



IBM Systems Group



IBM Virtualization Engine

Information Center, Virtualization Engine planning advisor, Installation

Virtualization Team
ATS PSSC Montpellier

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This presentation is intended for the education of IBM and Business Partner sales personnel. It should not be distributed to customers.

Agenda

Topics to be covered are :

IBM Systems Software Information Center

- How to access ?
- What information to find ?

IBM Virtualization Engine planning advisor

- How to access ?
- How to use ?

IBM Virtualization Engine Installation

- Software Components
- Installation Procedures / Product

Learning Objectives

At the conclusion of this material, you should be able to:

- Locate Virtualization Engine documentation by browsing the IBM Systems Software Information Center
- Understand the importance of planning in the deployment of the Virtualization Engine in your enterprise, and how the Virtualization Engine planning advisor can assist you
- Use the Virtualization Engine planning advisor in order to organize the deployment of the IBM Virtualization Engine in a given context
- Execute the installation of the different components of the IBM Virtualization Engine

Agenda

- 1 IBM Systems Software Information Center**
- 2 IBM Virtualization Engine planning advisor
- 3 IBM Virtualization Engine Installation

IBM Systems Software Information Center

The screenshot displays the IBM Systems Software Information Center website. The top navigation bar includes the IBM logo, a search box, and links for Home, Products, Services & solutions, Support & downloads, and My account. The main content area is titled "IBM Systems Software Information Center" and features a left-hand navigation pane with a tree view of topics. The "Planning" section is selected, showing sub-topics like "Port assignment planning worksheet", "User access and password planning worksheet", and "Virtualization Engine installation". The main content area displays the "Planning for the Virtualization Engine products" page, which includes an introduction, prerequisites, and installation planning sections.

Planning for the Virtualization Engine products

This series of planning worksheets contain the tasks and considerations that must be addressed prior to beginning the installation of the Virtualization Engine products.

These worksheets help you retrieve and record the information that you will need during the installation and configuration of the Virtualization Engine products. Print each page, record your answers, and use the completed worksheets to assist you as you install and configure the Virtualization Engine products.

Prerequisites

- Complete the [Virtualization Engine planning advisor](#), unless you already completed the advisor as part of your ordering process.

The Virtualization Engine planning advisor is an interactive tool that produces customized planning output based on your needs. Use the planning advisor to:

- Identify what products you want to install.
- Design your Virtualization Engine topology.
- Generate customized installation flow charts.
- Print and record your customized output before beginning the installation process.

Read about [installation considerations](#) to help you plan and perform your installation.

Installation planning

- Complete the [Virtualization Engine port assignment planning worksheet](#).
- Complete the [Virtualization Engine user access and password planning worksheet](#).

IBM Systems Software Information Center

<http://publib.boulder.ibm.com/infocenter/eserver/v1r2/index.jsp>

(Link available on VE v2r1 GA day)

• The IBM Systems Software Information Center is the primary location for the IBM Virtualization Engine documentation on the web

• Topics covered include :

- Deployment Planning (See Virtualization Engine planning advisor)
- Installation / Configuration / Updates
- Lookup on each component :
 - Virtualization Engine Console
 - Enterprise Workload Manager
 - Resource Dependency Service

Content / Areas

Virtualization Engine

- Overview & getting started
- Planning (including an interactive planning advisor)
- Scenarios
- Installation
- Management
- Troubleshooting
- Products
- Systems technologies
- Virtualizing a system
- Managing a virtual system
- Managing a virtual enterprise

Systems management

- Scenarios for effective systems management
- Solutions for single platform and cross-platform systems management

Various other IBM Systems-related software topics

Content / Topics

- **Topics : Concise pieces of information**
- **Each article addresses one complete idea**
- **The IBM Systems Software Information Center has topic types of *procedure, concept, example, reference, and details***

Topic Type	Content
Procedure	How do I ?
Concept	What is this ?
Reference	Look up information
Example	Works through a scenario or supplies working code examples
Details	Secondary to another article

Content / Interactive Resources

- More than just traditional text
- Content interactive and tailored to individual customers

Interactive Information	Description
eLearning	Allows the user to learn about task and concepts in an engaging, interactive, and user-driven manner. For example: Virtualization Engine eLearning module.
Advisors	Walks users through complex decisions; makes smart recommendations based on user input. For example: Virtualization Engine planning advisor.
Conceptual animations	Combines text, graphics, and sound to create a rich user experience. Illustrates complex concepts and relationships in an engaging format. For example: EWLM conceptual animations.
Custom checklists	Provides personalized procedures based on customer input.
Interactive tables	Allows the user to sort and filter complex sets of data in an interactive manner. No more sorting through pages and pages of data.
Finders	Allows the user to look up information fast; a mini-search.

Agenda

- 1 IBM Systems Software Information Center
- 2 IBM Virtualization Engine planning advisor**
- 3 IBM Virtualization Engine Installation

The importance of planning

Careful planning is a must to successfully deploy the Virtualization Engine

Among the planning considerations:

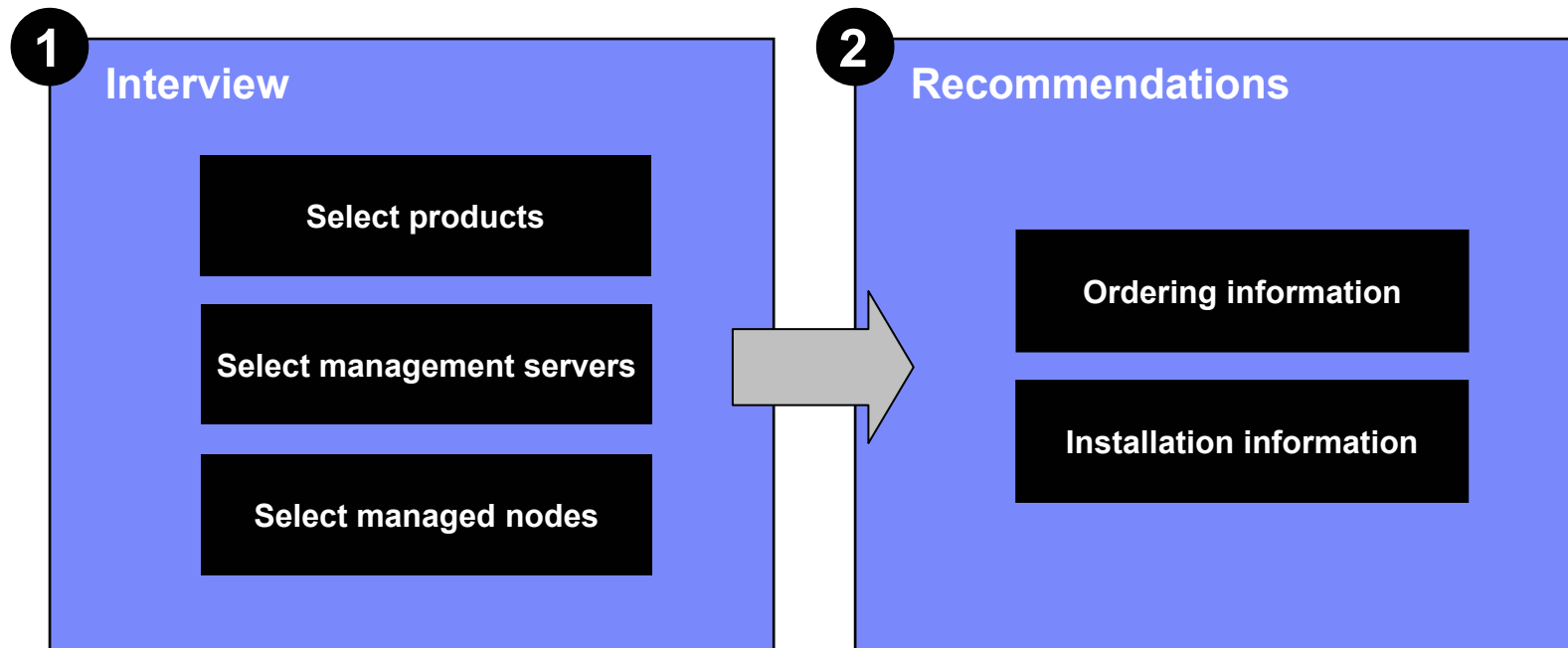
- Understand the functional capabilities of the Virtualization Engine products.
- Understand the supported operating systems and minimum system requirements.
- Determine which products are right for your business
- Determine what you need to order
- Determine where the products should be deployed in your enterprise
- Identify prerequisites
 - Prerequisite software installation
 - Environment preparation
- Understand the tasks that need to be completed to perform the installation

