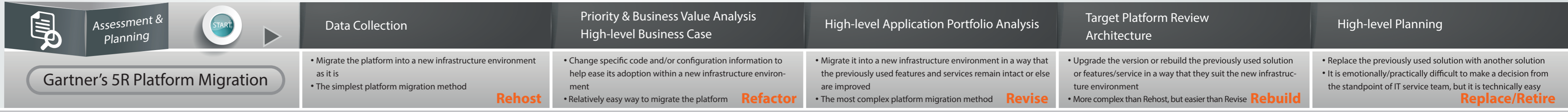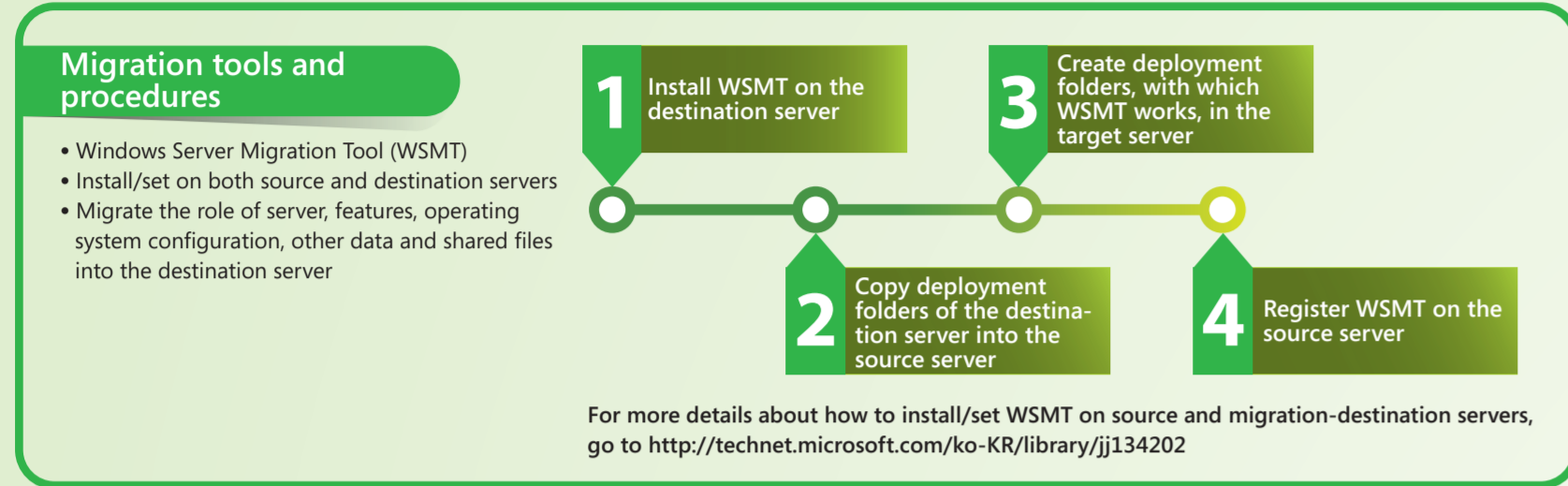# Windows Server 2003 Migration Process

Categorize platforms through planning & assessment for migration by role; choose one from the 5R (Rehost, Refactor, Revise, Rebuild Replace/Retire) platform methods defined by Gartner and establish an adequate migration plan accordingly.

Data Collection	Priority & Business Value Analysis / High-level Business Case	High-level Application Portfolio Analysis	Target Platform Review Architecture	High-level Planning
• Migrate the platform into a new infrastructure environment as it is • The simplest platform migration method **Rehost**	• Change specific code and/or configuration information to help ease its adoption within a new infrastructure environment • Relatively easy way to migrate the platform **Refactor**	• Migrate it into a new infrastructure environment in a way that the previously used features and services remain intact or else are improved • The most complex platform migration method **Revise**	• Upgrade the version or rebuild the previously used solution or features/service in a way that they suit the new infrastructure environment • More complex than Rehost, but easier than Revise **Rebuild**	• Replace the previously used solution with another solution • It is emotionally/practically difficult to make a decision from the standpoint of IT service team, but it is technically easy **Replace/Retire**

Migration method 1 – Make use of the default roles and features provided by the OS

You can practice this migration method by referring to the technical documentation in the TechNet Library officially provided by Microsoft or by working in collaboration with the Microsoft Services team and/or your partners, and also apply this to the migration of both the physical and virtual servers.

