

Modernización de las Aplicaciones de Negocio con el BRMS de IBM

IBM WebSphere Business Rules for z/OS





Automatización en el operacional de las decisiones de negocio

¿Cual es el riesgo de un cliente?

Regla de segmentación

si el solicitante ya es cliente
 y el balance de la cuenta es mayor que 3000€
 y el numero de descubiertos en los últimos 180 días es 0
 entonces
 el segmento de la solicitud es **Riesgo Bajo**

¿Cual es la comisión sobre una operación?

Política de precios

si la operación es de tipo **transferencia**
 y el canal utilizado es **internet**
 y el acuerdo del cliente incluye **banca online**
 entonces
 aplicar un descuento del **40%** sobre precio de catalogo

¿Cual es el asiento contable para esta operación?

Tabla de decisión contable

create a journal entry								
Op type	Accrued	Out of ccy	journal number	pos	D/C	core balance type	account	amount
BUY			'the journal num'	1	D	Inventory journal o...	INVENTORY	'the secondary qty'
SELL			'the journal num'	1	C	Inventory journal o...	INVENTORY	'the secondary qty'
BUY			'the journal num'	2	C	Counterparty journ...	COUNTERPARTY	'the settle qty'
SELL			'the journal num'	2	D	Counterparty journ...	COUNTERPARTY	'the settle qty'
BUY	<input checked="" type="checkbox"/>		'the journal num'	3	D	Coupon bought/sol...	COUPON BOUGHT	'the accrued interes...
SELL	<input checked="" type="checkbox"/>		'the journal num'	3	C	Coupon bought/sol...	COUPON BOUGHT	'the accrued interes...
BUY		<input checked="" type="checkbox"/>	'the journal num'	4	C	FX inventory value	FX CONTROL	'the secondary qty'
SELL		<input checked="" type="checkbox"/>	'the journal num'	4				
BUY		<input checked="" type="checkbox"/>	'the journal num'	5				
SELL		<input checked="" type="checkbox"/>	'the journal num'	5				
BUY		<input checked="" type="checkbox"/>	'the journal num'	6				
SELL		<input checked="" type="checkbox"/>	'the journal num'	6				
BUY		<input checked="" type="checkbox"/>	'the journal num'	7				
SELL		<input checked="" type="checkbox"/>	'the journal num'	7				

¿Que cámara de compensación seleccionar para enrutar un pago?

Tabla de enrutamiento

CURRENCY	PAYMENT TYPE	AMOUNT		Applicable MOP
		<min>	<max>	
EUR	Bank to Bank	100,000	500,000	EBA, CHAPSE E
		Otherwise		EBA, TARGET, SWIFT
	Customer Payment			CHAPSE
GBP		> 500,000		TARGET
Otherwise				CHAPSG
				SWIFT



IBM WebSphere ILOG BRMS



Desarrollo

Diseño



Rule Studio
(basado en Eclipse)