Virtualization Engine planning advisor - Description

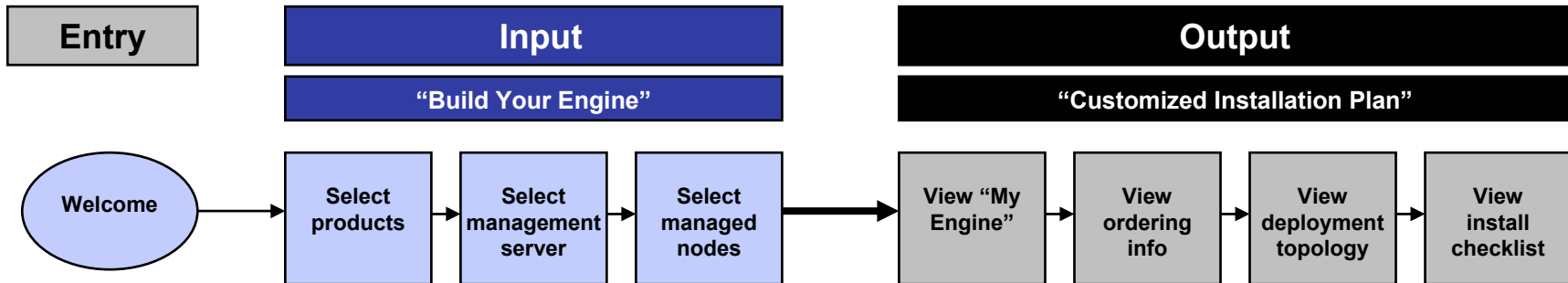
- ❖ **An interactive, Flash-based tool that asks you questions about your enterprise and how you plan to use the Virtualization Engine**
- ❖ **Produces customized recommendations for implementing (Ordering / Deploying / Installing) the Virtualization Engine in your enterprise**
- ❖ **Access through the IBM Systems Software Information Center :**
Virtualization >> Virtualization Engine >> Management Collection >> Planning

Virtualization Engine planning advisor - Principle

- The Virtualization Engine planning advisor is made up of two parts:
 - **The input gathered from the customer (Interview)**
 - **The resulting output / results (Recommendations)**



The entire Flow



Customer is guided through the task of selecting the VE products they are interested in, with the assistance of:

- Conceptual documentation
- Conceptual animations
- Solution scenarios
- Hardware requirements
- Software requirements

Once the combination of desired products has been established, the customer is guided through the process of selecting the hardware/operating systems on which they will deploy those desired products.

Upon completion of "building" their Virtualization Engine configuration, the customer is presented with customized recommendations:

Ordering

Instructions on how to go about ordering the Virtualization Engine, if it has not been ordered/obtained already
Explanation of the licensing model

Deploying

Graphical depiction of the deployment of the products and their components across VE enterprise

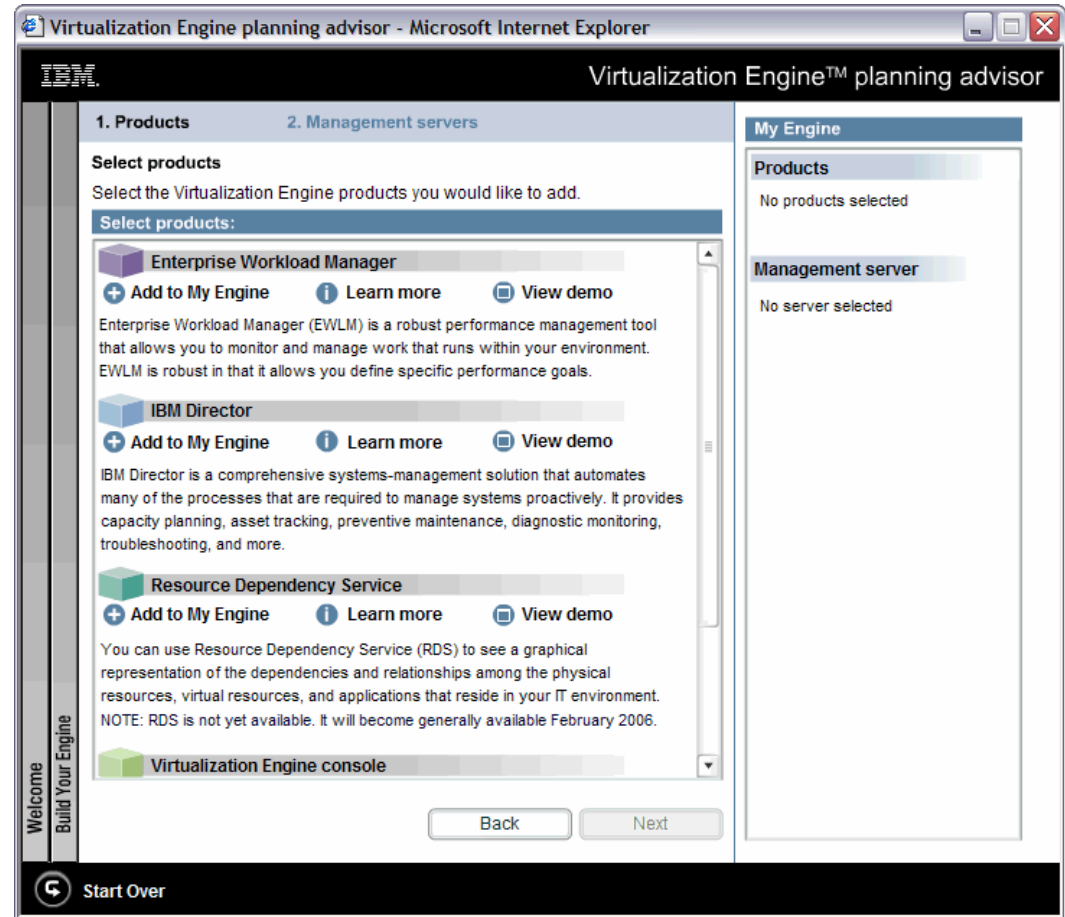
Installing

Customized checklist of tasks necessary to install, configure, and begin working with (with links to instructions/procedures)

The Flow

► Build Your Engine / Products

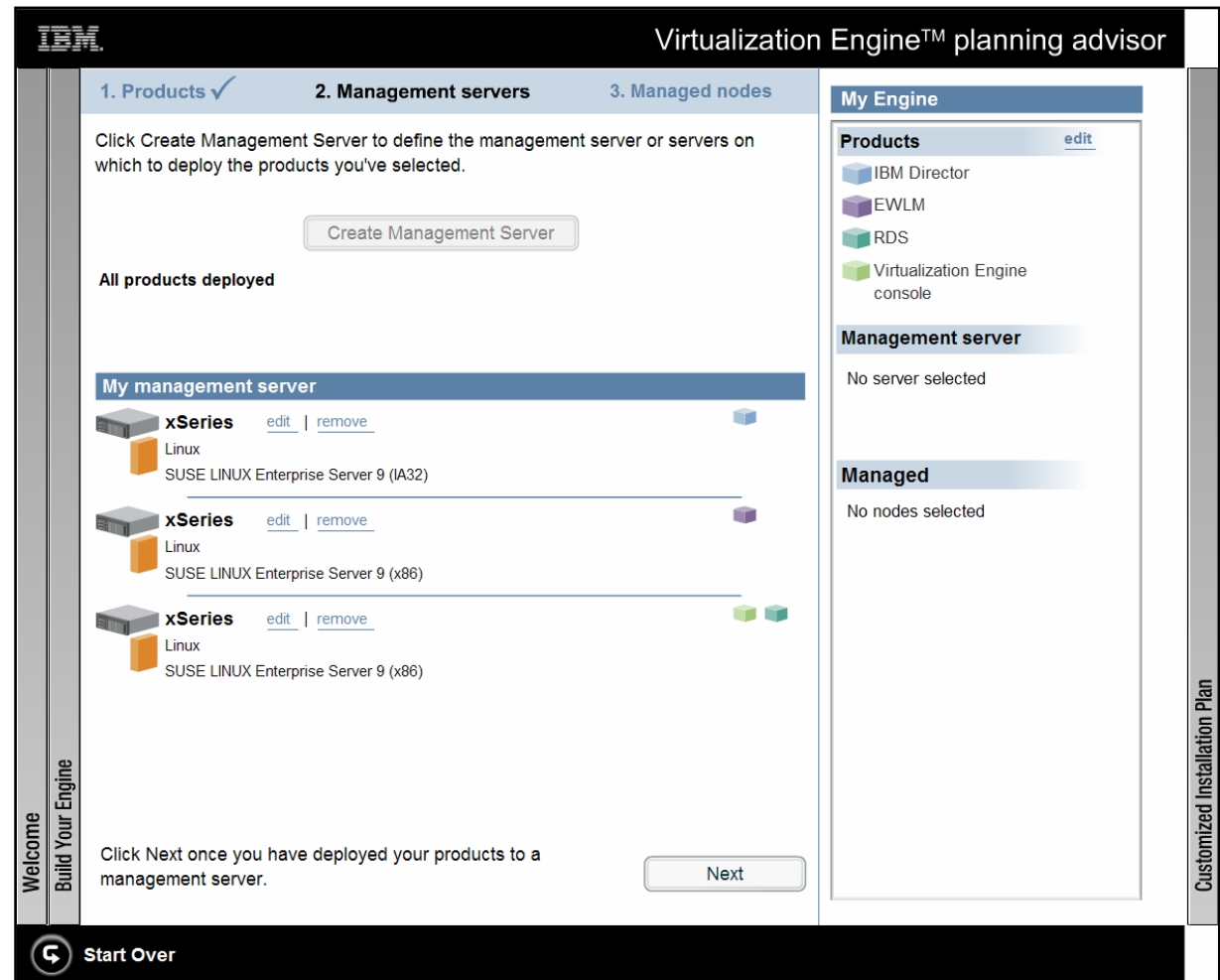
This step allows to select the IBM Virtualization Engine components that the customer would like to include in its environment



