Object expiry

Using the Swift API, you have the option for objects to automatically be deleted, after they have passed an expiry threshold.

Prerequisites

In order to manage object expiry, be sure that you have installed and configured the `swift` command-line interface (CLI). There is presently no way to set object expiry with the `openstack` CLI.

Auto-deletion at a fixed date

In order for an object to be automatically deleted at a certain date, you must first convert that date to a POSIX timestamp. You may do so with the `date` command. For example, to retrieve the POSIX timestamp for February 29, 2024, at 0000 UTC, use this command:

```
$ TZ=Etc/UTC date -d '2024-02-29' +'%s'
1709164800
```

You can then set the `X-Delete-At` header on an object, so that it is automatically deleted at that time:

```
$ swift post -H "X-Delete-At: 1709164800" private-container testobj.txt
```

Then, you can read back the header with `swift stat`:

```
$ swift stat private-container testobj.txt
            Account: AUTH_30a7768a0ffc40359d6110f21a6e7d88
          Container: private-container
             Object: testobj.txt
       Content Type: binary/octet-stream
     Content Length: 12
      Last Modified: Mon, 05 Dec 2022 14:09:02 GMT
               ETag: 6f5902ac237024bdd0c176cb93063dc4
       Accept-Ranges: bytes
        X-Timestamp: 1670249342.53870
         X-Delete-At: 1709164800
          X-Trans-Id: tx00000646596cd018a2d7b-00638dfb91-300de11-default
X-Openstack-Request-Id: tx00000646596cd018a2d7b-00638dfb91-300de11-default
```

Auto-deletion after a time period

Instead of giving an absolute time with `X-Delete-At`, you can also use `X-Delete-After` (in seconds), so that the object is automatically deleted after that timespan. This example uses 600 seconds or 10 minutes:

```
$ swift post -H "X-Delete-After: 600" private-container testobj.txt
```

The Swift API then converts this into an `X-Delete-At` header, adding the specified time span to the date the request is received (indicated by the `X-Timestamp` header).

You can then read back the object metadata. Observe that in this example, the difference between the `X-Timestamp` and `X-Delete-At` headers is 600 seconds:

```
$ swift stat private-container testobj.txt
            Account: AUTH_30a7768a0ffc40359d6110f21a6e7d88
          Container: private-container
             Object: testobj.txt
       Content Type: binary/octet-stream
     Content Length: 12
      Last Modified: Mon, 05 Dec 2022 14:09:55 GMT
               ETag: 6f5902ac237024bdd0c176cb93063dc4
      Accept-Ranges: bytes
        X-Timestamp: 1670249395.20576
        X-Delete-At: 1670249995
          X-Trans-Id: tx0000065937c08551ba2be-00638dfbb6-301ddeb-default
X-Openstack-Request-Id: tx0000065937c08551ba2be-00638dfbb6-301ddeb-default
```

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