Yandex

Yandex Cloud hostprovider

The Yandex Cloud hostprovider is one of the available hostproviders for Arenadata Cluster Manager (ADCM). This hostprovider allows you to create and manage virtual machines (VM) in the Yandex Cloud.

Version CURRENT Language: EN

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Planning guide

Daria Barysheva

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Before adding the Yandex Cloud hostprovider, ensure the following requirements are met:

- The Folder exists in the Yandex Cloud.
- The subnet is created in the Yandex Cloud.
- ADCM can establish the connection to the specified subnet in the Yandex Cloud.
- The user that creates the virtual machine has all necessary rights.

NOTE

The Yandex Cloud hostprovider does not allow you to perform all the actions available in the Yandex Cloud console. Currently, DDoS protection is not supported.

Installation and configuration

Daria Barysheva

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Step 1. Download a hostprovider bundle

Hostprovider distributions for ADCM come in bundles. Regarding the Yandex Cloud hostprovider, a bundle is a regular archive that includes a description and logic to interact with the Yandex Cloud.

The steps for downloading a bundle are given below:

1. Go to https://network.arenadata.io/ and select ***Arenadata Cluster Manager***.
2. Navigate to ***Infrastructure bundles*** and select the required bundle from the table.

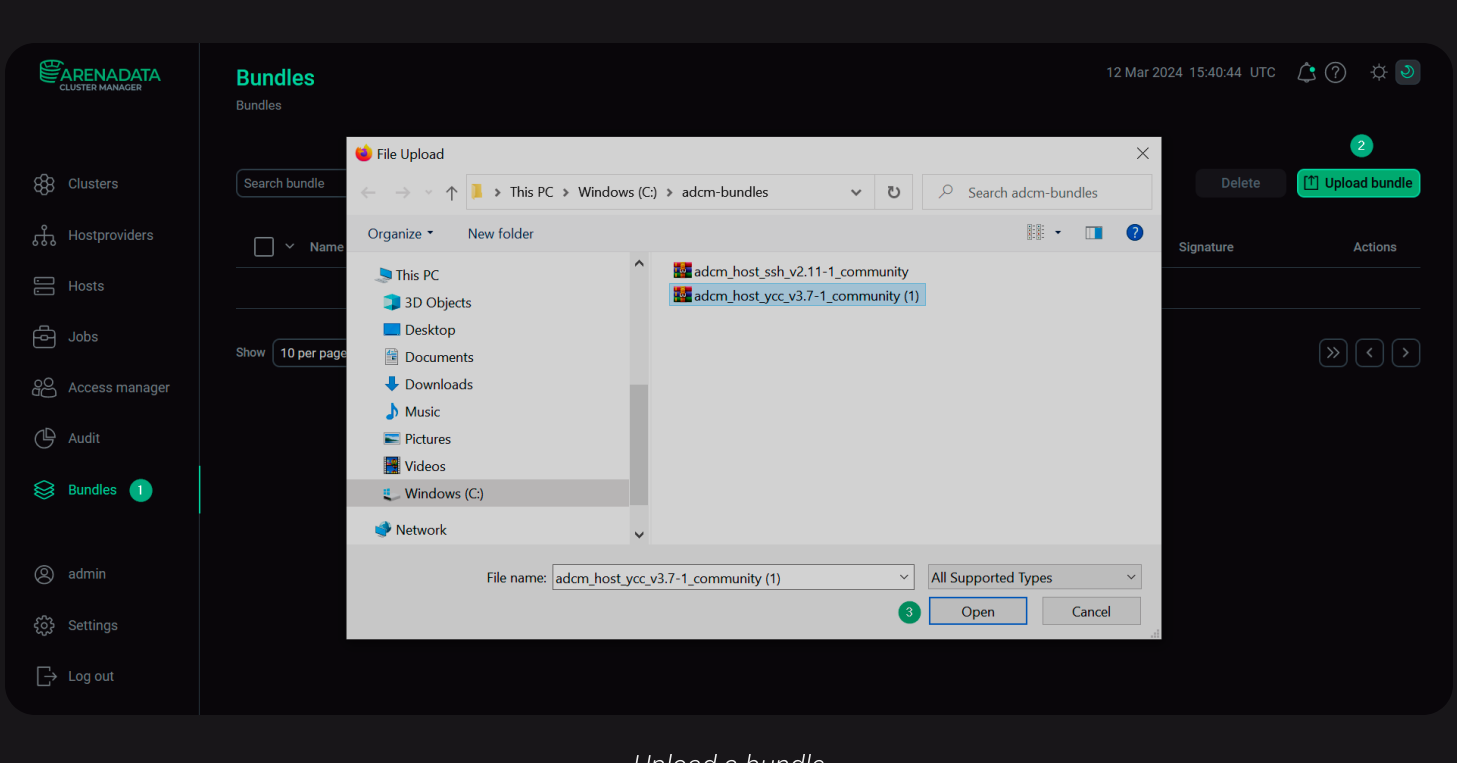
Infrastructure bundles page for ADCM

Yandex Cloud hostprovider bundle is called ***Yandex bundle***.

Step 2. Upload a hostprovider bundle to ADCM

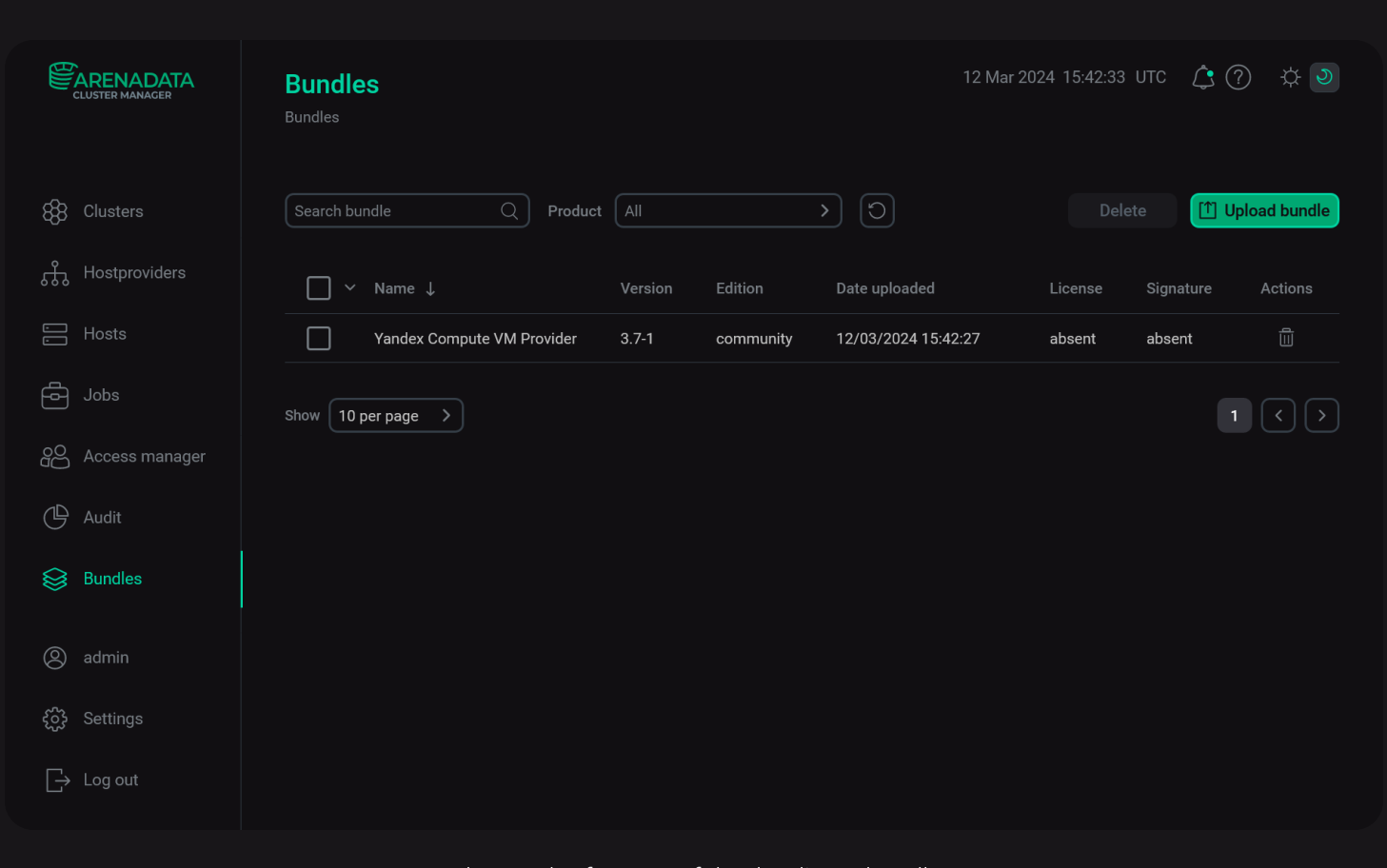
To upload a bundle to ADCM, follow the steps:

1. Select the ***Bundles*** item in the left navigation menu and click ***Upload bundle***.
2. Select a bundle in the Open File Dialog.



Upload a bundle

3. As a result of the performed actions, a bundle is displayed on the ***Bundles*** page.

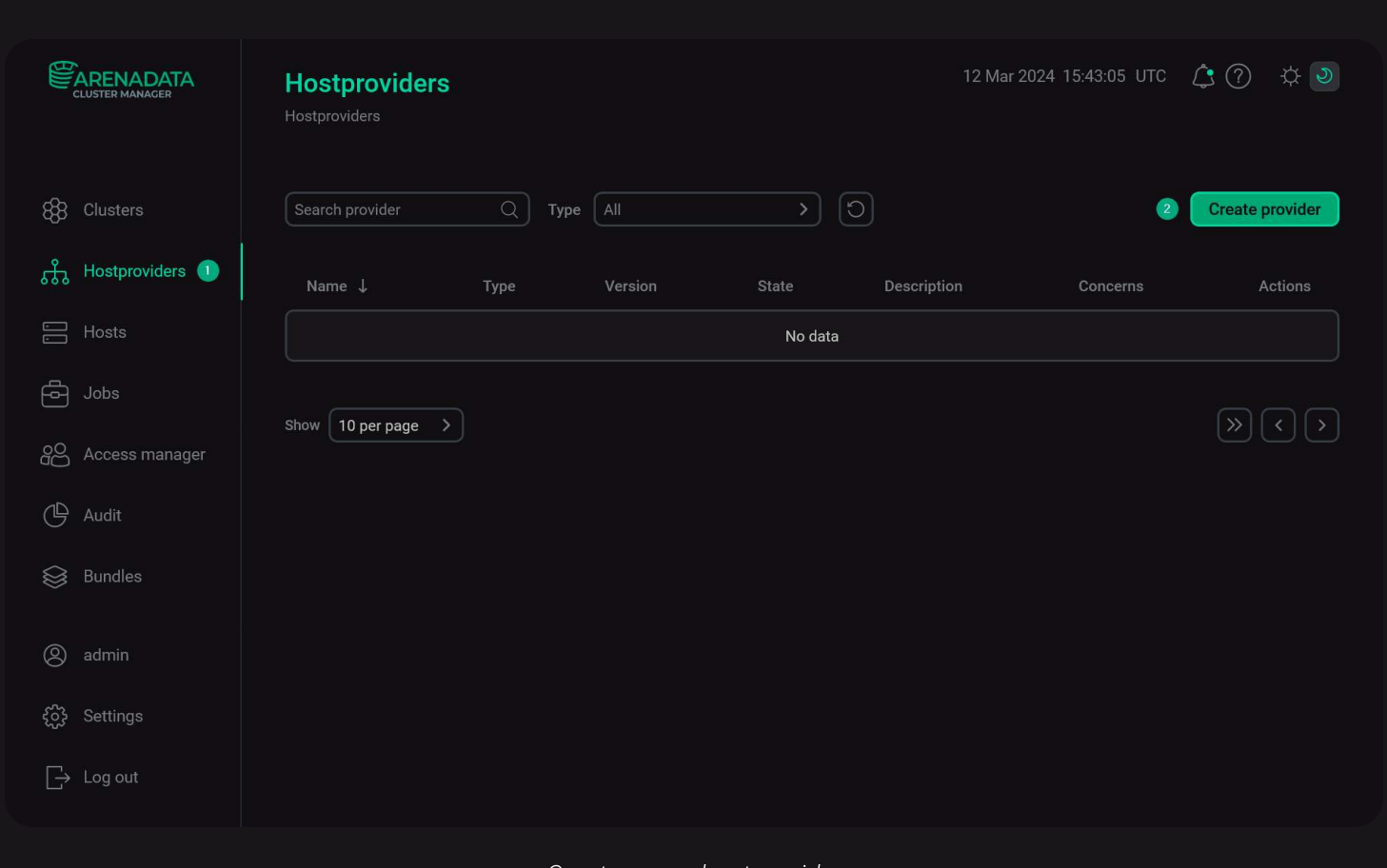


The result of successful uploading a bundle

Step 3. Create a hostprovider based on the uploaded bundle

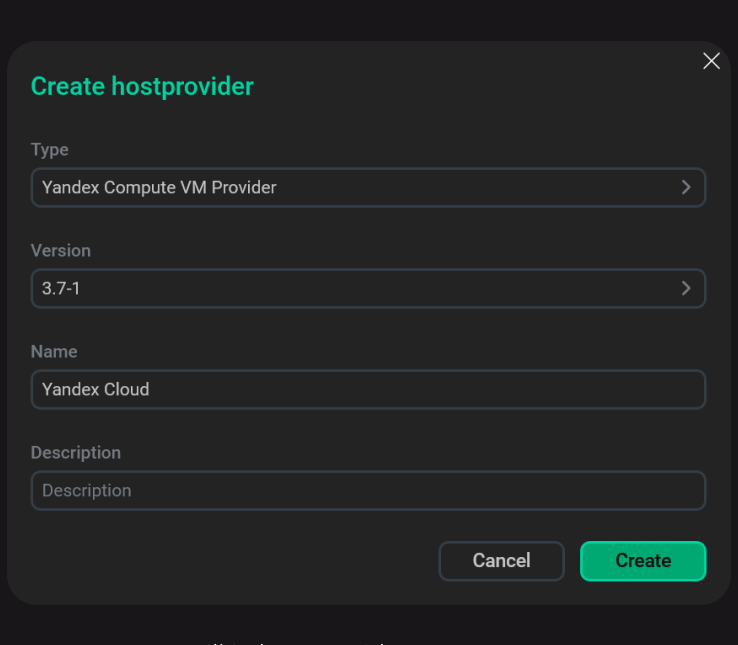
To add a new hostprovider to ADCM on the base of the uploaded bundle, follow the steps:

1. Select the ***Hostproviders*** item in the left navigation menu and click ***Create provider***.



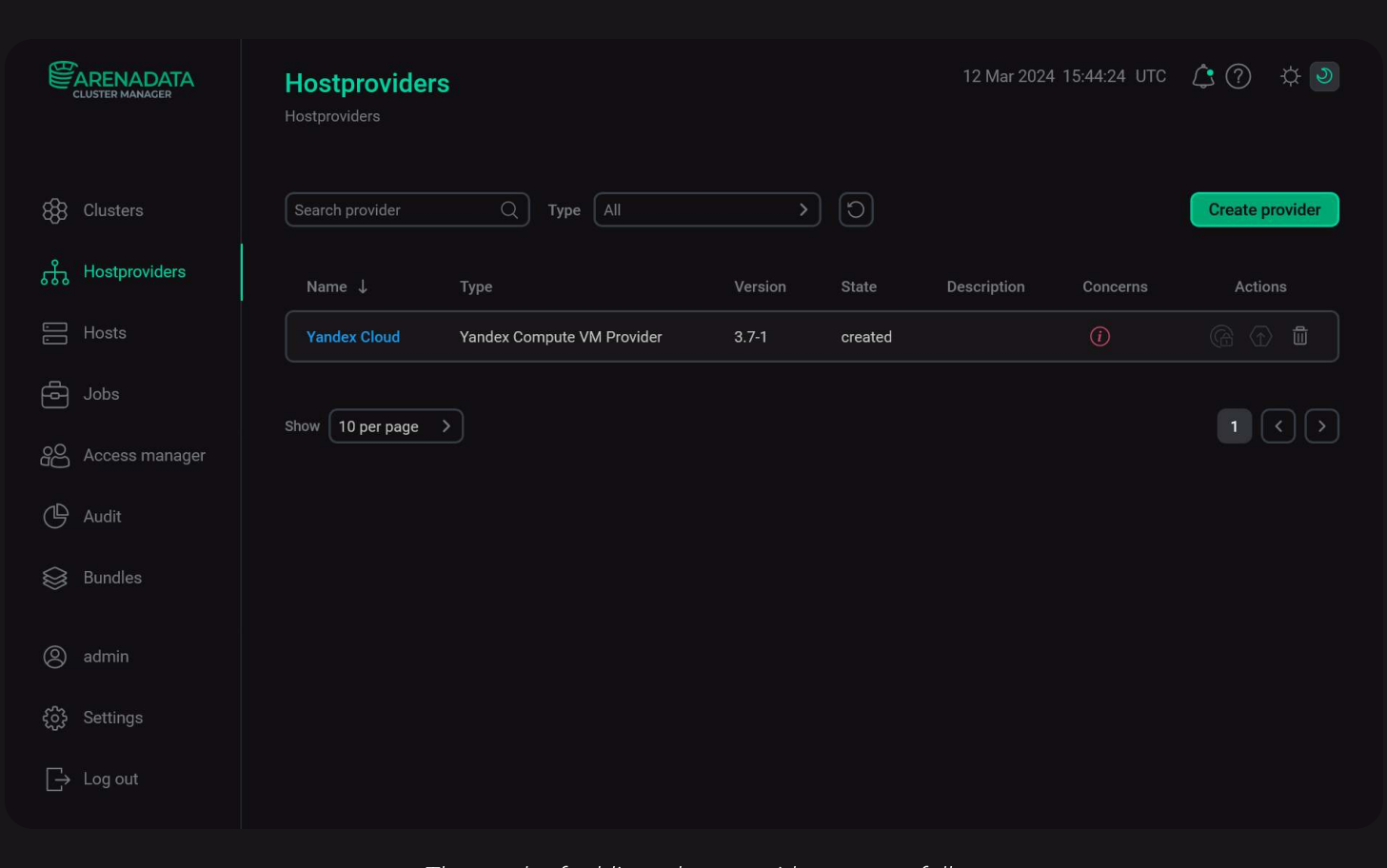
Create a new hostprovider

2. In the opened window:
   - Select an uploaded bundle in the ***Type*** field.
   - Select a bundle version in the ***Version*** field. Several versions become available in the case of different versions of the same bundle being uploaded.
   - Enter a hostprovider name in the ***Name*** field.
   - Enter a hostprovider description in the ***Description*** field if necessary.
   - Click ***Create***.



