed Content. These laws include restrictions on destinations, end users and end use. For additional information, see [www.microsoft.com/exporting](http://www.microsoft.com/exporting).
- 7. SUPPORT SERVICES.** Because the Licensed Content is “as is”, we may not provide support services for it.
- 8. TERMINATION.** Without prejudice to any other rights, Microsoft may terminate this agreement if you fail to comply with the terms and conditions of this agreement. Upon termination of this agreement for any reason, you will immediately stop all use of and delete and destroy all copies of the Licensed Content in your possession or under your control.
- 9. LINKS TO THIRD PARTY SITES.** You may link to third party sites through the use of the Licensed Content. The third party sites are not under the control of Microsoft, and Microsoft is not responsible for the contents of any third party sites, any links contained in third party sites, or any changes or updates to third party sites. Microsoft is not responsible for webcasting or any other form of transmission received from any third party sites. Microsoft is providing these links to third party sites to you only as a convenience, and the inclusion of any link does not imply an endorsement by Microsoft of the third party site.
- 10. ENTIRE AGREEMENT.** This agreement, and any additional terms for the Trainer Content, updates and supplements are the entire agreement for the Licensed Content, updates and supplements.
- 11. APPLICABLE LAW.**
- a. United States. If you acquired the Licensed Content in the United States, Washington state law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.

b. Outside the United States. If you acquired the Licensed Content in any other country, the laws of that country apply.

- 12. LEGAL EFFECT.** This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the Licensed Content. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.
- 13. DISCLAIMER OF WARRANTY. THE LICENSED CONTENT IS LICENSED "AS-IS" AND "AS AVAILABLE." YOU BEAR THE RISK OF USING IT. MICROSOFT AND ITS RESPECTIVE AFFILIATES GIVES NO EXPRESS WARRANTIES, GUARANTEES, OR CONDITIONS. YOU MAY HAVE ADDITIONAL CONSUMER RIGHTS UNDER YOUR LOCAL LAWS WHICH THIS AGREEMENT CANNOT CHANGE. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, MICROSOFT AND ITS RESPECTIVE AFFILIATES EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.**
- 14. LIMITATION ON AND EXCLUSION OF REMEDIES AND DAMAGES. YOU CAN RECOVER FROM MICROSOFT, ITS RESPECTIVE AFFILIATES AND ITS SUPPLIERS ONLY DIRECT DAMAGES UP TO US\$5.00. YOU CANNOT RECOVER ANY OTHER DAMAGES, INCLUDING CONSEQUENTIAL, LOST PROFITS, SPECIAL, INDIRECT OR INCIDENTAL DAMAGES.**

This limitation applies to

- anything related to the Licensed Content, services, content (including code) on third party Internet sites or third-party programs; and
- claims for breach of contract, breach of warranty, guarantee or condition, strict liability, negligence, or other tort to the extent permitted by applicable law.

It also applies even if Microsoft knew or should have known about the possibility of the damages. The above limitation or exclusion may not apply to you because your country may not allow the exclusion or limitation of incidental, consequential or other damages.

**Please note: As this Licensed Content is distributed in Quebec, Canada, some of the clauses in this agreement are provided below in French.**

**Remarque : Ce le contenu sous licence étant distribué au Québec, Canada, certaines des clauses dans ce contrat sont fournies ci-dessous en français.**

**EXONÉRATION DE GARANTIE.** Le contenu sous licence visé par une licence est offert « tel quel ». Toute utilisation de ce contenu sous licence est à votre seule risque et péril. Microsoft n'accorde aucune autre garantie expresse. Vous pouvez bénéficier de droits additionnels en vertu du droit local sur la protection des consommateurs, que ce contrat ne peut modifier. La ou elles sont permises par le droit local, les garanties implicites de qualité marchande, d'adéquation à un usage particulier et d'absence de contrefaçon sont exclues.

**LIMITATION DES DOMMAGES-INTÉRÊTS ET EXCLUSION DE RESPONSABILITÉ POUR LES DOMMAGES.** Vous pouvez obtenir de Microsoft et de ses fournisseurs une indemnisation en cas de dommages directs uniquement à hauteur de 5,00 \$ US. Vous ne pouvez prétendre à aucune indemnisation pour les autres dommages, y compris les dommages spéciaux, indirects ou accessoires et pertes de bénéfices.

Cette limitation concerne:

- tout ce qui est relié au le contenu sous licence, aux services ou au contenu (y compris le code) figurant sur des sites Internet tiers ou dans des programmes tiers; et.
- les réclamations au titre de violation de contrat ou de garantie, ou au titre de responsabilité stricte, de négligence ou d'une autre faute dans la limite autorisée par la loi en vigueur.

Elle s'applique également, même si Microsoft connaissait ou devrait connaître l'éventualité d'un tel dommage. Si votre pays n'autorise pas l'exclusion ou la limitation de responsabilité pour les dommages indirects, accessoires ou de quelque nature que ce soit, il se peut que la limitation ou l'exclusion ci-dessus ne s'appliquera pas à votre égard.

**EFFET JURIDIQUE.** Le présent contrat décrit certains droits juridiques. Vous pourriez avoir d'autres droits prévus par les lois de votre pays. Le présent contrat ne modifie pas les droits que vous confèrent les lois de votre pays si celles-ci ne le permettent pas.

Revised July 2013

# Module 1

## Overview of System Center 2012 Configuration

### Contents:

Lesson 4: Using Tools for Monitoring and Troubleshooting a Configuration Manager Site	2
Module Review and Takeaways	5
Lab Review Questions and Answers	6

## Lesson 4

# Using Tools for Monitoring and Troubleshooting a Configuration Manager Site

### Contents:

Demonstration: Viewing Site and Component Status	3
Demonstration: Using Reports to View Site Information	3

## Demonstration: Viewing Site and Component Status

### Demonstration Steps

1. Log on to **LON-CFG** as **Adatum\Administrator** with a password **Pa\$\$w0rd**.
2. Click **Configuration Manager Console** on the taskbar.
3. Click the **Administration** workspace, and then expand the **Site Configuration** folder.
4. Click the **Sites** node.
5. In the **Results** pane, right-click **S01 – Adatum Site**, and then click **Status Summarizers** to display the **Status Summarizers** dialog box.
6. Click **Component Status Summarizer**, and then click **Edit**.
7. Review the **General** tab, and then click the **Thresholds** tab.
8. Click the **Message Type** drop-down arrow. Note that you can configure thresholds for each type of message individually. Click **Error status messages**.
9. Scroll through the list of components. Note that you can set the **Warning** or **Critical** thresholds based on the number of messages created, but not the content of the messages, and then double-click **SMS\_AD\_SYSTEM\_DISCOVERY\_AGENT**.
10. Change the **Status Threshold** for **Warning** to **2**.
11. Click **OK**. Note the change in the display.
12. To close the dialog boxes, click **OK** in all of them.
13. In the **Results** pane, right click **S01 – Adatum Site**, and then click **Status Filter Rules** to display the **Status Filter Rules** dialog box.
14. Review the **Status Filter Rules** dialog box.
15. Double-click **Write audit messages to the site database and specify the period**.
16. Review the **General** tab, and then click the **Actions** tab.
17. Review the **Actions** tab, and then change the **Allow the user to delete messages after how many days** value to **190**.
18. Click **OK** in all dialog boxes to close them.

## Demonstration: Using Reports to View Site Information

### Demonstration Steps

1. Log on to **LON-CFG** as **Adatum\Administrator** with the password **Pa\$\$w0rd**.
2. Click the **Configuration Manager Console** on the taskbar.
3. Click the **Monitoring** workspace, and then expand the **Reporting** folder.
4. Expand the **Reports** node, and then click the **Administrative Security** folder.
5. In the **Results** pane, right-click **Security roles summary**, and then click **Run** to display the **Security roles summary** report.
6. Review the report, and then close the **Security roles summary** report.
7. Click **Start**, and then click **Internet Explorer**.
8. In the Internet Explorer address bar, type **http://LON-cfg/reports**, and then press Enter.
9. On the **SQL Server Reporting Services Home** page, click **ConfigMgr\_S01**.

10. On the **SQL Server Reporting Services ConfigMgr\_S01** page, click **Administrative Security**.
11. On the **SQL Server Reporting Services Administrative Security** page, click the **Administrative users security assignments** report.
12. Review the report, and then close Internet Explorer.

## Module Review and Takeaways

### Review Question(s)

**Question:** What System Center product would you use for alerts when a service stops working on a critical server?

**Answer:** You can use System Center Operations Manager for monitoring devices and services.

**Question:** When would you use a secondary site?

**Answer:** Answers will vary. One possible answer is that you would use a secondary site for a remote location with low bandwidth.

**Question:** In which workspace can you find the controls for adding a site system role to a site server?

**Answer:** You can find the controls for adding a site system role to a site server on the Administration workspace in the Site Configuration folder, under the Servers and Site Systems node.

**Question:** Which tool would you use to determine whether a deployment completed successfully to all targets?

**Answer:** Answers will vary. One possible answer is that you would use Status Message Queries.

**Question:** What is the difference between status messages and log files?

**Answer:** Status messages are milestones that record significant events during a particular process, whereas log files record detailed events continuously throughout the time a process runs.

### Tools

Tool	Use for	Where to find it
Configuration Manager Trace Log Tool	Viewing log files	<Installation Media>\TOOLS

## Lab Review Questions and Answers

### Lab A: Performing Administration Tasks by Using the Configuration Manager Tools

#### Question and Answers

**Question:** Where would you find the node for managing collections?

**Answer:** Collections are contained in the Assets and Compliance workspace.

**Question:** When would you use a local search?

**Answer:** Answers will vary. One possible answer is to find a single or related group of devices inside a collection.

**Question:** What is the benefit of saving a search?

**Answer:** Answers will vary. One possible answer is that when you conduct a complex search, you may want to save the results if you intend to refer to them frequently. In such cases, you do not have to recreate the search each time.

### Lab B: Monitoring and Troubleshooting a Configuration Manager Site

#### Question and Answers

**Question:** What is the difference between Site Status Messages and Component Status Messages?

**Answer:** Site Status Messages include all the status messages related to a particular role, which would include the status messages from all the components involved. Component Status Messages contain only the status messages for that component.

**Question:** When would you modify the Status Summarizers?

**Answer:** Answers will vary. One possible answer is that you would modify them if you feel that the status of a component is changing too frequently.

**Question:** Why were some of the components in a stopped state?

**Answer:** Some components, such as the site backup, run only when they have work to perform.

**Question:** Why were there so many more entries between the milestones in the log file and the same milestones in the status messages?

**Answer:** Status messages generate only for significant events, such as milestones and errors, while the log files record every event that occurs, including milestones and errors.

# Module 2

## Discovering and Organizing Resources

### Contents:

Lesson 2: Configuring Resource Discovery	2
Lesson 4: Configuring Role-Based Administration	5
Module Review and Takeaways	8
Lab Review Questions and Answers	9

## Lesson 2

# Configuring Resource Discovery

### Contents:

Demonstration: Configuring Active Directory Discovery Methods	3
---	---

## Demonstration: Configuring Active Directory Discovery Methods

### Demonstration Steps

1. On LON-CFG, in the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, and then expand **Hierarchy Configuration**.
2. Click the Discovery Methods node, and then double-click Active Directory System Discovery.
3. In the Active Directory System Discovery Properties dialog box, verify that the Enable Active Directory System Discovery check box is selected.
4. Click the **New** (🌟) button. Note the available options.
5. Click **Browse**.
6. In the **Select New Container** dialog box, click the **Toronto Clients** container, and then click **OK**.
7. Verify that the **Recursively search Active Directory child containers** check box is selected, and then click **OK**. Note that if you have objects in child OUs that you do not want to discover, you should not enable this option.
8. On the Polling Schedule tab, click Schedule.
9. On the **Custom Schedule** dialog box set the Recur Every value to **5 days**, and then click **OK**.
10. Verify that the **Enable delta discovery** check box is selected with an interval of 5 minutes.
11. On the **Active Directory Attributes** tab, verify the Active Directory Attributes that will be discovered by default.
12. On the **Options** tab, take note of the options used to discover computers based upon time since last logged on and time since last password update has taken place. Click **OK**.
13. Right-click Active Directory System Discovery, and then click Run Full Discovery Now.
14. On LON-CFG, in the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, and then expand **Hierarchy Configuration**.
15. Click the Discovery Methods node, and then double-click Active Directory User Discovery.
16. In the Active Directory User Discovery Properties dialog box, verify that the Enable Active Directory User Discovery check box has been selected.
17. Click the **New** (🌟) button. Note the available options.
18. Click **Browse**.
19. In the **Select New Container** dialog box, click the **Adatum** container, and then click **OK**.
20. Verify that the Recursively search Active Directory child containers check box is selected, and then click OK.
21. On the **Polling Schedule** tab, click **Schedule**, configure the recurrence to take place every three days, and then click **OK**.
22. Verify that the **Enable delta discovery check box** is selected with an interval of 5 minutes.
23. On the **Active Directory Attributes** tab, note the default attributes that are discovered by default, and then click **OK**.
24. With Active Directory User Discovery selected, on the ribbon, click Run Full Discovery Now.
25. At the Configuration Manager message box, to run full discovery as soon as possible, click **Yes**.
26. Click the **Assets and Compliance** workspace.

27. In the **Assets and Compliance** workspace, click the **Devices** node. Notice that several devices are listed.
28. In the results pane, right-click **TOR-CL2** and then click **Properties**. Notice that the system was discovered by using the SMS\_AD\_SYSTEM\_DISCOVERY\_AGENT.
29. Click **Close**.
30. In the **Assets and Compliance** workspace, click the **Users** node. Notice the users that have been discovered in the Adatum domain.
31. In the results pane, right-click **ADATUM\Don (Don Funk)**, and then click **Properties**. Notice that the user account was discovered by using the SMS\_AD\_USER\_DISCOVERY\_AGENT.

## Lesson 4

# Configuring Role-Based Administration

### Contents:

Demonstration: Implementing Role-Based Administration

6

## Demonstration: Implementing Role-Based Administration

### Demonstration Steps

1. On LON-CFG, on the taskbar, click **Configuration Manager Console**, click the **Administration** workspace, expand the **Security** node, and then click **Security Roles**. Notice the 15 default security roles on this page.
2. In the results pane, double-click **Operations Administrator**.
3. In the Operations Administrator Properties box, click and view the General, Administrative Users, and Permissions tabs.
4. In the Operations Administrator Properties box, click OK.
5. In the **Administration** workspace, expand the **Security** node, and then click **Security Scopes**. Notice the built-in security scopes in this page.
6. Right-click Security Scopes, and then click Create Security Scope.
7. In the **Create Security Scope** dialog box, fill in the following information, and then click **OK**:
  - o Security scope name: Desktop Administration Scope
  - o Description: Scope for Desktop related objects
8. Right-click Security Scopes, and then click Create Security Scope.
9. In the **Create Security Scope** dialog box, fill in the following information, and then click **OK**:
  - o Security scope name: Server Administration Scope
  - o Description: Scope for Server related objects
10. In the System Center 2012 R2 Configuration Manager console, click the **Software Library** workspace, expand the **Application Management** node, and then click **Applications**. Notice that there is an application named **XML Notepad 2007** listed in the results pane. You will assign this to the **Server Administration Scope** security scope.
11. Right-click XML Notepad 2007, and then click Set Security Scopes.
12. In the **Set Security Scopes** dialog box, click to clear the **Default** check box, select the **Server Administration Scope** check box, and then click **OK**.
13. Under the **Application Management** node, click **Packages**. Notice the application package named **Configuration Manager Client Package**. You will assign this package to the **Desktop Administration Scope** security scope.
14. Right-click Configuration Manager Client Package, and then click Set Security Scopes.
15. In the **Set Security Scopes** dialog box, clear the **Default** check box, select the **Desktop Administration Scope** check box, and then click **OK**.
16. In the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, expand the **Security** node, and then click **Administrative Users**. Notice that the initial administrative user is the user that installed the Configuration Manager site.
17. Right-click Administrative Users, and then click Add User or Group.
18. In the **Add User or Group** dialog box, fill in the following information, and then click **OK**:
  - o User or group name: Browse to **Desktop Admins**
  - o Assigned security roles: Operations Administrator

- Assigned security scopes or collection: **Desktop Administration Scope** and the **London Test Collection**. Remove all other Collections and the Default scope.
19. Close the Configuration Manager console.
  20. Start the Configuration Manager console as a different user. To do this, hold down the Shift key, right-click **Configuration Manager Console**, and then click **Run as different user**.
  21. At the Windows Security prompt message box, in the **User name** box, type **Brad**, in the **Password** box, type **Pa\$\$w0rd**, and then click **OK**.
  22. Browse to the Configuration Manager console, and then verify permissions. Brad is a member of the Desktop Admins group and should be able to see only objects assigned to the Desktop Administration scope. This means that in the Device Collections node of the Assets and Compliance workspace he should only be able to see the London Test Collection and in the Software Library workspace only see the Configuration Manager Client Package when the Packages node is selected.
  23. Close the Configuration Manager console.

