IBM Developer for z Systems – for ISPF Developers

Module 6 – Remote Systems - ISPF 3.x and Batch Job Management

DevOps

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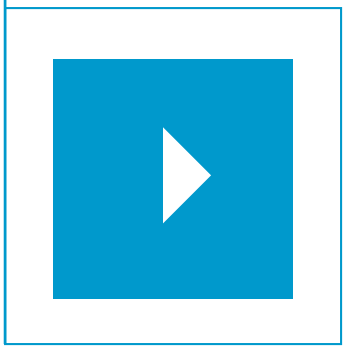
UNIT

The IDz Workbench



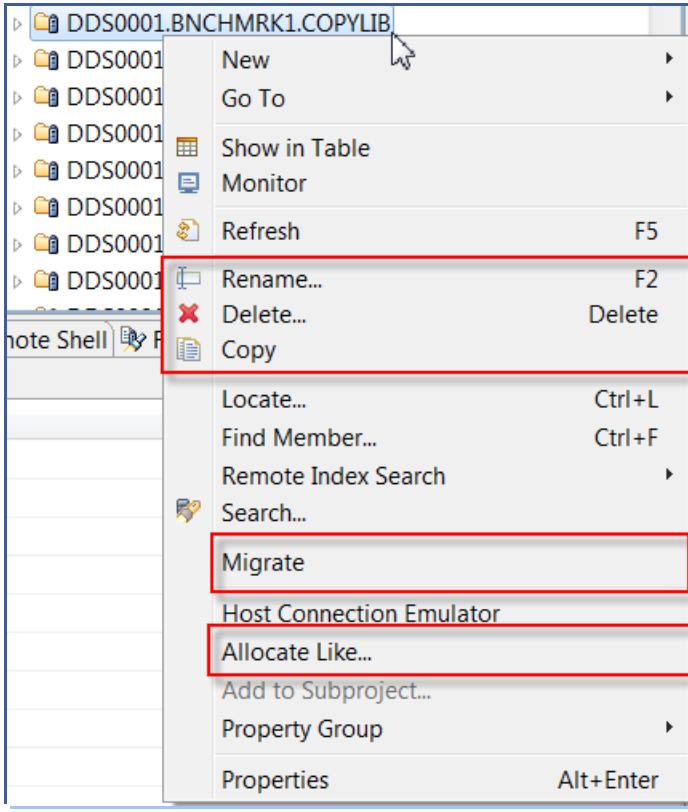
Topics:

- **z/OS Dataset Management**
- Submit and Manage z/OS Jobs
- Issue TSO Commands From Host Emulation

What Dataset Management Functions can you do Using IDz?

Using the Remote Systems Context Menu you can:

- Allocate:
  - **Sequential dataset**
  - **PDS**
  - **Allocate Like (an existing dataset)**
- Define Generation Data Group
  - **And create Datasets within a GDG**
- Migrate and Recall Datasets
- Create VSAM Datasets
  - **KSDS**
  - **ESDS**
  - **RRDS**
- Delete/Copy/Rename:
  - **Datasets**
  - **PDS Members**
- For PDS datasets:
  - **Copy an entire PDS to your PC**
  - **Compress a PDS**
  - **Create new PDS Members**

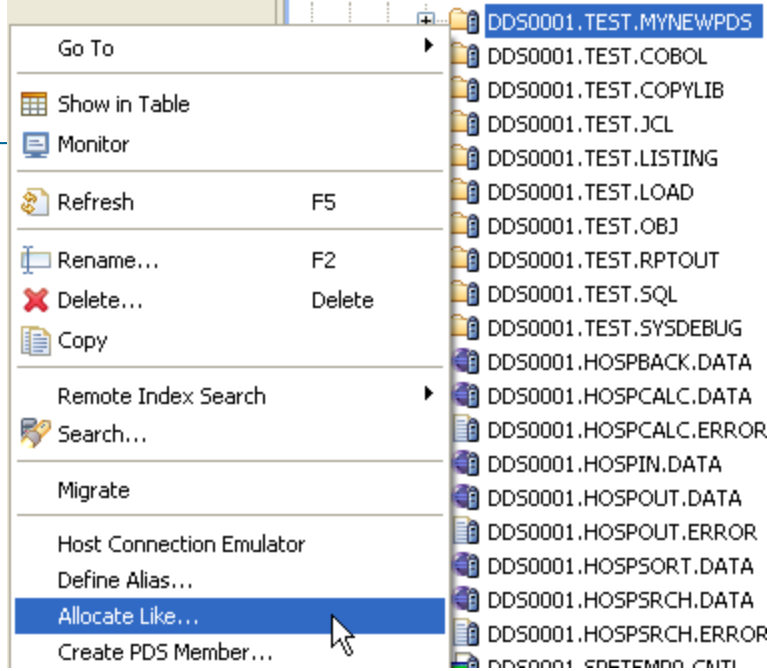


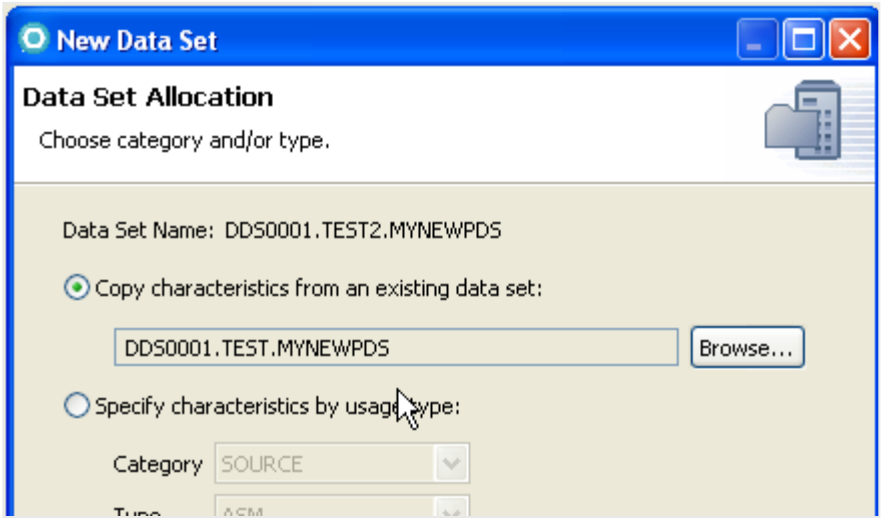
Note – when you copy a file between LPARs (systems) the data bits travel down to your client – and then across.

When you copy a file **within an LPAR everything happens on the mainframe** (IEBCOPY or a proprietary IBM mainframe copy utility written in C is used)

Allocate Like…

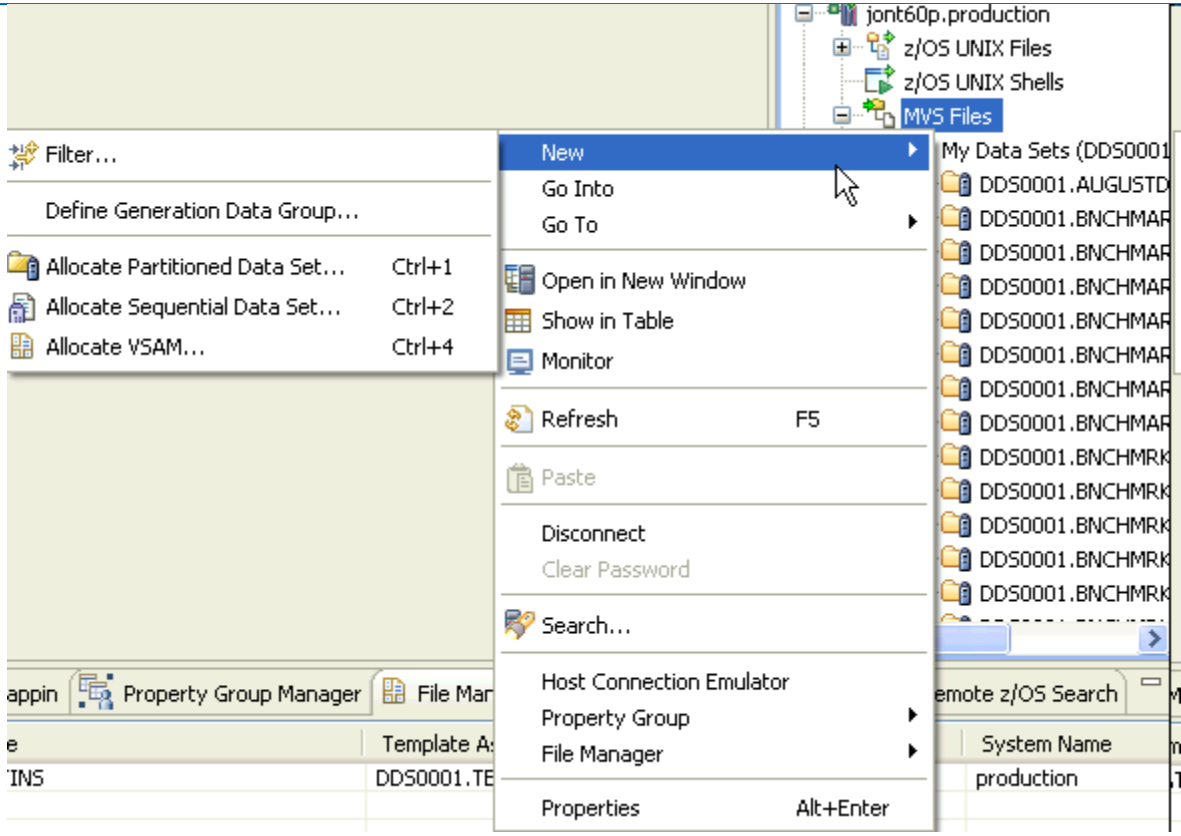
- Copies dataset characteristics to be used as a model for new file
  - DCB (LRECL/DSORG,BLKSIZE)
  - Space allocation
- From within your LPAR Connection:
  - Right-click over the MVS dataset you wish to use as the model for Allocate Like
  - Select **Allocate Like…**
  - Name the dataset
    - Note that you must have write or allocate authority against the high-level qualifier you choose for the DSN
  - Click **Finish**





