



Session Z46

The Point-and-Shoot Method and Other Fine Points of Report Distribution

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San Francisco, CA



Presentation Outline

- **Introducing IBM Output Manager for z/OS**
- **Product Overview**
- **Enhancements in V2.1**
- **Migration Considerations**
- **Summary, Q&A**

IBM Output Manager (OM)

- **Product Number** 5655-J20
- **Announced on** November 26, 2002 (#202-324)
- **Product GA on** December 6, 2002
- **Home page**
ibm.com/software/sysmgmt/outputmanager/
- **Requirements**
 - Any supported release of z/OS™ or OS/390®
 - Any supported version of TSO/E
 - ISPF Version 4 or later
 - DB2® Version 6.1 or later



OM: Product Goals

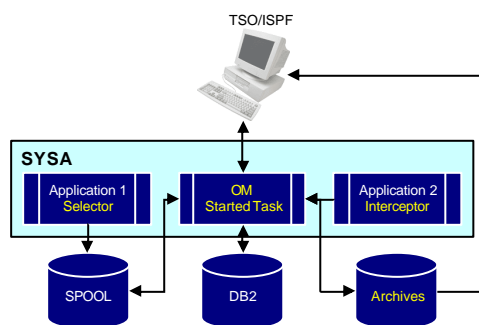
- **Provide Report Capture, Archive, Online Viewing, and Report Distribution in a single product**
- **Exploit existing z/OS facilities whenever possible**
- **Implement end user and administrator tasks in a familiar, intuitive way**
- **Deliver a strong and cost-effective alternative to existing product(s)**

IBM Output Manager: Design Criteria

- **Exploit existing z/OS facilities whenever possible**

| Instead of... | ...IBM Output Manager uses |
|---|---|
| Proprietary Viewer | ISPF Browse or View , as appropriate |
| Proprietary database for object definitions | DB2 Tables |
| Proprietary database to store reports | SMS-managed sequential data sets |
| Proprietary mechanism to archive reports to disk, tape, tape duplexing | Function of HSM |
| Proprietary retention definitions | Function of SMS |
| Internal security used to determine access to reports | Function of system security product |

OM: High-level Architectural Overview



- **Sysout capture**
 - Post-spool (Application 1)
 - Pre-spool (Application 2)
- **Archived Reports**
 - Stored as sequential data sets
 - Location, retention, security – all functions of existing policies
- **Report Distribution**
 - Custom Reports, Banner pages
 - Spooled for printing, local or remote
- **Online Viewing**
 - TSO/ISPF Browse and View
- **Metrics recorded in existing DB2 instance**
 - Job name, number
 - Date, time, pages, etc.
 - Exception codes

Product Administration – “Five Easy Pieces”

- | | |
|---|--------------------------|
| 1. Where do you want me to keep things? | ✓ Archive Attributes |
| 2. What do you want me to capture? | ✓ Sysout Selection Rules |
| 3. Where do control breaks occur within a report? | ✓ Report Layout |
| 4. Which part goes to the Boston office? | ✓ Custom Reports |
| 5. Which jobs produce the Marketing reports? | ✓ Report Selection Rules |

Step 1: Define an Archive Attribute

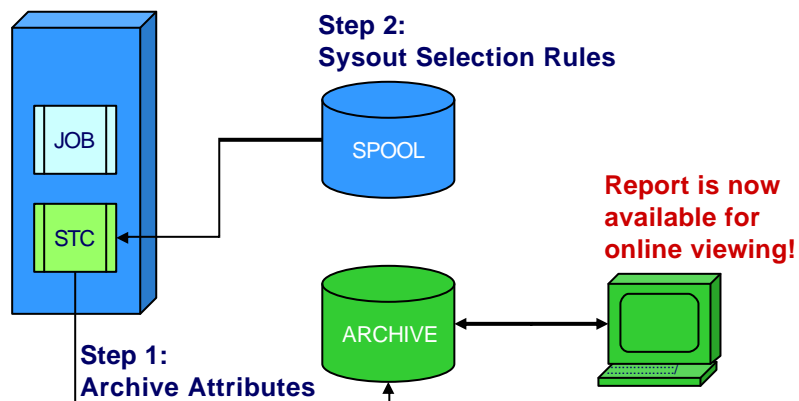
- **Archive Attributes are objects used to specify the naming conventions and allocation attributes for the MVS data sets that will be used to store output**
- **You can have any number of Archive Attributes: different ones for different reasons**
 - ▶ The Archive data set name Mask specified by Report Administrators ultimately determines “who” is authorized to view “which” reports (based upon existing system security product specifications)
 - ▶ Secured at the data set level
 - ▶ Storage charges to the owner