The Flow

► Build Your Engine / Select Management Server

Once product selection is complete, the Virtualization Engine planning advisor guides the customer through the process of selecting operating systems on which to deploy the desired Virtualization Engine components



The screenshot shows the 'Virtualization Engine™ planning advisor' interface. The main content area is titled '2. Management servers' and contains the following elements:

- Progress indicators for '1. Products ✓', '2. Management servers', and '3. Managed nodes'.
- Instruction: 'Click Create Management Server to define the management server or servers on which to deploy the products you've selected.'
- 'Create Management Server' button.
- 'All products deployed' section.
- 'My management server' section listing three servers:
 - xSeries Linux SUSE LINUX Enterprise Server 9 (IA32)
 - xSeries Linux SUSE LINUX Enterprise Server 9 (x86)
 - xSeries Linux SUSE LINUX Enterprise Server 9 (x86)
- 'Click Next once you have deployed your products to a management server.'
- 'Next' button.
- 'Start Over' button at the bottom left.

On the right side, the 'My Engine' summary panel shows:

- Products:** IBM Director, EWLM, RDS, Virtualization Engine console.
- Management server:** No server selected.
- Managed:** No nodes selected.

Vertical sidebars on the left and right read 'Welcome Build Your Engine' and 'Customized Installation Plan' respectively.

The Flow

► Build Your Engine / Managed Nodes

This step makes it possible to define the various combinations of Platforms and Operating Systems that will be managed by each of the services previously selected

The screenshot shows the 'Virtualization Engine™ planning advisor' interface, specifically the '3. Managed nodes' step. The interface is divided into several sections:

- Progress Indicators:** '1. Products' and '2. Management server' are marked with checkmarks, indicating they are completed. '3. Managed nodes' is the current step.
- IBM Director managed nodes:** This section contains instructions: 'Select the types of platforms that you will be managing with IBM Director. Add one entry for each platform. You do not need to add 50 entries to represent the 50 servers of that type.' Below this are two dropdown menus: 'Select hardware' (set to 'pSeries') and 'Select operating system' (set to 'Linux'). A 'Select OS versions' list includes 'Red Hat Enterprise Linux AS 4.0 (IBM POWER)', 'SUSE LINUX Enterprise Server 8 (IBM POWER)', and 'SUSE LINUX Enterprise Server 9 (IBM POWER)'. An 'Add' button is located below the list.
- My IBM Director managed nodes:** This section displays a list of selected nodes: 'xSeries / Windows / Windows 2000 Server', 'pSeries / AIX / AIX 5L Version 5.3', and 'pSeries / Linux / SUSE LINUX Enterprise Server 9 (IBM POWER)'. A 'Remove Selected Nodes' button is positioned below the list.
- My Engine Summary:** On the right side, there is a summary panel titled 'My Engine'. It includes sections for 'Products' (listing IBM Director, EWLM, RDS, and Virtualization Engine console), 'Management server' (listing xSeries Linux SLES 9 and xSeries Linux SUSE LINUX Enterprise), and 'Managed' (showing 'No nodes selected').
- Navigation:** A 'Next' button is located at the bottom right of the main content area. A 'Start Over' button with a circular arrow icon is at the bottom left.
- Sidebars:** The left sidebar contains the text 'Welcome Build Your Engine'. The right sidebar contains the text 'Customized Installation Plan'.

The Flow

► Customized Installation Plan / Ordering

Detailed list of the products to be purchased, with all information necessary to order

Virtualization Engine™ planning advisor

Use your customized installation plan below to help you order, install, and deploy the Virtualization Engine in your enterprise. To make changes to the selections you made, click the edit buttons on the My Engine tab.

My Engine | **Ordering** | Installing | Deploying

Use the ordering recommendations below to obtain your Virtualization Engine products, if you have not already done so.

To obtain the products for the operating systems that you selected, order the following:

PID#	Feature	Name	Licensing	Ordering method
5733-EWM	none	IBM Virtualization Engine Enterprise Workload Manager, V2.1	per managed processor	eConfig
5733-DIR	none	IBM Director with Virtualization Engine Console, V5.10	per managed processor	eConfig
5733-RDS	none	IBM Virtualization Engine Resource Dependency Services, V2.1	per server	eConfig

NOTE: RDS is not yet available; RDS will become generally available on February 10, 2006

NOTE TO REVIEWERS: Dummy data is listed on the tabs above for this review. Customized, dynamic data will appear in the final review.

Welcome | Build Your Engine | Customized Installation Plan

Start Over

The Flow

► Customized Installation Plan / Installing

Customized checklists to guide the customer through the installation, providing a recommended order of tasks, links to procedural documentation to complete each task, as well as “level of difficulty” icons to indicate the amount of time/expertise required to complete a task

The screenshot displays the 'Virtualization Engine™ planning advisor' interface. At the top, there are four tabs: 'My Engine', 'Ordering', 'Installing', and 'Deploying'. The 'Installing' tab is selected. Below the tabs, a message reads: 'Use your customized installation plan below to help you order, install, and deploy the Virtualization Engine in your enterprise. To make changes to the selections you made, click the edit buttons on the My Engine tab.' Below this message is a legend for difficulty levels: 'Easy' (green circle), 'Moderate' (yellow square), 'Difficult' (red diamond), and 'Most Difficult' (red diamond). The main content area is titled 'Install Virtualization Engine console' and is divided into two sections: 'Prerequisite and Planning' and 'Installing and Configuring'. The 'Prerequisite and Planning' section includes three tasks: 'Ensure that IBM Directory Server is installed in your network' (Difficult), 'Ensure the directory server is configured' (Easy), and 'Ensure the directory server is started' (Moderate). The 'Installing and Configuring' section includes five tasks: 'Install the Virtualization Engine console' (Difficult), 'Start the Virtualization Engine installation wizard' (Moderate), 'Select Virtualization Engine console and complete wizard panels' (Easy), 'Verify the installation' (Difficult), and 'Use a Web browser to open the Integrated Solutions Console' (Moderate). A final task, 'Create new Virtualization Engine console users and groups' (Difficult), is listed below. A red note at the bottom states: 'NOTE TO REVIEWERS: Dummy data is listed on the tabs above for this review. Customized, dynamic data will appear in the final review.' The interface also features a sidebar on the left with 'Welcome', 'Build Your Engine', and 'Customized Installation Plan' options, and a 'Start Over' button at the bottom left.

The Flow

► Customized Installation Plan / Deploying

Graphical representations of where the various components need to be installed in the enterprise are provided, with information about hardware and system requirements

Virtualization Engine planning advisor - Microsoft Internet Explorer

IBM Virtualization Engine™ planning advisor

Use your customized installation plan below to help you order, install, and deploy the Virtualization Engine in your enterprise. To make changes to the selections you made, click the edit buttons on the My Engine tab.