Línea de Negocio

Gestión



Decision Validation
Services

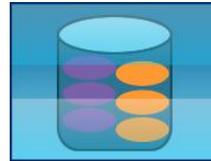


Rule Team
Server



Rule Solutions
for Office

Compartir



Rule Repository



Producción

Desplegar



Rule Execution
Server for Java



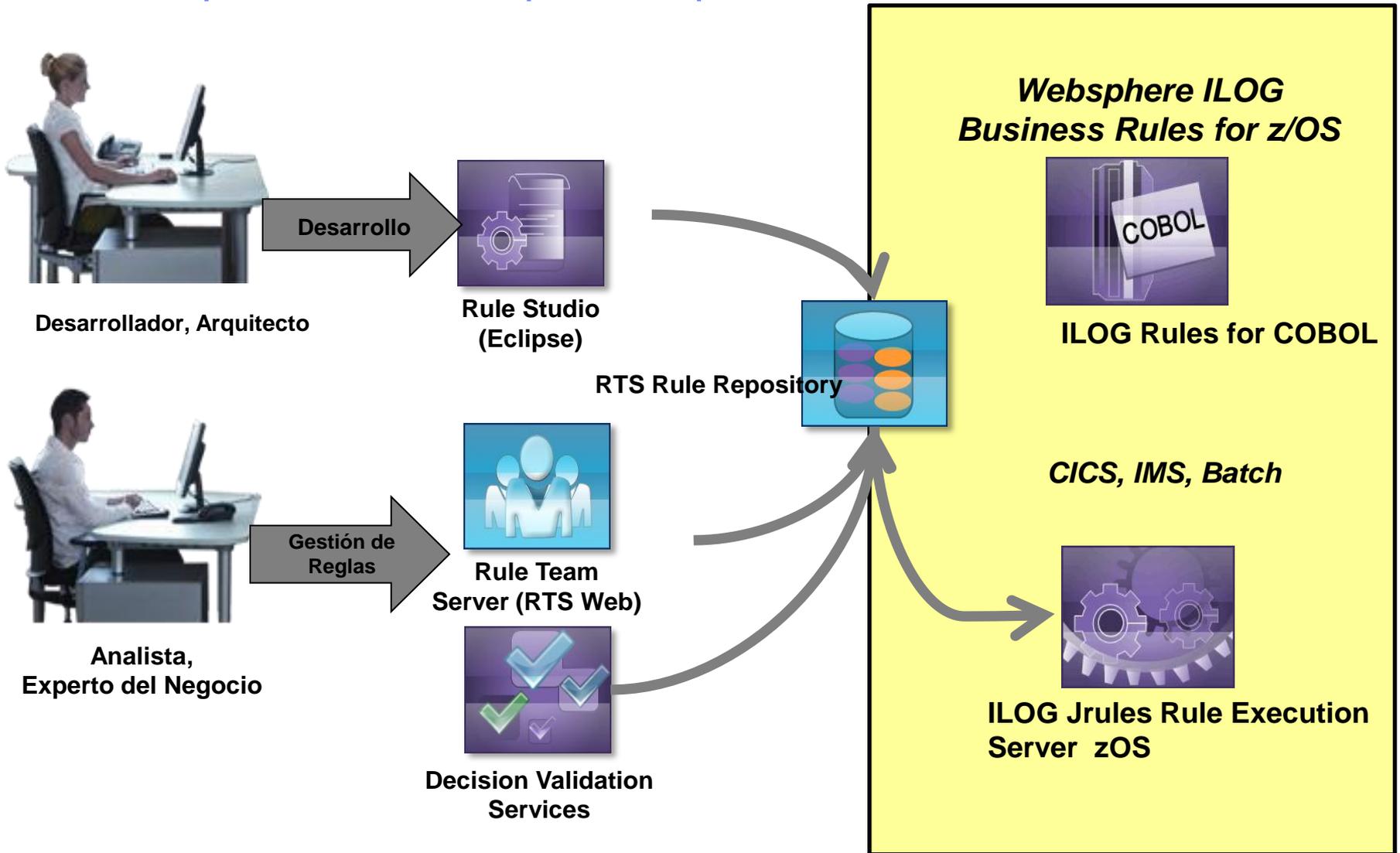
Rules for COBOL



Transparent
Decision Services



IBM WebSphere BRMS: Opciones para z/OS





Edición de reglas Intuitiva

si
 el tipo de garantía de 'la solicitud' no es HIPOTECARIA
 y el porcentaje cubierto por la garantía de 'la solicitud' es menor que 50
 entonces
 incrementa el tipo de interés de 'la
 solicitud' en 0,25 puntos por el motivo: "cobertura de la garantía inferior al 50%";

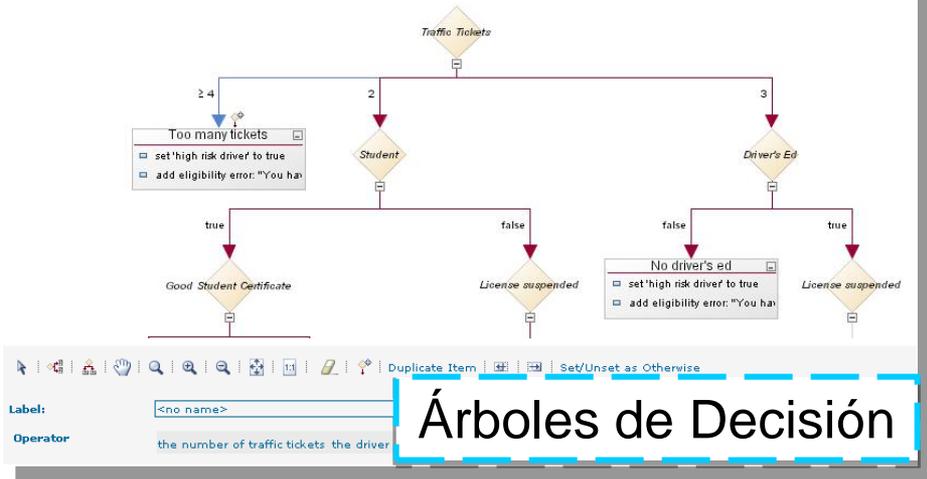
Lenguaje de Negocio

	Tipo de Producto	Plazo	Tipo de Interés
1	CREDITO AL CONSUMO	≤ 3	2,5
2		> 3	2,75
3	CREDITO EMPRESA	≤ 12	1,75
4		> 12	2
5	CREDITO HIPOTECARIO	≤ 36	1,75
6		[36 72]	1,85
7		> 72	1,95
8	CREDITO PERSONAL		

