

NTT Communications

Cloudⁿ

Provisioning Operation Manual

Ver.1.0

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1-1) Overview of the Service

This manual describes how you use Cloudⁿ Provisioning.

Cloudⁿ Provisioning is the service that simultaneously creates and updates various types of resources related to Cloudⁿ to facilitate the management of the system. A set of created resources is called "stack". You can make uniform management of resources in the unit of stacks.

What is equivalent to a blueprint in constructing a stack is called "template". This template is applied to Provisioning to enable you to simultaneously create and update a set of resources of your choice.

Cloudⁿ Provisioning is a function equivalent to Cloud Formation in AWS. You can easily convert a Cloud Formation template developed for AWS Cloud Formation into the one for Cloud Provisioning, and thus you can easily use it.

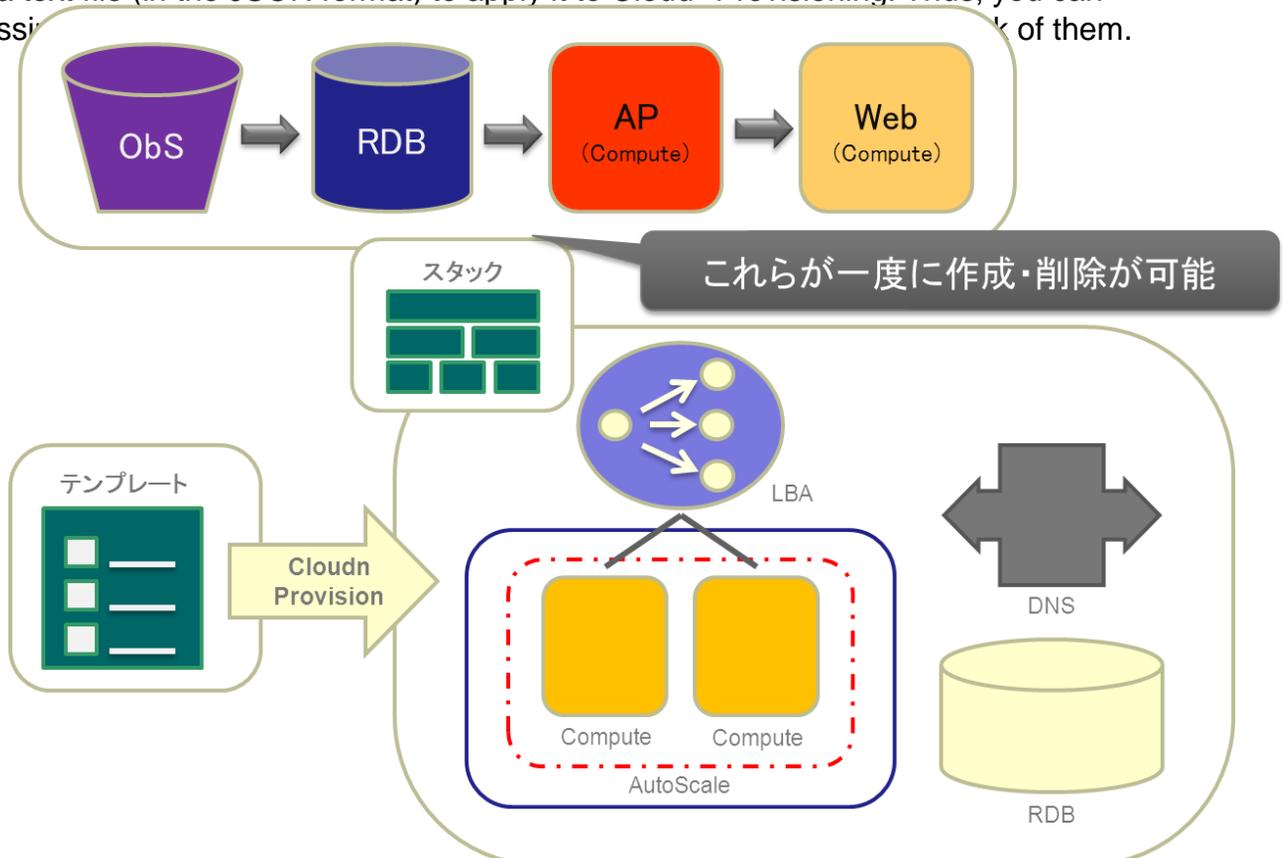
Listed below are major functions available:

- Cloudⁿ DNS

● You can set up all of the following Cloudⁿ resources by integrating them into a stack:

- Cloudⁿ Compute
- Cloudⁿ Relational Database
- Cloudⁿ Object Storage
- Cloudⁿ Load Balancing Advance
- Cloudⁿ AutoScaling
- Cloudⁿ Monitoring

● A template provides the information on a configuration of a stack. You can state a template in a text file (in the JSON format) to apply it to Cloudⁿ Provisioning. Thus, you can simultaneously create or delete a stack of them.