HTML

My Engine Ordering Installing Deploying

Management server

iSeries i5/OS
Version 5 Release 3

Minimum hardware requirements

	Processor	Memory	Disk space
EWLM	1.4 GHz	512 MB	2 GB
IBM Director	1.4 GHz	512 MB	2 GB
RDS	1.4 GHz	512 MB	2 GB
Virtualization Engine console	1.4 GHz	512 MB	2 GB

iSeries Linux
Red Hat Enterprise Linux AS 4.0

Minimum hardware requirements

	Processor	Memory	Disk space
RDS	1.4 GHz	512 MB	2 GB

Managed nodes

iSeries

i5/OS
Version 5 Release 3

- EWLM managed server
- IBM Director Agent

Linux
Red Hat Enterprise Linux AS

- EWLM managed server
- IBM Director Agent

AIX
AIX 5L Version 5.3

- EWLM managed server
- IBM Director Agent

pSeries

AIX

Linux

Back

Start Over

Welcome
Build Your Engine
Customized Installation Plan

Agenda

- 1 IBM Systems Software Information Center
- 2 IBM Virtualization Engine planning advisor
- 3 IBM Virtualization Engine Installation**
 - 3.1 Software Components**
 - 3.2 IBM Virtualization Engine Installation Procedure
 - 3.3 IBM Director Installation
 - 3.4 Agents Installation
 - 3.5 Additional Information

IBM Virtualization Engine Software Components

Virtualization Engine Services

- IBM Enterprise Workload Manager (EWLM)
- IBM Director
- Resource Dependency Service

End-Point Packages

- IBM Enterprise Workload Manager Managed Servers
- IBM Director Agents

Common Infrastructure

- IBM Virtualization Engine Console
- Virtualization Engine Bridges
- Resource Modeling
- Common Components

Common Components - Detail

Characteristics :

- Common Components include a set of middleware infrastructure that is commonly used by multiple VE management servers ► Aligns management servers to share a common versions and levels of the infrastructure
- Installed on Management Servers only, not on end-points
- Automatically installed based on their pre-requisite relationship to other VE offerings

Software Components :

- WebSphere Application Server : WAS 6.0.2 (+ VE iFixes)
- DB2 Universal Data Base : DB2 UDB 8.2 SP1
- IBM Tivoli Directory Server : ITDS 6.0 SP1
- IBM Integrated Solutions Console : ISC 6.0.1
- Core Elements :
 - Java Runtime Environment : JRE 1.4.2 SP2
 - IBM Solution Install Framework : SI 1.2.1.10
 - iLog Jviews
 - International Components for Unicode : ICU4J
 - IBM Common Logging Module : ICL
 - Fix Acquisition Services
 - Deployment Services

Supported Platforms Overview

	Windows	Linux	AIX	i5/OS
IBM Virtualization Engine Console	✓	✓	✓	✓
VE Console Bridges	✓	✓	✓*	✓
Resource Dependency Service	✗	✓	✗	✗
IBM Director	✓	✓	✓	✓
IBM Enterprise Workload Manager	✓	✓	✓	✓

- * : IBM Director Bridge to VE Console will require a fix pack to be fully supported
- Note : Full compatibility matrix can be found at the end of this presentation

Installation Dependencies

	Virtualization Engine Console	Console Bridges	Resource Dependency Service	EWLM Domain Manager
WebSphere	L	L	L	L
DB2	E	E	L / R / E	E
Directory Server	E	E	E	E
ISC	L			
Resource Manager			L	
Core Components	L	L	L	L

- L = Local = The component must reside on the same system as the Virtualization Engine service
- E = Environment = The component is part of the Virtualization Engine environment
- R = Remote = The component may reside on a remote system

Directory Server : Virtualization Engine Repository

Configuration repository

- Logical grouping of systems with Virtualization Engine software installed
- Root entity is a named “Virtualization Engine Environment”
- Includes Installation + Configuration settings
- Any instance of the Virtualization Engine can belong to only one environment from installation to uninstallation

WebSphere Application Server security user registry

- Used by the console, bridges and Resource Dependency Service

Identity Mapping Repository

- Containing identity data for the enterprise
- Collection of defined identifiers, associations and user registries
- Used by systems for identity lookup

What's part of the VE Installer ?

	VE Installer	External
IBM Director		
Director Server	i5/OS only ⁽¹⁾	✗
Director Bridge to VE Console	✗	
Director Agents		✗ ⁽²⁾
Resource Dependency Service	✗	
IBM Enterprise Workload Manager		
EWLM Domain Manager	✗	
EWLM Bridge to VE Console	✗	
EWLM Agents		✗ ⁽³⁾
IBM Virtualization Engine Console	✗	

(1) : Director Server is installed through the VE Installer on i5/OS

(2) : Director Agents are extracted from the installation media by the VE Installer on i5/OS, but actual installation is not part of the installer

(3) : EWLM Agents are extracted from the installation media by the VE Installer but actual installation is not part of the installer

Agenda

1	IBM Systems Software Information Center
2	IBM Virtualization Engine planning advisor
3	IBM Virtualization Engine Installation
3.1	Software Components
3.2	IBM Virtualization Engine Installation Procedure
3.3	IBM Director Installation
3.4	Agents
3.5	Additional Information

Getting Started Sheet



Start here for the IBM Virtualization Engine

GC09-7801-01

The IBM® Virtualization Engine™ is a collection of technologies and software that can help you virtualize your physical resources and then view and manage those virtual resources. In a virtualized environment, the IBM Virtualization Engine delivers the following benefits:

- Helps simplify network infrastructure
- Reduces cost and complexity by optimizing resource use
- Increases the business value of your IT investments

For information about the IBM Virtualization Engine, go to the IBM Systems Software Information Center:

<http://www.ibm.com/servers/library/infocenter>

Select the Software Information Center, then the version you want. The IBM Systems Software Information Center is the single location for the Virtualization Engine documentation.

To get started with the IBM Virtualization Engine, follow these steps:

1 Complete the Virtualization Engine planning advisor

To successfully install the IBM Virtualization Engine, planning is essential. The Virtualization Engine planning advisor is an online, interactive tool that produces customized planning recommendations based on your needs.

If you have not completed the planning advisor or you do not have the results of the planning advisor, go to the IBM Systems Software Information Center. From the navigation bar, click **Virtualization > Virtualization Engine > Virtualization Engine management collection > Planning**

2 Verify that prerequisites are satisfied

Some software that you install might require that you first meet certain prerequisites.

The planning advisor identifies the necessary Virtualization Engine prerequisites for your deployment, and it guides you through the process of satisfying them.

3 Find the Virtualization Engine installation media

To begin installation, find the Virtualization Engine installation media. Begin with the IBM Virtualization Engine Common Components media, which is labeled:

START HERE - Installation

Ensure that autorun is turned on. If you are installing the Virtualization Engine on i5/OS, go to a PC that is connected to your network. See the IBM Systems Software Information Center and the online help for the install program for help with problems or questions you may have during installation.

4 Download and install product updates and fixes

Be sure you have the latest updates and fixes installed for your Virtualization Engine products. Download updates and fixes from the Virtualization Engine support site:

<http://techsupport.services.ibm.com/server/VirtualizationEngine/>

OVER →

Virtualization is about simplification and power; it is the key to unlocking the full benefits of On Demand Business. The IBM Virtualization Engine is a platform designed to help you manage your IT environment more efficiently. It gives you a logical, rather than physical, view of data, computing power, storage capacity, and other resources. This allows you to automate resource management and manage disparate systems. Virtualization is commonly applied to physical hardware resources, but it can also be applied to non-physical resources, such as software. Virtualization often pulls multiple resources together into shared pools from which users receive virtual resources.

The software components of the IBM Virtualization Engine are the following:

IBM Virtualization Engine console

The Virtualization Engine console is a web based console that makes enterprise systems management easier by providing a consolidated view of your virtualized resources across heterogeneous platforms.

IBM Enterprise Workload Manager (EWLM)

Enterprise Workload Manager (EWLM) is a robust performance management tool that allows you to manage the performance of application-level transactions, operating system processes, and partitions. EWLM allows you to define performance goals for work that runs in your business environment then provides an end-to-end view of actual performance relative to those goals.

Resource Dependency Service

Resource Dependency Service provides a graphical representation of the dependencies and relationships among the physical resources, virtual resources, applications, and processes in your enterprise.

IBM Director

IBM Director enables you to view and track the hardware configuration of remote systems in detail and monitor the use and performance of critical components, such as processors, disks, and memory. You can take action on important events.