Fill in hostprovider parameters

3. As a result of the performed actions, the created hostprovider is displayed on the ***Hostproviders*** page.

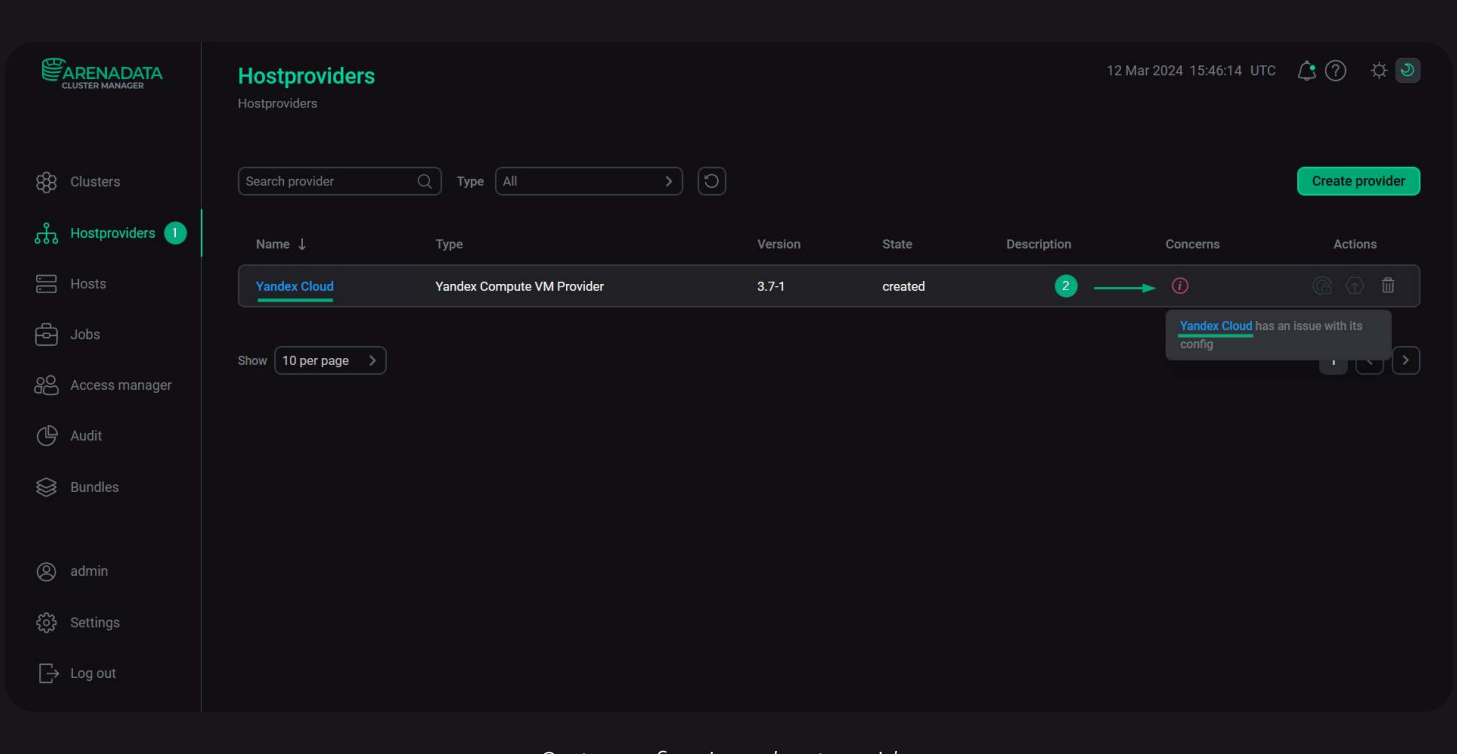


The result of adding a hostprovider successfully

Step 4. Configure a hostprovider

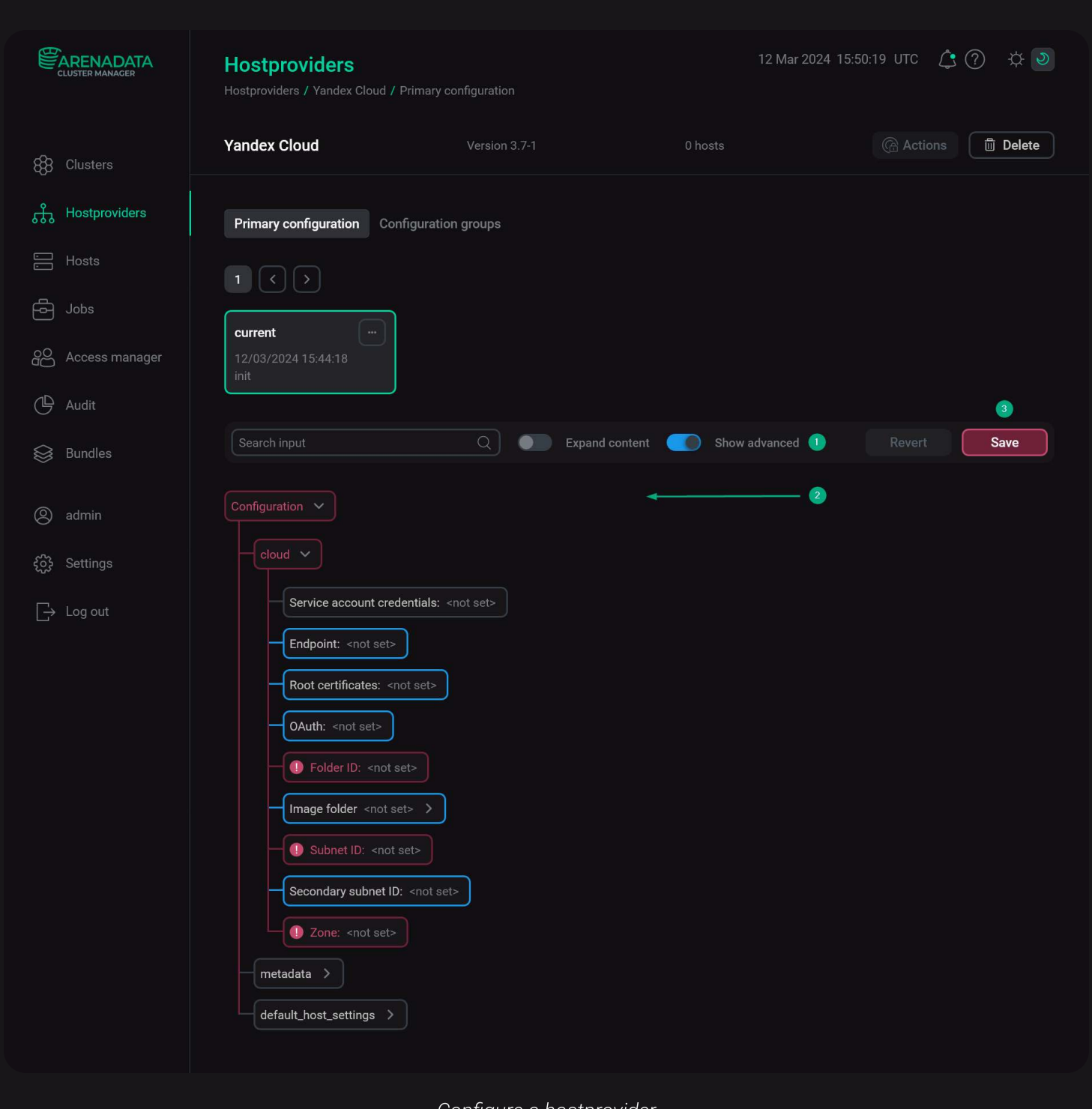
In order to configure the access to the cloud, follow the steps:

1. Select a hostprovider on the ***Hostproviders*** page. To do this, click a hostprovider name in the ***Name*** column. Alternatively, you can hover over the (i) icon in the ***Concerns*** column and follow the link in the pop-up window that opens. The icon indicates the presence of critical errors in the current hostprovider configuration (e.g. mandatory fields).



Go to configuring a hostprovider

2. In the next window, switch on the ***Show advanced*** toggle, fill in hostprovider parameters, and click ***Save***. The fields highlighted in red are mandatory.



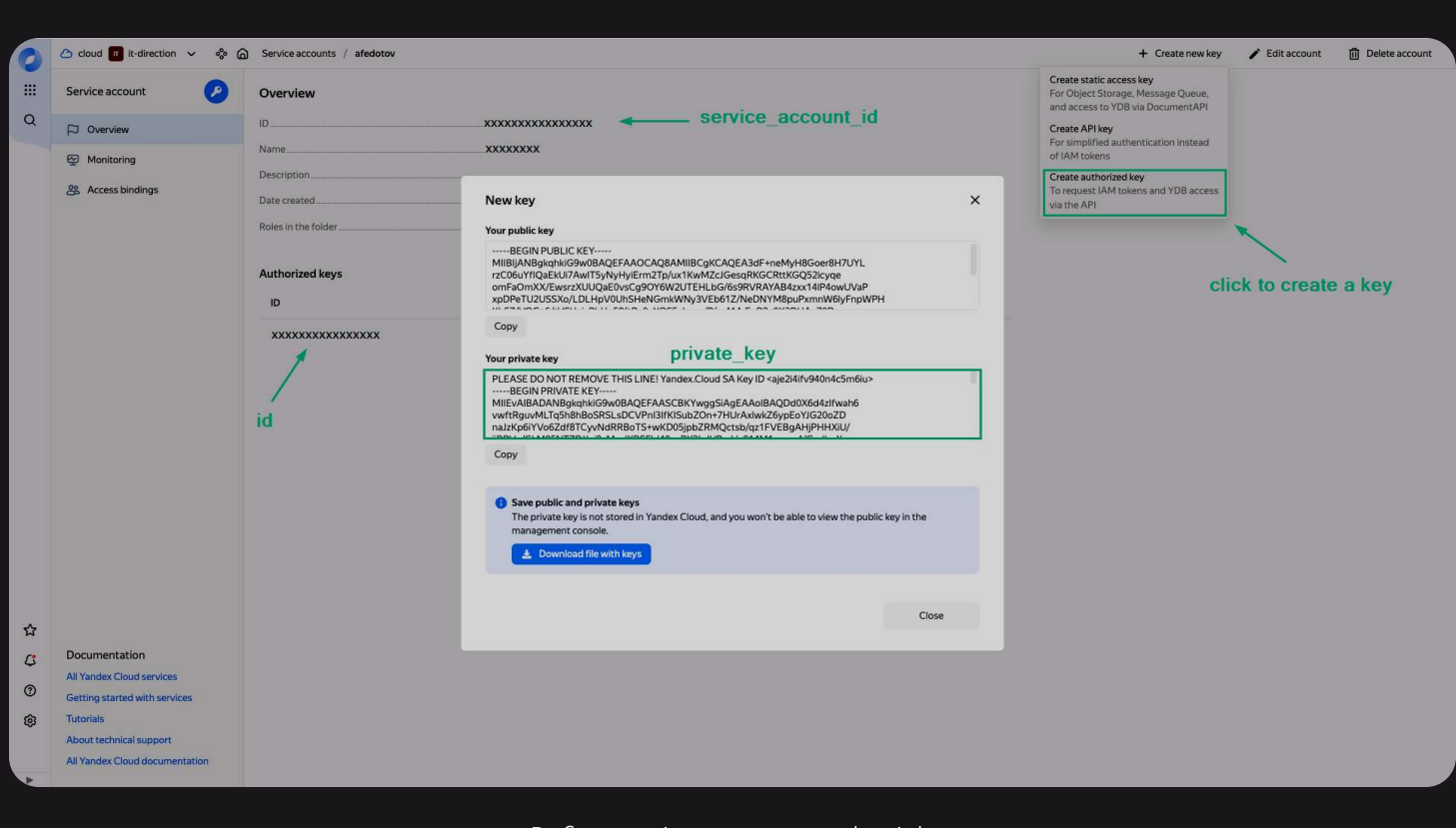
Configure a hostprovider

Hostprovider configuration parameters are given below:

- ***cloud***:
  - ***Service account credentials*** — credentials of the Yandex Cloud service account in the JSON format:

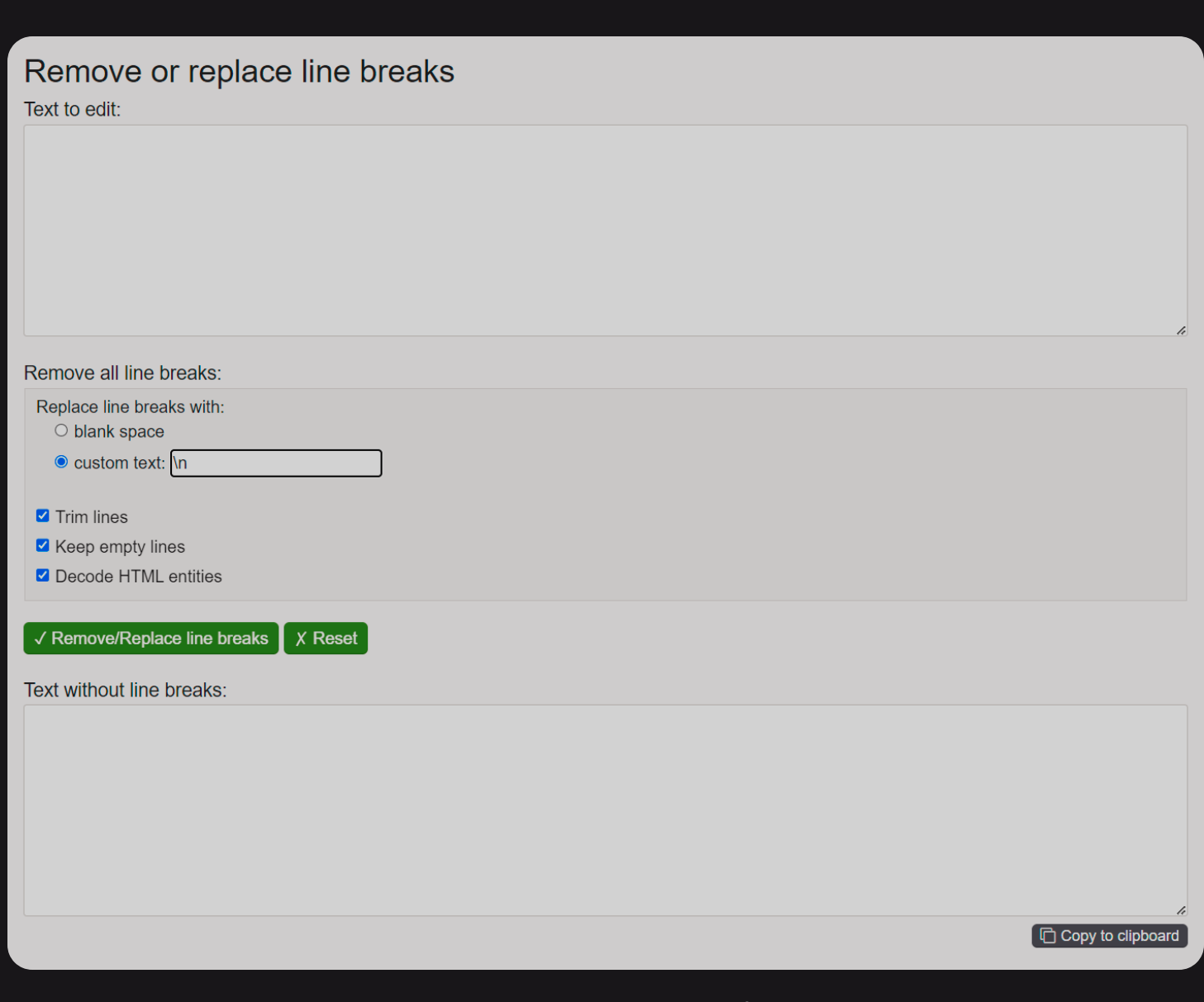
```
{
    "id": "<Identifier of the authorized key>",
    "service_account_id":"<Identifier of the service account>",
    "private_key":"<Private part of the authorized key>"
}
```

Authorized keys can be obtained for the service account according to the Yandex Cloud documentation. To create a new key, click ***Create new key*** → ***Create authorized key*** on the service account page.



Define service account credentials

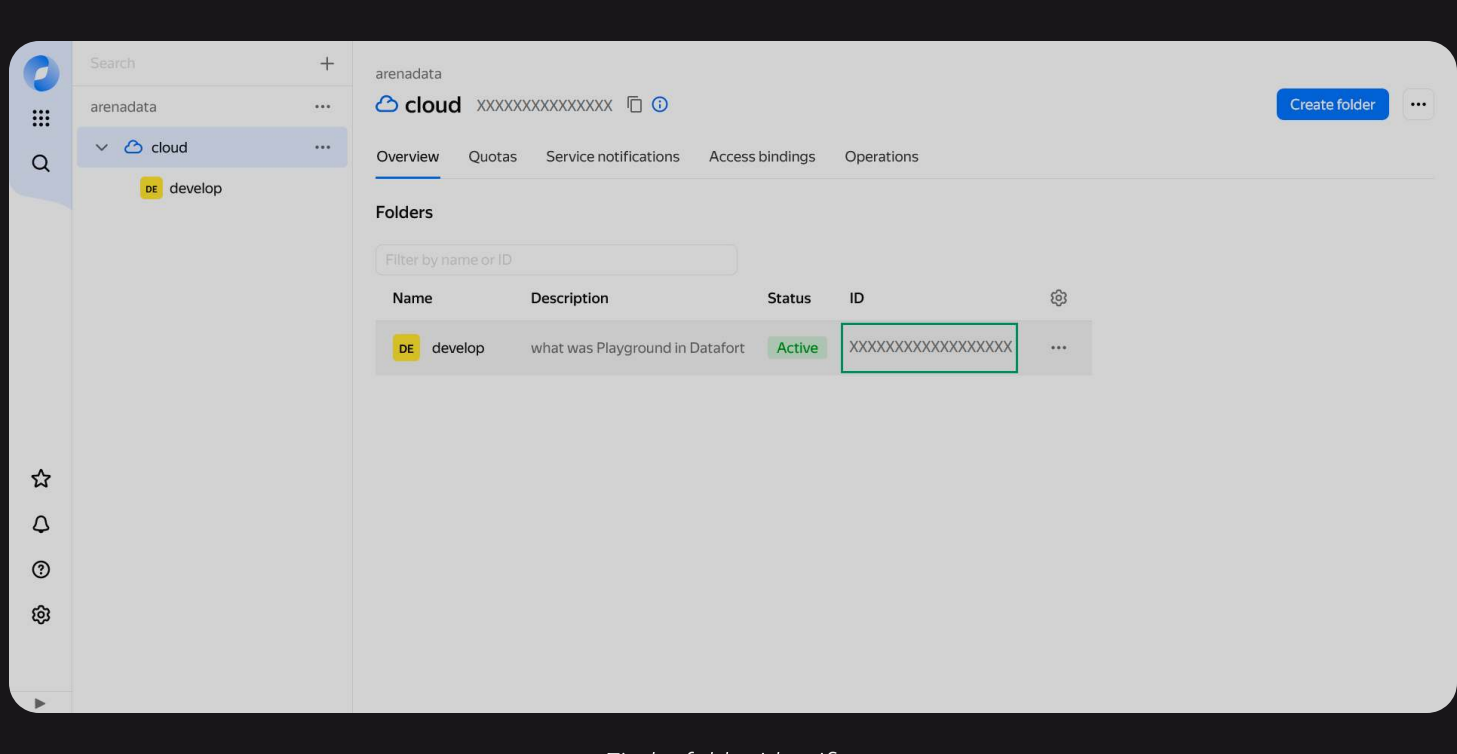
Note that you should convert a private part of the generated key to JSON format before copying its value to the ***Service account credentials*** field. To do this, use one of available instruments that replace line breaks or run the `dumps` method from the *json* Python library.



