# MindStream Analytics
## Webinar Series

**Recent Issues/Fixes and Monitoring Recommendations for Hyperion EPM**

9.04.14

# Overview

- **Introducing MindStream Analytics**

- Why do Organizations need a well defined application management structure?

- Recent issues and fixes

- Monitoring Recommendations

- Questions

# MindStream Analytics:
# Business Intelligence in the 21$^{st}$ Century

MindStream delivers premier consulting and managed services solutions to clients by enhancing technology and aligning resources through a systemic process to harness insight and enable financial and operational fact-based decision making.

# About MindStream Analytics

- Boston based consulting and managed services provider
- Oracle Platinum Partner with Hyperion Specialization
- Support Team: Consultant Experience Dedicated Administrators
- Committed to prioritizing timely and accurate responses to fit in with your reporting timetable, ensuring that your business critical applications remain fully operational.
- Complete EPM environment
    - Infrastructure issues
    - Application maintenance
    - Oracle support
    - User queries
    - Change requests
    - Application enhancements
    - Training and process control



ORACLE® Platinum Partner
Specialized
Oracle Hyperion Planning
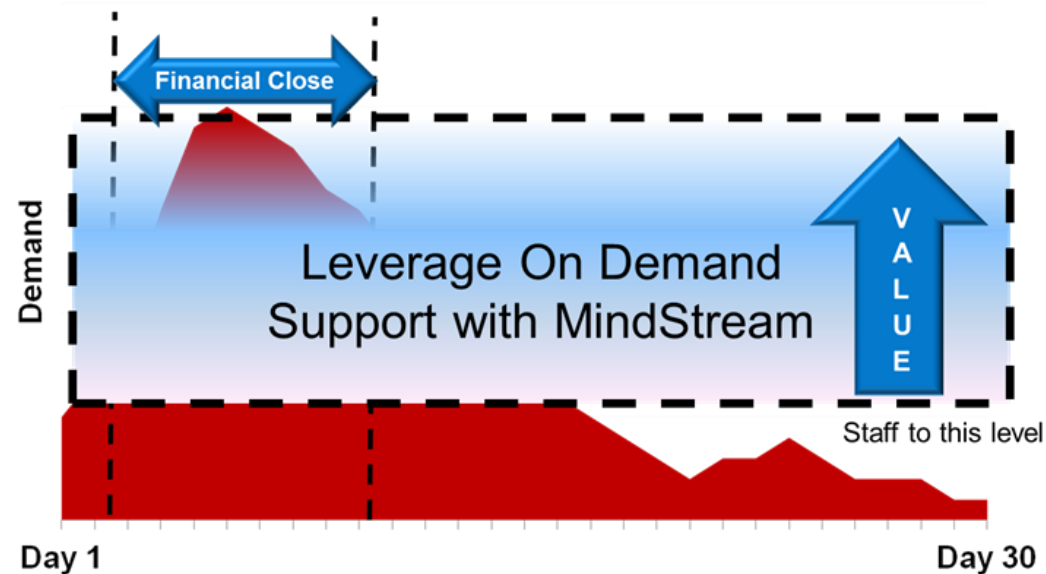
MINDSTREAM

# Case Specific Management Services

- MindStream Analytics and its Management Services is focused on providing a level of personalized care to each client

- An experienced team of service providers is on hand to give individualized responses to client issues

