

Rackspace API Key Authentication

EXT v1.0 (Aug 26, 2011)

DRAFT



RACKSPACE API Key Authentication Extension (Service Operations)

EXT v1.0 (2011-08-26)

Copyright © 2011 Rackspace US, Inc. All rights reserved.

This document is intended for client developers interested in using the Rackspace API Key Authentication Service Extension along with the Keystone - OpenStack Identity (API). The document is for informational purposes only and is provided "AS IS."

RACKSPACE MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS OF THIS DOCUMENT AND RESERVES THE RIGHT TO MAKE CHANGES TO SPECIFICATIONS AND PRODUCT/SERVICES DESCRIPTION AT ANY TIME WITHOUT NOTICE. RACKSPACE SERVICES OFFERINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE. USERS MUST TAKE FULL RESPONSIBILITY FOR APPLICATION OF ANY SERVICES MENTIONED HEREIN. EXCEPT AS SET FORTH IN RACKSPACE GENERAL TERMS AND CONDITIONS AND/OR CLOUD TERMS OF SERVICE, RACKSPACE ASSUMES NO LIABILITY WHATSOEVER, AND DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO ITS SERVICES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NONINFRINGEMENT.

Except as expressly provided in any written license agreement from Rackspace, the furnishing of this document does not give you any license to patents, trademarks, copyrights, or other intellectual property.

Rackspace®, Rackspace logo and Fanatical Support® are registered service marks of Rackspace US, Inc. All other product names and trademarks used in this document are for identification purposes only and are property of their respective owners.

Table of Contents

| | |
|---|---|
| 1. About This Extension | 1 |
| 1.1. Document Change History | 2 |
| 2. Summary of Changes | 3 |
| 2.1. New Headers | 3 |
| 2.2. New Faults | 3 |
| 2.3. New Resources | 3 |
| 2.4. New Actions | 3 |
| 2.5. New Element | 3 |
| 2.5.1. Rackspace extensions to Keystone v2.0 API enabling API Key authentication. | 3 |

List of Examples

| | |
|--|---|
| 1.1. Extension Query Response: XML | 2 |
| 1.2. Extension Query Response: JSON | 2 |
| 2.1. XML Auth Request using apiKeyCredentials | 4 |
| 2.2. JSON Auth Request using apiKeyCredentials | 4 |
| 2.3. XML Auth Response | 4 |
| 2.4. JSON Auth Response | 5 |

1. About This Extension

| | |
|-------------------|---|
| Name | Rackspace API Key Authentication Service Extension |
| Namespace | http://docs.rackspace.com/identity/api/ext/RAX-KSKEY/v1.0 |
| Alias | RAX-KSKEY-service |
| Dependencies | Keystone - OpenStack Identity |
| Doc Link (PDF) | https://github.com/openstack/keystone/raw/master/keystone/content/service/RAX-KSKEY-service-devguide.pdf |
| Doc Link (WADL) | None, the extension makes no modification to the API WADL. |
| Doc Link (XSD) | https://raw.githubusercontent.com/openstack/keystone/master/keystone/content/service/xsd/RAX-KSKEY-credentials.xsd |
| Short Description | Rackspace extensions to Keystone v2.0 API enabling API Key authentication. |

Example 1.1. Extension Query Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<extension xmlns="http://docs.openstack.org/common/api/v2.0"
  xmlns:atom="http://www.w3.org/2005/Atom"
  name="Rackspace API Key authentication" namespace="http://docs.
rackspace.com/identity/api/ext/RAX-KSKEY/v1.0"
  alias="RAX-KSKEY-service"
  updated="2011-08-14T13:25:27-06:00">
  <description>
    Rackspace extensions to Keystone v2.0 API
    enabling API Key authentication.
  </description>
  <atom:link rel="describedby" type="application/pdf"
    href="https://github.com/openstack/keystone/raw/
master/keystone/content/service/RAX-KSKEY-service-devguide.pdf"/>
</extension>
```

Example 1.2. Extension Query Response: JSON

```
{
  "extension": {
    "name": "Rackspace API Key Authentication",
    "namespace": "http://docs.rackspace.com/identity/api/ext/RAX-KSKEY/v1.0",
    "alias": "RAX-KSKEY-service",
    "updated": "2011-08-14T13:25:27-06:00",
    "description": "Rackspace extensions to Keystone v2.0 API enabling API Key
authentication.",
    "links": [{
      "rel": "describedby",
      "type": "application/pdf",
      "href": "https://github.com/openstack/keystone/raw/master/keystone/
content/service/RAX-KSKEY-service-devguide.pdf"
    }]
  }
}
```

1.1. Document Change History

| Revision Date | Summary of Changes |
|---------------|--------------------|
| Aug. 24, 2011 | • Initial release. |

2. Summary of Changes

The Rackspace API Key Authentication Service Extension allows authenticate call to happen using *apikeyCredentials*.

2.1. New Headers

None.

2.2. New Faults

None.

2.3. New Resources

None.

2.4. New Actions

None.

2.5. New Element

2.5.1. Rackspace extensions to Keystone v2.0 API enabling API Key authentication.

2.5.1.1. Authenticate

This extension allows authentication calls to accept new type of credentials *apikeyCredentials*. These are additional type of credentials defined to support rackspace style authentication. The usage of *apikeyCredentials* on a existing call to authenticate is illustrated below

| Verb | URI | Description |
|------|---------|-----------------------------------|
| POST | /tokens | Authenticate to generate a token. |

Normal Response Code(s):200, 203

Error Response Code(s): unauthorized (401), userDisabled (403), badRequest (400), identityFault (500), serviceUnavailable(503)

This call will return a token if successful. Clients obtain this token, along with the URL to other service APIs, by first authenticating against the Keystone Service and supplying valid credentials. This extension provides support for Rackspace Style API Key credentials.

Client authentication is provided via a ReST interface using the POST method, with v2.0/tokens supplied as the path. A payload of credentials must be included in the body.

The Keystone Service is a ReSTful web service. It is the entry point to all service APIs. To access the Keystone Service, you must know URL of the Keystone service.

Example 2.1. XML Auth Request using apikeyCredentials