Convert a private key to the JSON format

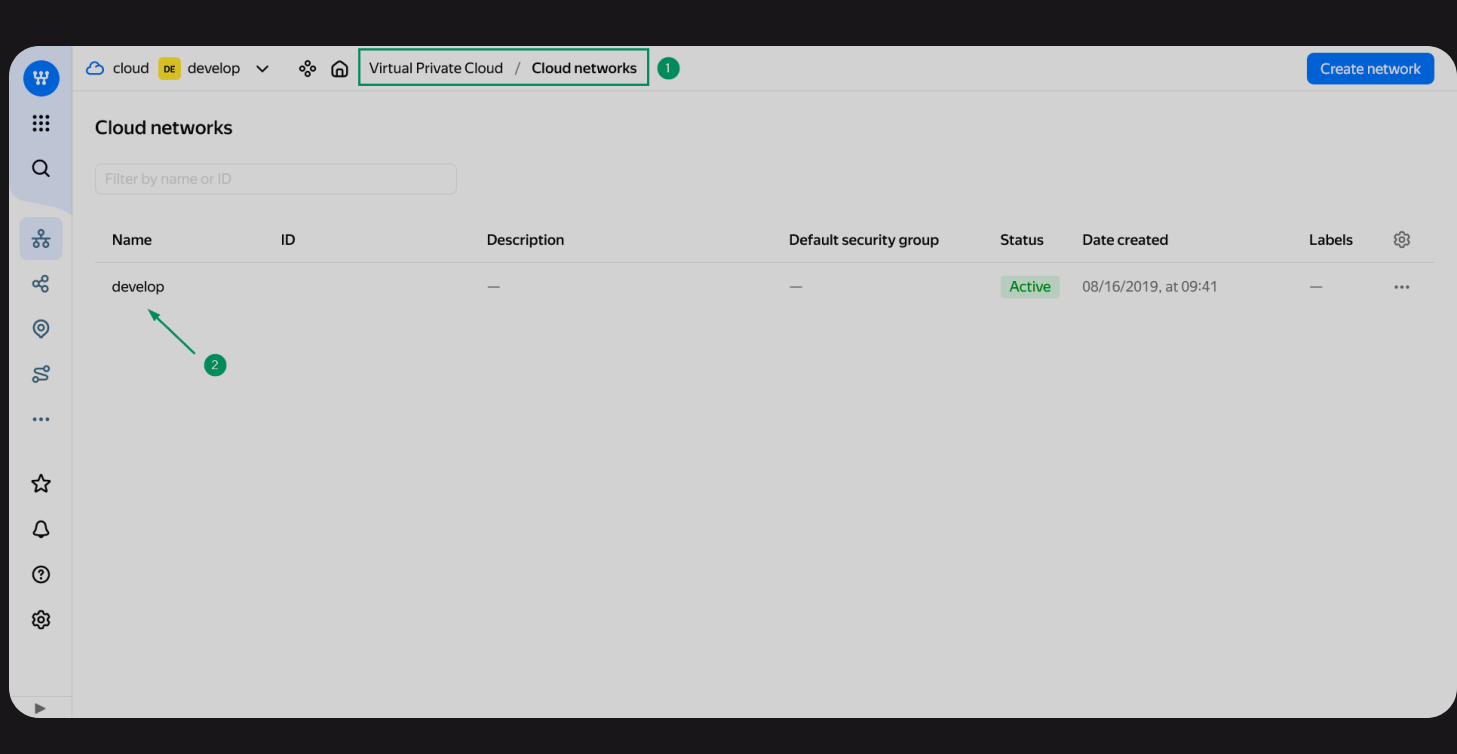
The ***Service account credentials*** field is incompatible with ***OAuth***, you should use only one of these fields for authentication.

  - ***Endpoint*** — a custom endpoint that is used to connect to a private Yandex Cloud installation. The default endpoint is `api.cloud.yandex.net`.
  - ***Root certificates*** — root certificates that are used to connect to a private Yandex Cloud installation.
  - ***OAuth*** — an OAuth token that can be obtained according to the Yandex Cloud documentation. The ***OAuth*** field is incompatible with ***Service account credentials***, you should use only one of these fields for authentication.
  - ***Folder ID*** — a target folder for new virtual machines. Can be copied from the ***ID*** column in the folder list of the Yandex Cloud.

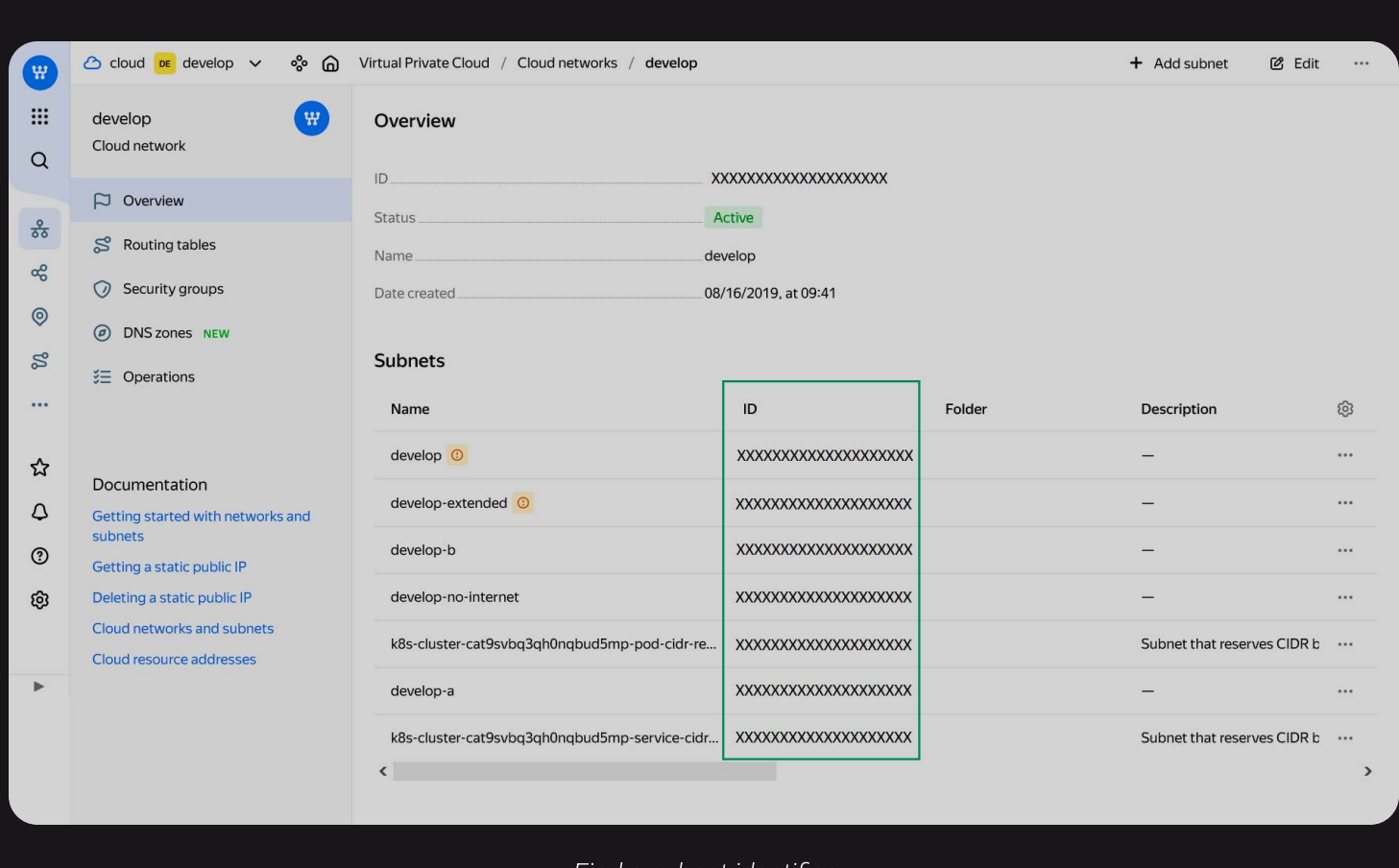


Find a folder identifier

  - ***Image folders*** — identifiers of the folders that are used to store all organization images. Images can be obtained via the get-latest-from-family function. Enter each folder identifier separately — by clicking the [+1] icon in the ***Image folders*** node and editing the new list element `Image folder [N]` subsequently.
  - ***Subnet ID*** — a target subnet for new virtual machines. To get the ***Subnet ID*** value, open the ***Virtual Private Cloud*** service in the Yandex Cloud console, click the desired network in the ***Cloud networks*** section, and copy the value of the ***ID*** column from the row that contains the desired subnet in the list of subnets that opens.

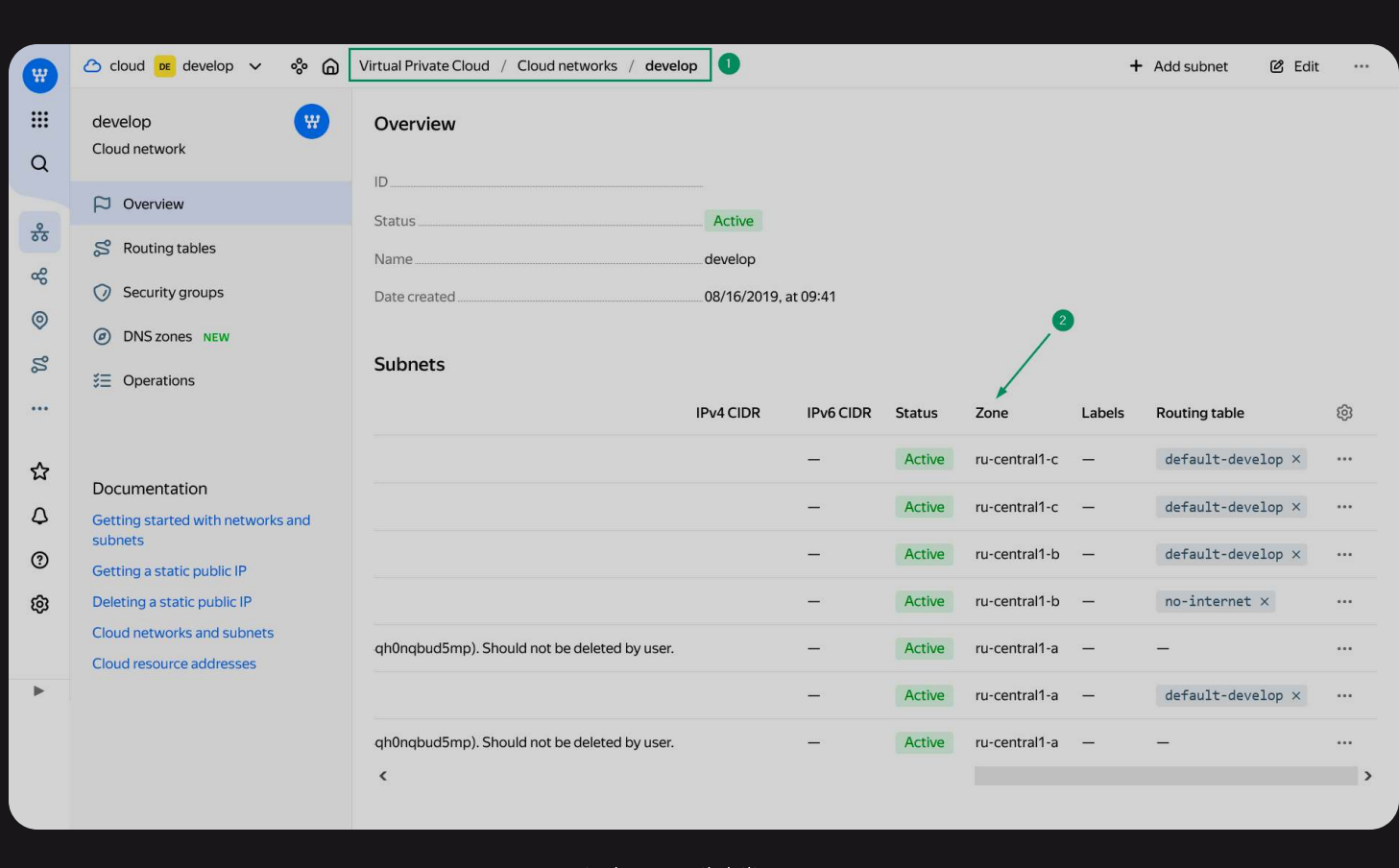


Select a network



Find a subnet identifier

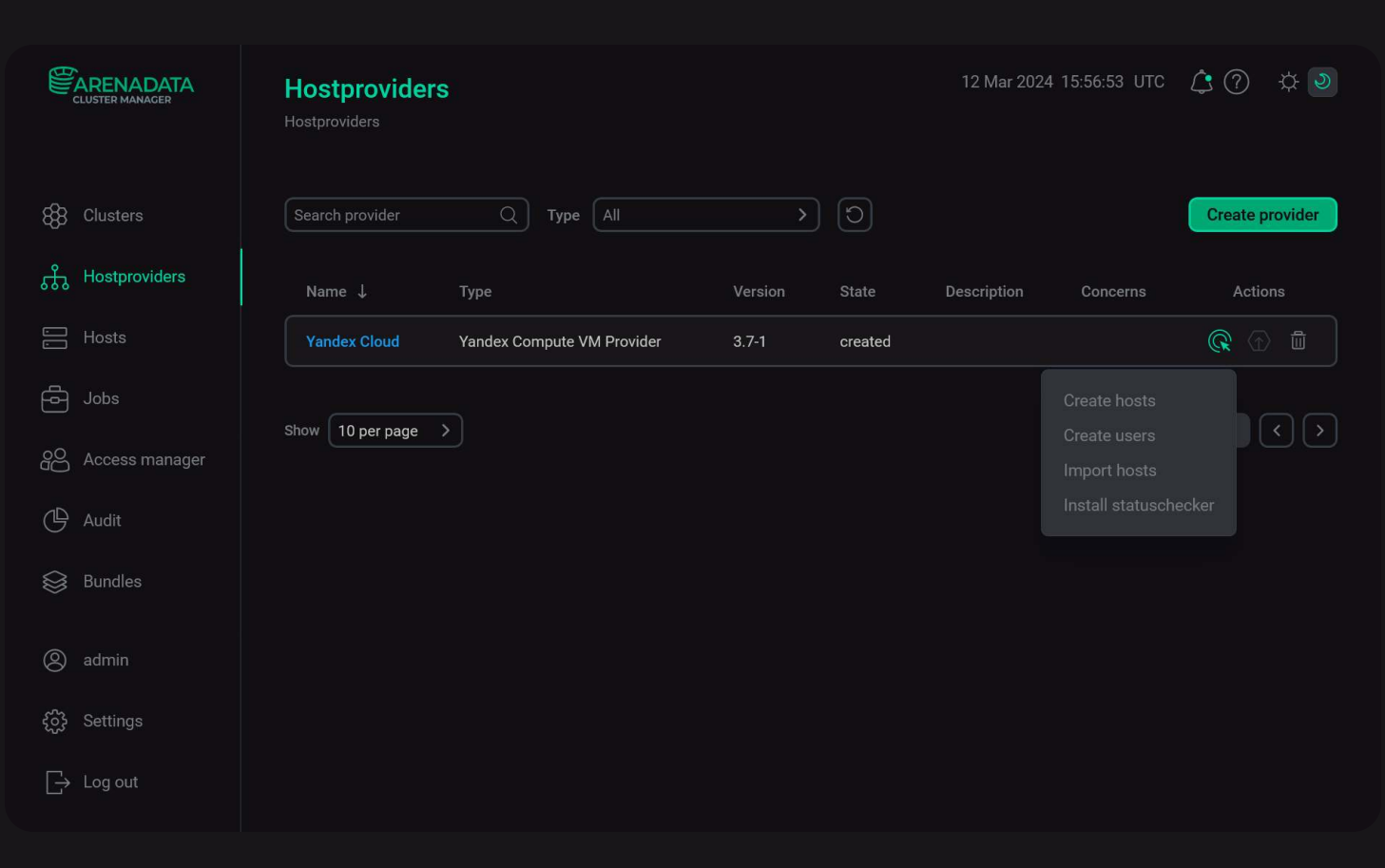
  - ***Secondary subnet ID*** — an identifier of the additional subnet that is used to create a second network interface on virtual machines. The second subnet must be within the same VPC in the Yandex Cloud as the ***Subnet ID*** subnet.
  - ***Zone*** — a target availability zone (AZ) for new virtual machines. Every zone corresponds to the specific data center. Currently, the following zones are available: `ru-central1-a`, `ru-central1-b`, `ru-central1-d`. The `ru-central1-c` zone will be decommissioned. To get the ***Zone*** value, open the ***Virtual Private Cloud*** service in the Yandex Cloud console, click the desired network in the ***Cloud networks*** section, and copy the value of the ***Zone*** column from the row that contains the desired subnet in the list of subnets that opens.