Migration tools and procedures

- Windows Server Migration Tool (WSMT)
- Install/set on both source and destination servers
- Migrate the role of server, features, operating system configuration, other data and shared files into the destination server

1 Install WSMT on the destination server

2 Copy deployment folders of the destination server into the source server

3 Create deployment folders, with which WSMT works, in the target server

4 Register WSMT on the source server

For more details about how to install/set WSMT on source and migration-destination servers, go to http://technet.microsoft.com/ko-KR/library/jj134202
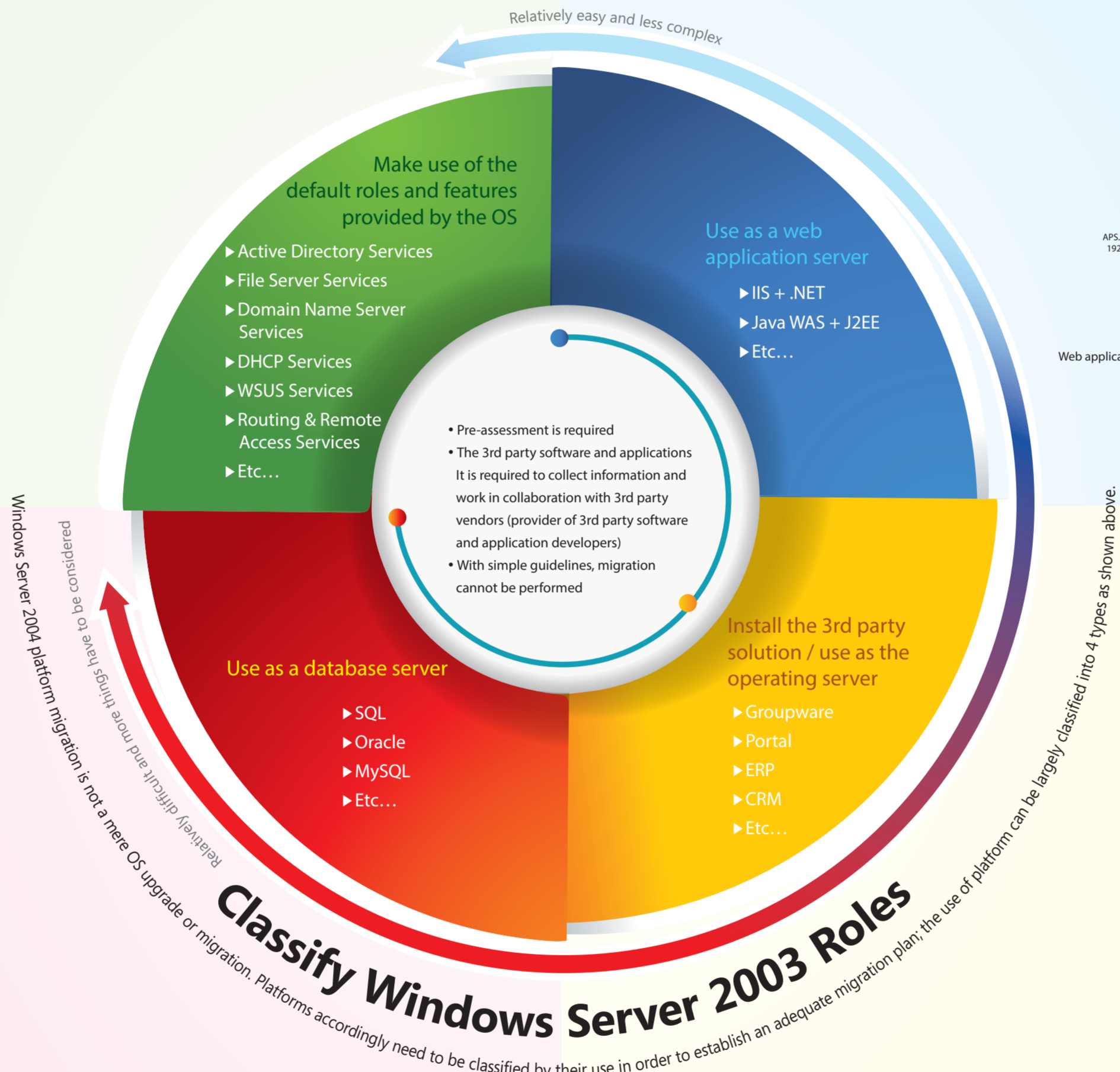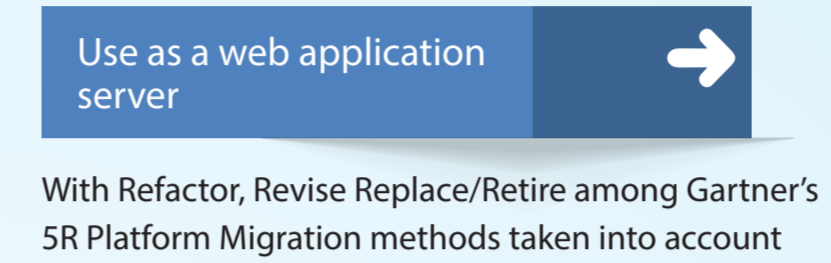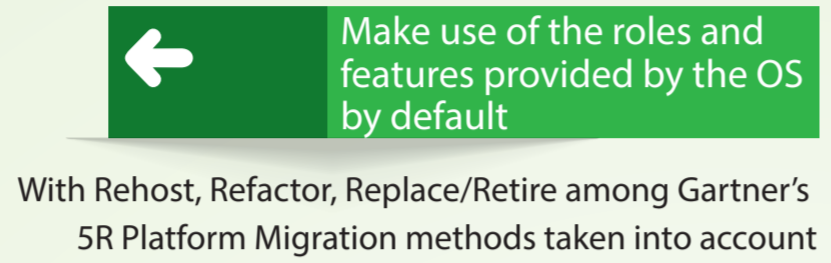
Next Step (Case by Case)

