# UDM
UNIVERSAL DATA MANAGER

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UDM Fact Sheet

What is UDM?

Universal Data Manager (UDM) is a unique, state-of-the-art, solution for managing an organization's z/OS Storage at an Enterprise Level, including, Tape Robots and Tape Catalogs, DFSMShsm, CA-Disk, ICF Catalogs, DASD Volumes, DFSMS objects, Spool data and other related objects. The overall ease of installation and automated analysis provides the controls, information, and reporting needed to manage the dynamics of modern Storage environments.
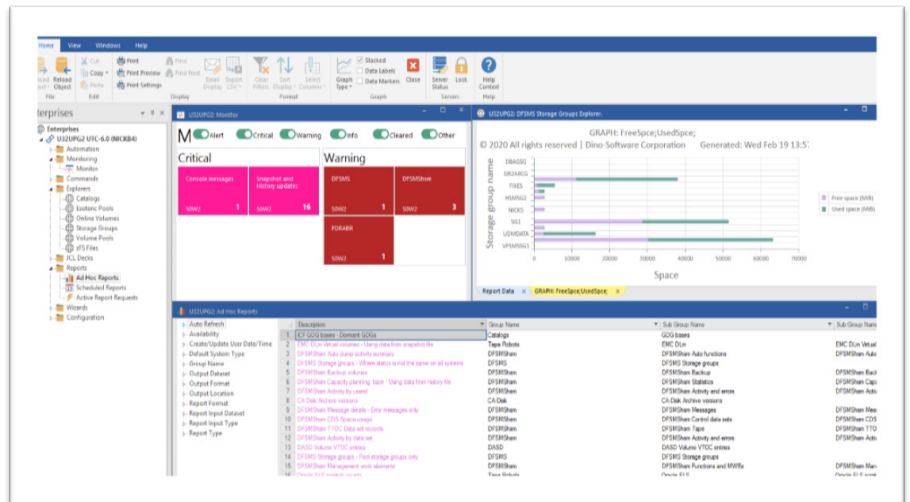
What is unique about UDM's architecture?

Unlike other products, UDM's architecture communicates directly with z/OS hosts and **does not use distributed servers** or databases. This simplifies product installation and management.

Installation
- One z/OS Host System is nominated within a UDM complex as the Enterprise System. This System serves as the user gateway and acts as a central repository for saved information such as commands, JCL decks, and Report queries.   The Host Server is simply a Started Task on the z/OS System.
- When the user logs into the UDM GUI, it retrieves all saved information from the Enterprise System and then allows the user the option to submit one of the saved objects, a Command for example, to one or more target Systems. The request is then sent from the GUI to the selected UDM Host Servers via TCP/IP.
- When a Host Server receives a request, it runs the process and returns the results from the request back to the GUI. All the results are accumulated and displayed in a single Results Display window.

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Management

Using the **UDM GUI** interface, users can:

- **Automate** the management of z/OS objects by dynamically reacting to Console messages or conditions, or users can schedule timed processes to interrogate the status of an object.
- **Monitor** the status of z/OS objects via the centralized monitor, which allows a user to view and react to alerts from all z/OS Systems via a single GUI window.
- **Report** on all aspects of enterprise z/OS Storage subsystems centrally, in real time or historically, using SQL filters. Using a single request, for example, a user can view in a central window the status of Storage groups on all of their z/OS Systems.
- **Maintain** z/OS Systems using the Command or JCL interfaces which allow users to centrally define, store and run z/OS commands or JCL decks.
- **Simplify** the management of z/OS Systems using items such as the Volume Initialize wizard or the Storage Explorers.

Simplified installation, minimal customization and pre-configured processes mean users can install and gain the benefits from the product in minutes rather than days.

Why is UDM necessary?

Management of z/OS storage is becoming more of a challenge due to the ever-increasing size of Data Storage farms and the decrease in the manpower to Terabyte ratio needed to manage this Storage. The net result is critical management processes such as Audits of the Catalog environment or monitoring of DFSMShsm environments are being ignored, while other tasks such as the initializing of volumes are performed without the time to ensure the required checks have been actioned, thereby increasing the possibility of user errors.
UDM solves these issues by simplifying and automating most of the tasks involved in managing data.

Distributed with UDM are a series of processes, which collectively provide an **out of the box solution** that will:

- Collect information on objects and retain Historical information allowing proactive analysis of data to determine any actions required.
- Simplify the processes needed to report on an object via a series of boxed reports.
- Trap critical Console messages and send an alert when critical conditions such as DASD errors occur.
- React to object conditions such as Catalog or VTOC errors or Scratch Tape shortages and take corrective actions or send email alerts about the condition via the Object automation interface.
- Provide notification of exception conditions as they occur via the central Monitor window that receives alerts from all controlled Systems.
- Simplify the day to day processes such as initializing volumes by ensuring volumes are offline to all systems, including systems outside the sysplex.