## Module Review and Takeaways

### Review Question(s)

**Question:** What is the purpose of the Heartbeat Discovery method?

**Answer:** The Heartbeat Discovery method is a client-side process that you can use to refresh the discovery data for a Configuration Manager client.

**Question:** You change an attribute on an Active Directory user object. You expect that delta discovery should identify the change within five minutes; however, the change is not discovered. What might be the problem?

**Answer:** The attribute that you changed is not a replicated attribute. Delta discovery will discover only replicated Active Directory attribute changes. However, when the full discovery cycle takes place, delta discovery will discover this change.

**Question:** Active Directory System Discovery does not discover several computer resources. You verify that the computer accounts are in Active Directory Domain Services. What else should you check?

**Answer:** You should verify that the computer accounts are not disabled and that each computer account has a corresponding DNS record that is registered and resolvable on the DNS server.

**Question:** Which two critical services do boundary groups provide?

**Answer:** You can use boundary groups for site assignment and content location services.

**Question:** You need to verify all actions performed by Configuration Manager administrators. What can you do?

**Answer:** You can view the role-based access reports including the Administrative Activity Log.

# Lab Review Questions and Answers

## Lab B: Configuring User and Device Collections

### Question and Answers

**Question:** You need to create a collection that includes a static list of members. Which rule type should you use?

**Answer:** You should use the Direct Rule to create a static list of members in a collection.

**Question:** You need to create a collection with workstations that do not have Microsoft® Office® installed. How can you accomplish this?

**Answer:** You can create a collection that includes all workstations that have Microsoft Office installed. Then, create a second collection that is based upon All Desktop and Server clients but excludes the collection that contains the workstations with Microsoft Office installed.

**Question:** You need to ensure that applications cannot be installed during working hours. What can you do?

**Answer:** You can configure a maintenance window to ensure that application installations take place during a specific time period only.

## Lab C: Configuring Role-Based Administration

### Question and Answers

**Question:** In the Configuration Manager console, what are some of the object types that you can associate with a specific security scope?

**Answer:** The object types that you can associate with a specific security scope are:

- Applications
- Packages
- Boot images
- Sites
- Custom client settings
- Distribution points and distribution point groups
- Software update groups

**Question:** You want to provide an administrative user with the permissions to create and deploy applications. Which security role would provide these capabilities?

**Answer:** The Application Administrator role provides these capabilities because it includes the permissions for the Application Author and Application Deployment Manager roles.

**Question:** An administrative user should be able to administer a specific collection only. How can you configure this?

**Answer:** You need to configure the user or group so that its access is for a specific collection only. You need to remove all other default collections.

# Module 3

## Managing the Configuration Manager Client

### Contents:

Lesson 1: Overview of the Configuration Manager Client	2
Lesson 2: Deploying Configuration Manager Clients	5
Lesson 3: Managing Client Settings in Configuration Manager	7
Lesson 4: Configuring and Monitoring Client Status	10
Module Review and Takeaways	13
Lab Review Questions and Answers	15

## Lesson 1

# Overview of the Configuration Manager Client

### Contents:

Resources	3
Demonstration: Exploring the Configuration Manager Client Properties	3

## Resources

### Supporting Linux-based and UNIX-based Computers

 **Additional Reading:** Deploying Software to Linux and UNIX Servers in Configuration Manager  
<http://technet.microsoft.com/en-us/library/jj573943.aspx>

### Demonstration: Exploring the Configuration Manager Client Properties

#### Demonstration Steps

1. On LON-CFG, from the **Start screen**, click **Control Panel**.
2. In the **Control Panel**, click **System and Security**, and then click **Configuration Manager**.
3. Note how the **General** tab contains basic information about the client. Review how you can use the information found here for troubleshooting.
  - o For example, if a user brought a laptop computer home for the first time and is unable to connect to the Application Catalog through the Internet, you might see the user has only a self-signed certificate and is configured for "Always intranet".
  - o You also use this tab to identify that the client is connected to the correct site, or any site, and is running the correct version of the client.
4. Click the **Components** tab. Review how to use the **Components** tab to determine if the client is receiving policy.
  - o You can use the components tab to verify that components have installed successfully and that a client is receiving policy. Explain how the Enabled\Disabled status of the components indicates policy has been downloaded.
  - o You can compare the Enabled\Disabled status to the client settings that a client should receive from the site.
5. Click the **Actions** tab. Review why you would initiate client actions manually rather than waiting for the next scheduled interval.

For example, you might force an agent to run instead of waiting for a change to be applied normally.

6. Click the **Site** tab. Review why you would configure a client to use a different site.
  - o Automatic site assignment only occurs once.
  - o Click the **Configure Settings** button and review how to change the site code.
7. Click the **Cache** tab and then click **Configure Settings**. Review why you would change the size of the cache for a client.
  - o The cache size is set during client installation, and that the default size is 5120 MB.
  - o Click the **Configure Settings** button and review how to change the cache size.
  - o Click the **Change Location** button and review how to change the cache location, and then click **Cancel**.
  - o Click the **Delete Files** button and review the **Delete persisted cache content** check box, and then click **No**.
8. Click the **Configurations** tab. Discuss configuration baselines and examine how to use the **Evaluate** and **View Report** buttons.

- The Evaluate and View Report buttons allows you to check the client machine immediately in comparison to a baseline.
9. Click the **Network** tab. Review why you would change a client to be an Internet client.
  10. Click the **Configure Settings** button and review how to use these settings to convert a client to an Internet client.
  11. Click **Cancel** and close the Control Panel.

## Lesson 2

# Deploying Configuration Manager Clients

### Contents:

Resources

6

## Resources

### Overview of Client Installation Methods



**Additional Reading:** Determine the Client Installation Method to Use for Windows Computers in Configuration Manager

<http://go.microsoft.com/fwlink/?LinkID=252179>

### Installing the Client by Using Additional Installation Methods



**Additional Reading:** About Configuration Manager Client Installation Properties

<http://technet.microsoft.com/en-us/library/bb680980.aspx>

### Installing the Client on Mac, LINUX, or UNIX



**Additional Reading:** How to Install Clients on Mac Computers in Configuration

<http://technet.microsoft.com/en-us/library/jj591553.aspx>

## Lesson 3

# Managing Client Settings in Configuration Manager

### Contents:

Demonstration: Configuring Default Client Settings	8
Demonstration: Configuring Custom Client Settings	8

## Demonstration: Configuring Default Client Settings

### Demonstration Steps

1. On LON-CFG, on the task bar, click **Configuration Manager Console**.
2. Click the **Administration** workspace, and then click the **Client Settings** node.
3. Right-click **Default Client Settings**, and then click **Properties**.
4. In the **Default Settings** dialog box, click the **Client Policy** setting. Explain that the **Client policy polling interval (minutes)** value controls how often the client requests settings from a management point.
  - a. Verify that the **Client policy polling interval (minutes)** is set to **5** minutes. Notice that this is for demonstration purposes and should not be used in a production environment.
  - b. Note that this configuration also reduces the number of supported clients on the management point by 75%. So instead of supporting 25,000 clients per management point, it is now only around 6,000 clients.
5. Click the **State Messaging** setting. Notice that the **State message reporting cycle (minutes)** value controls how often the client sends state messages to a management point.
  - a. Set the **State message reporting cycle (minutes)** to **5** minutes. Note that this is for demonstration purposes and should not be used in a production environment.
  - b. Note that doing this could cause a backlog of state messages, especially during a software update scan cycle.
6. Note that the other settings and values are set in a similar manner. The appropriate modules will cover these settings and values.
7. Click **OK** to accept changes, and then close the **Default Settings** dialog box.

## Demonstration: Configuring Custom Client Settings

### Demonstration Steps

1. In the Configuration Manager console, ensure you are still in the **Administration** workspace, and on the **Client Settings** node.
2. Right-click the **Client Settings** node, and then click **Create Custom Client Device Settings**.
3. In the **Custom Device Settings** dialog box, type **LON Server Systems** in the **Name** field.
4. Type **Client settings for all LON server systems** in the **Description** field.
5. In the **Select the custom settings to be enforced on client devices** section, select the **State Messaging** check box.
6. Click the **State Messaging** setting, take note of the value displayed, and then set the **State message reporting cycle (minutes)** to **15** minutes.
7. Click **OK** to create the custom client device setting policy. Note the priority of the newly created **LON Server Systems** client setting.
8. Right-click the **LON Server Systems** client setting, and then click **Deploy**.
9. In the **Select Collection** dialog box, click **All Windows Servers**, and then click **OK**.
10. In the **preview** pane, click the **Deployments** tab. Note the client deployment you just created, and note that the client setting can be assigned to more than one collection.
11. Right-click the **Client Settings**, and then click **Create Custom Client Device Settings**.

12. In the **Custom Device Settings** dialog box, type **Windows 8 Client Systems** in the **Name** field.
13. Type **Client settings for all Windows 8 client systems** in the **Description** field.
14. In the **Select the custom settings to be enforced on client devices** section, select the **Client Policy** check box.
15. Click the **Client Policy** setting, take note of the value displayed, and then set the **Client policy polling interval (minutes)** value to **30** minutes
16. Click **OK** to create the custom client device setting policy. Note the priority of the newly created **Windows 8 Client Systems** client setting.
17. In the results pane, click the **Priority** heading to arrange the client settings in order and sort the settings so the **Default Client Settings** is on the bottom of the list.
18. Right-click **Windows 8 Client Systems** client setting, and note that the **Decrease Priority** option is not available. Explain that this is because it already has the lowest priority of the custom policies.
19. Right-click **LON Server Systems** client setting, and note that the **Increase Priority** option is not available. Explain that this is because it already has the highest priority of the custom policies.

On the context menu for **LON Server Systems**, click **Decrease Priority**. Point out how the priorities have changed.

## Lesson 4

# Configuring and Monitoring Client Status

### Contents:

Demonstration: Configuring Client Status Settings	11
Demonstration: Using the Console to Monitor Client Health and Client Activity	11

## Demonstration: Configuring Client Status Settings

### Demonstration Steps

1. In the Configuration Manager console, click the **Monitoring** workspace, and then select the **Client Status** node.
2. Right-click the **Client Status** node, and then click **Client Status Settings**.
3. In the **Client Status Settings Properties** dialog box, under **Evaluation periods to determine client activity**, review the settings.
  - o If the clients do not have activity for the specified task within the specified number of days, the client shows in the monitor as inactive.
  - o Do not configure these settings for less than the scheduled interval. For instance, if hardware inventory is scheduled to run every 14 days do not leave its activity monitor at the default 7 days because this will cause it to show as inactive most of the time.
4. Discuss the **Retain client status history for the following number of days** setting.
  - o Explain that this setting is primarily concerned with health data as the activity results shows the last time a client was active, not how often.
5. In the **Client Status Settings Properties** dialog box, click **OK**.

## Demonstration: Using the Console to Monitor Client Health and Client Activity

### Demonstration Steps

1. Ensure the Configuration Manager console is still in the **Monitoring** workspace, with the **Client Status** node selected.
2. On the **Client Status** page, click the **Browse** button in the statistics section.
  - o Explain that this allows you to choose the collection whose health and activity you want to examine.
3. In the **Select Collection** dialog box, click the **All Systems** collection, and then click **OK**.
4. Click the **Active clients that passed client check or no results** link. Briefly discuss the results.
  - o Note that a temporary node has been created in the **Assets and Compliance** workspace and it is now displayed in the console.
  - o Note the name of the collection, **Active clients that passed client check or no results from "All Systems"**.
5. Click the **Monitoring** workspace, and then click the **Client Status** node.
6. On the **Client Status** page, click the **Browse** button in the statistics section.
7. In the **Select Collections** dialog box, click the **All Desktops and Server Clients** collection, and then click **OK**.
8. Click the **Active clients that passed client check or no results** link. Briefly discuss the results.
  - a. Note the name of the collection, **Active clients that passed client check or no results from "All Desktops and Server Clients"**.
9. In the **Active clients that passed client check or no results from "All Desktops and Server Clients"** collection, click **LON-CFG**.
10. Examine the preview pane.

- a. Explain that the **Summary** tab contains an overview of that client's status and some general information.
  - b. Click the **Client Activity Detail** tab; review that this tab shows the last time the client performed monitored activity in addition to the management point with which it last communicated .
  - c. Click the **Client Check Detail** tab; review that this tab shows the health checks the client has failed over the past 31 days (by default) or the last time the client passed all the health checks.
11. Close the Configuration Manager console.
  12. Open the Configuration Manager console.
  13. In the Configuration Manager console, click the **Assets and Compliance** workspace, click the **Devices** node.

Note that the temporary nodes created in the previous steps are now gone. Point out they could have been removed manually from the **Devices** node with a right-click action or the ribbon.

# Module Review and Takeaways

## Best Practice

- Always deploy at least one fallback status point.
- Do not rely on a single Client Installation method.
- Monitor the health of your clients proactively through the Client Status feature.

## Review Question(s)

**Question:** In your environment, do your users have local administrative rights? Will they need to change any of the Configuration Manager client settings, such as cache settings or site settings?

**Answer:** Answers will vary. As a best practice, users should not have administrative rights and the Configuration Manager Control Panel applet is reserved for support personnel.

**Question:** Which site systems would you deploy to support Internet-based clients?

**Answer:** Answers will vary. However, answers should include at least a management point and a distribution point.

**Question:** What is the danger of putting a fallback status point on the Internet?

**Answer:** The fallback status point allows for unauthenticated connections that load data automatically into a production database.

**Question:** Which deployment method will you use the most in your environment?

**Answer:** Answers will vary and can include any of the installation methods.

**Question:** Do you think your environment will require multiple client device settings?

**Answer:** Answers will vary.

## Real-world Issues and Scenarios

In a multi-domain forest, how will the client installation process gain local administrative rights on all the client systems?

Answer: Answers will vary. One possible solution is to use a client installation account from each domain that has administrative rights within that domain.

Different groups or departments need different installation options. How can you accommodate these needs?

Answer: Answers will vary. One possible answer is to use Group Policy Objects (GPOs) to set the installation properties.

Mobile users need a client installed on laptops that will be managed on the Internet. What is the best way to install the client on these systems?

Answer: Answers will vary. One possible answer is to have the users ship the systems to the IT department to install the client and then ship them back.

## Common Issues and Troubleshooting Tips

Common Issue	Troubleshooting Tip
Certificate trust issues	All systems must trust the root certification authority (CA)
Typographical errors on command line for client.msi installation	Review CCMSetup.log to find the mistake

Common Issue	Troubleshooting Tip
Nothing happens during installation attempt	Windows Firewall is blocking the deployment.
Clients not receiving the intended settings	Validate the order in which the client settings are being applied.

# Lab Review Questions and Answers

## Lab A: Deploying the Configuration Manager Client

### Question and Answers

**Question:** What rights does the client push installation account require?

**Answer:** It requires administrative rights on the machine on which the installation is running.

**Question:** What would happen if you did not install a fallback status point?

**Answer:** You may not receive important state messages from clients that are having difficulties and there would not be any useful information on installation reports.

## Lab B: Managing Client Settings

### Question and Answers

**Question:** Why would you want to assign multiple Client Device Settings to a collection?

**Answer:** You would assign multiple Client Device Settings to a collection because you can create different client device settings objects for separate sets of features in Configuration Manager. For instance, you may have a client device settings object for software deployment and another client device settings object for hardware inventory.

## Lab C: Configuring and Monitoring Client Status

### Question and Answers

**Question:** In your environment, for what interval will you configure the status health settings?

**Answer:** Answers will vary.

**Question:** In your environment, what threshold will you set for alerts?

**Answer:** Answers will vary.

# Module 4

## Managing Inventory and Software Metering

### Contents:

Lesson 2: Configuring Hardware Inventory	2
Lesson 4: Managing Inventory Collection	4
Lesson 5: Configuring Asset Intelligence	6
Lesson 6: Configuring Software Metering	8
Module Review and Takeaways	10

## Lesson 2

# Configuring Hardware Inventory

### Contents:

Demonstration: Configuring Client Settings for Hardware Inventory	3
---	---

## Demonstration: Configuring Client Settings for Hardware Inventory

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, and then click **Client Settings**.
2. In the results pane, double-click **Default Client Settings**.
3. In the Default Settings window, click **Hardware Inventory**.
4. Under **Device Settings**, next to **Enable hardware inventory on clients**, verify that the **True** option is selected.
5. Next to **Hardware inventory schedule**, click **Schedule**.
6. In the **Configure Client Setting** dialog box, select the option next to **Custom schedule**, and then click **Customize**.
7. Describe the **Time** and **Recurrence** pattern sections, and then click **Cancel**.
8. In the **Configure Client Setting** dialog box, select the option next to **Simple schedule**, and then click **OK**.
9. Under **Device Settings**, next to **Hardware inventory classes**, click **Set Classes**.
10. In the **Hardware Inventory Classes** dialog box, scroll down to view the various classes that are enabled and disabled.
11. Click **Filter by category**, and then review the various categories.
12. Click the **Filter by type** button, and then review the various types.
13. Click the **Add** button. Review **how you can connect to the WMI namespace of another computer**. Click **Cancel**.
14. Review the **Import** and **Export** buttons. To return to the Default Settings window, click **Cancel**.
15. Next to Collect MIF files, click the drop-down list box. Review the options for configuring the collection of IDMIF and NOIDMIF files.
16. To close the Default Settings window, click **Cancel**.

