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Frequently Asked Questions for Documentum Object Replication

Documentum Support Services
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1.) What is Object Replication?
    Object Replication (aka "Replication Services") is the replication of objects and their associated content files from one Docbase to another.

2.) How do I install Object Replication?
    Object Replication is installed automatically during Docbase creation with the replicate_bootstrap script. To install Object Replication manually in a Docbase, on UNIX run $DM_HOME/install/dm_apply_replicate_bootstrap, on Windows run the command: dmbasic -ermain - f<full path to $DM_HOME\bin\replicate_bootstrap.ebs -- <docbase name> <full path to $DM_HOME\bin directory>

3.) What is the difference between push and pull Replication?
    Push replication refers to a Replication job that is created and runs in the source Docbase and pushes objects to the target. Pull Replication refers to a Replication job that is created and runs in the target Docbase and pulls objects from the source.   The Docbase where the original objects are located is referred to as "source" and the Docbase where the objects are replicated is referred to as "target".

4.) Are there any "best practices" to follow when setting up my Replication job?
    Yes, observe the following rules regarding object replication to preserve structural and data consistency in the participating Docbases:

    a.) If a folder is a target folder in one replication job and a source folder in another replication job, do not schedule the two jobs to run concurrently or overlapping.
    b.) Do not change job settings for the source and target after a job has been run.
    c.) If the same documents are replicated to more than one target folder in the same Docbase, the parameters of each job (security and Fulltext settings, federation mode, and so forth) must match and the jobs must not run concurrently or overlapping. (Version mismatch errors may occur if the jobs are run concurrently).
    d.) To delete a replica from a target Docbase, first move the source object out of the source folder. If there are multiple jobs replicating the object to that target Docbase, remove the object from each source folder that replicates to that target Docbase. Then, use a Prune method and delete the replica's entire version tree in the target Docbase.
    e.) Do not create or link local folders to a target folder.
    f.) Do not move a replicated folder in a target Docbase to another location. It is acceptable to link a replicated folder to another, local folder or cabinet. However, do not remove the primary link to the target folder.
    g.) To delete a folder that contains replicas, first remove the replicas from the folder.

5.) Do my Docbases need to be in a Federation to use "Federated" Replication mode for a Replication job?
    No, running a Replication job using federated replication mode does not require the Docbase to be part of a federation and actually has nothing to do with "Federations". (The term "Federations" refers to Docbases that are grouped together so that user administration among the Docbases is easier. This provides the ability to automatically copy users, groups and ACLs from 1 Docbase (governing) to other Docbases (members) inside the "federation". A federation is not required for any specific functionality. A federation just automates the process of creating the same users, groups, and ACLs in multiple Docbases.) The replication mode on a Replication job controls how the job handles security and content storage. It's used in conjunction with the Replication Option. See Chapter 1 of the Distributed Configuration for a

description of all possible settings. (Note, the documentation mentions that federated mode is used for Docbases in a federation, this is a documentation bug.)

6.) What is Fast Replication?
   Setting Fast Replication to T in a Replication job means the job will not (with the exception of annotations), consider related objects for replication. Using fast replication can improve performance during the "Unload of Source Docbase" phase in Replication for incremental Replication jobs. To see if fast replication is right for you, please refer to the Chapter 1 of the Distributed Configuration Guide for more details.

7.) What mechanism is used to replicate objects and their associated content files?
   Object Replication uses an internal form of Documentum's Dump and Load utilities to replicate objects and their associated content files.

8.) Where is the Dump file located on the source machine?
   $DOCUMENTUM/share/temp/replicate/<source docbasename> is the location where the dump file is written on the source machine. The file name for the dump is "dump_<job id>". There's also another file present here called "delsync_<job id>" and contains information about the objects that were deleted from the source and therefore need to be deleted from the target.

9.) Since Dump and Load is being used can I load the dump file into the target Docbase myself?
   No. The load used for replication uses special replication-only internal flags. The dump file cannot be loaded manually.

10.) Why is my Replication job running a full refresh even though I have full_refresh set to F on the job settings?
   A full refresh replication will take place regardless if full_refresh is set to F on the job settings under the following conditions, if the replication_date value for this job in the dm_replication_events table is not equal to the value of a_retention_date on the dm_job object, there is no row in dm_replication_events for this job, if the job is being run for the first time.

11.) How does the Replication job connect to the source and target Docbases?
   The Replication job uses a .cnt file to connect to the appropriate Docbase. The file is located in $DOCUMENTUM/dba/config/docbase name and is called <docbasename>.cnt. For example on the source machine there should be a $DOCUMENTUM/dba/config/docbase name/<target docbasename>.cnt file present. If the file is not present, the job will fail with error "Connect file doesn't exist. Cannot connect to replica Docbase."