- Escalation process ensures that the right people address each and every issue

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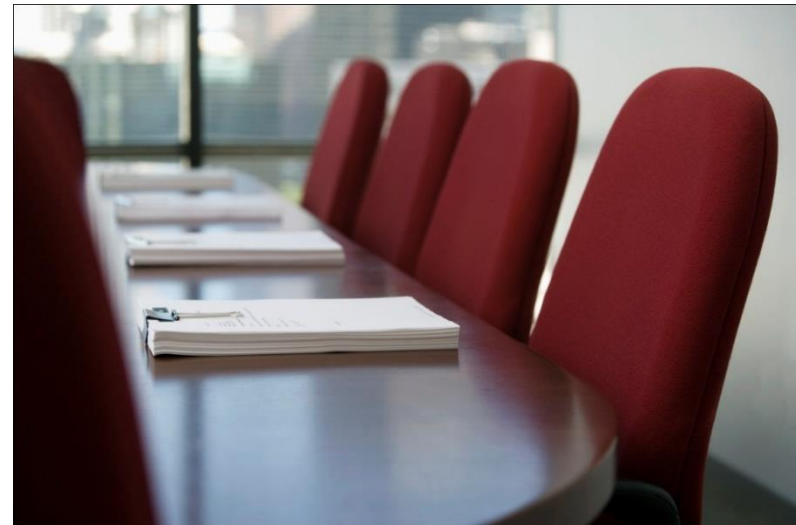
**Why do organizations need a well defined application management process?**

- Compliance and Audits
    - Change management logs
    - Security Access reports
    - Incident management reports
- Application Stability/Upgrade recommendations/Oracle support schedule
    - Know when Oracle comes out with a new release and what they decide to do with YOUR version going forward.
    - Understanding what pieces of your infrastructure and applications are working for you or against you.
    - Minimize system downtime.

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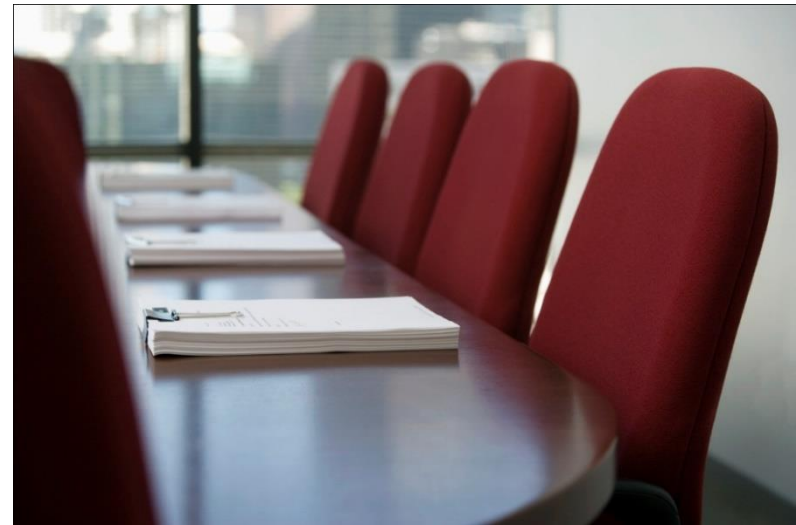
# Issue: Disk space used

- A Foundation server had 95% of disk space used.
- MindStream discovered that the increase in used disk space was related to a rebuild of QA Essbase applications migrated through the server and not cleaned up
- Removing the aforementioned extracts decreased disk space utilization to 80%.
- Lesson learned: In order to quickly avoid disk space issues, it is very important to know which directories are necessary to run your EPMSystem and which can be removed.

# Issue: Unable to start application in Essbase

- [Mon Feb 24 09:30:12 2014]Local/ActualPL///47593571703872/Error(1120006) Unable to lock file [/data/Oracle/Middleware/user_projects/epmsystem5/EssbaseServer/essbaseserver1/app/ActualPL/ActualPL/ActualPL.esm]. Essbase will try again after a short delay.

- [Mon Feb 24 09:30:13 2014]Local/ActualPL///47593571703872/Warning(1007089) Unable to open [/data/Oracle/Middleware/user_projects/epmsystem5/EssbaseServer/essbaseserver1/app/ActualPL/ActualPL/ActualPL.esm]for database [ActualPL]

# Troubleshooting Steps

- MindStream discovered that there was a hung process specific to the application after stopping Essbase.