Step 2: Define Sysout Selection Rules

- **Sysout Selection Rules** are used to identify the characteristics of system output that you want to capture
 - Interceptors = Pre-spool
 - Selectors = Post-spool
- Rules are mapped to **Archive Attributes** (i.e., “here’s what to look for, here’s where to put it”)
- “Enable” the rule. Jobs producing output which match the Selection Rule will be captured and stored in data sets specified by the associated Archive Attribute

Steps 1 and 2...

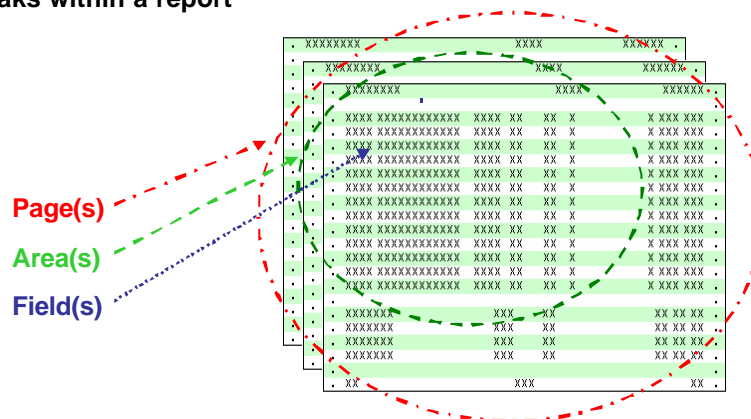


That's It...

- All Done! Any questions?
- In order to scan the spool and process reports, Steps 1 & 2 are all that are needed
- Custom reports involve three more steps...

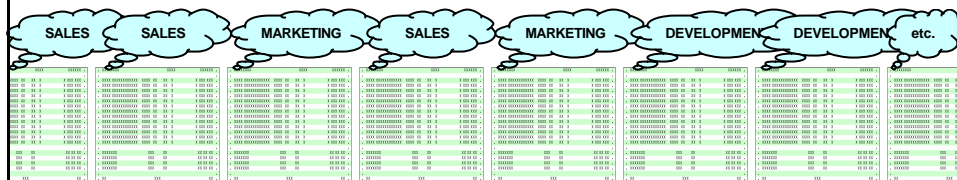
Step 3: Specify Report Layouts

- Report Layouts are named objects that describe the layout of data within a report and are used to identify control breaks within a report



Step 4: Define Custom Reports

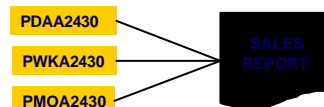
- A Custom Report is a named object that identifies a logical subset of the original output produced by a job
- Layouts are used to determine the contents of a Custom Report (i.e., if the DEPT field contains the string “SALES” then this goes in the SALES REPORT, “MARKETING” to MARKETING, etc.)



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Step 5: Define Report Selection Rules

- Report Selection Rules are used to identify which jobs produce the output that is to be processed as Custom Reports
- This can be a many to one relationship – the weekly, monthly and quarterly jobs may all produce the same output format and are all processed by the SALES REPORT Custom Report definition



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Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things?
2. What do you want me to capture?
3. Where do control breaks occur within a report?
4. Which part goes to the Boston office?
5. Which jobs produce the Marketing reports?