## Lesson 4

# Managing Inventory Collection

### Contents:

Demonstration: Initiating Inventory Collection on a Client

5

## Demonstration: Initiating Inventory Collection on a Client

### Demonstration Steps

1. On LON-CFG, right-click **Start**, and then click **Control Panel**.
2. In Control Panel, click System and Security and then click Configuration Manager. The Configuration Manager Properties dialog box opens.
3. In the **Configuration Manager Properties** dialog box, click the **Actions** tab. Take note of the various actions that are available.
4. Select the **Machine Policy Retrieval & Evaluation Cycle** action, and then click **Run Now**. At the prompt, click **OK**.
5. Select the **Hardware Inventory Cycle** action, and then click **Run Now**. At the prompt, click **OK**.
6. To close the **Configuration Manager Properties** dialog box, click **OK**, and then close Control Panel.
7. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, and then click **Devices**.
8. In the results pane, right-click **LON-CFG**, point to **Start**, and then click **Resource Explorer**.
9. In the left-hand pane of the Resource Explorer window, expand the **Hardware** node. Take note of the various hardware inventory nodes.
10. Click various hardware inventory nodes, and then discuss the results.
11. In the left-hand pane of the Resource Explorer window, expand the **Hardware History** node. Take note of, and discuss, any history data.
12. Close the Resource Explorer.
13. In the System Center Configuration Manager console, click the **Monitoring** workspace, expand the **Reporting** node, and then expand the **Reports** node. Notice the various report categories.
14. In the left-hand pane, click the **Hardware-Disk folder**. Notice the reports that relate to disk information.
15. In the left-hand pane, click the **Hardware-Memory folder**. Notice the reports that relate to computer memory information.

## Lesson 5

# Configuring Asset Intelligence

### Contents:

Demonstration: Enabling the Collection of Asset Intelligence Data

7

## Demonstration: Enabling the Collection of Asset Intelligence Data

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, and then click **Asset Intelligence**.
2. Right-click Asset Intelligence, and then click Edit Inventory Classes. The Edit Inventory Classes dialog box opens.
3. Verify that Enable only the selected Asset Intelligence reporting classes is enabled.
4. Enable all inventory classes except **SMS\_InstalledExecutable** and **SMS\_SoftwareShortcut**.
5. Point to each reporting class, and then with the tool tip, discuss the reports that are associated with each class.
6. Click **OK** to close the **Edit Inventory Classes** dialog box, and then at the message box click **Yes**.
7. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, and then click **Asset Intelligence**.
8. Right-click **Asset Intelligence**, and then click **Import Software Licenses**. The Import Software Licenses Wizard opens. Click **Next**.
9. On the Import page, click the General License Statement (.csv file) option.
10. In the Path box type \\LON-CFG\E\$\Licenses\LicenseData.csv, and then click Next.
11. On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
12. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, expand the **Site Configuration** node, and then click **Servers and Site System Roles**.
13. In the details pane, right-click \\LON-CFG.Adatum.com, and then click **Add Site System Roles**. The Add Site System Roles Wizard starts. Click **Next**.
14. On the System Role Selection page, select the check box next to Asset Intelligence synchronization point, and then click Next.
15. On the Asset Intelligence Synchronization Point Settings page, click Next.
16. On the Proxy Server Settings page, click Next.
17. On the **Synchronization Schedule** page, ensure that **Enable synchronization on a schedule** is selected and that it is set to run every **7 days**. Click **Next**.
18. On the **Summary page**, click **Next**, and on the **Completion** page, click **Close**.
19. Click the **Assets and Compliance** workspace, and then click **Asset Intelligence**. In the results pane, under **Catalog Synchronization**, review the status details. Refresh the page if required.
20. Right-click Asset Intelligence, and then point to Synchronize. Discuss the Synchronize Asset Intelligence Catalog and Schedule Synchronization options.

## Lesson 6

# Configuring Software Metering

### Contents:

Demonstration: Configuring Software Metering Rules

9

## Demonstration: Configuring Software Metering Rules

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, and then click **Client Settings**.
2. Right-click **Default Client Settings** and then click **Properties**. The **Default Settings** dialog box opens.
3. In the left-hand pane, click **Software Metering**.
4. Under Device Settings, verify that the Enable software metering on clients option is set to True.
5. Click the **Schedule** button. Describe the schedule options, and then click **Cancel**.
6. Click **OK** to close the **Default Settings** dialog box.
7. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, and then click **Software Metering**.
8. In the navigation pane, right-click **Software Metering** and then click **Create Software Metering Rule**.
9. In the **Name** box, type **CalcRule**
10. Click **Browse**, and then navigate to **C:\Windows\system32**.
11. Click **Calc.exe**, and then click **Open**. Notice that the **Original file name**, **Version**, and **Language** boxes are populated automatically.
12. In the **Version** box, delete the existing version text, and type the asterisk wildcard character (\*).
13. In the **Language** box, select – Any –. Click **Next**.
14. Click **Next**. Then click **Close**.
15. In the Configuration Manager console, right-click **Software Metering** and then click **Software Metering Properties**.
16. In the Software Metering Properties dialog box, ensure that Automatically create disabled metering rules from recent usage inventory data is enabled.
17. In the Specify the percentage of computers in the hierarchy that must use a program before a software metering rule is automatically created box, configure a setting of 5.
18. In the Specify the number of software metering rules that must be exceeded in the hierarchy before the automatic creation of rules is disabled box, configure a setting of 25.
19. Click OK to close the Software Metering Properties box.
20. In System Center 2012 R2 Configuration Manager console, click the **Monitoring** workspace, and then expand **Reporting**.
21. Expand **Reports**, and then click the **Software Metering** folder.
22. Describe the reports that are displayed. Run reports as time allows.

## Module Review and Takeaways

### Review Question(s)

**Question:** How can hardware and software inventory assist in software distribution?

**Answer:** You can create collections of resources based upon inventory data. For example, you can create a collection of computers that support the minimum hardware and software requirements for installing Microsoft Office 2010, and then distribute the software to that collection.

**Question:** A user in your organization is having intermittent problems with their desktop computer. How can you use hardware and software inventory to troubleshoot the problem?

**Answer:** You can use hardware inventory data to determine potential issues, such as a recent change in computer hardware. For example, you can find out if new hardware has been installed that might not be configured properly. You can use software inventory to determine if a user's computer has the latest service packs installed, or to collect log files from the client's computer.

**Question:** A department in your organization has deployed a user application with expensive per-user licenses. How can you use software inventory and software metering to help ensure that your organization is getting the most value from this application?

**Answer:** Use software inventory to determine which clients have the application installed. Use software metering to determine which users are running the application. Use the data to help determine if additional clients need to have the software installed, and which clients should have the software removed. Depending upon the application, you also may use Asset Intelligence reports to obtain license reports from reported data.

**Question:** You have enabled software metering and have just deployed a new application throughout your network. By default, what will trigger the automatic creation of a disabled software metering rule?

**Answer:** The software metering rule will be created when the application is present in the inventory data of 10% of computers.

# Module 5

## Querying and Reporting Data

### Contents:

Lesson 2: Managing Queries	2
Lesson 3: Configuring SQL Server Reporting Services	5
Module Review and Takeaways	8
Lab Review Questions and Answers	10

## Lesson 2

# Managing Queries

### Contents:

Demonstration: Creating and Running Queries

3

## Demonstration: Creating and Running Queries

### Demonstration Steps

1. On LON-CFG, on the task bar, click the **Configuration Manager Console**.
2. Click the **Monitoring** workspace, and then click **Queries**.
3. Right-click the **Queries** node and then click **Create Query**.
4. In the Create Query Wizard, on the **General** page, in the **Name** box, type **All LON Systems**
5. Click **Edit Query Statement**, and then in the **All LON Systems Query Statement Properties** dialog box, on the **General** tab, click the **New** button.
6. In the **Result Properties** dialog box, click **Select**.
7. In the **Select Attribute** dialog box, click the **Attribute** drop-down arrow, select **Active Directory Site Name**, and then click **OK**.
8. In the **Result Properties** dialog box, click **OK**.
9. In the **All LON Systems Query Statement Properties** dialog box, on the **General** tab, click the **New** button.
10. In the **Result Properties** dialog box, click **Select**.
11. In the **Select Attribute** dialog box, click the **Attribute** drop-down arrow, select **IP Addresses**, and then click **OK**.
12. In the **Result Properties** dialog box, click **OK**.
13. In the **All LON Systems Query Statement Properties** dialog box, on the **Creating and Running Queries** tab, click the **New** button.
14. In the **Result Properties** dialog box, click **Select**.
15. In the **Select Attribute** dialog box, click the **Attribute** drop-down arrow, select **Last Logon User Name**, and then click **OK**.
16. In the **Result Properties** dialog box, click **OK**.
17. In the **All LON Systems Query Statement Properties** dialog box, on the **Criteria** tab, and click the **New** button.
18. In the **Criterion Properties dialog** box, click **Select**.
19. In the **Select Attribute** dialog box, in the **Attribute Class** list, select **System Resource**.
20. In the **Select Attribute** dialog box, in the **Attribute** list, select **Name**, and then click **OK**.
21. In the **Criterion Properties** dialog box, in the **Operator** drop list, select is greater than or equal to.
22. In the **Value** box, type **LON**, and then click **OK**.
23. In the **All LON Systems Query Statement Properties** dialog box, click **OK**.
24. On the **General** page of the Create Query Wizard, click **Next**.
25. On the **Summary** page of the Create Query Wizard, click **Next**.
26. On the **Completion** page of the Create Query Wizard, click **Close**.
27. Right-click the **All LON Systems** query, and then click **Run**.
28. Review the results. Notice that the **Name** attribute is not displayed in the results pane.
29. In the **Monitoring** workspace, expand **System Status**, and then click **Status Message Queries**.

30. Right-click the **Status Message Queries** node and click **Create Status Message Query**.
31. On the **General** page of the Create Status Message Query Wizard, in the **Name** box, type **All LON Systems Status Messages**.
32. Click **Import Query Statement**. In the **Browse Query** dialog box, in the **Queries** box, click **All Status Messages from a Specific System**, and then click **OK**.
33. Click **Edit Query Statement**, and then click the **Criteria** tab.
34. Select **[Status message as stat].Machine Name is equal to <prompted value>**, and then click the **Modify** (  ) button.
35. In the **Criterion Properties** dialog box, in the **Operator** drop-down list, select **is greater than or equal to**, and then click **OK**.
36. In the **Query Statement Properties** dialog box, click **OK**.
37. On the **General** page of the Create Status Message Query Wizard, click **Next**.
38. On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
39. Right-click the **All LON Systems Status Messages query**, and then click **Show Messages**.
40. In the **All LON Systems Status Messages** dialog box, in the **Prompted value** box, click **Machine Name** and then, in the **Specify box**, type **LON**
41. In the **Prompted value** box, click **Time**, and then in the **Select date and time** list, select **12 hours ago**.
42. In the **All LON Systems Status Messages** dialog box, click **OK**.
43. Review the results, and then close the Status Message Viewer.
44. Minimize the System Center 2012 R2 Configuration Manager console.

## Lesson 3

# Configuring SQL Server Reporting Services

### Contents:

Demonstration: Installing a Reporting Services Point	6
Demonstration: Creating a Report Based on a SQL Query	7

## Demonstration: Installing a Reporting Services Point

### Demonstration Steps

1. On LON-CFG, on the **Start** screen, click the **Reporting Services Configuration Manager** tile.
2. In the **Reporting Services Configuration Connection** dialog box, click **Connect**.
3. In **Reporting Services Configuration Manager**, click the **Service Account node**.
4. Verify that Reporting Services is configured to use the **Local System** account.
5. Click the **Web Service URL** node, review the default settings.
6. On the **Database** page, verify that a database has been created.
7. On the **Proxy** page, click **Next**.
8. In **Reporting Services Configuration Manager**, click the **Report Manager URL** node. Verify that a URL exists.
9. In the **Reporting Services Configuration Manager**, click **Exit**.
10. If necessary, open the **System Center 2012 R2 Configuration Manager** console.
11. Click the **Administration** workspace, and then expand **Site Configuration**.
12. Click **Servers and Site Systems Roles**.
13. Right-click **\\LON-CFG.Adatum.com** and then click **Add Site System Roles**.
14. In the Add Site System Roles Wizard, on the **General** page, click **Next**.
15. On the **System Role Selection** page, select the **Reporting services point** check box, and then click **Next**.
16. On the **Reporting Services Point** page, click **Verify**.
17. On the **Reporting services point** page, click **Set**, and then click **New Account**.
18. In the **User name** box, type **ADatum\Administrator**, in the **Password** and **Confirm password** boxes, type **Pa\$\$w0rd**, and then click **OK**.
19. On the **Reporting Services Point** page, click **Next**.
20. Review the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
21. In the **Monitoring** workspace, expand the **Reporting** node, and then click the **Reports** node. You may need to refresh the console until all the reports appear.
22. Right-click the **Reports** node, and then click **Report Options**. Review the **Report Options** dialog box, and then click **OK**.
23. In the **Search** box, type **Windows**, and then click **Search**.
24. Right-click the **Windows Server computers** report, and then click **Run**.
25. In the Windows Server computers window, click **Values**, click **All Systems**, and then click **OK**.
26. Click **View Report**.
27. Close the **Report Viewer**, and then minimize the Configuration Manager console.
28. Open Internet Explorer®, and then navigate to **http://LON-CFG /Reports**.
29. Click the **ConfigMgr\_S01** link. Review the different report folders, and then open one or two to view the reports in the folders.

## Demonstration: Creating a Report Based on a SQL Query

### Demonstration Steps

1. On LON-CFG, on the task bar, click **Configuration Manager Console**.
2. From the **Monitoring** workspace in the Configuration Manager Console, right-click the **Reports** node, and then click **Create Report**.
3. In the Create Report Wizard, on the **Information** page, select **SQL-based Report**.
4. In the **Name** textbox, type **Desktop Computers**, and then click **Browse** to the right of the **Path** textbox.
5. On the **Report Path** dialog box, select **Site – Client Information**, click **OK**, and then click **Next**.
6. On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
7. In the Application Run – Security Warning dialog box, click **Run**.
8. In the Report Builder window, in **Report Data**, right-click **Datasets**, and then click **Add Dataset**.
9. In the Dataset Properties window, in **Name**, type **dsDesktops**.
10. Select **Use a dataset embedded in my report**.
11. In the **Data source** drop-down list, select the data source that begins with **AutoGen\_**.
12. In **Query**, type the following query, and then click **OK**:

```
SELECT s.ResourceID,
       s.ResourceType,
       s.Name0,
       s.Resource_Domain_OR_Workgr0,
       s.SMS_Unique_Identifier0,
       s.Client0,
       e.ChassisTypes0
FROM   dbo.v_R_System s
INNER JOIN dbo.v_GS_SYSTEM_ENCLOSURE e
ON      s.ResourceID = e.ResourceID
WHERE  (e.ChassisTypes0 = N'3')
```

13. If the **Enter Data Source Credentials** dialog box is displayed, type **Pa\$\$w0rd** in the **Password** textbox, and then click **OK**.
14. In the report designer area, click **Table or Matrix**.
15. In the **New Table or Matrix** dialog box, on the **Choose a dataset** page, click **dsDesktops**, and then click **Next**.
16. On the **Arrange fields** page, drag the **Resource\_Domain\_OR\_Workgr0** field from the **Available fields** list to the **Row groups** list.
17. On the **Arrange fields** page, drag the **Name0** field from the **Available fields** list to the **Values** list.
18. Repeat step 17 for the **ChassisTypes0** field, and then click **Next**.
19. On the **Choose the layout page**, click **Next**.
20. On the **Choose a style page**, click **Finish**.
21. On the **Home** toolbar, click **Run** to view the results of the report.

## Module Review and Takeaways

### Best Practice

Supplement or modify the following best practices for your own work situations:

Optimize SQL Server Reporting Services queries and your report queries. Usually, the bulk of the report run time is spent running queries and retrieving results. SQL Server tools, such as Query Analyzer and Profiler, can help you optimize queries.

Report Subscription Scheduling. Whenever possible, schedule report subscription processing to run outside of normal office hours. This will reduce the load on the Configuration Manager site database server and improve availability for immediate report requests.

### Review Question(s)

**Question:** What is the difference between attributes and attribute values?

**Answer:** Attributes are the types of data collected, and attribute values are the actual values collected.

**Question:** What is the difference between a data query and a status message query?

**Answer:** You can use data queries to find any data in the Configuration Manager tables and to build collections. You can use status message queries to query only the stored status messages and to assist in the monitoring and troubleshooting of Configuration Manager.

