



IBM Software Group

SAP integration workshop

IBM WebSphere Business Monitor V6.0.2 - Introduction

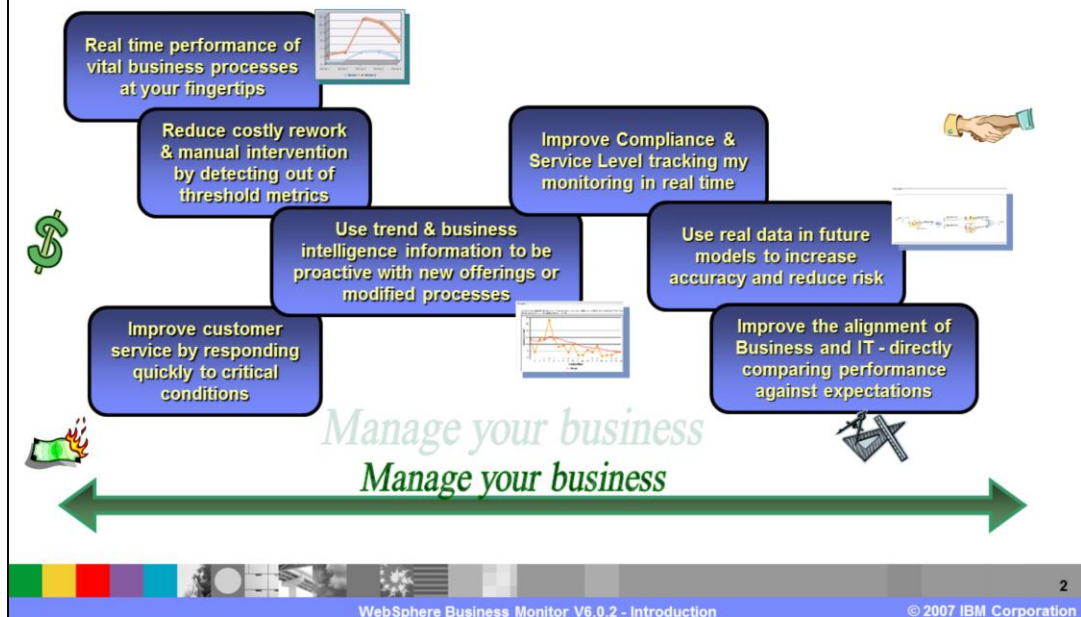


@business on demand.

© 2007 IBM Corporation
Converted to video June 19, 2014

Welcome to the IBM WebSphere® Business Monitor presentation as part of the SAP integration workshop. This presentation will give you an introduction to the WebSphere Business Monitor and monitoring over all.

WebSphere Business Monitor - Benefits



Business Monitor provides benefits in several different areas.

By monitoring processes in real time and using tailored dashboards, business performance information is accessible immediately.

If conditions which adversely affect performance are detected early in the process, rework and manual exception processing can be reduced.

Customer service can directly be affected by using process automation and early awareness of critical situations in a customer facing process

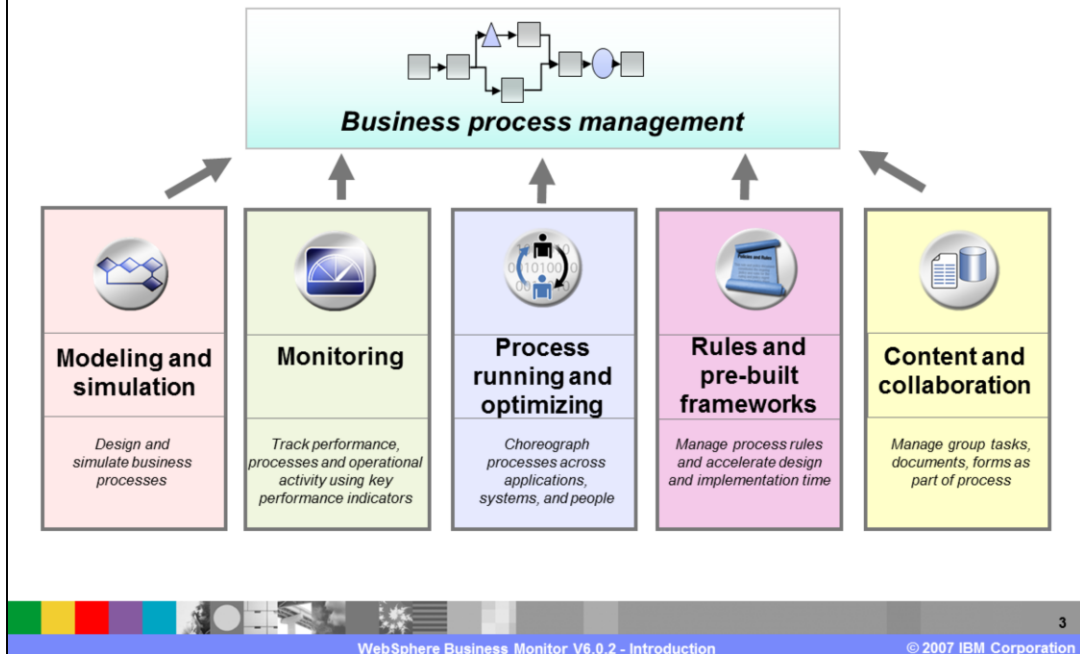
WebSphere Business Monitor provides powerful data analysis tools to examine multiple dimensions and discover patterns in process information that can lead to improved offerings or more efficient processes.