1-2) Making Preparation in Advance

Prepare every thing listed below to use Cloudⁿ Provisioning API.

Starting to Use Provisioning Service

Use the Cloudⁿ portal to start using the Provisioning service. For how to start using the service, see "Cloudⁿ Portal Operation Manual" for section 3-1), "Starting to Use the Service".

Starting to Use the Compute Service

Use the Cloudⁿ portal to start using the Compute service. (If you do not start using Compute, you cannot use the service of Provisioning.)

Besides the above, you can start creating functions by using Provisioning (AutoScaling, DNS, Compute, RDB, ObjectStorage, LBA) from the Cloudⁿ portal.

For how to start using the service, see "Cloudⁿ Portal Operation Manual" for section 3-1), "Starting to Use the Service".

API Access Key and Secret Key Common for the Cloudⁿ Service

Use the Cloudⁿ portal to check the API access key and the secret key "common for the service" required to use RDB API. For how to check them, see "Cloudⁿ Portal Operation Manual" for section 3-3), "Managing the API Access Key/Secret Key".

2-1) Starting Up the Provisioning Console

Start up the Provisioning console.

1

Log in to the Cloudⁿ portal. Hover the cursor over the "Provisioning" icon for your region that you have started to use. When "To console" appears, click on it.



2

A new window opens and the Provisioning console starts up.



2-2) Preparing a Template

Prepare a template. This will be a base of a stack when you create it. Use any text editor to create a text file in the JSON format for a template.

1

The example in this manual assumes that the template is used for the following stack:

[Assumed Stack]

"The security group with the receiving rule of TCP port number 22 registered as a Compute resource and a stack to construct a virtual server with the security group applied"

Under this condition, the template is created as follows:

[Example of Template]

File name: test.template

```
{
  "AWSTemplateFormatVersion" : "2010-09-09",
  "Description" : "Provisioning Test",
  "Resources" : {
    "InstanceA" : {
      "Type" : "Cloudn::Compute::Instance",
      "Properties" : {
        "AvailabilityZone" : "jp-e1a",
        "ImageId" : "8fdc326b-6e82-49a3-af22-69b0e3ab0cd7",
        "InstanceType" : "m1.small",
        "SecurityGroups" : [{ "Ref" : "SecurityGroupA"}]
      }
    },
    "SecurityGroupA" : {
      "Type" : "Cloudn::Compute::SecurityGroup",
      "Properties" : {
        "GroupDescription" : "Enable SSH access via port 22"
      }
    },
    "SecurityGroupIngressA" : {
      "Type" : "Cloudn::Compute::SecurityGroupIngress",
      "Properties" : {
        "GroupName" : { "Ref" : "SecurityGroupA" },
        "CidrIp" : "0.0.0.0/0",
        "IpProtocol" : "tcp",
        "FromPort" : "22",
        "ToPort" : "22"
      }
    }
  }
}
```

2-2) Preparing a Template

For this template, the following resource name and properties are used to create a security group and a virtual server.

[Virtual Server]

Resource name (type):

"Cloudn::Compute ::Instance"

Properties	Value
AvailabilityZone	jp-e1a
ImageId	8fdc326b-6e82-49a3-af22-69b0e3ab0cd
InstanceType	m1.small
SecurityGroups	[{"Ref" : "SecurityGroupA"}]

[Security Group]

Resource name (type): " Cloudn::Compute ::SecurityGroup"

Properties	Value
GroupDescription	Enable SSH access via port 22

[Security Group Receiving Rule]

Resource name (type): " Cloudn::Compute ::SecurityGroupIngress "

Properties	Value
GroupName	{ "Ref" : "SecurityGroupA" }
IpProtocol	tcp
FromPort	22
ToPort	22
CidrIp	0.0.0.0/0



If you create a virtual server, specify the ID of the template you are going to create as ImageId. Listed below are the ID's of the major official templates provided in the East Japan region:

CentOS 6.3 64bit	8fdc326b-6e82-49a3-af22-69b0e3ab0cd7
Ubuntu Server v12.10 64bit	238a2cd3-724a-47f3-8ee5-b445bb83e350
Windows Server 2008 R2	3cdec611-7f6c-4de5-a605-97358eba6476

3-1) Creating a Stack

Create a stack from the Provisioning console by using a template created in advance.