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Additionally, UDM provides the ability to define and test Service Level Agreements on a single system and then, via a single mouse click, provides the ability to Propagate the processes to manage these service levels to all controlled Systems.

Who is UDM designed for?

UDM fits seamlessly into any Data Center due to its flexible architecture. Customers with existing third party products can easily tailor UDM to interface with these existing products.

Irrespective of the Data Center size, UDM provides immediate benefits:

- Large multi-site customers can use UDM to define a standard set of Service Level Agreements and then propagate these to existing customer Systems, via a single mouse click, or implement these standard Service Level Agreements as new customer Systems come on board.
- Big data Centers benefit from the ability to work with multiple systems at the same time; for example, defining a new ICF Alias for a new User can be performed on all Sysplexes in a single request.
- Smaller data centers with less manpower resources benefit from the supplied and pre-configured processes, meaning fewer resources are needed to maintain and monitor storage, thereby freeing up personnel for other tasks.

Storages Managers, operations support, systems programmers and capacity planners can all benefit from the UDM features:

- Storage managers can use the powerful monitoring facilities to be alerted when critical Storage conditions occur such as full Catalogs or Storage groups. They can then utilize delivered Commands or JCL to react to these conditions or customize the product with their own, site specific, actions.
- Capacity planners, using the SQL based reporting processes, can automate the collection of capacity related data such as Usage by High-level qualifier or Tape usage growth and easily review and manipulate this data.
- Operations support can easily analyze problems such as volumes accidently being offline to systems and react using customized Commands or JCL decks.
- Systems programmers can easily analyze System messages, Spool or the general Storage architecture and issue z/OS maintenance commands via the Commands Interface.

When should UDM be used?

UDM can be used to proactively monitor Systems, collect information and react automatically to conditions, or it can be used to perform ad hoc tasks on request.

By activating UDM on a System, simply by starting the Started task, UDM will be automatically monitoring and maintaining Systems, as well as collecting historical information on Systems for further analysis.

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Once active, UDM provides a comprehensive set of processes, which allow users to perform common tasks such as the following:

- Identify volumes with a high Fragmentation Index and then build and submit DFDSS DEFRAG control cards.
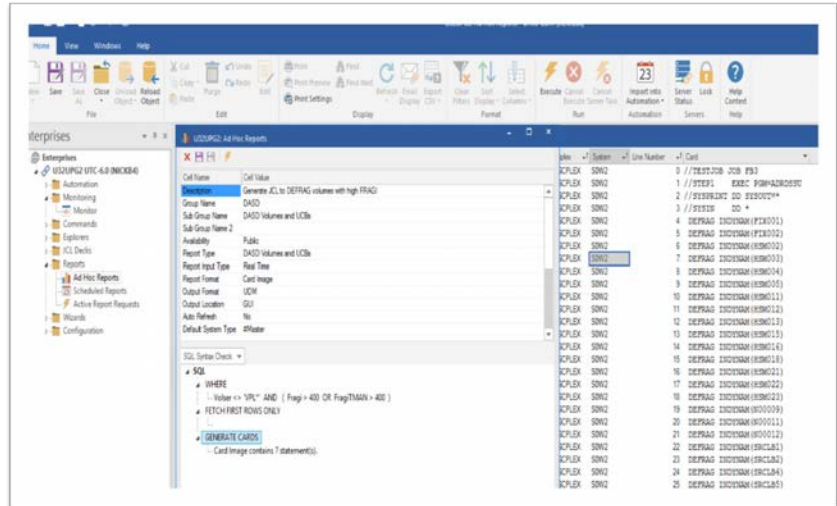
- Generate and submit IDCAMS DEFINE ALIAS control cards on all Sysplexes to define a new User ID.
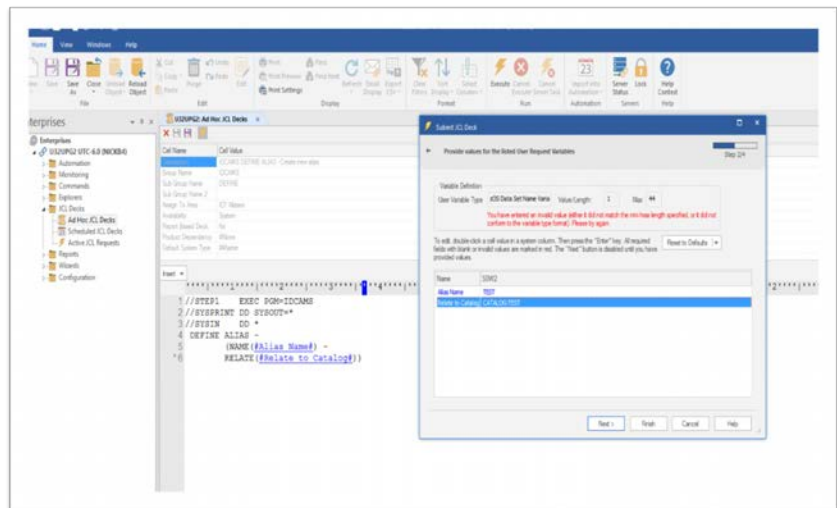
- List all datasets associated to specific mask across all Systems and Sysplexes and generate control cards to delete them.
- Identify DFSMShsm volumes, which have failed Recycle or Creation across all DFSMShsm systems.

