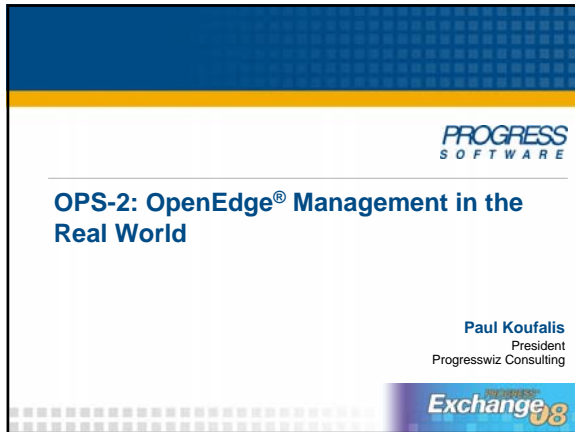


## OPS-02: OpenEdge Management in the Real World

Paul Koufalis



---

---

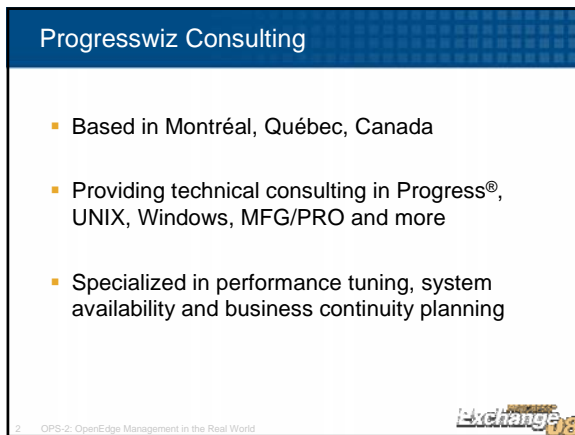
---

---

---

---

---



---

---

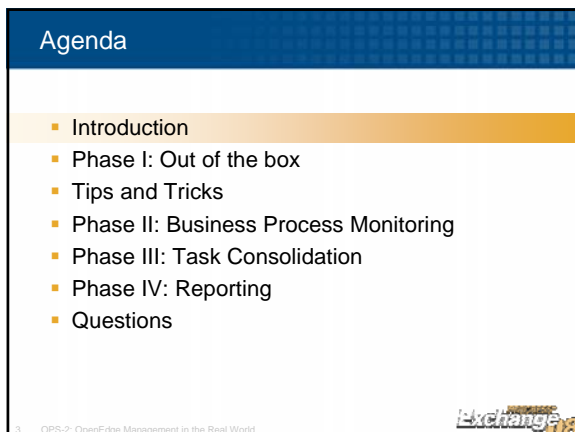
---

---

---

---

---



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Introduction

- Who here has never heard of OpenEdge (Fathom) Management?
  - Progress' monitoring tool for both OpenEdge and system resources
- Out-of-the-box you get
  - Pretty darn good monitoring
  - More trending information than you'll know what to do with

OPS-02: OpenEdge Management in the Real World



### Introduction (cont...)

- Why OpenEdge Management?
  - No in-house OpenEdge expertise
  - Or worse: ONE expert
  - Internal UNIX admins and/or other DBAs not interested in learning OpenEdge
  - Consultants can get expensive over the long-run!

5

OPS-02: OpenEdge Management in the Real World



### Nomenclature

- Resource: A file, database, AppServer™, CPU, disk, etc...
  - Anything that needs monitoring
- Rule: A test that is applied to a resource
- Alert: What is generated when a resource does not pass a given rule
- Job: Any task
- Action: Something that is done as a response to a generated alert

OPS-02: OpenEdge Management in the Real World



## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Phase I: Out-of-the-Box

- Same installation procedure as any OpenEdge product
- 15 minutes max to install
- AdminServer-managed DB's automatically added to resource list
  - Script managed DBs can be added with a few clicks
- Option to auto-discover operating system resources



OPS-02: OpenEdge Management in the Real World

### Out-of-the-Box (cont...)

- Simple and intuitive user interface
  - Main categories across the top
  - Windows Explorer-like Treeview/Listview below



OPS-02: OpenEdge Management in the Real World

### The User Interface



OPS-02: OpenEdge Management in the Real World

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Out-of-the-Box (cont...)