1

Click on "Crate New Stack" on the Provisioning console.



2

Type any stack name in "Stack Name". Make sure that "Upload a Template File" is selected. Click on the "Browse" button and navigate to a text file of a template created in advance. Click on "Continue".

Create Stack Provision gives you an easier way to create a collection of related Cloudn resources(a stack) by describing your requirements in a template.To create a stack,fill in the name for your stack and select a template. you may chose one of your own templates stored in Object Strage or on your local hard drive.

Stack Name:

Stack Template Source:

Upload a Template File

Provide a Template URL

Notifications:(optional):

Mail Address1
Mail Address2
Mail Address3
Mail Address4
Mail Address5

Creation Timeout(minutes):

Rollback on Failure: DO_NOTHING ROLLBACK DELETE

Click

3-1) Creating a Stack



If you specify an e-mail address as a Mail Address, a notification e-mail like an example shown below is transmit at the time of creation.

```
差出人 クラウド・エヌ カスタマーサポート★
件名 Cloudn Provisioning Notification
宛先

StackName='test-prov'
StackId='421651e4-0de0-4979-9e4d-612e547fb288_test-prov'
EventId='4320653306790-InstanceA-CREATE_COMPLETE'
LogicalResourceId='InstanceA'
PhysicalResourceId='82b8d49c-8cd2-47fb-9ee4-81ebea0971f0'
ResourceType='Cloudn::Compute::Instance'
Timestamp='Thu Apr 11 14:01:43 JST 2013'
ResourceStatus='CREATE_COMPLETE'
ResourceStatusReason='null'
ResourceProperties='null'
```



You can specify the timeout time at the time of creation in "Creation Timeout". You can also specify the action at the time of failure in creation in "Rollback on Failure" (DO NOTHING, ROLLBACK, or DELETE).

3

The information about the creation of the stack is displayed on the screen. Click on "Continue".

Create Stack
Please review the information below, then click Continue to create the stack.

[Stack Information](#)
StackName:testStack
StackDescription:Provisioning Test.
Template:https://prov.jp-e1.cloudn-service.com/Provision/test.template

[Edit Stack](#)
[Parameters](#)

Notifications(optional):
MailAddress1:
MailAddress2:
MailAddress3:
MailAddress4:
MailAddress5:
Creation Timeout(minutes):none
Rollback on Failure:ROLLBACK

[Edit Notification](#)
[back](#)

[Cancel](#)



3-1) Creating a Stack

4

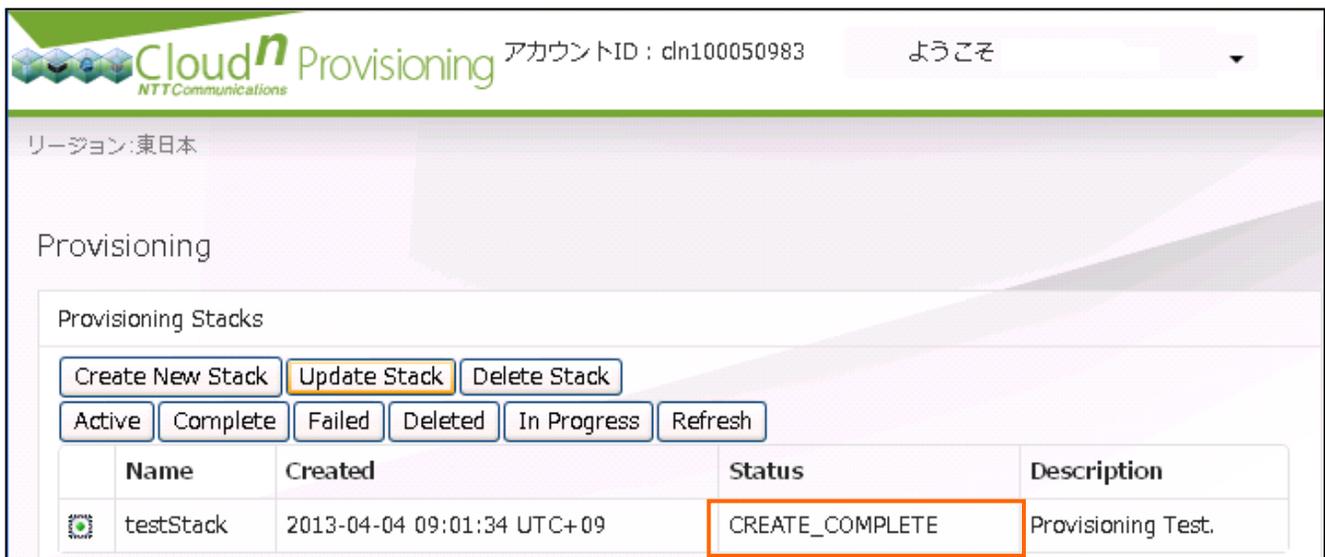
A screen appears to indicate the acceptance of creation. Click on "Back to StackList" to go back to the main screen. ("Status" is "CREATE_COMPLETE" if the update is completed.)