Compliance to defect levels or other and service level measurements can be confirmed and monitored continuously

As data is collected from executing processes, it can be used to increase the accuracy of future process models.

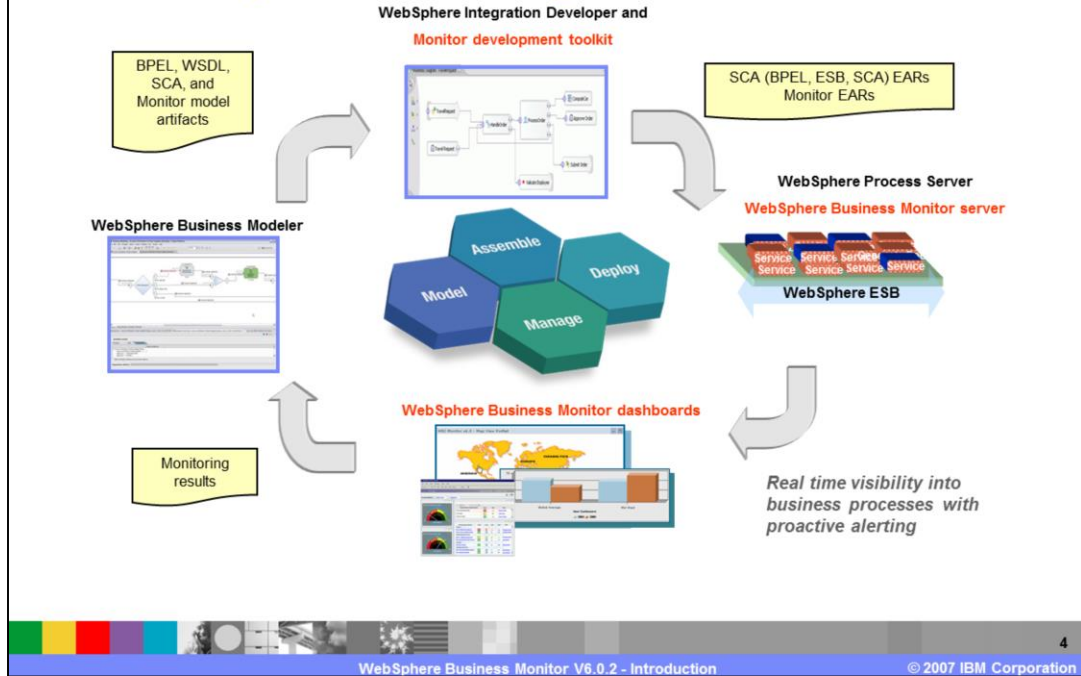
The performance of the running processes is compared to targets and limits set collaboratively by business and IT. This serves to reduce ambiguity and bring the two communities into better alignment.

Start with one of five BPM components



IBM offers several entry points where you can get into BPM with SOA. These BPM with SOA entry points help your business pursue BPM the right way - by taking a project-based approach and demanding that each project delivers real business value.

Business process management for SOA

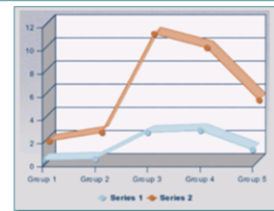


This slide shows the IBM BPM life cycle. IBM delivers products for all areas of this life cycle from modeling, assembly, deployment to monitoring.

