



SSH hostprovider

The SSH hostprovider is one of the available [hostproviders](#) for [Arenadata Cluster Manager \(ADCM\)](#). This hostprovider allows you to connect to existing hosts (previously created in a cloud or on-premises) via SSH.

Version **2.13** Language: **EN**



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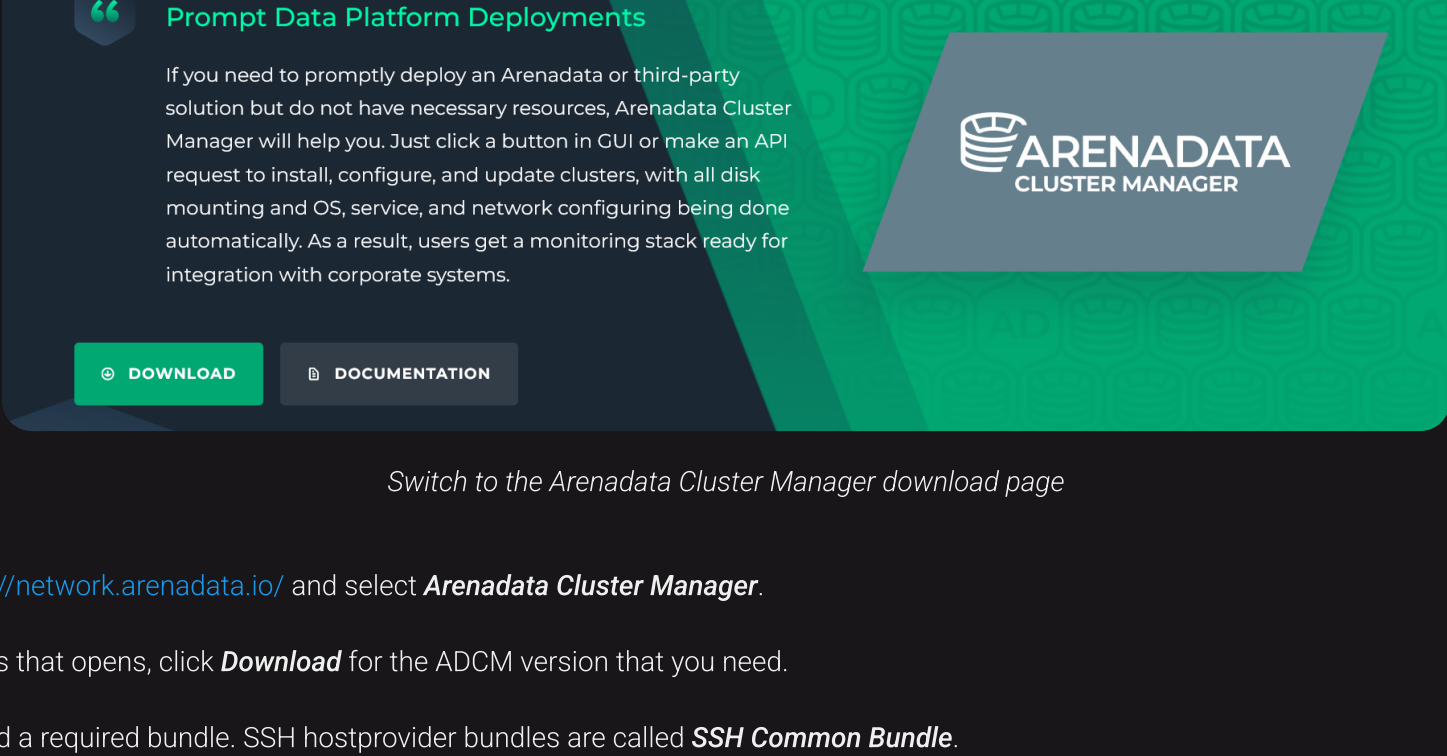
- Step 1. Download a hostprovider bundle
- Step 2. Upload a hostprovider bundle to ADCM
- Step 3. Create a hostprovider based on the uploaded bundle
- Step 4. Configure a hostprovider

Step 1. Download a hostprovider bundle

Hostprovider distributions for ADCM come in **bundles**. Regarding the SSH hostprovider, a bundle is a regular archive that includes a description and logic to establish an SSH connection to a host.

The steps for downloading a bundle are given below:

- 1. Go to the [Arenadata Cluster Manager](#) product website and click **Download**.



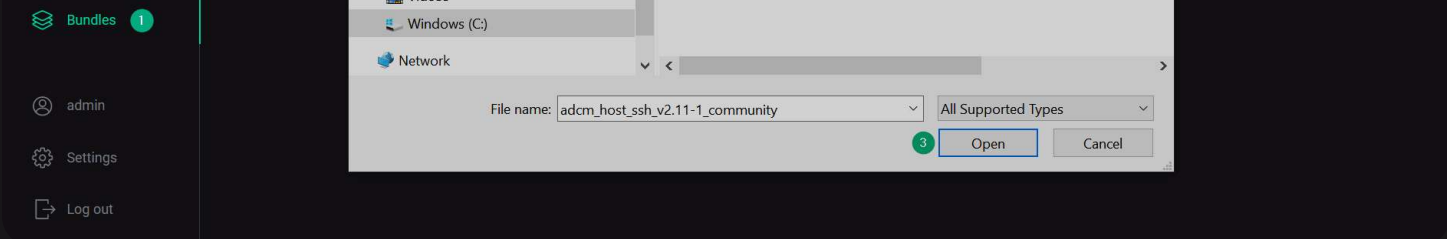
Switch to the Arenadata Cluster Manager download page

- Another way – go to <https://network.arenadata.io/> and select **Arenadata Cluster Manager**
- 2. In the list of ADCM releases that opens, click **Download** for the ADCM version that you need.
- 3. On the next page, download a required bundle. SSH hostprovider bundles are called **SSH Common Bundle**.

Step 2. Upload a hostprovider bundle to ADCM

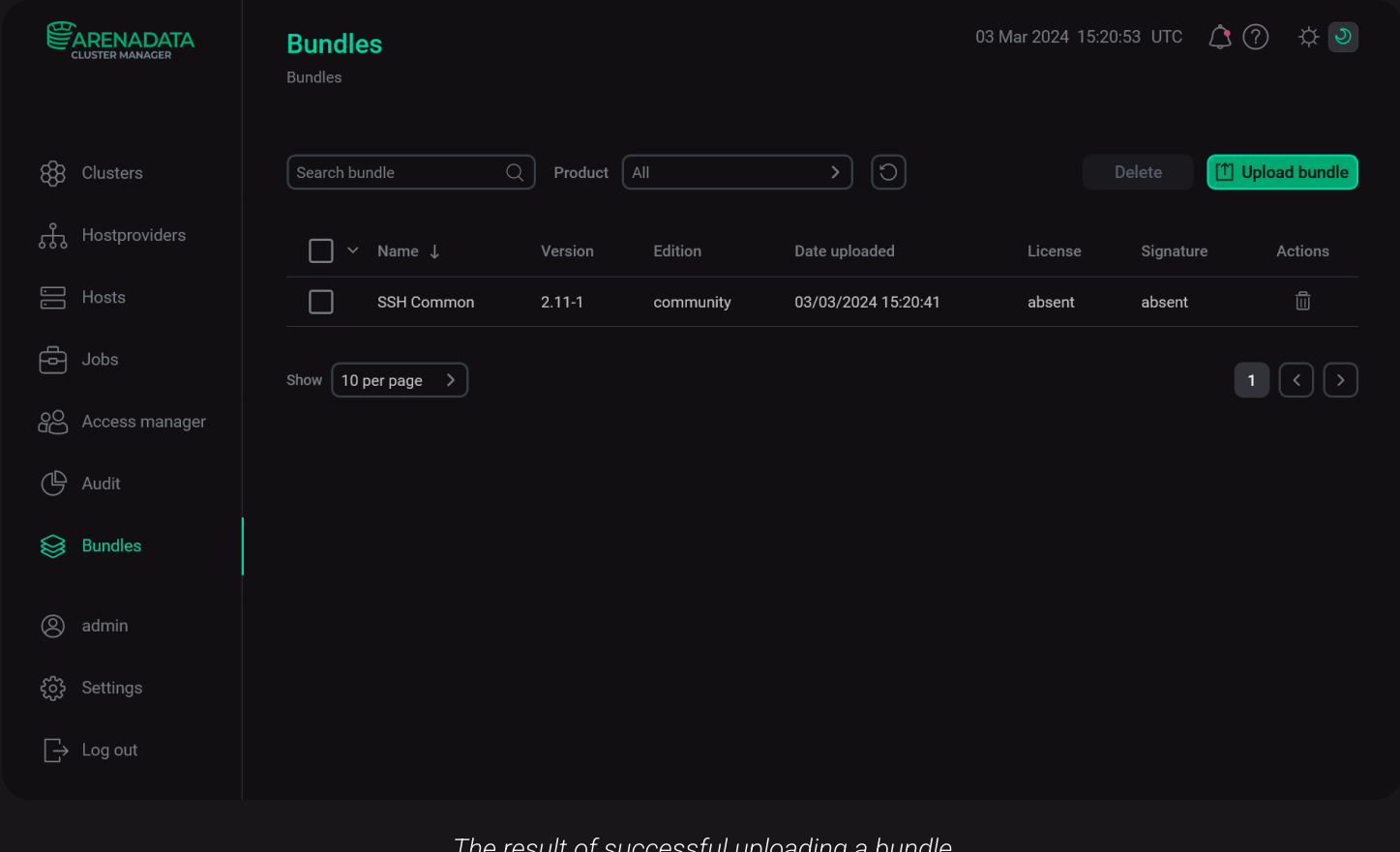
To upload a bundle to ADCM, follow the steps:

- 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.

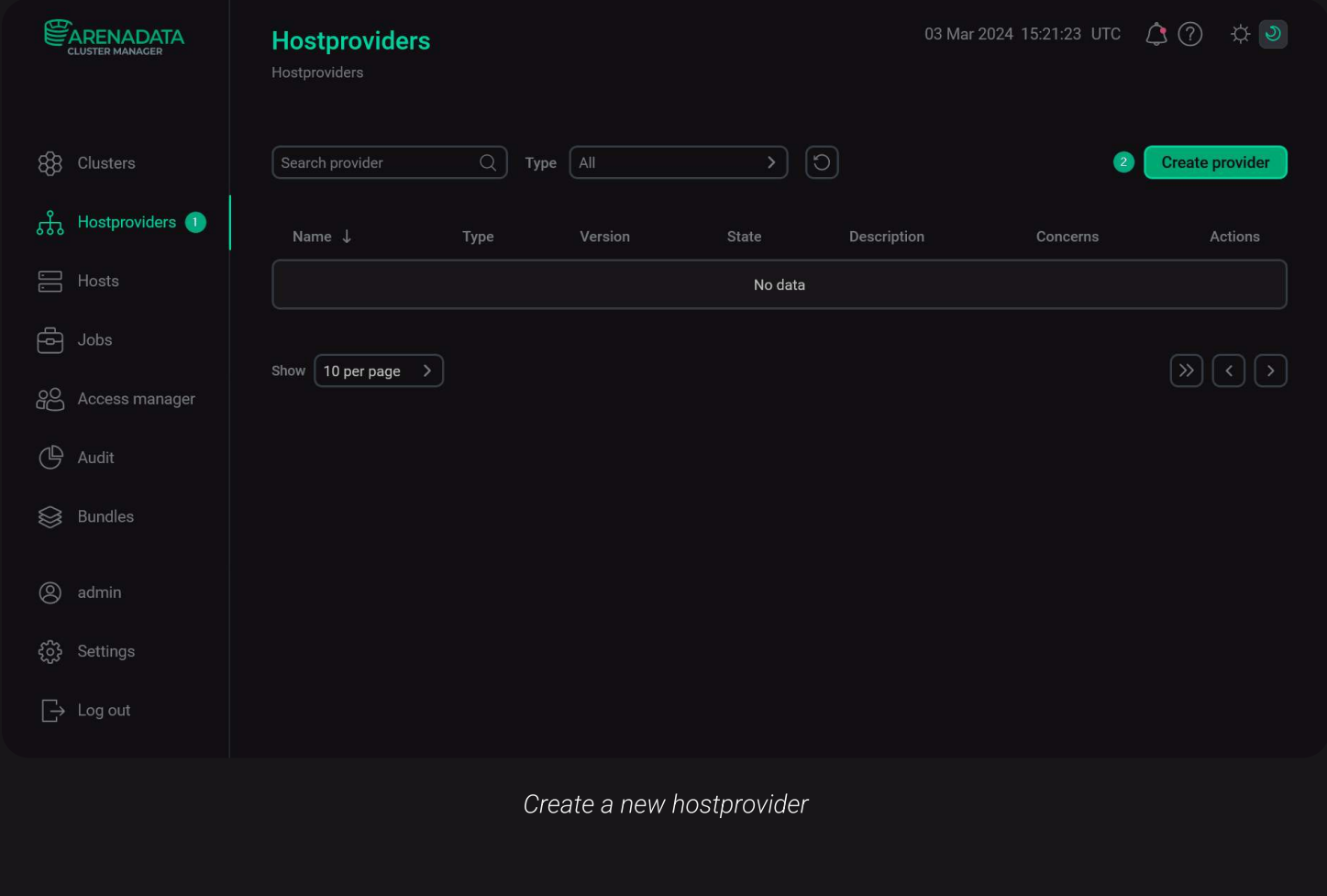


The result of successful uploading a bundle

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:

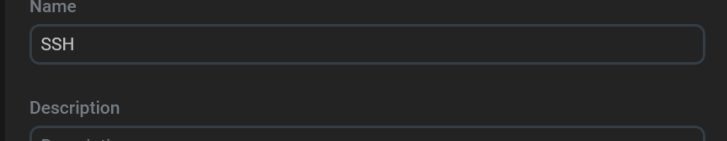
- 1. Select the **Hostproviders** item in the left navigation menu and click **Create provider**.



Create a new hostprovider

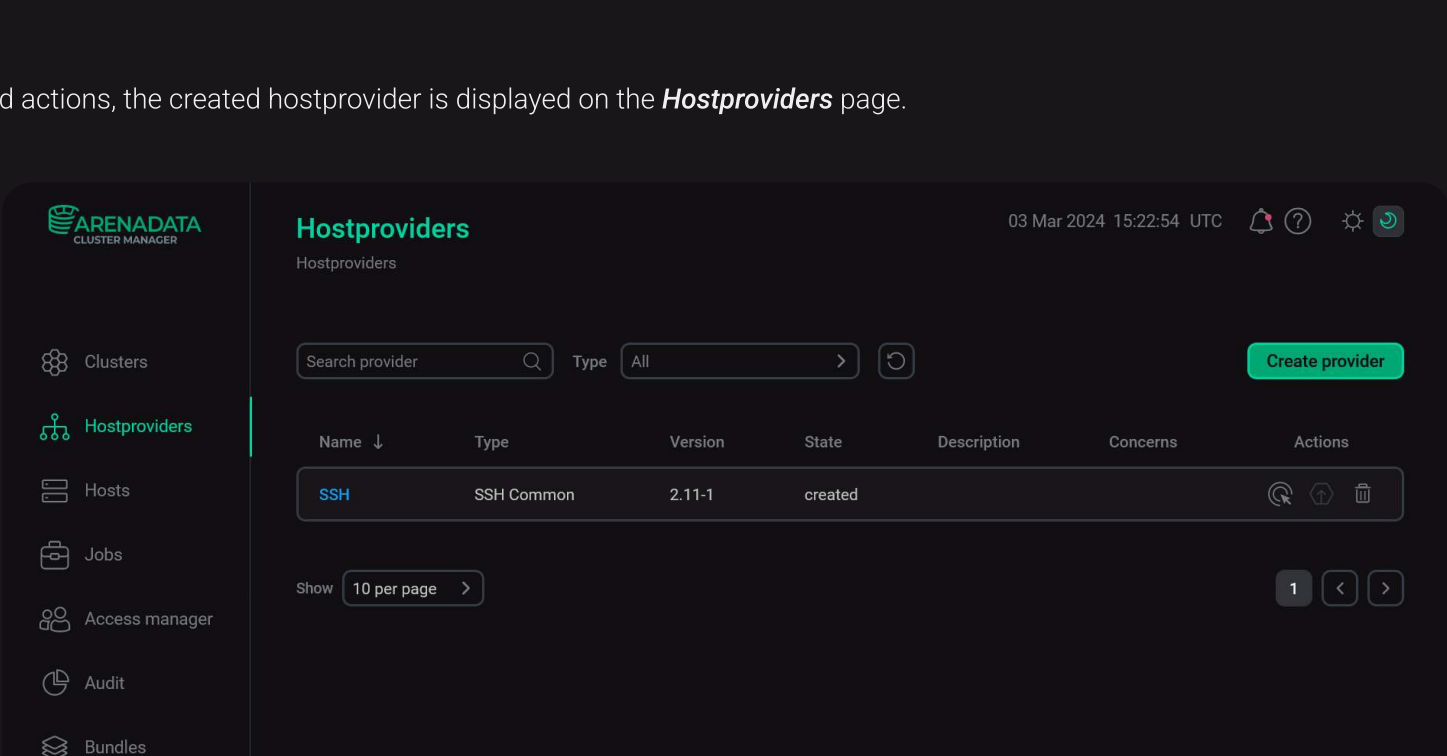
- 2. In the opened window:

 - 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.

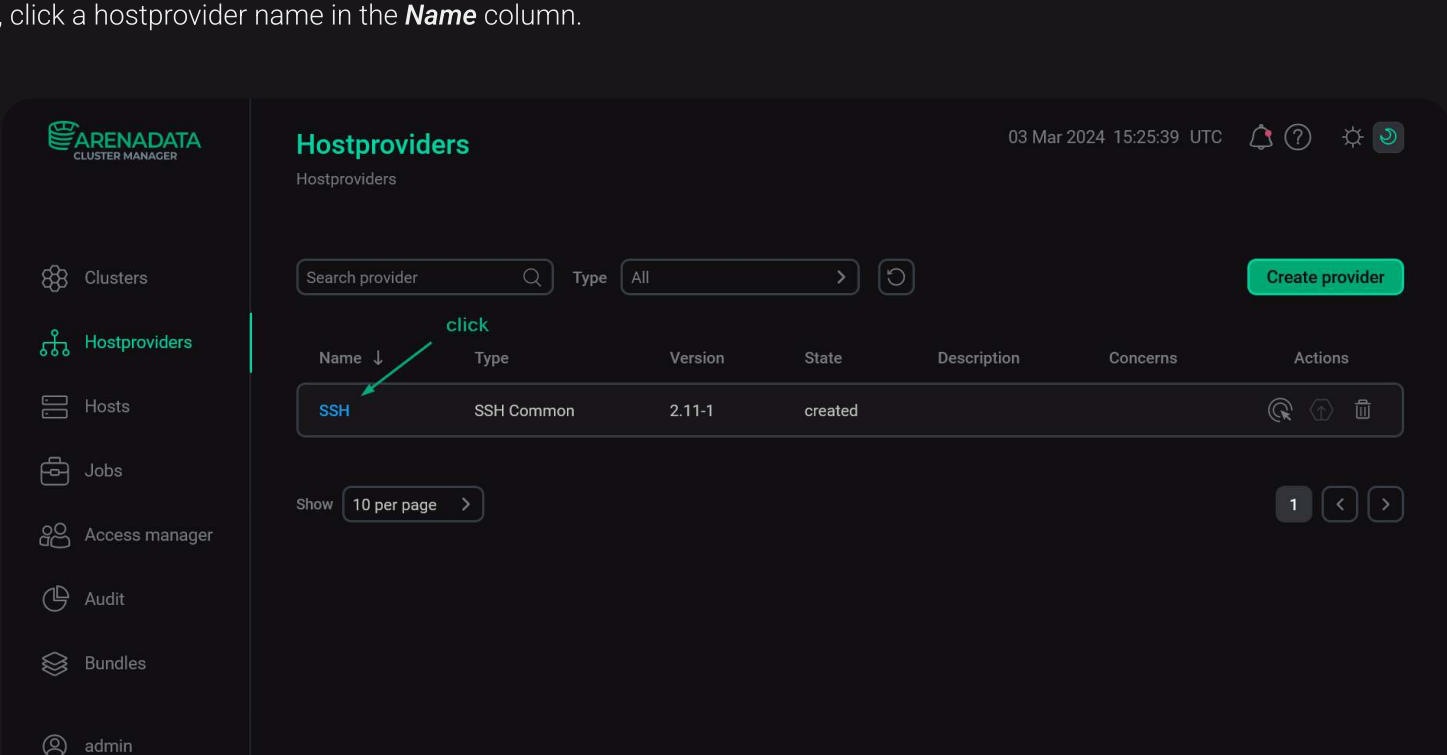


The result of adding a hostprovider successfully

Step 4. Configure a hostprovider

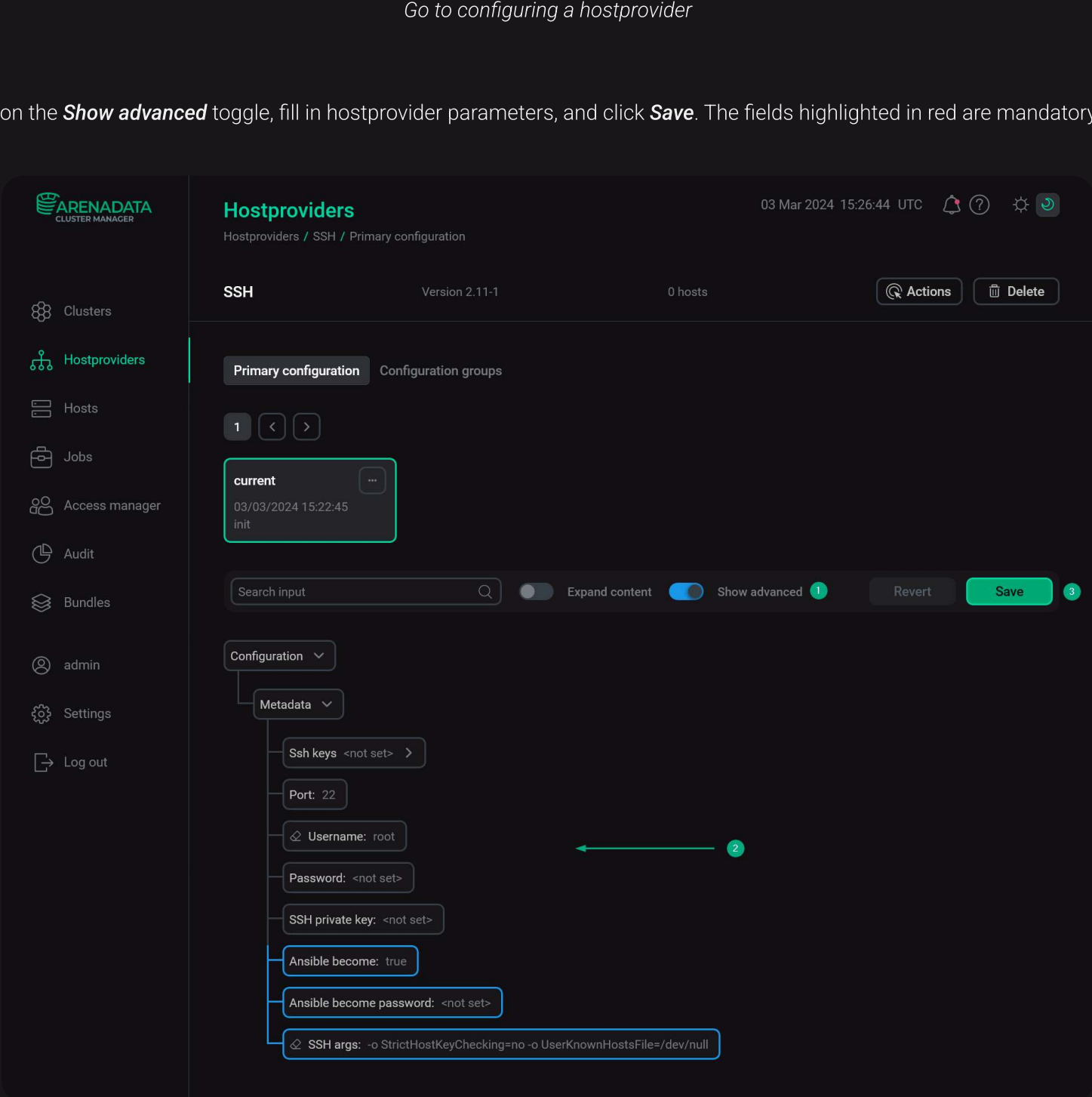
Configuring an SSH hostprovider is an optional step and is required only for the **Create users** and **Create hosts** actions. To configure an SSH hostprovider, follow the steps:

- 1. On the **Hostproviders** page, click a hostprovider name in the **Name** column.



