Coherence mint elsődleges közbenső tároló

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PARTITIONED BACKING MAP

- the partitioned backing map is your best option for very large caches. The following example demonstrates how you could configure a partitioned backing map that will allow you to store 1 TB of data in a 50-node cluster.

```xml
<distributed-scheme>
  <scheme-name>large-scheme</scheme-name>
  <service-name>largeCacheService</service-name>
  <partition-count>20981</partition-count>
  <partition-map-scheme>
    <partitioned>true</partitioned>
    <external-scheme>
      <high-units>256</high-units>
      <unit-calculator>262144</unit-calculator>
      <unit-factor>3072741828</unit-factor>
      <nio-memory-manager>
        <initial-size>3MB</initial-size>
        <maximum-size>50MB</maximum-size>
      </nio-memory-manager>
    </external-scheme>
    <backup-storage>
      <type>off-heap</type>
      <initial-size>3MB</initial-size>
      <maximum-size>50MB</maximum-size>
    </backup-storage>
  </partition-map-scheme>
  <autostart>true</autostart>
</distributed-scheme>
```

- We have configured partition-count to 20,981, which will allow us to store 1 TB of data in the cache while keeping the partition size down to 50 MB.
- We have then used the partitioned element within the backing map scheme definition to let Coherence know that it should use the partitioned backing map implementation instead of the default one.
- The external-schema element is used to configure the maximum size of the backing map as a whole, as well as the storage for each partition. Each partition uses an NIO buffer with the initial size of 1 MB and a maximum size of 50 MB.
- The backing map as a whole is limited to 20 GB using a combination of high-units, unit-calculator, and unit-factor values. Because we are storing serialized objects off-heap, we can use a binary calculator to limit cache size in bytes. However, the high-units setting is internally represented by a 32-bit integer, so the highest value we could specify for it would be 2 GB.
- In order to allow for larger cache sizes while preserving backwards compatibility, Coherence engineers decided not to widen high-units to 64 bits. Instead, they introduced the unit-factor setting, which is nothing more than a multiplier for the high-units value. In the preceding example, the unit-factor is set to 1 GB, which in combination with the high-units setting of 20 limits cache size per node to 20 GB.
- Finally, when using a partitioned backing map to support very large caches off-heap, we cannot use the default, on-heap backup storage. The backup storage is always managed per partition, so we had to configure it to use off-heap buffers of the same size as primary storage buffers.