Microsoft Assessment and Planning Toolkit Demo Exercises

These collections of exercises will jumpstart your understanding  
of the capabilities of the MAP Toolkit.

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## Introduction

#### About the Microsoft Assessment and Planning Toolkit

The Microsoft® Assessment and Planning (MAP) Toolkit is an inventory, assessment, and reporting tool that helps you assess your current IT infrastructure and determine the right Microsoft technologies for your IT needs. The MAP toolkit uses Windows® Management Instrumentation (WMI), Active Directory® Domain Services (AD DS), SMS Provider, and other technologies to collect data in your environment and inventories computer hardware, software, and operating systems in small or large IT environments without installing any agent software on the target computers.

The data and analysis provided by MAP streamline the planning process for software migration, help assess device driver availability, and allow you to make hardware upgrade recommendations. The MAP Toolkit also gathers performance metrics from computers you are considering for virtualization and includes a feature to model a library of potential host and storage hardware configurations. Use the MAP Toolkit to simplify the planning process for migration to Windows® 10, Windows® 8.1, Windows Server 2016, Windows Server 2012, Windows 7, Microsoft Office 2016, Microsoft Office 2013, Microsoft Office 2010, Microsoft Office 365, Internet Explorer 9, Windows Azure Platform, Windows Server 2008 R2, Microsoft SQL Server® 2012, Hyper-V™, Hyper-V R2, and Microsoft Private Cloud Fast Track.

#### About the Demo Databases

The demo databases have been manufactured in an isolated Microsoft lab and contain no data from outside the lab. Attempts have been made to make the demo environment diverse, but the lab setup does not represent a typical customer environment, nor is it a Microsoft recommended network or machine setup. It merely serves to illustrate the various features of the MAP Toolkit.

#### Contents of the Demo Databases

This version of the demo database supports all of the MAP scenarios used in this training kit.

#### Importing the Demo Databases

Install the MAP Toolkit - Instructions are in the appendix of this document.

You can import the demo database on SQL Server 2012 or newer.

The demo database must be imported with either MAP Toolkit or SQL Server Management Studio.

Demo database: MAP\_SampleDB.

#### About the MAP Toolkit Exercises

This collection of lab exercises will be relevant for you if you are one of two main types of MAP Toolkit users:

* IT Professionals who want to assess an environment to inform an upgrade decision.
* Consultants or technical sales staff from Microsoft or partners who want to document the need and feasibility of a suggested IT improvement.

The lab contains 16 exercises grouped into 5 sets that explore key MAP Toolkit functionalities. Although the exercises follow a logical sequence, you can enter the lab at the start of any of the following sets:

* Preparing and collecting inventory data, assessing and planning Windows Client Operating Systems, Microsoft Office and Internet Explorer deployments, creating client custom assessment properties. **(Exercises 1.1-1.7)**
* Assessing and planning of Windows Server deployments, defining server custom assessment properties, collecting performance data, and performance reporting. **(Exercises 2.1-2.4)**
* Assessing and planning VMware Virtualization discovery, and Windows Azure Platform Assessment. **(Exercises 3.1-3.3)**
* Discovering SQL Server and Oracle instances and SQL Server Migration Assessment. **(Exercise 4.1)**
* Discovering Linux instances **(Exercise 5.1)**

This lab manual contains step-by-step instructions for each exercise.

## Exercise 1.1: Managing databases

The MAP Toolkit

* Using MAP Toolkit to create, export and import databases

1. Double-click the **MAP Toolkit** shortcut to launch the MAP Toolkit unless it is already open. You may want to resize the application to full screen.
2. Click **Yes** to accept the User Account Control (UAC) dialog to run this application.
3. In the **Create or Select a Database to Use** dialog click **Create an inventory database** and type **student** as a new database name and click **OK**. (In later lab exercises this database will be used to do a very small inventory of your local computer.)
4. Select **File → Manage Databases…** from the main menu to launch the **Manage Databases** dialog.
5. Select the student database and click **Export**.
6. Enter the file name and click **Save**.
7. After successfully exporting the database click **OK** on the dialog.
8. Click **Close** on the **Manage Databases** dialog.
9. Copy the demo database to the **DatabaseBackups** folder (C:\Program Files\Microsoft Assessment and Planning Toolkit).
10. Select **File → Manage Databases…** from the main menu to launch the **Manage Databases** dialog.
11. Click **Import** on the **Manage Databases** dialog to launch the **To import a database…** dialog.
12. Click **Browse** on the **To import a database…** dialog and select the **MAP\_SampleDB** demo database from the **DatabaseBackups** folder (C:\Program Files\Microsoft Assessment and Planning Toolkit) and click **Open**.
13. Type the database name **MAP\_SampleDB** in the **To import a database…** dialog **Database Name** field, and click **OK**.
14. If a message displays stating “**The imported database needs to be upgraded…**” select **Yes**. In a few moments a “Successfully imported and upgraded the database” dialog will display, click **OK**.
15. Observe that the database is present as a selection in the **Manage Databases** dialog.
16. When finished click **Close** on the **Manage Databases** dialog.

## Exercise 1.2: Preparing for Inventory

The MAP Toolkit uses WMI and performance collection protocols to communicate with machines in the network to collect inventory information and performance data. This kind of communication is subject to administration and security settings on the target platform. This exercise will briefly address changing these settings on target machines to allow the MAP Toolkit to assess them.

* To enable remote administration

1. Navigate to the command prompt by going to **Start** → **All Programs** → **Accessories**, right-click **Command Prompt**, then select **Run As Administrator**.
2. Type in the following command, then hit **Enter**:  
   **netsh advfirewall set currentprofile settings remotemanagement enable**

* To open the necessary ports

1. To enable File and Printer Sharing in Windows 7, go to **Control Panel** → **Network and Internet** → **Network and Sharing Center** → **Change Advanced Sharing Settings**.
2. Turn on file and printer Sharing (This will open TCP ports 139 and 445 and UDP ports 137 and 138)

**Note:** Depending on the Microsoft Windows platform version where the MAP Toolkit is installed and the platforms the MAP Toolkit is trying to reach, there may be additional considerations beyond those mentioned in the previous exercise.