- Found the process associated with it on the Essbase server by running a grep on the essbase process (Unix)

- Needed to kill the specific process ID associated with the application and restart the app through EAS. Once the process was killed it freed up the locked application.

- Lesson learned: Always be sure all processes are stopped before restarting.

# Issue: HFM Journal Report will not run

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Journal report was aborting with no specific errors

| Manage Journals | Documents | Running Tasks × |
|---|---|---|

Actions ▾   View ▾

| Activity | Description | Progress | Status | Result | Last Updated Time |
|---|---|---|---|---|---|
| Journal Reports | All Journals All Journals | 0%     100% | Aborted | | Aug 13, 2014 8:57:45 AM |
| Journal Reports | All Journals All Journals | 0%     100% | Aborted | | Aug 13, 2014 8:57:28 AM |
| Journal Reports | All Journals All Journals | 0%     100% | Aborted | | Aug 13, 2014 8:56:06 AM |

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# Issue: HFM Journal Report will not run

- MindStream found that the hsveventlog.log and hfm.odl.log files had grown beyond the 25MB limit recommended by Oracle.

  - After stopping all HFM services, we archived the log files on all 3 HFM servers while making sure no HFM related processes were running (specifically) HyS9FinancialManagementWeb.exe, HsvDataSource.exe and CASSecurity.exe)

- Restarting HFM recreated the logs and allowed the journal report to run.

- Lesson learned: Don't allow HFM logs to get too big, it can effect system performance and functionality. Bonus: We created a script that archived the files regularly during scheduled restarts to prevent the issue in the future.

# Issue: Hyperion QA environment unstable and locking up on users

- A calculation in Essbase that typically took five minutes to run had been running for over two hours.

- Because of application monitoring and benchmarking, MindStream was able to identify large metadata additions that were not previously communicated and recommended that the admin reorder the outline.

- Lesson learned: Adding a large amount of metadata to any application can largely effect performance of the application.

# Issue: Essbase application stopping abruptly in Production.

- Application was aborting after start. After examining the EAS logs, MindStream found that when EAS crashed and a restart was attempted, there were still processes running that EAS was trying to start and therefore could not start correctly

- Recommended that the process HyS9eas.exe on the Essbase server is completely stopped before a restart of the service as it was still trying to call on essbase.

- Lesson learned: Always double check for hung processes when restarting or if you run into issues after a restart.

# Issue: A rule in HFM was not working properly

- A rule developed by a MindStream client was not providing desired results their HFM application.

- The rule did not reference every dimension. MindStream recommended that the rule reference the necessary members in the Custom 1 dimension which fixed the issue.

- Lesson learned: be sure that all dimensions are referenced if having a rule issue in HFM.

# Issue: HFM System performance

- MindStream restarted and triaged the system on automated restart.
  - Found the task that was set to run the restart would not do so without a logged in user in the windows Task Scheduler and therefore, the restarts were not running on schedule
- Restarted the environment and fixed the restart scripts to increase system speeds and repaired task issue.
- Lesson: be sure to set your scheduled tasks to run when the user is NOT logged into the server. Also, regular restarts of HFM are extremely important to system performance.

# Issue: Essbase Server approaching disk space limit

- MindStream alert notified us of an Essbase database growing quickly. We could either add disk space or remove data. The database was 145gb.

  - We reached out to the business to find out if there was data they would never use again and archived a Level0 export of the database at a point in time then cleared the year/period/scenarios specified by the business.

  - Tested the cleardata calc and defragment process in Development and applied the same steps to production.

  - Process decreased database size from 145GB to 77GB.

# Issue: Production Essbase down

- End users encountering issues when logging into Workspace or Smart View.
  - Errors claiming these services were failing against Shared Services Server. Essbase also would not start.
- MindStream discovered the Oracle database Flash Recovery area was at maximum capacity.
  - MindStream wrote a recovery manager script to keep only the last 7 days of backups in the FRA.
  - By running the scheduled RMAN backup/Archive script, we were able to successfully backup and reboot all services.
  - Allocated space to the backup pool and created a new script that manages backups in order to optimize the storage space.
  - Lesson Learned: Always setup FRA archives for your relational database when using Oracle database.