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- Identify who is filling up the spool by running the Spool report, grouping by Owner ID, and Summarizing by Record count.

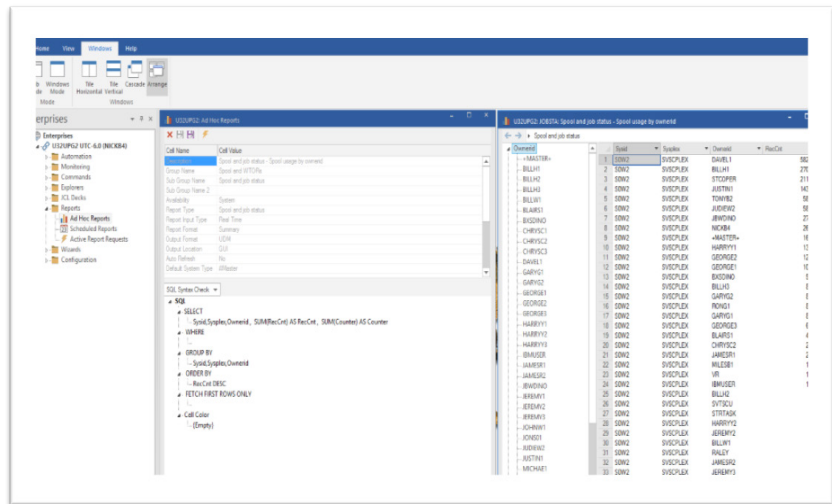- Trap message IGD008I (DFSMS configuration activated), locate the active SCDS and ACS routines, and create a date-timed backup of the datasets.
- Identify non-duplexed VTV Volumes with an Oracle VTSS subsystem.
- Automatically issue a DFHSM SWAPLOG command on all systems at midnight.
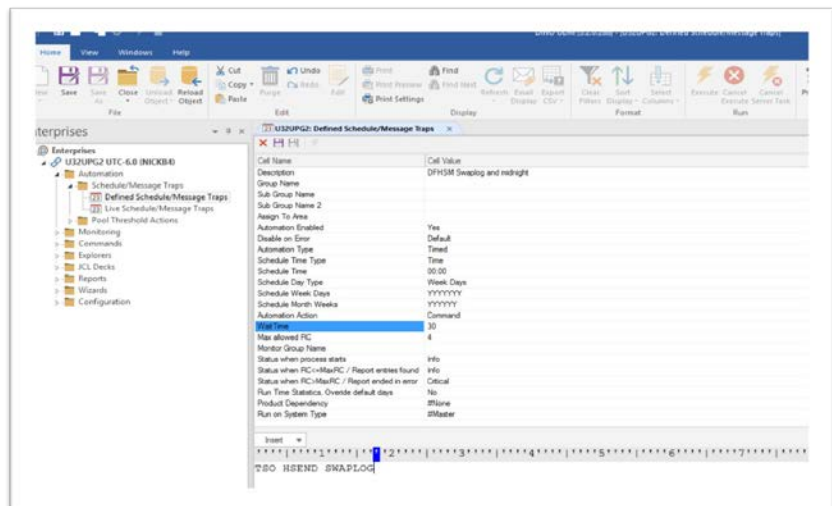
How can UDM save me money?

Using UDM you can save time, money and resources:

- It can simplify and expedite the inclusion of new Systems by allowing a user to easily port Storage management SLAs and processes to new z/OS systems via a single mouse click.
- Changes to Storage Management processes can be ported to all systems in the Enterprise, also via a single mouse click, ensuring a dramatic reduction in resources needed in managing multiple

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Systems and Sysplexes.