Archive Attributes

Session A - rs22 mod3 - [32 x 80]

File

IBM Output Manager - Archive Attributes Details

Command ==> SCROLL ==> PAGE

| | |
|-----------------------|--|
| Descriptive data | |
| Name | Bank Reports |
| Archive Mask . . . | PDTAYL.&JOBNAME.&JOBNUMB.&DDNAMEA |
| Retention Period . | 0 (Number of days to retain) |
| Allocation attributes | |
| Management Class . | |
| Storage Class . . | DEV |
| Vol Sers | (Up to 5) |
| Device Type . . . | (Generic Unit or device address) |
| Data Class | |
| Space Units . . . | Tracks (Blocks, Tracks, Cylinders, Kilobytes, Megabytes, Bytes or Records) |
| Average record unit | (M, K, or B) |
| Primary quantity . | 10 (In above units) |
| Secondary quantity | 10 (In above units) |
| Block Length . . | 0 (In above units) |
| Archive disposition | |
| Normal Disposition | Catalog (Catalog, Keep) |
| Abnormal Disposition | Delete (Catalog, Keep, Delete) |
| Release Unused Space | Yes (Yes release, No do not release) |

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Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things? ✓ Done
2. What do you want me to capture?
3. Where do control breaks occur within a report?
4. Which part goes to the Boston office?
5. Which jobs produce the Marketing reports?

Sysout Selection Rules

```

Session A - rs22 mod3 - [32 x 80]
File Help

IBM Output Manager - Selector Rules

Command ==> More: +

Control fields
Disposition . . . Delete      (Delete, Keep)
Exists . . . . Replace      (Leave, Replace, Extend)
Status . . . . Enabled      (Enabled or Disabled)
Line Limit . . . 0          (Max lines to allow in archive)
Combine Sysout. No          (Combine Sysout into single archive)
Insert Marker . No          (Insert marker when combining)
Capture Attrs : No          (Yes or No)
Archive Attr. : BANK REPORTS

Job Selection criteria
Job Type . . . . All         (All, Batch, Appc, Tso, Stc)
Job Class . . . . 
Job Name . . . . 
Job ID . . . . 
Proc Name . . . . 
Step Name . . . . 
Proc Step . . . . 
Step Number . . . . 
Program . . . .             (from the EXEC PGM= in the JCL)
DD Name . . . . 
Programmer name . . . . 
User Id . . . .             (RACF user id)
Group . . . .              (RACF group id)
Schenv. . . . 
Account 1 . . . . 

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```

Sysout Selection Rules (anything known to JES)

Session A - rs22 mod3 - [32 x 80]

File Help

IBM Output Manager - Selector Rules

Command ==>

More: -

Account 3 . . . _____
 Account 4 . . . _____
 Account 5 . . . _____
 Account 6 . . . _____
 Account 7 . . . _____
 Account 8 . . . _____

Sysout selection criteria

Sysout Class. . . N
 Destination . . . _____
 Form 1. _____
 Form 2. _____
 Form 3. _____
 Form 4. _____
 Form 5. _____
 Form 6. _____
 Form 7. _____
 Form 8. _____
 Prmode1 _____
 Prmode2 _____
 Prmode3 _____
 Prmode4 _____
 FCB _____
 UCS _____
 Flash _____
 Writer _____ (External writer name)
 JES Queue . . . ALL (All, External (writer), Write, Hold)

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Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things? ✓ Done
2. What do you want me to capture? ✓ Done
3. Where do control breaks occur within a report?
4. Which part goes to the Boston office?
5. Which jobs produce the Marketing reports?

A FIELD called "TITLE" at row 2, column 5, width 40

```

Session A - rs22 mod4 - [43 x 80]
File Preferences Help

Command ==> IBM Output Manager - Layout Field SCROLL ==>

Layout name . . . : bank reports
Page name . . . : PAGE 1
Area name . . . : AREA 1
Area row . . . : 0 Area column : 0 Relative area name :
Area width . . . : 0 Area height : 0 Relationship . . . :

Field information
Name . . . . . TITLE
Relative field name . . . . .
Relative field relationship . . . . . (Diagonal, Below, Adjacent)
Starting row . . . . . 2
Starting column . . . . . 5
Width . . . . . 40
Height . . . . . 1
Number of times to repeat . . . . . 0
Constant data at position . . . . . NO (No, Yes)
Heading name . . . . .

