

Online Workshop

How to Use the Northfield Optimizer in R and MATLAB®

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Boston

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Agenda

Introduction

- Northfield's Accessibility & Usability Strategy

The Northfield Analytics Service Platform

- What does it do?
- How does it work?

The Northfield API

- What does it do?
- How does it work?

The Northfield ASP Components

- The Northfield Risk Model Component
- The Northfield Optimizer Component

Northfield ASP Website

- Key Features

Agenda (continued)

Using The Northfield ASP – R & MATLAB

- Installation
- Configuration
- Demonstration - Northfield Risk Model & Northfield Optimizer Components

Next Steps

- Rollout plan
- Pricing
- Registrations
- Future Enhancements

Wrap Up

Accessibility & Usability @ Northfield

- Northfield's risk products and services have been developed for experts by experts
- Risk management tools are often complex to understand and difficult to access
- My work is to address the issues of complexity and access for Northfield's products and services
- The Strategy
 1. Create an internet platform for delivering risk data and performing analytics
 2. Create offerings that are targeted at specific user segments
 - APIs
 - Integrated Online Desktop
 3. Provide online access to Northfield's research & content
 4. Develop the Northfield OODA Process

Today in context

Strategic Intent	Today's Presentation
Create an internet platform for delivering risk data and performing analytics	Northfield Analytics Service Platform (ASP)
Create offerings that are targeted at specific user segments	The Northfield API
Provide online access to Northfield's research & content	The Northfield ASP Web Site

The Northfield Online Analytics Desktop and OODA process are future deliveries.

The Northfield Analytics Service Platform (ASP)

What does the Northfield ASP do?

- A software platform designed to enable access to Northfield's analytics and data services
- Allows you to configure where data is sourced and where work is done
 - Local PC
 - Enterprise Servers
 - Northfield's Servers over the cloud
- Enables new software services to be added incrementally
 - Present: Risk Model & Optimizer APIs
 - Future: Trade Schedule Optimizer, Performance Reporting Services

The Northfield ASP (continued)

How does it work?

- Northfield provides software called the “Host Container” that is installed on a participating computer
- A user profile determines how the Host Container is configured and run
- The Host Container is a Java application that provides access to other programs

The version you will see today installs and runs on a local PC

The Northfield API

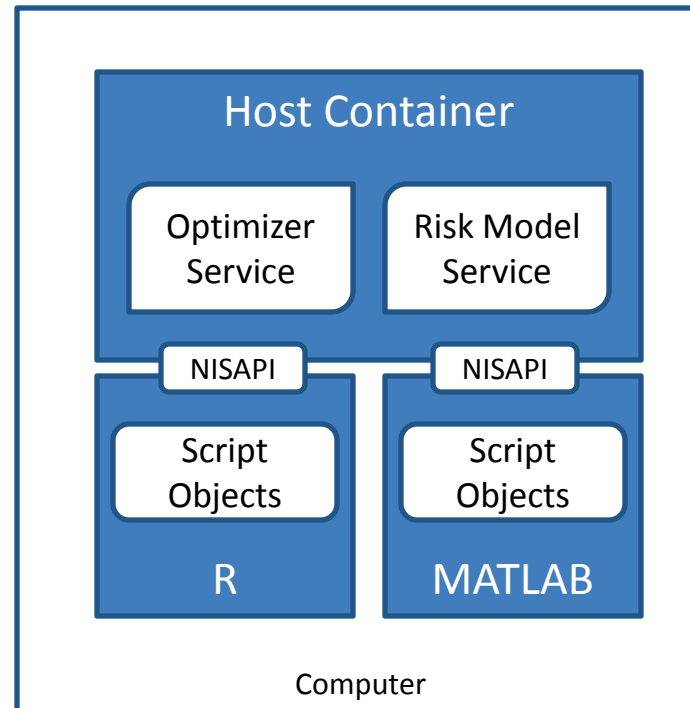
What does the Northfield API do?