- From this:



10 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

### Out-of-the-Box (cont...)

- To this in 30 seconds (~20 mouse clicks):



11 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

### Out-of-the-Box (cont...)

- Run OpenEdge Management more or less out-of-the-box for the first few months
  - Add all your resources (DB, AppServer, etc)
  - Add a few maintenance jobs (config backup)
- Get a feel for what it can do before adding new stuff

12 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Tips and Tricks

- Learn from our mistakes
- Of course YMMV!
  - Use this information at your own risk.
  - Always test test test first

13 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #1: Get a very recent version of Java™

- Veeeeery recent
- But still supported (i.e. 1.4.2.x but not 1.5)
- Older versions of Java are quite buggy
  - Especially on AIX!
- Talk to Tech Support
  - They will have the latest information
  - Be wary of outdated KB entries

14 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #2: Give AdminServer Some Elbow Room

- \$DLC/properties/AdminServerPlugins.properties
  - Look for "jvmargs="
  - -Xms512m -Xmx1280m
  - See P109126
- 64-bit java supported as of 10.1C

15 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Tip #2 (cont...)

- Speaking of Java...
  - %DLC%\jre\java.exe may need to be enabled under Windows DEP
    - Data Execution Prevention
    - See <http://support.microsoft.com/kb/875352>
  - When installing patches make sure java.exe is in the system PATH
    - Used to extract files
    - SP install may fail
    - Error message subtle and easy to miss

16 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #3: Stay Current

- Apply all available patches
- Upgrade to OpenEdge 10.1C (Management 3.1C)
  - Easy upgrade and worth the effort

17 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #4: Segregate

- Do not install OpenEdge Management in the OpenEdge installation directory
- Do not put your trend database in the default directory
  - Initial config via web page suggests creating DB in install dir
- Also consider moving the config ODB DB
  - Fathom.o\* in \$OEM/config
    - FathomConfigDir in \$OEM/fathom.init.params
- Never a good idea to mix programs and data

18 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Tip #5: Backup Your Configuration

- Immediately create a backup job for the OpenEdge Management configuration
  - Backup to prod DB backup directory
  - Create job from existing template:
    - “Configuration Backup”
- Create a simple script to backup other files:
  - fathom.properties
  - fathom.init.properties
  - fathomrealm.properties

19 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #6: Plan for Plenty of Disk Space

- Trend database and working directory can consume significant space
  - Manage trend frequency
  - Graph Cache can grow quickly
  - Reports created in working directory
- Plan for some kind of archive/purge of working directory

20 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #7: Archive and Purge Trend DB

- Do NOT wait to create Compact/Archive/Purge job
  - Schedule weekly
  - Otherwise trend DB will grow quickly

21 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Tip #8: Optimize Trend DB for Purge

- Set your trend DB startup parameters to optimize archive/purge
  - -B 20000 (8Kb DB block size)
    - The default may change so check block size after installation
  - BI Cluster size of 4-8Mg
  - -L 100 000
  - -bibufs 50
  - One APW plus the BIW

22 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #9: Do not Forget X Libraries

- If you do not see graphs on UNIX, make sure X-Windows is installed
  - Or at a minimum the graph libraries
- X-windows libraries also mandatory for remote monitoring
  - Sonic will not install without them

23 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Tip #10: No Spaces!

- Do not use spaces in OpenEdge and OpenEdge Management installation directories
  - No "C:\Program Files"
  - Remote monitoring will not work

24 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---



## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Most Important Tip

- Get to know the OpenEdge Management Support Team
- Currently:
  - Cyril Gleiman, Libor Laubacher, Darrel Cronkhite, Phil O'Donnell, Richard Shulman and Hugo Loera

25 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Phase II: Business Process Monitoring

- Obviously DBs, AppServers, etc must stay up
- Be **proactive**, not reactive
  - What other business processes are key?
    - Ex.: EDI upload/download
  - What could potentially disrupt your business?
    - Ex.: Lock conflicts, licensing issues

26 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Business Process Monitoring (cont...)

- Old method:
  - Cron scripts, batch jobs, other schedulers...
- New method:
  - OpenEdge Management Jobs
    - One central place for all things OpenEdge
  - Do not send emails from scripts
    - Generate OpenEdge Management Alerts
      - Let the Alert configuration decide what to do

27 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Business Process Monitoring (cont...)