The tools are tightly integrated and leverage common technologies like Eclipse or WebSphere Application Server. The artifacts that are exchanged between the different phases are using open standards.

WebSphere Business Monitor - Capabilities

- **Manage in-flight processes**
- **Monitor the business performance of active processes**
- **Detect business situations and take action**
- **Gather business intelligence from collected process data**
- **Create intuitive, role-based dashboards**



Business Monitor had five major areas of capability, each of these are examined in greater detail in the next few charts.

First, it is designed for managing and interacting with processes as they are running. Historical data is available for examination, but a key capability is to view processes and intervene while they are “in flight”, or in progress.

Second, the tool is designed for the business user. The combinations of views and available information are built to provide easy to use, intuitive information directly useable for a business audience. Although IBM does have a breadth of solutions available to examine the technology infrastructure beneath these running processes, the primary focus of this tool is BUSINESS.

Business Monitor examines events as they are presented from the process server. If combinations of these events contain information that describes a defined business situation, Monitor will detect this and if appropriate, follow a pre-defined course of action.

As process data accumulates in the data stores, multidimensional and cube analysis can be performed to offer additional insight and discovery of patterns.

Finally, tailored dashboards based on WebSphere Portal are used to present graphic and text information to business users in ways that are immediately consumable and consistent with that user’s role.

Manage in flight processes

Monitor running processes

- Process status
- Inspect process instance data
- Examine durations, costs, and so on

Active Instances

This view shows the running instances of a certain process and its activities. You can drill down through the instances and administer them as well.

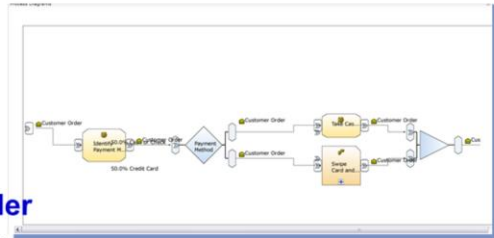
AccountVerificationTable

Result 1 to 4 of 4

Actions	Diagram	Process Instance Name	T.	Process Start Time	Process State	Process Working Duration	Activities
		Account Verification ABC 076295719943		Jan 11, 2006 9:27:10 AM	Delayed	3 d, 20 m, 41 s	
		Account Verification ACM 102241852345		Jan 9, 2006 9:34:00 PM	Running	1 s	
		Account Verification IBM 248572544309		Jan 7, 2006 9:57:39 AM	Running	25 s	
				Jul 2, 2005 9:03:53 PM	Running	208 d, 1 h, 5 m, 25 s	

Administer process instances

- Suspend or resume process instances
- Transfer work items



Export actual process data to Modeler

- Run new simulations based on REAL data
- Improve accuracy – reduce risk

IBM WebSphere Business Monitor measures the *actual* performance of every instance of a monitored business process.

This provides the executive and technical people responsible for the operation of specific processes, accurate information about how the process is executing by and for its users.

WebSphere Business Monitor allows users to view dashboards to see how their processes are working, track individual items, and identify bottlenecks. Various views can filter by many different criteria, including the Business Measures defined at Modeling time.

If intervention into a running process is necessary, a properly authorized user can immediately make changes to the status of the process, and even redirect or transfer work to other authorized parties if appropriate.

A key capability of Business Monitor is the ability to take real time data and load it back into the Business Modeler for analysis. When process “actuals” are used as a basis for modeling and simulation, a more accurate representation of the existing process is presented, permitting better simulation and analysis, resulting in new processes that will have a high degree of confidence to meet their projected performance goals.

The upper diagram shows a view of active process instances, each showing status, potential available actions, cost, time and other business measure information. Your users can drill into each process instance and examine a live process diagram, like the lower

one shown here, if needed.