Create Stack

Your stack is being created. You can select the stack and, using the tabs shown below, you can see the current state and track the progress of the stack creation. When your stack is created, it will have a status of CREATE_COMPLETE. The Events tab will show you what is currently being created and will also contain any error messages if there are problems creating your stack.

Back to StacksList

Click



The screenshot shows the Cloudn Provisioning interface. At the top, there is a header with the Cloudn logo and the text "アカウントID : dn100050983" and "ようこそ". Below the header, the region is set to "リージョン: 東日本". The main content area is titled "Provisioning" and contains a section for "Provisioning Stacks". This section has several buttons: "Create New Stack", "Update Stack", "Delete Stack", "Active", "Complete", "Failed", "Deleted", "In Progress", and "Refresh". Below these buttons is a table with the following data:

Name	Created	Status	Description
testStack	2013-04-04 09:01:34 UTC+09	CREATE_COMPLETE	Provisioning Test.



If you create a virtual server in a stack, the initial password of the virtual server is not defined. Please reissue a password from the Compute console. (See "Compute Operation Manual" for section 3-13), "Resetting a Password".)



If a function created as a stack (AutoScaling, DNS, Compute, RDB, ObjectStorage, or LBA) is not set to start using it on the Cloudn portal, an error occurs. Set up the services to start using them before you include them in a stack to be created.

3-1) Creating a Stack

5

You can a security group crated from the Compute console in the East Japan Region and an applied security group.

The screenshot shows the '詳細' (Details) tab of a Compute instance. The instance is named '1498e362-0b25-4531-b5a8-c31d5ed612bf' and is in a 'Running' state. The 'テンプレート' (Template) is 'CentOS 6.3 64bit', the 'OSの種類' (OS Type) is 'CentOS 6.0 (64-bit)', and the '仮想サーバプラン' (Virtual Server Plan) is 'm1.small'. The 'ゾーン名' (Zone Name) is 'jp-e1-a'. The '高可用性有効' (High Availability Enabled) checkbox is checked. The 'NIC' tab is selected, and the 'セキュリティグループ' (Security Group) is highlighted.

名前	1498e362-0b25-4531-b5a8-c31d5ed612bf
状態	Running
テンプレート	CentOS 6.3 64bit
OSの種類	CentOS 6.0 (64-bit)
アタッチされたISO	
仮想サーバプラン	m1.small
高可用性有効	Yes
グループ	
ゾーン名	jp-e1-a

The screenshot shows the 'セキュリティグループ' (Security Group) tab. The security group is named 'SecurityGroup1365033694761' and has an ID of 'd657a147-25b8-439c-bdd8-7178da7391ac'. The '説明' (Description) is 'Enable SSH access via port 22'.

名前	SecurityGroup1365033694761
ID	d657a147-25b8-439c-bdd8-7178da7391ac
説明	Enable SSH access via port 22

3-2) Updating a Stack

Update a stack you have created. In the example in this section, the stack previously created is updated into a stack described below.

[Content of the Updated Stack]

"As a Compute resource, the plan of a virtual server is changed from "m1.small" to "m1.medium". ("InstanceType" is changed into "m1.medium".)

The template is modified as follows.

