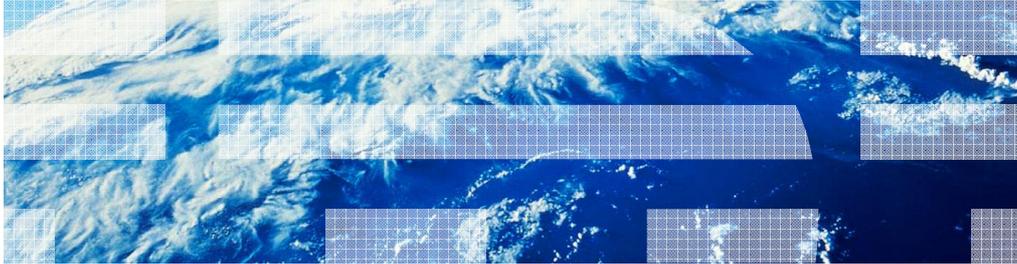




Business Process Management IBM Business Process Manager V8.0

Introduction to Enterprise Content Management integration



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This presentation provides an introduction to the Enterprise Content Management integration support that is new in BPM version 8.0.

Agenda

- What is Enterprise Content Management (ECM)?
- What is Content Management Interoperability Services (CMIS)?
- ECM support before the BPM V8.0 release
- ECM support added in BPM V8.0

The presentation starts out by providing a description of Enterprise Content Management, which is often referred to as ECM. Key to the implementation of ECM integration in BPM is the Content Management Interoperability Services (CMIS) standard, and therefore an introduction to that is provided next. Then, support in BPM for ECM integration that existed before the version 8.0 release is reviewed. With all of that as background, the ECM integration support added in version 8.0 is introduced.

What is ECM? (1 of 2)

- Definition per the Association for Information and Image Management (AIIM)

“Enterprise Content Management (ECM) is the **strategies, methods and tools used to capture, manage, store, preserve, and deliver content and documents** related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.”

The Association for Information and Image Management defines Enterprise Content Management as follows: “Enterprise Content Management (ECM) is the strategies, methods and tools used to capture, manage, store, preserve, and deliver content and documents related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.”

What is ECM? (2 of 2)

- Content can consist of:
 - Traditional content (images, office documents, graphics, drawings)
 - Electronic objects (web pages, email, video, audio, rich media)
- Management of content is key to any business
 - Critical documentation required to run the business
 - Regulatory compliance
 - Security requirements
- ECM systems are typically made up of many components
 - A content repository for electronic storage of content is normally the primary feature
 - Other capabilities typically include technology to convert physical media into an electronic representation, for example:
 - Image capture
 - Optical character
 - Handwriting recognition

To further clarify the definition presented on the previous slide, some more details are provided here. When speaking of content, it might be traditional physical types of content such as images, office documents, graphics and drawings. Content can also be electronic, such as web pages, email, video, audio and rich media.

The managing of content is a key requirement in any business environment. First, there is all the various documents that are needed just to keep the business running. Then on top of that, many businesses are subject to regulatory requirements for keeping specific types of documents. And to protect business assets and customer privacy, security of the content is a prime concern.

Enterprise Content Management systems address these requirements. There are often many different components that make up an ECM system, and the specific functionality provided varies from one ECM system to the next. However, the primary feature of an ECM system is typically a content repository for the electronic storage of content.

Since content is often physical, there needs to be a way to get it into an electronic form that can be managed in the repository. Therefore, systems often include image capture, optical character recognition or handwriting recognition capabilities.

What is CMIS?

- Content Management Interoperability Services (CMIS) is an standard administered by OASIS
 - Defines an abstraction layer for controlling diverse document management systems and repositories using web protocols
 - The data model provides for typed files and folders with generic properties
 - Provides a set of services for adding/retrieving/updating documents, folders, properties
 - Enables access control and document versions
 - Protocol bindings:
 - WSDL and SOAP
 - REST using Atom
- OASIS CMIS technical committee:
 - http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=cmis
- CMIS V1.0 Specification:
 - <http://docs.oasis-open.org/cmisis/CMIS/v1.0/cd04/cmisis-spec-v1.0.html>

OASIS, the Organization for the Advancement of Structured Information Standards, is a not-for-profit consortium that drives the development, convergence and adoption of open standards. They have published the Content Management Interoperability Services (CMIS) standard which defines the use of web services and Web 2.0 interfaces to enable information sharing across content management repositories from different vendors. This standard is the underlying interface used by the ECM integration implementation in BPM.

CMIS defines an abstraction layer that includes a data model for typed files, folders and generic properties of documents. Additionally, it defines a set of operations for adding, retrieving and updating document, folders and properties. It includes access control and the ability to version documents. There are two sets of protocols used by the standard, WSDL with SOAP, and REST using Atom.

For your further information, there are two links provided on the slide. The first is to the OASIS CMIS technical committee's web page and the other is to the currently adopted CMIS 1.0 specification itself.