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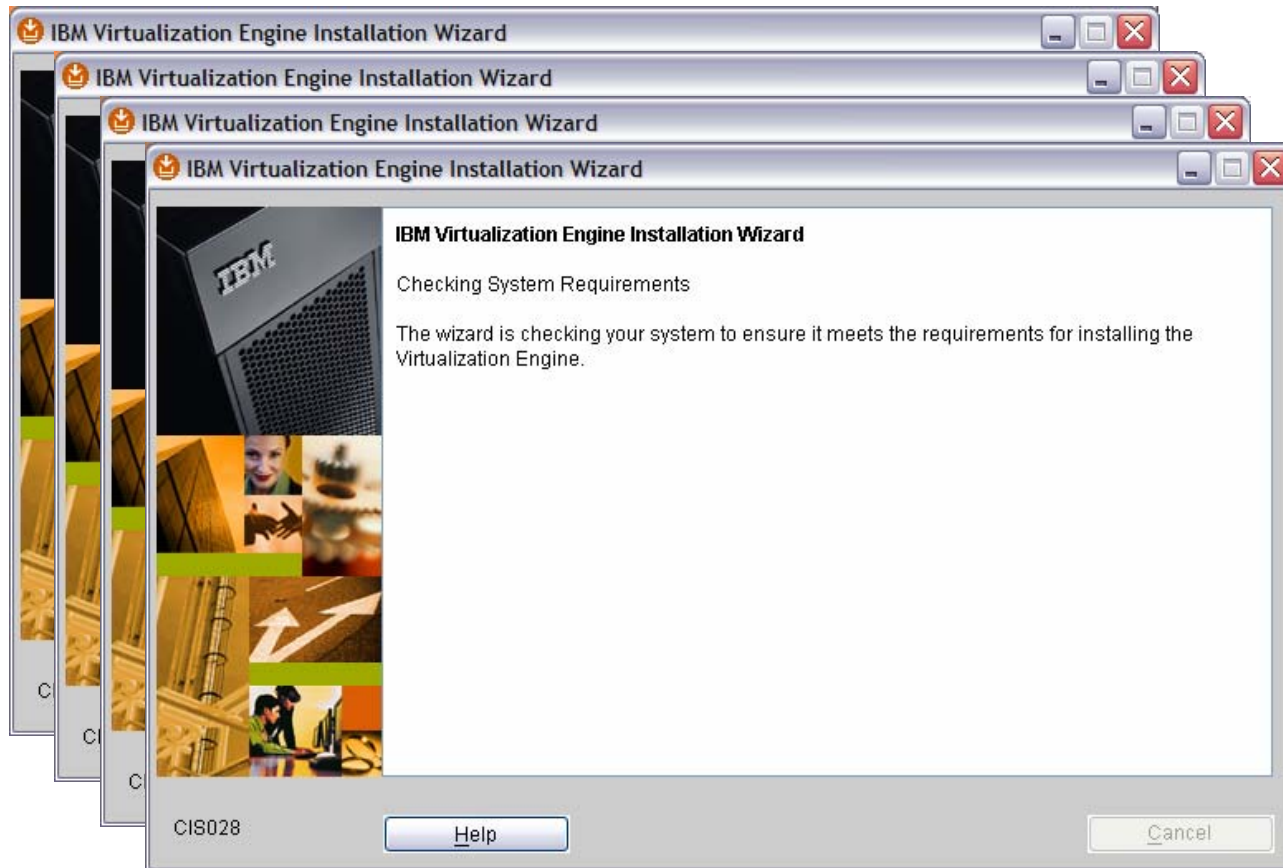


Installation Procedure

- 1. Virtualization Engine Environment setup**
- 2. Virtualization Engine Services selection**
- 3. Media copy**
- 4. Pre-installation configuration**
- 5. Product installation**
- 6. Post-installation configuration**

Step 1 : Virtualization Engine Environment Setup

- 🐞 **Accept software license agreements**
- 🐞 **Define installation and logging directories**
- 🐞 **Verify basic system requirements**
- 🐞 **Establish the LDAP directory server for the installation**
 - Use an existing IBM Tivoli Directory Server
 - Install a local directory server via the wizard
 - Requires OS user IDs and passwords for DB2 and directory instance owners
- 🐞 **Provide the name of the Virtualization Engine environment**
 - Create a new one in an existing directory server
 - Join a previously created environment
 - Automatic for a subsequent installation in the same install root directory



LDAP Discovery

- ❧ **VE requires an LDAP Directory Server for 3 different uses**
 - VE environment repository (Global Configuration Repository)
 - WAS security users and groups
 - Identity Mapping Repository
- ❧ **VE supports ITDS 5.1, 5.2, 6.0, and IBM Directory Server for iSeries**
- ❧ **VE installer provides the option to use an ITDS already installed in the network, or to install it locally**
 - If the choice is to install locally, the installer will query the user for some basic information and will then install the directory server silently
 - There is a media copy step for a local installation
 - Option to install directory server is not provided on i5/OS, since the directory server and DB2 are bundled with i5/OS

The image shows a stack of eight overlapping windows titled "IBM Virtualization Engine Installation Wizard". The top-most window is active and displays the "IBM Tivoli Directory Server" configuration screen. The window title bar includes standard Windows window controls (minimize, maximize, close) and the text "IBM Virtualization Engine Installation Wizard".

IBM Tivoli Directory Server

Directory Server and Database Instance Owner

The configuration of the IBM Tivoli Directory Server instance requires the configuration of an IBM DB2 Server instance. You need to specify an owner for the directory server instance and its corresponding database instance.

You must specify an existing operating system user with a valid password to be the instance owner. The operating system user ID that you specify must be a member of the Administrators group.

*Operating system user ID:

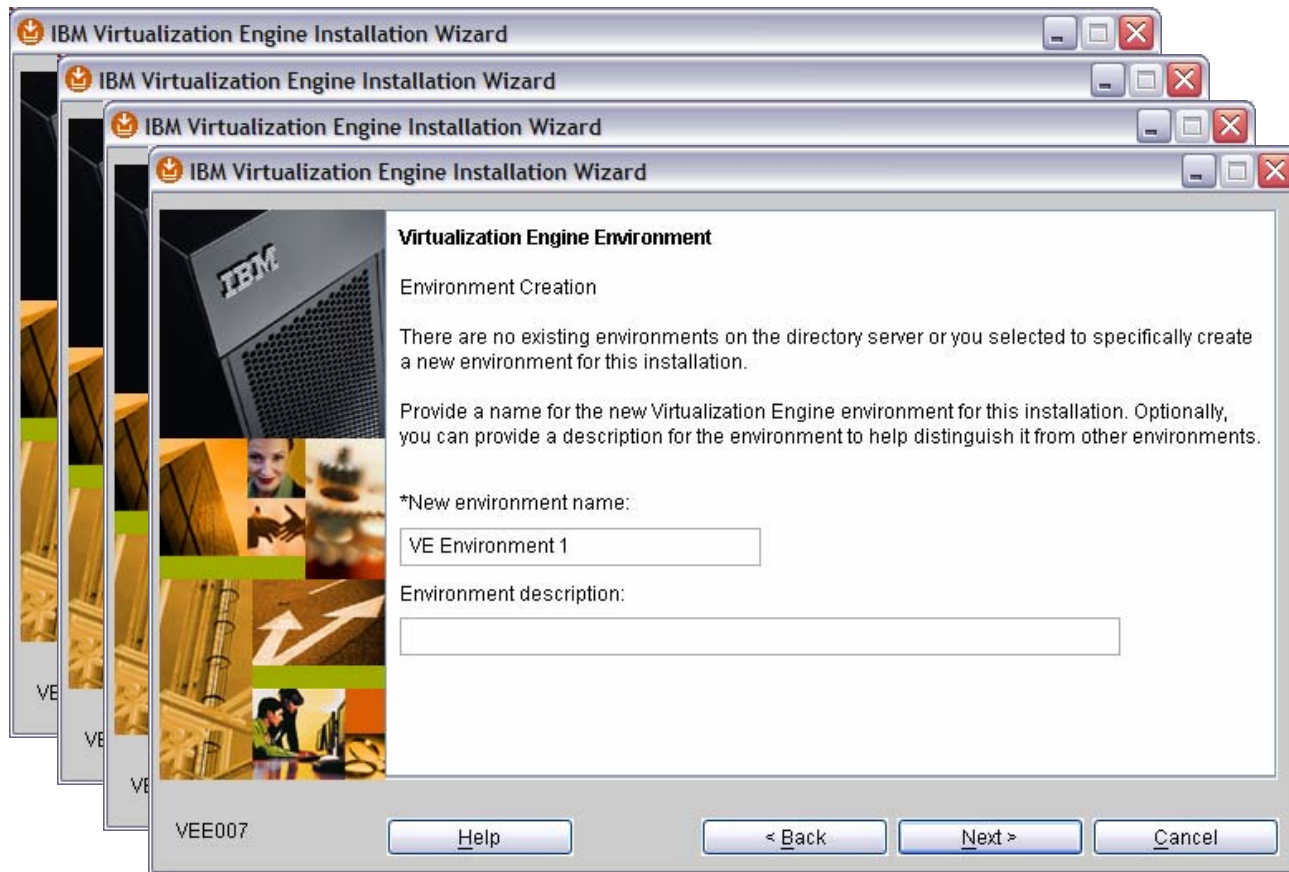
* Password:

ITD005

Buttons: Help, < Back, Next >, Cancel

Global Configuration Repository (GCR) Setup

- ❖ **The GCR stores “global” data for an entire deployment of VE**
 - A deployment, or VE environment, could include installations of VE on multiple systems or partitions
- ❖ **Stores data that applies to machines across the environment**
 - Security settings, LTPA keys for communication between WebSphere Application Servers, WAS security settings, and single sign on information
- ❖ **Settings will apply to all systems that join a VE environment**
 - Installation choice presented to create a new VE environment or to join any existing one
- ❖ **Once the environment is established for the VE installation, it persists until all of the VE software is uninstalled from that installation directory**