Find an availability zone

- ***metadata***:
  - ***Ssh keys*** — a set of public keys that will be used to create users during the Create hosts, Create users, and Create host → Init actions. Enter each key separately — by clicking the [+1] icon in the ***Ssh keys*** node and editing the new list element `Ssh keys [N]` subsequently. Each public key should start with `ssh-rsa ` and end with ` username@hostname`.
- ***default_host_settings***:
  - ***Active operations limit timeout*** — a timeout that is activated when the quota of simultaneously performed operations is exceeded (resulting in errors returned by the Yandex Cloud gPRC). If empty, the timeout is not activated. If `0`, the waiting time is unlimited. Any positive integer in the field equals the waiting time, during which the operation should move from the queue to the execution stage. Measured in seconds.
  - ***Labels*** — labels that will be used for all created VMs by default. The labels that are specified for VMs (during the Create hosts and Create host → Init actions) have a higher priority compared to the labels specified at the hostprovider level. Enter each label separately — by clicking ***Add property*** in the ***Labels*** node and editing the new list element `Labels [N]` subsequently. In the dialog that opens, enter a label key in ***Enter field name*** and a label value in ***Enter field value***.
  - ***Security Group IDs*** — security group identifiers that will be used for all created VMs by default. The security groups that are specified for VMs (during the Create hosts and Create host → Init actions) have a higher priority compared to the groups specified at the hostprovider level. Enter each group separately — by clicking the [+1] icon in the ***Security Group IDs*** node and editing the new list element `Security Group IDs [N]` subsequently.

3. Return to the ***Hostproviders*** page. As a result, the (i) icon stops being displayed in the ***Concerns*** column. The actions available for the configured hostprovider can be opened by clicking the icon in the ***Actions*** column.



The result of configuring a hostprovider successfully

Manage a Yandex Cloud hostprovider

Yandex

Daria Barysheva

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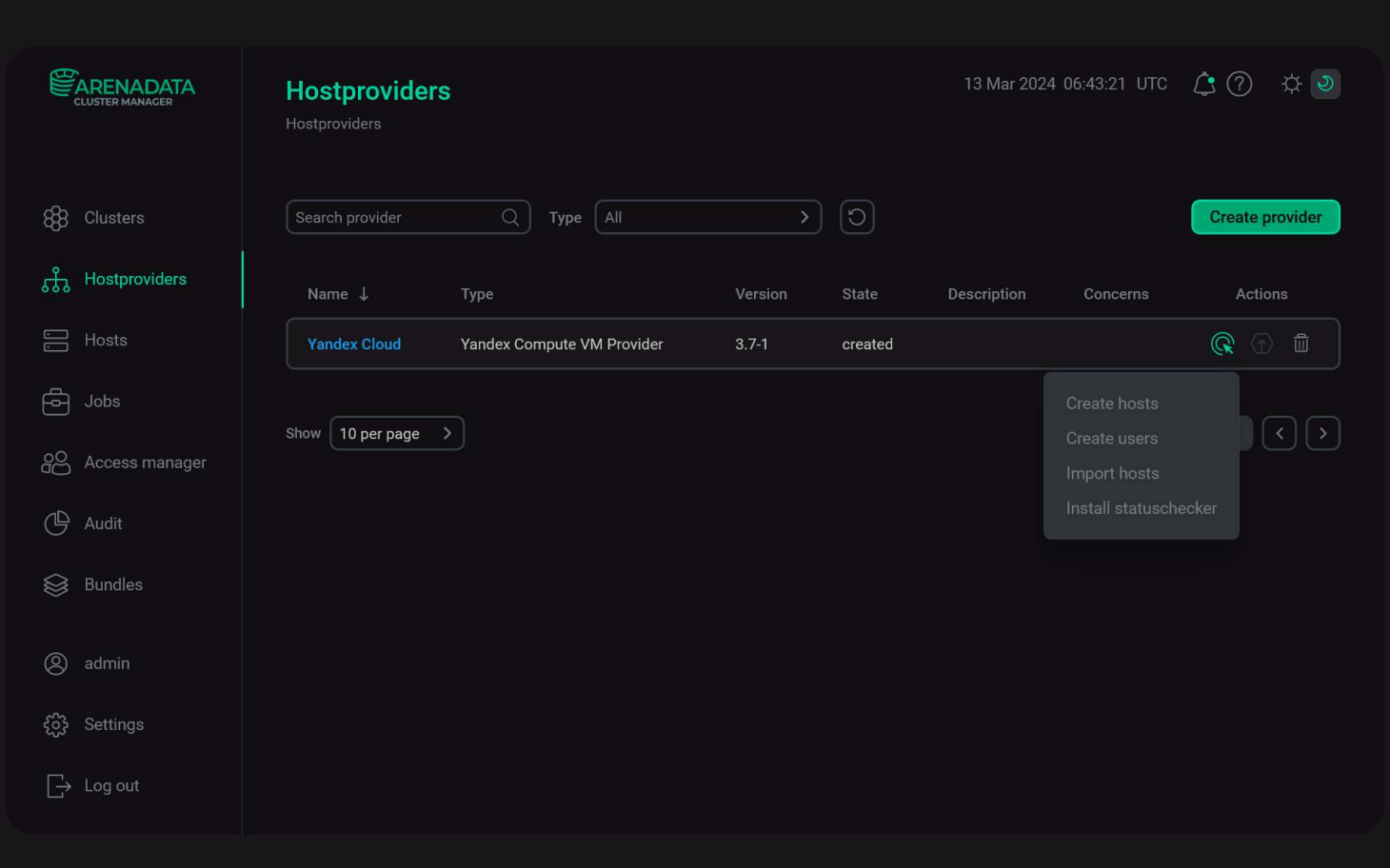
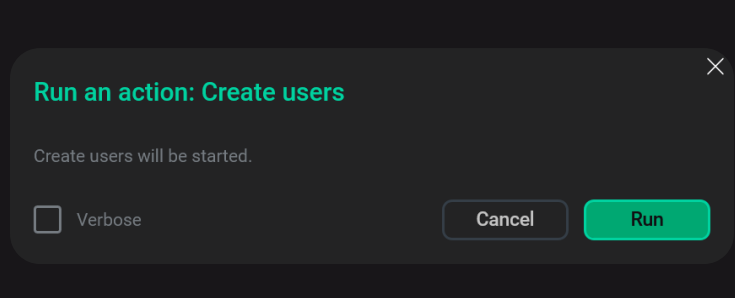
Overview

After you create and configure a Yandex Cloud hostprovider, you can manage it on the ***Hostproviders*** page of the ADCM web interface. To see available hostprovider actions, click the icon in the ***Actions*** column.



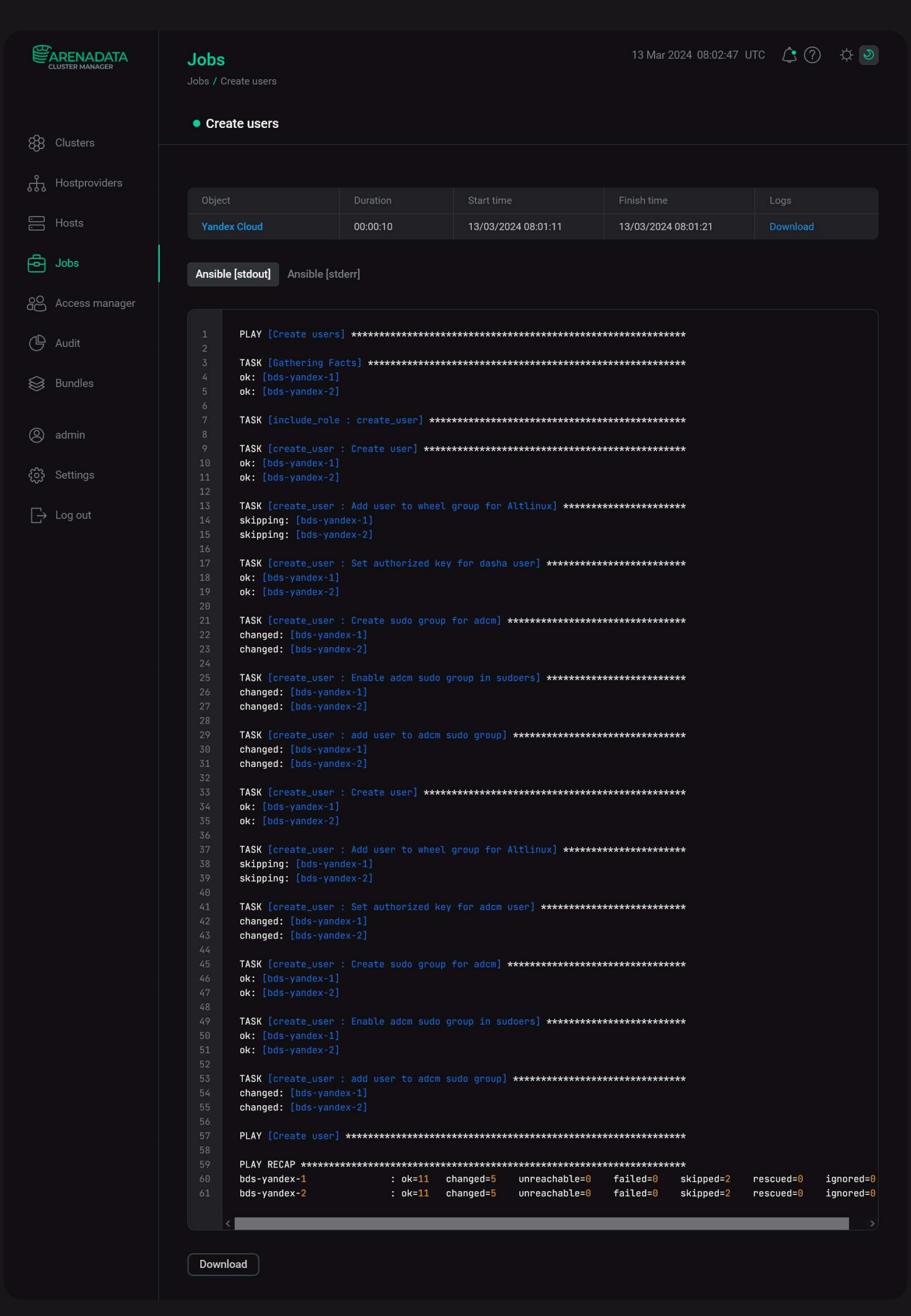
Yandex Cloud hostprovider actions

When you choose an action, ADCM displays a dialog window to confirm your choice. In this dialog window, you can select the ***Verbose*** checkbox to see additional execution details on the ***Jobs*** page. For some actions, you should first fill in additional options in a separate window.



Standard window to confirm all actions

When an action starts, ADCM displays its execution process and result on the ***Jobs*** page. From this page, you can navigate to a page with details on an individual job (by clicking a job name) to see inner steps of that job execution and analyze errors, if any.



The job page

All available hostprovider actions are listed below.

Create hosts

NOTE

- To add and configure each host separately, run the Create host → Init action on the ***Hosts*** page.
- Do not use the ***Create hosts*** action for products that require FQDNs. Use the Create host → Init action on the ***Hosts*** page instead.

The ***Create hosts*** action allows you to create a group of virtual machines in the Yandex Cloud and add their data to ADCM. For each host, the connection is checked and the statuschecker is installed. Thus, you do not need to run the Install statuschecker action for each created host.

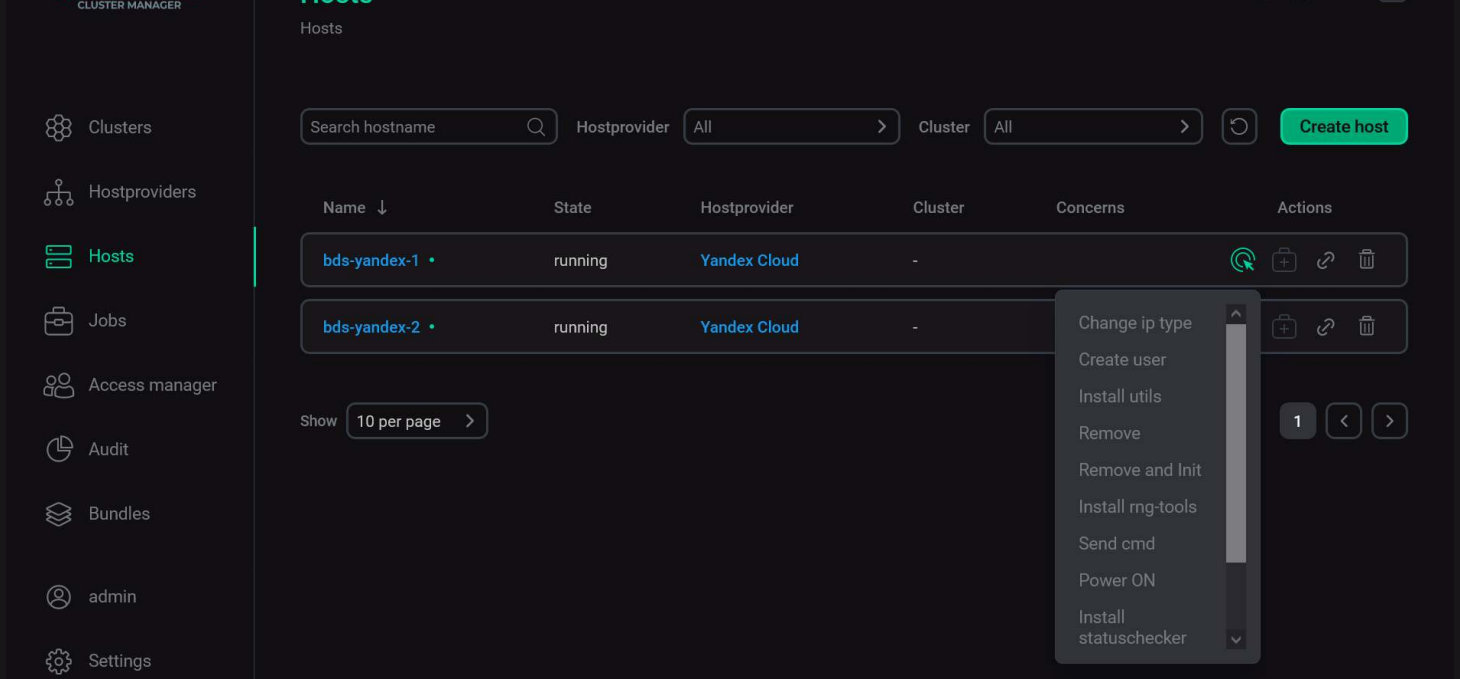
After you select the ***Create hosts*** action, a dialog box opens where you can set the following parameters (the fields highlighted in red are mandatory).

Host configuration parameters

Parameter	Description	Default value
Count	A number of virtual machines	—
FQDN	A prefix for names of virtual machines. Every name is formed according to the `<FQDN>-<VM number>.<Domain zone>` template. VM numbers start with `1`. If you need only one virtual machine and do not need numeric suffixes, use the Create host → Init action on the ***Hosts*** page	—
Additional users groups	A list of additional Linux groups. All users are added to this list at the moment the VMs are being initialized. For example, in the Alt Linux image the `ansible` user should be added to the `wheel` group. Each group should exist in the image. Enter each group separately — by clicking the `+ 1` icon in the ***Additional users groups*** node and editing the new list element `Additional users groups [N]` subsequently	—
Cloud-init timeout	A timeout for `cloud-init` to finish the running tasks (in seconds)	600
Init script	The initialization script that is executed at VMs deployment. A shebang (`#!`) is not needed. Pay attention that this option is experimental: single or double quotes may break the installation process	—
Image family	A family of operating systems based on which VMs are created. The newest image from the specified family is used. Starting with Yandex Cloud hostprovider 2.13, you can fill in the parameter value manually	centos-7
Snapshot id	An ID of the boot disk snapshot. Incompatible with the ***Image id*** parameter	—

Image id	An ID of the boot disk image. Can be obtained via two commands:
	▪ For public images:
	`yc compute image list --folder-id standard-images`
	▪ For private images:
	`yc compute image list`
	Incompatible with the ***Snapshot id*** parameter
		—