ECM support before the BPM V8.0 release (1 of 2)

- Existing support originated in two products which provide different implementations
 - WebSphere Lombardi Edition 7.2
 - WebSphere Adapters V7.0 Feature Pack 2
- WebSphere Lombardi Edition 7.2
 - Controls in Coaches enable integration with ECM systems
 - Attaching a document
 - Viewing a list of documents
 - Viewing a specific document
 - Implemented using IBM Content Integrator
 - Enables connectivity to any system that has an IBM Content Integrator connector implementation
 - Deprecated in V8.0

Releases before BPM version 8.0 contained some support for ECM integration. There are actually two different implementations, one originating in WebSphere Lombardi Edition version 7.2 and the other in WebSphere Adapters version 7.0 Feature Pack 2. This slide and the next describe the implementations and their status in BPM version 8.0.

WebSphere Lombardi Edition version 7.2 introduced a set of coach controls enabling ECM integration. The controls enable the attaching of documents, viewing lists of documents and viewing a specific document. The underlying support uses the IBM Content Integrator interfaces, which enable connectivity to any ECM system that has a corresponding IBM Content Integrator connector implementation. This support is still present in BPM version 8.0 for use with heritage coaches, but the support is deprecated and therefore might be removed in a subsequent release of BPM.

ECM support before the BPM V8.0 release (2 of 2)

- WebSphere Adapters V7.0 Feature Pack 2
 - A WebSphere Adapter implemented to support integration with ECM systems
 - Used with SCA Imports and Exports
 - Supports outbound operations on documents and document metadata
 - Implemented using the CMIS standard
 - Supports inbound event handling
 - Only supported with FileNet Content Manager
 - Support remains unchanged in BPM V8.0

The other implementation for ECM integration originated with WebSphere Adapters version 7.0 Feature Pack 2. WebSphere Adapters integrate into SCA modules using imports and exports. The adapter supports outbound operations on documents and document metadata through use of the CMIS standard. Support for inbound event handling is also provided, but only supports events originating from the FileNet Content Manager repository.

This support remains unchanged in BPM version 8.0.

ECM support added in BPM V8.0 - Description

- Incorporate content from external repositories into BPM process apps
 - New implementation separate from support provided in previous releases
- Includes:
 - ECM server connection configuration
 - Operations on folders, documents and document properties
 - Repository search capability
 - Content business object definitions used with content operations
 - Content specific user interface controls
- Content Management toolkit
 - Optional toolkit must be added to your process application to access functionality
- Communication with the ECM repository implemented using CMIS

The new support for ECM integration in BPM version 8.0 provides the capability to integrate operations to an ECM repository into a process application.

The implementation requires that you configure an ECM server endpoint as part of your process application or toolkit.

There is a new content integration step usable within a few service types. The content integration step supports numerous operations on the repository to create, retrieve, update and delete folders, documents and document properties. One of the operations is a search that can return a list of documents and properties matching a specified criteria. Each of the content operations requires specific input parameter types and return types. These are provided as a set of content business object definitions.

In addition to the content integration operations there are two new user interface controls. The document list and document viewer controls are part of the new coach capabilities introduced in BPM version 8.0.

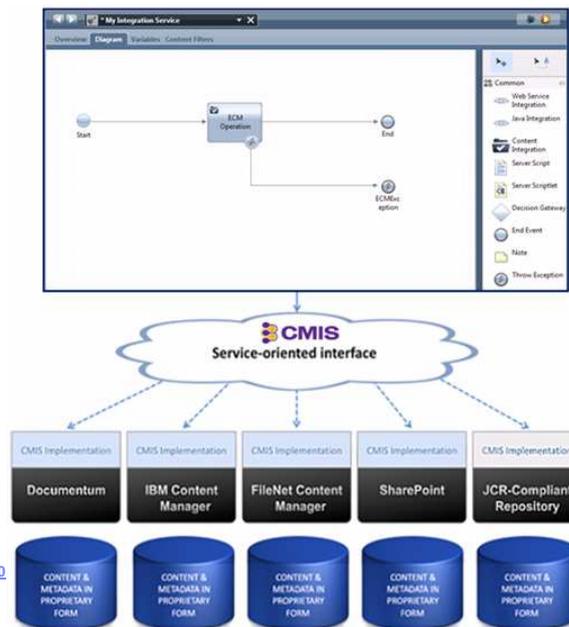
A new toolkit, the Content Management toolkit, provides the various artifacts needed to integrate ECM support into your process application or toolkit.

The underlying support for the implementation uses the CMIS APIs for interacting with the ECM repository.