- A referential guideline is provided for typical migration scenarios among default roles and features of Windows Server 2003
- It is recommended that you first carry out assessment before migration because a number of things need to be considered in the actual operating environment
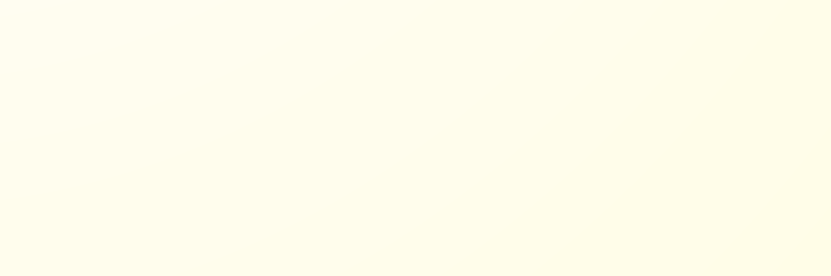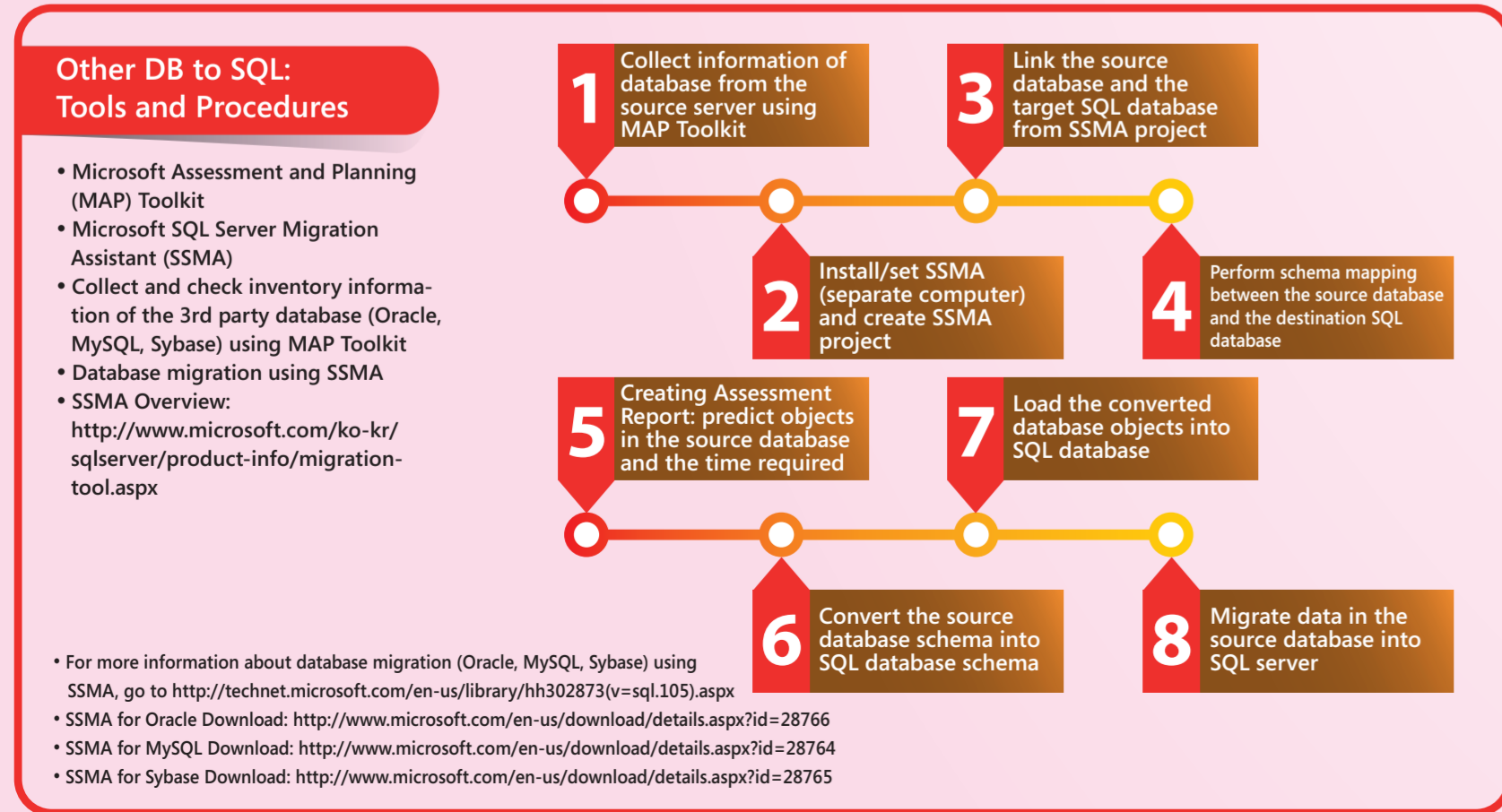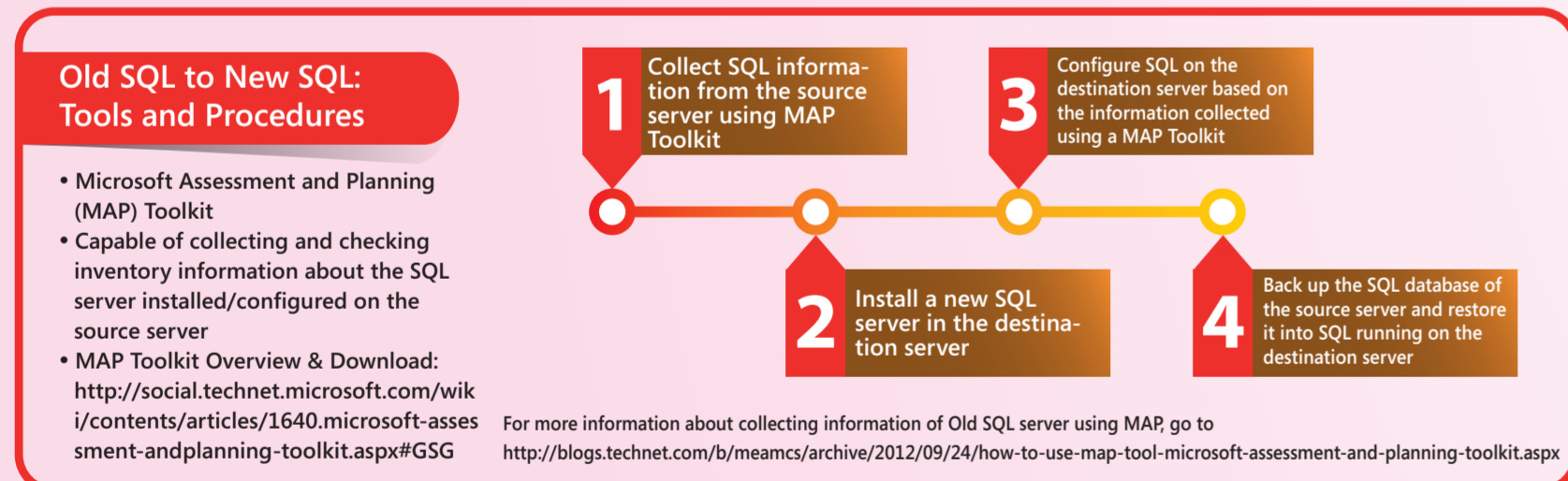
Active Directory Domain Services & DNS	Referential guideline: http://technet.microsoft.com/ko-KR/library/dd379558.aspx
Active Directory Certificate Services	Referential guideline: http://technet.microsoft.com/ko-KR/library/ee126170 (WS.10).aspx
DHCP Services	Referential guideline: http://technet.microsoft.com/ko-KR/library/dd379535.aspx
File Services	Referential guideline: http://technet.microsoft.com/ko-KR/library/dd379487.aspx
Windows Server Update Services	Referential guideline: http://technet.microsoft.com/ko-kr/library/hh852339.aspx
Local Users and Group	Referential guideline: http://technet.microsoft.com/ko-KR/library/dd379531.aspx