[Example of Template]

File name: testUpdate.template

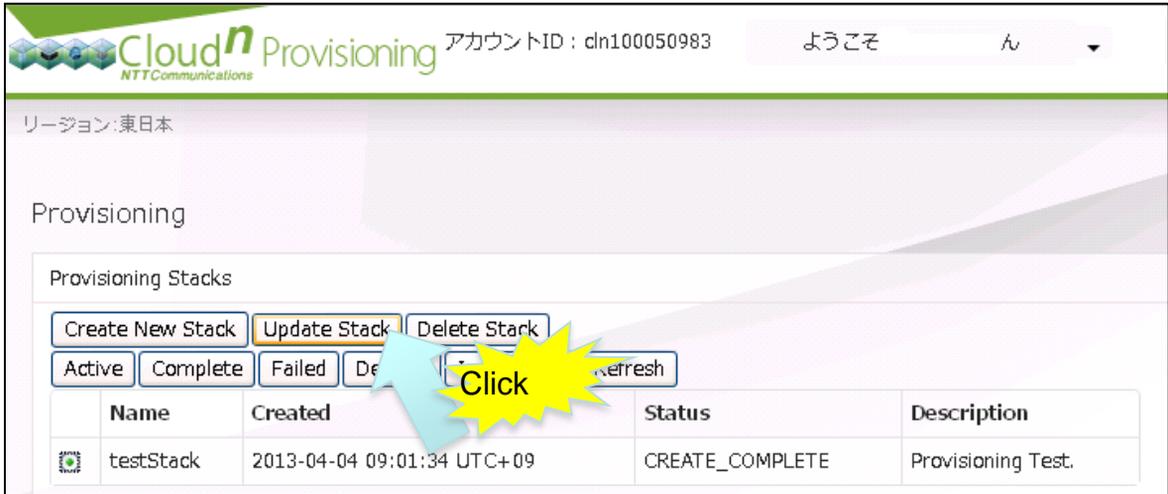
```
{
  "AWSTemplateFormatVersion" : "2010-09-09",
  "Description" : "Provisioning Test",
  "Resources" : {
    "InstanceA" : {
      "Type" : "Cloudn::Compute::Instance",
      "Properties" : {
        "AvailabilityZone" : "jp-e1a",
        "ImageId" : "8fdc326b-6e82-49a3-af22-69b0e3ab0cd7",
        "InstanceType" : "m1.medium",
        "SecurityGroups" : [{ "Ref" : "SecurityGroupA"}]
      }
    },
    "SecurityGroupA" : {
      "Type" : "Cloudn::Compute::SecurityGroup",
      "Properties" : {
        "GroupDescription" : "Enable SSH access via port 22"
      }
    },
    "SecurityGroupIngressA" : {
      "Type" : "Cloudn::Compute::SecurityGroupIngress",
      "Properties" : {
        "GroupName" : { "Ref" : "SecurityGroupA" },
        "CidrIp" : "0.0.0.0/0",
        "IpProtocol" : "tcp",
        "FromPort" : "22",
        "ToPort" : "22"
      }
    }
  }
}
```

3-2) Updating a Stack

Update a stack previously created based on a modified template.

1

Click on "Update Stack" on the Provisioning console.



Cloudⁿ Provisioning
NTT Communications

アカウントID : dn100050983 ようこそ ん

リージョン: 東日本

Provisioning

Provisioning Stacks

Create New Stack **Update Stack** Delete Stack

Active Complete Failed De Refresh

	Name	Created	Status	Description
	testStack	2013-04-04 09:01:34 UTC+09	CREATE_COMPLETE	Provisioning Test.

2

Make sure that "Upload a Template File" is selected. Click on the "Browse" button to navigate to the text file of a template modified for the update. Click on "Continue".

Update Stack Provision gives you an easier way to create a collection of related Cloudn resources(a stack) by describing your requirements in a template.To create a stack,fill in the name for your stack and select a template. you may chose one of your own templates stored in Object Strage or on your local hard drive.

Stack Name:

testStack

Stack Template Source:

Upload a Template File

template#testUpdate.template 参照...

Provide a Template URL

Continue

Cancel

Click

3-2) Updating a Stack

3

The information about the creation of the stack is displayed on the screen. Click on "Continue".

Update Stack

Please review the information below, then click Continue to create the stack.