# Issue: Corrupted database files

- Client stated that dense restructure of database in production environment was failing.
  - Restructure would not kick off in either background or foreground.
  - Start/stop of the application would not work either.
  - Dummy accounts created to prompt restructure unsuccessful.
- Stopped database
  - Removed .inn and .pan files from database directory and restarted application.
  - Restructure was successful.
- Lesson learned: Restructures can abort from corrupted temporary files. The database can be recovered without losing anything by removing the temporary files.

# Issue: Unable to Email Financial Reporting

- When attempting to email a report as part of the output of a Financial Reporting Batch, the email is not received.  The following error is seen in the "Show Details" output after the batch completes: "Error sending e-mail".

# Issue: Unable to Email Financial Reporting

To change the SMTPMailServer value:

1.In Workspace, navigate to the Shared Services Console (under Navigate > Administer)

2.Navigate to the appropriate section to access the entry where the SMTPMailServer value is located: Application Groups/Foundation/Deployment Metadata/Foundation Services/Shared Services/Properties

3.Right-click on the Properties and select to Export to Edit

4.Make a copy of the Component.Properties file

5.Edit the following values to have the correct server name and save the file.
SMTPHostName =
SMTPMailServer =

6.Import the updated file to the Shared Services Registry

7.Restart the following services: Reporting and Analysis Framework, Reporting and Analysis Framework Web, Financial Reporting Web, Financial Reporting Print

Lesson learned: How to configure FR emailing by configuring SMTP server in Shared Services

# Issue: Planning Database Refresh Fails With Error:
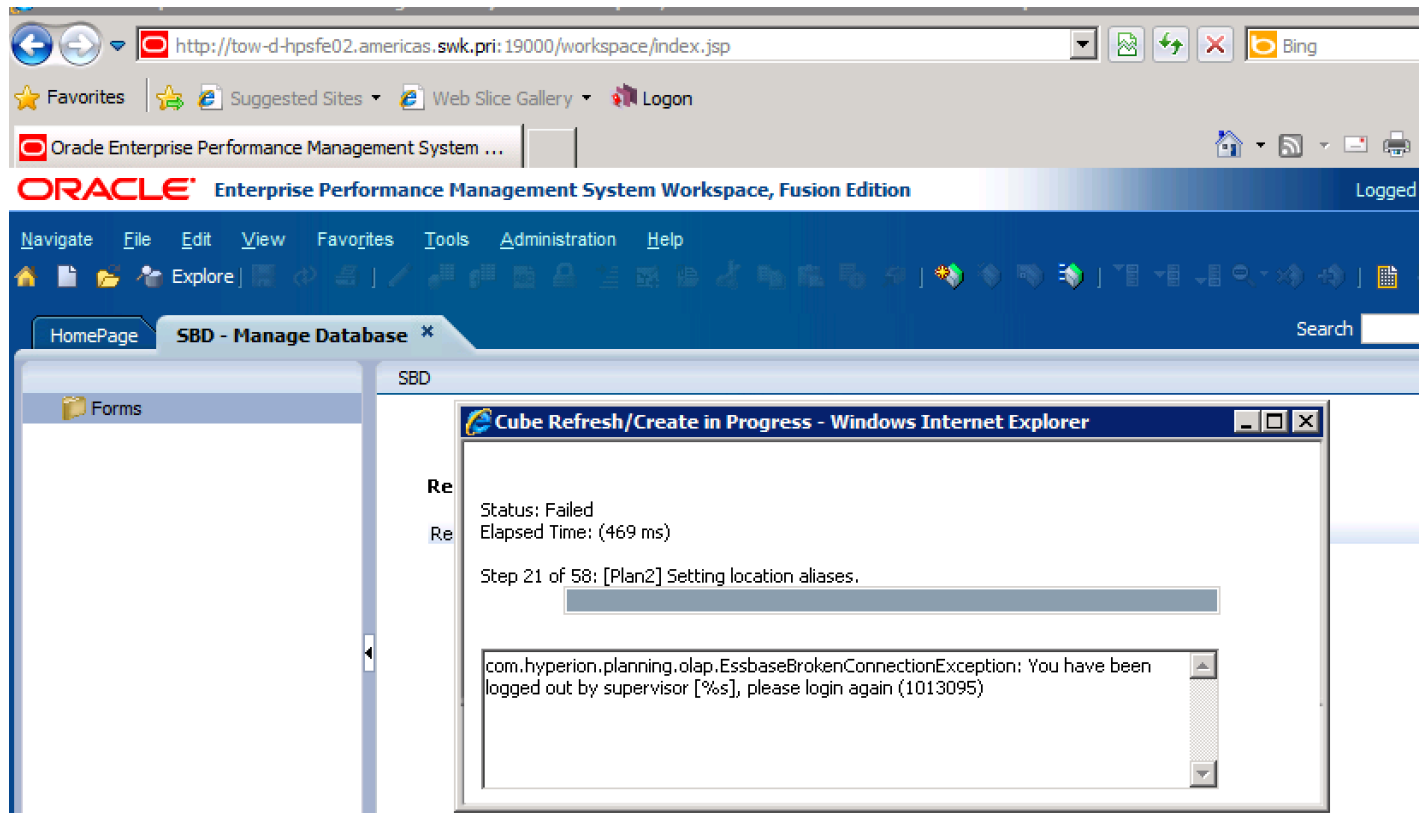
# Issue: Planning Database Refresh Fails

