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Oracle Autonomous Database

Using REST APIs to Manage ADB

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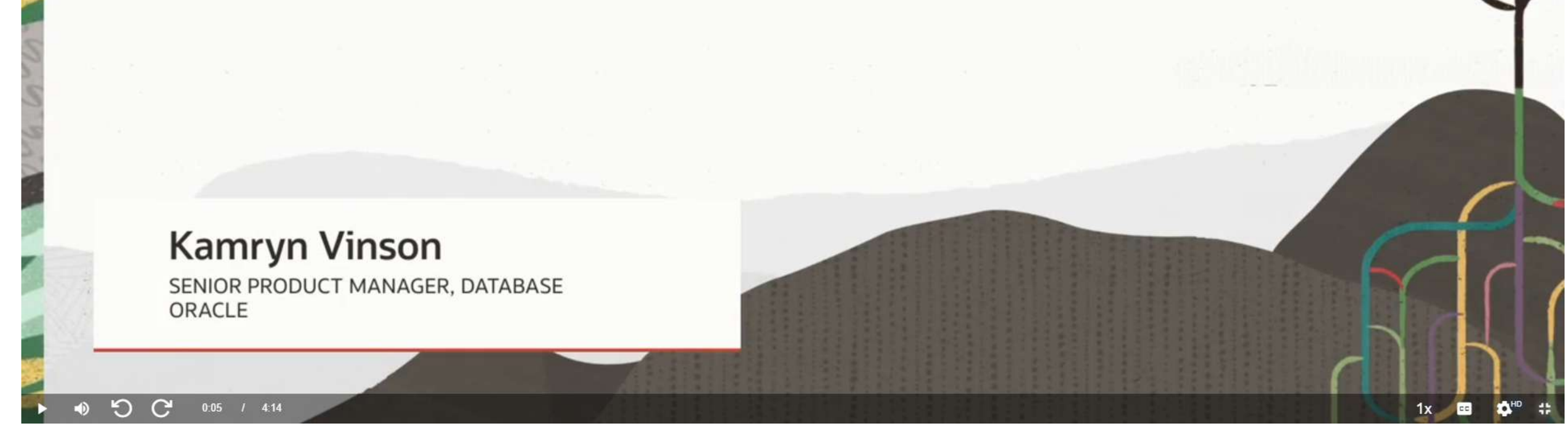


Autonomous Database: REST APIs

Oracle's Cloud offers full REST APIs for DBAs and developers. All the functionality provided in the console is available using REST APIs.

It's a mechanism for developing customized deployment and management scripts that can be saved and reused for deployments.

Oracle Cloud Infrastructure APIs are typical REST APIs that use HTTPS requests and responses and support HTTPS and SSL protocol TLS 1.2, the most secure industry standards.

Calls to the Oracle Cloud Infrastructure using REST APIs can be written in popular scripting languages such as node.js, Python, Ruby, Perl, Java, C#, bash or curl.

Autonomous Database: REST APIs

All Oracle Cloud Infrastructure API requests must be signed for authentication purposes.

The steps to create and sign API requests are:

- Form the HTTPS request (SSL protocol TLS 1.2 is required).
- Create the signing string, which is based on parts of the request.
- Create the signature from the signing string, using your private key and the RSA-SHA256 algorithm.
- Add the resulting signature and other required information to the Authorization header in the request.
- You will also need to generate an SSH key pair in the pem format.

These avoid using usernames/passwords and are based on the **draft-cavage-http-signatures-08** specification for secure communication over the Internet.

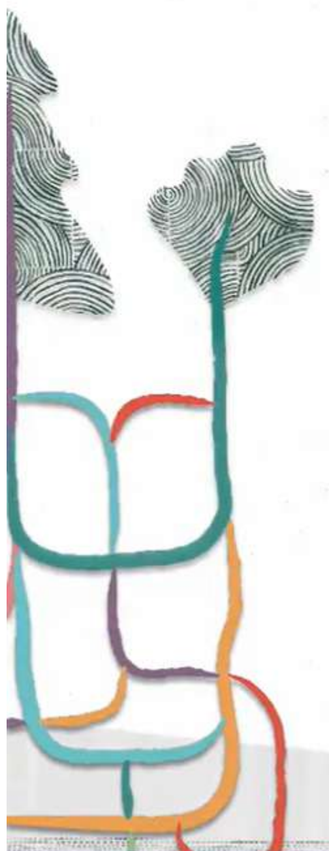
Autonomous Database: REST APIs

Create Autonomous Database: Example

This example creates an Autonomous Database in the Phoenix data center, with a database name of "adatabasedb1," the specified password, 8 CPUs and 1 TB of storage:

```
POST /20160918/autonomousDatabases
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>
{ "compartmentId" :
ocid1.tenancy.oc1..exampleah2sauv373xyfrpcnaed2pt
fy67fnspzyda2hacgdbrkijexample",
"displayName" : "example_autonomous_database",
"dbName" : "adatabasedb1",
"adminPassword" : "<password>",
"computeCount" : 8,
"dataStorageSizeInTBs" : 1
}
```

The response will include the current status of the create process and other relevant information regarding the database being created. The response will always be similar for any command, so for the examples in the next pages, you will see similar responses:



```
{
"compartmentId" : "ocid1.tenancy.oc1..exampleah2sauv373xyfrpcnaed2ptfy67fns
pzyda2hacgdbrkijexample",
"displayName" : "example_autonomous_database",
"id" : "ocid1.autonomousdatabase.oc1.phx.examplerojzggj3o5eh2okamyhsikksxzpen
citkhqu5jweyfdb4texample",
"dbName" : "adatabasedb1",
"lifecycleState" : "PROVISIONING",
"timeCreated" : "2023-11-23T01:59:07.032Z"
"computeCount" : 8,
"dataStorageSizeInTBs" : 1,
"licenseModel" : "LICENSE_INCLUDED",
"serviceConsoleUrl" : "https://adwc.uscom-east-1.oraclecloud.com/console/index.
html?tenant_name=iam
-ocid1.tenancy.oc1..exampleah2sauv373xyfrpcnaed2ptfy67fnspzyda2hacgdbrkijexample&
database_name=adwdb1"
}
```

Autonomous Database: REST APIs

Other Autonomous Database: Example

The following examples show you how to delete, start, and stop an autonomous database through REST APIs:

```
DELETE /20160918/autonomousDatabases/<autonomousDatabaseId>
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>

POST
/20160918/autonomousDatabases/<autonomousDatabaseId>/actions/start
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>

POST
/20160918/autonomousDatabases/<autonomousDatabaseId>/actions/stop
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>
```

In the first example, the ECPU count is set to 20. In the second example, a Monthly Backup is initiated.

```
PUT /20160918/autonomousDatabases/<autonomousDatabaseId>
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>
{
    "computeCount" : 20
}

POST /20160918/autonomousDatabaseBackups
Host: database.us-phoenix-1.oraclecloud.com
<authorization and other headers>
{
 "autonomousDatabaseId" :
 "ocid1.autonomousdatabase.oc1.phx.examplervkwamqmkukhluitmxsgupmgpv21
t4jf6i4mrksrqk4ysjexample",
"displayName" : "Monthly Backup"
}
```

To wrap up...