Windows Server Migration Information : http://technet.microsoft.com/ko-kr/library/jj134039 , http://technet.microsoft.com/ko-KR/library/dd365353.aspx

Make use of the roles and features provided by the OS by default

With Rehost, Refactor, Replace/Retire among Gartner's 5R Platform Migration methods taken into account

Migration method 2 – Use as web application server

Microsoft offers Web Deploy, which helps migrate ASP.NET and PHP applications developed/deployed in IIS 6.0 provided by Windows Server 2003 into IIS version 7.0 or later, and you can use Web Deploy to first migrate into a new destination server and then change the application-specific code or configuration values in the new infrastructure environment.

Use as a web application server

With Refactor, Revise Replace/Retire among Gartner's 5R Platform Migration methods taken into account

Web Deploy v3.5

- A tool that simplifies the deployment of web applications and websites to the IIS server
- It helps synchronize IIS servers, or migrate them into newer versions of IIS server
- For more information about Web Deploy, visit http://www.iis.net/downloads/microsoft/web-deploy

1 Install Web Deploy Extension on both the source and destination servers

2 Create information about the dependencies of websites running on the source server

3 Perform pre-configuration on the destination server based on dependencies information of the source server

4 Create a package file on the source server and migrate it into the destination server

For more information about IIS migration using Web Deploy, go to http://technet.microsoft.com/en-us/library/ff633422(v=ws.10).aspx