- It can automate the collection of data to allow making informed decisions on when more storage is required, or better still, it can identify the wastage in an environment which if cleaned up would negate the need for further Storage acquisitions.
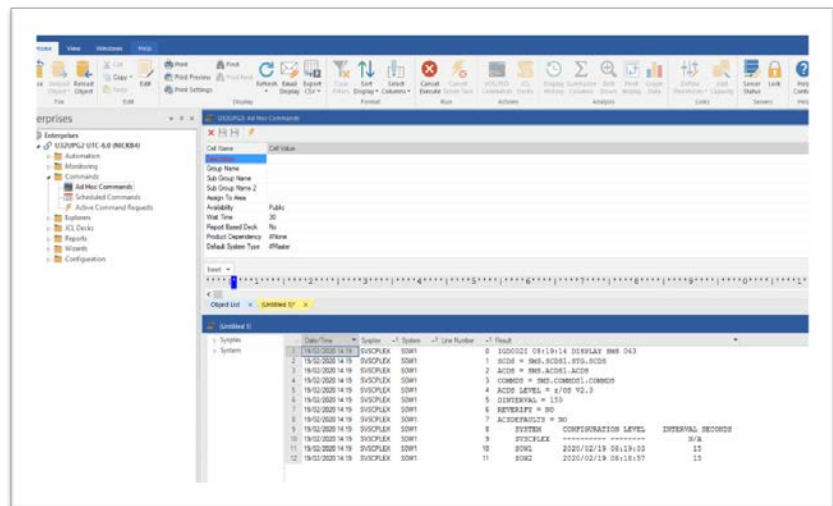- It can remove the risks and consequences of errors and omissions such as out of space failures, ICF catalogs are full, failed backups etc., all that are otherwise avoidable with advance notification and resolution with UDM.
- It can reduce Software inventory. If there are individual products to report on parts of a Storage subsystem or products to automatically defragment volumes or products to identify and repair errors, UDM would reduce Software costs, as it can perform all these functions and more in a single product.
- It can reduce the manpower needed to manage z/OS Systems. If there are multiple Systems and Sysplexes and a user needs to clean up the datasets for a TSO User who is leaving the company, it is likely they will need to log onto each Sysplex and manually list and remove the User's data. Using UDM, a single action could list all the User's data from ALL Systems and Sysplexes, and a subsequent Delete action could remove all the data in a single mouse click.

What are some specifics of UDM?

A streamlined installation process ensures minimum resources are required during the install process:

- The Host Installation requires three libraries to be downloaded, one parmlib per Sysplex to be configured with minimum parameters, and the UDM Started task to be started.
- The GUI installation requires the GUI.EXE to be loaded into a folder shared by all potential users of the product.
- UDM integrates into your existing security infrastructure; all actions are run using the authorization of the calling user and not the authority of the Started task.

It simplifies z/OS command management via the Command Interface:

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- It allows z/OS and TSO commands to be centrally stored in a single location and then issued to multiple Systems in a single request.
- It ensures Command output from all Sysplexes is returned to a single GUI Window.
- It allows generic Command decks to be created via the use of Variables; for example, a Vary command could have a variable Unit Address that would result in the user being requested to specify the Unit Address prior to generating the command.
- It ensures Commands are submitted using the authority of the caller and not the UDM Server.

If simplifies JCL management via the JCL Interface:

- It allows JCL decks to be centrally stored in a single location and then submitted to multiple Systems in a single request.
- The Integrated Spool management processes allow a user to review the status of Jobs, including the output, from multiple systems in a single GUI window.
- It allows generic JCL decks to be created via the use of Variables; for example, an IEBCOPY compress dataset JCL deck could have a variable Dataset Name, which would result in the user being requested to specify a Dataset name to compress prior to generating the command.
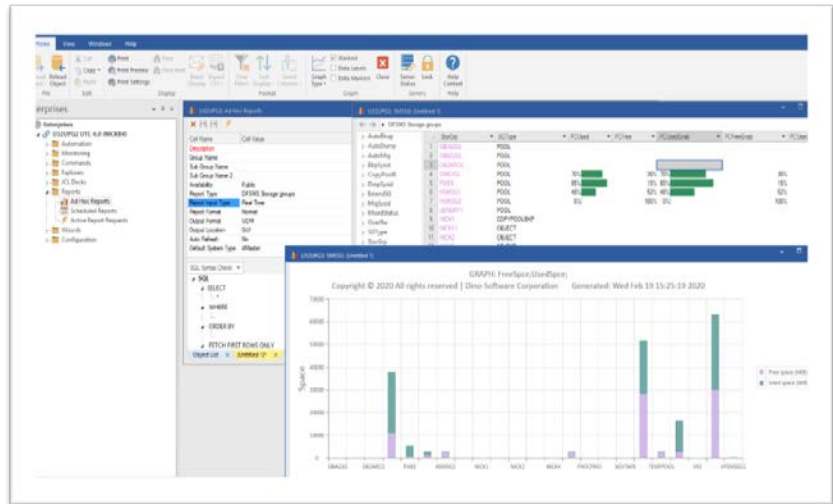
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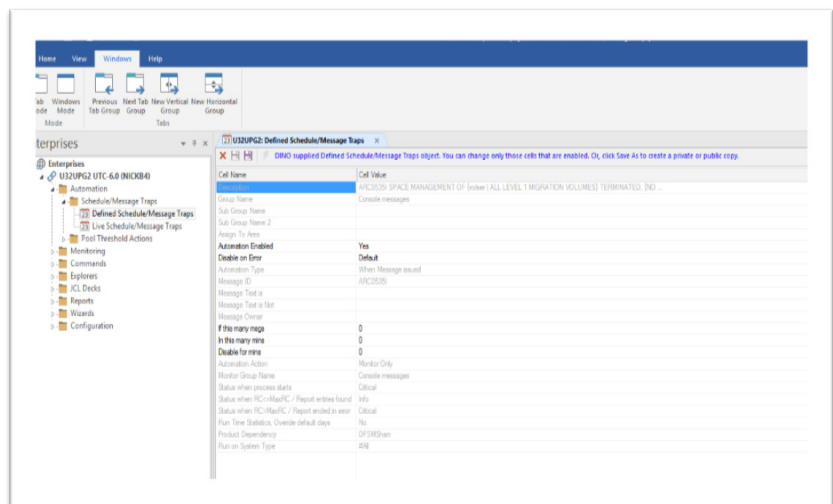
It simplifies reporting procedures via the Reporting Interface:

- It allows reporting on a specified Object across multiple systems in a single request.
- Results from all Systems are returned within a single GUI Window.
- Full SQL filtering ensures Report data can be sorted, filtered, or summarized using standard SQL syntax, meaning complex filters can be set up to identify specific conditions or Group and Sum features can be used to generate Summary reports.
- Drill-down functions ensure easy cross reference between reports; for example, when listing Storage groups, a user can easily list the Datasets on the selected Storage group(s) or Volumes within the selected Storage group(s).
- History functions simplify predictive analysis; for example, when displaying Storage groups, selecting a Storage group and the History option display historic information about the selected Storage group.
- Action functions allow displayed Report data to be used as input to JCL or Command skeletons.

It automates the analysis of important Console messages via the Automation Message Trap Interface:

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- It allows message trapping based on ID, type, or text within the message.
- It allows users to issue Commands, run JCL decks, start Report processes or send a notification to the central Monitoring interface when the Message occurs.

It automates the implementation of Service levels via the Automation Scheduling Interface:

- It allows users to initiate processes at specified times when existing UDM controlled schedules end or when independent jobs end.
- It allows users to analyze the state of an object, such as the utilization of critical Storage Groups, and take actions based on the object's condition.
- Processes include running commands, submitting JCL, and the starting of reports; additionally, dynamic repair actions can be generated and submitted. For example, a timed process to identify volumes with a High Fragmentation index which would then generate and submit the appropriate DEFRAG control cards.

It informs users of Conditions as they occur via the Monitoring Interface:

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It receives UDM driven alerts from all systems in a single GUI window.
- Alerts can be setup based on a message being issued, a job or process ending, or as a result of a Report query returning data, such as a report process for locating Catalogs, which are full.
- Alerts can be targeted to specific sections such as Catalog alerts.
- Drill-down processes allow a user to see at a glance if they have a problem with something, for example, Catalogs. It additionally displays a summary of the problem; for example, Catalogs are full, and the actual Catalogs which are full.

Dino-Software develops enterprise-wide solutions for the management, analysis, protection, and repair of complex z/OS mainframe environments. Dino-Software has long been acknowledged for its superiority in ICF catalog management and technical support, helping organizations ensure their business-critical assets remain online and recoverable in a disaster. Learn about Dino-Software's mainframe storage solutions at dino-software.com.

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Alte Landstr 25
85521 Ottobrunn
+49 - 89 - 99 14 99 0
http://www.interchip.de