**Question:** How many reporting services points can you have in your hierarchy? How many should you have in your hierarchy?

**Answer:** Answers will vary. You can have one or more reporting services points per primary site and the central administration site. You should have at least one reporting services point in the central administration site and at least one reporting services point in each primary site where the local administrators need to view reports that include data only from their site.

### Real-world Issues and Scenarios

Management users at an organization want to view reports from within Configuration Manager, but typically do not have any configured roles in Configuration Manager. What can you do to allow them to read reports from Configuration Manager?

**Answer:** One possible solution is to assign them permissions through the SQL Server Reporting Services website.

## Tools

Tool	Use for	Where to find it
SQL Server SQL Server Data Tools	Creating custom models for reports	Microsoft SQL Server <a href="http://go.microsoft.com/fwlink/?LinkId=252940">http://go.microsoft.com/fwlink/?LinkId=252940</a>
Microsoft Visual Studio®	Developing custom reports for SQL Server Reporting Services	Microsoft Visual Studio <a href="http://go.microsoft.com/fwlink/?LinkID=252941">http://go.microsoft.com/fwlink/?LinkID=252941</a>

## Common Issues and Troubleshooting Tips

Common Issue	Troubleshooting Tip
Queries not returning results	Data may not exist in the database. When setting the criteria for queries, use the Values button, to be sure that the data exists in the database. Additionally, when using multiple criteria for a query, be careful not to create a query statement so complex that no objects can match the query.
Reports not showing up in the Configuration Manager console	Ensure that SQL Server Reporting Services has been configured. In particular, when using the default settings, ensure that you clicked the Apply button for the Web Service URL and the Report Manager URL.

## Lab Review Questions and Answers

### Lab A: Creating and Running Queries

#### Question and Answers

**Question:** Why did you use the **OR** operator for the query to return both the Production users and the Research users?

**Answer:** If you used the **AND** operator, it would return only users who are in both groups. To find the users in either group, you use the **OR** operator.

**Question:** In your work environment, what additional status message queries would you make or have you made?

**Answer:** Answers will vary. One possible answer is queries for specific client-status messages.

**Question:** Why would you import an existing query to create a new query?

**Answer:** Answers will vary. One possible answer is that it is easier to modify an existing query than to build a new query.

### Lab B: Configuring Reporting

#### Question and Answers

**Question:** Why was the number of users that the queries returned greater than those that the report returned?

**Answer:** The query returned all discovered users. However, the user report returns all the users associated with a device in the database.

**Question:** What account should you use for the SQL Server Reporting Services service account?

**Answer:** You should use the Local System account or an account that has administrative rights to the reporting database.

**Question:** What rights do users need to view reports on the SQL Reporting Services website?

**Answer:** Users need at least Read access to the data for it to display in a report.

# Module 6

## Managing Software Distribution and Deployment by Using Packages and Programs

### Contents:

Lesson 1: Configuring Software Distribution	2
Lesson 2: Configuring Packages and Programs	4
Lesson 3: Distributing Content to Distribution Points	7
Lesson 4: Deploying Programs to Configuration Manager Clients	12
Module Review and Takeaways	14
Lab Review Questions and Answers	15

## Lesson 1

# Configuring Software Distribution

### Contents:

Demonstration: Configuring the Software Distribution Component and Client Settings 3

## Demonstration: Configuring the Software Distribution Component and Client Settings

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, expand **Site Configuration**, and then click **Sites**.
2. In the results pane, right-click **S01-Adatum Site**, point to **Configure Site Components**, and then click **Software Distribution**. The **Software Distribution Component Properties** dialog box opens.
3. On the **General** tab, note the default settings for the **Concurrent distribution settings**, **Retry settings**, and **Multicast retry settings** sections.
4. Click the **Network Access Account** tab.
5. Select **Specify the account that accesses network locations**.
6. Click **Set**, and then click **New Account**.
7. In the **Windows User Account** dialog box, click **Browse**.
8. In the **Select User** dialog box, type **NetworkAccess**, click **Check Names**, and then click **OK**.
9. In the **Windows User Account** dialog box, in the **Password** and **Confirm password** fields, type **Pa\$\$w0rd**.
10. Click **Verify**, and then in the **Network share** field, type **\\LON-CFG\SMS\_S01**.
11. Click **Test connection**. In the **Configuration Manager** dialog box, review the message to make sure that the connection was verified successfully, and then click **OK**.
12. In the **Windows User Account** dialog box, click **OK**.
13. Click **OK** to close the **Software Distribution Component Properties** dialog box.
14. In the **Administration** workspace, click **Client Settings**.
15. In the results pane, right-click **Default Client Settings**, and then click **Properties**.
16. Click **Background Intelligent Transfer**. Discuss the relevant options for the device settings.
17. Click **Client Policy**. Discuss the relevant options for the device settings.
18. Click **Computer Agent**. Discuss the relevant options for the device settings.
19. Click **Computer Restart**. Discuss the relevant options for the device settings.
20. Click **State Messaging**. Discuss the relevant options for the device settings.
21. Click **Cancel** to close the **Default Settings** window.

## Lesson 2

# Configuring Packages and Programs

### Contents:

Demonstration: Creating a Package and Program

5

## Demonstration: Creating a Package and Program

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Software Library** workspace, expand **Application Management**, and then click **Packages**.
3. Right-click **Packages**, and then click **Create Package**. The **Create Package and Program Wizard** opens.
4. On the **Package** page, configure the following settings, and then click **Next**:
  - Name: **Office Viewers**
  - Description: **Microsoft Office Viewers Package**
  - Manufacturer: **Microsoft**
  - Language: **English**
  - Version: **2007**
  - This package contains source files: **Selected**
  - Source folder: Local folder on site server: **E:\Software\Office Viewers**
5. On the **Program Type** page, select **Standard program**, and then click **Next**.
6. On the **Standard Program** page, configure the following settings, and then click **Next**:
  - Name: **PowerPoint Viewer**
  - Command line: **PPTViewer\PowerPointViewer.exe /quiet**
  - Program can run: **Whether or not a user is logged on**
7. On the **Requirements** page, configure the following, and then click **Next**:
  - Estimated disk space: **50 MB**
  - Maximum Allowed Run Time (minutes): **15**
8. On the **Summary** page, click **Next**.
9. On the **Completion** page, click **Close**.
10. In the results pane, right-click **Office Viewers**, and then click **Properties**.
11. Click the **Data Source** tab, and then select the check box next to **Enable binary differential replication**.
12. Click the **Data Access** tab, and then select the check box next to **Disconnect users from distribution points**.
13. Click the **Distribution Settings** tab. Note that the **Prestaged distribution point settings** option is configured to **Manually copy the content in this package to the distribution point**.
14. Click **OK** to close the **Office Viewers Properties** dialog box.
15. In the results pane, click **Office Viewers**.
16. In the preview pane, click the **Programs** tab. Point out that the initial program is listed.
17. Right-click **Office Viewers**, and then click **Create Program**. The **Create Program Wizard** starts.
18. On the **Program Type** page, select the **Standard program** option, and then click **Next**.
19. On the **Standard Program** page, configure the following settings, and then click **Next**:

- Name: **Visio Viewer**
  - Command line: **VisioViewer2013\VisioViewer32bit.exe /quiet**
  - Program can run: **Whether or not a user is logged on**
20. On the **Requirements** page, configure the following, and then click **Next**:
    - Estimated disk space: **25 MB**
    - Maximum Allowed Run Time (minutes): **15**
  21. On the **Summary** page, click **Next**.
  22. On the **Completion** page, click **Close**.
  23. In the preview pane, right-click **Visio Viewer**, and then click **Properties**. Discuss any required options to modify the program.

## Lesson 3

# Distributing Content to Distribution Points

### Contents:

Demonstration: Installing and Configuring the Distribution Point Site System Role 8

Demonstration: Managing Content on Distribution Points 9

## Demonstration: Installing and Configuring the Distribution Point Site System Role

### Demonstration Steps

1. On LON-SVR1, open Server Manager, if it is not open already.
2. In the Server Manager console, in the navigation pane, click **Local Server**. In the results pane, click **Tasks**, and then click **Computer Management**.
3. In the Computer Management console, expand **Local Users and Groups**, and then click **Groups**.
4. In the details pane, double-click **Administrators**. The **Administrators Properties** dialog box opens.
5. In the **Administrators Properties** dialog box, click **Add**.
6. In the **Select Users, Computers, Service Accounts, or Groups** dialog box, click **Object Types**.
7. In the **Object Types** dialog box, select the check box next to **Computers**, and then click **OK**.
8. In the **Select Users, Computers, Service Accounts, or Groups** dialog box, type **LON-CFG**. Click **Check Names**, and then click **OK**.
9. Click **OK** to close the **Administrators Properties** dialog box.
10. Close all open windows.
11. On LON-CFG, in the System Center 2012 R2 Configuration Manager console, click the **Administration** workspace, expand **Site Configuration**, and then click **Servers and Site System Roles**.
12. Right-click **Servers and Site System Roles**, and then click **Create Site System Server**. The **Create Site System Server Wizard** opens.
13. On the **General** page, describe the options, configure the following, and then click **Next**:
  - o Name: **LON-SVR1.Adatum.com**
  - o Site code: **S01 – Adatum Site**
14. On the **Proxy** page, click **Next**.
15. On the **System Role Selection** page, select the check box next to **Distribution point**, and then click **Next**.
16. On the **Distribution Point** page, select the check box next to **Install and configure IIS if required by Configuration Manager**. Select the check box next to **Enable this distribution point for prestaged content**.
17. Discuss the other available options, but do not configure any additional settings. Click **Next**.
18. On the **Drive Settings** page, review the default settings, and then click **Next**.
19. On the **Pull Distribution Point** page, click **Next**.
20. On the **PXE Settings** page, click **Next**.
21. On the **Multicast** page, click **Next**.
22. On the **Content Validation** page, select the check box next to **Validate content on a schedule**. Discuss the default schedule, and then click **Next**.
23. On the **Boundary Groups** page, discuss the options, but do not change any settings, and then click **Next**.
24. On the **Summary** page, click **Next**.

25. On the **Completion** page, click **Close**.
26. Click the **Monitoring** workspace, expand **Distribution Status**, and then click **Distribution Point Configuration Status**. Note that as components install, the status may show an error state. This will not affect the rest of the tasks.
27. In the results pane, click **LON-SVR1.Adatum.com**. In the preview pane, discuss the **Summary** and **Details** tabs.
28. Click the **Administration** workspace, and then click the **Distribution Points** node.
29. In the results pane, click **LON-SVR1.Adatum.com**. Discuss the information in the preview pane.
30. In the results pane, right-click **LON-SVR1.Adatum.com**, and then click **Properties**. Discuss the related settings for each tab, and then click **OK** to close the dialog box.
31. Click the **Distribution Point Groups** node.
32. Right-click **Distribution Point Groups**, and then click **Create Group**.
33. On the **Create New Distribution Point Group** dialog box, in the **Name** field, type **London DPs**. In the **Description** field, type **Distribution Points located in London**.
34. In the **Create New Distribution Point Group** dialog box, on the **Members** tab, and then click **Add**.
35. In the **Add Distribution Points** dialog box, click the **LON-CFG.Adatum.com** and **LON-SVR1.Adatum.com** check boxes. Click **OK**.
36. In the **Create New Distribution Point Group** dialog box, click the **Collections** tab, and then click **Add**.
37. In the **Select Collections** dialog box, click the dropdown menu, and then click **Device Collections**. Select the **All Windows 8.1 Workstations** check box, and then click **OK**.
38. Click **OK** to close the **Create New Distribution Point Group** dialog box.

## Demonstration: Managing Content on Distribution Points

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Software Library** workspace, expand **Application Management**, and then click **Packages**.
3. In the results pane, right-click **Office Viewers**, and then click **Distribute Content**. The **Distribute Content Wizard** opens.
4. On the **General** page, click **Next**.
5. On the **Content Destination** page, click **Add**, and then click **Distribution Point Group**.
6. On the **Add Distribution Point Groups** dialog box, select the check box next to **London DPs**, and then click **OK**. Click **Next**.
7. On the **Summary** page, click **Next**.
8. On the **Completion** page, click **Close**.
9. Click the **Monitoring** workspace, expand **Distribution Status**, and then click **Content Status**.
10. In the results pane, click **Microsoft Office Viewers 2007 English**. Discuss the information that displays in the details pane.
11. In the preview pane, click **View Status**. On the **Success** tab, discuss the information that displays. Click the **In Progress** tab, and then discuss the information that displays.

12. Refresh the status until LON-CFG.ADATUM.COM appears on the **Success** tab under Asset Details.
13. On the **In Progress** tab, right-click **LON-SVR1.Adatum.com**, and then discuss the **Cancel** and **Redistribute** options (dimmed).
14. In the **Administration** workspace, click the **Distribution Points** node.
15. In the results pane, right-click **LON-CFG.Adatum.com**, and then click **Properties**.
16. Click the **Content** tab. Discuss the **Validate**, **Redistribute**, and **Remove** buttons. Click **OK**.
17. Click the **Software Library** workspace, expand **Application Management**, and then click **Packages**.
18. In the results pane, right-click **Office Viewers**, and then click **Properties**.
19. Click the **Content Locations** tab. Discuss the **Validate**, **Redistribute**, and **Remove** buttons. Click **OK**.
20. In the results pane, right-click **Office Viewers**, and then click **Create Prestaged Content File**. The **Create Prestaged Content File Wizard** starts.
21. On the **General** page, click the **Browse** button.
22. In the **Prestaged content file** dialog box, in the **File name** text box, type **E:\OfficeViewers.pkgx**, and then click **Save**.
23. On the **General** page, click **Next**.
24. On the **Content** page, click **Next**.
25. On the **Content Locations** page, click **Add**. In the **Add Distribution Points** dialog box, select the **LON-CFG.Adatum.com** check box, and then click **OK**.
26. On the **Content Locations** page, click **Next**.
27. On the **Summary** page, click **Next**.
28. On the **Completion** page, click **Close**. Discuss the information on the **Completion** page.
29. Switch to LON-SVR1.
30. Open Windows® Explorer, and then browse to **\\LON-CFG\E\$**.
31. Copy **OfficeViewers.pkgx** to **C:\** on LON-SVR1.
32. On LON-SVR1, click **Start**, type **CMD**, right-click **Command Prompt**, and then click **Run as administrator**.
33. In the **Administrator: Command Prompt** window, type the following commands, and press Enter after each command:
  - o `CD C:\SMS_DP$\SMS\Tools`
  - o `ExtractContent /P:C:\ OfficeViewers.pkgx /S`
  - o `Exit`
34. Discuss the results that display in the command prompt.
35. Switch to LON-CFG.
36. In the Configuration Manager Console, in the results pane, right-click **Office Viewers**, and then click **Refresh**. Repeat this step until the Content Status appears green.
37. Click the **Content Status** link.
38. Click Microsoft Office Viewers 2007 English.
39. Click the **View Status** link.

40. Click the **Success** and **In Progress** tabs, and then discuss the information that displays in the results pane.

## Lesson 4

# Deploying Programs to Configuration Manager Clients

### Contents:

Demonstration: Deploying a Software Package by Using the Deploy Software Wizard 13

## Demonstration: Deploying a Software Package by Using the Deploy Software Wizard

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Software Library** workspace, expand **Application Management**, and then click **Packages**.
3. In the results pane, click the **Office Viewers** package.
4. In the preview pane, select the **Programs** tab, right-click the **PowerPoint Viewer** program, and then click **Deploy**. The **Deploy Software Wizard** starts.
5. On the **General** page, configure the following settings, and then click **Next**:
  - o Software: **Office Viewers (PowerPoint Viewer)**
  - o Collection: **All Windows 8.1 Workstations**
6. On the **Content** page, click **Next**.
7. On the **Deployment Settings** page, configure the following settings, and then click **Next**:
  - o Purpose: **Required**
8. On the **Scheduling** page, next to **Assignment schedule**, click **New**. In the **Assignment Schedule** dialog box, select the **Assign immediately after this event** option. Ensure that **As soon as possible** displays, and then click **OK**.
9. On the **Scheduling** page, click **Next**.
10. On the **User Experience** page, click **Next**.
11. On the **Distribution Points** page, in the Deployment options box, verify that **Download content from distribution point and run locally** is selected, and then click **Next**.  
Note that this selection is used when the client is connected within a fast (LAN) network boundary.
12. On the **Summary** page, click **Next**.
13. On the **Completion** page, click **Close**.
14. Switch to LON-CL1.
15. Open Control Panel, and then click **System and Security**.
16. Click **Configuration Manager**.
17. In the **Configuration Manager Properties** dialog box, click the **Actions** tab.
18. In the **Actions** tab, click **Machine Policy Retrieval & Evaluation Cycle**, and then click **Run Now**.
19. In the **Machine Policy Retrieval & Evaluation Cycle** message box, click **OK**.
20. Click **OK** to close the **Configuration Manager Properties** dialog box, and then close the Control Panel. Wait two minutes before continuing.
21. Switch to LON-CFG, click the **Monitoring** workspace, and then click **Deployments**.
22. Double-click **Office Viewers (PowerPoint viewer)**, and then click the **Run summarization** link to verify that the deployment was successful. This may take several minutes.