## Exercise 1.3: Collecting Inventory Data

The MAP Toolkit uses WMI, Active Directory Domain Services, SQL Server commands, VMware Web services Oracle client, Powershell, and SSH with remote shell commands to collect inventory information from the target network machines. You can use any of the following inventory scenarios and discovery methods to designate which machines to inventory.

* + Inventory Scenarios
  + Windows-based computers
  + Linux-based computers
  + VMware computers
  + Exchange Server
  + Active Devices and users
  + Forefront Endpoint Protection Server
  + Lync Server
  + SQL Server
  + SQL Server with database details
  + Windows Azure Platform Migration
  + MySQL, Oracle, and Sybase
  + Discovery Methods
  + Active Directory® Domain Services
  + Windows networking protocols
  + System Center Configuration Manager
  + Scan an IP address range
  + Manually enter computer names and credentials
  + Import computer names from a file

Because this is a small demo environment without its own networking setup, the lab does not rely on Active Directory or other means to discover networked machines. A demonstration collection is performed from the demo machine only to illustrate how collection is done. In subsequent exercises, the lab uses previously collected data from complex networks.

* To collect inventory data

1. If it is not already open, launch the MAP Toolkit. You may want to resize the application to full screen.
2. Click **Yes** to accept the User Account Control (UAC) dialog to run this application.
3. In the **Create or Select a Database** dialog click **Create an inventory database** and type **student** as a new database name and click **OK**. (The lab uses this database to do a very small inventory of your local computer.)
4. In the scenario detail page click **Perform an Inventory** to launch the inventory wizard.
5. In the **Inventory Scenarios** page, ensure that the **Windows computers** checkbox is selected, then click **Next**.
6. In the **Discovery Methods** page, uncheck **Use Active Directory Domain Services (AD DS)**.
7. Check **Manually enter computer names and credentials** then click **Next**.
8. In **All Computer Credentials** page, click **Create.**
9. In the Account Entry dialog, type the username for the local computer user (example: **Administrator)** in the **Account Name** field
10. In both the **Password** and **Confirm Password** fields, type the password for the local computer user (example: **password**)then click **Save**.
11. In the **All Computer Credentials** Page, click **Next.**
12. Click **Next** in the **Credentials Order** page.
13. In the **Enter Computers Manually** Page, click **Create.**
14. In the **Specify Computers and Credentials** page, type the name of the local computer (example: **MAP-HOL**) as the computer name and click **Add**.
15. Check **Use All Computers Credential list** and click **Save**.
16. Click **Next** and review the information displayed in the **Summary** page.
17. Click **Finish** to launch a status dialog and the inventory process.

**Note:** If you are using MAP on a virtual machine, even though you have specified that you want to inventory just one machine, the MAP Toolkit detects that it is a virtual machine and attempts to inventory the VM host as well. In this case the specified credentials may not allow such an inventory to be performed.

1. When it finishes, click **Close** on the status dialog.
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 10 Readiness** tile to view the displayed pie charts and tables in the scenario detail page.

In subsequent exercises, data previously collected from clients and servers in a complex network will be displayed.

**Conclusion:** The MAP Toolkit can collect inventory data from computers specified in different ways and in large numbers. It can collect data from 1000s of machines with minimal network impact. Immediately after inventory collection, the toolkit presents summary results in the user interface as pie charts and tables.

## Exercise 1.4: Windows Client Readiness

***Note:*** Steps 1 through 12 apply specifically to Windows 10 assessments and steps 17 through 24 apply specifically to Windows 8.1 assessments and steps 29 through 36 apply specifically to Windows 7 assessments. Steps 37 through 41 are for generic inventory assessments and will work for Windows 10 readiness or Windows 8.1 readiness or Windows 7 readiness assessments.

With the release of Windows 10, IT departments will want to determine if their machines can run Windows 10, and if not, what upgrades are required to make this possible. Organizations with many machines are likely to have a wide range of answers that reflect modifications made to individual machines over time. The MAP Toolkit provides a cost-effective way to evaluate every client machine on a network for Windows 10 readiness.

* To assess Windows 10

1. Select File → Select a Database from the main menu to launch the Create or select a database to use dialog.
2. Click Use an existing database, and select MAP\_SampleDB from the Databases menu, and click OK.

**Note:** This database already contains an inventory from a network of complex client machines. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 10 Readiness** tile.
2. Inspect the scenario detail page and observe that discovered machines are classified as ready, ready after upgrades, insufficient data or cannot run Windows 10.

* To generate Windows 10 Assessment Reports

1. Ensure you have completed the previous procedure to assess **Windows 10 Readiness**.
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 10 Readiness** tile.
3. Click **Generate Windows 10 Readiness Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use in the Documents **→** MAP directory.

1. Open the **Windows10Assessment-<date-and-time>** Excel report.
2. View the following tabs to see detailed information about the assessed computers and their relative readiness for Windows 10.
   * 1. ***Summary***  
        Number of machines that are ready (meeting the minimum or recommended requirements), the number that can be made ready with hardware upgrades, and the number that cannot by upgraded.
     2. ***Assessment Values***  
        CPU, Memory, Free Disk, DVD, Audio, and Video Microsoft Minimum and Recommended values and the values used in the assessment.
     3. ***Client Assessment***  
        Current OS, upgrade assessment, reasons for the conclusion, and other information for each client surveyed.
     4. ***After Upgrades***

Detailed list of computers that are not currently able to run Windows 10 and the hardware upgrades required to meet the minimum system requirements for a Windows 10 upgrade.

* + 1. ***Device Summary***  
       Windows 10 compatibility with equipment attached to discovered client machines
    2. ***Device Details***  
       Windows 10 compatibility with equipment on each client.
    3. ***Discovered Applications***  
       Summary of applications installed on client computers with a count of the clients that have each application installed.