12.) Is the dump file destroyed after the Replication job finishes?
   Yes, the dump file is destroyed unless the job was run using trace level 10 on the job settings. The trace level on a job is specified on the job settings.

13.) Can I estimate the size of the dump file?
   There are some guidelines listed in the Distributed Configuration Guide, but in general there's no good way to estimate what the size of the dump file will be.

14.) What is the Related Objects folder on the target Docbase used for?
   This is the folder where all objects that are considered "related" to the object that was replicated are located on the target Docbase. An example of a related object is when a Virtual Document is being

replicated and one of the child documents in the VDM resides outside of the source folder tree. The child document will be replicated to the Related Objects folder on the target. This folder is created regardless of whether there are objects to be placed there.

15.) If only an attribute value changes on a source object since the last time replication ran, will the content file associated with that object be re-replicated?
    No. The only time the content will be replicated is if the i_contents_id value of the object is different since the last time the object was replicated, or if a full refresh of the replication is being run.

16.) Can I edit a replica object?
    Yes, replica objects can be edited under the following conditions:
    a.) Must use a version 4.0 or higher dmcl.
    b.) Both Docbases must project to the same DocBroker. (If you are using Server 4.2 or higher, the dmcl.ini files on the source and target machines can contain both DocBrokers and have auto_request_forward=T instead.)
    c.) The source Docbase must be up and running.
    d.) The user and password editing the replica must be the same in both Docbases.

17.) How do I know which source object my replica object refers to?
    The r_ref_object_id attribute of the dm_reference object for the replica contains the r_object_id value of the source object that the replica refers to. The r_mirror_object_id of dm_reference points to the r_object_id of the replica object. For example, running this query on the target Docbase will return the r_object_id value of the source object that replica object with an r_object_id value of 090084a80000012a belongs to:
Select r_ref_object_id from dm_reference where r_mirror_object_id=' 090084a80000012a'

18.) Can I run replication between Docbases that are using different Server versions?
    Yes but you'll lose attributes that are not in the older version. Also if you're replicating between 4.2 and previous versions, data that includes international characters may become truncated in the 4.2 Docbase. Before release 4.2, string attribute lengths were defined as a number of characters. In release 4.2, under Unicode, string attribute lengths are defined as a number of bytes. This change in how a character is represented may result in the truncation of string attribute values in the 4.2 Docbase. For more details refer to the Documentum eContent Server Internationalization Release Note Addendum.

19.) Are renditions replicated?
    Yes renditions are replicated along with the content. However, you can create local renditions of a replica object and these are not replicated back to the source.

20.) Where can I find more information about Object Replication?
    For more information on Object Replication please refer to the Distributed Configuration Guide.

New **21.) I have several objects named "dump_08000567a8016e2ea" located in the Docbase Owner cabinet of my target Docbase, what are they and can they be deleted?**
    Those objects are placeholders for the dump files that are being loaded into the target Docbase. If the Replication job that's using that dump file is not still running then yes, these objects can be removed. Ensure that dmclean is run after deleting these objects so the underlying files in the Filestore are also deleted. (NOTE: The r_object_id of the job that's associated with the dump files is included in the name of the object.)

`New` **22.) If a replica object is deleted from the target Docbase, will the object be replaced the next time the Replication job runs?**

It depends, if a full refresh job is run then yes it will be replaced. If an incremental job is run then no it will not be replaced. The only way an incremental Replication job knows that an object needs to be re-replicated is if that object has changed on the source Docbase.

`New` **23.) Why do I see errors DM_API_E_EXIST and DM_SYSOBJECT_E_CANT_FETCH_INVALID_ID when attempting to check properties, edit or view a replica object with Desktop Client or any other DFC based client?**

This could be related to known bug 55825. Please see Support Note 20936 for more details.

`New` **24.) Is there a procedure documented on how to convert from using multiple Docbases with object replication to using a single Docbase with distributed content and content replication?**

No, there's currently no documentation on how to achieve this. Please contact Documentum Consulting for assistance on these types of issues.

`New` **25.) Why am I seeing error DM_CONTENT_E_OPEN_FAILURE when replicating more than 2 gig. of data?**

This could be related to known bug 35079. This bug only affects Server 4.2.x and is fixed in Server 5.1. The workaround for this bug is to run the Replication job using "Manual Transfer". NOTE: If Manual Transfer mode returns error "dmbasic: Error 57 in line 701: Device I/O error" you'll need to apply the patch for bug 43241.