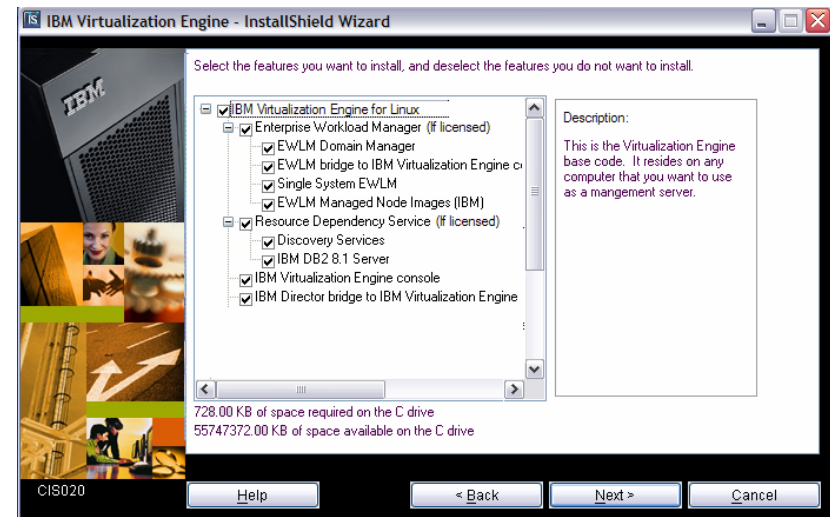
Step 2 : Virtualization Engine Services Selection

- 🌀 **Selecting an outer level selects all sub-selections**
 - Individual levels can be toggled
- 🌀 **Space required changes with selections**
- 🌀 **Same selection panel is shown for all VE offerings for each OS target platform**
 - Note “If licensed” for EWLM and RDS
 - It is possible to select something that has not been ordered
- 🌀 **Product selection affects dependent installation actions**
 - Installation of required common components
 - Media prompting
 - Repository creations
 - Services installed

Available Services Tree

IBM Virtualization Engine

- Enterprise Workload Manager
 - EWL Domain Manager
 - EWL Bridge to IBM Virtualization Engine Console
 - Single System EWL
 - EWL Managed Node Images (IBM)
- Resource Dependency Service
 - Discovery Services
 - IBM DB2 8.1 Server
- IBM Virtualization Engine Console
- IBM Director Bridge to IBM Virtualization Engine Console



Step 3 : Media Copy

- ❧ **Installer prompts for each medium based on services selected and medium descriptor**
- ❧ **Provides a staging of necessary files to hard disk**
 - Assures all files available before starting the installation processing
 - Allows core portion of installation to be unattended
 - Allows preloading of media images to a file server
- ❧ **Does not prompt for previously copied media if install is run again**
- ❧ **If prompted for a media you do not have**
 - Select “Back” and deselect the product(s) that need the media
 - Cancel, obtain the media and restart the installer
- ❧ **Media images should be deleted when no longer needed**

Step 4 : Pre-Installation Configuration

- **WebSphere Application security registry**
- **Identity mapping repository**
- **Product specific install panels**
 - Console port assignments
 - EWLM domain manager directory (not in this presentation)
 - Console auto-start option

WebSphere Application Security Registry

- **WAS security configuration is now automated in a wizard**
 - One of the major release 1 usability problems was the detailed directory server configuration that was required as a pre-requisite to installing VE console
- **By clicking through and accepting default values, the wizard will configure LDAP users and groups with minimal user input**
 - Defaults to use the same directory server that hosts the VE environment
 - Default VE administrator named VEAdmin is created and is added to the VEAdministrator group.
- **Creates five user groups on the directory server**
 - **VEAdministrator:** Administrator who can do everything
 - **VEMonitor:** User who can access some Administration functions
 - Read only access
 - **VEUser:** Any authenticated user
 - **VEAnonymous:** Any unauthenticated user
 - **VEManager:** User who can perform management operations
 - Subset of functions that an Administrator can perform

WebSphere Application Server Security

Configuration Preview

The tables below show two lists of distinguished names (DNs) based on the values that you provided in previous panels. Or, the DN's are based on the IBM recommended values that you selected to use. One table lists DN's that are not currently defined on the directory server that the installation wizard will create for you. The other table lists those DN's that currently exist on the directory server.

The installation wizard will write these DN's to a log. You can record these settings now, or you can use this log to retrieve them later.

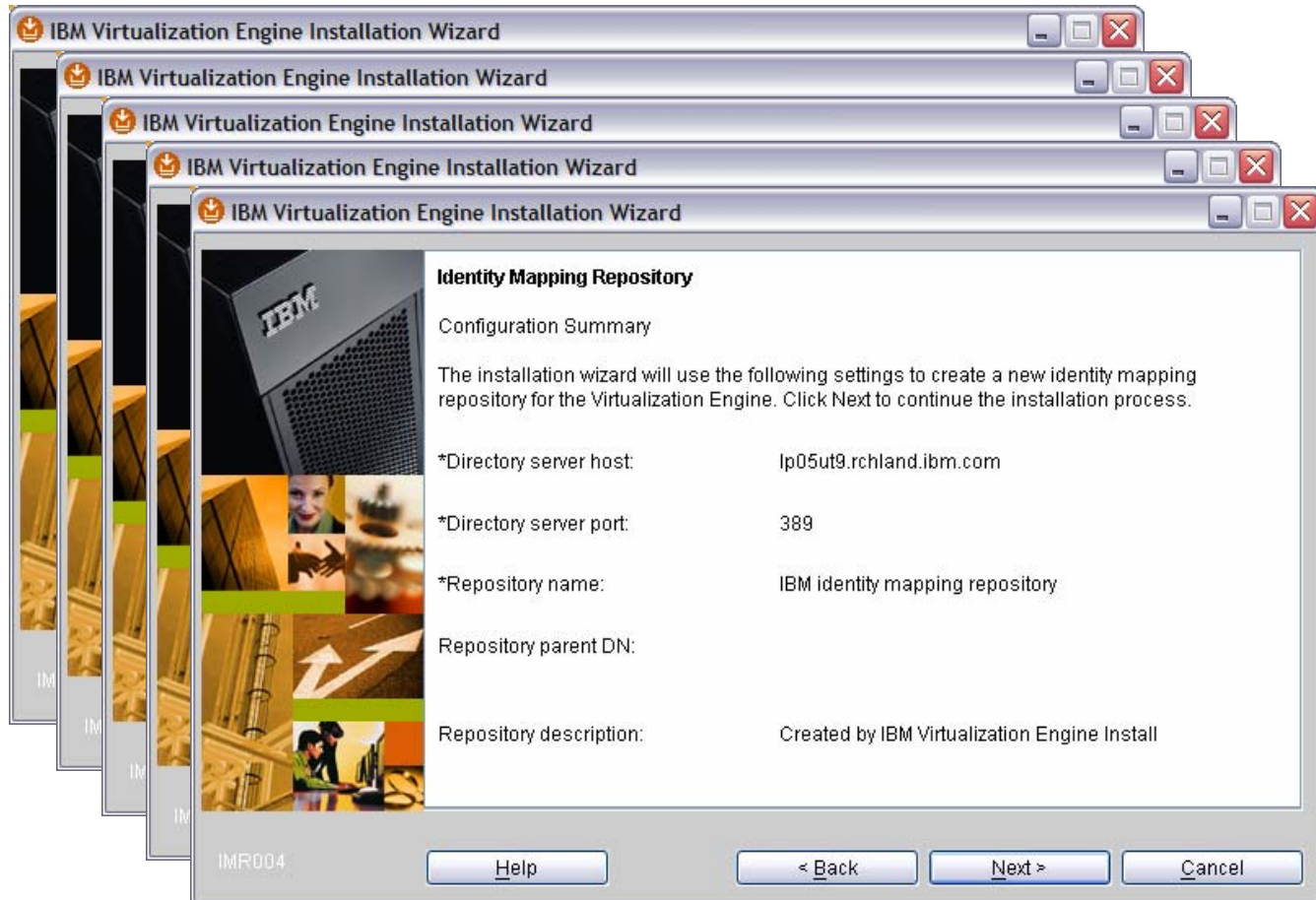
DN's to be created on the directory server:

DN
cn=registry,cn=ibmve
cn=users,cn=registry,cn=ibmve

WSS017 Help < Back Next > Cancel

Identity Mapping Repository (IMR)