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

The assignment of parameters is listed below.

Hostprovider configuration parameters

Parameter	Description
Ssh keys	A set of public keys that will be used to create users during the Create users action. 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 be started with ssh-rsa and ended with username@hostname
Port	A port number that is used for connecting to a host via SSH (by default, 22)
Username	A user name that is used for connecting to a host via SSH. The specified user should exist on the host
Password	A user password that is used for connecting to a host via SSH. If you do not use a password, leave this field blank
SSH private key	A private SSH key that is used for connecting to a host via SSH. If you do not use SSH keys, leave this field blank
Ansible become	A flag that grants the superuser privileges to the user specified in the Username field. The default value should be used (flag is set)
Ansible become password	A password that is used during granting of the superuser privileges to the user specified in the Username field. Can be left at the default value
SSH args	SSH arguments for Ansible. Each parameter requires the following format: -o <name>=<value> . Several parameters are separated by space: -o StrictHostKeyChecking=no -o UserKnownHostsFile=/dev/null . Thus, 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 hosts list. Can be left at the default value

IMPORTANT

- The **Ssh keys** parameter is used only during the **Create users** action – to create users (specified in public keys) and give them access to hosts by the appropriate private keys.
- Other hostprovider options are used during the **Create hosts** action, which allows you to add several hosts simultaneously. When you add each host separately via the **Create host** action, you should define all eponymous options at the host level (inheriting hostprovider settings is not supported).



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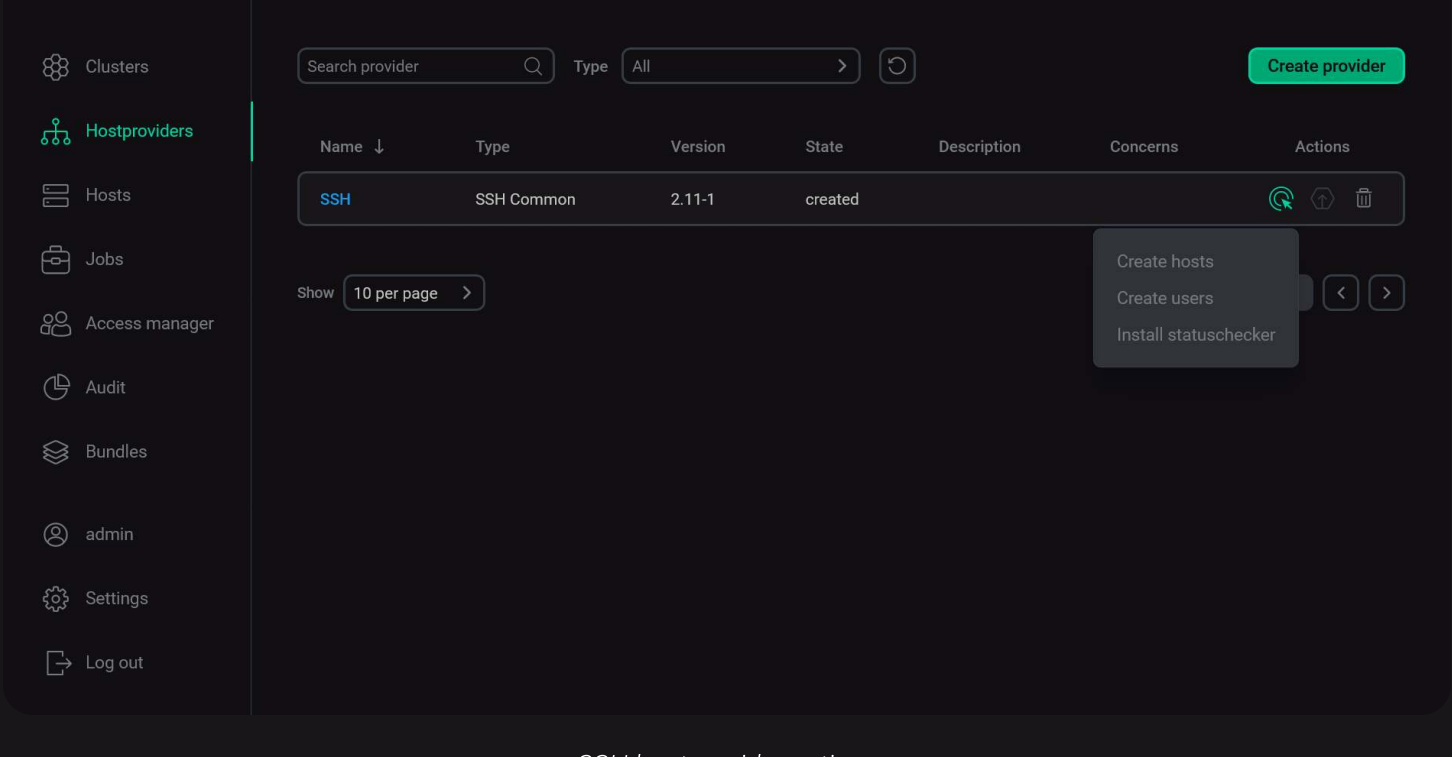
Create hosts

Create users

Install statuschecker

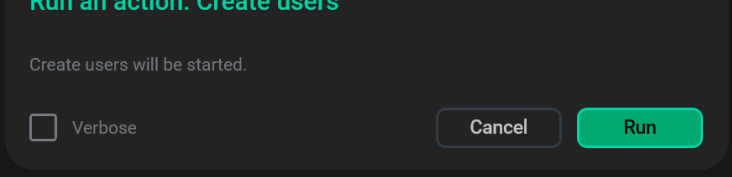
Overview

After you [create and configure](#) an SSH 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.