Monitor the business performance of active processes

View key performance indicators (KPIs) calculated from live process data

- Display KPIs graphically as scorecards and gauges

Key Performance Indicators (KPI's)

The KPI view allows users to monitor Key Performance Indicators

KPI	Status	Value
Retail.Forecast Cost	N/A	48
Retail.Actual Cost MTD	N/A	8
Retail.Actual Cost YTD	✓	47
Retail.Actual Capital MTD	N/A	0
Mortgage.Actual Cost MTD	N/A	0
Mortgage.Actual Cost YTD	✗	6
Retail.Actual Capital YTD	N/A	0
Retail.Actual Interest Income YTD	✓	470
Retail.Actual Interest Income MTD	N/A	83

⚠ Below limit
✓ Within limits
✗ Above limit

Internal Business Process

KPI Name	Status	Value	Target	Score
Mortgage.Actual Interest Income YTD	⚠	10.8	15	72%
Credit Cards.Actual Interest Income YTD	⚠	140	155.0	90%

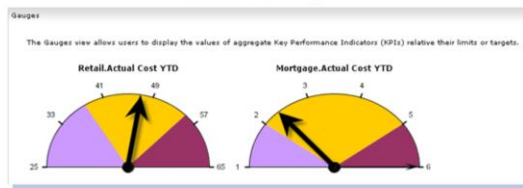
Learning & Growth

KPI Name	Status	Value	Target	Score
Credit Cards.Actual Interest Income YTD	⚠	140	155.0	90%
Wholesale.Actual Interest Income YTD	✗	160	150	107%

Customer

KPI Name	Status	Value	Target	Score
Trade Finance.Actual Interest Income YTD	✗	85	79	108%
Wholesale.Actual Interest Income YTD	✗	160	150	107%

⚠ Below target
✓ On target
✗ Above target



7

Although Business Monitor analyzes a large number of event messages and captures a tremendous amount of information, one of its primary objectives is to distill this mass of data into relevant, consumable, business level information pertinent to the specific role of your business user.

In the business measures model, key performance indicators, or KPIs, were defined for the process. Now as the process is running, these key performance measurements are updated real time, and displayed in a variety of forms. This slide shows three available views that display KPIs.

A KPI table view is shown on the left. Notice the Mortgage Actual Cost year-to-date KPI is above its limit.

A Scorecard view groups KPIs into related categories – notice the particular KPI scores presented for the “Learning & Growth” category

A gauge view is shown in the foreground that displays KPIs as automotive gauges with the defined targets and limits.

Combinations of these and other views can be used together, depending on the role of whoever is looking at these views.

Detect business situations and take action

Detect anomalous situations and take action

- View alerts from active processes
- Notifications sent for manual response
 - ▶ E-mail
 - ▶ Pager
- Invoke automated responses
 - ▶ A BPEL process
 - ▶ A Web service

Alerts

Use this view to handle incoming alerts. You can mark an alert as read or unread, or remove an alert from the view. alert, click on the Subject hyperlink.

Mark Read Mark Unread Remove

Results 1 to 6 of 6

<input type="checkbox"/>	Time	Subject	Alert Source
<input checked="" type="checkbox"/>	Jan 18, 2006 2:20:01 PM	Credit Request for ABC is a high risk request.	
<input type="checkbox"/>	Jan 18, 2006 2:26:18 PM	Credit Request for ABC is a medium risk request.	
<input checked="" type="checkbox"/>	Jan 18, 2006 2:21:14 PM	Credit Request for ACME is a medium risk request.	
<input type="checkbox"/>	Jan 18, 2006 2:25:38 PM	Credit Request for ACME is a medium risk request.	
<input checked="" type="checkbox"/>	Jan 18, 2006 2:20:49 PM	Credit Request for IBM is a low risk request.	

As processes are running, the Monitor server examines the arriving events and detects any conditions for which actions should be taken.

In these cases, the action manager is triggered, and one or more things may happen.

A special alert view, shown here, can be displayed to appropriate users for follow up action. E-mail and pagers using e-mail can also be used for a manual response.

The action manager can also be defined to respond automatically to certain business situations. In this case, the action manager starts an existing BPEL process available on the Process Server, or can invoke an available Web service in response to this situation.

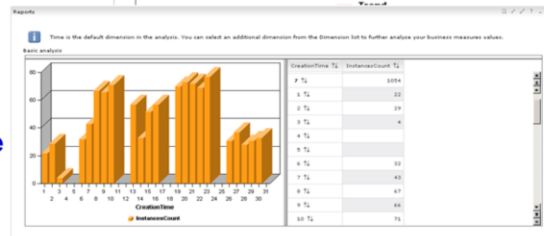
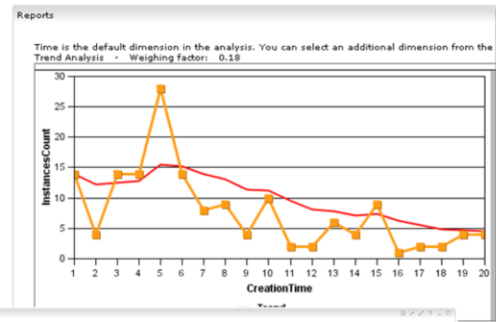
Gather business intelligence from collected data