## Module Review and Takeaways

### Review Question(s)

**Question:** What are some of the ways that software distribution can help reduce TCO?

**Answer:** Software distribution can help reduce TCO by:

- Reducing the need for staff to install software manually.
- Increasing the consistency of software installations.
- Improving client satisfaction by reducing the time that application installations take.

**Question:** What is the default timeout when you are deploying a package to a distribution point?

**Answer:** By default, the timeout process of copying a package to a distribution point is 50 hours, at which point an error status message will generate.

**Question:** Which object must you create first: the package or the program?

**Answer:** You must create the package first. You cannot create a program until a package exists.

**Question:** What can you do to ensure that software does not install during working hours?

**Answer:** You can configure a maintenance window on the collection to control software-installation times.

# Lab Review Questions and Answers

## Lab: Managing Software Deployment by Using Packages and Programs

### Question and Answers

**Question:** Where can you quickly review the status of deployed software?

**Answer:** You can quickly review the status of deployed software on the Deployments node of the Monitoring workspace.

**Question:** Can you distribute a package to a distribution point without defining a program?

**Answer:** Yes, you can. However, you cannot create a deployment without a program.

**Question:** You do not want to deploy a program until it distributes to all distribution points. How can you tell if the package has been distributed successfully to distribution points?

**Answer:** You can review the status of content on the Content Status node of the Monitoring workspace.

# Module 7

## Creating and Deploying Applications

### Contents:

Lesson 1: Overview of Application Management	2
Lesson 2: Creating Applications	4
Lesson 3: Deploying Applications	7
Lesson 4: Managing Applications	9
Module Review and Takeaways	11
Lab Review Questions and Answers	12

## Lesson 1

# Overview of Application Management

### Contents:

Resources	3
Demonstration: Installing the Application Catalog Site System Roles	3

## Resources

### Server Roles Used for Managing Applications

 **Additional Reading:** Visit the Supported Configurations for Configuration Manager topic in the following site for the complete list of prerequisites: [http://technet.microsoft.com/en-us/library/gg682077.aspx#BKMK\\_SiteSystemRolePrereqs](http://technet.microsoft.com/en-us/library/gg682077.aspx#BKMK_SiteSystemRolePrereqs)

### Demonstration: Installing the Application Catalog Site System Roles

#### Demonstration Steps

1. On LON-CFG, on the taskbar, click **Configuration Manager Console**.
2. Click the **Administration** workspace, expand the **Site Configuration** folder, and then click the **Servers and Site System Roles** node.
3. Click **\\LON-CFG.Adatum.com**, on the ribbon click the **Home** tab, and then click **Add Site System Roles**.
4. In the Add Site System Roles Wizard, on the **General** page, click **Next**.
5. On the **Proxy** page, click **Next**.
6. On the **System Role Selection** page, select the **Application Catalog web service point** and the **Application Catalog website point** check boxes, and then click **Next**.
7. On the **Application Catalog web service point** page, click **Next**.
8. On the **Application Catalog website point** page, click **Next**.
9. On the **Application Catalog Customizations** page, in the **Organization name** box, type **Adatum** and then click **Next**.
10. On the **Summary** page, click **Next**.
11. On the **Completion** page, click **Close**.

## Lesson 2

# Creating Applications

### Contents:

Demonstration: Creating an Application from an .msi File	5
Demonstration: Creating a Global Condition and a Requirement	6

## Demonstration: Creating an Application from an .msi File

### Demonstration Steps

1. Click the **Software Library** workspace, expand **Application Management**, and then click **Applications**.
2. Right-click **Applications**, and then click **Create Application**.
3. In the Create Application Wizard, on the **General** page, ensure that the **Automatically detect information about this application from installation files** option is selected and the **Type** list displays **Windows Installer (\*.msi file)**, and then click **Browse**.
4. Navigate to `\\LON-CFG\Software\MSI_Files\ExcelViewer`, click `xlview.msi`, and then click **Open**.
5. On the **General** page, click **Next**.
6. On the **Import Information** page, click **Next**.
7. On the **General Information** page, in the **Administrator comments** box, type **Excel viewer program** in the **Publisher** box, type **Microsoft** and then in the **Software version** box, type **12.0.4518.1069**
8. Next to **Administrative categories**, click **Select**.
9. In the **Manage Administrative Categories** dialog box, click **Create**, and in the **Create Administrative Category** box, type **Viewer** and then click **OK**.
10. In the **Manage Administrative Categories** dialog box, click **OK**.
11. On the **General Information** page, click **Next**.
12. On the **Summary** page, click **Next**.
13. On the **Completion** page, click **Close**.
14. In the results pane, click **Microsoft Office Excel Viewer**, and then on the ribbon, click **Properties**.
15. Review the settings on the **General** tab.
16. On the **Application Catalog** tab, next to **User categories**, click **Edit**.
17. In the **User Categories** dialog box, click **Create**.
18. In the **Create User Category** dialog box, in the **Specify the name of the new user category** box, type **Viewers** and then click **OK**.
19. In the **User Categories** dialog box, click **Create**.
20. In the **Create User Category** dialog box, in the **Specify the name of the new user category** box, type **Excel and** click **OK**, and then in the **User Categories** dialog box, click **OK**.
21. In the **Keywords** box, type **Spreadsheet** and then next to **Icon**, click **Browse**.
22. In the **Open** dialog box, click **Browse**, navigate to `C:\Windows\System32\imageres.dll`, and then click **Open**.
23. Click an icon, and then click **OK**.

In the **Microsoft Office Excel Viewer Properties** dialog box, click **OK**.

## Demonstration: Creating a Global Condition and a Requirement

### Demonstration Steps

1. In the Configuration Manager Console, click the **Software Library** workspace, expand the **Application Management** folder, and then click the **Global Conditions** node.

2. On the ribbon, click **Create Global Condition**.
3. In the **Create Global Condition** dialog box, click the **Browse** button.
4. In the **Browse Registry** dialog box, expand **HKEY\_LOCAL\_MACHINE**, expand **SOFTWARE**, expand **Microsoft**, click **Internet Explorer**, and in the **Registry Value** box, click **Version**, and then click **OK**.
5. In the **Create Global Condition** dialog box, in the **Name** box, type: **Internet Explorer Version**
6. In the **Create Global** Condition dialog box, click **OK**.
7. In the **Software Library** workspace, in the **Application Management** folder, click the **Applications** node.
8. Right-click **Microsoft Office Excel Viewer**, and then click **Properties**.
9. Click the **Deployment Types** tab.
10. Click **Microsoft Office Excel Viewer – Windows Installer (\*.msi file)**, and then click **Edit**.
11. Select the **Requirements** tab, and then click **Add**.
12. In the **Category** list, select **Custom**.
13. In the **Condition** list, select **Internet Explorer Version**.
14. In the **Value** box, type **9.11.9431.0**
15. Click **Cancel**.
16. In the **Microsoft Office Excel Viewer - Windows Installer (\*.msi file)** Properties dialog box, click **Cancel**.
17. In the **Microsoft Office Excel Viewer Properties** dialog box, click **Cancel**.

## Lesson 3

# Deploying Applications

### Contents:

Demonstration: Deploying an Application

8

## Demonstration: Deploying an Application

### Demonstration Steps

1. Click the **Software Library** workspace, and then under **Application Management**, click the **Applications** node.
2. Click **Microsoft Office Excel Viewer**, and on the ribbon, click **Deployment**, and then click **Deploy**.
3. In the Deploy Software Wizard, on the **General** page, next to the **Collection** box, click **Browse**.
4. In the **Select Collection** dialog box, click **All Users**, click **OK**, and then click **Next**.
5. On the **Content** page, click **Add**, and then click **Distribution Point**.
6. In the **Add Distribution Points** dialog box, select the check box next to **LON-CFG.ADATUM.COM**, and then click **OK**.
7. On the **Content** page, click **Next**.
8. On the **Deployment Settings** page, in the **Purpose** list, select **Required**, and then click **Next**.
9. On the **Scheduling** page, select the **Schedule at** option, and in the date list, select *tomorrow's date*, and then click **Next**.
10. On the **User Experience** page, click **Next**.
11. On the **Alerts** page, click **Next**.
12. On the **Summary** page, click **Next**.
13. On the **Completion** page, click **Close**.

## Lesson 4

# Managing Applications

### Contents:

Demonstration: Configuring Application Supersedence

10

## Demonstration: Configuring Application Supersedence

### Demonstration Steps

1. On LON-CFG, click the **Software Library** workspace, expand the **Application Management** folder, and then click the **Applications** node.
2. Click the **XML Notepad 2007** application, and on the ribbon, click **Properties**.
3. In the **XML Notepad 2007 Properties** dialog box, click the **Deployment Types** tab.
4. Click the **XML Notepad 2007 – Windows installer (\*.msi file)** deployment type, and then click **Edit**.
5. In the **XML Notepad 2007 – Windows installer (\*.msi file) Properties** dialog box, click the **Requirements** tab.
6. On the **Requirements** tab, click **Add**.
7. In the **Create Requirement** dialog box, click the **Category** drop-down list, and then select **Device**.
8. Click the **Condition** drop-down list, and then select **Operating system**.
9. In the **Operator** list, select the **Windows 8.1 Preview** check box.
10. In the **Create Requirement** dialog box, click **OK**.
11. In the **XML Notepad 2007 – Windows installer (\*.msi file) Properties** dialog box, click **OK**.
12. Click the **Supersedence** tab.
13. Click the **Add** button.
14. In the **Specify Supersedence Relationship** dialog box, click **Browse**.
15. In the **Choose Application** dialog box, click **Microsoft Office Word Viewer**, and then click **OK**.
16. In the **Specify Supersedence Relationship** dialog box, click the **New Deployment Type** drop-down list, and then select **XML Notepad 2007– Windows Installer (\*.msi file)**.
17. Select the **Uninstall** check box for the **Microsoft Office Word Viewer 2003 - Windows Installer (\*.msi file)** deployment type, and then click **OK**.
18. In the **XML Notepad 2007 Properties** dialog box, click **OK**.
19. In the results pane, click **XML Notepad 2007**.
20. On the ribbon, click the **View Relationships** button, and then click **Supersedence**.
21. Discuss the **XML Notepad 2007 Supersedence** window, and then click **OK**.

# Module Review and Takeaways

## Review Question(s)

**Question:** What are some of the differences between an application and a package?

**Answer:** There are several differences between an application and a package; including but not limited to:

- An application uses deployment types instead of programs.
- Application can have supersedence relationships defined in them.
- You can add more user searchable information to an application.

**Question:** How can you create an application?

**Answer:** There are two ways to create an application: automatically, by importing the information from an installer file such as an .msi file or a .cab file, and manually.

**Question:** What is a detection method?

**Answer:** Detection methods enable the deployment process to determine whether or not an application is already present in a system. Detection methods can use file or folder properties, registry settings, or scripts for determining if a particular application is installed.

**Question:** What is Application Catalog?

**Answer:** Application Catalog is a website that allows users to install or request available software. Also, it provides with control over their application deployment experience.

**Question:** Can you add multiples of the same deployment types to a single application?

**Answer:** Yes. You may need to create multiple deployment types of the same type for a single application in several situations, including when there are different dependencies based on the operating system target, for example.

# Lab Review Questions and Answers

## Lab A: Creating and Deploying Applications

### Question and Answers

**Question:** Why is the status of each deployed application so different?

**Answer:** You deployed the Microsoft Office Word Viewer as Required. Therefore, the status is based on all the users who have or have not installed the application and systems that have downloaded the content. You deployed Microsoft Office Excel® Viewer as Available. Therefore, the status process does not have any information to use other than attempted installations.

## Lab B: Managing Application Supersedence and Removal

### Question and Answers

**Question:** When you signed on as Ed during exercise 1, why did you see information about only the Microsoft Excel application and the XML Notepad 2007 application?

**Answer:** The XML Notepad 2007 application replaced the Microsoft Word Viewer application; therefore, the Word Viewer application was no longer available.

**Question:** During exercise 2, after you signed on as Ed, why did you see information for the Excel application and the XML Notepad 2007 application?

**Answer:** The XML Notepad 2007 application replaced the Word Viewer application; therefore, you do not see anything about the Word Viewer application. The Excel Viewer application was uninstalled and not replaced, so the Excel Viewer application still exists and could become available in the future.

# Module 8

## Deploying Additional Application Types

### Contents:

Lesson 1: Deploying Windows Store Apps by Using System Center 2012 R2 Configuration Manager	2
Module Review and Takeaways	4
Lab Review Questions and Answers	5

## Lesson 1

# Deploying Windows Store Apps by Using System Center 2012 R2 Configuration Manager

### Contents:

Demonstration: Configuring Group Policy to Enable Sideloads 3

## Demonstration: Configuring Group Policy to Enable Sideloading

### Demonstration Steps

1. On LON-DC1, in the **Server Manager**, on the **Dashboard** screen, click **Tools**, and then click **Group Policy Management**.
2. In the **Group Policy Management** console, expand the node to **Forest: Adatum.com/Domains/Adatum.com**, and then click **Group Policy Objects**.
3. Click the **Action** menu, and then click **New**.
4. In the **New GPO** dialog box, in the **Name** field, type **Windows 8 Sideloading** and then click **OK**.
5. Right-click **Windows 8 Sideloading**, and then click **Edit**.
6. Under **Computer Configuration**, expand the node to **Policies/Administrative Templates/Windows Components/App Package Deployment**, and then click **Allow All Trusted Apps to install**.
7. Click the **Action** menu, and then click **Edit**.
8. In the **Allow All Trusted Apps to install** dialog box, click the **Enabled** option, and then click **OK**.
9. Close the Group Policy Management Editor.

## Module Review and Takeaways

### Review Question(s)

**Question:** When deploying applications using deployment types other than Windows Installer (\*.msi files), such as Windows Store apps and Microsoft Application Virtualization, how do you troubleshoot problems?

**Answer:** Troubleshoot deployments by using the same method regardless of the deployment type that you use.

1. Review any error messages generated.
2. Review the appropriate client log files.
3. Review the appropriate status messages.

### Real-world Issues and Scenarios

#### Tools

Integrating Virtual Application Management with App-V 5 and Configuration Manager 2012 SP1:  
<http://www.microsoft.com/en-us/download/details.aspx?id=38177>

## Lab Review Questions and Answers

### Lab A: Deploying Windows Store Apps by Using System Center 2012 R2 Configuration Manager

#### Question and Answers

**Question:** How would you configure the sideloading Group Policy Object (GPO) if your client computers used different Windows versions?

**Answer:** Answers will vary depending on the students' experiences but may include configuring a Windows Management Instrumentation (WMI) filter for the GPO to limit applications to Windows 8-based computers. Another answer may be creating a Windows 8 computer device group and configuring permissions to apply only the policy for that group.

**Question:** How can you troubleshoot Windows Store app deployments?

**Answer:** Troubleshooting a Windows Store app deployment is the same as troubleshooting any other application deployment. You use the related local log files on the client and the status messages sent to the server.

### Lab B: Deploying Virtual Applications by Using Configuration Manager 2012

#### Question and Answers

**Question:** In your environment, would you deploy App-V deployment types as the only deployment type in your applications or would you include them as one of several deployment types?

**Answer:** The answers may vary. They could include creating applications with App-V and Windows Installer (\*.msi file) deployment types and then using requirements to determine the deployment type to use at runtime.

**Question:** Why did the application take a long time to start after the installation completed?

**Answer:** The installation copied the package content into the Configuration Manager cache. The first time the application is run, the App-V client has to copy the contents to the App-V cache.

