Optimize shards placement database action requests

<table>
<thead>
<tr>
<th>Method</th>
<th>Path</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>/v1/bdbs/{uid}/actions/optimize_shards_placement</td>
<td>Get optimized shards placement for a database</td>
</tr>
</tbody>
</table>

**Get optimized shards placement**

GET /v1/bdbs/{int: uid}/actions/optimize_shards_placement

Get optimized shards placement for the given database.

**Required permissions**

<table>
<thead>
<tr>
<th>Permission name</th>
</tr>
</thead>
<tbody>
<tr>
<td>view_bdb_info</td>
</tr>
</tbody>
</table>

**Request**

**Example HTTP request**

GET /bdbs/1/actions/optimize_shards_placement

**Response**

To rearrange the database shards, you can submit the blueprint returned in this response body as the shards_blueprint field in the PUT /bdbs/{uid} request.

**Example JSON body**
[{
  "nodes": [
    {
      "node_uid": "3",
      "role": "master"
    },
    {
      "node_uid": "1",
      "role": "slave"
    }
  ],
  "slot_range": "5461-10922"
},
{
  "nodes": [
    {
      "node_uid": "3",
      "role": "master"
    },
    {
      "node_uid": "1",
      "role": "slave"
    }
  ],
  "slot_range": "10923-16383"
},
{
  "nodes": [
    {
      "node_uid": "3",
      "role": "master"
    },
    {
      "node_uid": "1",
      "role": "slave"
    }
  ],
  "slot_range": "0-5460"
}]

Response headers

<table>
<thead>
<tr>
<th>Key</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Length</td>
<td>352</td>
<td>Length of the request body in octets</td>
</tr>
<tr>
<td>cluster-state-id</td>
<td>30</td>
<td>Cluster state ID</td>
</tr>
</tbody>
</table>

Status codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 OK</td>
<td>No error</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>Database UID does not exist</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>Not enough resources in the cluster to host the database</td>
</tr>
</tbody>
</table>

**Rearrange database shards**

Use the blueprint returned by the GET /bdbs/{uid}/actions/optimize_shards_placement request as the value of the shards_blueprint field to rearrange the database shards.

To ensure that the optimized shard placement is relevant for the current cluster state, pass the cluster-state-id, taken from the response header of the GET request, in the PUT /bdbs/{uid} request headers.

The cluster will reject the update if its state was changed since the optimal shards placement was obtained.

**Request**

**Example HTTP request**

PUT /bdbs/1

**Example JSON body**

```json
{
    "shards_blueprint": [
        {
            "nodes": [
                {
                    "node_uid": "2",
                    "role": "master"
                }
            ],
            "slot_range": "0-8191"
        },
        "...
    ]
}
```

**Request headers**

<table>
<thead>
<tr>
<th>Key</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host</td>
<td>cnm.cluster.fqdn</td>
<td>Domain name</td>
</tr>
<tr>
<td>Accept</td>
<td>application/json</td>
<td>Accepted media type</td>
</tr>
<tr>
<td>cluster-state-id</td>
<td>30</td>
<td>Cluster state ID</td>
</tr>
</tbody>
</table>

**Updated:** November 29, 2021