Analyze business metrics over time to identify trends

Discover previously hidden patterns using dimensional analysis

Leverages DB2[®], Alphablox[®] and Cube Views[®] technology

Populate a business performance warehouse in near real time



The report view provides performance reports relative to a time-axis. Such reports typically contain tables and graphs analyzing historical data contained within the performance warehouse data store.

The report view has built-in analysis types that include Quartile, Trend, and Control Analysis, with many chart type options.

The dimensional view provides a multidimensional view of business data. You can pivot on dimensions to view the performance aspects.

The upper example shows a trend view, the lower example is a dimensional view.

DB2 Alphablox and Cube view technologies are used as the basis for these views. Only a small fraction of the capabilities are mentioned here. Other customized views could be combined with these and the other available views to provide a highly customized environment, tailored to the needs of the role.

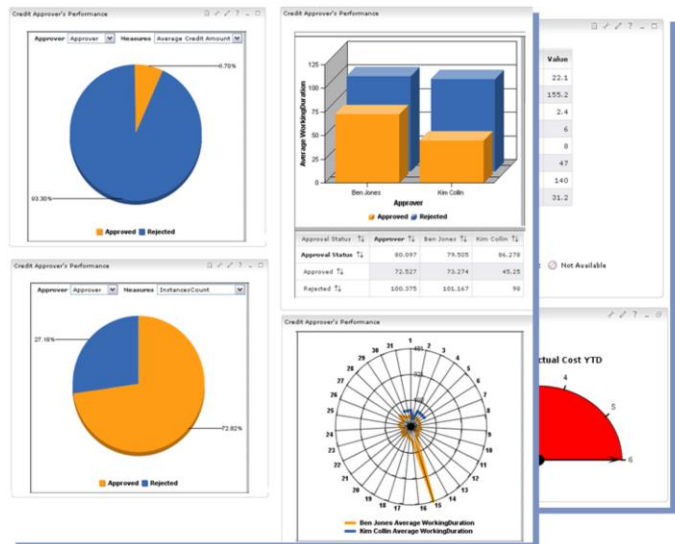
Create high productivity, role-based dashboards

Assemble dashboards from different views

- Monitor view
- Report view
- Dimensional view
- KPI view
- Scorecard view
- Gauge view
- Alert view
- Organizational view

Combine standard and custom portlets to meet any business need

WebSphere Portal allows flexible customization



10

WebSphere Business Monitor V6.0.2 - Introduction

© 2007 IBM Corporation

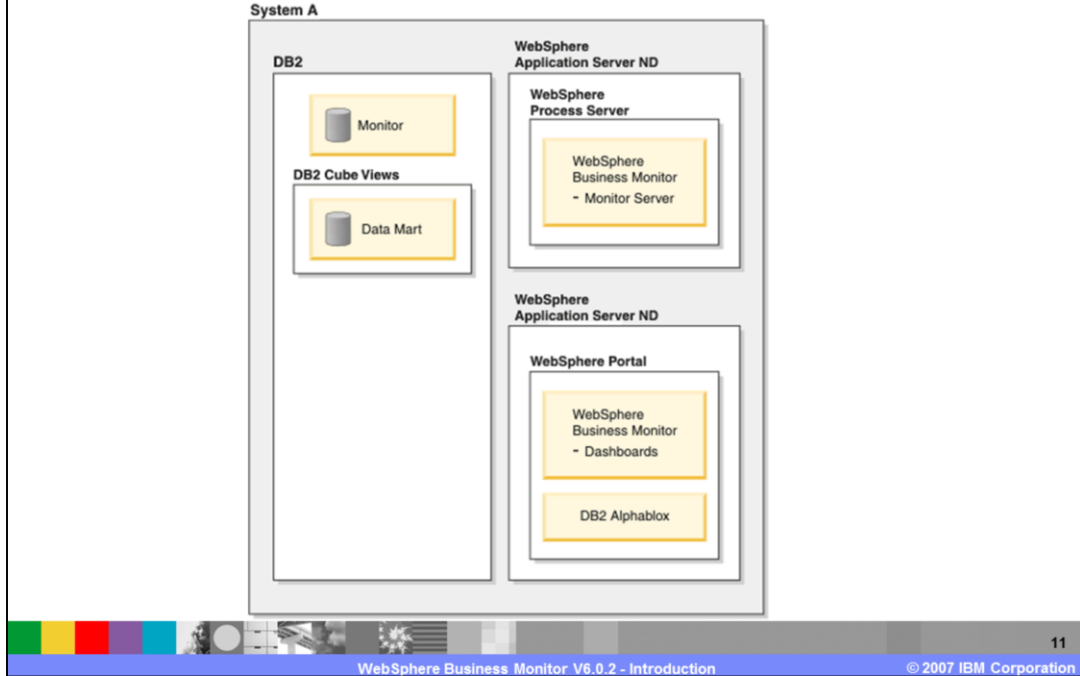
These examples begin to show the flexibility and adaptability of the dashboard based approach. Eight configurable views are included with some additional adjunct views. A dashboard designer with WebSphere Portal skills can take these views and configure and combine them or create custom dashboards.