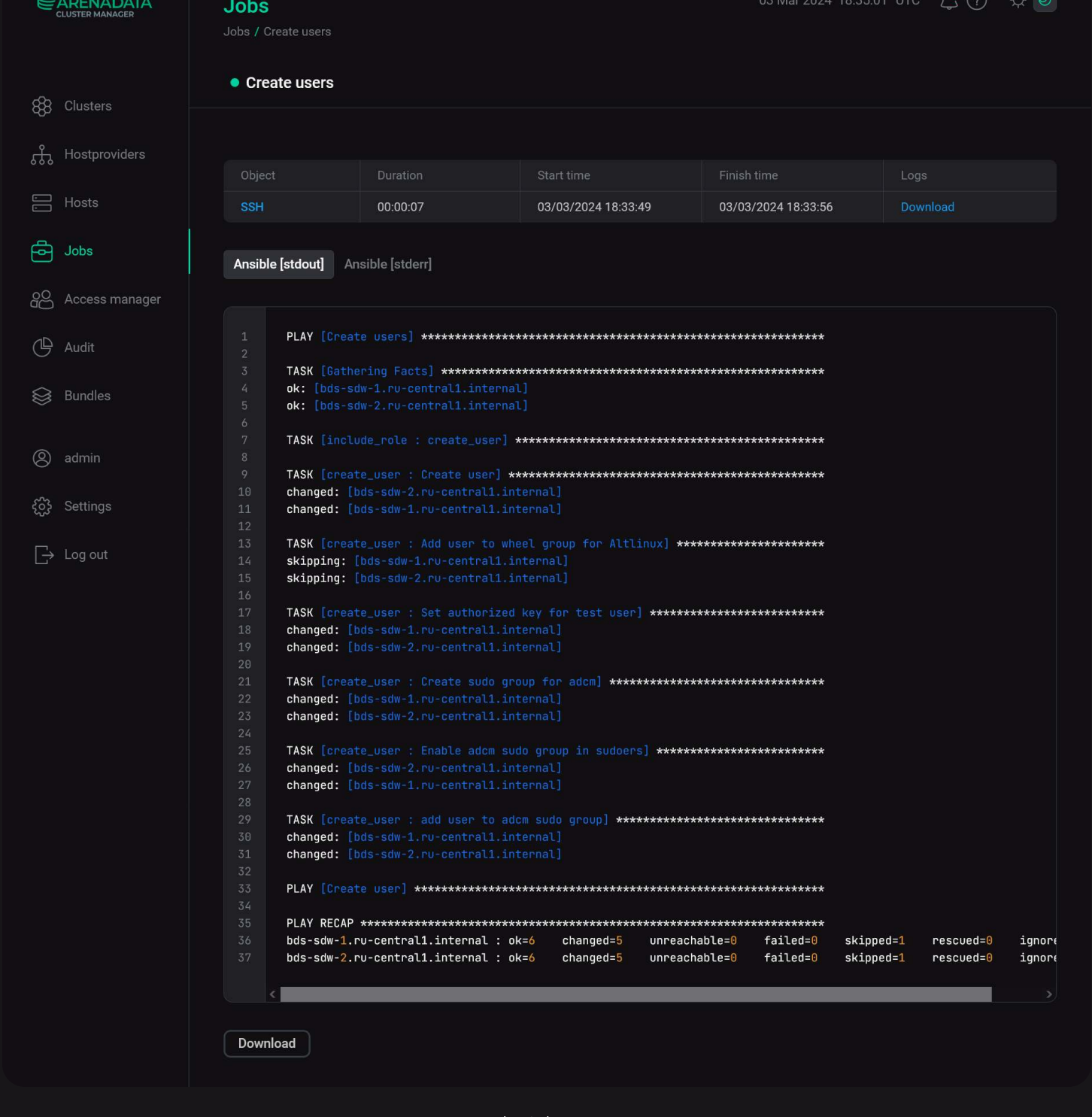
SSH hostprovider actions

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

IMPORTANT

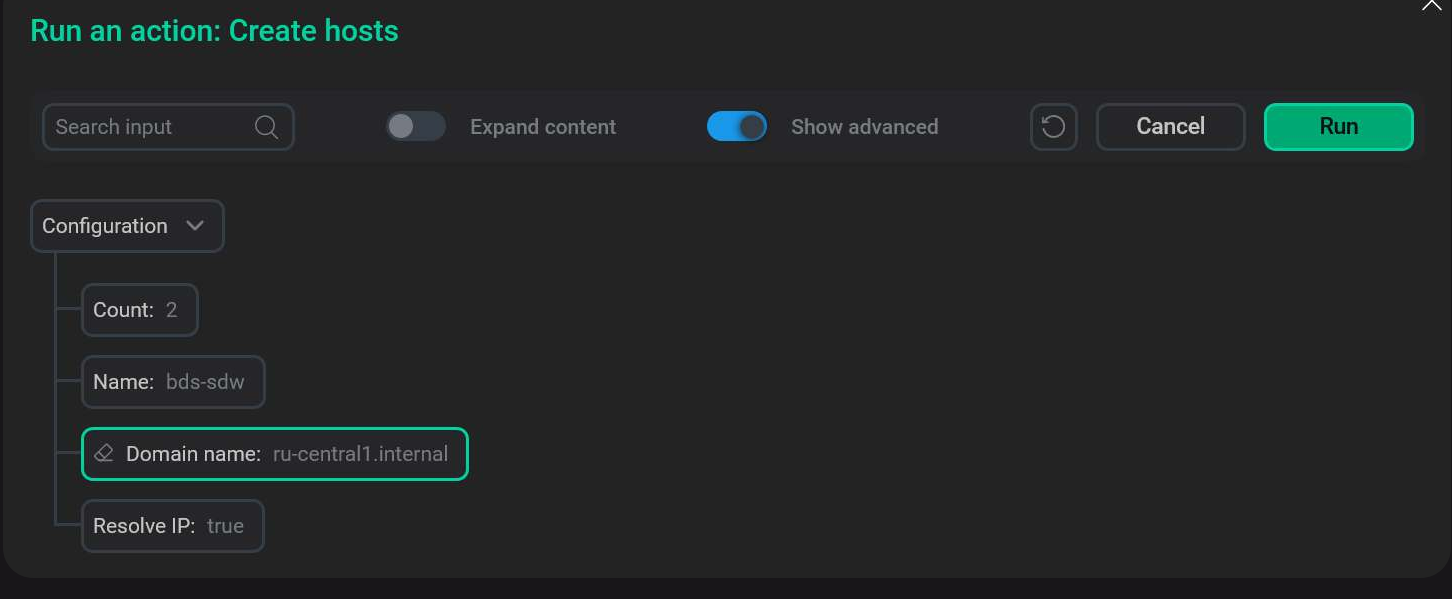
- Before you select the action, fill in the following **SSH hostprovider settings**:
 - Port**
 - Username**
 - Password** or **SSH private key**
- To add and configure each host separately, run the [Create host](#) action on the **Hosts** page.

!

After you select the **Create hosts** action, a dialog box opens where you can set the following parameters:

- Count** – a number of hosts.
- Name** – a common part of host names. A full host name is formed as **<Name>-<N>**, where **<N>** is a host number (from **1** to **<Count>**).
- Domain name** – a domain name.
- Resolve IP** – a flag that indicates whether ADCM can access the DNS server that provides the **Domain name** domain. If there is no such access, set the field value to **false** and specify IP addresses in the settings of new hosts manually after the **Create hosts** action is completed. Then, apply the [Check connection](#) and [Install statuschecker](#) actions to each created host.

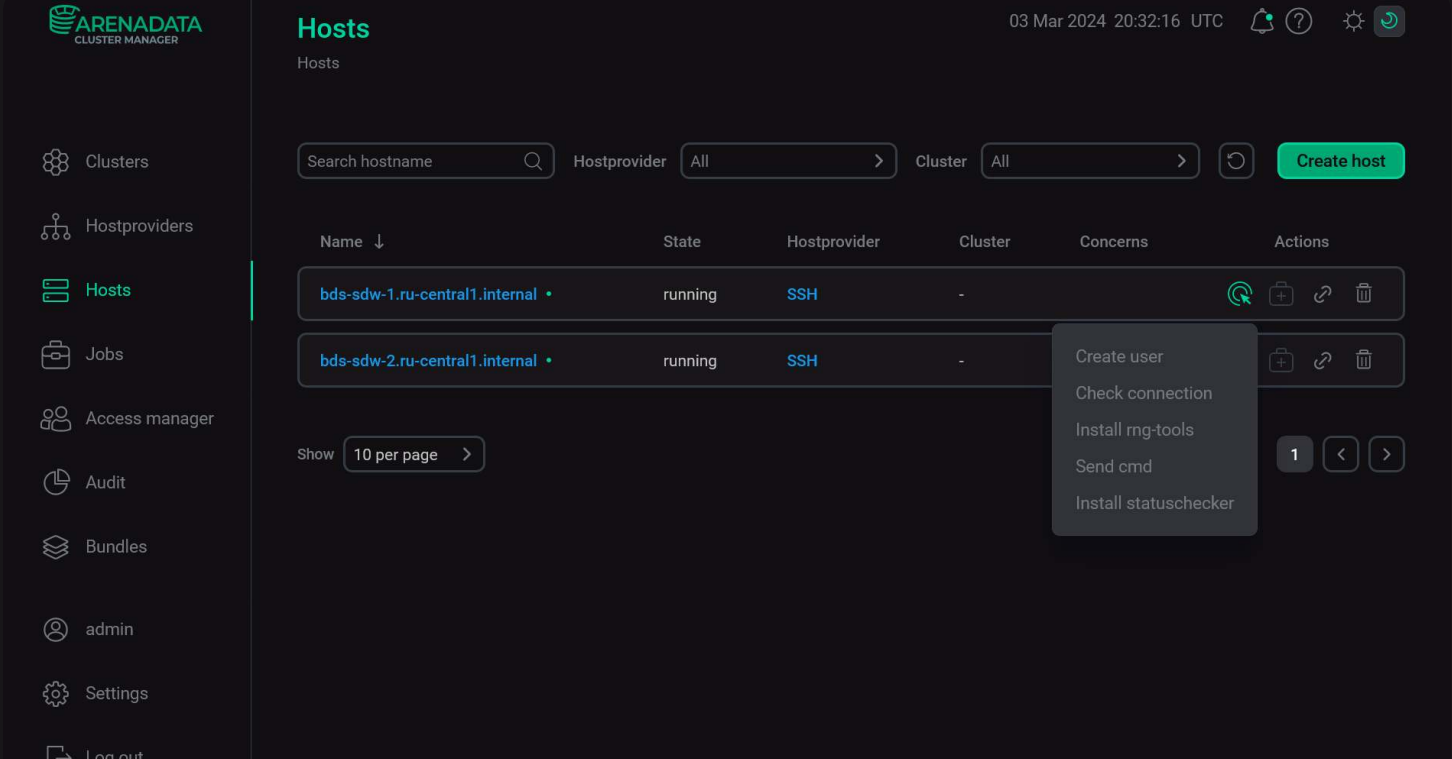
The figure below shows how to fill in the action parameters for two hosts that already exist in the Yandex Cloud and have the following FQDNs: **bds-sdw-1.ru-central1.internal** and **bds-sdw-2.ru-central1.internal** (resolving IP is possible).