Stack Information

StackName:testStack
StackDescription:Provisioning Test.
Template:https://prov.jp-e1.cloudn-service.com/Provision/testUpdate.template

[Edit Stack](#)

[back](#)

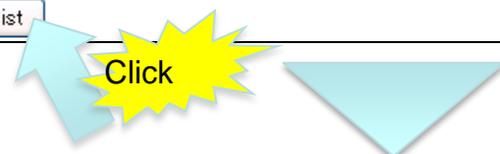


4

A screen appears to indicate the acceptance of creation. Click on "Back to StackList" to go back to the main screen. ("Status" is "CREATE_COMPLETE" if the update is completed.)

Update Stack

Your stack is being updated. You can select the stack and, using the tabs shown below, you can see the current state and track progress. When your stack is updated, it will have a status of UPDATED_COMPLETE. The Events tab will show you what is currently being updated and will also contain any error messages if there are problems updating your stack.



Cloudⁿ Provisioning NTTCommunications アカウントID : dn100050983 ようこそ

リージョン:東日本

Provisioning

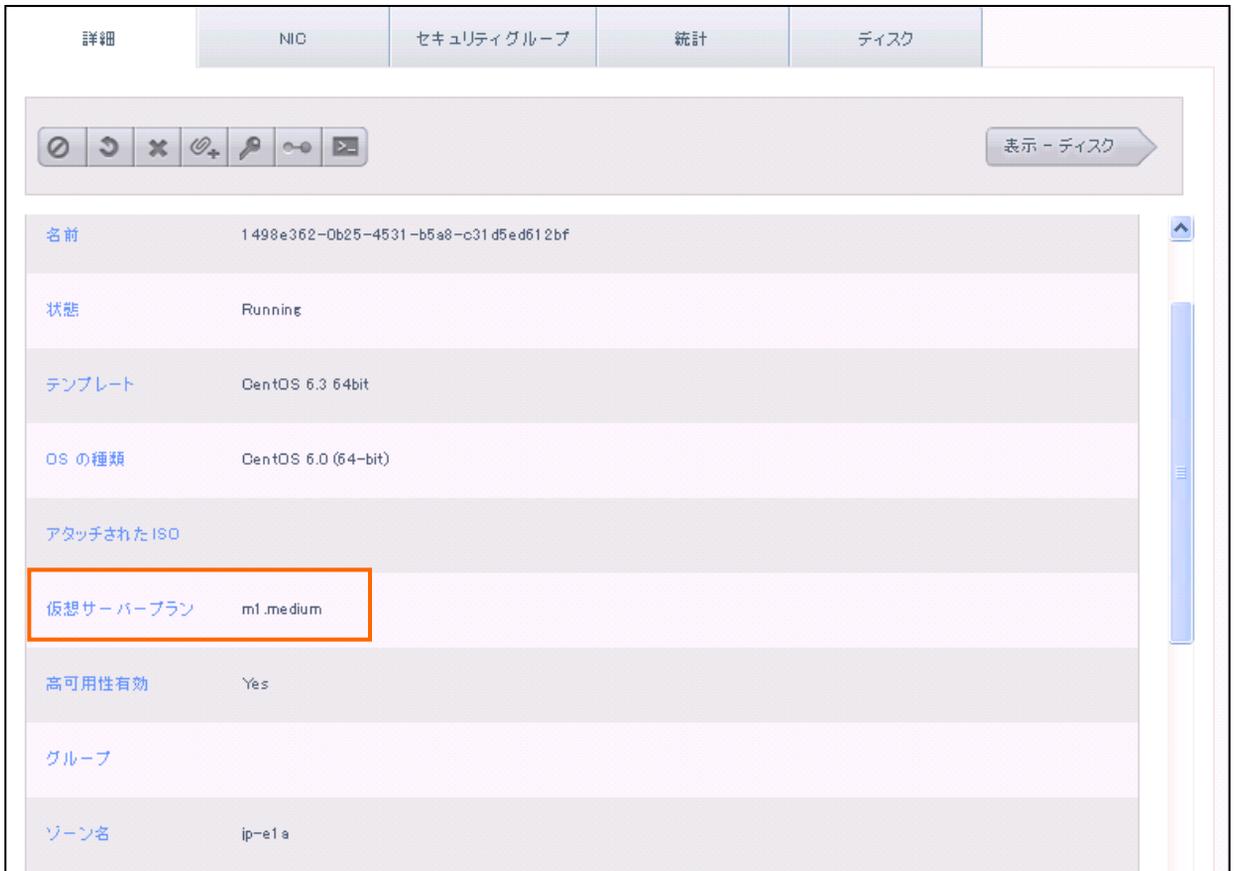
Provisioning Stacks

	Name	Created	Status	Description
<input type="radio"/>	testStack	2013-04-04 09:01:34 UTC+09	UPDATE_COMPLETE	Provisioning Test.