Menu Utilities Compilers Help

BROWSE BJT.PR00110.SAMPLIB(BJTBANKR) - 01.06 Line 00000025 Col 001 080
Command ==> Scroll ==> CSR
1
Tree House Bank Confidential

TREE HOUSE BRANCH BANK DAILY TRANSACTION REPORT
Branch - Cypress Oak
Address - 24 Liberty Way
Killeen, TX 77912
Manager - Kevin Jacobs
Date - August 29th, 2002

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```

A FIELD called "BRANCHTI" at row 7, column 10, width 9

```

Session A - rs22 mod4 - [43 x 80]
File Preferences Help

Command ==> IBM Output Manager - Layout Field SCROLL ==>

Layout name . . . : bank reports
Page name . . . : PAGE 1
Area name . . . : AREA 1
Area row . . . : 0 Area column : 0 Relative area name :
Area width . . . : 0 Area height : 0 Relationship . . . :

Field information
Name . . . . . BRANCHTI
Relative field name . . . . .
Relative field relationship . . . . . (Diagonal, Below, Adjacent)
Starting row . . . . . 7
Starting column . . . . . 10
Width . . . . . 9
Height . . . . . 1
Number of times to repeat . . . . . 0
Constant data at position . . . . . NO (No, Yes)
Heading name . . . . .

Menu Utilities Compilers Help

BROWSE BJT.PR00110.SAMPLIB(BJTBANKR) - 01.06 Line 00000025 Col 001 080
Command ==> Scroll ==> CSR
1
Tree House Bank Confidential

TREE HOUSE BRANCH BANK DAILY TRANSACTION REPORT
Branch Cypress Oak
Address - 24 Liberty Way
Killeen, TX 77912
Manager - Kevin Jacobs
Date - August 29th, 2002

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```

FIELD "BRANCHNA" at row 7, column 20, width 40

```

Session A - rs22 mod4 - [43 x 80]
File Preferences Help

Command ==> IBM Output Manager - Layout Field SCROLL ==>

Layout name . . . : bank reports
Page name . . . : PAGE 1
Area name . . . : AREA 1
Area row . . . : 0 Area column : 0 Relative area name :
Area width . . . : 0 Area height : 0 Relationship . . . :

Field information
Name . . . : BRANCHNA
Relative field name : (Diagonal, Below, Adjacent)
Starting row . . . : 7
Starting column . . . : 20
Width . . . : 40
Height . . . : 1
Number of times to repeat . . . : 0
Constant data at position . . . : No (No, Yes)
Heading name . . . :

Menu Utilities Compilers Help

BROWSE BJT.PR00110.SAMPLIB(BJTBANKR) - 01.06 Line 00000025 Col 001 000
Command ==> Scroll ==> CSR
1
Tree House Bank Confidential

TREE HOUSE BRANCH BANK DAILY TRANSACTION REPORT
Branch - Cypress Oak
Address - 24 Liberty Way
Killeen, TX 77912
Manager - Kevin Jacobs
Date - August 29th, 2002

```

Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things? ✓ Done
2. What do you want me to capture? ✓ Done
3. Where do control breaks occur within a report?
4. Which part goes to the Boston office?
5. Which jobs produce the Marketing reports?

The Custom Report for the “Ash” branch

```

Session A - rs22 mod3 - [32 x 80]
File Links Preferences Help
IBM Output Manager - Report
Command ==> Row 1 of 3 SCROLL ==> CSR
Report name . . . Bank Reports, Ash
Contiguous . . . Yes (Yes or No)
Description . . .
Layout . . . : bank reports
Distribution . . .
Line Commands: Edit, Insert, Delete
CMD Connector Field Condition Value
and TITLE EQ Tree House Bank Confidential
and BRANCHTI EQ Branch -
and BRANCHNA EQ Ash
***** BOTTOM OF DATA *****
  
```

Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things? ✓ Done
2. What do you want me to capture? ✓ Done
3. Where do control breaks occur within a report? ✓ Done
4. Which part goes to the Boston office? ✓ Done
5. Which jobs produce the Marketing reports?

The Report Rule ties it all together

