Content Caching for FileNet P8 Content Engine (CE) explained

Question & Answer

Question

How does FileNet P8 Content Caching work and what is it used for?

Cause

This technote provides a detailed explanation of the use and benefits of creating a content cache area within a FileNet P8 domain.

Answer

The purpose of a content cache is to attempt to avoid transferring content over a WAN. P8 4.x and later have a concept known as "Sites". Sites allow Content Engine servers and other P8 domain components to be assigned to them. A Site is meant to represent a geographical location.

To illustrate how content caching works, presume there are two Sites in a P8 domain, site A and site B. Both Sites have one or more CE servers separated by a WAN with users in both Sites. A storage area is created at Site A so that content can be stored permanently at Site A.

Users in Site B need to retrieve the content from the Site A storage area. If there is no content cache, each time a piece of content is retrieved by a user in Site B, it will be transferred over the WAN from Site A to Site B. However, if a content cache is configured in Site B, then the first time a piece of content is retrieved from the Site A storage area, the content will be written to the cache in Site B by the CE. The next time that same content is retrieved from Site B, it will be read from the Site B cache (over the LAN, not the WAN).

There is a configuration option on the content cache area (Processing tab) called "Preload Content when created". This is useful when new content is being ingested from Site B and is subsequently going to be retrieved from Site B. After the content is ingested from Site B, the content must be sent over the WAN to be permanently stored in Site A. However, if "Preload Content..." is selected on the Site B content cache, the content ingested from Site B will also be stored in the Site B content cache. This means that the first retrieval of the content from Site B will be from the Site B content cache, not from the storage area in Site A.

In order to use a content cache for users in a remote location, you need to create a Site representing the remote location and have at least one CE server and at least one content cache assigned to the remote Site.

For example, let's say the primary CE server is running in the default site (i.e. Initial Site) and there is an object

store and a file storage area that reside in the Initial Site. If there is also a remote site in a different geographic location, you can create a new Site object in your P8 domain. Let's call the new Site object "Remote Site". See the first link below for how to create a Site.

The CE servers then need to be partitioned so that those CE servers that run in the local site are assigned to the "Initial Site" and those CE servers that run in the remote site are assigned to the "Remote Site" object. Please see the second link below for how to link server instances with Sites.

Next, a content cache area can be created for the "Remote Site" object. After creating the content cache area, make sure there is at least one "Virtual Server" configured in the remote site to use the content cache. Go to the Properties of the Remote Site object in P8 Enterprise Manager (FEM) and select the "Content Cache" tab. Make sure a value appears in the "Selected Content Cache Area" field. If there is nothing there, check the "override inherited settings" check box and select the content cache area that was created for the remote site. See the third link below for more details about configuring a content cache area.

Finally, enable the content cache for the file storage area in your object store. In P8 Enterprise Manager (FEM), open the Properties of the storage area in the Initial Site, select the Configuration tab and select the "Cross-site Only" option in the "Content Caching" section.

After doing this, the CE servers that run in the "Remote Site" know to use the cache area for any content that resides in a storage area in a different site (i.e. cross-site). Since the file storage area resides in the "Initial Site", the CE server running in the "Remote Site" first checks the local cache area for documents with storage area property equal to the file storage area.

Example: A user at the remote site attempts to retrieve content stored in the file storage area at the Initial Site. The requested content will be retrieved from the content cache area of the remote site if it is available in the remote content cache.. If not, the CE server at the remote site will access the content from the network mounted file storage area directly (across the WAN at the Initial Site) and stream it into the content cache area at the remote site while simultaneously returning the content to the user at the remote site.

Related Information

How to create a Site

(http://publib.boulder.ibm.com/infocenter/p8docs/v4r5m1/topic/com.ibm.p8.doc/ce_help/aboutem/aem_site_create_new.htm)

Linking servers and Sites

(http://publib.boulder.ibm.com/infocenter/p8docs/v4r5m1/index.jsp?topic=/com.ibm.p8.doc/ce_help/aboutem/dom_concepts.htm)

Configuring Content Cache

(http://publib.boulder.ibm.com/infocenter/p8docs/v4r5m1/topic/com.ibm.p8.doc/ce_help/contentstores/cs_configuration_content_cache_store.ht

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