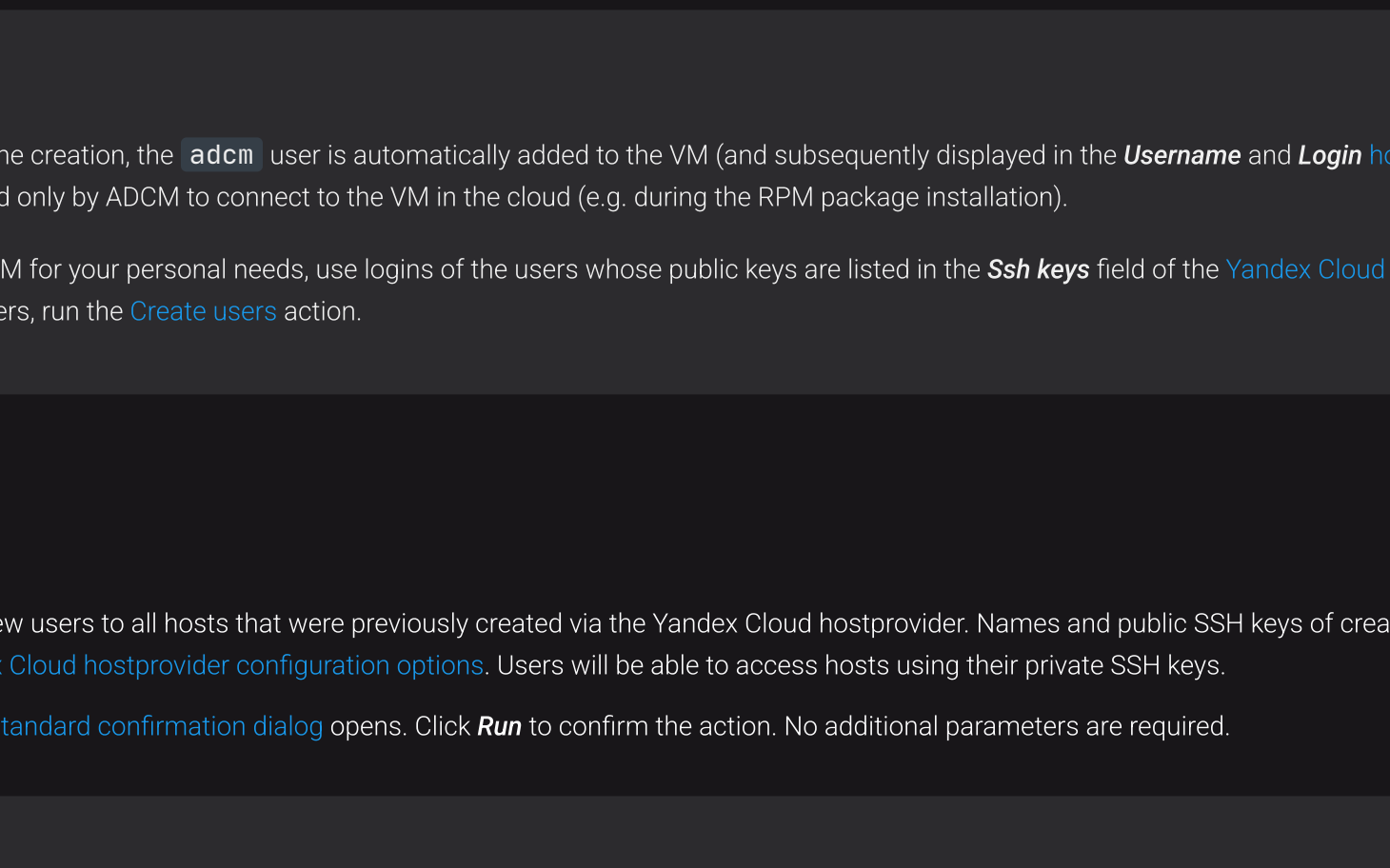
Platform	A processor type. For more information on supported platforms, refer to the Yandex Cloud documentation. Possible values: ▪ `Intel Broadwell` ▪ `Intel Cascade Lake` ▪ `Intel Ice Lake` (starting with Yandex Cloud hostprovider 2.15)	Intel Cascade Lake
vCPU	A number of vCPU	2
Perfomance level (%)	A guaranteed processor performance level that is allocated to VMs. See more details in the Yandex Cloud documentation	100
Memory (GB)	RAM (in GB)	2
Disk type	A storage class of VMs. Possible values: ▪ `SSD` ▪ `HDD` ▪ `SSD-NONREPLICATED` (starting with Yandex Cloud hostprovider 2.13)	HDD
Disk size, GB	A size of the boot disk that is created for VMs (in GB)	50
Additional disks (JSON)	Parameters of additional disks in the JSON format: ▪ `name` — a name of the disk. If not defined, the following template is used: `<hostname>-data-disk-<N>`, where `<hostname>` is the VM name and `<N>` is the disk number. ▪ `autodelete` — a flag that indicates whether to remove a disk after removing a VM. ▪ `description` — a disk description. ▪ `type` — a disk type (see ***Disk type*** above). ▪ `size` — a disk size in GB. All parameters except `name` are required. Example: `[ { "name": "Data-disk1", "autodelete": true, "description": "disk1", "type": "ssd", "size": 10 }, { "autodelete": false, "description": "disk2", "type": "hdd", "size": 100 } ]`	—
Assign public ip	Whether or not to assign public IP addresses to VMs	false
Assign secondary NIC	A flag that indicates whether to use the second network interface controller (NIC) for VM. You need to define the ***Secondary subnet ID*** value in the Yandex Cloud hostprovider settings first	false
Security Group IDs	Security group identifiers that will be used for all created VMs by default. The security groups that are specified during the ***Create hosts*** action have a higher priority compared to the groups specified at the hostprovider level. Enter each group separately — by clicking the `+ 1` icon in the ***Security Group IDs*** node and editing the new list element `Security Group IDs [N]` subsequently	—
Labels	Labels that will be used for all created VMs by default. The labels that are specified during the ***Create hosts*** action have a higher priority compared to the labels specified at the hostprovider level. Enter each label separately — by clicking ***Add property*** in the ***Labels*** node and editing the new list element `Labels [N]` subsequently. In the dialog that opens, enter a label key in ***Enter field name*** and a label value in ***Enter field value***	—
Preemptible	Whether or not to mark VMs as **preemptible**. Preemptible machines work for no longer than 24 hours and can be interrupted by the cloud provider at any time. The rental cost in this case is much cheaper. The parameter may be defined only before the VM initialization	false
ADCM control connection address type	An IP address type that is used by ADCM to communicate with VMs. Determines whether the connection between ADCM and the Yandex Cloud should use an external or internal route. If ADCM is deployed in another cloud and VPN is not configured, set the parameter value to `public`. Possible values: ▪ `private` — a private address. ▪ `public` — a public address.	private



The "Create hosts" action form

To run the ***Create hosts*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

As a successful result, new hosts and their actions become available on the ***Hosts*** page.



New hosts on the Hosts page

NOTE

- During the virtual machine creation, the `adcm` user is automatically added to the VM (and subsequently displayed in the ***Username*** and ***Login*** host settings in ADCM). This user is used only by ADCM to connect to the VM in the cloud (e.g. during the RPM package installation).
- To connect to the new VM for your personal needs, use logins of the users whose public keys are listed in the ***Ssh keys*** field of the Yandex Cloud hostprovider settings. To add new users, run the Create users action.

Create users

The ***Create users*** action adds new users to all hosts that were previously created via the Yandex Cloud hostprovider. Names and public SSH keys of created users are extracted from the ***SSH keys*** field of the Yandex Cloud hostprovider configuration options. Users will be able to access hosts using their private SSH keys.

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

IMPORTANT

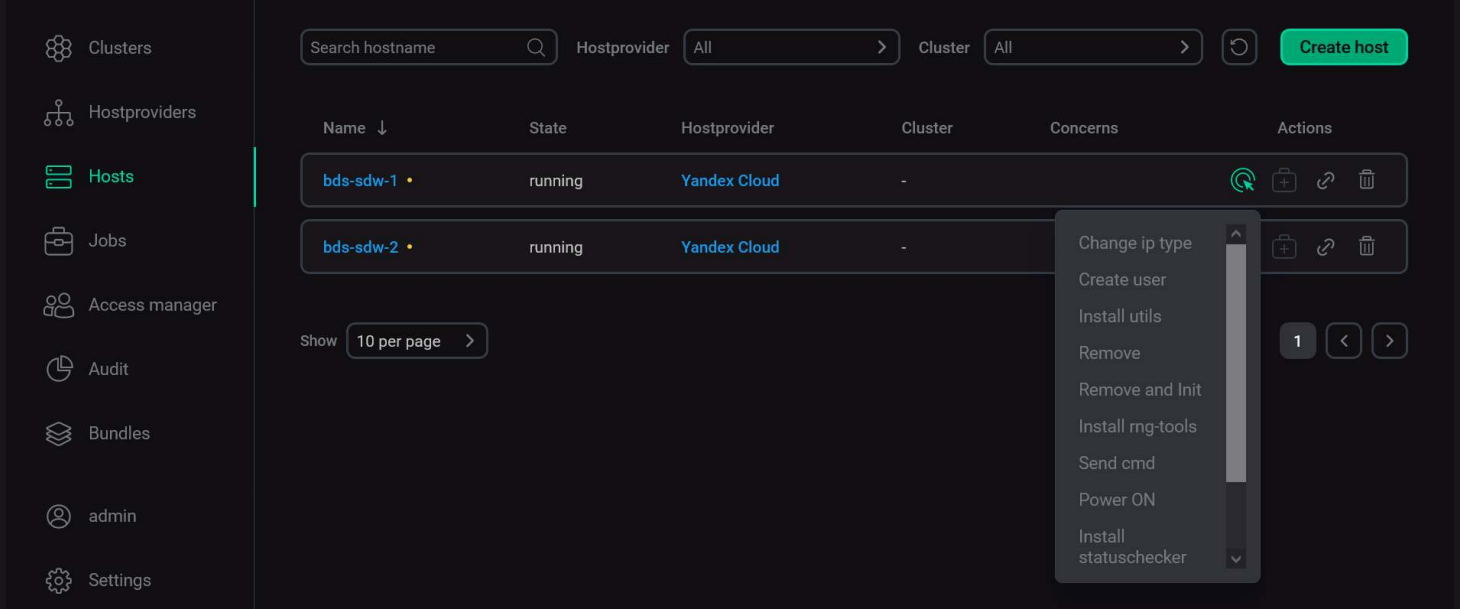
- Before running the action, create and configure all hosts first — using the Create hosts action on the ***Hostproviders*** page or the Create host → Init action on the ***Hosts*** page.
- Public SSH keys of all created users should be specified in the ***SSH keys*** field of the Yandex Cloud hostprovider settings.

Import hosts

The ***Import hosts*** action imports to ADCM information on the hosts that are previously created in the Yandex Cloud. Configuration parameters of the imported virtual machines should be compatible with Yandex Cloud hostprovider settings. All machines should have the `Running` status in the cloud.

After you select the ***Import hosts*** action, a dialog box opens where you can set the following parameters (the fields highlighted in red are mandatory):

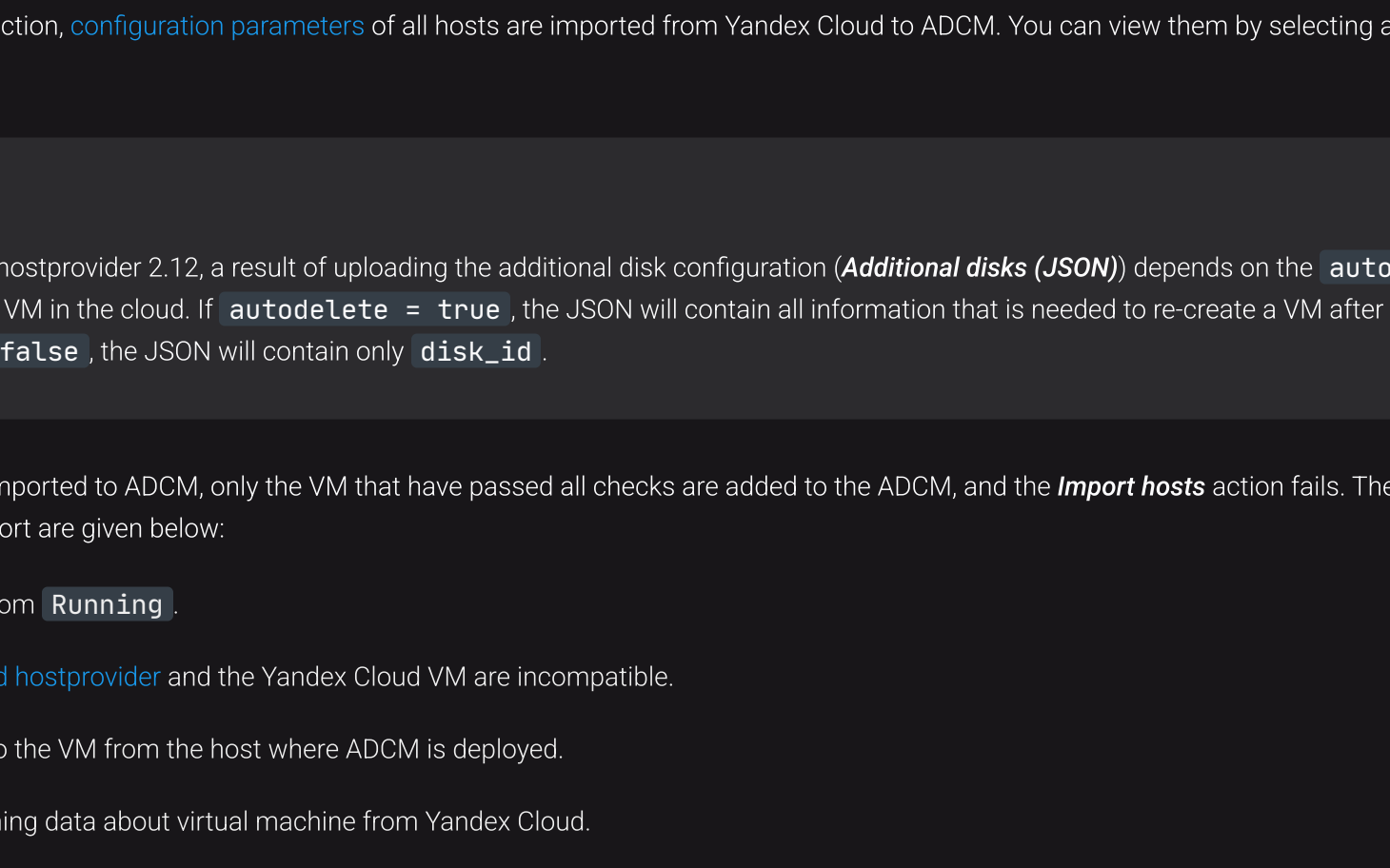
- ***FQDNs*** — a fully qualified domain name of the virtual machine in the Yandex Cloud. To enter several names, use a comma-separated list.
- ***Ssh username*** — a user name that is used for connecting to the virtual machine via SSH. The specified user should exist on the host.
- ***Ssh user private key*** — a private SSH key that is used for connecting to the virtual machine via SSH.



The "Import hosts" action form

To run the ***Import hosts*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

As a successful result, new hosts and their actions become available on the ***Hosts*** page. To finish the configuration process, run the Install statuschecker action for each host.



Imported hosts on the Hosts page

As a result of the ***Import hosts*** action, configuration parameters of all hosts are imported from Yandex Cloud to ADCM. You can view them by selecting a specific host on the ***Hosts*** page.

NOTE

Starting with Yandex Cloud hostprovider 2.12, a result of uploading the additional disk configuration (***Additional disks (JSON)***) depends on the `autodelete` option value that is set for a VM in the cloud. If `autodelete = true`, the JSON will contain all information that is needed to re-create a VM after the Remove action. If `autodelete = false`, the JSON will contain only `disk_id`.

If not all requested VM can be imported to ADCM, only the VM that have passed all checks are added to the ADCM, and the ***Import hosts*** action fails. The reasons why Yandex virtual machines can be invalid for import are given below:

- The VM status is different from `Running`.
- Settings of the Yandex Cloud hostprovider and the Yandex Cloud VM are incompatible.
- It is impossible to connect to the VM from the host where ADCM is deployed.
- Other problems when obtaining data about virtual machine from Yandex Cloud.

Install statuschecker

The ***Install statuschecker*** action installs the **statuschecker** on all hosts that were previously created via the Yandex Cloud hostprovider. This is a special daemon that periodically checks the status of services and components added to the cluster hosts via ADCM.

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

IMPORTANT

Before running the action, create and configure all hosts first — using the Create hosts action on the ***Hostproviders*** page or the Create host → Init action on the ***Hosts*** page.

Create hosts with Yandex Cloud hostprovider

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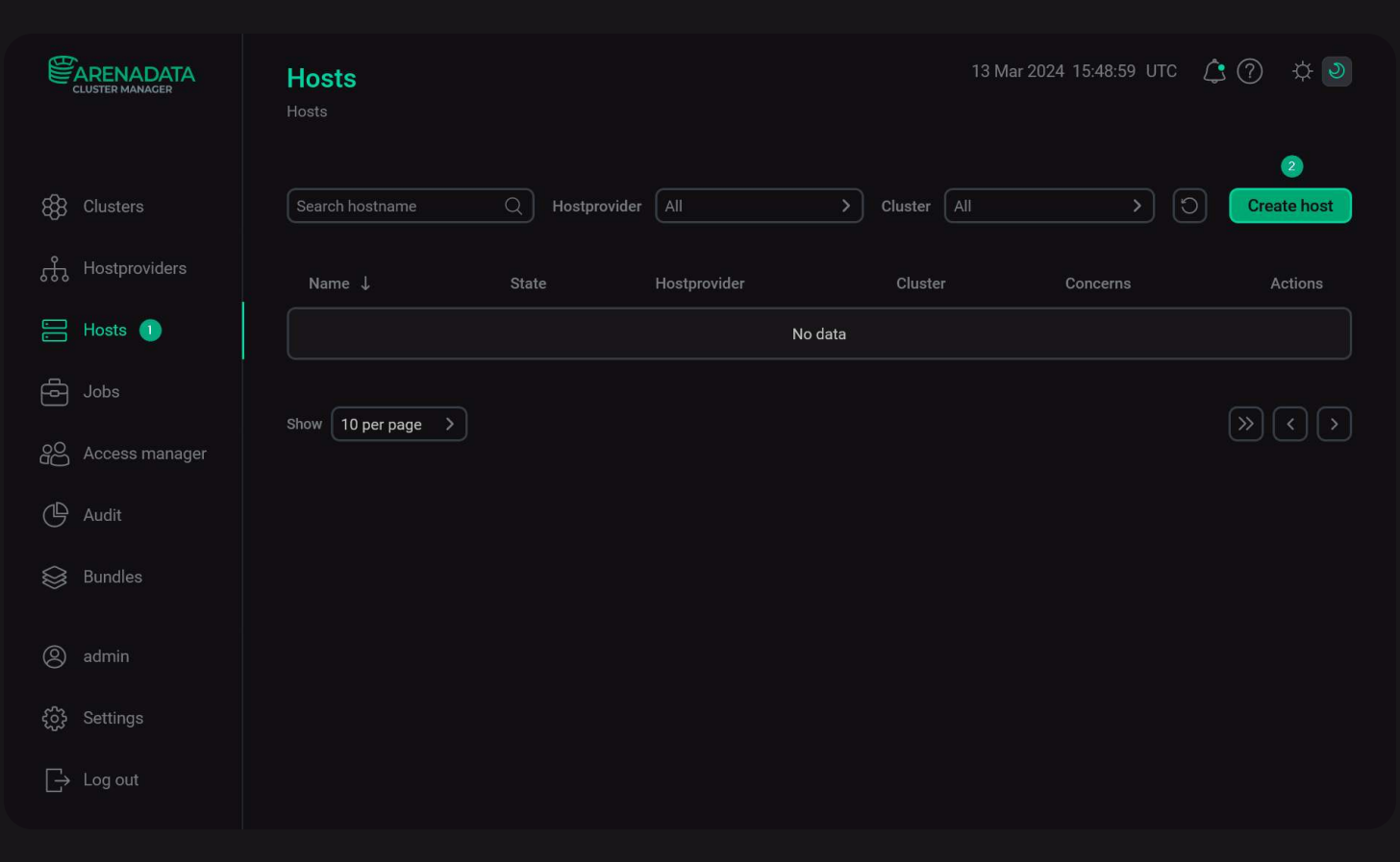
IMPORTANT

- Before adding hosts, ensure that the Yandex Cloud hostprovider is installed and configured via ADCM.
- This guide explains how to add a single host. To add several hosts simultaneously, run the hostprovider action Create hosts.

The steps for adding a single host are listed below:

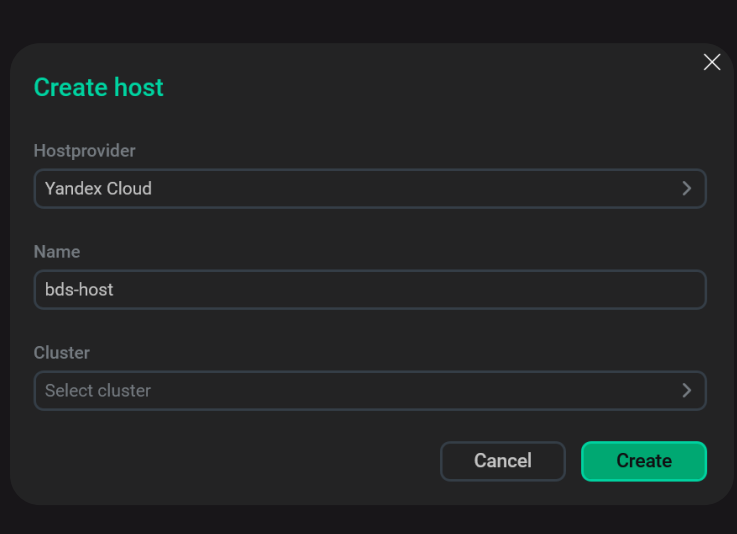
1. Select the ***Hosts*** item in the left navigation menu and click ***Create host***.



