



IBM DS8880 delivers transparent cloud tiering to migrate and recall data from the cloud

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Overview

Modern enterprises have adopted cloud storage to overcome the massive amount of data growth. A new software layer on top of the existing DS8880 will help manage data from flash to the correct tier for faster access to the cloud at the lowest cost.

Transparent cloud tiering

Transparent cloud tiering enables a DS8880 to migrate and recall data in cloud storage. This functionality is exploited on z/OS^(R) by DFSMSHsm and other software to provide the ability to use on-premise or public cloud storage for archive of data. The use of transparent cloud tiering enables server-less data movement and efficiencies in DFSMS which reduce CPU processing and frees up MIPS for use by other applications.

UNMAP command (VMware support)

DS8880 supports the UNMAP commands issued directly by the VMware host to reclaim storage space. The use of UNMAP command enable efficiencies in data management and frees up storage space for other applications or hosts.

Key prerequisites

All released features and functions supported on the IBM^(R) DS8000^(R) series require DS8000 LMC 8.8.23.xx.xx (bundle version 88.23.xxx.xx), or later.

Planned availability date

June 9, 2017

Description

Transparent cloud tiering

Cloud object storage delivers a solution to consolidate and store various types of unstructured data that is both dense and cost effective, whether on-premise using IBM Cloud Object Storage or a public or hybrid cloud.

IBM DS8880 offers transparent cloud tiering, a software feature that enables users to migrate and recall data directly from the DS8880 to cloud object storage without the data going through the mainframe. With tight integration with IBM DFSMS software, data continues to be managed by DFSMSHsm without major changes in the operational model.

The combination of server-less data movement through DS8880 and the efficiencies in DFSMS enable a reduction in CPU processing and frees up MIPS for use by other applications. This also helps with data management across the enterprise system by adding another tier for which cold data can be archived to. With transparent cloud tiering, this additional tier will enable an IBM TS7700 to be the target of DFSMSshm migration data.

Transparent cloud tiering is a software-only enhancement and does not require additional DS8000 hardware as it uses the existing Ethernet ports on DS8000 servers. Microcode support for this function is available for R8.2.3. This support also requires z/OS V2R1 with APAR OA51622 or z/OS V2R2 with APAR OA50667.

In this release, only ECKD™ data format type is supported and use is restricted to simplex devices only. Configuration to connect the DS8880 to cloud object storage is performed using DSCLI and ISMF panels via a new SMS construct in z/OS.

UNMAP command (VMware support)

VAAI Thin Provisioning Block Space Reclamation (UNMAP) Primitive feature is introduced in vSphere 5.0. This feature is designed to efficiently reclaim deleted space to meet continuing storage needs.

The VMware host will notify the storage device about freed space on a thin-provisioned LUN by sending a SCSI UNMAP command. DS8880 will release any entire extents that have been allocated within that freed space.

On DS8880, the extent size is either 16 MB for small extents or 1 GB for large extents. Therefore, for any space to be released, the request must be for at least 16 MB. If the request is not aligned on extent boundaries, then only full extents contained within the requested range will be released.

The UNMAP command can help improve the efficiency of storage management and released space can be claimed for use by other applications.

This function is available for R8.2.3 and also required ESXi version 5.0, or higher, on the host.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be found on the [IBM Accessibility](#) website.

Section 508 of the US Rehabilitation Act

IBM DS8880 storage family is capable, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be found on the [IBM Accessibility](#) website.

Reference information

For additional information about DS8880 models 980, 981, 98B, and 98E, refer to the following Hardware Announcements:

- [115-139](#), dated October 20, 2015
- [115-142](#), dated October 20, 2015
- [115-140](#), dated October 20, 2015
- [115-141](#), dated October 20, 2015

For additional information about DS8888 all-flash models 982 and 98F, refer to the following Hardware Announcements:

- [116-044](#), dated May 31, 2016
- [116-045](#), dated May 31, 2016
- [116-046](#), dated May 31, 2016
- [116-047](#), dated May 31, 2016

For additional information about DS8880 models 984, 985, 986, 84E, 85E, and 86E, refer to the following Hardware Announcements:

- [116-097](#), dated November 2, 2016
- [116-098](#), dated November 2, 2016
- [116-099](#), dated November 2, 2016
- [116-100](#), dated November 2, 2016

For additional information about DS8880 all-flash models 984, 985, 986, 988, 85E, 86E, and 88E, refer to the following Hardware Announcements:

- [117-003](#), dated January 10, 2017
- [117-004](#), dated January 10, 2017
- [117-005](#), dated January 10, 2017
- [117-006](#), dated January 10, 2017

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