```

File
IBM Output Manager - Report Rules
Command ==>

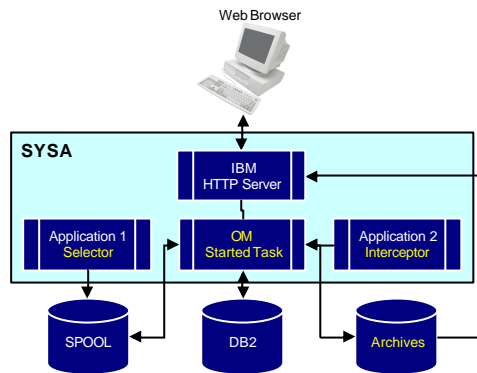
Control fields
Status . . . . Enabled (Enabled or Disabled)
Layout Name . : bank reports

Job Selection criteria
Report Name . . Brads bank reports
Job Name . . . . BJTBANKP
Proc Name . . . .
Step Name . . . . PRINT
Proc Step . . . .
Step Number . . . .
Program . . . . (from the EXEC PGM= in the JCL)
DD Name . . . . SYSUT2
  
```

Product Administration – “Five Easy Pieces”

1. Where do you want me to keep things? ✓ Done
2. What do you want me to capture? ✓ Done
3. Where do control breaks occur within a report? ✓ Done
4. Which part goes to the Boston office? ✓ Done
5. Which jobs produce the Marketing reports? ✓ Done

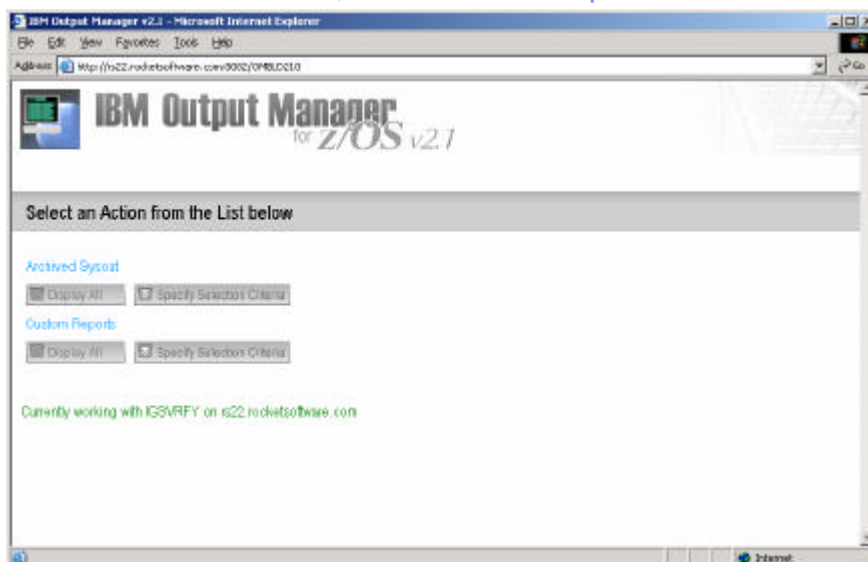
Web-Based Report Viewing



- **Existing Web Browser**
 - Internet Explorer
 - Netscape
 - other?
- **IBM HTTP Server**
 - Installed on same image as Output Manager started task
 - Presents reports to users as requested
- **Security**
 - HTTP, HTTPS (SSL)
 - User Authentication – base capability of IBM HTTP Server
- **Offered as a Standard Feature**
 - No Additional Hardware
 - No Additional Software to buy

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One instance illustrated, could show multiple if desired



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Scroll, Sort – Click to View

IBM Output Manager v2.1 - Microsoft Internet Explorer

Address: http://v21.rchsoft.com:6062/CM6L0210

Archived Sysout Custom Reports Settings

Select an archive from list to view

| Jobname | Job Number | Exception | Capture Date | Line Count | Archived |
|----------|------------|-----------|---------------------|------------|----------|
| BJT@JCPF | J028915 | | 2004-01-15-10:59:23 | 281 | N |
| BJTBANKP | J0289159 | | 2004-01-20-10:35:24 | 63 | N |
| BJTBANKP | J0289159 | | 2004-01-20-10:35:25 | 3 | N |
| BJTBANKP | J0289159 | | 2004-01-20-10:35:25 | 4062 | N |
| BJTBANKP | J0289209 | | 2004-01-20-10:59:51 | 4062 | N |
| BJTBANKP | J0289220 | | 2004-01-20-11:03:07 | 4062 | N |