# Module 9

## Deploying and Managing Software Updates

### Contents:

Lesson 2: Preparing a Configuration Manager Site for Software Updates	2
Lesson 3: Managing Software Updates	6
Lesson 4: Configuring Automatic Deployment Rules	10
Module Review and Takeaways	13
Lab Review Questions and Answers	14

## Lesson 2

# Preparing a Configuration Manager Site for Software Updates

### Contents:

Demonstration: Installing and Configuring the Software Update Point 3

## Demonstration: Installing and Configuring the Software Update Point

### Demonstration Steps

1. On LON-SVR1, open Server Manager.
2. In the Server Manager console, click **Tools**, and then click **Computer Management**.
3. In Computer Management, expand System Tools, expand Local Users and Groups, and then click Groups.
4. In the details pane, double-click **Administrators**. The **Administrators Properties** dialog box opens.
5. In the **Administrators Properties** dialog box, click **Add**.
6. In the Select Users, Computers, Service Accounts, or Groups dialog box, click Object Types.
7. In the **Object Types** dialog box, select the **Computers** check box, and then click **OK**.
8. In the Select Users, Computers, Service Accounts, or Groups dialog box, type LON-CFG. Click Check Names, and then click OK.
9. Click OK to close the Administrators Properties dialog box. Close Computer Management.
10. In the Server Manager console, in the navigation pane, click **WSUS**. Verify that Windows® Server Update Services (WSUS) has already been installed.
11. Close Server Manager.
12. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
13. Click the Administration workspace, expand Site Configuration, and then click Servers and Site System Roles.
14. Right-click **Servers and Site System Roles**, and then click **Create Site System Server**. The Create Site System Server Wizard opens.
15. On the **General** page, describe the options, and then configure the following settings:
  - Name: LON-SVR1.Adatum.com
  - Site code: S01 – Adatum Site
16. Click **Next**.
17. On the **Proxy** page, click **Next**.
18. On the **System Role Selection** page, select the check box next to **Software update point**, and then click **Next**.
19. On the Software Update Point page, select the WSUS is configured to use ports 8530 and 8531 for client communications (default settings for WSUS on Windows Server 2012) option. Click Next.
20. On the Proxy and Account Settings page, click Next.
21. On the Synchronization Source page, select the option next to Do not synchronize from Microsoft Update or upstream data source, and then click Next.
22. On the Synchronization Schedule page, click Next.
23. On the **Supersedence Rules** page, select the **Immediately expire a superseded software update** option. Discuss the other options, and then click **Next**.
24. On the **Classifications** page, select the following software update classifications (Remove all other selections):
  - Critical Updates

- o Definition Updates
  - o Security Updates
25. Click **Next**.
  26. On the **Products** page, expand all nodes and remove the check mark next to all selected products. Browse to and select the following Product:
    - o Windows 8
  27. Click **Next**.
  28. On the **Languages** page, ensure that only **English** is selected. Deselect any other enabled languages, and then click **Next**.
  29. On the **Summary** page, click **Next**.
  30. On the **Completion** page, click **Close**.
  31. Click the **Monitoring** workspace, expand **System Status**, and then click **Component Status**.
  32. In the results pane, scroll down, and then click **SMS\_WSUS\_CONTROL\_MANAGER**.
  33. Right-click **SMS\_WSUS\_CONTROL\_MANAGER**, point to **Show Messages**, and then click **All**.
  34. In the Status Messages: Set Viewing Period dialog box, click OK.
  35. In the Configuration Manager Status Message Viewer, discuss the messages related to the component installation on LON-SVR1. Refresh the display until status message 1015 appears.
  36. Close the Configuration Manager Status Message Viewer.
  37. Click the Software Library workspace, expand Software Updates, and then click All Software Updates.
  38. Right-click **All Software Updates**, and then click **Synchronize Software Updates**. In the message box, click **Yes**.
  39. Click the **Administration** workspace, expand **Site Configuration**, and then click **Sites**.
  40. In the results pane, right-click S01 – Adatum Site, point to Configure Site Components, and then click Software Update Point.
  41. Click the **Products** tab, and then select the check box next to the following: **Office 2013, Windows 8.1**. Note that if these products are not visible repeat steps 37-40.
  42. Click the Software Library workspace, expand Software Updates, and then click All Software Updates.
  43. Right-click All Software Updates, and then click Synchronize Software Updates.
  44. In the **Configuration Manager** message box, to initiate a site-wide synchronization of software updates, click **Yes**.
  45. Click the **Monitoring** workspace, and then click **Software Update Point Synchronization Status**. Point out the information in the preview pane.
  46. Click the **Administration** workspace, and then click **Client Settings**.
  47. In the results pane, right-click **Default Client Settings**, and then click **Properties**.
  48. In the **Default Settings** dialog box, click **Software Updates**. Verify that software updates is enabled, and then discuss other options, as needed.
  49. Modify the **State Messaging** value to have a reporting cycle of 5 minutes.
- On LON-CL2, open Configuration Manager Properties, and then initiate the Machine Policy Retrieval & Evaluation Cycle action and the Software Updates Scan Cycle actions.



## Lesson 3

# Managing Software Updates

### Contents:

Demonstration: Creating Software Update Groups and Deployment Packages	7
Demonstration: Deploying Software Updates	8

## Demonstration: Creating Software Update Groups and Deployment Packages

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Software Library workspace**, expand **Software Updates**, and then click **All Software Updates**.
3. In the results pane, select the following updates:
  - a. **Update for Microsoft Office 2013 (KB2752094) 32-Bit Edition**
  - b. **Update for Microsoft Office 2013 (KB2726954) 32-Bit Edition**
4. On the ribbon, select the **Home** tab, and then click **Create Software Update Group**. The **Create Software Update Group** dialog box opens.
5. On the **Create Software Update Group** dialog box, configure the following, and then click **Create**:
  - Name: **Critical Updates – Office 2013**
  - Description: **Critical Updates for Office 2013**
6. In the **Software Library** workspace, under **Software Updates**, click **Software Update Groups**. The **Critical Updates – Office 2013** software update group is visible in the results pane.
7. Select **Critical Updates – Office 2013**, and then on the ribbon, click **Show Members**. Verify that the two updates that you added are displayed.
8. Under **Software Updates**, click **Software Update Groups**.
9. In the ribbon, click **Run Summarization**. In the **Configuration Manager** message box, click **OK**. Wait for a few minutes, and then the preview pane should display the compliance statistics for the **Critical Updates – Office 2013** software update group. Refresh the results pane as required.
10. In the navigation pane, expand **Software Updates**, and then click **Software Update Groups**.
11. In the list pane, right-click **Critical Updates – Office 2013** and then click **Download**. The Download Software Updates Wizard starts.
12. On the **Deployment Package** page, verify that **Create a new deployment package** is selected, and then configure the following information:
  - Name: **Critical Updates – Office2013**
  - Package source: **\\LON-CFG\E\$\Source\Updates**
13. Click **Next**.
14. On the Distribution Points page, click **Add**, and then click **Distribution Point**. The Add Distribution Points dialog box opens.
15. In the **Add Distribution Points** dialog box, select the check box next to **\\LON-CFG.Adatum.com**, and then click **OK**. In the Download Software Updates Wizard, click **Next**.
16. On the **Distribution Settings** page, click **Next**.
17. On the **Download Location** page, click **Download software updates from a location on my network**.
18. In the text box, type **\\LON-CFG\E\$\Software\Updates**, and then click **Next**.
19. On the **Language Selection** page, verify that only **English** is selected, and then click **Next**.
20. On the **Summary** page, click **Next**.

21. On the **Completion** page, verify that the package and software updates show success as indicated by a green check mark. Click **Close**.
22. In the navigation pane, under **Software Updates**, click **Deployment Packages**.
23. In the preview pane, verify that the **Distribution Point Status** shows **Success**.

## Demonstration: Deploying Software Updates

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 Configuration Manager console.
2. Click the **Software Library workspace**, expand **Software Updates**, and then click **Software Update Groups**.
3. In the results pane, select **Critical Updates – Office 2013**.
4. On the ribbon, click **Deploy**. The Deploy Software Updates Wizard starts.
5. On the **General** page, configure the following settings:
  - o Deployment Name: Critical Updates – Office 2013
  - o Collection: All Windows 8.1 Workstations
6. Click **Next**.
7. On the **Deployment Settings** page, next to **Type of deployment**, select **Required**, and then click **Next**.
8. On the **Scheduling** page, click **Next**.
9. On the **User Experience** page, configure the following setting:
  - o User notifications: Display in Software Center and show all notifications
10. Click **Next**.
11. On the **Alerts** page, select the **Generate an alert when the following conditions are met** check box, and then click **Next**.
12. On the **Download Settings** page, click **Next**.
13. On the **Summary** page, verify that the settings are correct, and then click **Save As Template**.
14. In the Save As Template dialog box, in the Name box, type Critical Updates – Office 2013. Click Save.
15. On the **Summary** page, click **Next**.
16. On the **Completion** page, click **Close**.
17. Switch to LON-CL2.
18. Open Control Panel, and then click **System and Security**.
19. Click **Configuration Manager**.
20. In the **Configuration Manager Properties** dialog box, click the **Actions** tab.
21. In the **Actions** tab, click **Machine Policy Retrieval & Evaluation Cycle**, and then click **Run Now**.
22. In the **Machine Policy Retrieval & Evaluation Cycle** message box, click **OK**.
23. In the **Actions** tab, click **Software Updates Deployment Evaluation Cycle**, and then click **Run Now**.
24. In the **Software Updates Deployment Evaluation Cycle** message box, click **OK**.

25. Click **OK** to close the **Configuration Manager Properties** dialog box, and then close Control Panel. Within a few minutes, a prompt appears in the notification area.
26. On LON-CL2, on the Start screen type **Software**, and then click **Software Center**.
27. In the **Software Center**, on the **Installation Status** tab, take note of the installation status and details for the software updates.
28. Select one of the updates and then click **INSTALL SELECTED**.
29. On LON-CFG, click the **Monitoring** workspace, and then click **Deployments**.
30. In the results pane, click **Critical Updates – Office 2013**, and then on the ribbon, click **Run Summarization**. Click **OK**. Describe the information in the preview pane. It may take several minutes for details to appear.
31. In the results pane, right-click **Critical Updates – Office 2013**, and then click **View Status**. View the information that displays on the **Deployment Status** page.

## Lesson 4

# Configuring Automatic Deployment Rules

### Contents:

Demonstration: Creating Automatic Deployment Rules	11
--	----

## Demonstration: Creating Automatic Deployment Rules

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 Configuration Manager console.
2. Click the **Software Library** workspace, **expand Software Updates**, and then click **Automatic Deployment Rules**.
3. On the ribbon, click **Create Automatic Deployment Rule**. The **Create Automatic Deployment Rule Wizard** starts.
4. On the **General** page, configure the following settings:
  - Name: **Required Critical Updates**
  - Collection: **All Windows 8.1 Workstations**
  - Create a new Software Update Group: **Selected**
5. Click **Next**.
6. On the Deployment Settings page, click **Next**.
7. On the **Software Updates** page, under Property filters, select **Required** and **Update Classification** and then configure the following settings:
  - Required: **1**
  - Update Classification: **Critical Updates**
  - Click **Preview** to show the updates and then click **Close**.
8. Click **Next**.
9. On the **Evaluation Schedule** page, verify that the **Enable rule to run on a schedule** option is selected. Click **Customize** and configure the schedule to recur every 2 days. Click **OK** to close the **Custom Schedule** dialog box. Click **Next**.
10. On the **Deployment Schedule** page, configure the following settings:
  - Time based on: Client local time
  - Software available time: **As soon as possible**
  - Installation deadline: **Specific time: 7 days**
11. Click **Next**.
12. On the **User Experience** page, configure the following setting:
  - User notifications: Display in Software Center and show all notifications
13. Click **Next**.
14. On the **Alerts** page, select the **Generate an alert when the following conditions are met** check box, and then click **Next**.
15. On the **Download Settings** page, click **Next**.
16. On the **Deployment Package** page, select **Create a new deployment package**, configure the following settings:
  - Name: **AutoDeployment**
  - Package source: **\\LON-CFG\E\$\source\autoupdate**
17. Click **Next**.

18. On the **Distribution Points** page, click **Add**, and then click **Distribution Point**.
19. On the **Add Distribution Points** dialog box, select the **\\LON-CFG.Adatum.com** check box, and then click **OK**.
20. On the **Distribution Points** page, click **Next**.
21. On the **Download Location** page, select **Download software updates from a location on my network**. In the text box, type **\\LON-CFG\E\$\Software\Updates** and then click **Next**.
22. On the **Language Selection** page, click **Next**.
23. On the **Summary** page, verify that the settings are correct, and then point out the **Save As Template** option to the students. Click **Next**.
24. Click Automatic Deployment Rules, and then in the results pane, select Required Critical Updates.
25. On the ribbon, click **Run Now**. In the **Configuration Manager** message box, click **OK**.
26. In the navigation pane, click **Software Update Groups**. Refresh the results pane. In the results pane, notice that a software update group named **Required Critical Updates** is listed. In addition, notice that the Created By column shows **AutoUpdateRuleEngine**.
27. In the preview pane, click the **Deployment** tab. Notice that a deployment is automatically created, and is enabled.

## Module Review and Takeaways

### Review Question(s)

**Question:** You have specific group of computers that require a unique scan schedule for software updates. What can you do to accommodate this?

**Answer:** You can create a custom client-device setting that you configure with the update requirements. You then can assign the custom client device-settings object to a collection that contains the group of computers.

**Question:** Which method do you feel will benefit you the most for determining compliance with software updates?

**Answer:** Answers will vary, but your options include sorting, filtering, or searching the All Software updates list or using software updates compliance reports.

**Question:** You have a LOB application that you want to update. Which tool can you use to create a catalog for use with software updates?

**Answer:** You can use System Center Updates Publisher to create a catalog for use with software updates.

**Question:** You need to provide information to the junior service-desk staff to help them monitor update deployment. Without giving the junior service-desk staff access to the Configuration Manager console, how can you give them the information?

**Answer:** You can grant the junior service-desk staff access to the Configuration Manager reporting Wwebsite, where they can access the various reports that they require.

## Lab Review Questions and Answers

### Lab A: Configuring the Site for Software Updates

#### Question and Answers

**Question:** You plan to implement the software update point on a Windows Server 2012 server. Which version of WSUS should you install?

**Answer:** For Windows Server 2012, you need to install the Windows Server Update Services server role. There is no need to download a separate WSUS version for installation.

**Question:** You need to add the Service Packs classification to be synchronized for software updates. Where can you make this modification?

**Answer:** This is modified on the Software Update Point Component Properties dialog box.

**Question:** Why would you not want to immediately expire a superseded software update?

**Answer:** You can configure the software update point to not expire a superseded update until a specified amount of time. This is useful, for example, where a critical update has been superseded by a standard security update. The security update may not have been tested for deployment, whereas the critical update can still be deployed as required.

### Lab B: Deploying and Managing Software Updates

#### Question and Answers

**Question:** In the lab, you had to run a summarization to view the status of software updates. What can you do to minimize the manual summarization task?

**Answer:** You can modify the summarization schedule for software updates. By default, it runs every hour. However, if summarization is set too frequently, it can cause performance issues.

**Question:** What are some of the advantages of using a Software Update Group?

**Answer:** A Software Update Group is an efficient way to organize, monitor, and deploy software updates. A number of the reports also are based upon settings for Software Update Groups.

**Question:** When is an automatic deployment rule useful?

**Answer:** An automatic deployment rule is useful for any automated deployments. However, it can be helpful for managing the deployment of Endpoint Protection definition files.

# Module 10

## Implementing Endpoint Protection by Using System Center 2012 R2 Configuration Manager

### Contents:

Lesson 1: Overview of Endpoint Protection in Configuration Manager	2
Lesson 2: Configuring and Monitoring Endpoint Protection Policies	4
Module Review and Takeaways	7
Lab Review Questions and Answers	8

## Lesson 1

# Overview of Endpoint Protection in Configuration Manager

### Contents:

Demonstration: Configuring the Endpoint Protection Point Site System Role and Client Settings 3

## Demonstration: Configuring the Endpoint Protection Point Site System Role and Client Settings

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Administration** workspace, and in the navigation pane, expand **Site Configuration**, and then click **Servers and Site System Roles**.
3. Right-click \\LON-CFG.Adatum.com, and then click **Add Site System Roles**. The Add Site System Roles Wizard opens.
4. On the **General** page, describe the default settings, and then click **Next**:
5. On the **Proxy** page, click **Next**
6. On the **System Role Selection** page, select the **Endpoint Protection point** check box, click **OK** at the message box, and then click **Next**.
7. On the **Endpoint Protection** page, select **the I accept the Endpoint Protection license terms** check box, and then click **Next**.
8. On the **Microsoft Active Protection Service** page, click the **Do not join MAPS** option, and then click **Next**.
9. On the **Summary** page, click **Next**.
10. On the **Completion** page, click **Close**.
11. Click the **Monitoring** workspace, and in the navigation pane, expand **System Status**, and then click **Component Status**.
12. In the results pane, scroll down, and then click **SMS\_ENDPOINT\_PROTECTION\_MANAGER**.
13. On the ribbon, click **Show Messages**, and then click **All**.
14. In the **Status Messages: Set Viewing Period** dialog box, click **OK**.
15. In the Configuration Manager Status Message Viewer, discuss the messages related to the component installation.
16. Close the Configuration Manager Status Message Viewer.
17. Click the **Administration** workspace, and then click **Client Settings**.
18. In the results pane, right-click **Default Client Settings**, and then click **Properties**.
19. In the **Default Settings** dialog box, click **Endpoint Protection**. Discuss each of the device settings. Explain that configuring the settings here will affect all clients in the hierarchy. In addition, explain that you should configure policies before enabling installation. The policy will define where to download the latest updates from and will define initial client settings.
20. Next to **Manage Endpoint Protection client on client computers**, click **Yes**.
21. Click **OK** to close the **Default Settings** dialog box.

