

List Volumes: WADL

48 Lines of XML goes a long way

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

You can see how most data comes from the WADL

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983" />
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983" />
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f" />
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f" />
  </volume>
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4.1.1.1. List Volumes

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  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
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    <representation mediaType="applicaiton/json"/>
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    <representation mediaType="applicaiton/json"/>
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Example 4.1. List Volumes Response: XML

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<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
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  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
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      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
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      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
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```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
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4.1.1.1. List Volumes

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<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
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    name="Home">
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    </db:para>
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    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
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  <response status="200 203">
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      <doc xml:lang="EN">
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Example 4.1. List Volumes Response: XML

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  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
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      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
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    name="Home">
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      rel="self"
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  <response>
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GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

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    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>
<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```



```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Theres are some important subtleties....

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983" />
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983" />
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f" />
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f" />
  </volume>
```

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Same Data, Two Views

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```

Automatically Generated Titles

4.1.1.1. List Volumes

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```



```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Automatically
Generated Descriptions

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

4.1.1.1. List Volumes

Generated Text means
less text to translate.
Easy to make big
changes.
More Consistent.

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```

TenantId is implied by the location of Method in WADL

4.1.1.1. List Volumes

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Verb	URI	Description
GET	{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```


Automatic Entry in Summary Table

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Verb	URI	Description
Volume Lists		
GET	v1/{tenantId}/volumes	List all volumes (IDs, names, links).
GET	v1/{tenantId}/volumes/detail	List all volumes (all details).
Volume Opreations		
POST	v1/{tenantId}/volumes	Creates a new volume.
PUT	v1/{tenantId}/volumes/{id}	Update the specified volume's name.
GET	v1/{tenantId}/volumes/{id}	List details of the specified volume.
DELETE	v1/{tenantId}/volumes/{id}	Delete the volume.
Volume Metadata		
PUT	v1/{tenantId}/volumes/{id}/metadata	Set metadata.
POST	v1/{tenantId}/volumes/{id}/metadata	Update metadata items.
GET	v1/{tenantId}/volumes/{id}/metadata	List metadata associated with the resource.
GET	v1/{tenantId}/volumes/{id}/metadata/{key}	Get a metadata item associated with a resource.
PUT	v1/{tenantId}/volumes/{id}/metadata/{key}	Set metadata item.
DELETE	v1/{tenantId}/volumes/{id}/metadata/{key}	Delete a metadata item.
Backup Lists		
GET	v1/{tenantId}/backups	List all backups (IDs, names, links).
GET	v1/{tenantId}/backups/detail	List all backups (all details).
Backup Opreations		
POST	v1/{tenantId}/backups	Creates a new backup.
PUT	v1/{tenantId}/backups/{id}	Update the specified backup's name.
GET	v1/{tenantId}/backups/{id}	List details of the specified backup.
DELETE	v1/{tenantId}/backups/{id}	Delete the backup.
Backup Metadata		
PUT	v1/{tenantId}/backups/{id}/metadata	Set metadata.
POST	v1/{tenantId}/backups/{id}/metadata	Update metadata items.
GET	v1/{tenantId}/backups/{id}/metadata	List metadata associated with the resource.
GET	v1/{tenantId}/backups/{id}/metadata/{key}	Get a metadata item associated with a resource.
PUT	v1/{tenantId}/backups/{id}/metadata/{key}	Set metadata item.
DELETE	v1/{tenantId}/backups/{id}/metadata/{key}	Delete a metadata item.
Types		
GET	v1/{tenantId}/types	List all types.
GET	v1/{tenantId}/types/{id}	List details of the specified type.

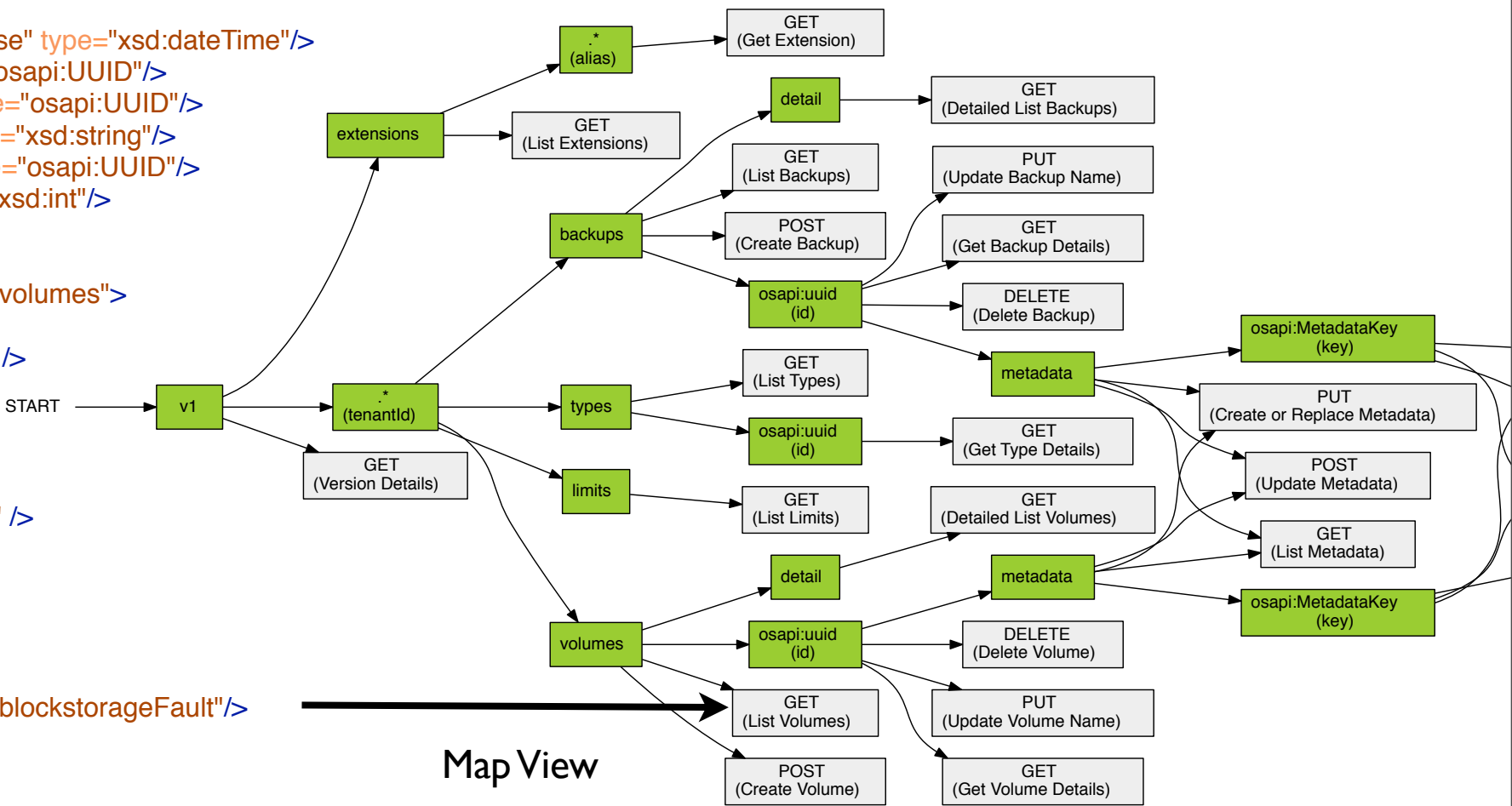

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

Alternate Formats



Volume		
The Volume API allows you to manage volumes and snapshots that can be used with the Compute API.		
POST	v1/{tenant_id}/volumes	Create a Volume.
GET	v1/{tenant_id}/volumes	List all volumes (IDs, names, links).