1. After viewing close report.

* To assess Windows 8.1

1. Select File → Select a Database from the main menu to launch the Create or select a database to use dialog.
2. Click **Use an existing database**, and select **MAP\_SampleDB** from the Databases menu, and click **OK**.

**Note:** This database already contains an inventory from a network of complex client machines. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 8.1 Readiness** tile.
2. Inspect the scenario detail page and observe that discovered machines are classified as ready, ready after upgrades, insufficient data or cannot run Windows 8.1.

* To generate Windows 8.1 Assessment Reports

1. Ensure you have completed the previous procedure to assess **Windows 8.1 Readiness**.
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 8.1 Readiness** tile.
3. Click **Generate Windows 8.1 Readiness Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use in the Documents **→** MAP directory.

1. Open the **Windows81Assessment-<date-and-time>** Excel report.
2. View the following tabs to see detailed information about the assessed computers and their relative readiness for Windows 8.1.
   * 1. ***Summary***  
        Number of machines that are ready (meeting the minimum or recommended requirements), the number that can be made ready with hardware upgrades, and the number that cannot by upgraded.
     2. ***Assessment Values***  
        CPU, Memory, Free Disk, DVD, Audio, and Video Microsoft Minimum and Recommended values and the values used in the assessment.
     3. ***Client Assessment***  
        Current OS, upgrade assessment, reasons for the conclusion, and other information for each client surveyed.
     4. ***After Upgrades***

Detailed list of computers that are not currently able to run Windows 8.1 and the hardware upgrades required to meet the minimum system requirements for a Windows 8.1 upgrade.

* + 1. ***Device Summary***  
       Windows 8.1 compatibility with equipment attached to discovered client machines
    2. ***Device Details***  
       Windows 8.1 compatibility with equipment on each client.
    3. ***Discovered Applications***  
       Summary of applications installed on client computers with a count of the clients that have each application installed.

1. After viewing close report.

* To assess Windows 7

1. Select File → Select a Database from the main menu to launch the Create or select a database to use dialog.
2. Click **Use an existing database**, and select **MAP\_SampleDB** from the Databases menu, and click **OK**.

**Note:** This database already contains an inventory from a network of complex client machines. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 7 Readiness** tile.
2. Inspect the primary pane and observe that discovered machines are classified as ready, ready after upgrades, insufficient data or cannot run Windows 7.

* To generate Windows 7 Assessment Reports

1. Ensure you have completed the previous procedure to assess **Windows 7 Readiness**.
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 7 Readiness** tile.
3. Click **Generate Windows 7 Readiness Report** at the top of the primary pane to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use in the Documents **→** MAP directory.

1. Open the **Windows7Assessment-<date-and-time>** Excel report.
2. View the following tabs to see detailed information about the assessed computers and their relative readiness for Windows 7.
   * 1. ***Summary***  
        Number of machines that are ready (meeting the minimum or recommended requirements), the number that can be made ready with hardware upgrades, and the number that cannot by upgraded.
     2. ***Assessment Values***  
        CPU, Memory, Free Disk, DVD, Audio, and Video Microsoft Minimum and Recommended values and the values used in the assessment.
     3. ***Client Assessment***  
        Current OS, upgrade assessment, reasons for the conclusion, and other information for each client surveyed.
     4. ***Device Summary***  
        Windows 7 compatibility with equipment attached to discovered client machines
     5. ***Device Details***  
        Windows 7 compatibility with equipment on each client.
     6. ***Minimum After Upgrades***  
        Detailed list of computer upgrades required to reach the "Minimum Ready" configuration for a Windows 7 upgrade
     7. ***Recommended After Upgrades***  
        Detailed list of computer upgrades required to reach the "Recommended Ready" configuration for a Windows 7 upgrade
     8. ***Discovered Applications***  
        Summary of applications installed on client computers with a count of the clients that have each application installed.
3. After viewing close report.

* To generate a generic inventory report

1. Click the **Environment** scenario group in the left pane of the UI, then click the **Inventory Results** tile.
2. Click **Generate Inventory Results Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **InventoryResults-<date-and-time>** Excel report and view detailed information on every machine inventoried. After viewing close reports and file browser.

**Conclusion:** The MAP Toolkit can generate customer-ready content that lays out the facts to support a migration to Windows 10.

## Exercise 1.5: Client Custom Assessment Properties

Microsoft provides default settings for the level of performance and resources required of a Windows 10 ready machine. These settings, however, are not always suitable due to specialized hardware or virtualization. In these cases, you can specify your own threshold for Windows 10 readiness as shown in this exercise.

* To use default assessment properties

1. Ensure that you are using the **MAP\_SampleDB** database, visible in the bottom status bar of the MAP Toolkit UI**.**
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Windows 10 Readiness** tile.
3. Inspect the scenario detail page and observe that Windows 10 discovered machines are classified as ready, ready after upgrades, cannot run, or insufficient data. Note the values in the Before Hardware Upgrades section for how many machines are ready, how many machines are ready after upgrades how many machines cannot run, and how many machines have insufficient data.

* To use custom assessment properties

1. Ensure you have completed the steps in the procedure **To use default assessment properties**.
2. In the **Options** section at the top of the scenario detail page, click **Customize assessment properties**.
3. In the **Assessment Properties** pop-up dialog, click **Use Custom Settings**. Now you can modify the criteria for invalidating a machine for upgrade to Windows 10.
4. Change the value in **CPU Speed (GHz)** in the **x64 Systems** columnfrom 1.000 to 5.000.
5. Click **Run Assessment** to run the assessment using the custom values and to launch a status dialog.
6. After the status dialog reports that the assessment process has completed, click **Close**.
7. In the scenario detail page, after the custom assessment, notice in the details section how many machines are ready, how many machines are ready after upgrades, how many machines cannot run, and how many machines have insufficient data.