## Lesson 2

# Configuring and Monitoring Endpoint Protection Policies

### Contents:

Demonstration: Configuring Endpoint Protection Policies

5

## Demonstration: Configuring Endpoint Protection Policies

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Assets and Compliance** workspace, and in the navigation pane, expand **Endpoint Protection**, then click **Antimalware Policies**.
3. On the ribbon, click **Create Antimalware Policy**. The **Create Antimalware Policy** dialog box opens.
4. On the **General** page, configure the following settings:
  - Name: **Windows 8.1 Client Policy**
  - Description: **Windows 8.1 Antimalware Policy**
5. Select each of the setting pages, discuss the default options, and then on the **Definition updates** page, click **Set Source**. The **Configure Definition Update Sources** dialog box opens.
6. Select the **Updates from UNC file shares** check box, and then click the **Up** button until the selection is first on the list.
7. Clear all other options, and then click **OK**.
8. Click the **Set Paths** button. The **Configure Definition Update UNC Paths** dialog box opens.
9. Under **UNC path**, type `\\LON-CFG\Software\Updates` and then click **Add**.
10. Click **OK** to close the **Configure Definition Update UNC Paths** dialog box.
11. Click **OK** to close the **Create Antimalware Policy** dialog box. Notice that the policy is listed in the results pane.
12. Click the **Assets and Compliance** workspace, and in the navigation pane, expand **Endpoint Protection**, and then click **Antimalware Policies**.
13. In the results pane, select **Windows 8.1 Client Policy**, and then on the ribbon, click **Deploy**. The **Select Collection** dialog box opens.
14. Select **All Windows 8.1 Workstations**, and then click **OK**.
15. Click the **Assets and Compliance** workspace, and in the navigation pane, expand **Endpoint Protection**, and then click **Windows Firewall Policies**.
16. On the ribbon, click **Create Windows Firewall Policy**. The **Create Firewall Policy Wizard** dialog box opens.
17. On the **General** page, configure the following settings, and then click **Next**.
  - Name: **Windows 8.1 Client Firewall Policy**
  - Description: **Windows 8.1 Firewall Policy**
18. On the **Profile Settings** page, configure the following settings, and then click **Next**:
  - Enable Windows Firewall – Domain profile: **Yes**
  - Notify the user when Windows Firewall blocks a new program – Domain profile: **Yes**
19. Click the **Summary** page, click **Next**.
20. On the **Completion** page, click **Close**.
21. Click the **Assets and Compliance** workspace, and in the navigation pane, expand **Endpoint Protection**, and then click **Windows Firewall Policies**.

22. In the results pane, select **Windows 8.1 Client Firewall Policy**, and then on the ribbon, click **Deploy**. The **Deploy Windows Firewall Policy** dialog box opens.
23. Click **Browse**, and in the **Select Collection** dialog box, select **All Windows 8.1 Workstations**, and then click **OK**.
24. In the **Deploy Windows Firewall Policy** dialog box, verify that the **Simple schedule** is configured to run every **7 Days**, and then click **OK**.

## Module Review and Takeaways

### Review Question(s)

**Question:** You attempt to configure device settings for the Endpoint Protection client, but all options are greyed out. What is the problem?

**Answer:** You need to first install an Endpoint Protection point site system role before you can configure the Endpoint Protection device settings.

**Question:** You have configured a software update point in order to deploy malware definitions to clients. Which definition update source should you use for the antimalware policy?

**Answer:** If you intend to use software updates, ensure that **Updates distributed from Configuration Manager** is selected.

**Question:** You have a client that is a member of two collections that each have their own separate antimalware policy deployed. Which policy will affect the client?

**Answer:** Multiple antimalware policies that are deployed to the same computer are merged. If two settings conflict, the highest priority setting affects the client.

**Question:** You need to determine the top malware that computers have reported. How can you find this information?

**Answer:** You can find this information by viewing the Top Malware By Computers report, or you can view the Top 5 malware by number of computers section of the System Center 2012 R2 Endpoint Protection Status node.

## Lab Review Questions and Answers

### Lab: Implementing Endpoint Protection

#### Question and Answers

**Question:** In the lab results, what does the Operational Status of Clients graph indicate?

**Answer:** One client needs to reboot before the install is complete.

**Question:** What is the status of the definitions according to the Definition Status on Computers graph?

**Answer:** The definition status shows that the definitions are older than seven days for one client.

**Question:** You have received an alert that malware has been detected. How can you determine which machines the malware has affected?

**Answer:** When you select the Alerts node, you can select the Malware detection alert, and then in the preview pane, click the Machines tab. This tab will display the computer name of the machines affected. You can also view Endpoint Protection reports for malware details.

# Module 11

## Managing Operating Systems Deployment

### Contents:

Lesson 2: Preparing a Site for Operating System Deployment	2
Lesson 3: Building and Capturing a Reference Operating System Image	6
Lesson 4: Deploying an Operating System	8
Module Review and Takeaways	10
Lab Review Questions and Answers	12

## Lesson 2

# Preparing a Site for Operating System Deployment

### Contents:

Demonstration: Enabling PXE and Multicast on a Distribution Point	3
Demonstration: Configuring the Network Access Account	3
Demonstration: Managing Device Drivers	4
Demonstration: Managing the Default Boot Images	4

## Demonstration: Enabling PXE and Multicast on a Distribution Point

### Demonstration Steps

1. On LON-CFG, on the **Start** screen, click **Configuration Manager Console**.
2. Click the **Administration** workspace, expand the **Site Configuration** folder, and then click the **Servers and Site System Roles** node.
3. Right-click the **Distribution point** role, and then click **Properties**.
4. In the **Distribution point Properties** dialog box, on the **PXE** tab, select the **Enable PXE support for clients** check box.
5. In the **Review Required ports for PXE** dialog box, click **Yes**.
6. Select the **Allow this distribution point to respond to incoming PXE requests** check box.
7. Select the **Enable unknown computer support** check box.
8. In the **Configuration Manager** message box, click **OK**.
9. Clear the box next to **Require a password when computers use PXE**.
10. Click the **Multicast** tab, and then select the **Enable multicast to simultaneously send data to multiple clients** check box.
11. In the **Distribution point Properties** dialog box, click **OK**.
12. Click the **Monitoring** workspace, expand **Distribution Status**, and then click **Distribution Point Configuration Status**.
13. Right-click **\\LON-CFG.Adatum.com**, and then click **Refresh**. Repeat until the **PXE** and **Multicast** columns display **Yes**.

## Demonstration: Configuring the Network Access Account

### Demonstration Steps

1. In the Configuration Manager console, click the **Administration** workspace, expand **Site Configuration**, and then click the **Sites** node.
2. In the results pane, right-click **S01-Adatum Site**, point to **Configure Site Components**, and then click **Software Distribution**.
3. In the **Software Distribution Components Properties** dialog box, on the **Network Access Account** tab, click the **Specify the account that accesses network locations** option.
4. Click the **Set** button, and then click **New Account**. Provide the following information as the credentials for the Network Access account:
  - User name: **Adatum\NetworkAccess**
  - Password: **Pa\$\$w0rd**
  - Confirm password: **Pa\$\$w0rd**
5. Click the **Verify** button.
6. In the **Network share** box, type **\\LON-CFG\SMS\_S01**, and then click **Test connection**.
7. Ensure that you receive a message stating that the connection was verified successfully, and then click **OK**.
8. Click **OK** to close the **Windows User Account** dialog box.
9. Click **OK** to close the **Software Distribution Component Properties** dialog box.

## Demonstration: Managing Device Drivers

### Demonstration Steps

1. On LON-CFG, click the **Software Library** workspace, expand the **Operating Systems** folder, and then click the **Drivers** node.
2. Right-click the **Drivers** node, and then click **Import Driver**.
3. On the **Locate Driver** page, click **Browse**.
4. In the **Select Folder** dialog box, in the **Folder** box, type `\\LON-CFG\Software\Drivers\HypervX64`, and then click **Select Folder**.
5. On the **Locate Driver** page, click **Next**.
6. On the **Driver Details** page, click **Categories**, and then in the **Manage Administrative Categories** dialog box, click **Create**.
7. In the **Create Administrative Category** box, type **64-bit Drivers**, and then click **OK**.
8. In the **Manage Administrative Categories** dialog box, click **Create**.
9. In the **Create Administrative Category** box, type **Hyper-V Drivers**, and then click **OK**.
10. In the **Manage Administrative Categories** dialog box, click **OK**, and then on the **Driver Details** page, click **Next**.
11. On the **Add Driver to Packages** page, click **New Package**.
12. In the **Create Driver Package** dialog box, in the **Name** box, type **Hyper-V Drivers**, and in the **Path** box, type `\\LON-CFG\E$\Source\Drivers`, and then click **OK**.
13. On the **Add Driver to Packages** page, click **Next**.
14. On the **Add Driver to Boot Images** page, click **Next**.
15. On the **Summary** page, click **Next**, and then on the **Confirmation** page, click **Close**.
16. Click the **Driver Packages** node.
17. Right-click the **Hyper-V Drivers** package, and then click **Distribute Content**.
18. In the **Distribute Content Wizard**, on the **General** page, click **Next**.
19. On the **Content Destination** page, click **Add**, and then click **Distribution Point**.
20. In the **Add Distribution Points** dialog box, select the **LON-CFG.Adatum.com** check box, and then click **OK**.
21. On the **Content Destination** page, click **Next**.
22. On the **Summary** page, click **Next**, and then on the **Confirmation** page, click **Close**.

## Demonstration: Managing the Default Boot Images

### Demonstration Steps

1. On LON-CFG, in the Configuration Manager console, click the **Software Library** workspace.
2. Expand **Operating Systems**, and then click the **Boot Images** node.
3. In the results pane, right-click **Boot Image (x64)**, and then click **Properties**.
4. Click the **Drivers** tab.
5. Click **New**.

6. In the **Select a driver** dialog box, click **Microsoft Hyper-V Network Adapter**, and then click **OK**.
7. Click the **Customization** tab, and then select the **Enable command support (testing only)** check box.
8. Click the **Data Source** tab, and then verify that the **Deploy this boot image from the PXE-enabled distribution point** check box is selected.
9. In the **Boot Image (x64) Properties** dialog box, click **OK**.
10. In the **Configuration Manager** dialog box, click **Yes**.
11. In the Update Distribution Points Wizard, on the **Summary** page, click **Next**.
12. In the Update Distribution Points Wizard, on the **Completion** page, click **Close**.
13. Right-click **Boot Image (x86)**, and then click **Properties**.
14. Click the **Drivers** tab.
15. Click **New**.
16. In the **Select a driver** dialog box, click **Microsoft Hyper-V Network Adapter**, and then click **OK**.
17. Click the **Customization** tab, and then select the **Enable command support (testing only)** check box.
18. Click the **Data Source** tab, and then verify that the **Deploy this boot image from the PXE-enabled distribution point** check box is selected.
19. In the **Boot Image (x86) Properties** dialog box, click **OK**.
20. In the **Configuration Manager** dialog box, click **Yes**.
21. In the Update Distribution Points Wizard, on the **Summary** page, click **Next**.
22. Click **Boot Image (x64)**, hold down the Ctrl key and click **Boot Image (x86)**, and then right-click **Boot Image (x64)** and click **Distribute Content**.
23. In the Distribute Content Wizard, on the **General** page, click **Next**.
24. On the **Content Destination** page, click **Add**, and then click **Distribution Point**.
25. In the **Add Distribution Points** dialog box, select **LON-CFG.Adatum.com**, and then click **OK**.
26. On the **Content Destination** page, click **Next**.
27. On the **Summary** page, click **Next**.
28. On the **Completion** page, click **Close**.

## Lesson 3

# Building and Capturing a Reference Operating System Image

### Contents:

Demonstration: Creating a Build and Capture Task Sequence

7

## Demonstration: Creating a Build and Capture Task Sequence

### Demonstration Steps

1. On LON-CFG, in the System Center 2012 R2 Configuration Manager console, click **Software Library**, expand **Operating Systems**, and then click the **Task Sequences** node.
  2. On the ribbon, in the **Create** group, click **Create Task Sequence**.
  3. In the Create Task Sequence Wizard, on the **Create New Task Sequence** page, click the **Build and capture a reference operating system image** option, and then click **Next**.
  4. On the **Task Sequence Information** page, in the **Task sequence name** box, type **Build and Capture Windows 8.1**, and then click **Browse**.
  5. In the **Select a Boot Image** dialog box, click **Boot image (x64) 6.3.9431.0 en-US**, and then click **OK**.
  6. On the **Task Sequence Information** page, click **Next**.
  7. On the **Install Windows** page, click **Browse**.
  8. In the **Select an Operating System Image** dialog box, click **Windows 8 Pro en-US**, and then click **OK**.
  9. On the **Install Windows** page, click the **Enable the account and specify the local administrator password** option, in the **Password** and **Confirm password** boxes, type **Pa\$\$w0rd**, and then click **Next**.
  10. On the **Configure Network** page, in the **Workgroup** box, type **workgroup**, and then click **Next**.
  11. On the **Install Configuration Manager** page, ensure that the package named **Configuration Manager Client Package** is selected, and then click **Next**.
  12. On the **Include Updates** page, click **Next**.
  13. On the **Install Applications** page, click **Next**.
  14. On the **System Preparation** page, click **Next**.
  15. On the **Image Properties** page, in the **Created by** box, type *<your name>*, and then click **Next**.
  16. On the **Capture Image** page, in the **Path** box, type **\\LON-CFG\e\$\captures\MyWin81Capture.wim**
  17. In the area next to the **Account** box, click **Set**.
  18. In the **Windows User Account** dialog box, in the **User name** box, type **Adatum\Administrator**, in the **Password** box, type **Pa\$\$w0rd**, in the **Confirm password** box, type **Pa\$\$w0rd**, and then click **OK**.
  19. On the **Capture Image** page, click **Next**.
- On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.

## Lesson 4

# Deploying an Operating System

### Contents:

Demonstration: Importing and Distributing an Operating System Image 9

## Demonstration: Importing and Distributing an Operating System Image

### Demonstration Steps

1. On LON-CFG, in the System Center 2012 R2 Configuration Manager console, click **Software Library**, expand **Operating Systems**, click **Operating System Images**, and then on the ribbon, in the **Create** group, click **Add Operating System Image**.
2. In the Add Operating System Image Wizard, on the Data Source page, in the Path box, type \\LON-CFG\Software\Win81Preview\sources\install.wim, and then click Next.
3. On the **General** page, name the image **Windows 8.1 Preview**, click **Next**.
4. On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
5. Right-click the **Windows 8.1 Preview** image package, and then click **Properties**.
6. On the **Distribution Settings** tab, select the **Allow this package to be transferred via multicast (WinPE only)** check box, and then in the **Windows 8.1 Preview Properties** dialog box, click **OK**.
7. Right-click **Windows 8.1 Preview** and click **Distribute Content**.
8. In the Distribute Content Wizard, on the **General** page, click **Next**.
9. On the **Content Destination** page, click **Add**, and then click **Distribution Point**.
10. In the **Add Distribution Point** dialog box, select the **LON-CFG.Adatum.com** check box, and then click **OK**.
11. On the **Content Destination** page, click **Next**.
12. On the **Summary** page, click **Next**, and then on the **Completion** page, click **Close**.
13. Right-click the **Windows 8.1 Preview** installation package, and then click **Refresh**. Repeat until the status shows **Success**. This should take about five minutes.

## Module Review and Takeaways

### Best Practice

- Supplement or modify the following best practices for your own work situations:
- Implement access controls to protect bootable media. When you create bootable media, you should always assign a password and control physical access to the media.
- Always install the most recent security updates on the reference computer. Starting with an up-to-date reference computer helps decrease the window of vulnerability for newly-deployed computers.
- Implement access controls to prevent unauthorized computers from connecting to the network, if you are deploying operating systems to unknown computers. Although deploying to unknown computers can be a convenient way to bring up multiple computers on demand, it can also allow a malicious user to add a trusted computer on your network. It also can deploy an operating system image to computers that have not yet been discovered by Configuration Manager by mistake.

### Review Question(s)

**Question:** How can operating system deployment assist in managing your organization's systems?

**Answer:** Answers will vary, but can include standardization and ease of deployment.

**Question:** What packages could you use for operating system deployment?

**Answer:** The packages for operating system deployment include: operating system installer package, device driver packages, Configuration Manager client upgrade package, application packages, and the USMT package.

**Question:** Why would you use task sequences outside of operating system deployment?

**Answer:** You use task sequences to run any series of commands on multiple client computers, such as installing a set of related applications on multiple computers.

**Question:** Why should you import computer information into the Configuration Manager database before deployment?

**Answer:** You should import computer information into the Configuration Manager database before deployment to prevent accidentally sending a task sequence to unknown computers. To do this, you should use the Import Computer Information Wizard. In the wizard, add the new computers to an appropriate target collection and target the task sequences accordingly.

### Real-world Issues and Scenarios

**Question:** You are creating a new image for the new corporate standard laptop. You have discovered that the accelerometer driver is not installed automatically during operating system deployment. What can you do to install the accelerometer driver without user intervention?