- It is recommended that you first test Web Deploy in a test environment, carry out assessment through troubleshooting and then use it in the actual operating environment because there are a number of things to be considered, including the deployment of ASP.NET or PHP application to IIS and specific configuration.
- This guideline is provided for the IIS server, but you can migrate Java-based WAS and J2EE servers in the same way using the migration tool provided by the relevant solution provider.
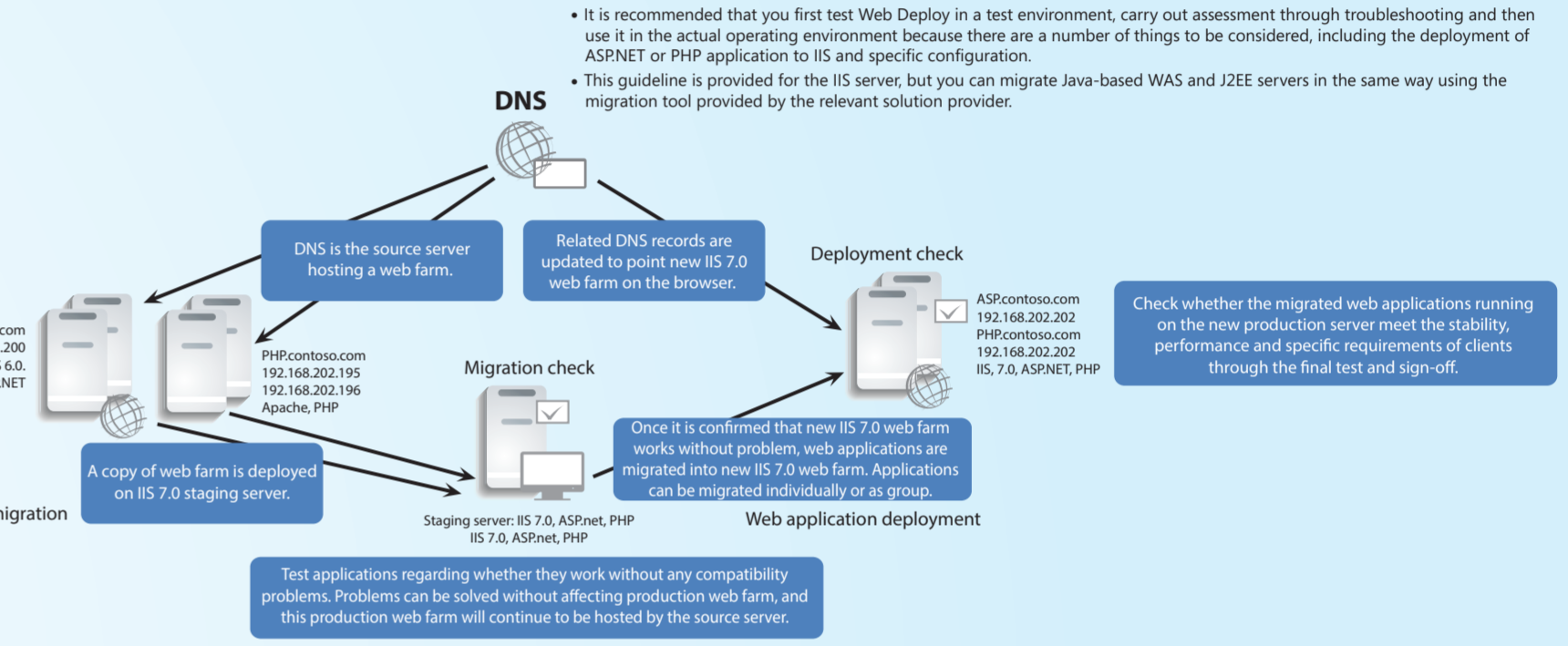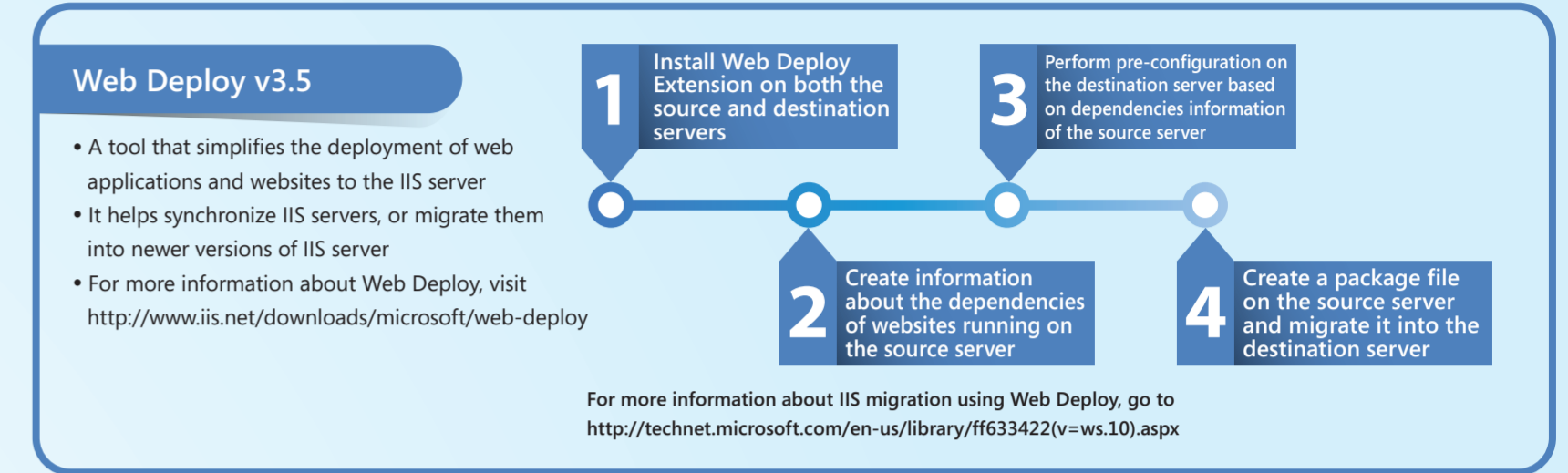