- Long Transaction Monitoring
  - Old-style code allows users to control TX start and end
  - Can result in incredible BI growth!
- Simple to add a custom job to monitor and report long transactions
  - Monitor \_TRANSACTION VST

28 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Business Process Monitoring (cont...)

- Validate Schema Holders
  - Many companies interface with other systems via DataServer
  - 3<sup>rd</sup> party support may not notify you when they make changes to their app
  - Simple task to check schema holder every morning

29 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Business Process Monitoring (cont...)

- Lock Conflicts
  - Common problem: Normal processing interferes with batch processing and vice-versa
  - Especially true with older systems
    - Longer lock times
  - Automatically monitor \_LOCK VST for lock conflicts

30 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Business Process Monitoring (cont...)

- License Counts
  - Licensing needs grow with your business
  - Don't let a vendor audit surprise you with a big invoice!

31 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Business Process Monitoring (cont...)

- Non-Progress processes
  - Still crucial to your business
- Examples:
  - EDI
  - Batch processing queues
  - Shop floor equipment
- OpenEdge won't necessarily monitor
  - However can centralize alert and response

32 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Phase III: Task Consolidation

- Inventory all tasks related to your OpenEdge environment:
  - DBA tasks
  - Application tasks
- Note the pertinent information:
  - User account that executes the task
  - Parameters
  - Schedule
- Careful! Not all tasks are run by CRON

33 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### DBA Tasks

- Job templates already exist for most DBA tasks
  - DB Backup/Restore
  - DB Analysis
  - Index Compaction
  - BI Truncate/Grow
- Easy to create new templates
  - Simply copy and modify existing perl scripts

34 OPS-2: OpenEdge Management in the Real World



### DBA Tasks (cont...)

```
for ($x=0; $x <= $#RESRC_DBNAME; $x++)
{
    print scalar(localtime(time)), " Compacting index on
    database $RESRC_DBNAME[$x]\n";
    print scalar(localtime(time)), " Compacting index
    $FM_IDXINDEXNAME on $FM_IDXTABLENAME using
    $FM_COMPACTIIONNUMBER\n";

    $rc = system("$CMD \"$RESRC_DBPATH[$x]\" -C idxcompact
    $FM_IDXTABLENAME.$FM_IDXINDEXNAME $FM_COMPACTIIONNUMBER");
    if ($rc != 0)
    {
        print scalar(localtime(time)), "IDXCompact error on
        database ", $RESRC_DBNAME[$x], " error ", $rc >> 8;
        print "\n";
    }
}
```

36 OPS-2: OpenEdge Management in the Real World



### Application Tasks

- Consolidating application tasks requires two distinct actions:
  - Remove the task definition from its current location and create as a job
  - Modify error-handling to generate OpenEdge Management alerts

38 OPS-2: OpenEdge Management in the Real World

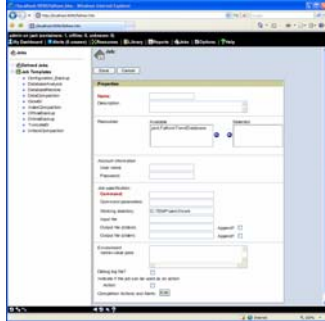


## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Application Tasks

#### ■ Job creation screen:



OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

### Phase IV: Reporting

- Organizations implement OpenEdge Management for its monitoring capabilities
  - ROI typically justified by just one avoided catastrophe
- Trend database reporting is the cream in your coffee, the icing on your cake...
  - You don't *really* know your OpenEdge environment until you start mining this data

OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

### Reporting (cont...)

- Quick and dirty ROI:
  - DB Analysis report
    - How fast is your DB growing?
    - Which tables?
    - Is this normal? If not, find out why...
    - How much disk space should I budget for next year?

OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Reporting (cont...)

- Real customer example:
  - Item table grew by 7 GB in one day
  - Weekly, automated report in OpenEdge Management alerted DBA
  - Was a coding error

10 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Reporting (cont...)

- Index Usage Report
  - Which indexes are being used the most?
  - Again: Is this normal?
  - What if use of an index suddenly increases or drops significantly?
    - Trend report will point this out
    - Compare to table usage report

11 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Reporting (cont...)

- Index Analysis Report
  - Automatically notify DBA when time to compact or rebuild index
  - Index size may indicate need to change storage area

12 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Reporting (cont...)