Add a host via ADCM

2. In the opened dialog:

   - Select a hostprovider in the ***Hostprovider*** field. Notice that hostproviders are displayed with the names that you have assigned to them.
   - Enter a host name in the ***Name*** field.
   - Click ***Create***.

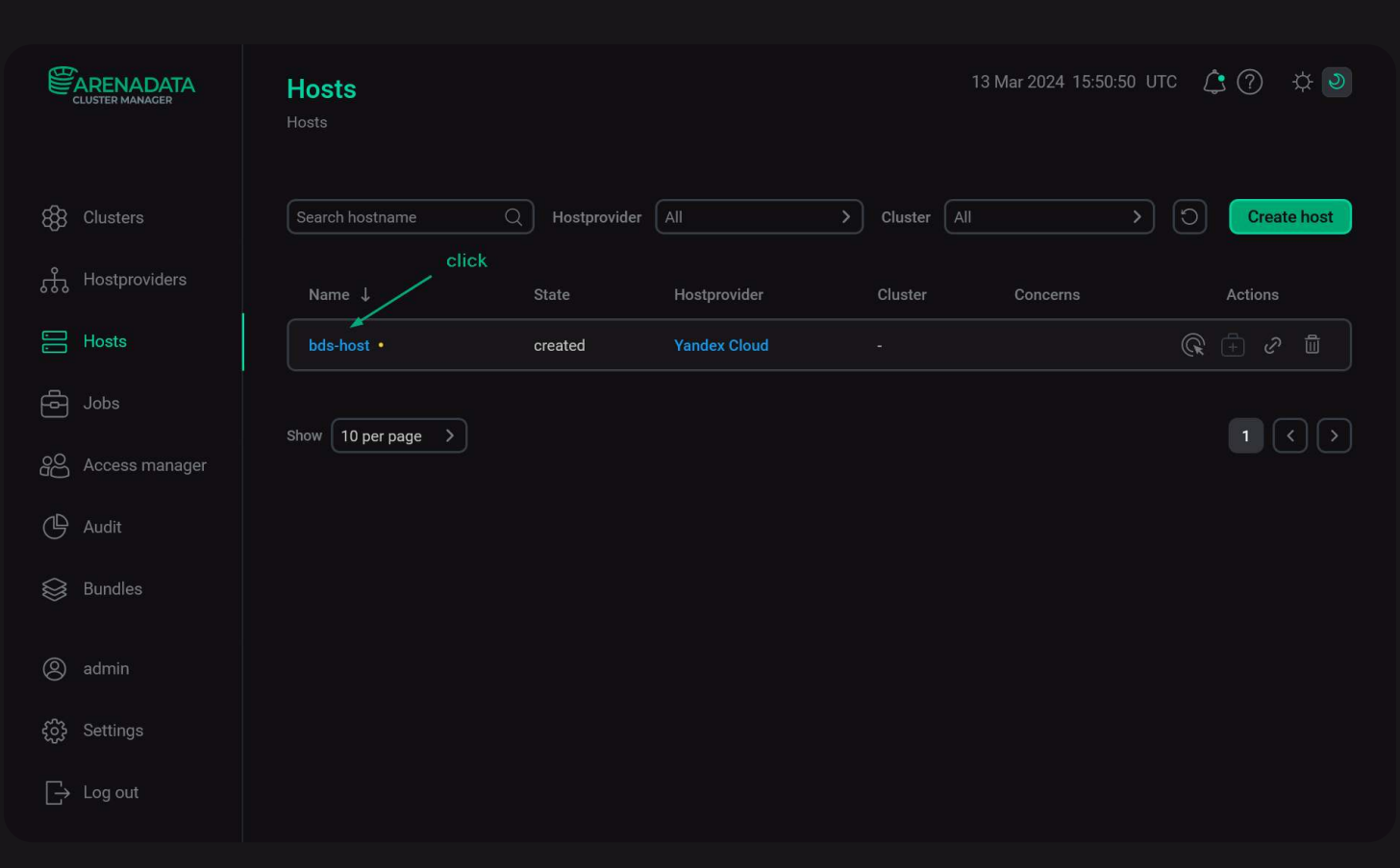


Describe a new host

CAUTION

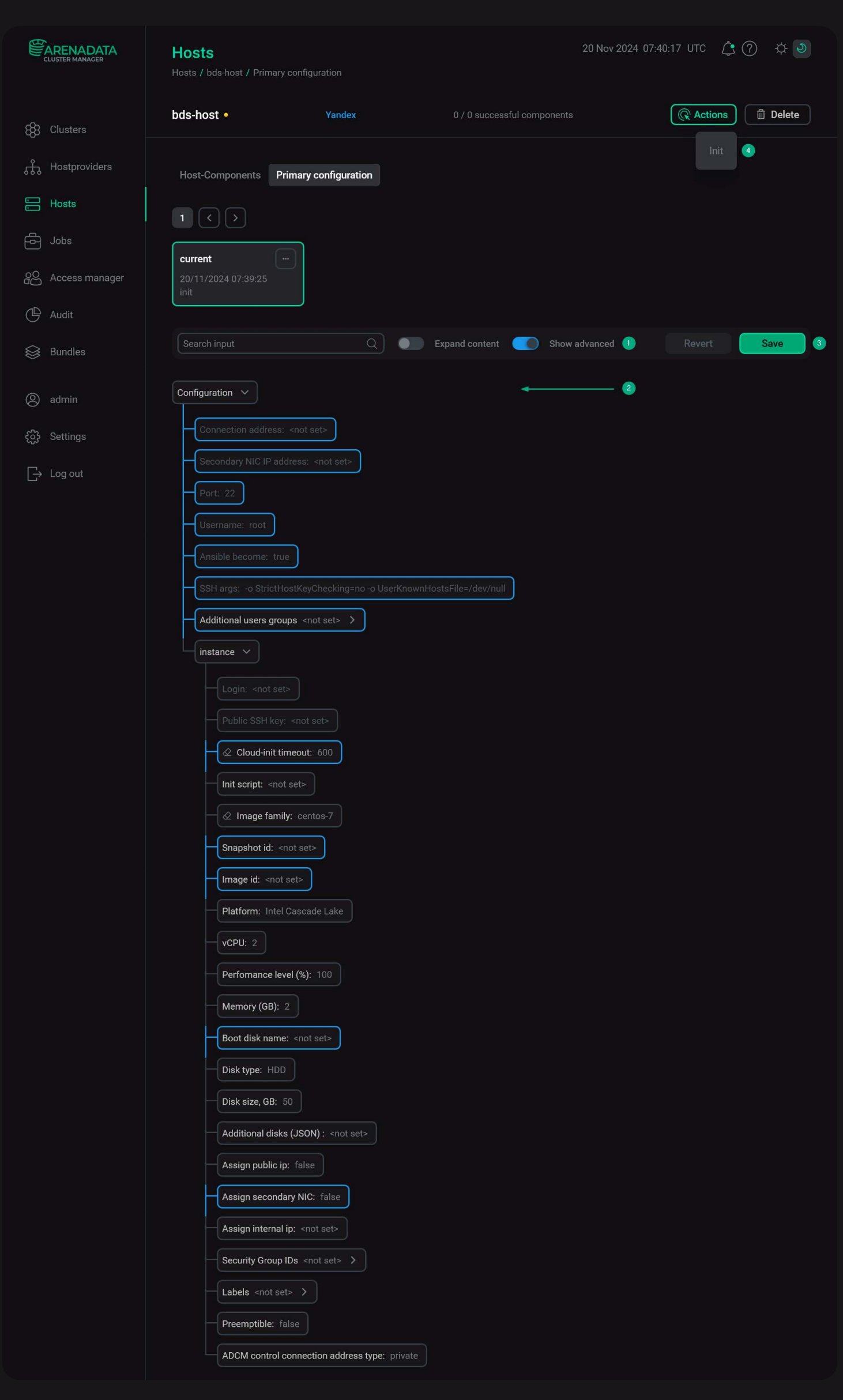
- When creating hosts for the ADH and ADPS products, you should define an FQDN in the ***Name*** field (e.g. `test.ru-central1.internal`). The maximum FQDN length is 38 symbols for ADH and 49 symbols for ADPS.
- For the ADS and ADS Control products, FQDNs are required if the ADPS product is used. The maximum FQDN length for ADS hosts is 48 symbols.
- For the ADQM product, FQDNs are required if Kerberos authentication is used.
- ADB starting with the 6.23.3.44 version supports both FQDN and short host names. For the previous ADB versions, it is not recommended to use FQDNs (as FQDNs cause errors during the ***Expand*** action and a workaround is needed).
- In other cases, both short host names and FQDNs are allowed in the ***Name*** field.

3. Return to the ***Hosts*** page and switch to configuring the added host. To do this, click the host name in the ***Name*** column.



Go to configuring a host

4. In the opened window, select the ***Primary Configuration*** tab, switch on the ***Show advanced*** toggle, fill in parameters, and click ***Save***.



Configure a host

The assignment of parameters is listed in the table below.

Host configuration parameters

Parameter	Description	Default value
Connection address	Read-only. An IP address of the created VM. It is filled in automatically during the ***Init*** action	—
Secondary NIC IP address	Read-only. An IP address of the second network interface controller (NIC) that is used by the created VM. It is filled in automatically during the ***Init*** action	—
Port	Read-only. A port number that is used for connecting to the created VM via SSH	22
Username	Read-only. A user name that is used for connecting ADCM to the created VM via SSH. It is filled in automatically during the ***Init*** action	root
Ansible become	Read-only. A flag that grants the superuser privileges to the user specified in the ***Username*** field	true
SSH args	Read-only. SSH arguments for Ansible. The `StrictHostKeyChecking=no` and `UserKnownHostsFile=/dev/null` parameters disable strict host key checking for SSH. Otherwise, when this checking is enabled, the SSH client connects only to the known hosts that are stored in the known host list	-o StrictHostKeyChecking=no -o UserKnownHostsFile=/dev/null
Additional users groups	A list of additional Linux groups. All users are added to this list at the moment the VMs are being initialized. For example, in the Alt Linux image the `ansible` user should be added to the `wheel` group. Each group should exist in the image. Enter each group separately — by clicking the + 1 icon in the ***Additional users groups*** node and editing the new list element `Additional users groups [N]` subsequently	—
Login	Read-only. A name of the user that is created on the new VM. It is filled in automatically during the ***Init*** action	—
Public SSH key	Read-only. A public SSH key of the new user with the ***Login*** name. It is filled in automatically during the ***Init*** action	—
Cloud-init timeout	A timeout for `cloud-init` to finish the running tasks (in seconds)	600
Init script	The initialization script that is executed at VMs deployment. A shebang (`#!`) is not needed. Pay attention that this option is experimental: single or double quotes may break the installation process	—
Image family	A family of operating systems based on which VMs are created. The newest image from the specified family is used. Starting with Yandex Cloud hostprovider 2.13, you can fill in the parameter value manually	centos-7
Snapshot id	An ID of the boot disk snapshot. Incompatible with the ***Image id*** parameter	—

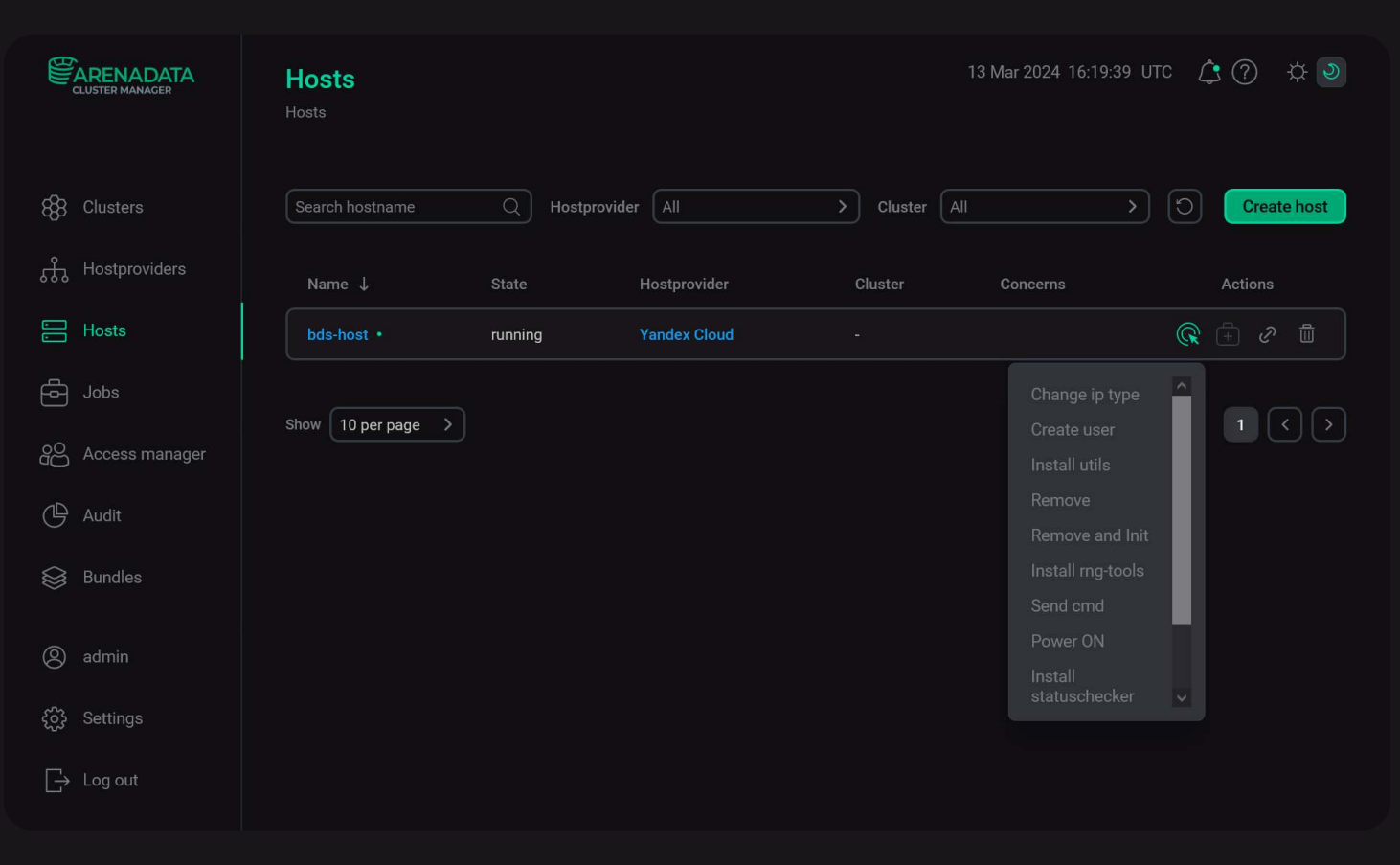
Image id	An ID of the boot disk image. Can be obtained via two commands:
	- For public images:
	`yc compute image list --folder-id standard-images`
	- For private images:
	`yc compute image list`
	Incompatible with the ***Snapshot id*** parameter
		—

Platform	A processor type. For more information on supported platforms, refer to the Yandex Cloud documentation. Possible values: - `Intel Broadwell` - `Intel Cascade Lake` - `Intel Ice Lake` (starting with Yandex Cloud hostprovider 2.15)	Intel Cascade Lake
vCPU	A number of vCPU	2
Perfomance level (%)	A guaranteed processor performance level that is allocated to VMs. See more details in the Yandex Cloud documentation	100
Memory (GB)	RAM (in GB)	2
Boot disk name	A name of the boot disk that is created for the new VM. If not defined, the `<hostname>-boot-disk` template is used as a disk name, where `<hostname>` is the VM name	—
Disk type	A storage class of VMs. Possible values: - `SSD` - `HDD` - `SSD-NONREPLICATED` (starting with Yandex Cloud hostprovider 2.13)	HDD
Disk size, GB	A size of the boot disk that is created for VMs (in GB)	50

Additional disks (JSON)	Parameters of additional disks in the JSON format:
	- `name` — a name of the disk. If not defined, the following template is used: `<hostname>-data-disk-<N>`, where `<hostname>` is the VM name and `<N>` is the disk number.
	- `autodelete` — a flag that indicates whether to remove a disk after removing a VM.
	- `description` — a disk description.
	- `type` — a disk type (see ***Disk type*** above).
	- `size` — a disk size in GB.
	All parameters except `name` are required. Example:
	`[`
	`  {`
	`    "name": "Data-disk1",`
	`    "autodelete": true,`
	`    "description": "disk1",`
	`    "type": "ssd",`
	`    "size": 10`
	`  },`
	`  {`
	`    "autodelete": false,`
	`    "description": "disk2",`
	`    "type": "hdd",`
	`    "size": 100`
	`  }`
	`]`
		—

Assign public ip	Whether or not to assign public IP addresses to VMs	false
Assign secondary NIC	A flag that indicates whether to use the second network interface controller (NIC) for VM. You need to define the ***Secondary subnet ID*** value in the Yandex Cloud hostprovider settings first	false
Security Group IDs	Security group identifiers that will be used for all created VMs by default. The security groups that are specified during the ***Create hosts*** action have a higher priority compared to the groups specified at the hostprovider level. Enter each group separately — by clicking the + 1 icon in the ***Security Group IDs*** node and editing the new list element `Security Group IDs [N]` subsequently	—
Labels	Labels that will be used for all created VMs by default. The labels that are specified during the ***Create hosts*** action have a higher priority compared to the labels specified at the hostprovider level. Enter each label separately — by clicking ***Add property*** in the ***Labels*** node and editing the new list element `Labels [N]` subsequently. In the dialog that opens, enter a label key in ***Enter field name*** and a label value in ***Enter field value***	—
Preemptible	Whether or not to mark VMs as **preemptible**. Preemptible machines work for no longer than 24 hours and can be interrupted by the cloud provider at any time. The rental cost in this case is much cheaper. The parameter may be defined only before the VM initialization	false
ADCM control connection address type	An IP address type that is used by ADCM to communicate with VMs. Determines whether the connection between ADCM and the Yandex Cloud should use an external or internal route. If ADCM is deployed in another cloud and VPN is not configured, set the parameter value to `public`. Possible values: - `private` — a private address. - `public` — a public address.	private

As a result of the completed steps, a virtual machine is created in the Yandex Cloud, and new actions become available for the corresponding host on the ***Hosts*** page in ADCM. The statuschecker is installed on the new host automatically. Thus, you do not need to run the Install statuschecker action for the created host.