Migration method 4 – Use as database server

You can refer to the technical documentation in the TechNet Library officially provided by Microsoft or work in collaboration with Microsoft Services team and/or your partners to migrate the database into a newer version or re-configure it while migrating the OS environment.

Old SQL to New SQL: Tools and Procedures

- Microsoft Assessment and Planning (MAP) Toolkit
- Capable of collecting and checking inventory information about the SQL server installed/configured on the source server
- MAP Toolkit Overview & Download: http://social.technet.microsoft.com/wiki/contents/articles/1640.microsoft-assessment-andplanning-toolkit.aspx#GSG

1 Collect SQL information from the source server using MAP Toolkit

2 Install a new SQL server in the destination server

3 Configure SQL on the destination server based on the information collected using a MAP Toolkit

4 Back up the SQL database of the source server and restore it into SQL running on the destination server

For more information about collecting information of Old SQL server using MAP, go to http://blogs.technet.com/b/meamcs/archive/2012/09/24/how-to-use-map-tool-microsoft-assessment-and-planning-toolkit.aspx

Other DB to SQL: Tools and Procedures

- Microsoft Assessment and Planning (MAP) Toolkit
- Microsoft SQL Server Migration Assistant (SSMA)
- Collect and check inventory information of the 3rd party database (Oracle, MySQL, Sybase) using MAP Toolkit
- Database migration using SSMA
- SSMA Overview: http://www.microsoft.com/ko-kr/sqlserver/product-info/migration-tool.aspx

1 Collect information of database from the source server using MAP Toolkit

2 Install/set SSMA (separate computer) and create SSMA project

3 Link the source database and the target SQL database from SSMA project

4 Perform schema mapping between the source database and the destination SQL database

5 Creating Assessment Report: predict objects in the source database and the time required

6 Convert the source database schema into SQL database schema

7 Load the converted database objects into SQL database

8 Migrate data in the source database into SQL server

- For more information about database migration (Oracle, MySQL, Sybase) using SSMA, go to http://technet.microsoft.com/en-us/library/hh302873(v=sql.105).aspx
- SSMA for Oracle Download: http://www.microsoft.com/en-us/download/details.aspx?id=28766
- SSMA for MySQL Download: http://www.microsoft.com/en-us/download/details.aspx?id=28764
- SSMA for Sybase Download: http://www.microsoft.com/en-us/download/details.aspx?id=28765