Defining Brand New Datasets, Libraries, GDGs and VSAM Files

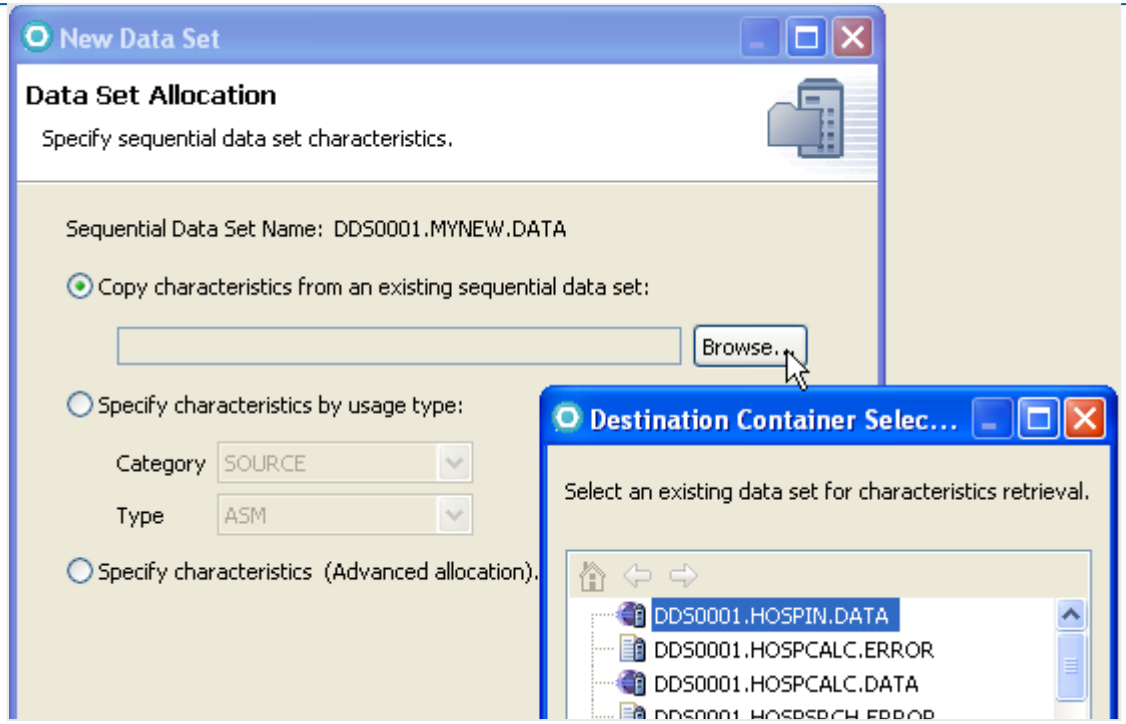
- To access the "new file" wizards (from your connection):
  - Select: **MVS Files**
  - Right-click
  - Select: **New >**
  - Select your option

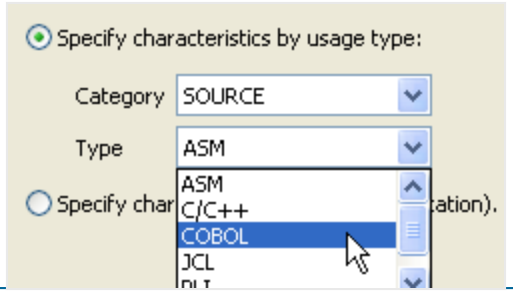


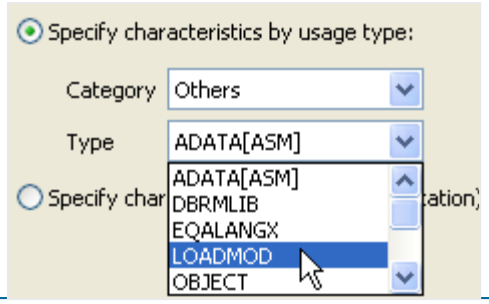
Dataset wizards will open…specific to your selected option

Allocate Sequential Dataset – Specify Dataset Characteristics

- **Three options:**
  - "Create like": Copy DCB characteristics from existing dataset
    - Click: **Browse**
    - Select the dataset to copy the file characteristics from
  - Advanced Allocation
    - Next slide
  - Create by type:
    - Source or a number of other common types



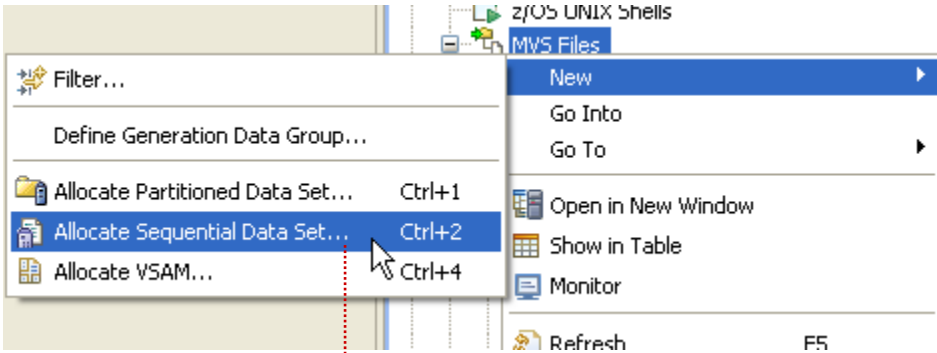


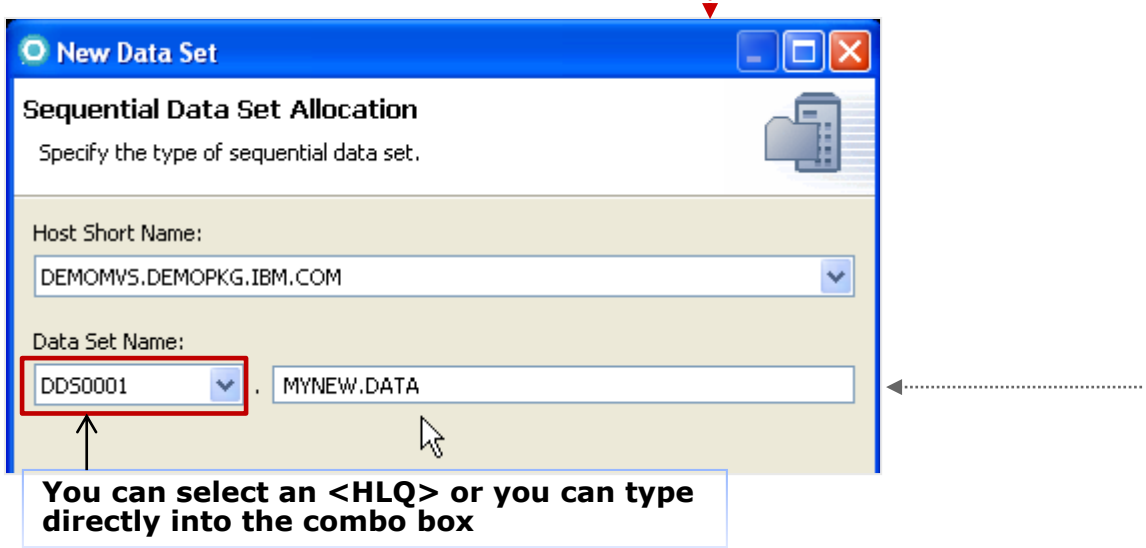


Allocate Sequential Dataset

- IDz alternative to ISPF 3.2/Allocate function

- From within your connection:
  - Right-click over MVS Files under the connection name and select **New >**
  - Select **Allocate Sequential Dataset**…
  - Name the dataset
    - Note that you must have write or allocate authority against the high-level qualifier you choose for the DSN