Actions available on the Hosts page

NOTE

- During the virtual machine creation, the `adcm` user is automatically added to the VM (and subsequently displayed in the ***Username*** and ***Login*** host settings in ADCM). This user is used only by ADCM to connect to the VM in the cloud (e.g. during the RPM package installation).
- To connect to the new VM for your personal needs, use logins of the users whose public keys are listed in the ***Ssh keys*** field of the Yandex Cloud hostprovider settings. To add new users, run the Create users action.

Manage hosts with Yandex Cloud hostprovider

Daria Barysheva

Yandex

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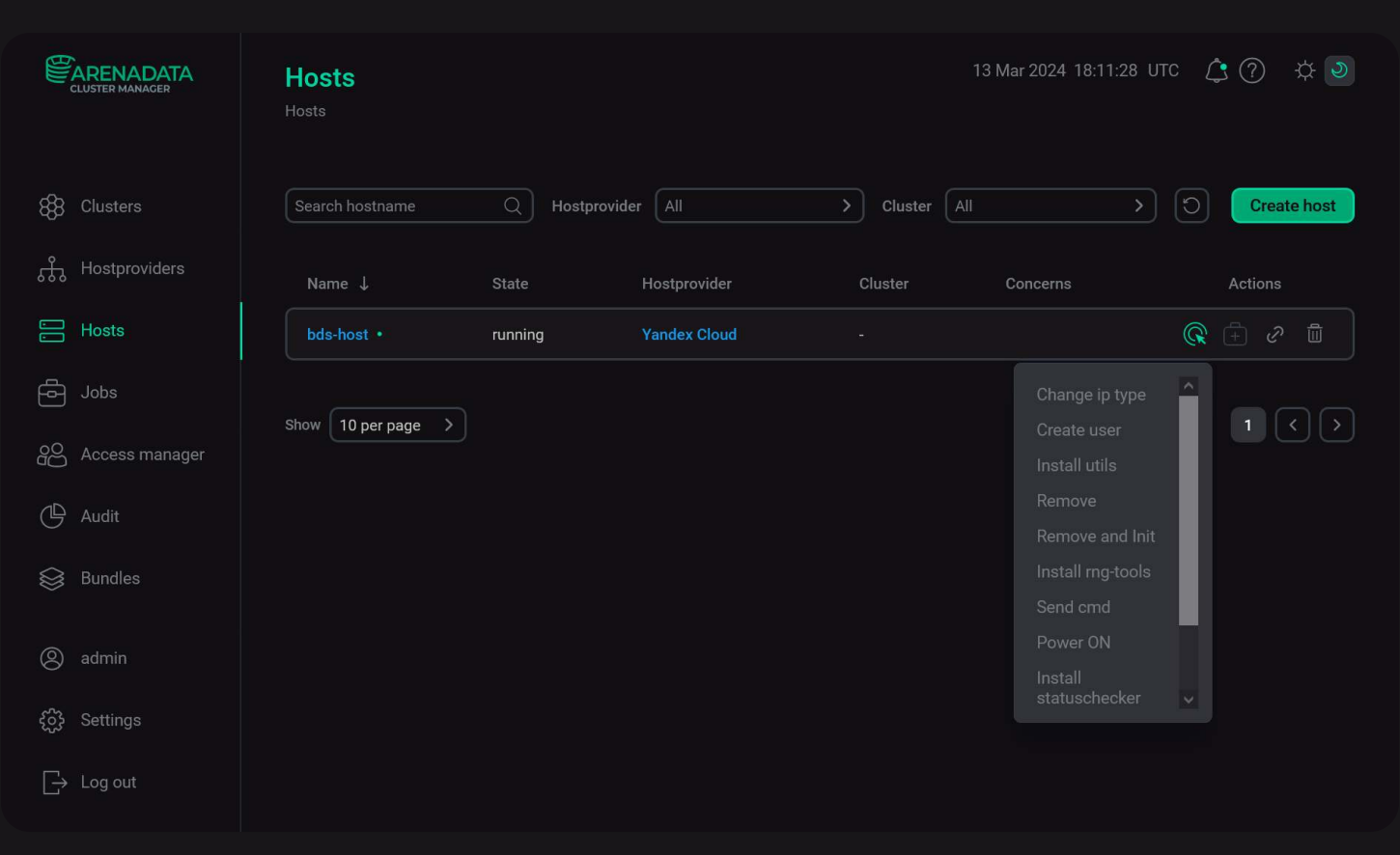
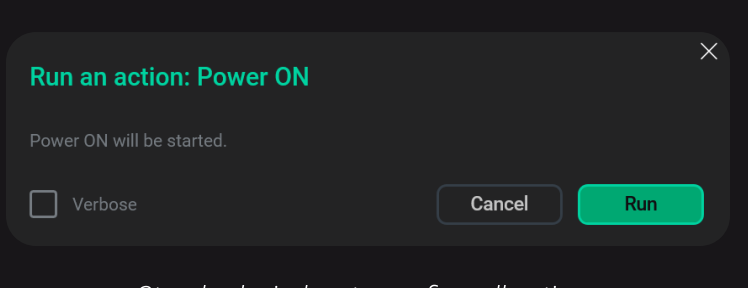
Overview

After you create and configure new hosts based on the Yandex Cloud hostprovider (by running the Create hosts or Create host → Init action), you can manage them on the ***Hosts*** page of the ADCM web interface. To see available host actions, click the icon in the ***Actions*** column.



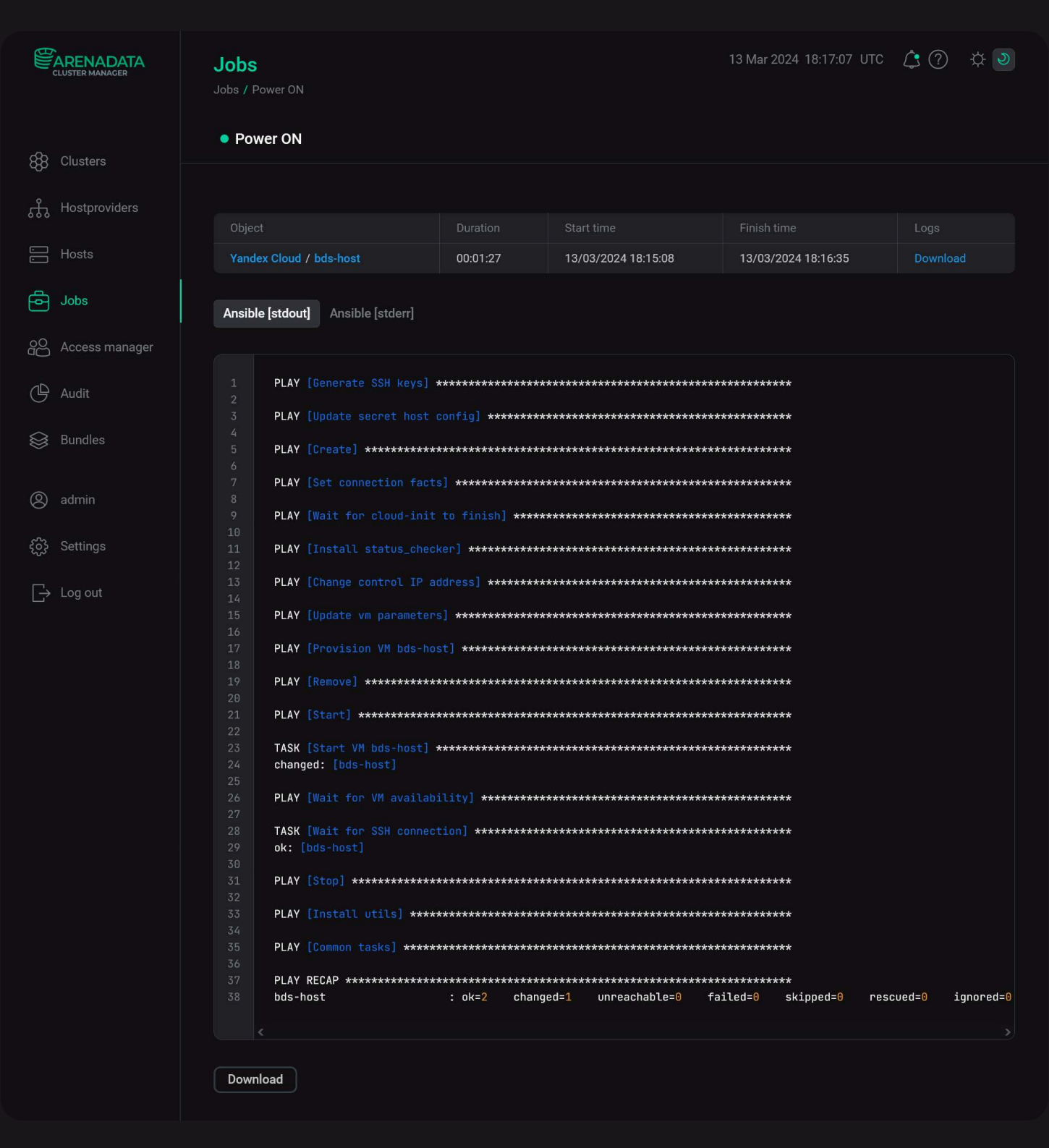
Host actions

When you choose an action, ADCM displays a dialog window to confirm your choice. In this dialog window, you can select the ***Verbose*** checkbox to see additional execution details on the ***Jobs*** page. For some actions, you should first fill in additional options in a separate window.



Standard window to confirm all actions

When an action starts, ADCM displays its execution process and result on the ***Jobs*** page. From this page, you can navigate to a page with details on an individual job (by clicking a job name) to see inner steps of that job execution and analyze errors, if any.



The job page

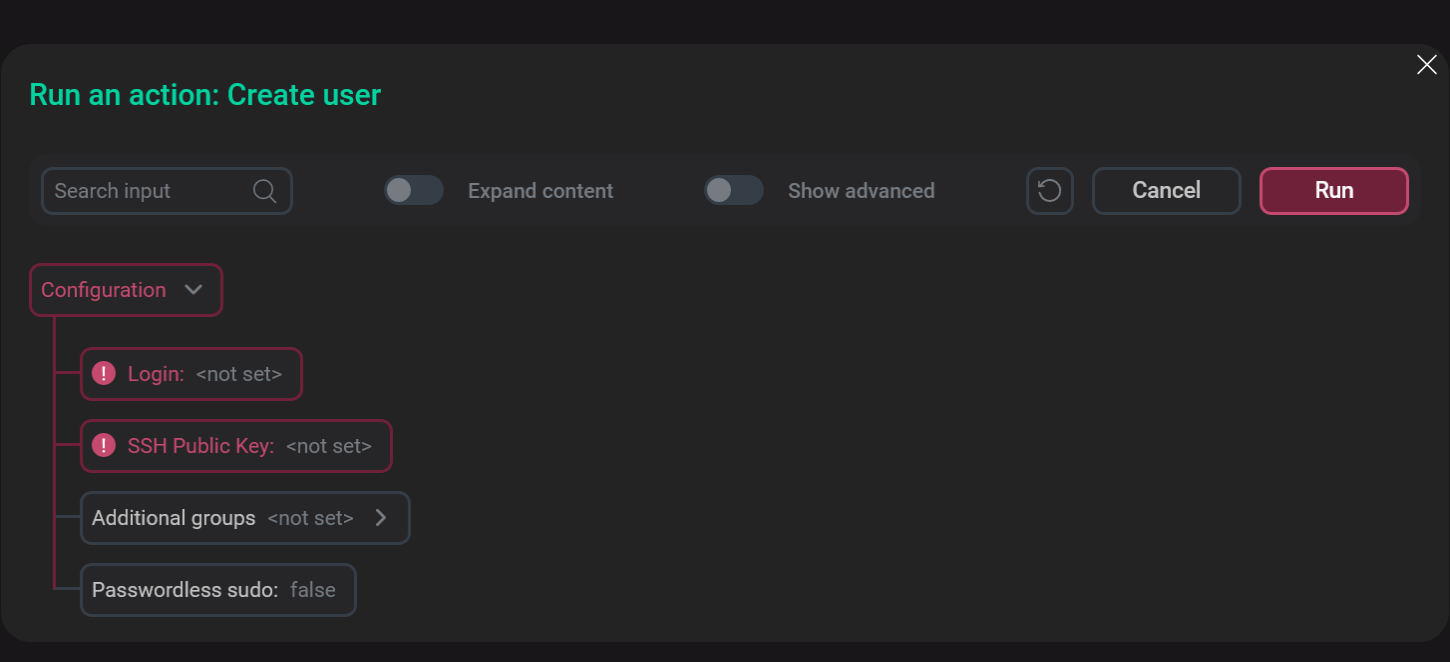
All available host actions are listed below.

Change ip type

The ***Change ip type*** action allows you to change the host IP address type to public or private. After you select the action, a dialog box opens where you can select one of the following types in the ***IP-address type*** field:

- `private`
- `public`

> **IMPORTANT**
>
> The action only changes the IP address that is used to manage a host by ADCM. The virtual machine IP address is not changed.



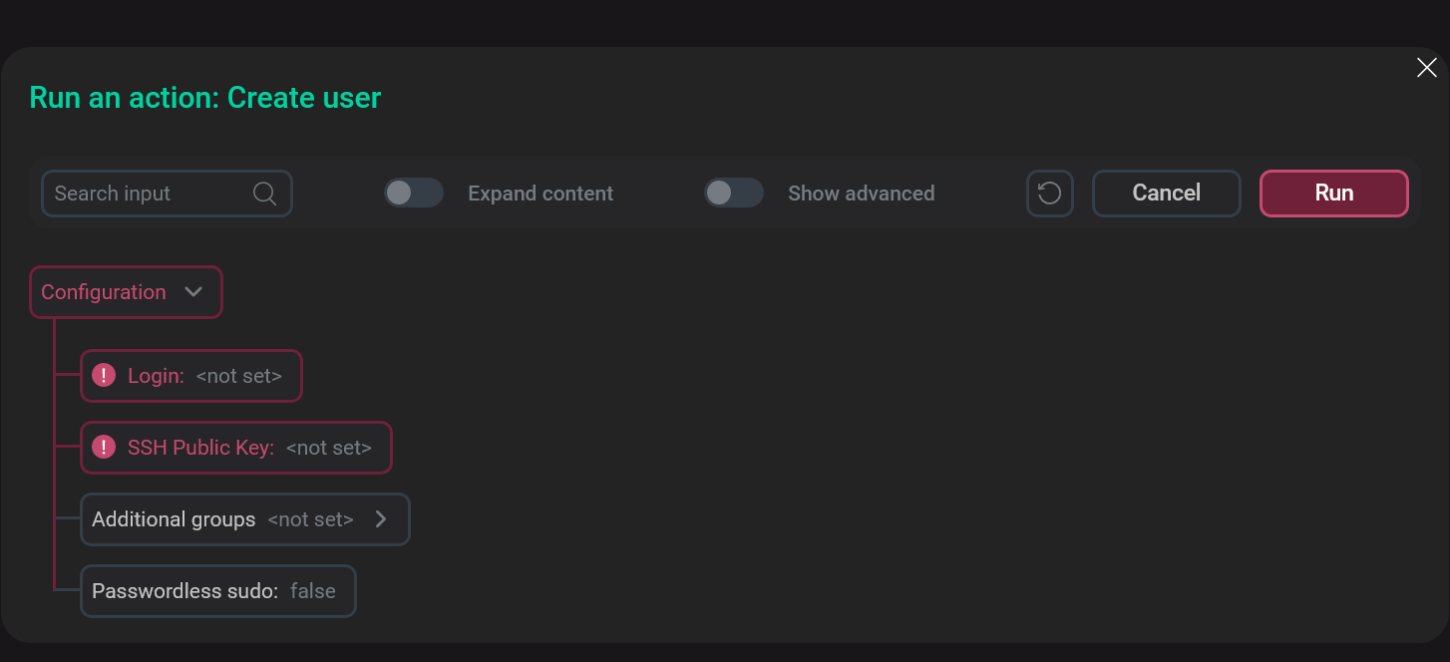
The "Change ip type" action form

To run the ***Change ip type*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

Create user

The ***Create user*** action creates a user on the host. After you select the action, a dialog box opens where you can fill in the following parameters (the fields highlighted in red are mandatory):

- ***Login*** — a name of the created user.
- ***SSH Public Key*** — a public SSH key of the created user. It should start with `ssh-rsa` and end with `username@hostname`.
- ***Additional groups*** — a list of Linux groups to which a user will be added (optionally). Enter each group separately — by clicking the + 1 icon in the ***Additional groups*** node and editing the new list element `Additional groups [N]` subsequently.
- ***Passwordless sudo*** — a flag that indicates whether the user can escalate their privileges to `sudo` without password. If set, the user will also be added to the `adcm_sudo` group.



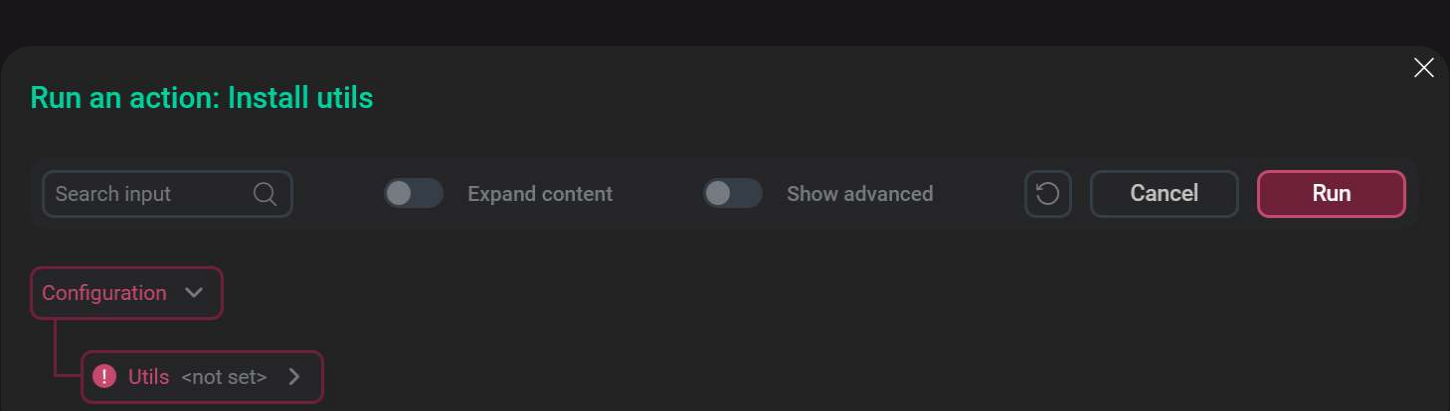
The "Create user" action form

To run the ***Create user*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

> **NOTE**
>
> If you need to add users to all hosts that are based on the Yandex Cloud hostprovider, run the Create users action.