The monitor view displays sets of related processes with various measurements.

The process view displays process diagrams. Report and dimensional views show various process data using multi-dimensional analysis. KPI, scorecard and gauge views depict key performance indicators in various groupings and styles. The Alert view, driven by the action manager, responds to defined business situations and displays the view on the desktop of appropriate users for follow-up action. The organizational view depicts the layers and hierarchies of the organization model defined within Monitor or a referenced LDAP directory.

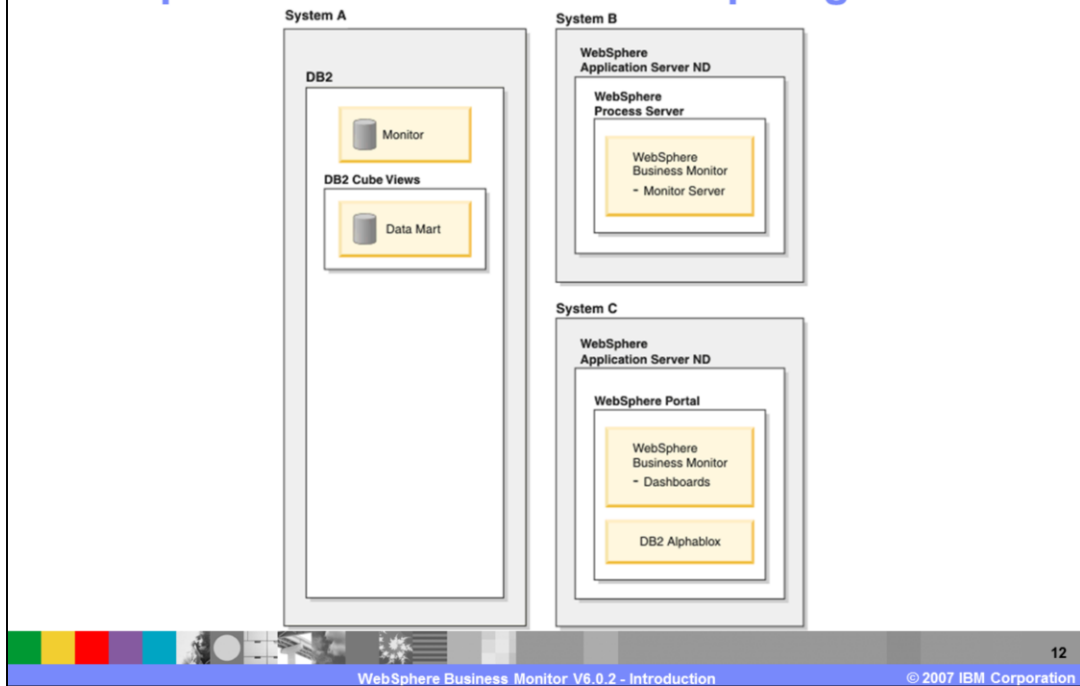
The example dashboard shown here combines multiple styles of a customized report and dimensional view with pie, 3D column, and a radial scatter diagram views.

