IBM Innovations that Simplify Application Development

Systems Integration with REST

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Decision Optimization

Agenda

- Decision Optimization Center Overview
- What is REST?
- Real Use Case Implementation
- Integrating Systems using REST
Provides rapid, reliable creation and deployment of custom analytic decision support across all industries

Powerful what-if analysis for scenario management and scenario comparison enables better, faster decision-making

Advanced analytics with drill-downs and graphical displays enables detailed visualization of data and decisions

Supports distributed planning processes by enabling for scenario sharing and collaboration among planners

Wide range of configuration options from Desktop to Enterprise gives organizations the flexibility to map to different solution architectures

Decision Optimization
IBM Decision Optimization Center
A Framework for building Business Optimization solutions
Basic Business Application Component Stack
IBM Decision Optimization Center have ALL Layers built in

- A Framework for building Optimization applications
- Develop your custom app and deploy. No data or UI elements to build
Decision Optimization

Build your own apps and deploy them to the Framework

- Portfolio Optimization and Rebalancing
- Workforce Scheduling
- Fleet assignment
- Power generator scheduling
- Network Capacity planning
- Supply Chain Management
- Loan Pooling
- Marketing Campaign
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Leverage a Single Platform Across the Enterprise

Production planning
Supply chain

Manage risk
Human Resources

Customer Service

Sales

Customer retention campaigns

Operations

Optimize business processes

Product Development

Finance

IT

Improve IT economics

Optimize financial operations

Leverage a Single Platform Across the Enterprise
Integrating with External Apps Using REST

- Direct connectivity with external websites
- Two-way communications with enterprise systems
- Easy integration with the leading Business Intelligence systems
With REST, web applications interact with each other using URLs:

- Similar to how websites work
- Worldwide standard
- Actions are represented by URLs which maps to application processes
- Entire applications can be built in JavaScript-HTML
- Language independent
- Use AJAX (Asynchronous Javascript and XML) to interact with application servers
- Enables Hybrid Cloud implementations

REST-enabled System

1. Some_server/someapp/getdata
2. Response in XML OR JSON
REST Enables Many Enterprise Integration Possibilities

System-to-System Communications

- ERP
- Business Intelligence
- Analytical Systems

IBM Decision Optimization Center

Enterprise Service Bus
Easy Web Sites Connectivity Using REST

- Web & mobile apps interaction without server-side code
- External systems can tap the power of optimization by:
  - Initiating Solves & retrieving solutions
  - Manipulating optimization parameters
  - Etc…
Major American Retailer with 2500 stores around the country

- Merchandising Teams travel from store to store organizing displays
- Company pays for travel costs

**Main Requirements:**

- Integrate optimization in current intranet
- Minimize implementation time and testing
Super Retailer

**MET Workbench**

Merchandising Manager’s toolbox for ensuring effective execution of merchandising service activities and scheduling.

**MET Quick Poll**

Tell us your thoughts on our first associate newsletter - Merchandising Execution Times.

Click here to take the poll.

**News You Can Use**

- 9.19.2011
- 9.12.2011
- 9.05.2011
- 8.29.2011
- ARCHIVE

**Tools**

- Citrix Email
- CR Execution
- ePOP – POP Catalog
- Field Merchandising MET service request
- FIRST phone tracking
- **MET Optimization**
- MET Interactive Reports
- MET Scorecards
- ...(more)

**Departments**

- D22
- D23
- D24
- D25
- D26/D29B
Welcome to the MET Optimization workbench

This tool allows MEMs to optimize their teams and help build a store coverage model to maximize productivity and minimize travel hours and expense.

Select Manage Teams to open the Team Management tool
Select View Results to view and download planning results
Select Begin to build a new schedule

<table>
<thead>
<tr>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Teams</td>
</tr>
<tr>
<td>Average Team Size</td>
</tr>
<tr>
<td>Last Optimization Run date</td>
</tr>
</tbody>
</table>

Begin
Welcome to the MET Optimization workbench

### Optimization Parameters

- **Cost Per Mile**: 0.4
- **Mileage Threshold**: 17.5
- **Max Team Size**: 60
- **Max Travel Distance For Associate**: 100
- **Total Workdays**: 20
- **Max Days a Team Can Be at One Store**: 15
- **Associate on Current Team Flag**: 0
- **Max Percent over Hours Required**: 50
Welcome to the MET Optimization workbench

Building your Team’s Schedule…
Please wait
Welcome to the MET Optimization workbench

This tool allow MEMs to optimize their teams and help build a store coverage model to maximize productivity and minimize travel hours and expense.

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<tr>
<td>View results</td>
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</tbody>
</table>

Begin

Let’s see the Results!
### MET Optimization - Results

#### SE Region – District 133

<table>
<thead>
<tr>
<th>Summary</th>
<th>Associate Results</th>
<th>Associate Costs</th>
<th>Store Results</th>
<th>Teams</th>
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<tbody>
<tr>
<td>Optimization Date:</td>
<td>09/20/2011</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total Full Time Associates</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Part-time Associates</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Stores</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>...MORE...</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## MET Optimization - Results

**SE Region – District 133**

<table>
<thead>
<tr>
<th>Store</th>
<th>Team</th>
<th>Number of Visits</th>
<th>Actual Hours</th>
<th>Target Hours</th>
<th>Percentage Difference</th>
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<tbody>
<tr>
<td>6301</td>
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<tr>
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<td>602</td>
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<td>6377</td>
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<td>6303</td>
<td>1</td>
<td>5</td>
<td>880</td>
<td>996</td>
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<td>1,320</td>
<td>1,100</td>
<td>20</td>
</tr>
</tbody>
</table>

[Download (CSV)](download.csv)  
[Back to main](#)  
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REST Enables Many Integration Possibilities - UI
REST Interactions work over HTTP

- Location independence – connecting systems can be hosted far from each other.
- Performance! – no object serializations
- Easy to learn and implement
Resources for Using REST

- Firefox REST Client – allows you to fire REST calls to any server
- Ajax – Asynchronous Javascript and XML is the enabler of REST
- JavaScript – Worldwide standard for browser-side scripting
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Want to Learn more?

Come see me at the IBM booth!

- Live demo on how it works
- Code samples
- More real-life implementations
- Let’s talk possibilities!
THANK YOU!