Tablas de Decisión

Attribute	Range	Weight(%)	Score	Reason Code
Months since last bankruptcy	< 1	100	20	MLB
	1 ≤ Months since last bankruptcy < 3		60	MLB
	3 ≤ Months since last bankruptcy < 6		150	
Number of Bankruptcies	≥ 6	30	150	
	< 1		100	
	1 ≤ Number of Bankruptcies < 2		50	
Number of Foreclosures	2 ≤ Number of Foreclosures < 3	20	0	NE
	≥ 3		100	
	< 1		30	
Number of 30 days Late Payment	1 ≤ Number of Foreclosures < 2	5	10	
	2 ≤ Number of Foreclosures < 3		0	NP
	< 1		100	
Number of 60 days Late Payment	1 ≤ Number of 30 days Late Payment...	15	60	
	3 ≤ Number of 30 days Late Payment...		10	3DLP
	≥ 7		100	
Number of 30 days Late Payment	< 1	15	60	
	1 ≤ Number of 60 days Late Payment...		30	
	3 ≤ Number of 60 days Late Payment...		0	6DLP

Scorecards



Árboles de Decisión

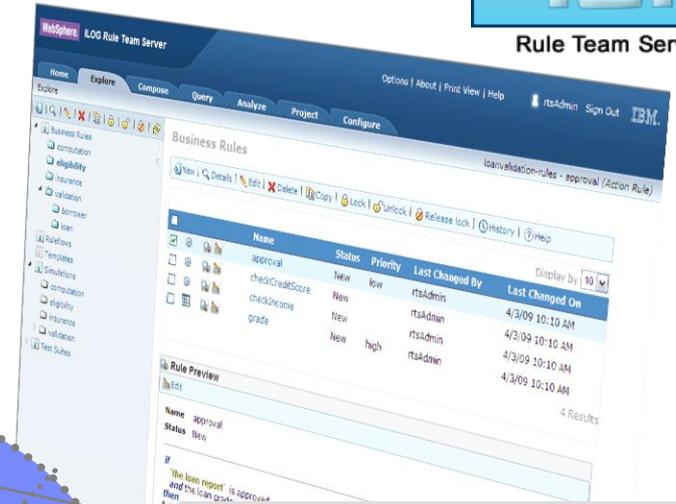


Rule Team Server: Gestión Centralizada de Reglas



Rule Team Server

- Entorno Web de trabajo en grupo
- Colaboración efectiva de distintos perfiles (IT, Negocio)
- Control y gobierno de los cambios



- Versionado de reglas
- Historia de cambios (auditaridad)
- Comparación de versiones
- Gestión de baselines (congelar / restaurar)

- Consultas de reglas por atributos
- Consultas semánticas
- "Smart views": organización dinámica del repositorio

- Bloqueo de reglas/paquetes
- Editores de reglas
- Herramientas de administración



- Pruebas unitarias
- Escenarios de simulación
- Cálculo de KPI's
- Análisis de impacto

- Análisis sintáctico
- Análisis de consistencia
- Análisis de cobertura

- Autenticación/autorización
- Integración con el registro corporativo de usuarios
- Configuración de Permisos



Gestión de Reglas en Documentos de Office

Eligibility.xlsx - Microsoft Excel

	A	B	C	D	E	F
1	A	City	C		D	E
2			Min	Max		
3			≤ 22.00		FALSE	The customer's age is below the minimum for ren
4	New Hampshire	X	23	70	TRUE	The customer is eligible to rent in New
5			≥ 71.00		FALSE	The customer's age is past the maximum for rent
6			≤ 20.00		FALSE	The customer's age is below the minimum for re
7	Rhode Island	A	21	70	TRUE	The customer is eligible to rent in Rh
8			≥ 71.00		FALSE	The customer's age is past the maximum for ren

Rules

Row4

Definitions...