**Answer:** Answers will vary; one possible solution is to create a package for the driver and add a task sequence step to install the driver after the operating system is installed.

## Tools

Tool	Use for	Where to find it
Microsoft Deployment Toolkit	Managing deployment images	Solution Accelerators – Microsoft Deployment Toolkit <a href="http://go.microsoft.com/fwlink/?LinkID=252925">http://go.microsoft.com/fwlink/?LinkID=252925</a>

## Common Issues and Troubleshooting Tips

Common Issue	Troubleshooting Tip
When you deploy an image that includes the 100 megabytes (MB) partition for bitlocker and you receive this error: <Task_Sequence_Name> has failed with the error code (0x8000FFFF)	Verify that the partition step is creating the proper disk sizes. The second partition should be 100 percent of the remaining disk space. Verify the images are being placed in the correct order.

## Lab Review Questions and Answers

### Lab A: Preparing the Environment for Operating System Deployment

#### Question and Answers

**Question:** In your work environment, would you enable unknown computer support for PXE boot?

**Answer:** Answers will vary. Discuss the advantages, such as ease of deployment, and disadvantages, such as accidental deployment, of enabling unknown computer support for PXE boot. Also, discuss the use of a password for PXE boot support.

**Question:** Apart from the packages deployed in the lab, what packages would you include as part of the operating system deployment process?

**Answer:** Answers will vary.

### Lab B: Building and Capturing a Reference Image

#### Question and Answers

**Question:** Why should the reference computer not be a member of a domain?

**Answer:** Configuration Manager does not support capture for domain-joined computers.

**Question:** What precautions should you take if you deploy the build-and-capture task sequence to the unknown computers collection?

**Answer:** You must ensure that computers that are part of the network, but do not have the Configuration Manager client installed on them, are not started by using PXE boot. This could result in the installation of a new operating system. You can prevent this by using a password in the PXE settings.

### Lab C: Performing an In-Place Upgrade

#### Question and Answers

**Question:** When would you include an application in the Install an existing image task sequence rather than the build-and-capture task sequence?

**Answer:** You include applications in the build-and-capture task sequence in situations when all computers have the same application, such as Microsoft Office. In the Install an existing image task sequence, you add additional applications that are installed only on certain systems.

**Question:** In your work environment, will you use the USMT for state migration?

**Answer:** Answers will vary. If you are using roaming profiles, state migration may not be necessary.

# Module 12

## Managing Compliance Settings and Profiles

### Contents:

Lesson 2: Configuring Compliance Settings	2
Module Review and Takeaways	5
Lab Review Questions and Answers	7

## Lesson 2

# Configuring Compliance Settings

### Contents:

Demonstration: Creating a Configuration Item	3
Demonstration: Configuring Remediation on a Configuration Item	3
Demonstration: Creating and Deploying a Configuration Baseline	4

## Demonstration: Creating a Configuration Item

### Demonstration Steps

1. Switch to the LON-CFG computer.
2. Click **Configuration Manager Console** on the taskbar.
3. Click the **Assets and Compliance** workspace, expand the **Compliance Settings** folder, and then click the **Configuration Items** node.
4. On the ribbon, click **Create Configuration Item**.
5. In the Create Configuration Item Wizard, on the **General** page, in the **Name** box, type **Validate Remote Desktop is Enabled**.
6. Click **Categories**.
7. Select the **Client** check box, and then click **OK**.
8. On the **General** page, click **Next**.
9. On the **Supported Platforms** page, click **Next**.
10. On the **Settings** page, click **New**.
11. In the **Create Setting** dialog box, on the **General** tab, click **Browse**.
12. In the **Browse Registry** dialog box, in the **Computer name** box, type **LON-DC1**, and then click **Connect**.
13. In the **Registry tree** area, expand the **LON-DC1** computer, and then navigate to **HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\Terminal Server**.
14. In the **Browse Registry** dialog box, in the **Registry Value** area, click **fDenyTSCconnections**.
15. Select the **This registry value must satisfy the following rule if present** check box. Explain to the students that because this value is already configured to the desired value, they do not need to change the setting.
16. In the **Browse Registry** dialog box, click **OK**, and then in the **Create Setting** dialog box, click **OK**.
17. On the **Settings** page, click **Next**.
18. On the **Compliance Rules** page, under the **Name** heading, click the **fDenyTSCconnections Equals 0** condition (expand the name column if necessary), and then click **Edit**.
19. In the **Noncompliance severity for reports** list, click **Critical**, and then click **OK**.
20. On the **Compliance Rules** page, click **Next**.
21. On the **Summary** page, click **Next**.
22. On the **Completion** page, click **Close**.

## Demonstration: Configuring Remediation on a Configuration Item

### Demonstration Steps

1. In the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, expand the **Compliance Settings** folder, and then click the **Configuration Items** node.
2. Click **Validate Remote Desktop is Enabled**.
3. On the ribbon, click **Properties**.
4. Click the **Compliance Rules** tab.

5. Under the **Condition** heading, click **Equals 0**, and then click **Edit**.
6. In the **Edit Rule** dialog box, select the **Remediate noncompliant rules when supported** check box.

Explain that you do not specify how to remediate the problem. The remediation action depends on the type of rule you select.

7. In the **Edit Rule** dialog box, click **OK**.
8. In the **Validate Remote Desktop is Enabled Properties** dialog box, click **OK**.

## Demonstration: Creating and Deploying a Configuration Baseline

### Demonstration Steps

1. In the System Center 2012 R2 Configuration Manager console, click the **Assets and Compliance** workspace, expand the **Compliance Settings** folder, and then click the **Configuration Baselines** node.
2. On the ribbon, click **Create Configuration Baseline**.
3. In the **Create Configuration Baseline** dialog box, in the **Name** box, type **IT Support Configuration Settings**
4. Click **Add**, and then click **Configuration Items**.
5. Click **Validate Remote Desktop is Enabled**, and then click **Add**.
6. In the **Add Configuration Items** dialog box, click **OK**.
7. Click **Categories**.
8. Select the **IT Infrastructure** check box, and then click **OK**.
9. In the **Create Configuration Baseline** dialog box, click **OK**.
10. Click **IT Support Configuration Settings**.
11. On the ribbon, click **Deploy**.
12. In the **Deploy Configuration Baselines** dialog box, click **Browse**.
13. In the **Select Collection** dialog box, click the **User Collections** list, and then click **Device Collections**.
14. Click the **All Windows 8.1 Workstations** collection, and then click **OK**.

# Module Review and Takeaways

## Best Practice

- Supplement or modify the following best-practices for your own work situations:
- Create configuration items that combine multiple objects and settings to define a single unit of change.
- Provide meaningful display names and descriptions for configuration items and baselines so that other administrators can use them without needing to check and interpret their properties.
- Minimize the number of configuration items, dependent configuration baselines, and configuration baselines that are deployed to computers when defining desired compliance.
- Where possible, use child configuration items rather than duplicating configuration items.
- Schedule compliance evaluations according to business requirements and available computing resources.

## Review Question(s)

**Question:** What are the components of compliance settings? Which component would you create first?

**Answer:** Configuration items and configuration baselines are the components of compliance settings. You should first create configuration items and then the configuration baselines.

**Question:** The default evaluation interval is seven days. When would you modify this setting?

**Answer:** Answers will vary, but can include regulatory compliance requirements or business requirements.

**Question:** How would you remediate computers found out of compliance with a configuration item that requires Microsoft .NET Framework 2.0?

**Answer:** You can use software distribution to deploy .NET Framework 2.0 to computers that do not have the framework.

## Real-world Issues and Scenarios

**Question:** You support a line-of-business (LOB) application that was developed in-house. This application requires that Adobe Reader be the default application for opening .pdf files regardless of the installed versions of Adobe. Some users have been changing their default program for the .pdf files. This generally results in a call to the help desk when the LOB application does not function properly. How can you use compliance settings to prevent this from happening?

**Answer:** Answers will vary. One possible answer is to configure configuration items and configuration baselines, which represent the registry settings that control the .pdf default application settings, and then configure them for automatic remediation.

**Question:** You have apps that require specific versions of third-party components. These components can be updated through the Internet. Certain users have administrative access to their computers and update the app on their own. This occasionally causes problems. You would like to be able to quickly reference the version of the third-party app they are running. How could you use compliance settings to help with this situation?

**Answer:** Answers will vary. One possible answer is to create a file-based compliance rule for the run-time component so that user changes are quickly reported to the Configuration Manager database.

**Question:** Your audit department requires documentation showing that all client computers are in compliance with the security updates for all apps. Your security department is responsible for producing this documentation. How can you use compliance settings to show compliance with security updates for all apps?

**Answer:** Answers will vary. One possible answer is to work with the security department to determine the apps that can be monitored through the registry and through the files system. Then, develop configuration items for each application that will be monitored and create baselines for each department and the apps that they use.

# Lab Review Questions and Answers

## Lab: Managing Compliance Settings

### Question and Answers

**Question:** Besides presence, what values might you want to use with a file-based configuration item?

**Answer:** Answers will vary but can include Size, Date Created, Secure Hash Algorithm 1 (SHA-1), and Attributes and permissions.

**Question:** What was the compliance state when you ran the evaluation for the first time?

**Answer:** The evaluation showed noncompliant with a severity of Information for the file system setting and Critical for the registry setting.

**Question:** What was the compliance state when you ran the evaluation for the last time?

**Answer:** The evaluation showed noncompliant with a severity of Information for the file system setting and Compliant for the registry setting.

**Question:** Was the remediation successful?

**Answer:** Yes.

# Module 13

## **Mobile Device Management Using System Center 2012 R2 Configuration Manager**

### **Contents:**

#### **Lesson 1:**

Overview of Mobile Device Management with System Center 2012 R2 Configuration Manager 2012	2
Lab Review Questions and Answers	4

## Lesson 1

# Overview of Mobile Device Management with System Center 2012 R2 Configuration Manager 2012

### Contents:

Demonstration: Demonstration: Configuring the Exchange Server Connector 3

## Demonstration: Demonstration: Configuring the Exchange Server Connector

### Demonstration Steps

1. On LON-CFG, on the taskbar, click the **Configuration Manager** icon.
2. In the Configuration Manager console, click the **Administration** workspace, expand the **Hierarchy Configuration** folder, and then click **Exchange Server Connectors**.
3. On the ribbon, click **Add Exchange Server**.
4. On the **General** page of the Add Exchange Server Wizard, in the **server address (URL)** textbox, type **http://mail.adatum.com**, and then click **Next**.
5. On the **Account** page, ensure that **Use the computer account of the site server** is selected, and then click **Next**.
6. On the **Discovery** page, complete the following settings, and then click **Next**.
  - **Delta synchronization interval(minutes): 120 minutes**
  - **Ignore mobile devices that are inactive for more than (days): 365.**
7. On the **Settings** page, click **General**, and then click **Edit**.
8. On the **General Settings** page, set **Allow mobile devices that cannot be provisioned to Prohibited**, and then discuss each of the settings. Click **OK**.
9. On the **Settings** page, click **Password**, and then click **Edit**.
10. On the **Password Settings** dialog box, on the **mobile devices** drop-down menu, set the **Require** password settings to **Required**. Set the **password expiration in days** to **42**, and then set the **idle time in minutes before mobile device is locked** to **3**. Discuss the other settings, and then click **OK**.
11. On the **Settings** page, click **E-mail Management**, and then click **Edit**.
12. On the **E-mail Management Settings** dialog box, set **POP and IMAP e-mail** to **Prohibited**. Discuss each of the settings, and then click **OK**.
13. On the **Settings** page, click **Security**, and then click **Edit**.
14. On the **Security Settings** dialog box, set **Camera** to **Prohibited**. Discuss each of the settings, and then click **OK**.
15. On the **Settings** page, click **Applications** page, click **Edit**.
16. On the **Applications Settings** dialog box, set **Unsigned File installation** to **Allowed**. Discuss each of the settings, and then click **OK**.
17. On the **Settings** page, click **Next**.
18. Review the summary. Because there is no Exchange Microsoft® Exchange Server in the lab environment, click **Cancel**.

## Lab Review Questions and Answers

### Question and Answers

**Question:** You have configured directory synchronization, the Windows Intune connector, and the Windows Intune site system role. What other step do you need to take before a user can enroll a stand-alone computer?

**Answer:** You need to enable the user for Windows Intune.

**Question:** You have configured the Windows Intune connector for Configuration Manager. When deploying a custom app to a mobile device, which distribution point should you select?

**Answer:** You should select the MANAGE.MICROSOFT.COM distribution point when deploying a custom app to a mobile device.

# Module 14

## Configuring Wake On LAN, Power Management, and Remote Control

### Contents:

Lesson 1: Configuring Wake On LAN	2
Module Review and Takeaways	4
Lab Review Questions and Answers	5

## Lesson 1

# Configuring Wake On LAN

### Contents:

Demonstration: Enabling Wake On LAN

3

## Demonstration: Enabling Wake On LAN

### Demonstration Steps

1. On LON-CFG, open the System Center 2012 R2 Configuration Manager console.
2. Click the **Administration** workspace, expand **Site Configuration**, and then click **Sites**.
3. Right-click **S01 – Adatum Site**, and then click **Properties**. The **Adatum Site Properties** dialog box opens.
4. In the **Adatum Site Properties** dialog box, on the **Ports** tab, verify that **Wake On LAN (UDP)** is selected as an active port, right-click this entry, and then click **Properties**. Note that the default port number is nine, but you can modify it, if required. Click **Cancel**.
5. In the **Adatum Site Properties** dialog box, on the **Wake On LAN** tab, select the **Enable Wake On LAN for this site** check box. A **Configuration Manager** message box displays, stating that no site system has the out of band service point role assigned. This is relevant only if out-of-band management is used to turn the computers on and off. Click **OK**.
6. Click the **Use wake-up packets only** option. Note that for this demonstration, because there is no out of band management role configured for the site, you will only enable the use of wake-up packet transmissions.
7. In the **Adatum Site Properties** dialog box, on the **Wake On LAN** tab, select one of the following options:
  - o **Subnet-directed broadcasts**: Select this option if you want to send wake-up packets by using subnet-directed broadcast transmission.
  - o **Unicast**: Select this option if you want to send wake-up packets by using unicast transmission.
8. On the **Wake On LAN** tab, click **Advanced**.
9. In the **Wake On LAN Advanced Properties** dialog box, explore the following options:
  - o **Retries** and **Delay (minutes)** under the **Transmission retries** section.
  - o **Maximum** and **Wait (seconds)** under the **Transmission maximum** section.
  - o **Transmission threads** under the **Transmission threads** section.
  - o **Transmission offset (minutes)** under the **Transmission offset** section.
10. Click **OK** to close the **Wake On LAN Advanced Properties** dialog box.
11. Click **OK** to close the **Adatum Site Properties** dialog box.

## Module Review and Takeaways

### Review Question(s)

**Question:** What is the purpose of Remote Control?

**Answer:** You can use Remote Control to troubleshoot hardware and software configuration problems on remote client computers and provide remote help desk support when access to the user's computer is necessary.

**Question:** What is the purpose of the Permitted viewers list?

**Answer:** This is a list of users who are allowed to use Configuration Manager Remote Tools functionality on clients. It is important to note that the Permitted viewers list is just a list. The list is not validated until the Remote Tools Agent attempts to add the specified users to the ConfigMgr Remote Control Users group.

**Question:** What would happen if you tried to control the Remote Assistance settings through both Group Policy and through Configuration Manager?

**Answer:** When Group Policy is refreshed on the client, by default, it processes all changes made to the applied GPOs. However, Configuration Manager changes the settings in the local security policy, which, by default, overwrites any GPO setting. Administrators can force a GPO setting to override a local policy, therefore setting the policy in both places could lead to inconsistent results. Choose one of these methods to configure your Remote Assistance settings.

**Question:** When does Wake On LAN wake computers?

**Answer:** By default, computers are woken three minutes before the scheduled activity to ensure that they have completed startup.

**Question:** List three or four main requirements for out of band management.

**Answer:** The four main requirements for out of band management are: computers that support Intel Active Management Technology (AMT), a public key infrastructure (PKI), an out of band service point server role, and an enrollment point site server role.

# Lab Review Questions and Answers

## Question and Answers

**Question:** During peak hours, when can you expect computers in the Toronto collection to turn off the display and go to sleep?

**Answer:** Because you have applied the High Performance peak plan to the Toronto collection, the display is set to never turn off. Computers will only go to sleep if on battery and after 60 minutes.

**Question:** During nonpeak hours, when can you expect computers in the Toronto collection to turn off the display and go to sleep?

**Answer:** For the nonpeak plan, the Power Saver plan has been applied. This will turn off the display after five minutes on battery and 10 minutes plugged in. Computers will also sleep after five minutes on battery and 10 minutes plugged in.

**Question:** You need to modify the time that a plugged in computer will go to sleep during peak hours. What should you do?

**Answer:** You need to select the Customized Peak (ConfigMgr) plan, which will allow you to edit the specific power management settings.