**Conclusion:** You can change the criteria for Windows 10 platform readiness that the assessment engine uses.

## Exercise 1.6: Internet Explorer Discovery

Internet Explorer Discovery includes details about web browsers and plug-ins deployed in your environment and provides the information you need to migrate previous releases of Windows® Internet Explorer® to the latest version. The assessment identifies the current state of Internet browser installations in your environment with detailed information on add-in software for Internet Explorer used to help assess the impact of migrating to the latest version of Internet Explorer.

* To view Internet Explorer Migration Assessment

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an existing database**, and select **MAP\_SampleDB** from the Databases menu, and click **OK**.

**Note:** This database already contains an inventory and assessment from a network of complex client machines with various Internet Explorer versions and other browser types.

1. Click the **Desktop** scenario group in the left pane of the UI, then click the **Internet Explorer Discovery** tile.
2. View the scenario detail page and observe the Installed Web Browser Summary.

* To create an Internet Explorer Discovery Report

1. Ensure you have completed the previous procedure **to view** **Internet Explorer Discovery**.
2. Click the **Desktop** scenario group in the left pane of the UI, then click the **Internet Explorer Discovery** tile.
3. Click **Generate IE Discovery Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **IEMigrationAssessment-<date-and-time>** Excel report**.**
2. Inspect the following tabs to see detailed information about the web browsers and add-ons deployed in your IT environment.
   * 1. ***Overview***  
        Provides an overview of web browsers inventoried in your IT environment.
     2. ***Web Browser Summary***  
        Provides a summary of specific web browsers deployed on client computers in your IT environment. It also highlights web browsers deployed on Windows XP computers.
     3. ***Web Browser Details***  
        Provides details about web browsers deployed on client computers in your IT environment.
     4. ***Client Details***  
        Provides details about web browsers and count of Internet Explorer Add-ons deployed on client computers in your IT environment.
     5. ***Add-on Details***  
        Provides details about Internet Explorer Add-ons deployed on client computers in your IT environment.
3. After inspection close report.

**Conclusion:** Based on the Internet Explorer Discovery Assessment it is possible to determine migration capability from previous releases of Windows® Internet Explorer® to the latest version.

## Exercise 1.7: Microsoft Office Assessment

***Note:*** Steps 1 through 7 apply specifically to Office 2016 assessments and steps 8 through 14 apply specifically to Office 2013 assessments and steps 15 through 21 apply specifically to Office 2010 assessments

It may be important to keep software up to date and use a single document standard. You can use the MAP Toolkit’s ability to visit every machine on the network to get a snapshot of all installed applications. For this assessment, you can get an inventory of the existing Microsoft Office software deployed in your environment.

* To create an Office 2016 Assessment Report

1. From the main menu select **File → Select a Database** to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.
3. Click the **Desktop** scenario group in the left pane of the UI, then click the **Office 2016 Readiness** tile.
4. Click **Generate Office 2016 Report** at the top of the scenario detail page to start generating the report and to launch a status dialog.
5. After the status dialog reports that the generation has completed, click **Close**.
6. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **Office2016Assessment-<date-and-time>** Excel report, view how individual client computers were configured at the time of the inventory, and which are recommended for a migration to Office 2016. After viewing close report.

* To create an Office 2013 Assessment Report

1. From the main menu select File → Select a Database to launch the Create or select a database to use dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.
3. Click the **Desktop** scenario group in the left pane of the UI, then click the **Office 2013 Readiness** tile.
4. Click **Generate Office 2013 Report** at the top of the primary pane to start generating the reports and to launch a status dialog.
5. After the status dialog reports that the generation has completed, click **Close**.
6. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **Office2013Assessment-<date-and-time>** Excel report, view how individual client computers were configured at the time of the inventory, and which are recommended for a migration to Office 2013. After viewing close report.

* To create an Office 2010 Assessment Report

1. From the main menu select File → Select a Database to launch the Create or select a database to use dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.
3. Click the **Desktop** scenario group in the left pane of the UI, then click the **Office 2010 Readiness** tile.
4. Click **Generate Office 2010 Report** at the top of the primary pane to start generating the reports and to launch a status dialog.
5. After the status dialog reports that the generation has completed, click **Close**.
6. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **Office2010Assessment-<date-and-time>** Excel report, view how individual client computers were configured at the time of the inventory, and which are recommended for a migration to Office 2010. After viewing close report.

**Conclusion:** Based on the Selected Microsoft Office Assessment it is possible to find machines that are in need of an upgrade to Office 2010 or Office 2013 or Office 2016

## Exercise 2.1: Windows Server Readiness

***Note:*** Steps 1 through 10 apply specifically to Windows Server 2016 assessments and steps 11 through 20 apply specifically to Windows Server 2012 assessments and steps 21 through 30 apply specifically to Windows Server 2008 R2 assessments. Steps 31 through 35 are for generic inventory assessments and will work for Windows Server 2016, Windows Server 2012 or Windows Server 2008 R2 assessments.

Imagine you have been assigned the task of assessing your organization’s readiness to upgrade existing servers to Windows Server 2016. It is essential to collect information on the hardware configurations, driver versions, installed server roles, etc. in order to develop a migration plan that includes the projected time and cost of upgrading and migrating servers. To this end, the MAP Toolkit needs to collect inventory information from the target network using WMI.

* To assess Windows Server 2016

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.

**Note:** This database already contains an inventory from a network of server machines with complex configuration. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2016** tile.
2. Inspect the scenario detail page and observe that discovered machines are classified as ready, not ready, insufficient data or cannot run Windows Server 2016.

* To generate Windows Server 2016 Assessment Reports

1. Ensure you have completed the previous procedure, **To assess** **Windows Server 2016**.
2. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2016** tile.
3. Click **Generate Windows Server 2016 Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.
6. Open the **WindowsServer2016Assessment-<date-and-time>** Excel report, view the detailed information on the assessed servers and their relative readiness for Windows Server 2016. After viewing close reports and file browser.

**Note:** In addition to the subject matter-specific Excel report, the MAP Toolkit can generate an inventory report of all the machines found in the environment.