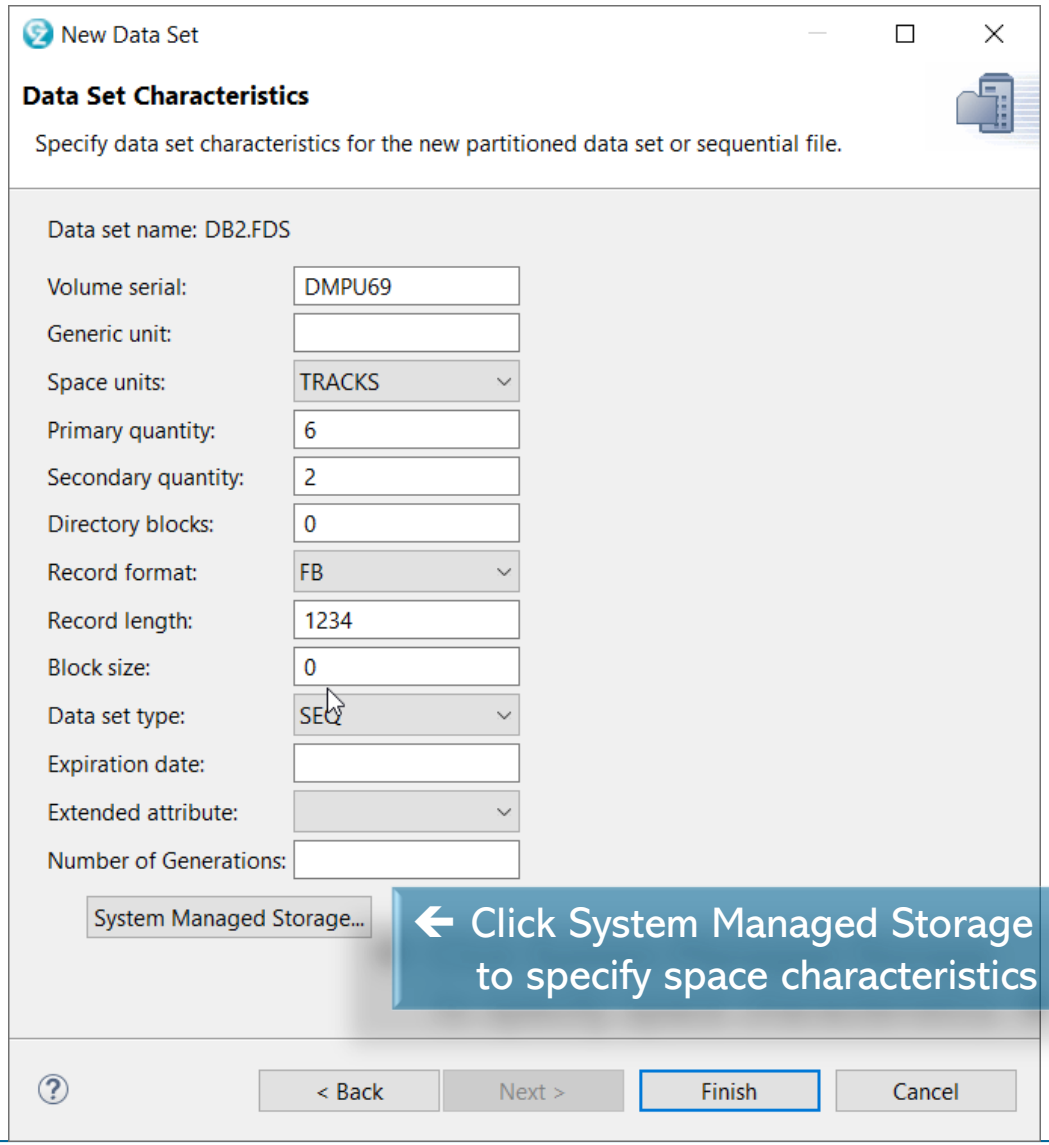




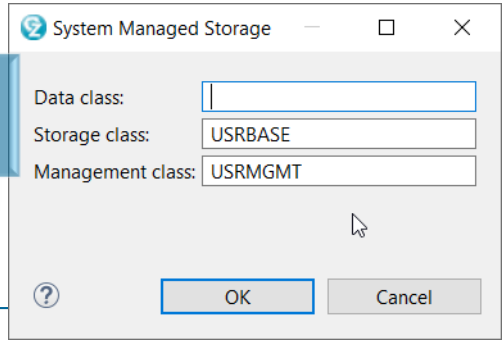
Click **Next** twice

Allocate Sequential Dataset – Specify Dataset Characteristics

- Third option (Advanced Allocation) - completely custom characteristics:



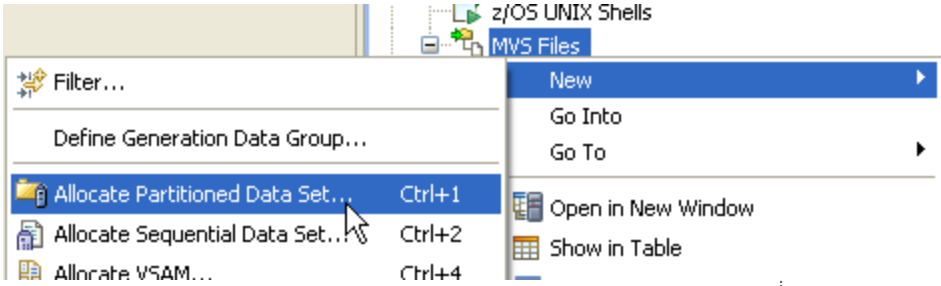
← Click System Managed Storage to specify space characteristics →

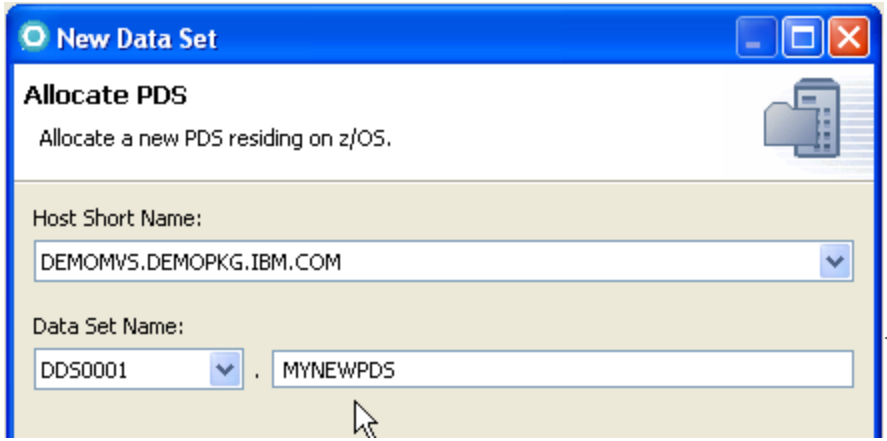


Allocate PDS (TSO Library)

- IDz alternative to ISPF 3.2

- From within your connection:
  - Right-click over MVS Files under the connection name
  - Select Allocate PDS…
  - Name the PDS
    - Note that you must have write or allocate authority against the high-level qualifier you choose for the DSN