- Checkpoint
  - VST/promon only contain info on last 8 CKPTs
  - CKPTs are typically bunched:
    - Large # of CKPT in very small period of time
    - Often during overnight batch
  - Promon – Activity shows total # CKPTs since startup
    - May be misleading
  - Set the trending interval very low to catch all CKPTs

33 OPS-02: OpenEdge Management in the Real World



### Reporting (cont...)

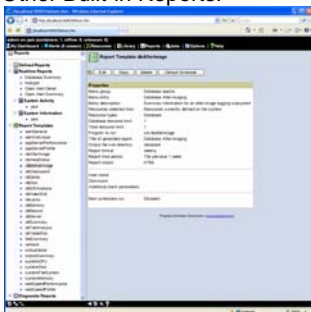
- OpenEdge Management Alert Report
  - Detailed view of **all** OpenEdge-related issues
    - Problem and resolution
  - Easy to identify and correct recurring issues
  - Easy to confirm SLA-compliance

34 OPS-02: OpenEdge Management in the Real World



### Reporting (cont...)

- Other Built-in Reports:



35 OPS-02: OpenEdge Management in the Real World



## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

### Reporting (cont...)

- Any script can monitor a DB
  - Might be ugly to manage and maintain
  - Still doable
  - In fact, most of you probably are doing it this way
- Trend data brings a whole new level of monitoring and understanding

16 OPS-02: OpenEdge Management in the Real World



---

---

---

---

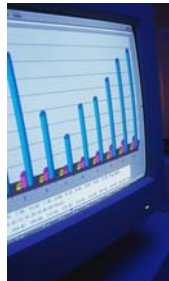
---

---

---

### In Summary

- Go slow...
  - Take the time to understand what you're doing
- Consolidate
  - Make OpenEdge Management the center of your OpenEdge universe
- Take Control
  - Use the data in the trend DB to get a firm understanding of your environment



17 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Mustn't Forget...

- Thanks to a few gentlemen from Tech Support:
  - Darrel Cronkhite
  - Cyril Gleiman
  - Libor Laubacher
- Do not hesitate to call them if you have any questions

18 OPS-02: OpenEdge Management in the Real World



---

---

---

---

---

---

---



## OPS-02: OpenEdge Management in the Real World

Paul Koufalis

For More Information, go to...

- Want a copy of killprosession?
  - Email [pk@progresswiz.com](mailto:pk@progresswiz.com)
- OpenEdge Management on PSDN:
  - <http://www.psdn.com/library/kbcategory.jspa?categoryID=1296>
- OpenEdge Management on the PEG
  - <http://www.peg.com/lists/oemgmt/web/>

49 OPS-2: OpenEdge Management in the Real World



---

---

---

---

---

---

---

### Relevant Exchange Sessions

- OPS-04: The Complete DB DRP!
- OPS-13: Building and Deploying HA Apps
- OPS-08: Alerts, Alarms, Pages...
- OPS-15: What Was Happening with My Database...
- OPS-24: Success with OpenEdge Replication
- OPS-21: Managing Multiple Sites Part-Time: OpenEdge Repl and Mgmt Case Study

50 OPS-2: OpenEdge Management in the Real World



---

---

---

---

---

---

---

Questions ?

51 OPS-2: OpenEdge Management in the Real World



---

---

---

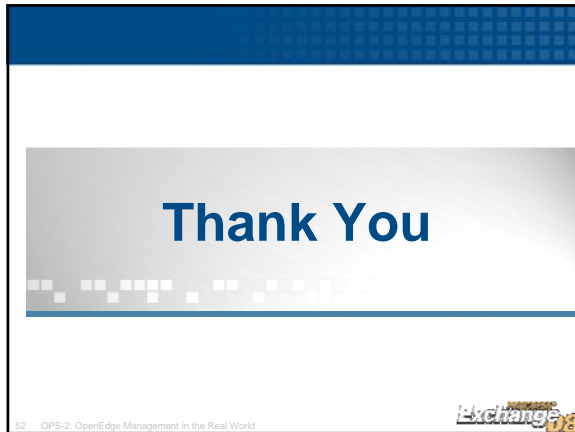
---

---

---

---

OPS-02: OpenEdge Management in the Real World  
Paul Koufalis



---

---

---

---

---

---

---



---

---

---

---

---

---

---