

# Unit testing Analysis Services

How to automate the test of your cubes



#275 | DENMARK 2014

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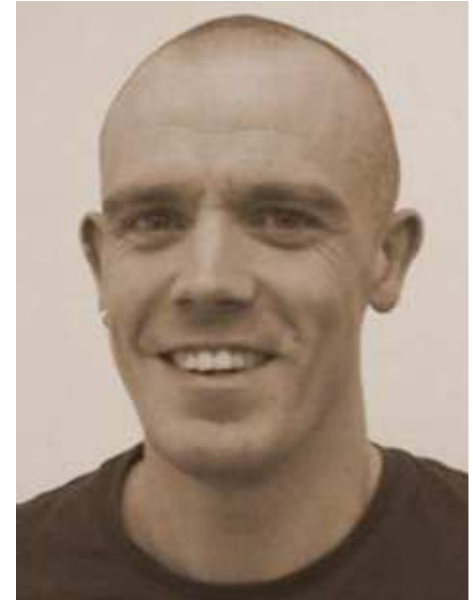
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# Just Thorning Blindbæk

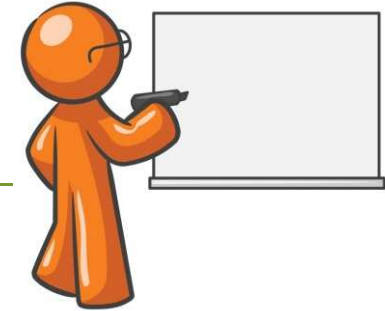
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- Consultant in justB
- Trainer at Orange Man
- Founder of MsBIP
- Worked with Microsoft BI in 7 years
- Strong focus on front-end
  - Analysis Services
  - Reporting Services
  - PerformancePoint Services
  - Excel and PowerPivot
- [just@blindbaek.dk](mailto:just@blindbaek.dk) / [blog.justB.dk](http://blog.justB.dk)



# Agenda

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- What can be tested:
  - Structure (meta data)
    - Elements (measures, measuregroups, dimensions, hierarchies, attributes, BUS matrix, aggregations, partitions)
  - Content (data)
    - Measures (result set)
    - Dimensions (member count and sorting)
  - Performance
- Tools
  - OpenQuery and Reporting Services
  - NBI in combination with NUnit

# OpenQuery and SSRS

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- OpenQuery snapshot extract with parameters
- Comparison across
  - Environments (production vs. test)
  - Times (before / after deployment) - automation?
- Test
  - Metadata from DMVs
  - Data on all measures with parameterized MDX query
- Reporting through SSRS
  - Keeping it simple!

# Metadata

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- Automatic cube documentation from Purple Frog
  - Metadata from DMV
  - OpenQuery with LinkedServer
  - Enhanced with write-back of descriptions, etc.
- Demo on comparison of measures
  - Enhanced extraction with "Source" and "Time"
  - Reporting with simple UNION
  - Focus on differences (minus, plus or modification)
- Next step: BUSMatrix and aggregations



# Data

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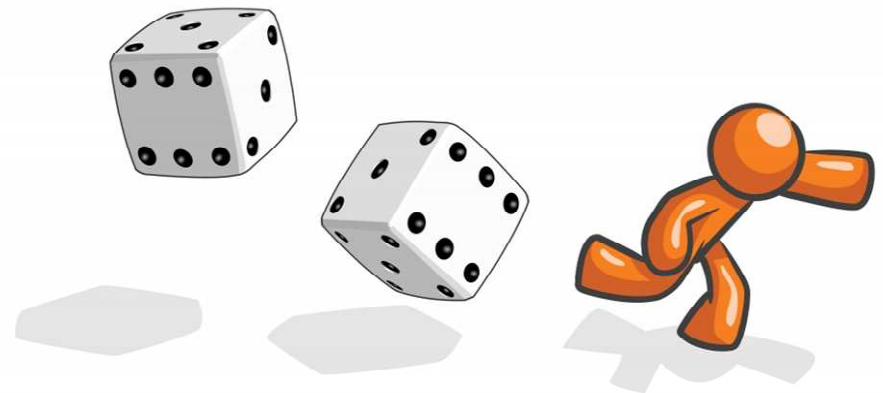
- Measure data
  - The same method
  - MDX through OpenQuery with parameters
  - Challenge: Data modified natural
- Next step:
  - Member counts in dimensions/attributtes
  - Sorting of members in dimensions



# Performance

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- Benchmark tests covered in blog post
  - Automated?
- Options with NBi





- Microsoft BI test framework
  - Easy to set up test cases (XML syntax)
  - Can execute SQL, DAX, MDX, and XMLA
  - Add-on for NUnit
  - Latest version as of 21 March 2014
- Test features:
  - Compare result set
  - Performance
  - Syntax
  - Structure
  - Dimensions members

# NBi installation and demo

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- Installation
- Setting up tests
  - Count members
  - Compare data sets
  - Performance
  - Metadata (structure)
- Executing test suite

# When and how to run the test

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- Deployment
  - Snapshot before and after either manual or trough deployment scripts
  - NBI is only run after
- Daily
  - Build server
  - SQL Server Agent

# Questions

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