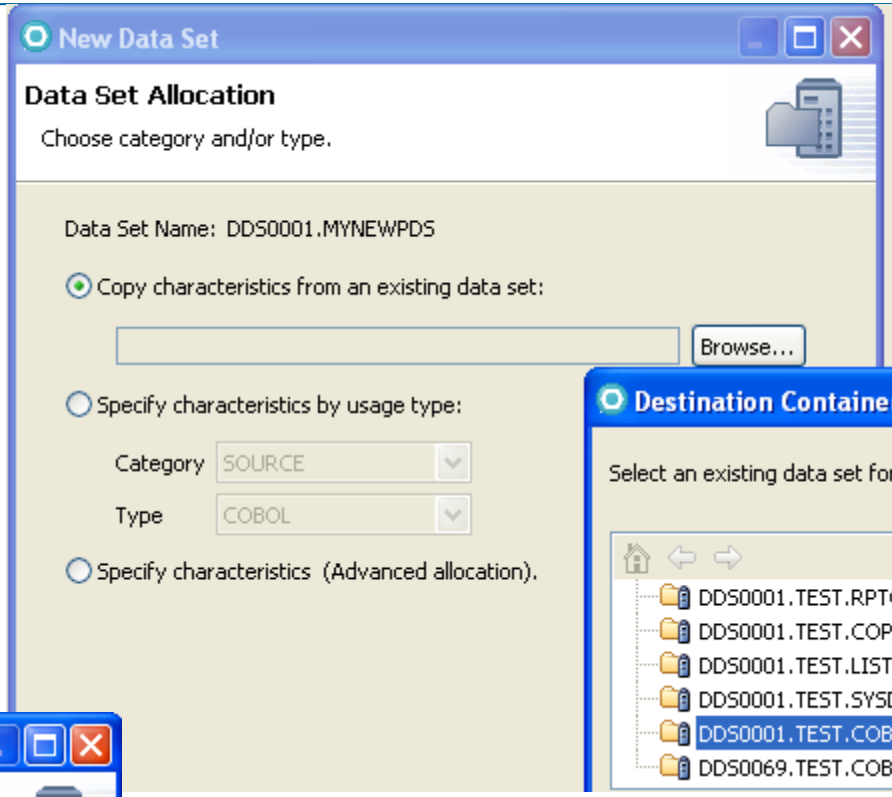


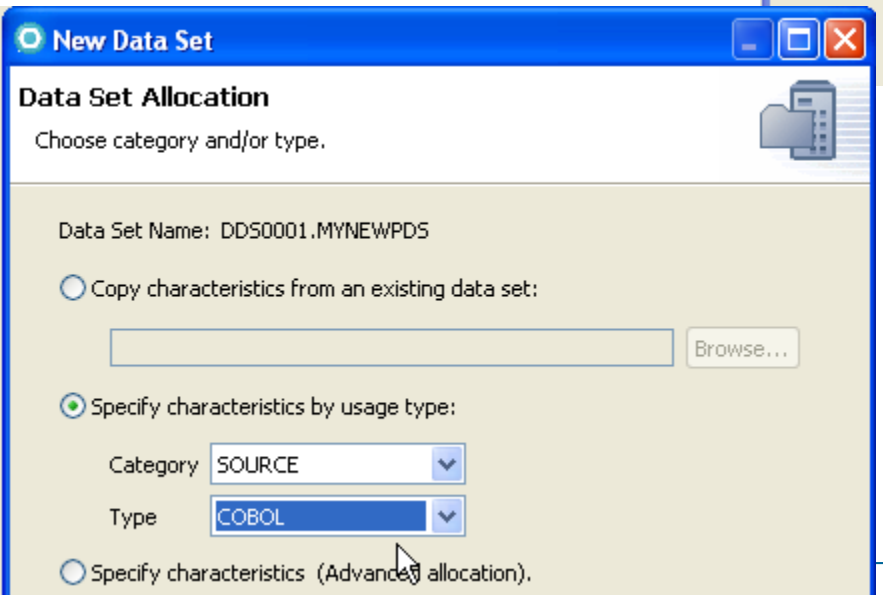
  - Click **Next >**

Allocate PDS – Specify Dataset Characteristics

- Same three options:
  - "Create like" copy characteristics from existing dataset
  - Advanced Allocation
  - Create by type:

    Source or a number of other common PDS types



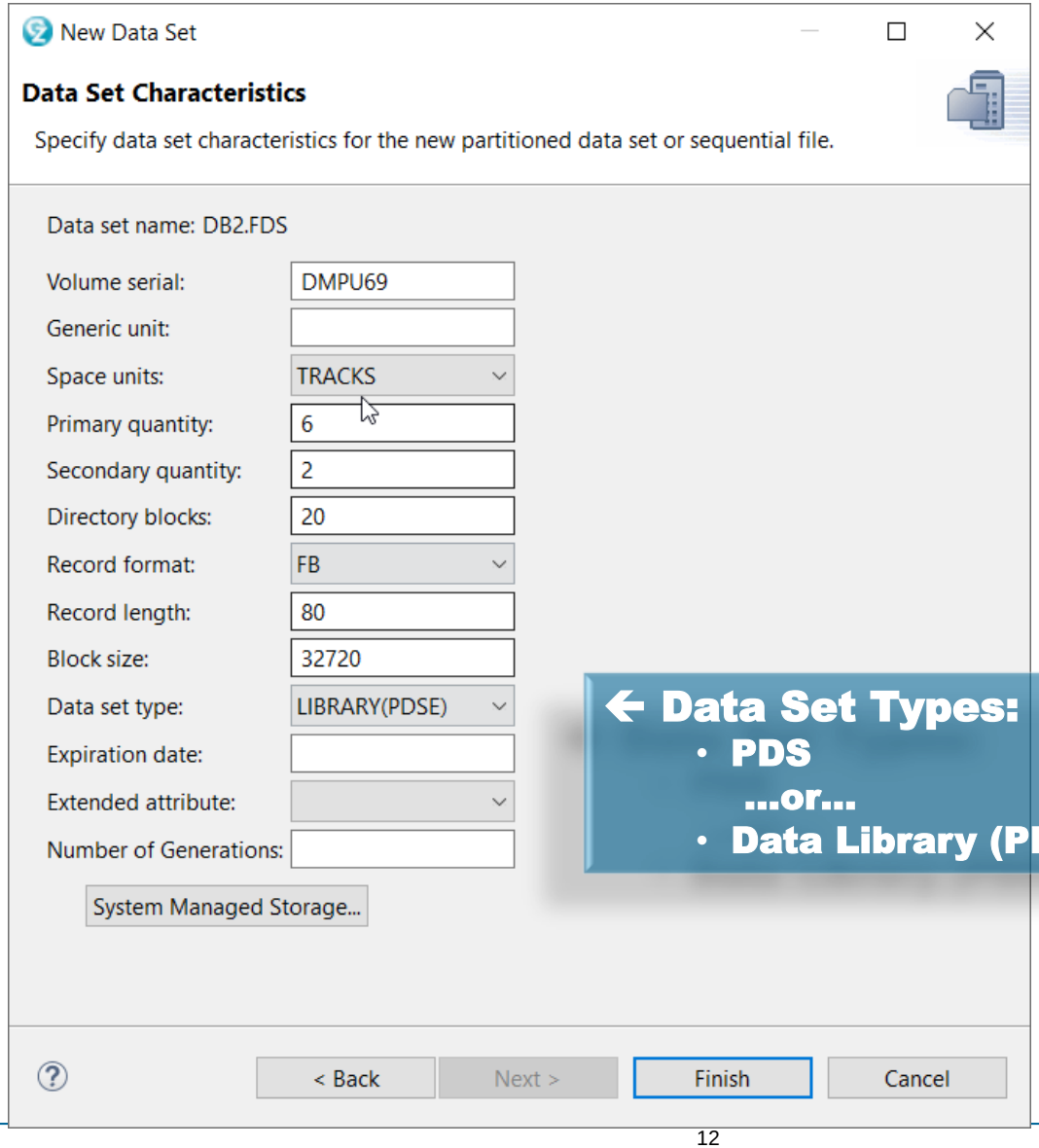


Use Advanced Allocation to customize all elements of DCB including...

- **PDS**
- **PDSE**
- **PDSE(v2)**

Allocate Partitioned Dataset – Specify Dataset Characteristics

- Third option (Advanced Allocation) – completely custom characteristics:

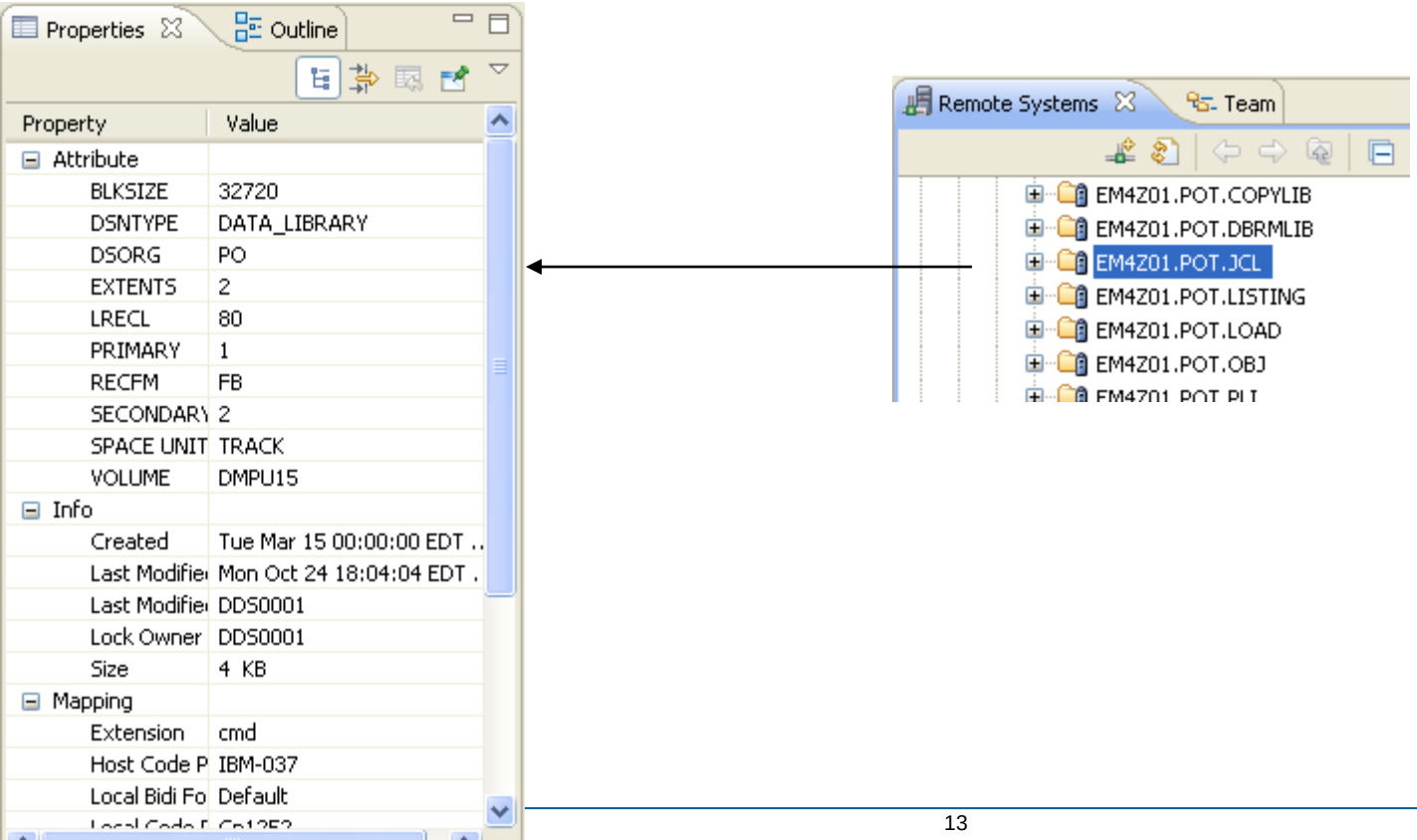


← Data Set Types:
- PDS

...or...
- Data Library (PDSe)

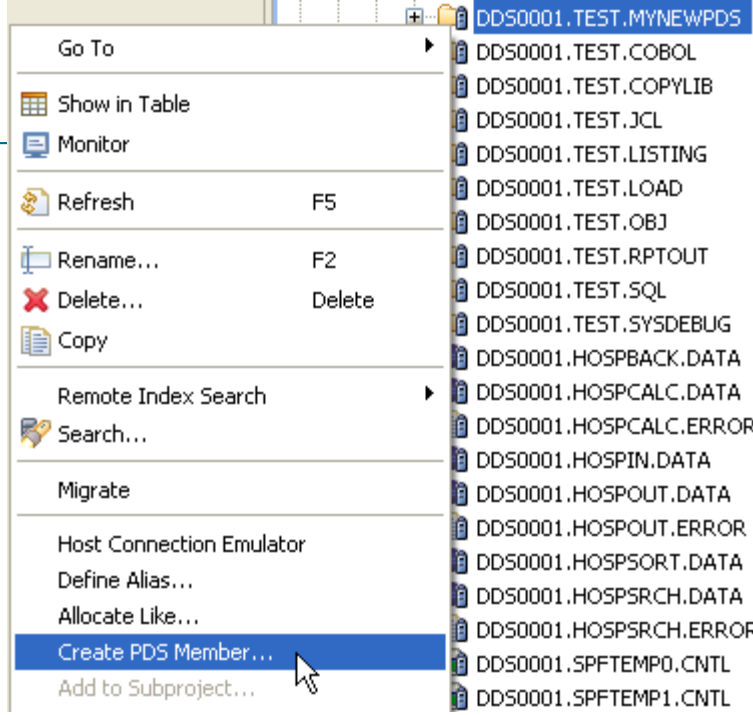
Getting Existing Dataset Characteristics

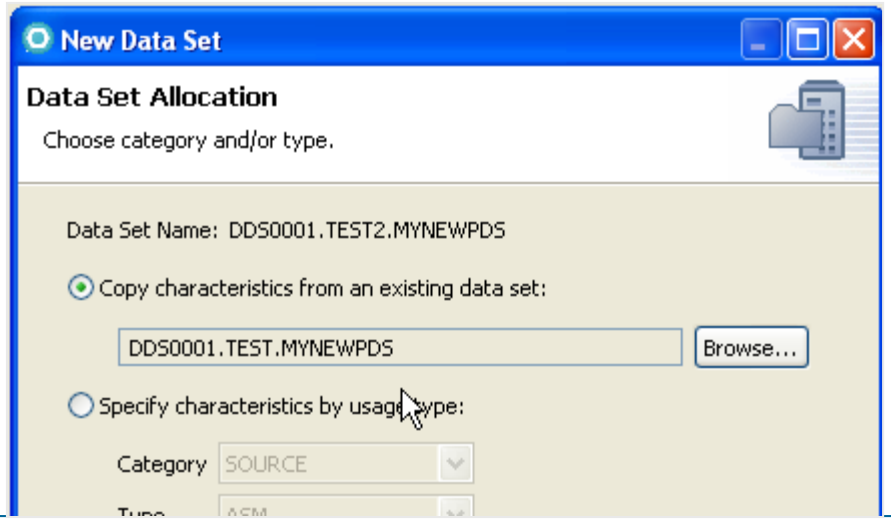
- Using ISPF you probably gathered Dataset statistics in Option 3.2
- IDz makes this easier
  - Click a dataset name in the Remote Systems view
  - Look at the Properties view



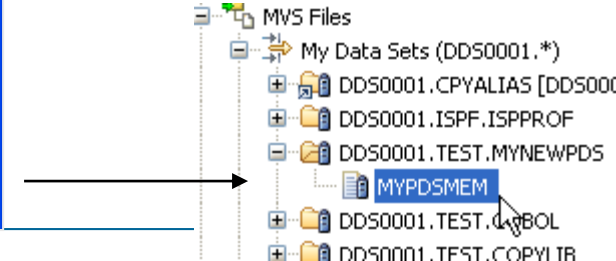
Create PDS Member

- Creates new PDS members in a:
  - PDS
  - PDSE
  - PDSE(v2)
- From within your connection:
  - Right-click over the MVS dataset you wish to create the member in
  - Select **Create PDS Member…**
  - Name the member
    - Note that you must have enough space and directory blocks available to create new members in the PDS





- Click **Finish**



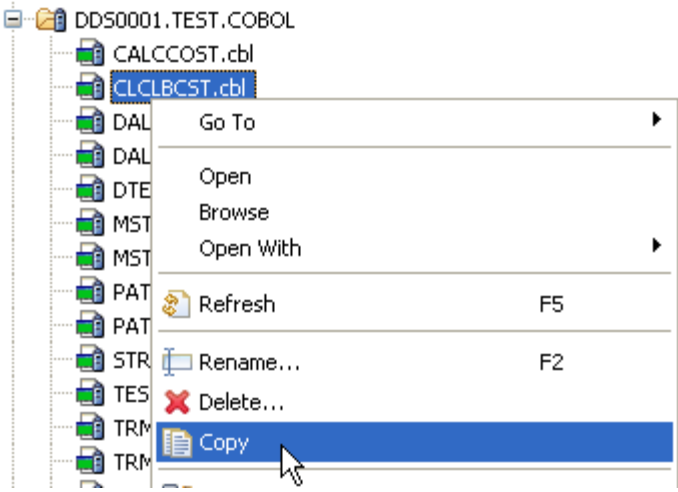
Copy PDS Members

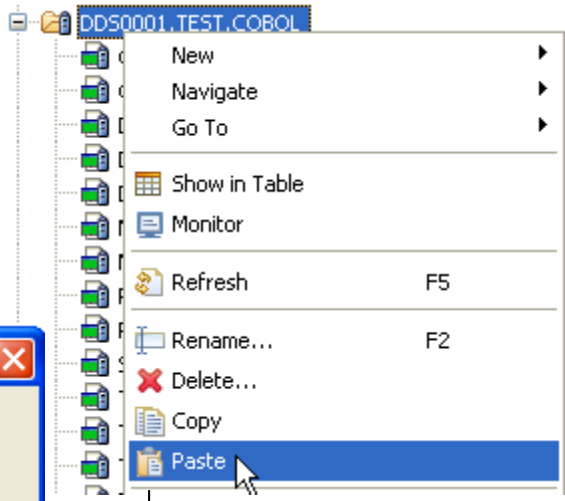
- Creates new PDS members – copied from an existing library into a:
  - PDS
  - PDSE
- From within your connection and from Remote Systems:
  - Open the "copy-from" library
  - Select any number of PDS members (press the Ctrl or Shift key to select more than one at a time)
  - Left-click, hold and drag the members to their destination library …or…
    1. Press the Right-mouse, and from the Context Menu select **Copy**
    2. Select the destination "copy-to" library
    3. Press the Right-mouse, and from the Context Menu select **Paste**