```
<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>
```

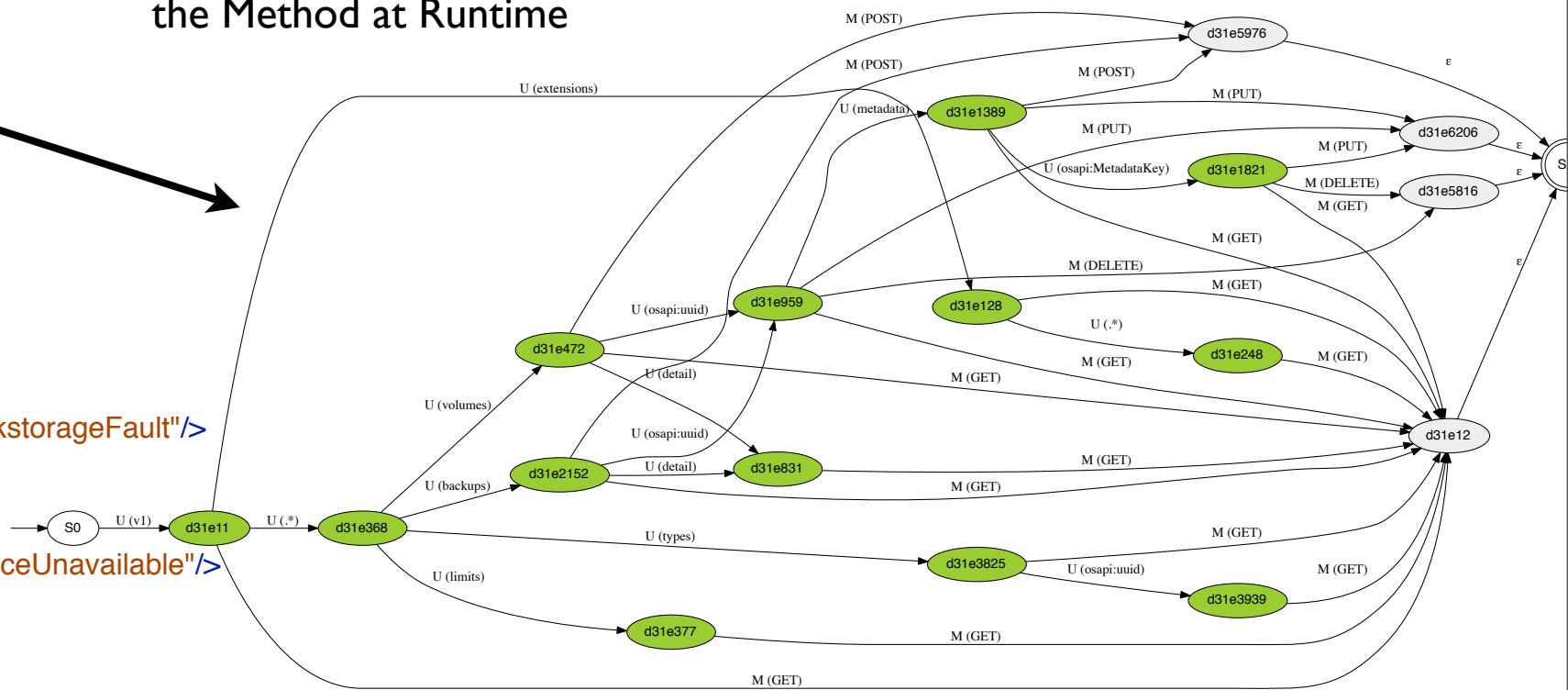