| BJTBANKP | J0289223 | | 2004-01-20-11:03:19 | 4062 | N |
| BJTBANKP | J0289225 | | 2004-01-20-11:04:42 | 4062 | N |
| BJTBANKR | J0250976 | | 2004-01-02-12:21:16 | 4062 | Y |
| BJTBANKR | J0250976 | | 2004-01-02-12:21:19 | 3 | N |
| BJTBANKR | J0252240 | | 2004-01-03-01:59:26 | 4062 | N |
| BJTBANKR | J0252240 | | 2004-01-03-01:59:28 | 3 | N |
| BJTBANKR | J0252266 | | 2004-01-03-02:00:58 | 3 | N |
| BJTBANKR | J0252266 | | 2004-01-03-02:00:58 | 4062 | N |
| BJTBANKR | J0255845 | | 2004-01-06-10:18:29 | 4062 | N |

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Selection Criteria: All jobs beginning with "B" that had exceptions

IBM Output Manager v2.1 - Microsoft Internet Explorer

Address: http://v21.rchsoft.com:6062/CM6L0210

Archived Sysout Custom Reports Settings

Select an archive from list to view

Refresh Query Specify Selection Criteria

Specify Selection Criteria

☒ Jobname

☐ All jobs

☒ Pattern

Pattern: B*

Matching any number of any characters

Matching any single character

☒ Job status

Job status: Exceptions only

☐ All

☐ Success only

☐ Exceptions only

☐ Date

☐ In the last 1 days

☐ In the last 1 months

☐ Between 2004-01-01 and 2004-01-12

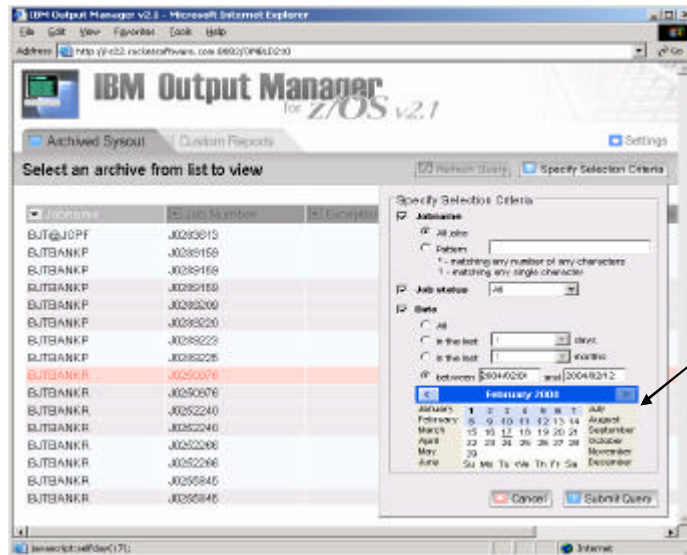
Cancel Submit Query

101 records found

Indicate what you're interested in and then click [Submit Query]

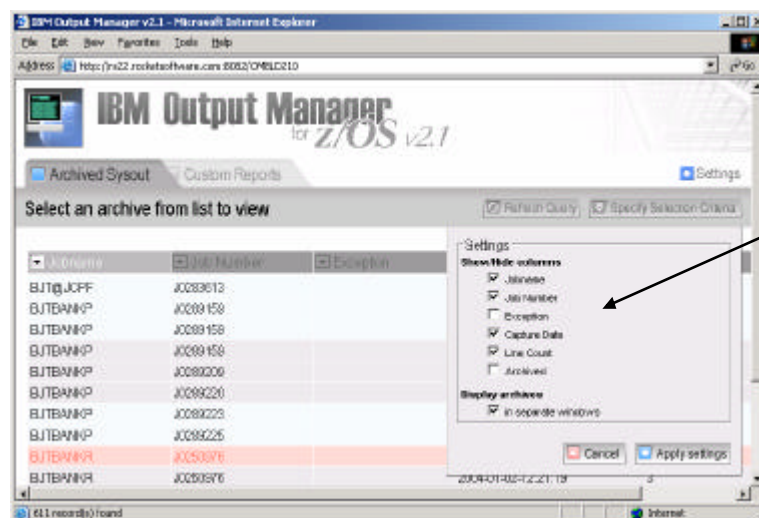
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Selection Criteria: Jobs, Status, Date(s)



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Settings: Columns, Windows



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Click to open Reports – Separate Windows for result comparisons

The screenshot shows the IBM Output Manager v2.1 web interface. At the top, there's a navigation bar with 'Archived Sysout' and 'Custom Reports' tabs. Below this is a table titled 'Select a report from list to view'.

| Report Name | Creation Date | Page | Line Count |
|-------------|---------------------|-------|------------|
| Bank Report | 2004-01-20-11:04:42 | Basic | 4092 |