If

- all of the following conditions are true:
 - the state of the pickup branch of the rental agreement is New Hampshire
 - the last name of the customer starts with X
 - the age of the customer of the rental agreement is between 23 and 70

Then

- set the rental agreement accepted status to True
- display the message: The customer is eligible to rent in New Hampshire.

Else...



Rule Solutions for Office

Word Tutorial - copied.docx - Microsoft Word

Page 3

Special Offer. The price is computed from the base

RuleDoc Outline

- Compute the Base Rate
- Check the Eligibility for the Defau...
- Define the Pricing of the Defaul...
- Check the Eligibility for the Long...
- Define the Pricing of the Long Te...

Rule Properties

Problem List

- The word "true" is expected in place

Definitions

- the <a coverage name>
- the actual car group of <a rental agreement>
- the actual return branch of <a rental agreement>
- the actual return date of <a rental agreement>
- the age of <a customer>
- the birth date of <a customer>
- the branch
- the car group
- the car group of <a rental agreement>
- the car group upgrade level of <an offer>

Rule B

Definition

Set

- the car group of <a rental agreement>
- the car group upgrade level of <an offer>

If

And the

Then

- Set the rental agreement "Default" discount to 'the percentage' ;
- Set the rental agreement "Default" price to the rental agreement "Base" price * (1 - 'the percentage' / 100) ;
- Display the message: "The Default special offer corresponds to a 10% rebate on the Base offer price." ;





Pruebas y Simulaciones para usuarios de Negocio

Second Test Suite - Report (6)

Test Suite as of this run: Second Test Suite - Version: 1.11
 Scenarios used for this run: template1.xls

Run Date: Apr 24, 2009 11:12:30 AM CEST
 Run By: rtsAdmin
 Rules tested: All rules as of the baseline Current
 Starting Ruleflow Task: Default
 Server: Sample

Summary

Number of Scenarios: 10
 Scenarios with Failures: 2
 Scenarios with Errors: 1
 Success Rate: 70%

Details

Click here to download the output values [Second Test Suite - Report (8) - data.xls]

Name	Status
Scenario 1	Failed
Scenario 2	Failed
Scenario 3	Passed
Scenario 4	Passed
Scenario 5	Passed
Scenario 6	Passed
Scenario 7	Passed
Scenario 8	Passed
Scenario 9	Failed
Scenario 10	Passed

Informe detallado

Name	Status	7 test(s) (1 failure(s) - 0 error(s))
Scenario 1	Failed	7 test(s) (1 failure(s) - 0 error(s))
Status Test		
✓ the application result of borrower equals	the observed value Low Risk is the expected value	
✓ the credit check report of borrower equals	the observed value null is the expected value	
✓ the credit check result of borrower equals	the observed value Refused is the expected value	
✓ the fraud probability of borrower equals	the observed value 5 is the expected value	
✓ the fraud report of borrower equals	the observed value tarin from paris rej is the expected value	
✓ the fraud result of borrower equals	the observed value Low Risk is the expected value	
! the execution duration in milliseconds is lower than or equals	the observed value 78 is greater than 50	
The list of rules fired	rulePackage.businessRule	
The list of executed ruleflow tasks	mainRuleflow mainRuleflow>rulePackage	
The duration (in ms) of execution	78	
Scenario 2	Failed	7 test(s) (2 failure(s) - 0 error(s))
Status Test		
! the application result of borrower equals	the observed value Low Risk does not equal the expected value High risk	
✓ the credit check report of borrower equals	the observed value null is the expected value	
✓ the credit check result of borrower equals	the observed value Refused is the expected value	
! the fraud probability of borrower equals	the observed value 5 does not equal the expected value 6	
✓ the fraud report of borrower equals	the observed value tarin from paris rej is the expected value	
✓ the fraud result of borrower equals	the observed value Low Risk is the expected value	
✓ the execution duration in milliseconds is lower than or equals	the observed value 0 is not greater than 13	
The list of rules fired	rulePackage.businessRule	
The list of executed ruleflow tasks	mainRuleflow mainRuleflow>rulePackage	
The duration (in ms) of execution	0	
Scenario 3	Passed	0 test(s) (0 failure(s) - 0 error(s))
Scenario 4	Passed	0 test(s) (0 failure(s) - 0 error(s))
Scenario 5	Passed	0 test(s) (0 failure(s) - 0 error(s))
Scenario 6	Passed	0 test(s) (0 failure(s) - 0 error(s))
Scenario 7	Passed	0 test(s) (0 failure(s) - 0 error(s))

Decision Validation Services



Análisis de Impacto y "what-if"

WebSphere. ILOG Rule Team Server

Options | About | Print View | Help Adam Sign Out IBM.