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. For each host, an IP address is defined automatically if possible (see **Resolve IP** above). Other parameters (**Username**, **Port**, **Password/SSH private key**) are filled in as well – based on the **SSH hostprovider settings**.



New hosts on the Hosts page

Create users

The **Create users** action adds new users to all hosts that were previously created via the SSH hostprovider. Names and public SSH keys of created users are extracted from the **SSH keys** field of the **SSH 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](#) action on the **Hosts** page.
- Public SSH keys of all created users should be specified in the **SSH keys** field of the **SSH hostprovider settings**.

!

Install statuschecker

The **Install statuschecker** action installs the **statuschecker** on all hosts that were previously created via the SSH 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](#) action on the **Hosts** page.

!

Create hosts with SSH hostprovider

Daria Barysheva



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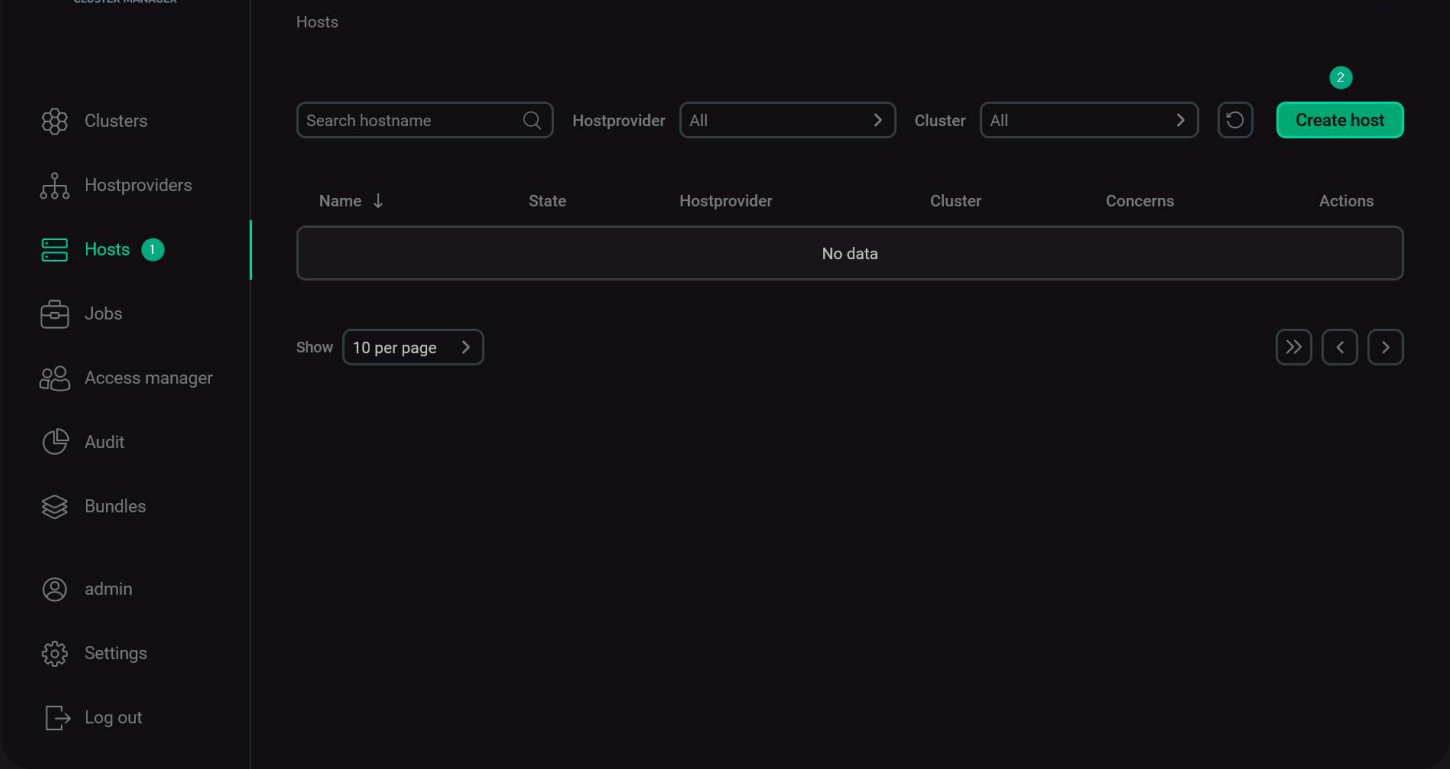
IMPORTANT

- To add hosts based on the SSH hostprovider, ensure that the following requirements are met:
 - The SSH hostprovider is [installed and configured](#) via ADCM.
 - Hosts with the ability to connect via the SSH protocol are created in a cloud or on-premises. Notice that this operation is performed manually and is not supported by the current hostprovider.
- 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:

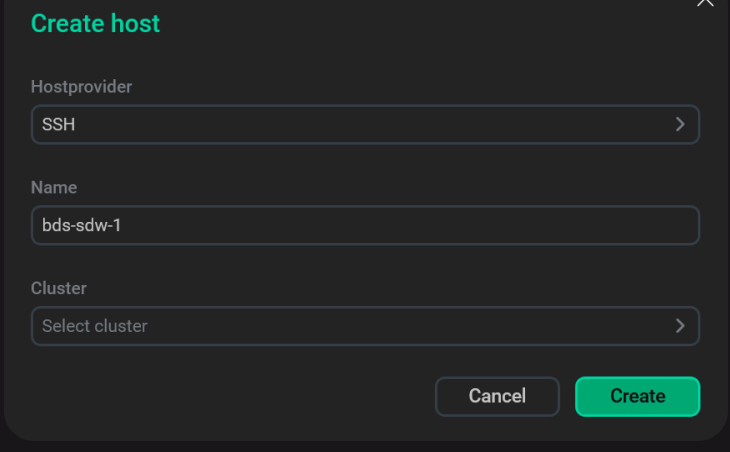
- Select the **Hosts** item in the left navigation menu and click **Create host**.



Add a host via ADCM

- 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. Some products (see below) require a fully qualified domain name (FQDN).
- Click **Create**.