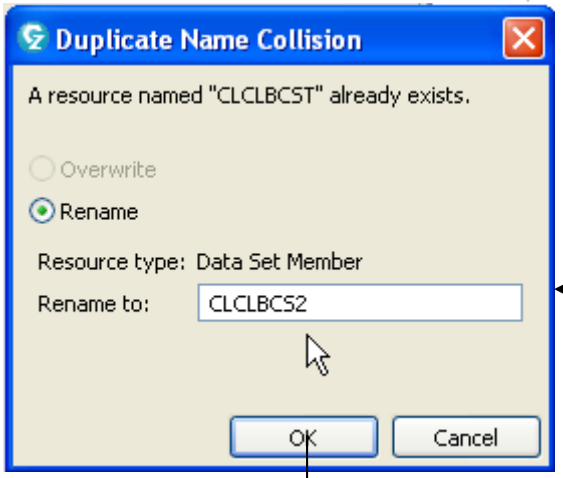
- **Notes**
  - You must have enough space and directory blocks available to create new members in the destination PDS
  - You can copy Load Modules **within a single LPAR**
  - When you copy a file **between LPARs** (systems) the data bits travel down to your client – and then across.
  - When you copy a file **within an LPAR** everything happens on the mainframe (IEBCOPY or a proprietary IBM mainframe

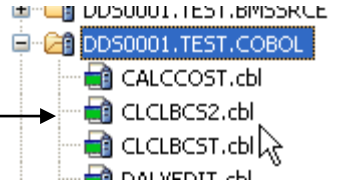
Create New PDS Member by Copy/Paste

- Sometimes you may wish to "clone" a new program based on an existing one
- From within your LPAR Connection and Remote Systems explorer:
  1. Open the "copy-from" library
  2. Select any number of PDS members (press the Ctrl or Shift key to select more than one) – note that in this example we select one member
  3. Right-click, select Copy
  4. Right-click over the PDS name and select Paste
  5. A pop-up will prompt you to rename each member
     - Note that you will need to specify a valid z/OS member name









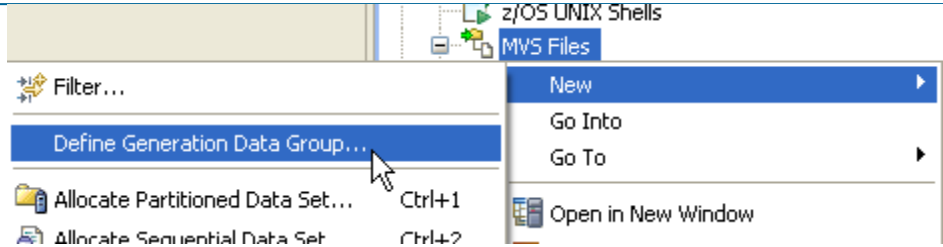
You can also Copy/Paste an entire PDS - including all (*) PDS members

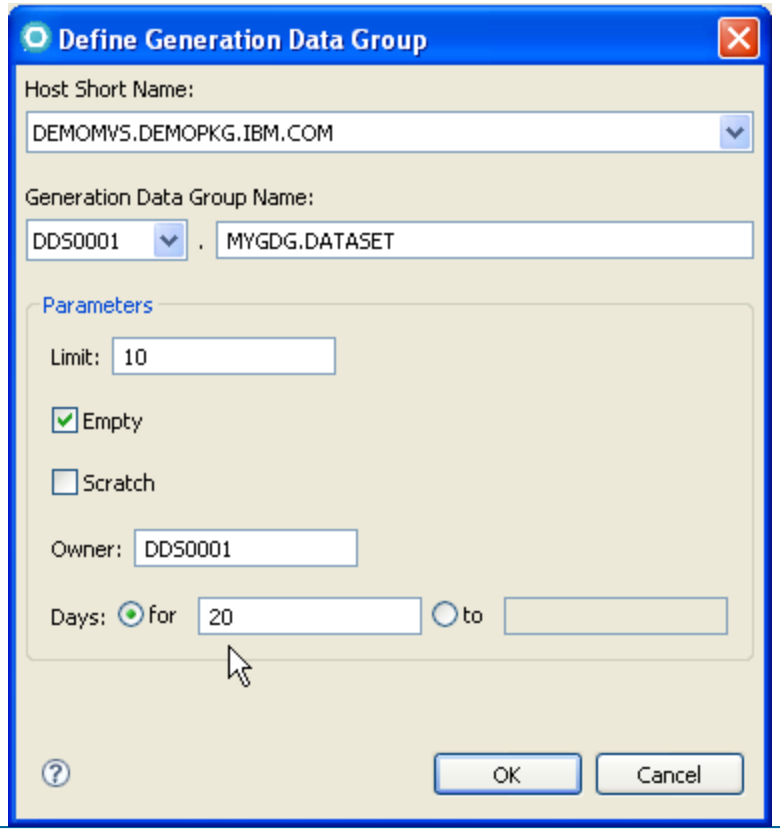
From Remote Systems:
•Right-Click on a PDS and select **Copy**
•Right-Click on My Data Sets and select **Paste**

Define Generation Data Group

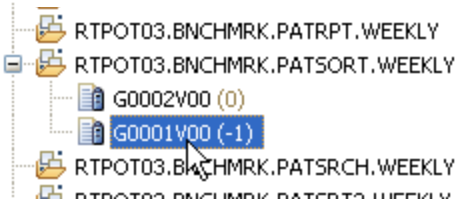
IDz alternative to IDCAMS

- From within your connection:
  - Right-click over MVS Files under the connection name
  - Select Define Generation Data Group …
  - Name the dataset
  - Specify:
    - Limit
      - How many generations to retain
    - Owner ID
      - Defaults to your connection if left blank
    - How long to retain the file
  - Click **OK**



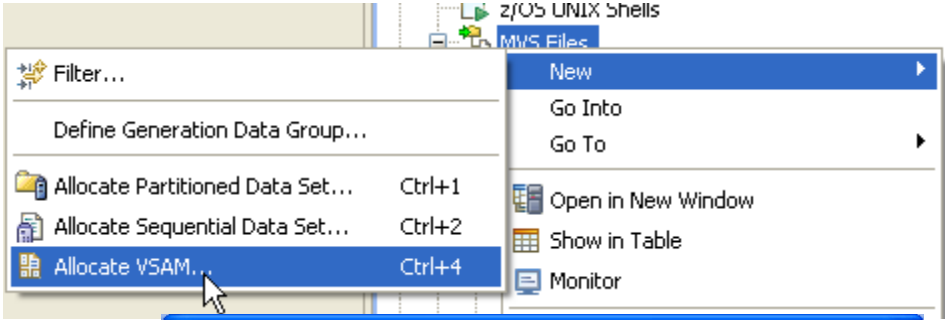


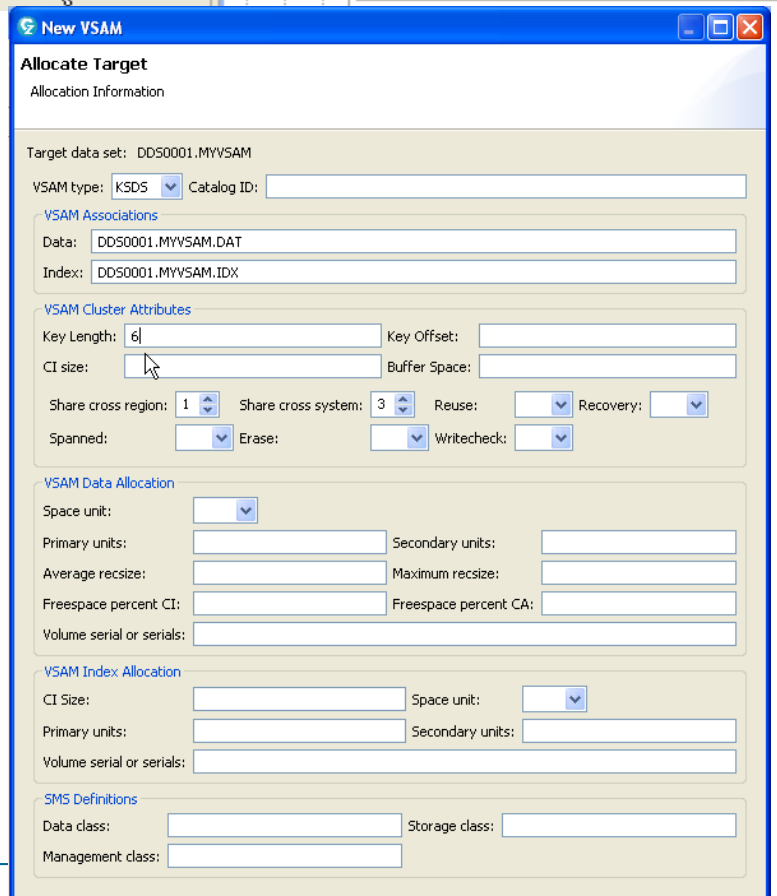
GDG file versions displayed as relative numbered members of a dataset



Allocate VSAM File

- IDz alternative to IDCAMS
- From within your connection:
  - Right-click over MVS Files under the connection name
  - Select **Allocate VSAM…**
  - Name the dataset
  - Select either Allocate like or Custom
  - Specify other VSAM properties
    - Note that you will need to understand IDCAMS VSAM specifications
  - Click **OK**