This issue can be resolved by one of the following options:

A.Edit the Planning Application's Data source and configure an Essbase user with Essbase Administrator role. Then, restart the Planning web application service and refresh the database.

Or

B.In Shared Services provision the pre-existing Essbase user id configured in the Data source with the Administrator role in Essbase. If using versions earlier than 11.1.2.x, then refresh security from Shared Services via EAS console or via MaxL. Then, restart the Planning web application service and refresh the database.
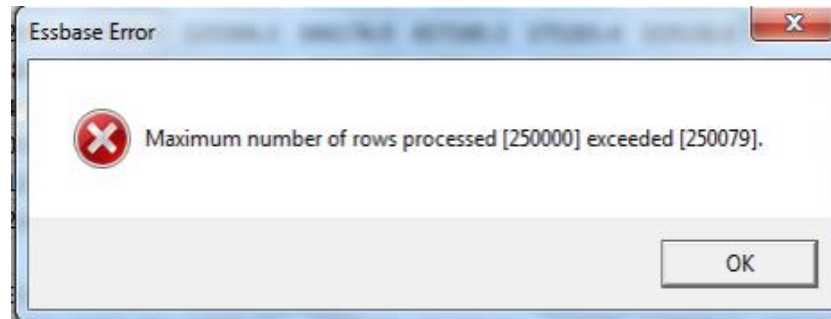
# Smart View Error "XML Load" Error
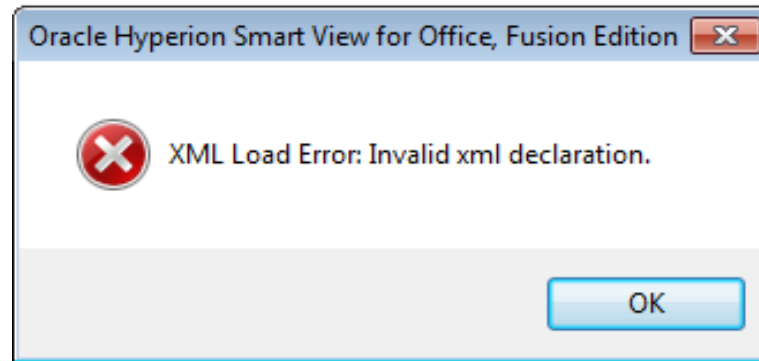