| Bank Report | 2004-01-20-11:03:19 | Basic | 4092 |

Below the table, two separate browser windows are open, each displaying the content of a selected report. Both windows show the same text: 'TREE HOUSE BANK CONFIDENTIAL', 'TREE HOUSE BANK', 'Daily Branch Reports from', 'Overhead Oak', 'Willow', 'Post Oak', 'Cherry', 'Ash', 'Cedar', and 'for August 29th, 2002'.

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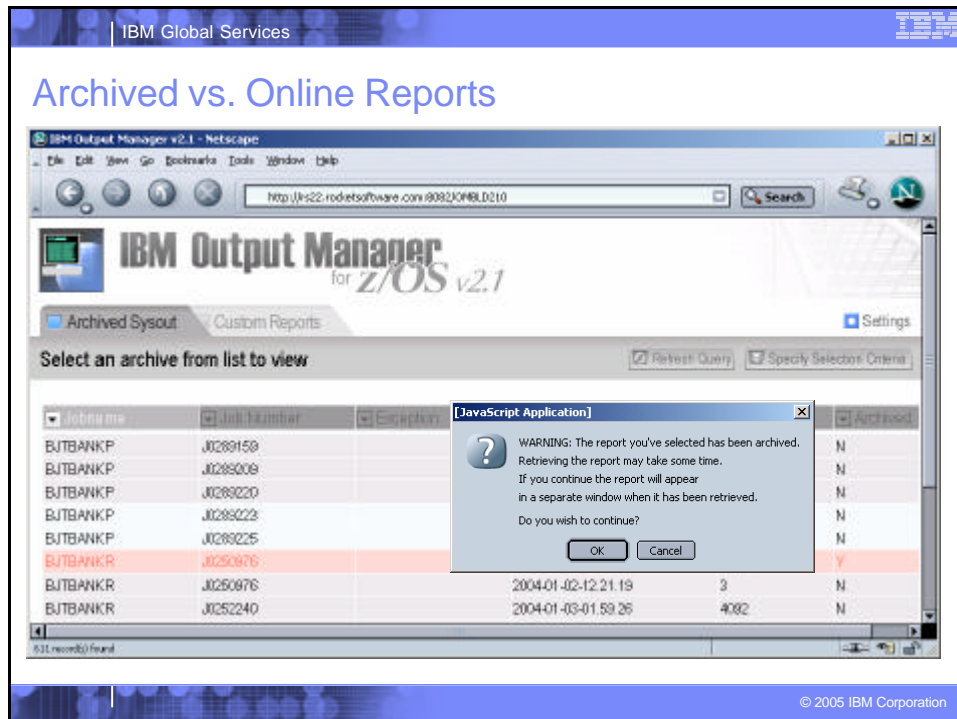
Archived vs. Online Reports

The screenshot shows the IBM Output Manager v2.1 web interface with the 'Archived Sysout' tab selected. Below the navigation bar is a table titled 'Select an archive from list to view'.

| Jobname | Job Number | Exception | Creation Date | Line Count | Archived |
|----------|------------|-----------|---------------------|------------|----------|
| BJTBANKP | J0289159 | | 2004-01-20-10:35:25 | 4092 | N |
| BJTBANKP | J0289208 | | 2004-01-20-10:59:31 | 4092 | N |
| BJTBANKP | J0289220 | | 2004-01-20-11:03:07 | 4092 | N |
| BJTBANKP | J0289223 | | 2004-01-20-11:03:19 | 4092 | N |
| BJTBANKP | J0289225 | | 2004-01-20-11:04:42 | 4092 | N |
| BJTBANKP | J0289370 | | 2004-01-22-12:21:19 | 4092 | Y |
| BJTBANKR | J0289370 | | 2004-01-22-12:21:19 | 3 | N |
| BJTBANKR | J0282240 | | 2004-01-03-01:59:26 | 4092 | N |

At the bottom of the table, it says '331 records found'.

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IBM Global Services

Web-Based Report Viewing

- Browser-based alternative to ISPF panels**
 - Easily customized with company-specific artwork
 - Intuitive enough for even the most casual user
- What features would you like to see?**
 - “Nice” printing?
 - Data export?
 - Others?

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Archive Viewer

■ The Problems

- Customers have thousands of tapes tied up with archives
- Business or legal requirements mandate that the reports be retained
- Not enough DASD on the planet to bring them all back
- Migration could take years – “we don’t have years”