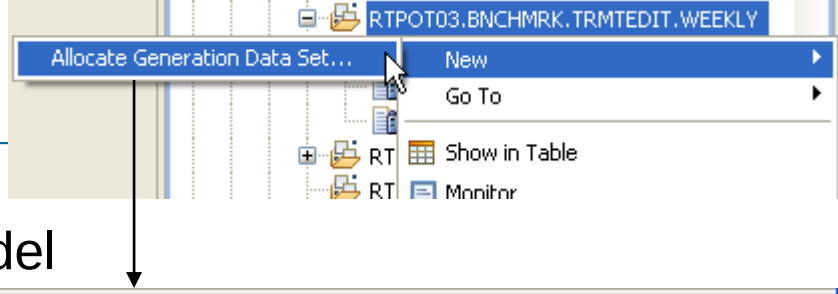




IDz v8 Note:

- Starting at version 8 you can define VSAM files with IDz whether or not your z/OS system has IBM's File Manager product installed
- Prior to version 8 your z/OS system required File Manager to be installed, in order to define VSAM files using this wizard-driven approach

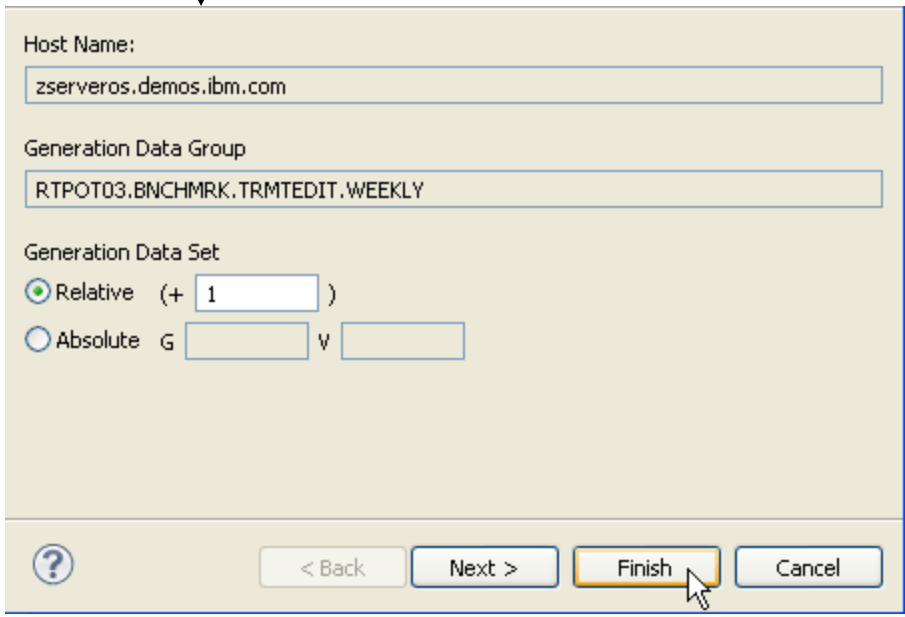
Allocate Generation Data Set...



- Copies dataset characteristics to be used for a new sequential file within a GDG model

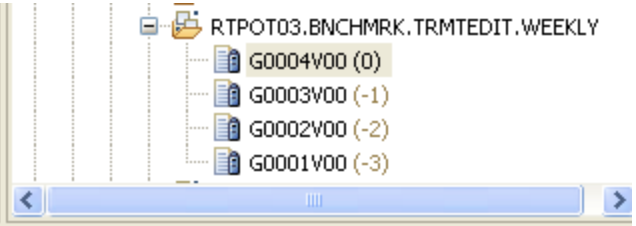
Steps to create (from RSE):

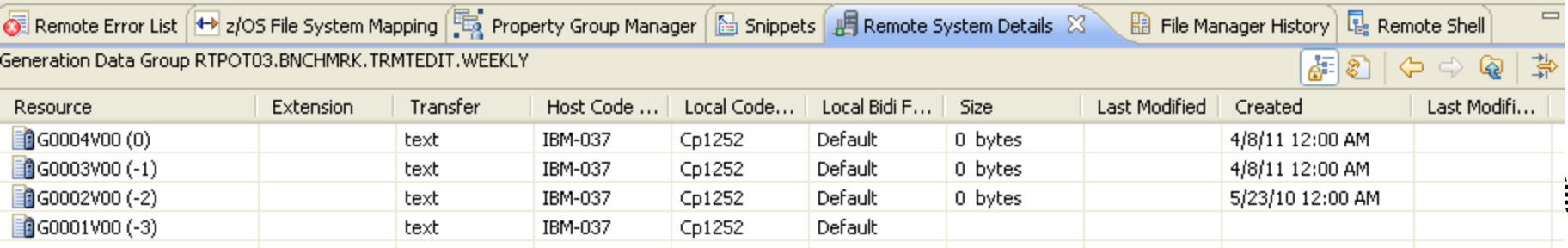
- Right-click over the GDG Model you wish to use as the basis for allocating new sequential files
- Select: **New > Allocate Generation Data Set…**
- **Specify:**
  - **Relative generation sequence numbering**
  - **Absolute dataset name (GnnnnVnn)**
- **Click Next –** to override the DCB (not typical)
- **Click Finish –** to add new sequential file



Additional considerations for GDGs

- **Properties view shows GDG model characteristics**
- **Show in Table** is useful to display all generations
- Access GDG dataset as any other file under RSE
  - May require File Manager Interface for EBCDIC data display

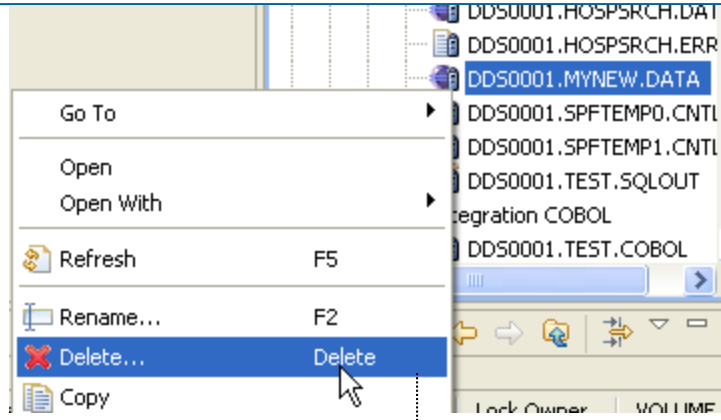


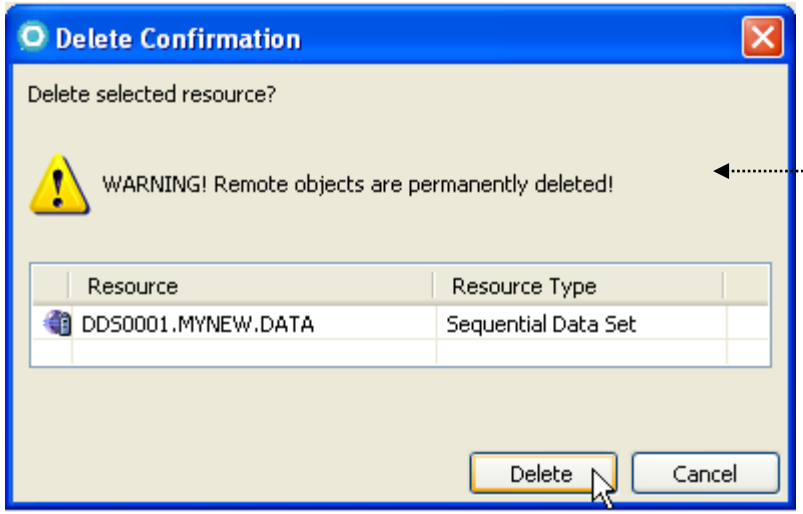


Resource	Extension	Transfer	Host Code ...	Local Code...	Local Bidi F...	Size	Last Modified	Created	Last Modifi...
G0004V00 (0)		text	IBM-037	Cp1252	Default	0 bytes		4/8/11 12:00 AM	
G0003V00 (-1)		text	IBM-037	Cp1252	Default	0 bytes		4/8/11 12:00 AM	
G0002V00 (-2)		text	IBM-037	Cp1252	Default	0 bytes		5/23/10 12:00 AM	
G0001V00 (-3)		text	IBM-037	Cp1252	Default				

Delete Dataset

- IDz alternative to ISPF 3.2 delete option
- From within your connection:
  - Right-click over the file resource you wish to delete:
    - Sequential (QSAM) dataset
    - PDS
    - GDG model and datasets
    - VSAM files
  - Select **Delete…**
  - At the Confirm, click:
    - **Delete** …or…
    - **Cancel**