* To assess Windows Server 2012

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.

**Note:** This database already contains an inventory from a network of server machines with complex configuration. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2012** tile.
2. Inspect the scenario detail page and observe that discovered machines are classified as ready, not ready, insufficient data or cannot run Windows Server 2012.

* To generate Windows Server 2012 Assessment Reports

1. Ensure you have completed the previous procedure, **To assess** **Windows Server 2012**.
2. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2012** tile.
3. Click **Generate Windows Server 2012 Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.
6. Open the **WindowsServer2012Assessment-<date-and-time>** Excel report, view the detailed information on the assessed servers and their relative readiness for Windows Server 2012. After viewing close reports and file browser.

**Note:** In addition to the subject matter-specific Excel report, the MAP Toolkit can generate an inventory report of all the machines found in the environment.

* To assess Windows Server 2008 R2

1. Select File → Select a Database from the main menu to launch the Create or select a database to use dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.

**Note:** This database already contains an inventory from a network of server machines with complex configuration. The database was populated by performing the steps of the previous exercise on a live network.

1. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2008 R2** tile.
2. Inspect the primary pane and observe that discovered machines are classified as ready, not ready, insufficient data or cannot run Windows Server 2008 R2.

* To generate Windows Server 2008 R2 Assessment Reports

1. Ensure you have completed the previous procedure, **To assess** **Windows Server 2008 R2**.
2. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2008 R2** tile.
3. Click **Generate Windows Server 2008 R2 Report** at the top of the primary pane to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.
6. Open the **WS2008R2HardwareAssessment-<date-and-time>** and **WS2008R2RoleAssessment-<date-and-time>** Excel reports, view the detailed information on the assessed servers and their relative readiness for Windows Server 2008 R2. After viewing close reports and file browser.

**Note:** In addition to the subject matter-specific Excel report, the MAP Toolkit can generate an inventory report of all the machines found in the environment.

* To generate a generic inventory report

1. Click the **Environment** scenario group in the left pane of the UI, then click the **Inventory Results** tile.
2. Click **Generate Inventory Results Report** at the top of the scenario detail page to start generating the report and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **InventoryResults-<date-and-time>** Excel report and view the detailed information on every machine inventoried. After viewing close reports and file browser.

**Conclusion:** The MAP Toolkit can generate content that lays out the facts to support a migration to Windows Server 2008 R2, Windows Server 2012 or Windows Server 2016. The reports show the number of upgradeable machines in the network and provide the details of hardware upgrades that may be necessary for some of the machines.

## Exercise 2.2: Server Custom Assessment Properties

Microsoft provides default settings for the level of performance and resources required of a Windows Server 2012 ready machine. These settings, however, are not always suitable due to specialized hardware or virtualization. In these cases, you can specify your own threshold for Windows Server 2012. In this exercise we will perform custom assessment properties for Windows Server 2012.

* To use default assessment properties

1. Ensure that you are using the **MAP\_SampleDB** database, visible in the bottom status bar of the MAP Toolkit UI**.**
2. Click the **Server** scenario group in the left pane of the UI, then click the **Windows Server 2012** tile.
3. Inspect the scenario detail page and observe that Windows Server 2012 discovered machines are classified as ready, not ready, cannot run or insufficient data. Note the values in the Before Hardware Upgrades section for how many machines are ready, how many machines are not ready, how many machines cannot run, and how many machines have insufficient data.

* To use custom assessment properties

1. Ensure you have completed the steps in the procedure **To use default assessment properties**.
2. In the **Options** section at the top of the scenario detail page, click **Customize assessment properties**.
3. In the **Assessment Properties** pop-up dialog, click **Use Custom Settings**. Now you can modify the criteria for invalidating a machine for upgrade to Windows Server 2012.
4. Change the value in **CPU Speed (GHz)** in the **x64 Systems** columnfrom 1.000 to 5.000.
5. Click **Run Assessment** to run the assessment using the custom values and to launch a status dialog.
6. After the status dialog reports that the assessment process has completed, click **Close**.
7. In the scenario detail page, after the custom assessment, notice in the Before Hardware Upgrades section how many machines are ready, how many machines are not ready, how many machines cannot run, and how many machines have insufficient data.

**Conclusion:** You can change the criteria for Windows Server 2012 platform readiness that the assessment engine uses.

## Exercise 2.3: Collecting Performance Data

In order to determine the resources needed by individual computers that are candidates for virtualization or to determine Azure capacity, the MAP Toolkit needs to collect performance data from these computers over an extended period.

This exercise demonstrates how such collection is done, but in the interest of time, actual collection from an interesting network has been done ahead of time and provided in database form for the subsequent exercises.

**Note:** This lab uses the student database for exercises that serve to demonstrate functionality but do not require complex data.

* To collect performance data

1. Create a text file called **local-computer.txt** with notepad containing the host name of your computer (example: **MAP-LAB-2013**), and save it to your **Documents** folder - this document will be used in the steps below.
2. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
3. Click **Use an Existing Database** and select **student** from the database menu and click **OK**. (If you created an inventory database with a different name in exercise 1.2, use the name you specified).
4. Click the **Desktop Virtualization** scenario group in the left pane of the UI, then click the **Collect performance data** step.
5. On the **Collection Configuration** page, verify that only **Windows-based machines** is selected.
6. In the **End Time** field, type a time **5 minutes** **from now**, then click **Next**.
7. You will see a dialog that will warn you that the duration is too short. Click **Yes** to dismiss the notification.
8. In the **Choose Computers** dialog verify that **Provide a text file…** is selected
9. Click **Browse…**
10. Locate the file **local**-**computer** and click **Open**.
11. Click **Next** in the **Choose Computers** dialog.
12. You will see a dialog that will notify you about the number of machines on which the toolkit will collect performance data. Click **OK** to dismiss the notification.
13. Click **Create** to provide an administrator login for the machine.
14. Leave the **Domain Name** blank, then in the **Account Name** field type the name of the local computer user (example: **MAP-lab-user**).
15. In both the **Password** and **Confirm Password** fields, type the password of the local computer user (example: **Password**) and **Save**.
16. Click **Next** in the **All Computers Credentials** dialog.
17. If you had selected Linux on the first page, you would also see SSH in the list and be able to specify which you would like tried first, click **Next**.
18. Click **Finish** to start collecting performance data.