Home Explore Compose Query Analyze Project **Custom Impact** Configure

Explore > Run > Report Eligibility

Impact View

Report: Last year history - all rules - Report

Run Date: Dec 15, 2009 3:01:35 PM CST

Run By: Adam

Number of Scenarios: 400

Success Rate: 100%

Report: Last year history - all rules - Report (2)

Run Date: Dec 15, 2009 4:08:26 PM CST

Run By: Adam

Number of Scenarios: 400

Success Rate: 100%

Global eligibility results



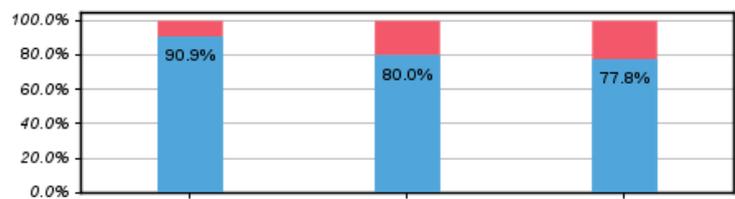
Accepted 82.5% Rejected 17.5%

Global eligibility results



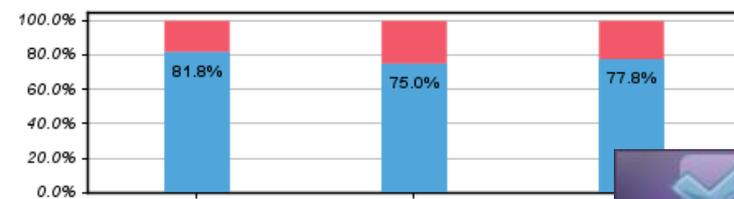
Accepted 77.5% Rejected 22.5%

Eligibility results by states



Accepted Rejected

Eligibility results by states



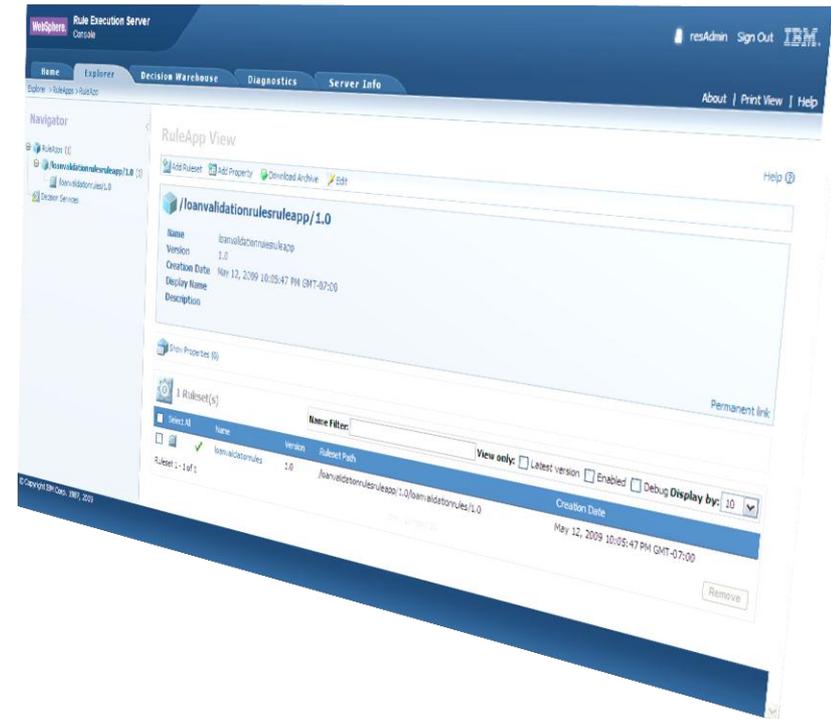
Accepted Rejected





Entorno Gestionado de Ejecución

- Entorno de ejecución J2EE para alto rendimiento y escalabilidad
- Consola de gestión
 - Basada en JMX
 - Estadísticas de ejecución
 - Trazabilidad y de las reglas aplicadas
 - Persistencia y versionado de reglas desplegadas
- Configuración del motor como un recurso
 - Adaptador de Recursos JCA
 - Pool de motores reusables entre aplicaciones
 - Clusterizable para escalabilidad y alta disponibilidad
- Acceso a los servicios de reglas como:
 - Mensajes (MDB)
 - Código Java (POJO o EJB)
 - Web Services (Transparent Decision Services)