■ The Solution

- Use existing utilities to obtain data about archive directory contents
- Load this data into Output Manager
- Recall reports from existing archive tapes upon request

■ The Benefits

- Drastically Simplify migrations to Output Manager
- Eliminate need for mass data conversions (TB’s of data)
- Facilitates use of existing tape copies of reports

Migrating to IBM Output Manager

■ Professional Services

- IBM Global Services personnel specifically assigned to get the job done right
- Contact your IBM Account Manager

■ *Going it alone*

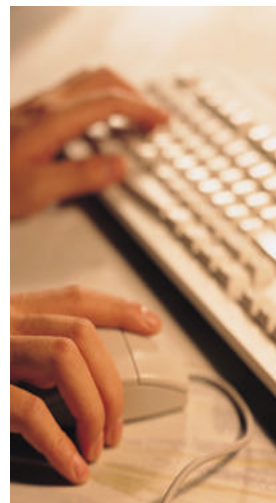
- Output Manager can be installed, configured and up and running in a few hours
- The following slide highlights the steps associated with migration using Archive Viewer...

Migration using Archive Viewer

- 1 Install, configure and start using Output Manager
- 2 Stop capturing new reports with the existing product
- 3 Ensure that copies of reports that you wish to retain have been archived to tape
- 4 Extract data from the 3rd party product index via existing utilities
- 5 Load the data into Output Manager tables using the utilities provided with Output Manager
- 6 Discontinue your license for the 3rd party product
- 7 Use Output Manager to access your existing tape archives as needed
- 8 Scratch the 3rd party tapes when report retention limits have been reached -or- all reports have been recalled and processed through Output Manager

IBM Output Manager

- Report Capture, Archive, Online Viewing and Report Distribution in a single product
- Uses existing company standards for security as well as production data backups and retention
- Web-Based Report Viewing included as a standard feature
- Archive Viewer simplifies and expedites the migration process
- Extremely cost-effective particularly when replacing multiple products from multiple vendors



Thank You !!!

- Any questions?

Session Z46

The Point-and-Shoot Method and Other Fine Points of Report Distribution

Louis Hanna



September 19 - 23, 2005

San Francisco, CA