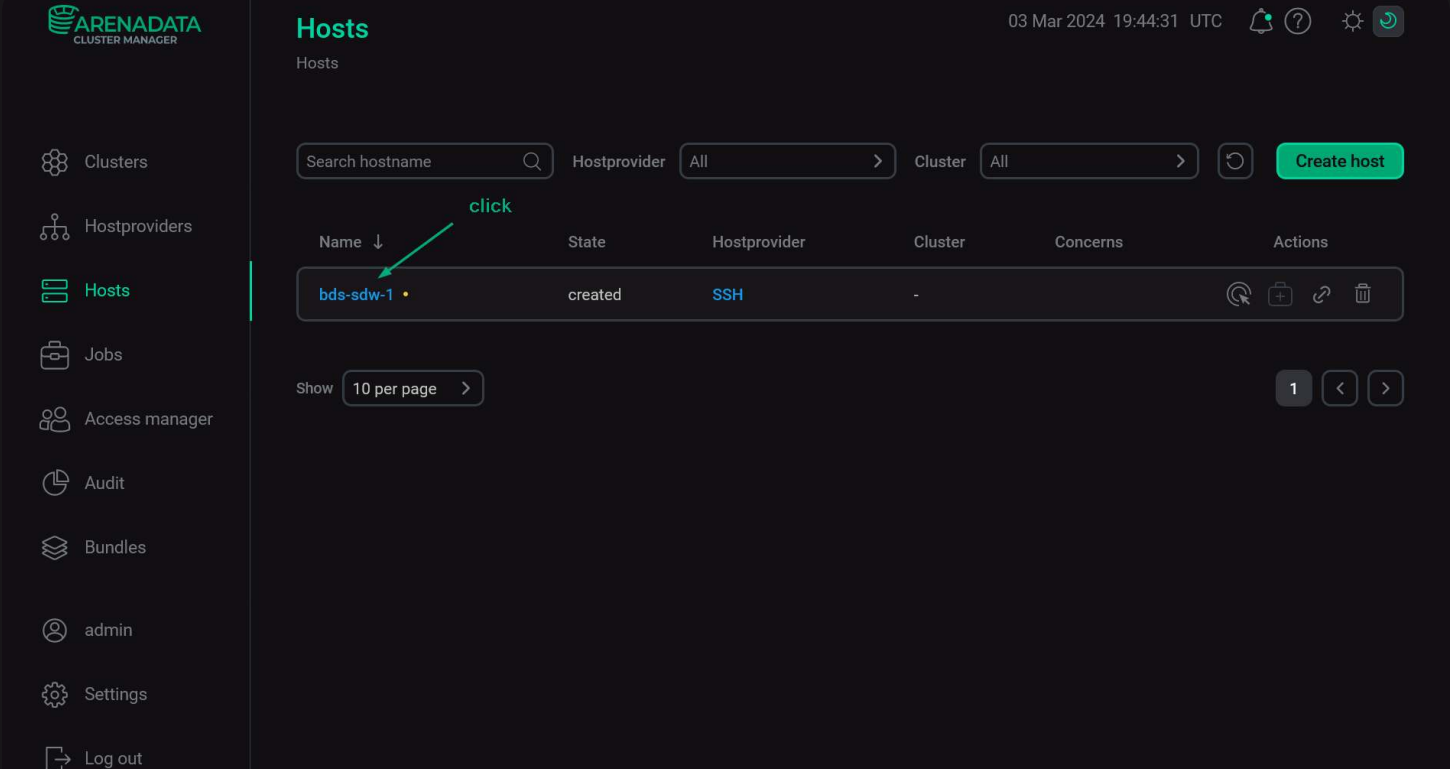
Describe a new host

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.

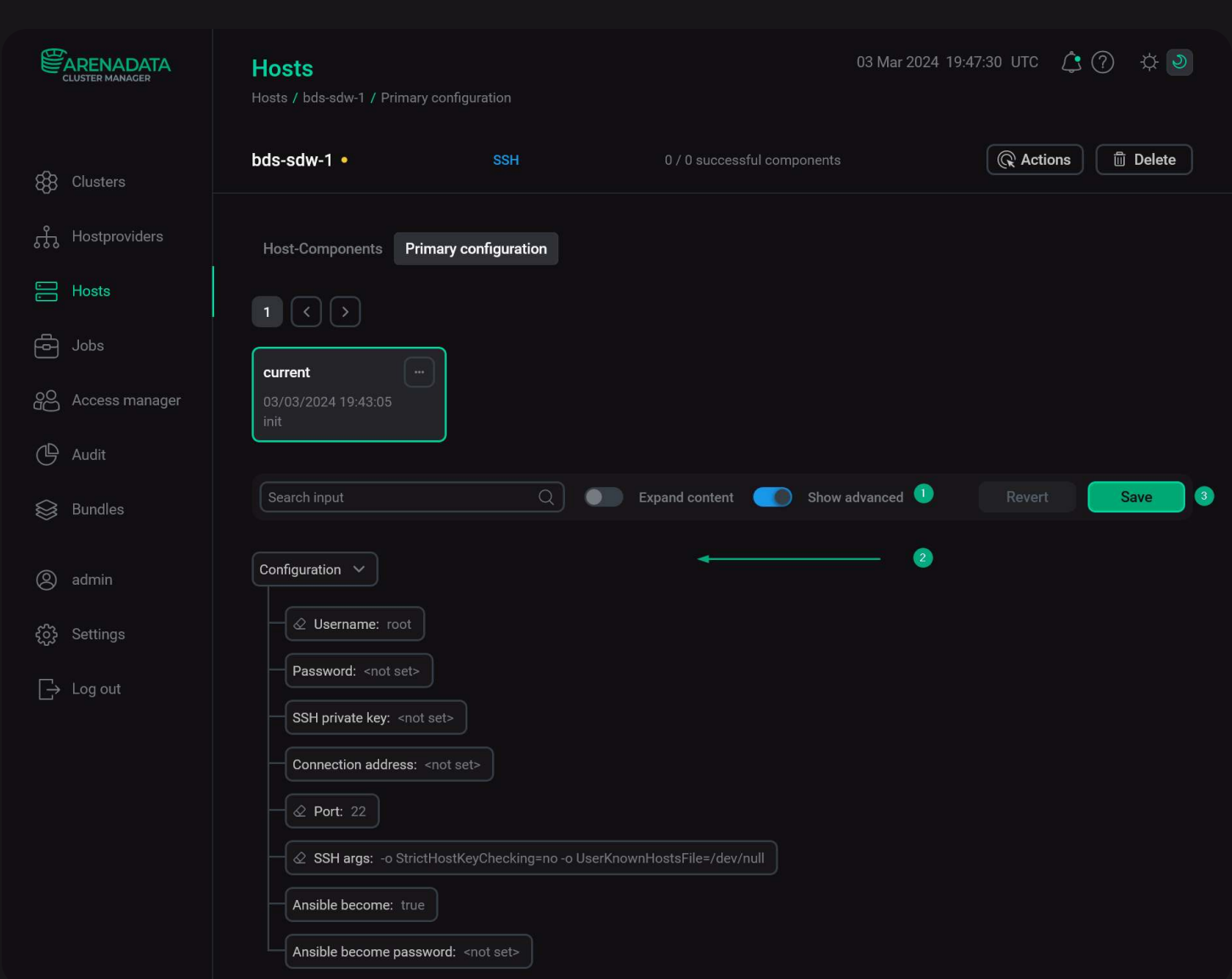


- Return to the **Hosts** page and switch to configuring the added host. To do this, click the host name in the **Name** column.