Rule Execution Server



ILOG BRMS Case Study – Financial Service Provider

Challenge

- The company was missing revenue by not being able to present the right offer at the right time when a customer was on-line
- Decision logic was scattered and inconsistent across channels
- Poor customer experience: branch staff would sometimes try to cross-sell to clients who did not qualify for the additional credit, resulting in negative client experience

Solution

- Create an ILOG BRMS-based cross-sell/up-sell solution to provide decision support throughout generation of personalized & qualified offers
- Rules centralized and deployed Cross-channel (branches, call centers, etc.) and cross-product
- Agile solution – business users implement and deploy changes when required

One of the World's Largest Financial Service Providers Dramatically Increases Revenue through effective Cross-sell/Upsell

Business Benefits

Improved client relationship – acquisition, retention & wallet-share

Accelerated ROI

Increased revenues - \$14M in approved bookings in 2.5 months

Significantly increased cross-sell offers: from 13% to 40%

Significantly increased client offer acceptance from 3% to 20%-30%

Instant updates of rules fully managed by business users – changes are implemented with greater accuracy and speed



IBM y la Gestión de Reglas de Negocio

WebSphere ILOG BRMS es la tecnología de IBM para diseñar, gestionar, desplegar y ejecutar servicios de decisión ...



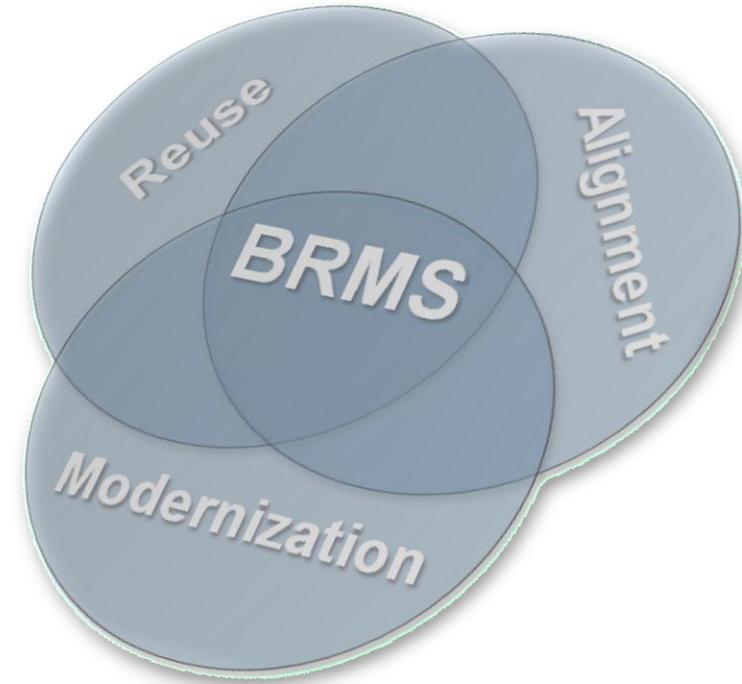
Acerca a los usuarios de negocio y de IT con herramientas de colaboración



Facilita la implementación y reutilización de políticas de negocio, así como el gobierno y control de sus cambios



Mejora la transparencia y auditabilidad de los sistemas y los hace más robustos ante los cambios regulatorios





Recursos BRMS de IBM

- DeveloperWorks (Red paper, Forums, ...) <http://www.ibm.com/developerworks/websphere/zones/brms>
- Metodología y mejores prácticas https://www.ibm.com/developerworks/mydeveloperworks/blogs/isis/?lang=en_us
- Industry Solution Center @ La Gaude <http://www-05.ibm.com/fr/ibmforum/lagaude/>

Preguntas



The screenshot shows the IBM DeveloperWorks website for 'WebSphere ILOG Business Rule Management Systems'. The page features a navigation menu with options like Home, Solutions, Services, Products, Support & downloads, and My IBM. A search bar is located at the top right. The main content area includes a title 'WebSphere ILOG Business Rule Management Systems', a brief description, and a 'Spotlight' section with a link to a redbook. Below this is a 'Search technical library' section with a search input field and a 'Go' button. Further down, there are sections for 'Downloads, CDs, DVDs' and 'Learning resources'.