```

<method name="GET" id="listVolumes">
  <doc xml:lang="EN" title="List Volumes">
    <db:para role="shortdesc">
      List all volumes (IDs, names, links).
    </db:para>
    <db:para>
      A list of volumes. Each volume contains IDs, names, and
      links -- other attributes are omitted.
    </db:para>
  </doc>
  <request>
    <param name="changes-since" style="query" required="false" type="xsd:dateTime"/>
    <param name="type" style="query" required="false" type="osapi:UUID"/>
    <param name="backup" style="query" required="false" type="osapi:UUID"/>
    <param name="name" style="query" required="false" type="xsd:string"/>
    <param name="marker" style="query" required="false" type="osapi:UUID"/>
    <param name="limit" style="query" required="false" type="xsd:int"/>
  </request>
  <response status="200 203">
    <representation mediaType="application/xml" element="bs:volumes">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.xml" />
      </doc>
    </representation>
    <representation mediaType="application/json">
      <doc xml:lang="EN">
        <xsdxt:code href="samples/core/volumes-sparse.json" />
      </doc>
    </representation>
  </response>
  <!-- Common Faults -->
  <response>
    <representation mediaType="application/xml" element="bs:blockstorageFault"/>
    <representation mediaType="application/json"/>
  </response>
  <response status="503">
    <representation mediaType="application/xml" element="bs:serviceUnavailable"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="401">
    <representation mediaType="application/xml" element="bs:unauthorized"/>
    <representation mediaType="applicaiton/json"/>
  </response>
  <response status="403">
    <representation mediaType="application/xml" element="bs:forbidden"/>
    <representation mediaType="applicaiton/json"/>
  </response>
</method>

```

State Machine to Validate the Method at Runtime



List Volumes: DocBook Only

135 Lines of XML doesn't quite go as far

<section>
 <title>List Volumes</title>
 <informaltable rules="all">
 <col width="10%"/>
 <col width="40%"/>
 <col width="50%"/>
 <thead>
 <tr>
 <th align="center">Verb</th>
 <th align="center">URI</th>
 <th align="center">Description</th>
 </tr>
 </thead>
 <tbody>
 <tr>
 <td>
 <command>GET</command>
 </td>
 <td>
 <code>v1/{tenantId}/volumes?changes-since=<replaceable>date</replaceable>
 <code>time</code>&type=<replaceable>UUID</replaceable>
 &backup=<replaceable>UUID</replaceable>
 &name=<replaceable>string</replaceable>
 &marker=<replaceable>UUID</replaceable>&limit=<replaceable>int</replaceable>
 <code></code>
 </td>
 <td> List all volumes (IDs, names, links). </td>
 </tr>
 </tbody>
 </informaltable>
 <simpara> Normal Response Code(s): <returnvalue>200</returnvalue>,&br/> <returnvalue>203</returnvalue></simpara>
 <simpara> Error Response Code(s): blockstorageFault (<errorcode>400</errorcode>,&br/> <returnvalue>500</returnvalue>, <returnvalue>#8230</returnvalue>),
 serviceUnavailable
 (<errorcode>503</errorcode>), unauthorized (<errorcode>401</errorcode>), forbidden
 (<errorcode>403</errorcode>) </simpara>
 <para> A list of
 volumes. Each volume contains IDs, names, and links -- other attributes are omitted. </
 para>
 <table rules="all">
 <caption>List Volumes Request Parameters</caption>
 <col width="30%"/>
 <col width="10%"/>
 <col width="10%"/>
 <col width="40%"/>
 <thead>
 <tr>
 <th align="center">Name</th>
 <th align="center">Style</th>
 <th align="center">Type</th>
 <th align="center">Description</th>
 </tr>
 </thead>
 <tbody>
 <tr>
 <td align="center">
 <code role="hyphenate-true">changes-since</code>
 </td>
 <td align="center">query</td>
 <td align="center">DateTime</td>
 <td>
 <para>The <code role="hyphenate-true">changes-since</code> parameter is
 optional. </para>
 </td>
 </tr>
 <tr>
 <td align="center">
 <code role="hyphenate-true">type</code>
 </td>
 <td align="center">query</td>
 <td align="center">UUID</td>
 <td>
 <para>The <code role="hyphenate-true">type</code> parameter is optional. </para>
 </td>
 </tr>
 <tr>
 <td align="center">
 <code role="hyphenate-true">backup</code>
 </td>
 <td align="center">query</td>
 <td align="center">UUID</td>
 <td>
 <para>The <code role="hyphenate-true">backup</code> parameter is optional.
 </para>
 </td>
 </tr>
 <tr>
 <td align="center">
 <code role="hyphenate-true">name</code>
 </td>
 <td align="center">query</td>
 <td align="center">String</td>
 <td>
 <para>The <code role="hyphenate-true">name</code> parameter is optional. </para>
 </td>
 </tr>
 <tr>
 <td align="center">
 <code role="hyphenate-true">marker</code>
 </td>
 <td align="center">query</td>
 <td align="center">UUID</td>
 <td>
 <para>The <code role="hyphenate-true">marker</code> parameter is optional.
 </para>
 </td>
 </tr>
 </tbody>
 </table>
</tbody>

Tuesday, March 12, 2013

```
<section>
  <title>List Volumes</title>
  <informaltable rules="all">
    <col width="10%"/>
    <col width="40%"/>
    <col width="50%"/>
    <thead>
      <tr>
        <th align="center">Verb</th>
        <th align="center">URI</th>
        <th align="center">Description</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>
          <command>GET</command>
        </td>
        <td>
          <code>v1/{tenantId}/volumes?changes-since=
<replaceable>dateTime</replaceable>&amp;&#8203;type=<replaceable>UUID</replaceable>
&amp;&#8203;backup=<replaceable>UUID</replaceable>&amp;&#8203;name=
<replaceable>string</replaceable>&amp;&#8203;marker=<replaceable>UUID</replaceable>
&amp;&#8203;limit=<replaceable>int</replaceable></code>
        </td>
        <td> List all volumes (IDs, names, links). </td>
      </tr>
    </tbody>
  </informaltable>
  <simpara> Normal Response Code(s): <returnvalue>200</returnvalue>,
    <returnvalue>203</returnvalue></simpara>
  <simpara> Error Response Code(s): blockstorageFault (<errorcode>400</errorcode>,
    <returnvalue>500</returnvalue>, <returnvalue>&#8230;</returnvalue>), serviceUnavailable
    (<errorcode>503</errorcode>), unauthorized (<errorcode>401</errorcode>), forbidden
    (<errorcode>403</errorcode>) </simpara>
  <para> A list of
    volumes. Each volume contains IDs, names, and links -- other attributes are omitted. </para>
```

Here, we’re talking tables, sections, paragraphs

Great for Narrative Text, but doesn’t capture the API operation semantically

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```