Use as a database server

With Refactor, Revise, Rebuild and Replace/Retire among Gartner's 5R Platform Migration methods into account

Central diagram – Classify Windows Server 2003 Roles

Relatively easy and less complex

Make use of the default roles and features provided by the OS
- ▶ Active Directory Services
- ▶ File Server Services
- ▶ Domain Name Server Services
- ▶ DHCP Services
- ▶ WSUS Services
- ▶ Routing & Remote Access Services
- ▶ Etc…

Use as a web application server
- ▶ IIS + .NET
- ▶ Java WAS + J2EE
- ▶ Etc…

Use as a database server
- ▶ MySQL
- ▶ Etc…

Install the 3rd party solution / use as the operating server
- ▶ Groupware
- ▶ Portal
- ▶ ERP
- ▶ CRM
- ▶ Etc…

(center)
- Pre-assessment is required
- The 3rd party software and applications It is required to collect information and work in collaboration with 3rd party vendors (provider of 3rd party software and application developers)
- With simple guidelines, migration cannot be performed

Classify Windows Server 2003 Roles

Windows Server 2004 platform migration is not a mere OS upgrade or migration. Platforms accordingly need to be classified by their use in order to establish an adequate migration plan; the use of platform can be largely classified into 4 types as shown above.

Relatively difficult and more things to be considered

Migration method 3 – Install the 3rd party solution / use as the operating server

When it comes down to migrating Windows Server 2003 hosting 3rd party solutions (and applications), there are many more things to be considered concerning the migration of those solutions (applications) to a new infrastructure environment, rather than the migration of the OS itself, and moreover the procedure and methodology take on added significance. Microsoft recommends performing migration in 9 steps as shown below. (It is difficult to propose guidelines in broad generalities because a number of things must be considered depending on the 3rd party solutions - and applications - installed.)

The following figure shows a detailed examination of the step-by-step activities proposed by Microsoft for the migration of Windows Server 2003 on which the 3rd party solutions (and applications) are installed:
(It is recommended to follow each step and activity involved, but some steps could be skipped depending on the size of the 3rd party solutions - and applications - or staffing of the client.)

1 Discovery/Raw Inventory
- Collect configuration information of applications and software installed in the current environment
- Record the information collected and store it in a database
- Output: Raw Application List

2 Rationalization
- Define rationalization rules that determine which software/applications would be migrated
- Deduplication (driver, utility, other binary)
- Remove dummy configuration information
- Output: Rationalized Inventory

3 Categorize
- Collect information and binary of solutions (or applications)
- Determine priorities depending on critical business dependencies and collect information of how much each solution (or application) is used
- Define type of applications, installation and configuration methods
- Output: Categorized Inventory

4 Standardize/Prioritize
- Prioritize solutions (or applications)
- Check and designate business owner
- Prioritize according to the deployment plan
- Output: Raw Application List

5 Preparation Inflow
- Examine the result of pre-assessment
- Prepare solution (or application) specific installation/configuration guidelines
- Configure the owner of task
- Output: Apps Ready for Packaging

6 Remediation/Packaging
- Install/configure testing environment with the help of solution (or application) provider and check
- Change installation/configuration steps and packaging/deployment methods (if required)
- Output: Packaged Applications

7 Receive Outflow/Initial Testing
- Prioritize tasks
- Binary packaging, synchronization of document and configuration information, source code clean-up
- Output: Apps Ready for AT Testing

8 Acceptance Testing (AT)
- Designate server for AT, and install/configure applications
- Implement test scenarios
- Correct errors and approve AT result
- Output: Raw Application List

9 Deploy/Transition to Users
- Deploy in the actual operating environment
- Update Help Desk knowledge base
- Update documents
- Update IT assets management database
- Output: Apps Ready for Deployment

Install the 3rd party solution / use as the operating server

With Revise, Rebuild and Replace/Retire among Gartner's 5R Platform Migration methods taken into account