- The Northfield API enables power users and programmers to use the services of the Northfield ASP in their own applications
- Supported Environments
 - Java
 - R
 - MATLAB
- Provides scripting objects to make it easier to use services

The Northfield API

How does it work?

- The Host Container is installed once on a host computer
- Each language environment has an API interface package installed
- Script objects can be created by the API for use in the scripting environment
- The API provides native data type support in each environment
 - R – data frames
 - MATLAB - arrays



The Northfield ASP Components

Data and analytics objects from Northfield for you to use in your own scripts

Risk Model Component

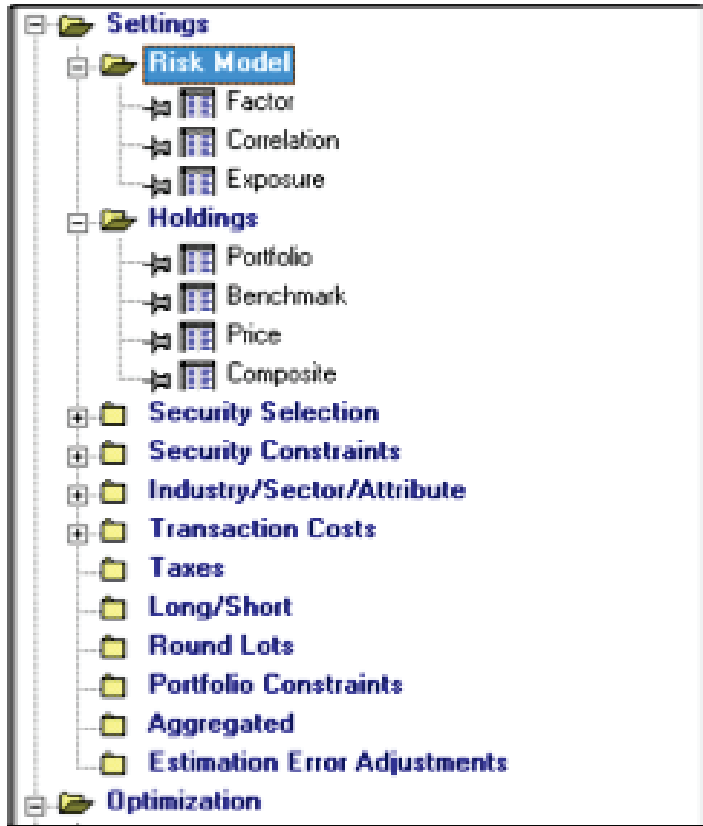
- Use Northfield's Risk Model, Correlation & Factor Exposure data in your calculations
- Script access to a web service for risk model data available soon

The Northfield Optimizer Service Component

- Perform risk analytics and optimizations in your own scripts
- Integrate to external data sources (depends on your environment)
- Full support for all features
- Intuitively maps from the GUI to your scripts
- Saves results to a project that can be imported in to the GUI for testing

The Northfield Optimizer Script Object

The script object maps to the Northfield Optimizer GUI



`Optimizer.settings.riskModel.model(...)`

`Optimizer.settings.riskModel.date(...)`

`Optimizer.settings.holdings.benchmark(...,...)`

`optimizer.settings.holdings.portfolio(...,...)`

The Northfield ASP Website

Key Features

- Secure, client only website
- Full ASP & API Documentation
- Online Tech Tips
- Software Downloads
- More searchable content coming soon

Next Steps

Current Features

- Local installation only
- Risk Model data local and online
- Northfield Optimizer (excluding taxable portfolios)

Availability

- Beta program – April 1 to June 30
- Production July 1

Registration & Pricing

- Contact your Northfield sales representative or me - pete@northinfo.com

Future Enhancements

- Trade Schedule Optimizer
- Secure access to integrated portfolio and benchmark data
- Batch processing on Northfield's optimized, optimizer servers
- Online Analytics Desktop
- Portfolio Performance Reporting

Thank You

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