12.4 DS8900F storage configuration for the CKD volumes

This list contains the steps to configure CKD storage in the DS8880:

1. Create the arrays.
2. Create the CKD ranks.
3. Create the CKD extent pools.
4. Create the LCUs.
5. Create the CKD volumes.

You do not need to create volume groups or host connects for CKD volumes. If I/O ports in FICON mode exist, access to CKD volumes by FICON hosts is granted automatically, following the specifications in the input/output definition file (IODF).

12.4.1 Creating the arrays

Array creation for CKD volumes is the same as for FB volumes. For more information, see 12.3.2, "Creating the arrays" on page 391.

12.4.2 Creating the ranks and extent pools

When ranks and extent pools are created, you must specify **-stgtype ckd**. Then you can create the extent pool as shown in Example 12-57.

Example 12-57   Rank and extent pool creation for CKD volumes

```
dscli> mkrank -array A2 -stgtype ckd
CMUC00007I mkrank: Rank R2 successfully created.
dscli> lsrank
ID Group State       datastate Array RAIDtype extpoolID stgtype
===============================================================
R0    0 Normal      Normal    A0             6 P0       fb
R1    1 Normal      Normal    A1             6 P1       fb
R2    - Unassigned Normal    A2             6 -        ckd
dscli> mkextpool -rankgrp 0 -stgtype ckd CKD_HPF_0
CMUC00000I mkextpool: Extent Pool P2 successfully created.
dscli> chrank -extpool P2 R2
CMUC00008I chrank: Rank R2 successfully modified.
dscli> lsextpool
Name       ID stgtype rankgrp status availstor (2^30B) %allocated available reserved numvols
============================================================================================
ITSO_FB    P0 fb            0  below            15232          12    15232        1       17
ITSO_FB    P1 fb            1  below            15833           8    15833        1        7
CKD_HPF_0 P2 ckd           0  below             7135           0     8098        1        0
```

When defining a rank, you can also specify the extent size. You can have ranks and extent pools with large 1113 cylinder CKD extents, or small 21 cylinder CKD extents. The extent unit is specified with the **-extsize** parameter of the **mkrank** command. The first rank added to an extent pool determines the extent size of the extent pool. Example 12-58 shows ranks with different extent sizes.

Example 12-58   CKD ranks with different extent sizes

```
dscli> lsrank -l
Date/Time: October 10, 2019 10:34:16 PM CEST IBM DSCLI Version: 7.9.0.501 DS: IBM.2107-75HAL91
ID Group State  datastate Array RAIDtype extpoolID extpoolnam stgtype exts   usedexts keygrp marray extsize (cap)
=================================================================================================================
```