```
<?xml version="1.0" encoding="UTF-8"?>
<auth xmlns="http://docs.openstack.org/identity/api/v2.0">
  <apikeyCredentials
    xmlns="http://docs.rackspace.com/identity/api/ext/RAX-KSKEY/v1.0"
    username="testuser"
    apikey="aaaaa-bbbbb-cccc-12345678"/>
</auth>
```

Example 2.2. JSON Auth Request using apikeyCredentials

```
{
  "auth": {
    "RAX-KSKEY:apikeyCredentials": {
      "username": "test_user",
      "apikey": "aaaaa-bbbbb-cccc-12345678"
    },
    "tenantId": "1234"
  }
}
```

Example 2.3. XML Auth Response

```
<?xml version="1.0" encoding="UTF-8"?>
<access xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://docs.openstack.org/identity/api/v2.0 ../xsd/api.
xsd"
xmlns="http://docs.openstack.org/identity/api/v2.0">
  <token expires="2010-11-01T03:32:15-05:00"
id="ab48a9efdfedb23ty3494"/>
  <user id="testId" name="test">
    <roles>
      <role id="compute:admin"/>
    </roles>
  </user>
  <serviceCatalog>
    <service type="compute" name="Computers in the Cloud">
      <endpoint
        region="North"
        tenantId="1234"
        publicURL="https://north.compute.public.com/v2.0/1234"
        internalURL="https://north.compute.internal.com/v2.0/1234">
        <version
          id="2.0"
          info="https://north.compute.public.com/v2.0/"
          list="https://north.compute.public.com/" />
        </endpoint>
      <endpoint
        region="South"
        tenantId="1234"
        publicURL="https://south.compute.public.com/v2.0/3456"
        internalURL="https://south.compute.internal.com/v2.0/3456">
        <version
          id="2.0"
          info="https://south.compute.public.com/v2.0/"
```



```

    list="https://south.compute.public.com/" />
  </endpoint>
</service>
<service type="object-store" name="HTTP Object Store">
  <endpoint
    region="North"
    tenantId="1234"
    publicURL="https://north.object-store.public.com/v1/1234"
    internalURL="https://north.object-store.internal.com/v1/1234">
    <version
      id="1"
      info="https://north.object-store.public.com/v1/"
      list="https://north.object-store.public.com/" />
    </endpoint>
  <endpoint
    region="South"
    tenantId="1234"
    publicURL="https://south.object-store.public.com/v2.0/3456"
    internalURL="https://south.object-store.internal.com/v2.0/3456">
    <version
      id="2.0"
      info="https://south.object-store.public.com/v1/"
      list="https://south.object-store.public.com/" />
    </endpoint>
  </service>
<service type="dnsextension:dns" name="DNS-as-a-Service">
  <endpoint
    publicURL="https://dns.public.com/v2.0/blah-blah">
    <version
      id="2.0"
      info="https://dns.public.com/v2.0/"
      list="https://dns.public.com/" />
    </endpoint>
  </service>
</serviceCatalog>
</access>

```

Example 2.4. JSON Auth Response

```

{
  "auth": {
    "token": {
      "id": "asdasdasd-adsasdad-adsasdasd-adsasdasd",
      "expires": "2010-11-01T03:32:15-05:00"
    },
    "user": {
      "id": "testId",
      "name": "testName",
      "roles": [ {
        "id": "compute:admin"
      } ],
      "roles_links": []
    },
    "serviceCatalog": [ {
      "name": "Cloud Servers",
      "type": "compute",
      "endpoints": [ {
        "publicURL": "https://compute.north.host/v1/1234",
        "internalURL": "https://compute.north.host/v1/1234",

```

```
        "region": "North",
        "tenantId": "1234",
        "versionId": "1.0",
        "versionInfo": "https://compute.north.host/v1.0/",
        "versionList": "https://compute.north.host/"
    },
    {
        "publicURL": "https://compute.north.host/v1.1/3456",
        "internalURL": "https://compute.north.host/v1.1/3456",
        "region": "North",
        "tenantId": "3456",
        "versionId": "1.1",
        "versionInfo": "https://compute.north.host/v1.1/",
        "versionList": "https://compute.north.host/"
    }
],
"endpoints_links": []
},
{
    "name": "Cloud Files",
    "type": "object-store",
    "endpoints": [{
        "publicURL": "https://compute.north.host/v1/blah-blah",
        "internalURL": "https://compute.north.host/v1/blah-
blah",
        "region": "South",
        "tenantId": "1234",
        "versionId": "1.0",
        "versionInfo": "uri",
        "versionList": "uri"
    },
    {
        "publicURL": "https://compute.north.host/v1.1/blah-
blah",
        "internalURL": "https://compute.north.host/v1.1/blah-
blah",
        "region": "South",
        "tenantId": "1234",
        "versionId": "1.1",
        "versionInfo": "https://compute.north.host/v1.1/",
        "versionList": "https://compute.north.host/"
    }
],
"endpoints_links": [{
    "rel": "next",
    "href": "https://identity.north.host/v2.0/endpoints?
marker=2"
}]
},
],
"serviceCatalog_links": [{
    "rel": "next",
    "href": "https://identity.host/v2.0/endpoints?session=2hfh8Ar&
marker=2"
}]
}
}
```