**Note:** Collecting performance data for five minutes is done for demonstration purposes only. In a real setting five minutes would be meaningless because the goal is to measure the peaks and valleys of the machines’ performance and a much longer data collection time (30 minutes at a minimum) would be required. For some machines it may be advisable to collect data for a longer period (2 days or more) because they may exhibit their true behavior only during a scheduled task, for example, in the middle of the night.

1. While you are waiting, click **Close** on the status dialog and interact with the underlying UI to see that it is not locked up by the collection.
2. Notice the MAP Toolkit status bar. To the right of the database name (Student, in this case), the process status will appear.
3. Wait until the status turns to **Task processor succeeded**. This will signify that data collection is complete.

**Note:** This inventory may fail because we did not allow sufficient time to pass. There can be other reasons such as authentication problems on the remote machine.

**Conclusion:** This exercise shows what is required to collect performance data from a machine and how to enable collection by changing administrative permissions.

## Exercise 2.4: Performance Reporting

As shown in Exercise 2.3, the MAP Toolkit can monitor select computers for an extended amount of time to collect performance data. Because line-of-business applications are used throughout the day or for a longer period of time, there are peaks and valleys in performance that will be missed if only a few measurements are collected.

This exercise uses a database that contains performance data already collected on a number of machines. The real time required to collect this data is 30 minutes or longer.

* Re-load the sample database

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.

**Note:** Because the database already contains performance data the UI can be immediately inspected in the following steps.

* To create a performance report

1. Click the **Desktop Virtualization** scenario group in the left pane of the UI, then click the **Performance Metrics** tile.
2. Click **Performance Metrics Report** at the top of the scenario detail page to start generating the report and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **PerfMetricResults-<date-and-time>** Excel report and view detailed information on the observed performance of the designated machines. After viewing close report and file browser.

**Conclusion:** The MAP Toolkit is capable of collecting a wide variety of performance metrics which can be used for many purposes outside the scope of the MAP Toolkit. These results can be directly inspected in the UI and exported through an Excel report by using the generate report action.

## Exercise 3.1: Server Consolidation by Virtualization

With the availability of high performance virtualization technologies such as Hyper-V, many workloads can be considered for virtualization in order to reduce machine maintenance, increase utilization, and lower aggregate power consumption.

You can greatly simplify the tasks of figuring out exactly where to start and how to plan for consolidation by using the MAP Toolkit. The toolkit can provide estimates in a matter of hours instead of the days required by manual inspection.

This exercise uses the **MAP\_SampleDB** database, which contains previously collected performance data collected on several machines (a 30 minute real time task).

* To create a hardware configuration

1. From the main menu select **File → Select a Database** to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.
3. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Create hardware configuration** step.
4. On the **Choose Scenario** page, click **General Server Consolidation/Desktop Virtualization**.
5. Under **Create new,** type the name **myhardware** and click **Next** twice and the CPU page will display.
6. From the **Manufacturer** drop down menu, select **Intel**. You can personalize the CPU specification as you like, then click **Next**.
7. Keep or modify the **Storage** settings and click **Next**.

**Note:** The values for Maximum Disk input/output (I/O) and total storage available are calculated based on specified disk configurations. These are the only values that are carried forward for analysis. Specifying input output per second (IOPS) and total storage directly allows the use of storage arrays.

1. Enter “1000” for the network throughput in the **Network and Memory** settings and click **Next**.
2. Inspect the summary of hardware settings for the virtualization host and click **Finish**.

* To perform a Server Consolidation Assessment

1. Create a text file called **network-computers.txt** with notepad and enter the contents as follows:

POM-3H3E-VS05-1

POM-3P8E-01

POM-3P8E-02

Save it to your **Documents** folder - this document will be used in the steps below. Only the machines named in this file will be considered for consolidation. You can consider creating a shorter list of computers that are eligible for placement and re-run Server Consolidation Wizard to see the impact.

1. Ensure you have completed the previous procedure, **To** **create a hardware configuration**.
2. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Run the Server Consolidation Wizard** in the **Server Consolidation** tile.
3. Select **Windows Server 2012 Hyper-V** (default) and click **Next**, the **Hardware Configuration** page is displayed.
4. Click **Select from your hardware library**, verify that **myhardware** is selected and click **View** to inspect the configuration you are about to use. After inspecting the configuration click **Close** on the Hardware Configuration Properties page.
5. Click **Next** on the Hardware Configuration page and the **Utilization Settings** page is displayed, adjust as desired.
6. Click **Next** and the **Choose Computers** page is displayed.
7. Click **Provide a text file…**
8. Click **Browse** to select a file and open the **network-computers.txt** file.
9. Click **Next** to see a dialog informing you how many machines will be considered for placement. Click **OK** on the dialog and a **Summary** page of the host machine configuration will be shown.
10. Click **Finish** on the Summarypage to start the placement assessment, and to launch a status dialog.
11. When the assessment is complete, click **Close**.
12. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Server Consolidation** tile. View the server consolidation assessment results within the UI.

* To generate Server Consolidation Reports

1. Ensure you have completed the previous procedure, **To** **perform a Server Consolidation Assessment**.
2. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Server Consolidation** tile.
3. Click **Server Virtualization Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
4. After the status dialog reports that the generation has completed, click **Close**.
5. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **ServerVirtRecommendation-<date-and-time>** Excel report. View the report which contains detailed information on the placement of existing hardware as virtual machines on future hardware running Windows Server 2012 Hyper-V.
2. After viewing close the report and file browser.