- **The Identity Mapping Repository wizard performs configuration for identity mapping**
 - Works in a similar fashion to the WebSphere Application security registry performs user and group configuration
- **By clicking through and accepting default values, the IMR wizard will configure an identity mapping repository on the directory sever with minimal user input**
- **By default, uses the same directory server that hosts the VE environment**
- **The default IMR is named “IBM Identity Mapping Repository”**



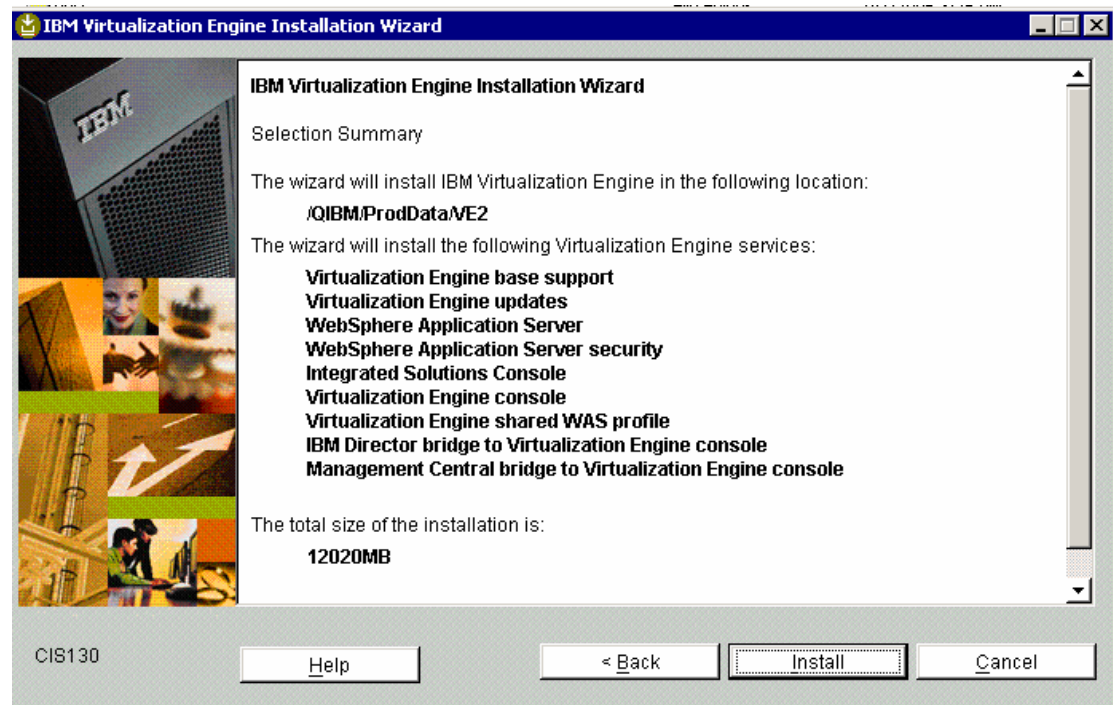
Step 5 : Product Installation

Pre-install summary

- Last chance to click the 'Back' button before the actual installation starts !

Install progress indicators

Post-install summary



Step 6 : Post-Installation Configuration

- Virtualization Engine console launch URL and option
- EWLM post-install setup
- EWLM domain manager configuration
- Readme files
- Reboot if required

Agenda

- 1 IBM Systems Software Information Center
- 2 IBM Virtualization Engine planning advisor
- 3 IBM Virtualization Engine Installation**
 - 3.1 Software Components
 - 3.2 IBM Virtualization Engine Installation Procedure
 - 3.3 IBM Director Installation**
 - 3.4 Agents
 - 3.5 Additional Information

IBM Director Components

🐼 IBM Director Server

- The management server
- Comes together with Director Agent + Director Console

🐼 IBM Director Core Services

- A « light » version of the Director Agent

🐼 IBM Director Agent

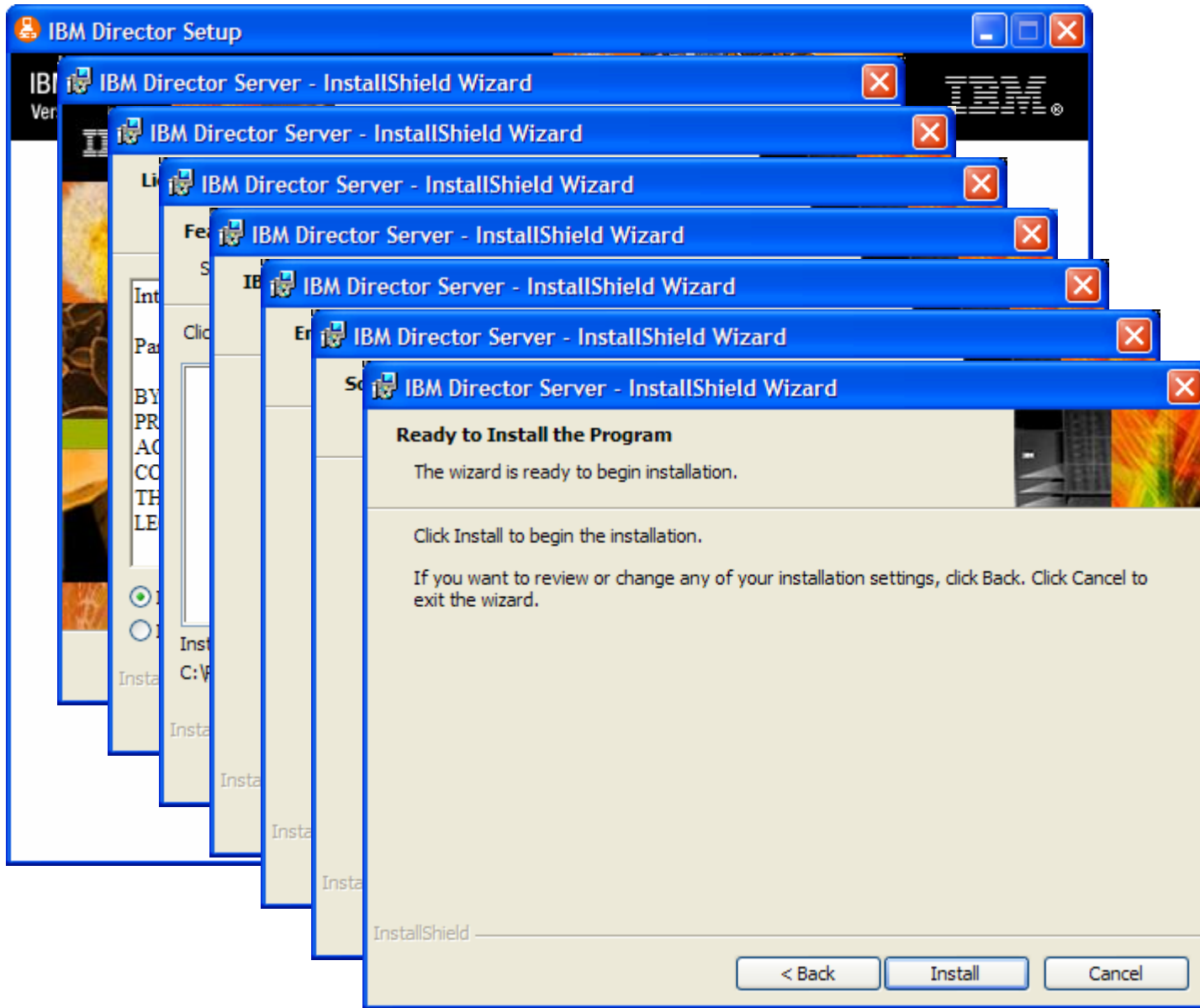
- Two ways of installing :
 - From the installation media, directly on the target machine
 - From the Director Server, deployed through Software Distribution

🐼 IBM Director Console

- The IBM Director GUI

IBM Director Installation

- ❧ **Does not have dependency on the IBM Virtualization Engine Common Components**
- ❧ **Installed as a “soft prerequisite” for other services**
 - Update assistant for end point deployment and service
 - End point consolidator for Virtualization Engine Console
- ❧ **Separate installation (except on i5/OS)**
- ❧ **Joins an environment when a Director Bridge to the Virtualization Engine Console is installed on the same system**



Agenda

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3.5	Additional Information

Agents Installation

Agents may be installed through different ways :

- **EWLM Agents only** : By using RPD scripts that are installed by the Virtualization Engine installer to distribute and install the EWLM agent on the remote systems
- By using the Software Distribution feature of the Director Server to distribute and install automatically on the remote systems
- By distributing the installation files on the target system by any mean (FTP, Media copy, ...) and running the installer locally

Agenda

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Platform Support / Full Matrix [1/4 - xSeries]