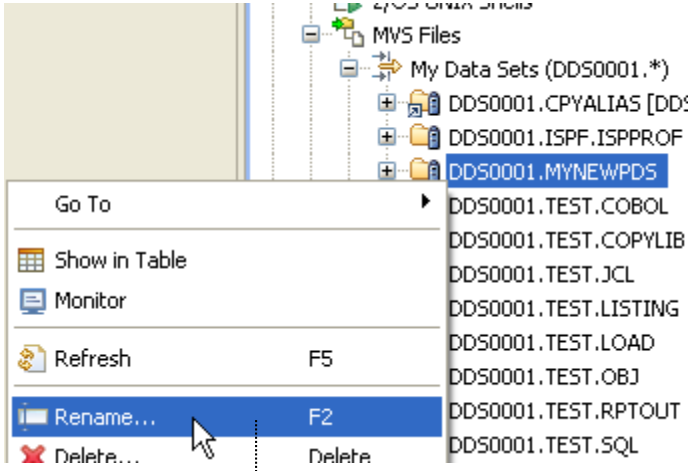


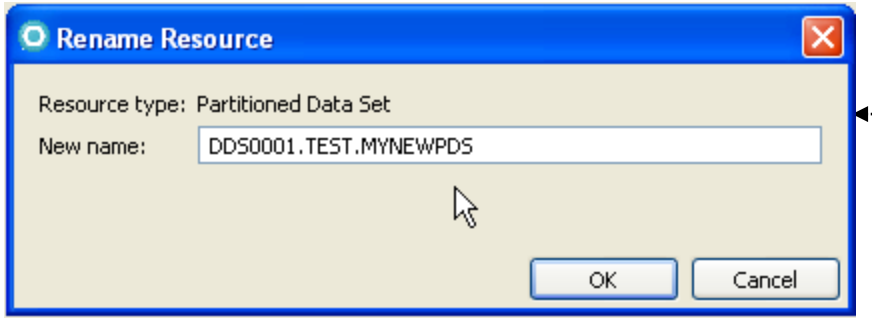


No need to run IDCAMS JCL to delete VSAM files.

Rename Dataset

- IDz alternative to ISPF 3.2 rename option
- From within your connection:
  - Right-click over the file resource you wish to rename:
    - Sequential dataset
    - PDS
    - PDS members
    - GDG
  - Select **Rename…**
  - At the Rename Resource prompt:
    - Enter your new name, and click:
      - OK …or…
      - Cancel

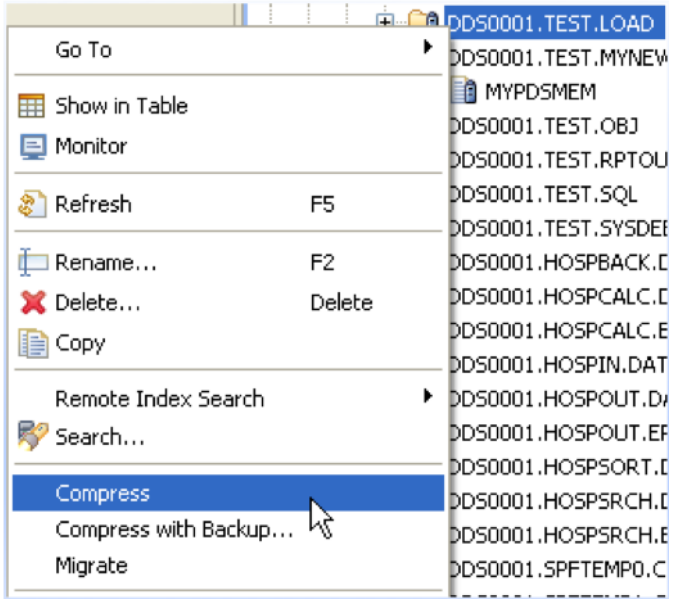




Note that you can rename multiple datasets or multiple PDS members in a nice tabular form

Compress a PDS

- IDz alternative to ISPF 3.1 compress option
- From within your connection:
  - Right-click over the PDS (note… not PDSE – as PDSE files do not need to be compressed) resource you wish to compress:
  - Select **Compress PDS… or…**
  - **Compress with Backup…**

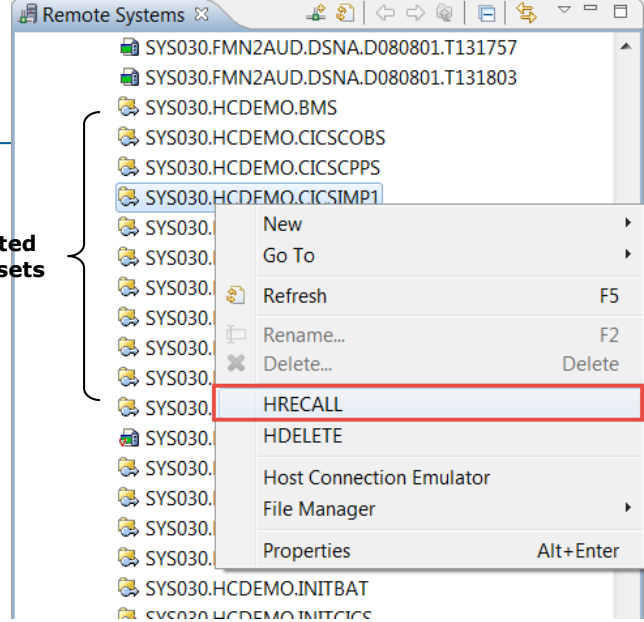


📖 By compressing a PDS, TSO cleans up (deletes) the "marked-for-deletion-but-not-deleted" PDS directory entries for the PDS members

http://publib.boulder.ibm.com/infocenter/zos/basics/index.jsp?topic=/com.ibm.zos.zconcepts/zconcepts_163.htm

Migrate and Recall a Dataset

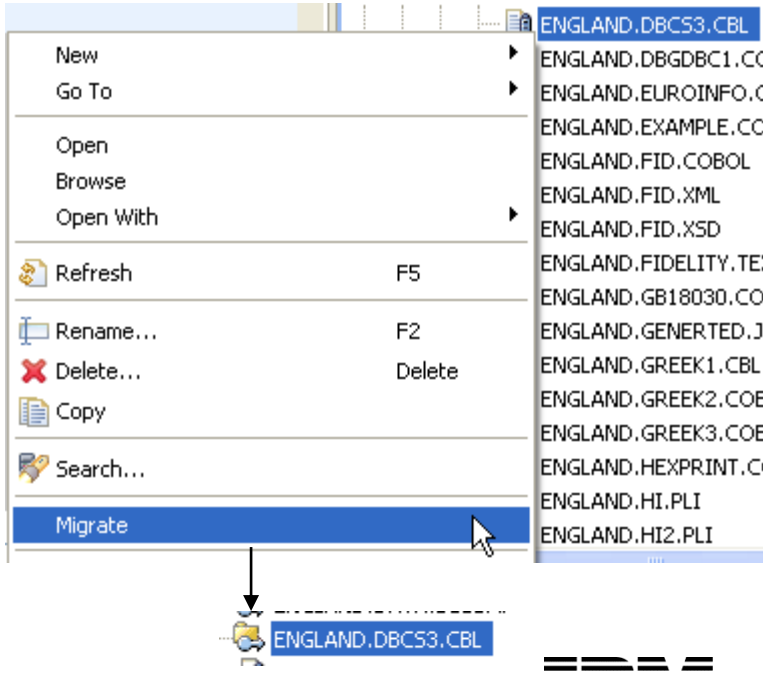
- IDz – Remote Systems explorer alternative to DFSMS commands:
  - HRECALL
  - HDELETE
  - MIGRATE



- From within your connection:
  - Right-click over the migrated dataset you wish to work with:
    - Select **HRECALL … or…**
    - **HDELETE**

    Note the different RSE icon for migrated files

  - Right-click over the dataset you wish to migrate:
    - Select **Migrate**



Note – when an HRECALL is submitted, the data is recalled and the icon changes after the RECALL is successful -- there is an ***auto refresh*** of the RSE entries

ISPF and Remote Systems Dataset Management Options

ISPF Option	Remote Systems Process or Option
3.1 – Library Utility	**Remote Systems view**
Member list	Expand folder
Compress dataset	Context menu Compress or Compress with Backup
Print entire dataset	N/A – use Menu Manager
Print dataset index	N/A – use Menu Manager
Dataset information	Properties view
Edit member	Double-click – or Context menu/Open
Browse member	Context menu/Browse
Delete member	Context menu/Delete
Rename member	Context menu/Rename
Print member	Context menu/Print
3.2 Dataset Utility	**Remote Systems view**
Allocate Dataset	Context menu/Allocate
Rename Dataset	Context menu/Rename
Delete Dataset	Context menu/Delete
Dataset information	Properties view
Catalog	N/A – use Menu Manager
Un-catalog	N/A – use Menu Manager
VSAM Utilities	File Manager (z/OS Problem Determination Tools)
3.3 Copy Utility	**Remote Systems view**
Copy	Drag & Drop, Context menu/Copy → Context menu/Paste
Move	Drag & Drop then Delete
Copy and Print	Drag & Drop – then Print
Move and Print	Drag & Drop – then Print, then Delete