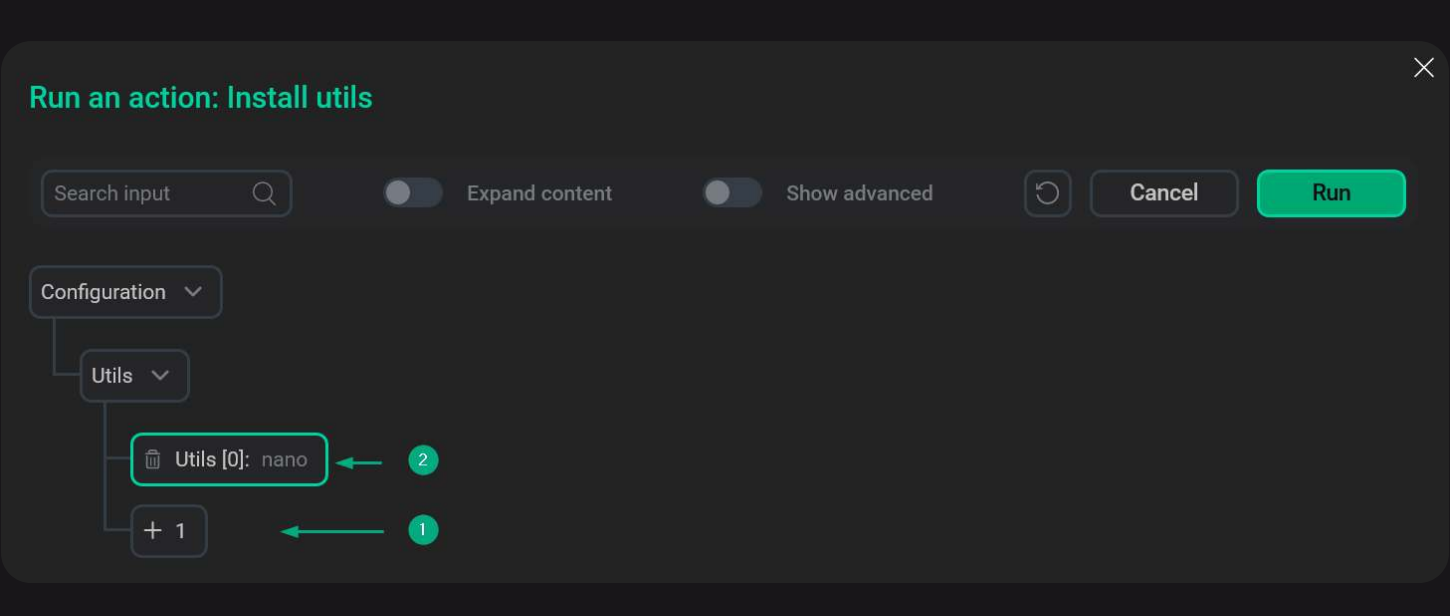
Install utils

The ***Install utils*** action installs packages (utilities) on the host (e.g. *nano*, *wget*, etc.). After you select the action, a dialog box opens where you can specify the packages you need.



The "Install utils" action form

Enter each package separately — by clicking the + 1 icon in the ***Utils*** node and editing the new list element `Utils [N]` subsequently.



Enter each package separately

To run the ***Install utils*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

Remove

The ***Remove*** action removes the virtual machine from the Yandex Cloud and ADCM.

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

Remove and Init

The ***Remove and Init*** action recreates the virtual machine in the Yandex Cloud (removes and creates).

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

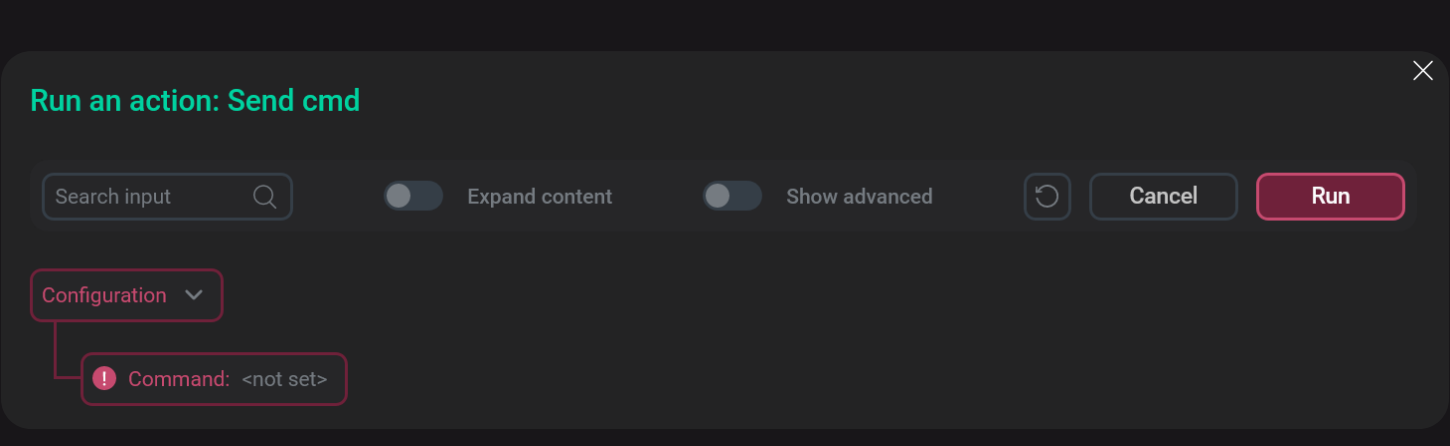
Install rng-tools

The ***Install rng-tools*** action installs the *rngd* utility from the *rng-tools* package. This utility fills the Linux system entropy pool. The contents of this pool are used by the random number generator (RNG).

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

Send cmd

The ***Send cmd*** action allows you to send a bash command to the host. After you select the action, a dialog box opens where you can enter a command text in the ***Command*** field. A shebang (`#!`) is not needed.



The "Send cmd" action form

To run the ***Send cmd*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

Power ON

The ***Power ON*** action starts the virtual machine in the Yandex Cloud.

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

After the ***Power ON*** action is completed, the host status changes to `running` in ADCM and to `Running` in the Yandex Cloud.

Install statuschecker

The ***Install statuschecker*** action installs the **statuschecker** on the host. This is a special daemon that periodically checks the status of services and components added to the cluster hosts via ADCM.

After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

Power OFF

The ***Power OFF*** action stops the virtual machine in the Yandex Cloud.

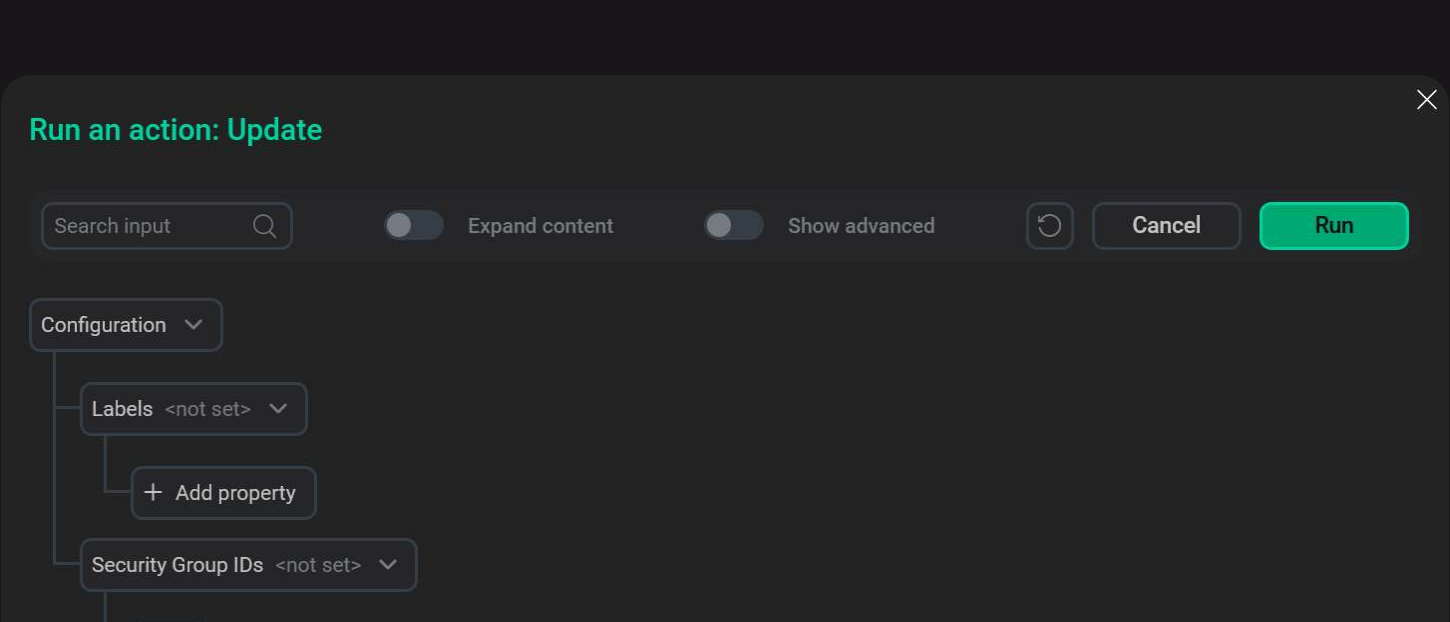
After you select the action, the standard confirmation dialog opens. Click ***Run*** to confirm the action. No additional parameters are required.

After the ***Power OFF*** action is completed, the host status changes to `stopped` in ADCM and to `Stopped` in the Yandex Cloud.

Update

The ***Update*** action sets new labels and Security Group IDs for the virtual machine in the Yandex Cloud. In this case, the previous data (saved during the VM initialization or the last launch of the ***Update*** action) is completely overwritten. After you select the action, a dialog box opens where you can fill in the following parameters:

- ***Labels*** — new labels for VM. Enter each label separately — by clicking ***Add property*** in the ***Labels*** node and editing the new list element `Labels [N]` subsequently. In the dialog that opens, enter a label key in ***Enter field name*** and a label value in ***Enter field value***.
- ***Security Group IDs*** — new identifiers of security groups for VM. Enter each group separately — by clicking the + 1 icon in the ***Security Group IDs*** node and editing the new list element `Security Group IDs [N]` subsequently.



The "Update" action form

To run the ***Update*** action, click ***Run*** in the action form. Then, confirm the action in the standard confirmation dialog.

Release notes

Daria Barysheva

Yandex

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4.0

Date: 18.11.2025

Misc/Internal

Implemented compatibility with ADCM API v2 (API v1 is no longer supported)

The minimum ADCM version now is 2.8.0

3.12.1

Date: 16.05.2025

Bug fixes

Fixed the error message that occurred when attempting to create a virtual machine with a disk name that matched one of the existing disk names

3.12

Date: 27.12.2024

Improvements

Updated `status_checker`: removed timers that generated restart logs

Bug fixes

Fixed the error with running `init-script` on Alt Linux

3.11

Date: 09.10.2024

Misc/Internal

Updated dependencies

3.10

Date: 12.09.2024

Bug fixes

Fixed the error that occurred when trying to run the ***Install statuschecker*** action from the hostprovider menu

Misc/Internal

Updated the path for storing SSH keys on the ADCM node

3.9

Date: 13.08.2024

Improvements

Improved security via a new approach to interacting with remote nodes

Bug fixes

Fixed the error with redhat_subscription

Fixed the issue with the availability of CentOS 7 repositories

Misc/Internal

The concept of working with SSH keys has been changed

3.8

Date: 01.04.2024

New features

Added the ability to explicitly specify a name for the boot disk (in the ***Boot disk name*** field), as well as to define names of additional disks (in the `<name>` attribute within the ***Additional disks (JSON)*** field) for better visibility in Grafana dashboards.

If you specify the ***Boot disk name*** field or the `<name>` attribute in the ***Additional disks (JSON)*** field, they are used as disk names. Otherwise, disk names are generated automatically according to the following templates:

- For the boot disk: `<hostname>-boot-disk`, where `<hostname>` is the VM name.

- For additional disks: `<hostname>-data-disk-<N>`, where `<hostname>` is the VM name and `<N>` is the disk number.

3.7

Date: 31.01.2024

New features

Added the ability to create a secondary network interface for virtual machines in the Yandex Cloud

3.6

Date: 21.12.2023

Bug fixes

Fixed Ansible inventory for the case when users are created on the hosts that are linked to clusters. Now, the ***Create user*** action starts only on the selected host (instead of all cluster hosts)

3.5

Date: 28.11.2023

New features

Added the ability to stop execution of Ansible playbooks and actions

3.4

Date: 02.06.2023

New features

Multiline, loops, variables are supported for initialization scripts (`init_script`)

Added the `post_script` section for host actions, which allows executing Ansible scripts on the virtual machine after its initialization

3.3

Date: 13.04.2023

New features

Added support for Astra Linux

3.2

Date: 21.03.2023

New features

Added the ***Remove and init*** action at the host level, which allows you to recreate virtual machines in the cloud

3.1

Date: 04.10.2022

Improvements

The ***Name*** field (that was used to create a group of virtual machines and to import hosts) is changed to ***FQDN***. Host configurations in ADCM now contain FQDNs instead of names

Misc/Internal

Support for RHEL distribution activation is temporarily disabled

Upgrade is supported only from version 3.x

2.16

Date: 14.02.2022

Misc/Internal

Requirements to the minimal ADCM version are changed. In ADCM 2022020106, the Python version has been changed to 3.10, which is not supported by the previous bundles of the Yandex Cloud hostprovider

2.15

Date: 14.02.2022

New features

Added the ***redhat_subscription*** section to the hostprovider settings. This section is designed to store registration parameters for virtual machines with RHEL

Added the ***Register RHEL VM*** action at the host level. This action registers RedHat for a virtual machine that uses RHEL — with the ability to override registration settings from the hostprovider configuration

Added the ***Register RHEL VM*** action at the hostprovider level. This action registers RedHat for a virtual machine that uses RHEL — based on the registration settings from the hostprovider configuration

The Intel Ice Lake platform is supported

Added the advanced parameter ***Image folder*** to the hostprovider settings. This parameter provides a single storage for all images with the ability to obtain images via the `get-latest-from-family` function

Bug fixes

Fixed the Ansible module error for Yandex Cloud

Fixed the minimal ADCM version for a bundle

Fixed an error with granting the `sudo` privileges, which occurred during creation of users in Alt Linux. Now, if the ***Passwordless sudo*** flag is set, users are automatically added to the `wheel` group

The SSH availability waiting logic is combined with processing the ***Cloud-init timeout*** field. Previously, the timeout for VM SSH availability was 300 seconds

If the ***Image id*** or ***Snapshot id*** parameters are defined in the host settings, the ***Image family*** field gets cleared

Fixed the Python discovery error for the ***Power ON*** action, which occurred if the Python interpreter did not exist at the same path as in the ADCM container

2.14

Date: 26.05.2021

Improvements

Increased stability of the *rng-tools* installation action

Bug fixes

Fixed a bug that allowed saving negative values in the ***Active operations limit timeout*** and ***Cloud-init timeout*** fields

Misc/Internal

Requirements to the minimal ADCM version are changed. In ADCM 2021052612, the Python version has been changed to 3.9, which is not supported by the previous bundles of the Yandex Cloud hostprovider

2.13

Date: 12.05.2021

New features

The ***Image family*** parameter type is changed from `option` to `variant`. Now, you can edit the parameter value manually. Also, this parameter is optional now. It can be left empty if alternative sources for the boot disk are used

Added the ***Assign internal ip*** field where you can enter an IPv4 address for a virtual machine. By default, internal IP addresses are created automatically

Added support for a new disk type `SSD_NONREPLICATED`

Bug fixes

Fixed `required=false` for the deprecated field `'template'(DN: Image)`. Caused problems while working through API

2.12

Date: 26.02.2021

New features

Added the ***default_host_settings*** section to the hostprovider settings for saving default host settings

Added the advanced field ***Active operations limit timeout*** to the ***default_host_settings*** section. This is a timeout that is activated when the quota of simultaneously performed operations is exceeded (resulting in errors returned by the Yandex Cloud gPRC)

Added the optional field ***Labels*** to the ***default_host_settings*** section. You can use this field to specify labels that will be used for all created VMs by default. The labels that are specified for VMs have a higher priority compared to the labels specified at the hostprovider level

Added the ***Service account credentials*** field to the hostprovider settings for authentication based on static access keys. This field is optional and incompatible with the ***OAuth*** field

Added the advanced field ***Endpoint*** to the hostprovider settings. This is a custom endpoint that will be used to connect to a private Yandex Cloud installation. The default endpoint is `api.cloud.yandex.net`

Added the advanced field ***Root certificates*** to the hostprovider settings. In this field, you can define root certificates that will be used to connect to a private Yandex Cloud installation

Added the advanced field ***Cloud-init timeout*** to the host settings. This is a timeout for `cloud-init` to finish the running tasks

Added the ability to create additional disks based on `snapshot_id` / `image_id` or attach existing disks via `disk_id`

Improvements

Made the ***OAuth*** parameter optional. Currently, the ***Service account credentials*** field is the main field for authentication

Now it is possible to use the data about additional disks when performing the ***Init*** action for virtual machines previously added via the ***Import hosts*** action and subsequently removed (if the `autodelete` VM parameter is set to `true`)

Bug fixes

Fixed the problem of writing public keys with the `adcm` username to the host configuration (from the ***Ssh keys*** field in the hostprovider settngs)

Removed the `Advanced` attribute for the ***Login***, ***SSH public Key*** fields in the ***Create user*** action

Fixed the problem of upgrading a bundle from version 2.10. The error occurred if some virtual machines were created from snapshots

2.11

Date: 18.09.2020

New features

Added the ***Update*** action that updates labels of virtuals machines by overwriting the previous labels

Added the advanced field ***Snapshot ID***, which allows you to create virtual machines from snapshots

The `'image_family'(DN: Image family)` field has become the main source for a boot disk image. During the virtual machine creation, the newest image from the specified family is currently used (instead of a fixed image)

Improvements

Replaced the deprecated field `'template'(DN: Image)` with `'image_family'(DN: Image family)`

Replaced the deprecated disk type `NVME` with `SSD`

Bug fixes

Fixed the problem of repeated queries when gRPC connection is broken

Perfomed rearrangement of fields in the ADCM web interface to improve user experience