		Microsoft Windows (32 bits)	Microsoft Windows (64 bits)	x/Linux (32 bits)	x/Linux (64 bits)
IBM Director					
	Director Server	2000 S/AS Server 2003 SE/EE		RHEL AS 3.0/4.0 SLES 8/9	
	Director Agent	2000 S/AS Server 2003 SE/EE	Server 2003 SE/EE	RHEL AS 3.0/4.0 SLES 8/9	RHEL AS 4.0 SLES 9
Resource Dependency Service		Discovery only		RHEL AS 4.0 SLES 9	
IBM Enterprise Workload Manager					
	Domain Manager	Server 2003 SE/EE		RHEL AS 4.0 SLES 9	
	Managed Node	2000 S/AS Server 2003 SE/EE		SLES 9 (SP2)	
IBM Virtualization Engine Console		Server 2003 SE/EE		RHEL AS 4.0 SLES 9	
VE Console Bridges					
	Cluster System Management				
	Director	Server 2003 SE/EE		RHEL AS 4.0 SLES 9	
	EWLM	Server 2003 SE/EE		RHEL AS 4.0 SLES 9	
	Management Central				

Platform Support / Full Matrix [2/4 – i/pSeries]

		AIX	p/Linux	i5/OS	i/Linux
IBM Director					
	Director Server	5.3	RHEL AS 4.0 SLES 9	5.3	RHEL AS 4.0 SLES 9
	Director Agent	5.2/5.3	RHEL AS 3.0/4.0 SLES 8/9	5.3	RHEL AS 3.0/4.0 SLES 8/9
Resource Dependency Service		Data Source only	RHEL AS 4.0 SLES 9	Data Source only	RHEL AS 4.0 SLES 9
IBM Enterprise Workload Manager					
	Domain Manager	5.3	RHEL AS 4.0 SLES 9	5.3	RHEL AS 4.0 SLES 9
	Managed Node	5.2/5.3	SLES 9 (SP2)	5.3	SLES 9 (SP2)
IBM Virtualization Engine Console		5.3	RHEL AS 4.0 SLES 9	5.3	RHEL AS 4.0 SLES 9
VE Console Bridges					
	Cluster System Management	5.3			
	Director		RHEL AS 4.0 SLES 9	5.3	RHEL AS 4.0 SLES 9
	EWLM	5.3	RHEL AS 4.0 SLES 9	5.3	RHEL AS 4.0 SLES 9
	Management Central			5.3	

Platform Support / Full Matrix [3/4 – zSeries]

		z/OS	z/Linux (32 bits)	z/Linux (64 bits)
IBM Director				
	Director Server		RHEL AS 4.0 SLES 9	RHEL AS 4.0 SLES 9
	Director Agent		RHEL AS 4.0 SLES 9	RHEL AS 4.0 SLES 9
Resource Dependency Service		Data Source only		RHEL AS 4.0 SLES 9
IBM Enterprise Workload Manager				
	Domain Manager	1.6		RHEL AS 4.0 SLES 9
	Managed Node	1.6 w/Pre-Req. SPE	SLES 9 (SP2)	SLES 9 (SP2)
IBM Virtualization Engine Console				RHEL AS 4.0 SLES 9
VE Console Bridges				
	Cluster System Management			
	Director			RHEL AS 4.0 SLES 9
	EWLM			RHEL AS 4.0 SLES 9
	Management Central			

Platform Support / Full Matrix [4/4 – Others]

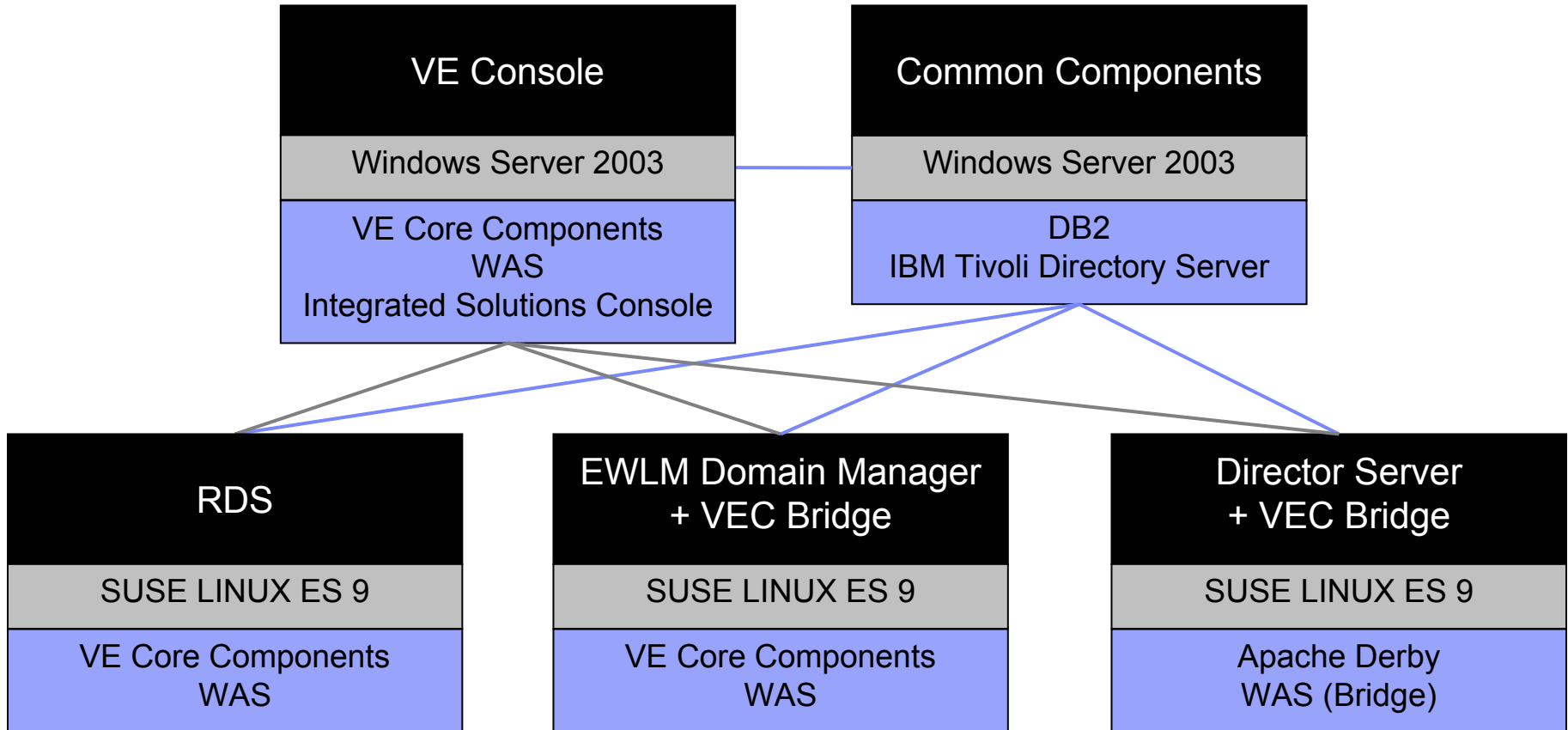
		Solaris	HP/UX
IBM Director			
	Director Server		
	Director Agent		
Resource Dependency Service		Data Source only	
IBM Enterprise Workload Manager			
	Domain Manager		
	Managed Node	Solaris 9	HP/UX 11i V1
IBM Virtualization Engine Console			
VE Console Bridges			
	Cluster System Management		
	Director		
	EWLM		
	Management Central		

Sizing Information

	Diskspace*	Memory
Common Components	2.5 GB	300 MB
Virtualization Engine Console	2 GB	<i>Not Yet Evaluated</i>
EWLM Domain Manager (+ VE Console Bridge)	2 GB	<i>Not Yet Evaluated</i>
Director Server (+ VE Console Bridge)	2 GB	100 MB (Server) 200 MB (Bridge)

- * : Diskspace represents the final space used by the components, but extra diskspace is required during installation for file copy and extraction from media
- Note : Values shown here are approximate ; actual values may differ, depending on the installation / the platform type

An Example of Implementation (Management Servers only)



Note : Does not constitute an implementation recommendation in any way ; Please refer to the compatibility matrix for full supported platforms information

Special Considerations

i5/OS

- Installation is driven remotely from an attached PC
- Check the information center for special requirements, such as host servers being started
- WAS may be shared with non-VE applications, so be aware when uninstalling
- Mapped network drive required for uninstallation

zLinux:

- 31/64 bit installer must match the environment
- Remote media
 - Many target systems will not have an attached optical device
 - Must copy the correct 31/64 bit installer to match the target

AIX

- Script is provided on media for a geninstall launch

Uninstalling

- Consult the information center about using the uninstallation wizard to maintain system consistency

End Of Presentation