WebSphere Business Monitor topologies



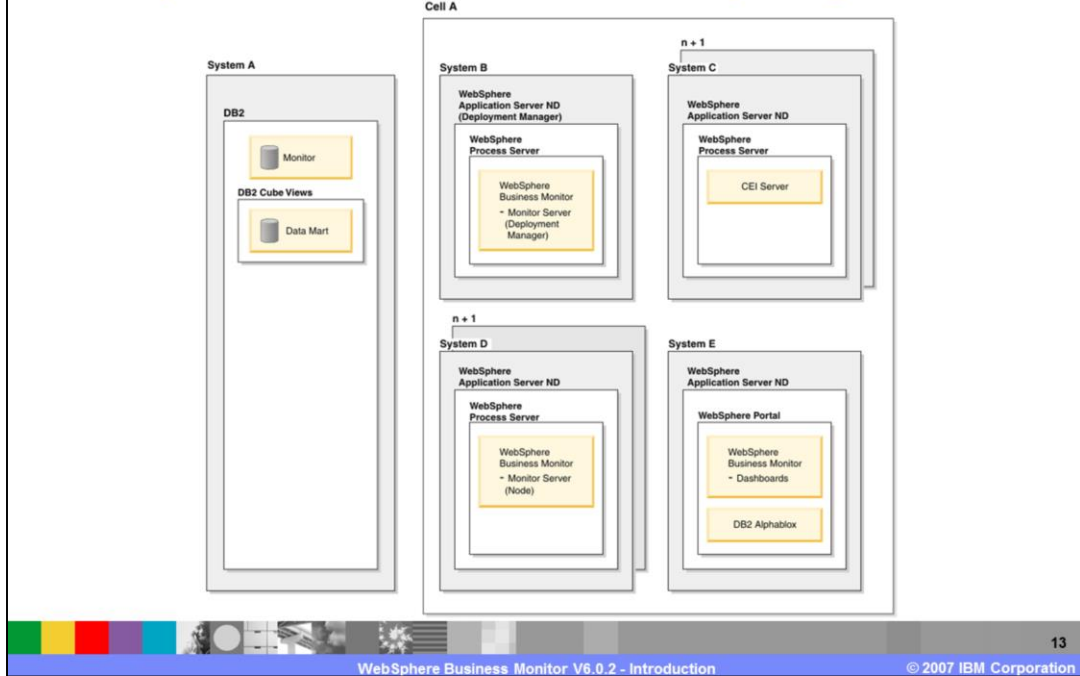
This slide highlights a single machine installation. In this setup, all required components like the database, monitor server and dashboard server are installed on one physical box. This setup is ideal for development workstations where performance is not an issue; it is a simple infrastructure that uses less hardware.

WebSphere Business Monitor topologies



This slide highlights a three machine installation. In this setup, all required components like database, monitor server and dashboard server are installed on separate physical machines. This setup is ideal for test and production environments where performance is a criteria and multiple users and user groups are testing the functionality.

WebSphere Business Monitor topologies



This slide highlights a typical production installation. In this setup, all required components like database, monitor server and dashboard server are installed on separate physical boxes leveraging enhanced clustering and redundancy mechanisms of the underlying technology. This setup is ideal for high-performance production environments that also have the requirement for high failover.

WebSphere Business Monitor - Themes

- **Open standard event infrastructure – Common base event**
- **Ability to monitor multiple environments in your organization**
- **Excellent performance and throughput to support high-volume environments**
- **Launch pad installation**
- **Key element of IBM business innovation and optimization strategy**



The major design themes of WebSphere Business Monitor are shown here.

Monitor has an open event infrastructure that is commonly applicable for business and IT events. The infrastructure is Common Event Infrastructure...the event messages sent on that infrastructure conform to a format called the Common Base Event.

You can monitor multiple environments, such as other process engines, application adapters, and message brokers. Potentially any common event infrastructure compatible emitter could be monitored.

Performance and throughput are derived from the underlying WebSphere Application Server. Monitor shares common event infrastructure underpinnings with WebSphere Process Server

Launch Pad installation, despite the multiple, powerful technologies employed to bring together all the function in Monitor, the Launch Pad installation simplifies and shortens the installation process with automatic verification, installation, and configuration of prerequisites.

WebSphere Business Monitor is a central component in the business innovation and optimization strategy.