- Login to Planning DB to delete a row using:
- DELETE FROM <appname>_USERPARAMS WHERE Username like '<username>@%' and Parameterkey = 'UserMbrSel'
- < appname> = (The company's HFM App name)
- <username> = (The affected user's User ID)
- This will purge the affected record that is causing the XML Load Error

# How to Increase Smart View drill down capacity



- On the APS server navigate to Oracle/user_projects/epmsystem1/aps/bin. Find the User Essbase property file and change the max SmartView rows to the necessary max row number.

- Disclaimer – This can put a large strain on APS and can cause the service to crash. Test to max number of rows to be sure there are no negative consequences. You can also increase the Java heap size on the APS server to allow for more refresh capacity.

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# General Infrastructure Monitoring Recommendations

- Disk space for all drives on all servers
- CPU usage
- Physical Memory usage
- Virtual Memory usage
- Server Uptime (we recommend at least monthly server reboots if not completed during patching period)

# Important terms as they relate to Essbase Monitoring

- **Percentage of maximum blocks existing:** Compares, as a percentage, the number of blocks that exist and the number of potential blocks. The percentage is a measure of the sparsity of the database. It is not uncommon for this number to be very small (less than 1%) but could potentially indicate a need for tuning.

- **Compression ratio:** Indicates the compression efficiency of blocks stored on disk, usually from using bitmap compression. #MISSING cells are typically compressed with this method. Therefore, the compression ratio usually tracks block density.

- **Average clustering ratio:** Indicates the fragmentation level of data (.pag) files. The maximum value, 1, indicates no fragmentation. If you are experiencing degraded retrieval, calculation, or data load performance and the clustering ratio value is significantly less than 1, consider performing an export and reload to rewrite the data files. Essbase also rewrites the data files during outline restructures that are triggered by changes to dense dimensions. Rewriting the data files defragments them, resulting in a clustering ratio closer to 1.

# Important terms:

- **Hit ratio on index cache:** Indicates the success rate of the Essbase Server kernel in locating index information in the index cache without having to retrieve another index page from disk. The cache hit ratio indicates the percentage of time that a requested piece of information is already in the cache. A higher hit ratio indicates that the data is in the cache more often. This improves performance, because the requested data need not be retrieved from disk for the next process. A hit ratio of 1.0 indicates that every time data is requested, it is found in the cache. This is the maximum performance possible from a cache setting.

# Important terms:

- **Hit ratio on data cache:** Indicates the success rate of the Essbase Server kernel in locating data blocks in the data cache without having to retrieve the blocks from disk. The Hit Ratio on Data Cache setting indicates the Essbase success rate in locating data blocks in the data cache without having to retrieve the block from the data file cache.
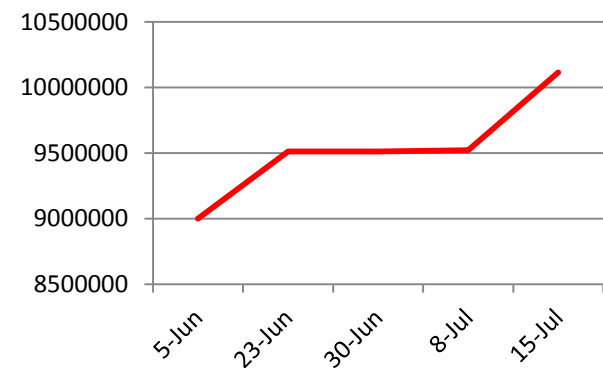
# Essbase Monitoring

- Number of existing blocks
- Block size (B)
- Potential number of blocks
- Existing level 0 blocks
- Existing upper-level blocks
- Block density (%)
- % of maximum blocks existing
- Compression ratio
- Average clustering ratio
- *Run-times of calculations*
- Hit ratio on index cache
- Hit ratio on data cache