**Conclusion:** The MAP Toolkit can generate proposal-ready content that presents the facts to support a consolidation of existing physical workloads onto Windows Server Hyper-V based on the observed needs of the workloads. It reports on workload performance and the utilization of the physical server hardware before and after consolidation.

## Exercise 3.2: Discovering VMware Virtualization

Larger IT organizations may have more than one virtualization technology. MAP Toolkit functionalities extend to these technologies, similarly to other Microsoft management products that reach beyond Microsoft products.

In this exercise you can learn how to inventory existing VMware platforms and the virtual machines running on them. The lab uses a database that contains inventory from an environment including installations of VMware for the exercise.

* Collecting Inventory Data

Exercise 1.2 reviews the collecting inventory process. By selecting **VMware computers** from the Inventory and Assessment Wizard **Inventory Scenarios** page you will be able to specifically collect existing VMware platforms information.

* Review Discovery Results via the UI

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an existing database**, and select **MAP\_SampleDB** from the Databases menu, and click **OK**.

**Note:** This database already contains an inventory from a network of complex machines with VMware.

1. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Virtual Machine Discovery** tile.
2. Inspect the scenario detail page and view the tables **Discovery Summary** and **Guest Operating System Overview**. Observe that the MAP Toolkit has found **Hyper-V**, **VMware ESXi**, and **Other/Unknown**.

* Generate a Discovery Results Report

1. Click the **Server Virtualization** scenario group in the left pane of the UI, then click the **Virtual Machine Discovery** tile.
2. Click **Generate Virtual Machine Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **VMReport-<date-and-time>** Excel report.
2. Click the **Overview** tab to see that the MAP Toolkit has found **VMware ESXi** servers and **VMware Servers**. This worksheet provides a summary of physical servers running virtualization technologies and virtual machines in your IT environment.

**Note:** You can use all of the MAP Toolkit analysis functionalities on clients discovered in this way.

1. Click the **Host Summary** tab to view details about physical servers running virtualization technologies and virtual machines in your environment.
2. Click the **Host and Guest Details** tab to view known physical hosts and guests in the environment. This worksheet shows host guest relationship with hardware details. After viewing close the report and file browser.

**Conclusion:** This exercise has shown how the MAP Toolkit can discover the clients running VMware by communicating with VMware ESXi and S2 servers.

## Exercise 3.3: Windows Azure Platform Migration

This MAP Toolkit feature performs an inventory of web applications and SQL Server databases in your environment and assesses them for migration to a Windows Azure Platform. You can select which web applications and SQL Server databases in your environment to consider for migration. Based on your selection, a Windows Azure Application Summary will be generated with recommendations.

In this exercise you can learn how to:

* Perform an inventory of existing web applications and SQL Server databases
* Review discovery results via the UI
* Generate a discovery results report
* Collect performance data

This exercise uses a database that contains inventory and performance metrics from an environment including installations of web applications and SQL Server databases.

* Collecting Inventory Data

Exercise 1.2 reviews the inventory collection process. By selecting **Windows Azure Platform Migration** from the Inventory and Assessment Wizard **Inventory Scenarios** page you will be able to specifically collect Windows Azure Platform Migration information such as hardware, device, and software information for Windows-based machines in your environment, including IIS instances, web applications and Microsoft SQL Server databases running on them.

* Review Discovery Results via the UI

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an existing database**, and select **MAP\_SampleDB** from the Databases menu, and click **OK**.

**Note:** This database already contains an inventory from a network of complex machines with web applications and SQL Server databases.

1. Click the **Server** scenario group in the left pane of the UI, then click the **Web Application Discovery** tile.
2. Inspect the scenario detail page and observe the tables and pie chart with **Web Application Summary**.

* Generate a Discovery Results Report

1. Click the **Server** scenario group in the left pane of the UI, then click the **Web Application Discovery** tile.
2. Click **Generate Web Application Report** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **WebApplicationDatabaseDiscovery-<date-and-time>** Excel report.
2. View the following tabs to see detailed information about the discovered computers and their web applications and SQL databases.
   * 1. ***Summary***  
        Provides a high level overview of IIS servers, web applications, and SQL Servers running in the environment that can be considered for migration to Windows Azure or SQL Azure.
     2. ***Web Applications***  
        Describes the inventory of web applications running on IIS that were discovered in the environment.
     3. ***SQL Server Databases***  
         A listing of all databases discovered on each database server instance with operational details such as size of the database, last backup time, and owner name.
     4. ***Server Summary***  
        Lists all the computers discovered in the environment that were running either SQL Server or IIS and the associated hardware configuration and workload for each computer.
3. After viewing close report.

* Collecting Performance Data

Performance metrics must be collected for machines to be assessed for migration to the Windows Azure Platform. Exercise 2.3 reviews the collecting performance data process.

## Exercise 4.1: Discovering SQL Server

Larger IT organizations are likely to have a proliferation of SQL Server installations that are not fully known to the internal IT department. Furthermore, some of these installations may be in various stages of repair because they are not managed systematically. If these unsupervised SQL databases carry business-critical or sensitive information without backup or control, this can be problematic for the organization.

The MAP Toolkit helps you create an inventory of all the SQL Server installations in the network, complete with component and version information. This information can help you consider the value of consolidating, possibly virtualizing, certain databases, and bringing them under IT supervision when appropriate.

* To observe Microsoft SQL Server Discovery results via the UI

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu, and click **OK**.

**Note:** Because this database already contains an inventory of SQL server machines the UI can be immediately inspected in the following steps.

1. Click the **Database** scenario group in the left pane of the UI, then click the **SQL Server Products** tile.
2. Inspect the scenario detail page and observe the tables and pie chart with **SQL Server** information.