```
<table rules="all">
  <caption>List Volumes Request Parameters</caption>
  <col width="30%"/>
  <col width="10%"/>
  <col width="10%"/>
  <col width="40%"/>
  <thead>
    <tr>
      <th align="center">Name</th>
      <th align="center">Style</th>
      <th align="center">Type</th>
      <th align="center">Description</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td align="center">
```

```
<section>
  <title>List Volumes</title>
  <informaltable rules="all">
    <col width="10%"/>
    <col width="40%"/>
    <col width="50%"/>
    <thead>
      <tr>
        <th align="center">Verb</th>
        <th align="center">URI</th>
        <th align="center">Description</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>
          <command>GET</command>
        </td>
        <td>
          <code>v1/{tenantId}/volumes?changes-since=<replaceable>dateTime</
replaceable>&amp;type=<replaceable>UUID</
replaceable>&amp;backup=<replaceable>UUID</
replaceable>&amp;name=<replaceable>string</
replaceable>&amp;marker=<replaceable>UUID</replaceable>&amp;limit=<replaceable>int</
replaceable></code>
        </td>
        <td> List all volumes (IDs, names, links). </td>
      </tr>
    </tbody>
  </informaltable>
  <simpara> Normal Response Code(s): <returnvalue>200</returnvalue>,
    <returnvalue>203</returnvalue></simpara>
  <simpara> Error Response Code(s): blockstorageFault (<errorcode>400</errorcode>,
    <returnvalue>500</returnvalue>, <returnvalue>&#8230;</returnvalue>),
serviceUnavailable
    (<errorcode>503</errorcode>), unauthorized (<errorcode>401</errorcode>), forbidden
    (<errorcode>403</errorcode>) </simpara>
  <para> A list of
    volumes. Each volume contains IDs, names, and links -- other attributes are omitted. </
para>
  <table rules="all">
    <caption>List Volumes Request Parameters</caption>
    <col width="30%"/>
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        <th align="center">Description</th>
      </tr>
    </thead>
```

Repetitive data,
Parameter info listed twice in two formats.
This is error prone.

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

Error Response Code(s): blockstorageFault (400, 500, ...), serviceUnavailable (503), unauthorized (401), forbidden (403)

A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
changes-since	query	DateTime	The changes-since parameter is optional.
type	query	UUID	The type parameter is optional.
backup	query	UUID	The backup parameter is optional.
name	query	String	The name parameter is optional.
marker	query	UUID	The marker parameter is optional.
limit	query	Int	The limit parameter is optional.
tenantId	template	String	A unique identifier for the tenant who owns the resource.

Example 4.1. List Volumes Response: XML

```
<?xml version="1.0" encoding="UTF-8"?>

<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"
  xmlns:atom="http://www.w3.org/2005/Atom">
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"
    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/
15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/
15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
    name="Home">
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      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/
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      rel="bookmark"
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  </volume>
```

<section>
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 <para> A list of

 volumes. Each volume contains IDs, names, and links -- other attributes are omitted. </para>
</section>

Only the Section, Example, Table Numbers
are Generated -- everything
else is written out manually

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

Normal Response Code(s): 200, 203

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A list of volumes. Each volume contains IDs, names, and links – other attributes are omitted.

Table 4.1. List Volumes Request Parameters

Name	Style	Type	Description
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Example 4.1. List Volumes Response: XML

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<?xml version="1.0" encoding="UTF-8"?>  
  
<volumes xmlns="http://docs.openstack.org/block-storage/api/v1.0"  
  xmlns:atom="http://www.w3.org/2005/Atom">  
  <volume id="15e59938-07d5-11e1-90e3-e3dffe0c5983"  
    name="Work">  
    <atom:link  
      rel="self"  
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/  
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There are semantic annotations,
but the granularity is different

4.1.1.1. List Volumes

Verb	URI	Description
GET	v1/{tenantId}/volumes?changes-since=dateTime&type=UUID&backup=UUID&name=string&marker=UUID&limit=int	List all volumes (IDs, names, links).

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    name="Work">
    <atom:link
      rel="self"
      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
    <atom:link
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      href="http://servers.api.openstack.org/1234/OS-BS/volumes/15e59938-07d5-11e1-90e3-e3dffe0c5983"/>
  </volume>
  <volume id="4512308a-0808-11e1-bff3-83d5d70a461f"
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    <atom:link
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      href="http://servers.api.openstack.org/v1.1/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
    <atom:link
      rel="bookmark"
      href="http://servers.api.openstack.org/1234/OS-BS/volumes/4512308a-0808-11e1-bff3-83d5d70a461f"/>
  </volume>
```