**Database Size (GB)**
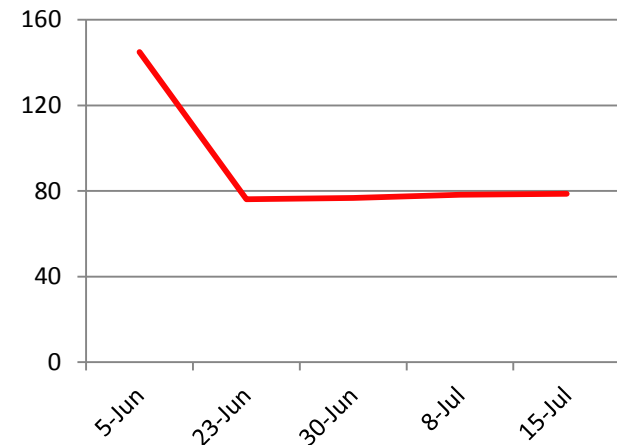
**Number of existing blocks**

# HFM Stat General Recommendations

- Consolidation Time (Specify Entity)
- CPU Usage @ point in time
- Number of Users on the system @ point in time
- Physical Memory used
- Max Database Connections
- Data Audit report size
- Track all dimension sizes over time

# HFM Stat General Recommendations

- HSVEventLog.log and hfm.odl.log Size on Application Servers
- Potential Subcubes
- Potential Records
- Task Audit activities by date range FreeLRU's - Too many messages means max cache is not sizing correctly

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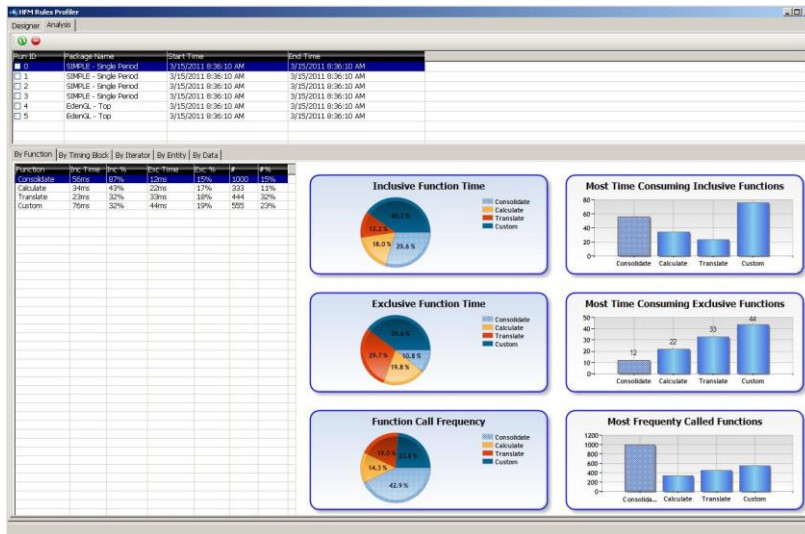# Accelatis for Application and Infrastructure optimization for Hyperion
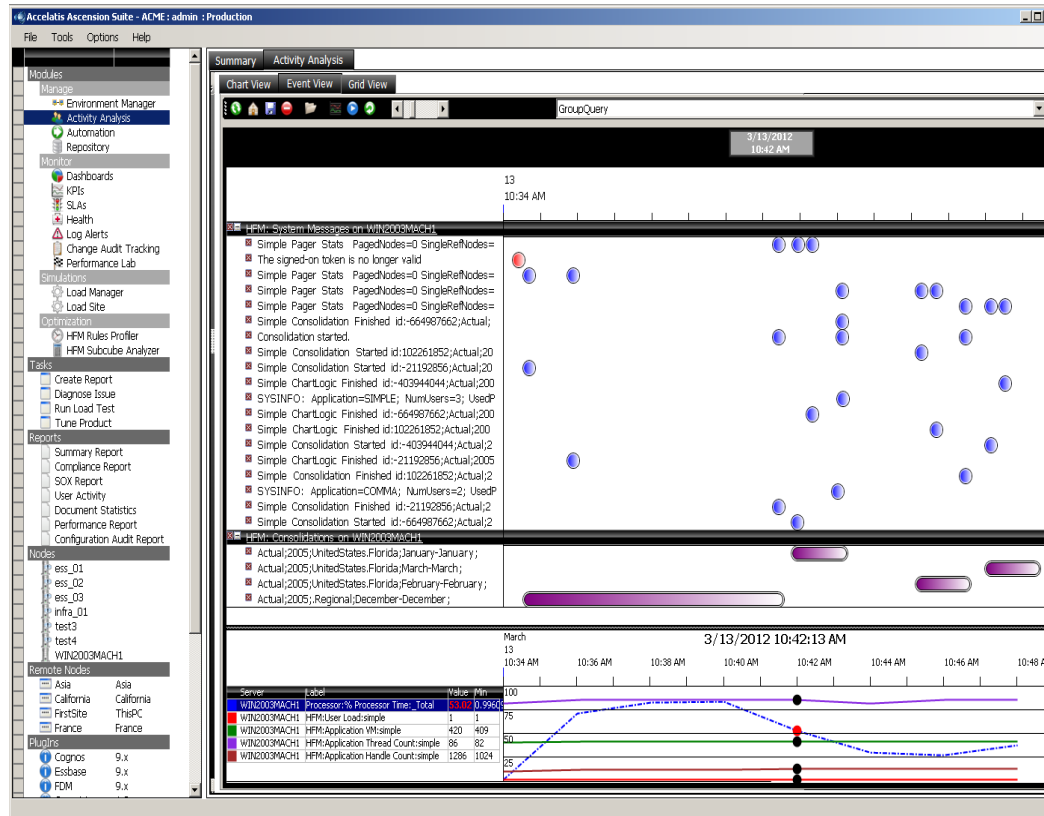