* To create SQL Server Reports

1. Click the **Database** scenario group in the left pane of the UI, then click the **SQL Server Products** tile.
2. Click **Generate Detailed SQL Server Reports** at the top of the scenario detail page to start generating the reports and to launch a status dialog.
3. After the status dialog reports that the generation has completed, click **Close**.
4. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **SQLServerAssessment-<date-and-time>** and **SQLServerDatabaseDetails-<date-and-time>** Excel documents.
2. In the SQLServerAssessment Excel report, view the **Summary** tab to see how many SQL Server database components were found in the network in total.
3. View the **Database Instances** tab to see all database instances listed with server details including if the server is virtualized (**Machine Typ**e).
4. View the **Components** tab to see all installed database components listed with server details.
5. In the **SQLServerDatabaseDetails** Excel report, view the SQL Server database information.
6. After viewing close reports and file browser.

**Conclusion:** The MAP Toolkit provides quick insight into existing installations of Microsoft SQL Server for the purpose of upgrade and improved management of company assets.

## Exercise 5.1: Discovering Linux Installations

Many IT organizations are likely to have multiple Linux installations running within their network. Many of these installations are likely running various flavors of Linux, and within each flavor, different versions. Maintaining a consistent inventory of these installations, and assessing the ability to change or consolidate them can be problematic for the organization.

The MAP Toolkit helps you create an inventory of all the Linux and other installations in the network, complete with component and version information. This information can help you consider the value of consolidating, and possibly virtualizing certain servers, and bringing them under IT supervision when appropriate.

* To create Inventory Reports for Linux Installations

1. Select **File → Select a Database** from the main menu to launch the **Create or select a database to use** dialog.
2. Click **Use an Existing Database**, select **MAP\_SampleDB** from the database menu and click **OK**.
3. Click the **Environment** scenario group in the left pane of the UI, then click the **Linux Environment Summary** tile.
4. Observe that the grid in the scenario detail page updates to display overview information for Linux-based machines.
5. Click **Generate Linux Environment Report** at the top of the scenario detail page to start generating the report and to launch a status dialog.
6. After the status dialog reports that the generation has completed, click **Close**.
7. Select **View → Saved Reports** from the main menu (or navigate to a previously opened file explorer) to launch a file browser on the directory where the generated files are stored.

**Note:** Reports are created in folders named after the database currently in use.

1. Open the **LinuxEnvironmentSummary-<date-and-time>** Excel report.
2. In the Excel report, view a summary of every machine discovered in the network, including Linux and UNIX installations. After viewing close reports and file browser.

**Conclusion:** The MAP Toolkit provides quick insight into existing Microsoft and non-Microsoft installations for the purpose of migration and improved management of company assets.

## Appendix A: Resource Links

This appendix contains additional information that relates to the contents of the Lab and online resource links.

#### Solution Accelerators and the MAP Toolkit Online Resources

* Access MAP Toolkit technical information and download links  
  <http://www.microsoft.com/map>
* Subscribe to the *Solution Accelerators Notifications* newsletter  
  <http://technet.microsoft.com/en-us/solutionaccelerators/bb687756.aspx>
* Take the Solution Accelerators Survey  
  <http://www.zoomerang.com/Survey/survey-intro.zgi?p=WEB228F6W2Z5TH>
* Visit the home page for Solution Accelerators on TechNet  
  <http://www.microsoft.com/solutionaccelerators>

## Appendix B: Installing the MAP Toolkit

The MAP Toolkit is available for free on TechNet at <http://www.microsoft.com/map>.

The MAP Toolkit can be installed on any of the following platforms:

* Windows 10 (Professional and Enterprise editions only)
* Windows 8.1 (Professional and Enterprise editions only)
* Windows 8 (Professional and Enterprise editions only)
* Windows 7 with Service Pack 1 (Professional, Enterprise, and Ultimate editions only)
* Windows Server 2016
* Windows Server 2012 R2
* Windows Server 2012
* Windows Server 2008 R2 with Service Pack 1

**Note**: MAP will run on either x86 or x64 versions of the operating system. Itanium processors are not supported.

Three major things happen when the MAP Toolkit is installed:

* The presence of prerequisites is tested, because the MAP Toolkit requires the following software:
  + Microsoft.NET Framework 4.5 (download from <http://www.microsoft.com/en-us/download/details.aspx?id=30653>)
* Installation of all updates for the operating system. Note: In some cases updates may not install automatically. To download updates for your computer manually, go to <http://update.microsoft.com>.
* By default, the MAP Toolkit will install SQL Server 2012 Express LocalDB during setup. You may also use an existing installation of SQL Server 2008, SQL Server 2008 R2, or SQL Server 2012 if you create an instance named "MAPS" before running the MAP Toolkit installer. The MAP Toolkit requires the collation order of the database engine to be set to "SQL\_Latin1\_General\_CP1\_CI\_AS".

**Notes:**

* Some of these prerequisites require restarting your computer. You may have to restart multiple times if all the prerequisites are not met prior to running Microsoft Assessment and Planning Toolkit setup.
* Installing the MAP Toolkit on a domain controller is not supported
* Existing databases made with MAP Toolkit 7.0 or earlier will not be upgradable to MAP 8.0. Existing databases made with MAP Toolkit 8.0 or later will be upgradable to work with current versions of the MAP Toolkit.
* To Install the MAP Toolkit

1. Download and run the Microsoft Planning and Assessment Tool from Microsoft TechNet.
2. Click **Yes** to accept the UAC dialog to run this application.
3. Observe how the application prompts for permission to check for updates online. Keep the default checkmark or uncheck it (it does not impact the demonstration).
4. Accept the License Agreement and click **Next**.
5. Unless you uninstalled the MAP Toolkit, the setup program will ask you if you want to **Upgrade** or **Repair a previous installation**.
6. Click **Next** to accept the default installation location.
7. Click **Upgrade**, **Repair** or **Install** to start installation.
8. Click **Finish** to complete the installation.

**Note: During the installation, MAP will generally upgrade any existing database to the current version of all the database logic. Due to the extent of changes to database logic between MAP Toolkit 7.0 and MAP Toolkit 8.0, no upgrade path is available, and a new database will need to be created.**

**Conclusion: The MAP Toolkit installs easily on the consultant’s laptop or the customer’s computer system, and has the ability to stay updated with the latest information from Microsoft.**