ECM support added in BPM V8.0 – Supported repositories

- Potentially usable with multiple repositories that provide CMIS support:
 - FileNet P8 Content Manager
 - IBM Content Manager
 - Microsoft SharePoint
 - EMC Documentum
 - Others
- Repositories supported as of BPM V8 release:
 - FileNet P8 Content Manager
 - IBM Content Manager
- For a current support statement, see: **Detailed hardware and software requirements for IBM Business Process Manager Standard V8.0**

<http://www-01.ibm.com/support/docview.wss?uid=swq27024120>



This picture shows a content integration step within an integration service. It highlights the fact that use of the CMIS APIs potentially allows multiple different ECM repositories to be supported. Among the more widely used ECM repositories are FileNet P8 Content Manager, IBM Content Manager, Microsoft SharePoint and EMC Documentum. Theoretically, the implementation works with any of these repositories. However, official support statements are based on which repositories the implementation has actually been tested with, and proved to work correctly. As a result, at the time that BPM version 8.0 was first released, the officially supported repositories were limited to FileNet P8 Content Manager and IBM Content Manager. To verify the current support status of other repositories, check the web page **Detailed hardware and software requirements for IBM Business Process Manager Standard V8.0**. A link is provided on the slide.

ECM support added in BPM V8.0 – User interface controls

Overview Diagram Variables **Coaches**

ST Demo Coach

ST Demo

ST Demo Document List

Name	Date Created	Creator	Major Version Number	Actions
Addresses1	2012/05/05 16:07:32.276 CDT	user	1	[Icons]
Addresses2	2012/05/05 16:08:30.744 CDT	user	1	[Icons]
BPM75 Overview	2012/05/05 16:10:19.151 CDT	user	1	[Icons]
Black Skimmers	2012/05/05 16:21:16.88 CDT	user	1	[Icons]
Blue Heron	2012/05/05 16:34:58.463 CDT	user	1	[Icons]

ST Demo Doc Viewer

Document Viewer

Drop additional content here

Done

ST Demo

ST Demo Document List

Name	acpType	acpDescription	acpComments	Date Last Modified	Actions
Addresses1	Excel	An address spreadsheet	This file is in Excel format	2012/05/05 16:07:32.276 CDT	[Icons]
Addresses2	PDF	An address list	This file is in PDF format	2012/05/05 16:08:30.744 CDT	[Icons]
BPM75 Overview	PDF	Overview presentation of BPM75	This is a powerpoint presentation in PDF format	2012/05/05 16:10:19.151 CDT	[Icons]
Black Skimmers	Image	Two Black Skimmers flying along the shoreline	Taken on St. George Island, FL	2012/05/05 16:21:16.88 CDT	[Icons]
Blue Heron	Image	Blue Heron standing on shore of gulf	Taken on St. George Island, FL	2012/05/05 16:34:58.463 CDT	[Icons]

Page: 1 Next ▶

Refresh

Done

ST Demo Doc Viewer

Open in new window

The upper half of this slide shows the coach designer with a document list and document viewer control in the layout. The bottom shows those controls within a browser at runtime.

Contrasting the three ECM implementations in BPM V8.0

	New V8.0 support	From WebSphere Lombardi Edition	From WebSphere Adapters
New coach controls	Yes		
Heritage coach controls		Yes	
Process application steps	Yes		
SCA modules			Yes
Outbound support	Yes	Yes	Yes
Inbound support			Yes
CMIS standard	Yes		Yes
IBM Content Integrator		Yes	
Deprecated		Yes	

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Introduction to Enterprise Content Management integration

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The fact that BPM version 8.0 contains three different approaches to ECM integration can certainly lead to some confusion. This slide is intended to help characterize the implementations in a way that can help you understand the usage scenarios for each of them. The specific attributes can be seen in the table and won't be explicitly described here. Rather, a statement is made about where each is appropriate to be used.

The use of the WebSphere Adapter support is appropriate when developing an SCA module rather than a process application. Additionally, even in the case of a process application, if you need support for inbound events from FileNet the WebSphere Adapter is the only way to receive those events. In that case, you can must integrate the SCA module with your process application.

The support originating from WebSphere Lombardi edition is there to support ECM integration with heritage coaches, and is therefore most likely used with process applications migrated to BPM version 8.0 from an earlier release. In general, new development using BPM version 8.0 should be done with the new coaches and new ECM user interface controls.

The new BPM version 8.0 support is appropriate for all new development of process applications needing outbound ECM operations as part of a service, or document list and document viewer controls on the user interface.

Summary

- Introduced:
 - Enterprise Content Management concepts
 - Content Management Interoperability Services
- Described ECM support before the BPM V8.0 release
- Introduced the ECM support added in BPM V8.0
 - Description
 - Supported repositories
 - User interface controls
- Contrasting the ECM implementations

In this presentation you were introduced to the concepts of Enterprise Content Management and to the OASIS Content Management Interoperability Services specification. Since BPM version 8.0 contains two differing ECM implementations from prior releases, both of these were reviewed. The new ECM support was then described, along with information about the supported ECM repositories and a look at the user interface controls. Finally, the three different ECM implementations were contrasted.



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