3-2) Updating a Stack

5

The information about the creation of the stack is displayed on the screen. Click on "Continue".



The screenshot displays a web interface for managing a stack. At the top, there are tabs for "詳細" (Details), "NIC", "セキュリティグループ" (Security Group), "統計" (Statistics), and "ディスク" (Disk). Below the tabs is a toolbar with various icons and a "表示 - ディスク" (Show - Disk) button. The main content area shows a list of stack properties:

名前	1498e362-0b25-4531-b5a8-c31d5ed612bf
状態	Running
テンプレート	CentOS 6.3 64bit
OS の種類	CentOS 6.0 (64-bit)
アタッチされた ISO	
仮想サーバプラン	m1.medium
高可用性有効	Yes
グループ	
ゾーン名	jp-e1a

3-3) Deleting a Stack

Delete a stack previously created.

1

Click on "Delete Stack" on the Provisioning console.



Cloudⁿ Provisioning
NTT Communications

アカウントID : dn100050983 ようこそ 閉じる

リージョン: 東日本

Provisioning

Provisioning Stacks

Create New Stack Update Stack **Delete Stack**

Active Complete Failed Deleted In Progress Refresh

	Name	Created	Status	Description
	testStack	2013-04-04 09:01:34 UTC+	UPDATE_COMPLETE	Provisioning Test.

2

When you click on "Yes, Delete", the stack is deleted, and you go back to the main screen. ("Status" is "DELETE_COMPLETE" is the deletion is completed.)

Confirm

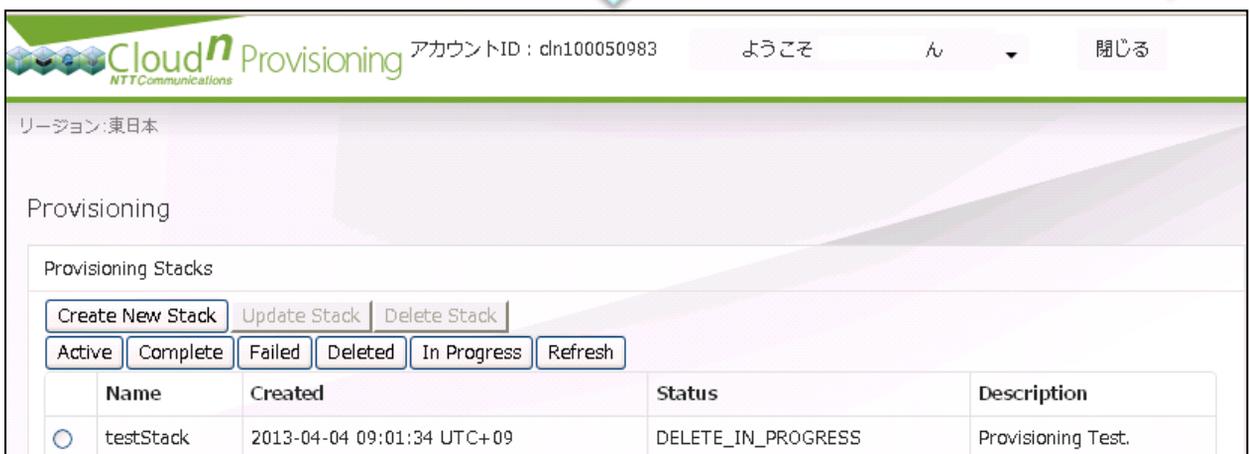
Are you sure you want to delete this stack?

testStack

Deleting a stack will lead to deallocation of all of the stack's resources.

Yes, Delete Cancel

Click



Cloudⁿ Provisioning
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アカウントID : dn100050983 ようこそ ん 閉じる

リージョン: 東日本

Provisioning

Provisioning Stacks

Create New Stack Update Stack Delete Stack

Active Complete Failed Deleted In Progress Refresh

	Name	Created	Status	Description
	testStack	2013-04-04 09:01:34 UTC+09	DELETE_IN_PROGRESS	Provisioning Test.