## What to Track
- User Activity
- System Events
- Activity and Event Patterns
- Cause-And-Effect Relationships

## Different Perspectives
- Local User Response
- Remote User Response
- System Response
- Component Connectivity
- Network Connectivity
- Benchmark Task Results

# Accelatis continued:





**Modules include:**

- Data and Application Montoring and optimization.
- Component Health for services, network and servers.
- Fully customizable KPIs that allow you to set thresholds and alerts on any part of the environment.
- Log monitoring/alerting/parsing to identify patterns.
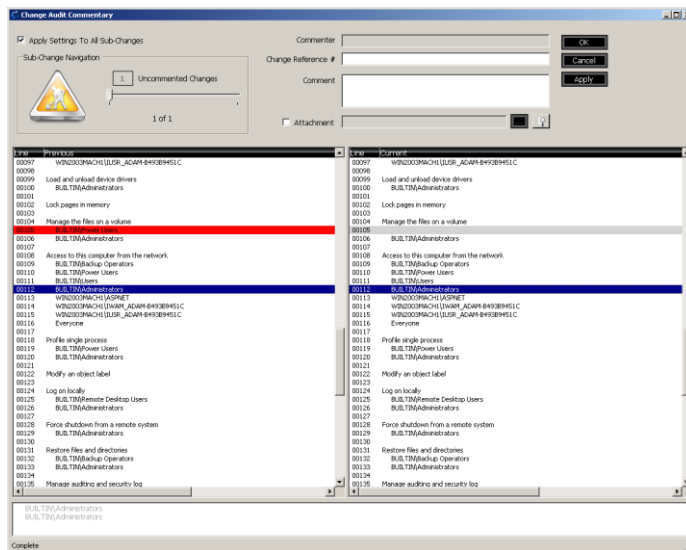
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MindStream Webinar Series Presents:

*Think outside the box - New ideas in Financial Data Management*

March 1, 2013 Noon – 1pm eastern

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# Questions