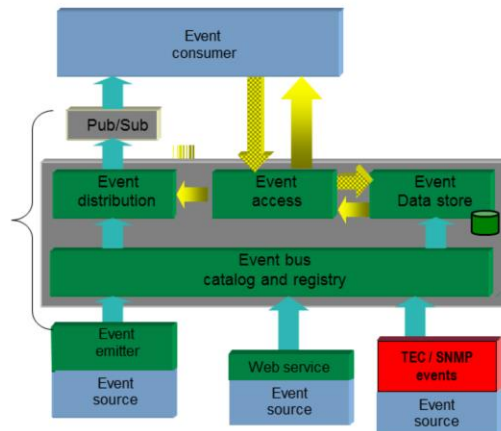
Enabling events

Common base event

- An "Event" is anything interesting that occurs from either a business or an IT perspective. "Common base event" is the event data format IBM has proposed as a standard to the Organization for the Advancement of Structured Information Standards (OASIS).

Common event infrastructure

- The common event infrastructure is IBM's implementation of a consistent approach for the creation, transmission, persistence and distribution of a wide range of business, system and network events, based on common base events



15

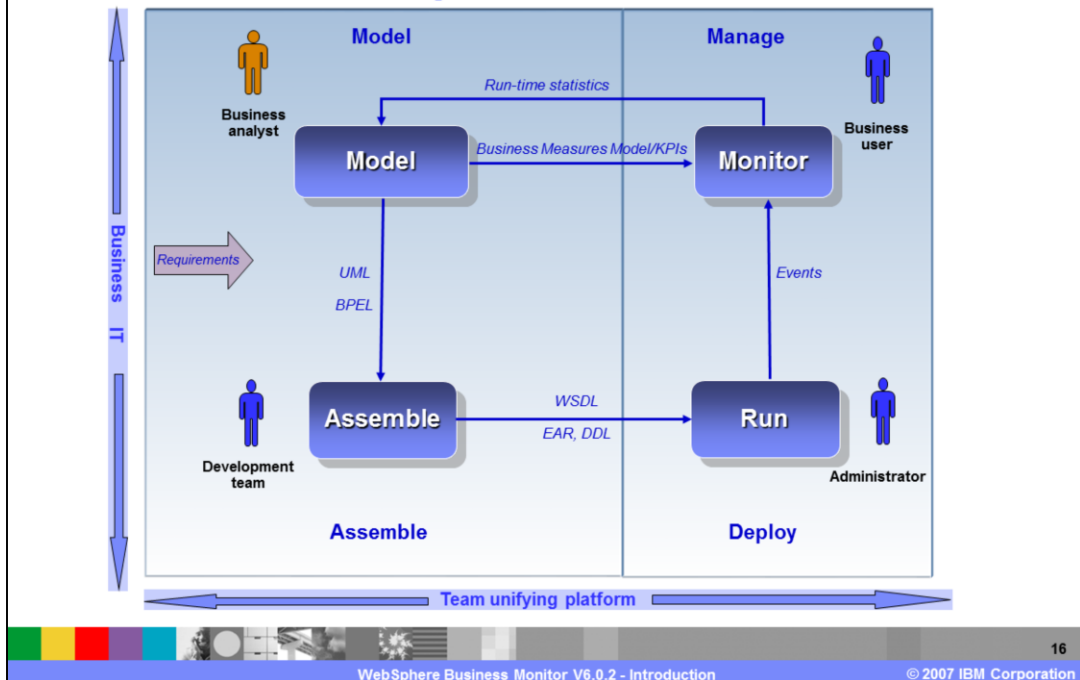
WebSphere Business Monitor V6.0.2 - Introduction

© 2007 IBM Corporation

An event is anything interesting that occurs from either a business or an IT perspective. IBM has proposed a standard called "Common base events" to define the structure of event messages.

The common event infrastructure is IBM's implementation of a consistent approach for the creation, transmission, persistence and distribution of a wide range of business, system and network events, using common base events as the standard.

Role-based development view



This chart highlights the participants in development and deployment in the WebSphere Business Monitor environment.

The business analyst develops the model in collaboration with the development team and defines the business measures model.

The development team – including an integration specialist and a J2EE developer - builds and assembles services required for the execution of the defined processes.

Web application server administrators and database administrators deploy the process, business measures model, and other Monitor components.

Business users view, manage the process using role based dashboards, and bring runtime statistics back into Modeler for future modeling efforts.

Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

Cube Views DB2 IBM WebSphere

Alphablox is a registered trademark of Alphablox Corporation in the United States, other countries, or both

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2007. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.