Go to configuring a host

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



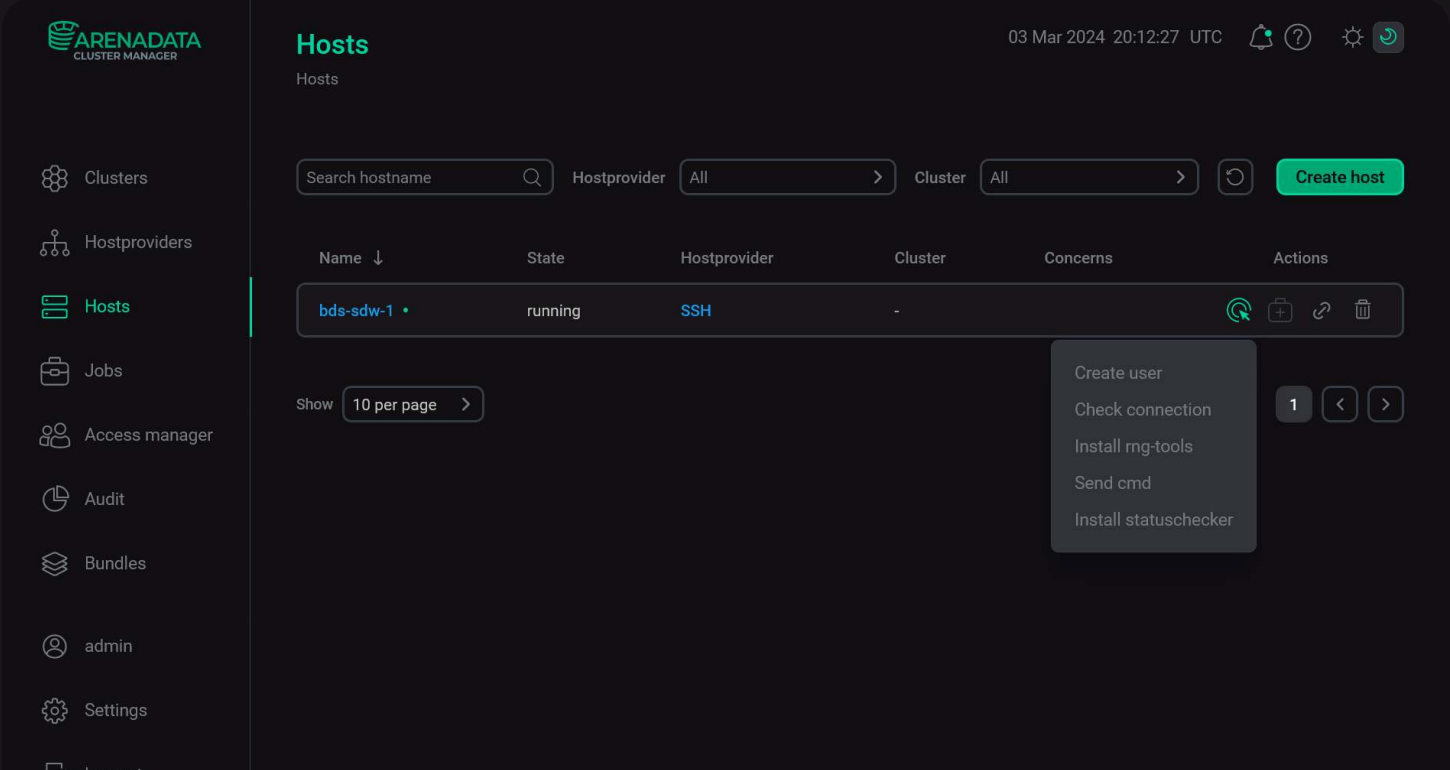
Configure a host

The assignment of parameters is listed in the table below.

Host configuration parameters

Parameter	Description
Username	A user name that is used for connecting to a host via SSH. The specified user should exist on the host
Password	A user password that is used for connecting to a host via SSH. If you do not use a password, leave this field blank
SSH private key	A private SSH key that is used for connecting to a host via SSH. If you do not use SSH keys, leave this field blank
Connection address (Hostname in previous hostprovider versions)	An IP address of the host
Port	A port number that is used for connecting to a host via SSH (by default, <code>22</code>)
SSH args	SSH arguments for Ansible. Each parameter requires the following format: <code>-o <name>=<value></code>. Several parameters are separated by space: <code>-o StrictHostKeyChecking=no -o UserKnownHostsFile=/dev/null</code>. Thus, <code>StrictHostKeyChecking=no</code> and <code>UserKnownHostsFile=/dev/null</code> 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 hosts list. Can be left at the default value
Ansible become	A flag that grants the superuser privileges to the user specified in the Username field. The default value should be used (flag is set)
Ansible become password	A password that is used during granting of the superuser privileges to the user specified in the Username field. Can be left at the default value

As a result of the performed actions, the new host and its **actions** become available on the **Hosts** page. To finish the configuration process, run the [Check connection](#) and [Install statuschecker](#) actions sequentially.



New host on the Hosts page

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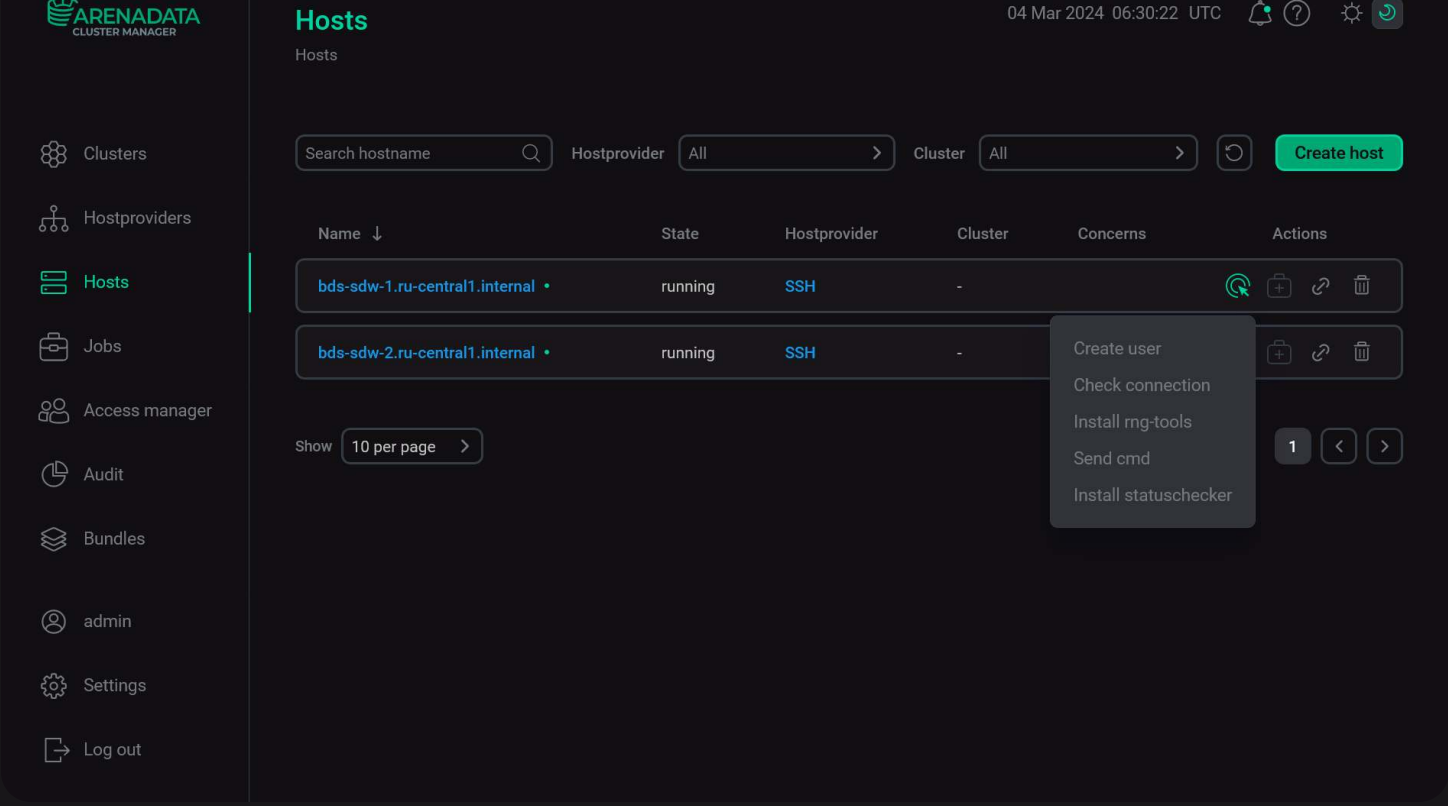
Install rng-tools

Send cmd

Install statuschecker

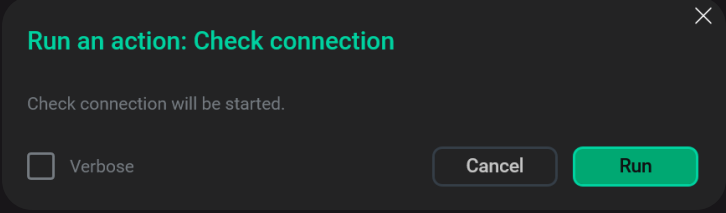
Overview

After you create and configure new hosts based on the SSH hostprovider (by running the [Create hosts](#) or [Create host](#) 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.



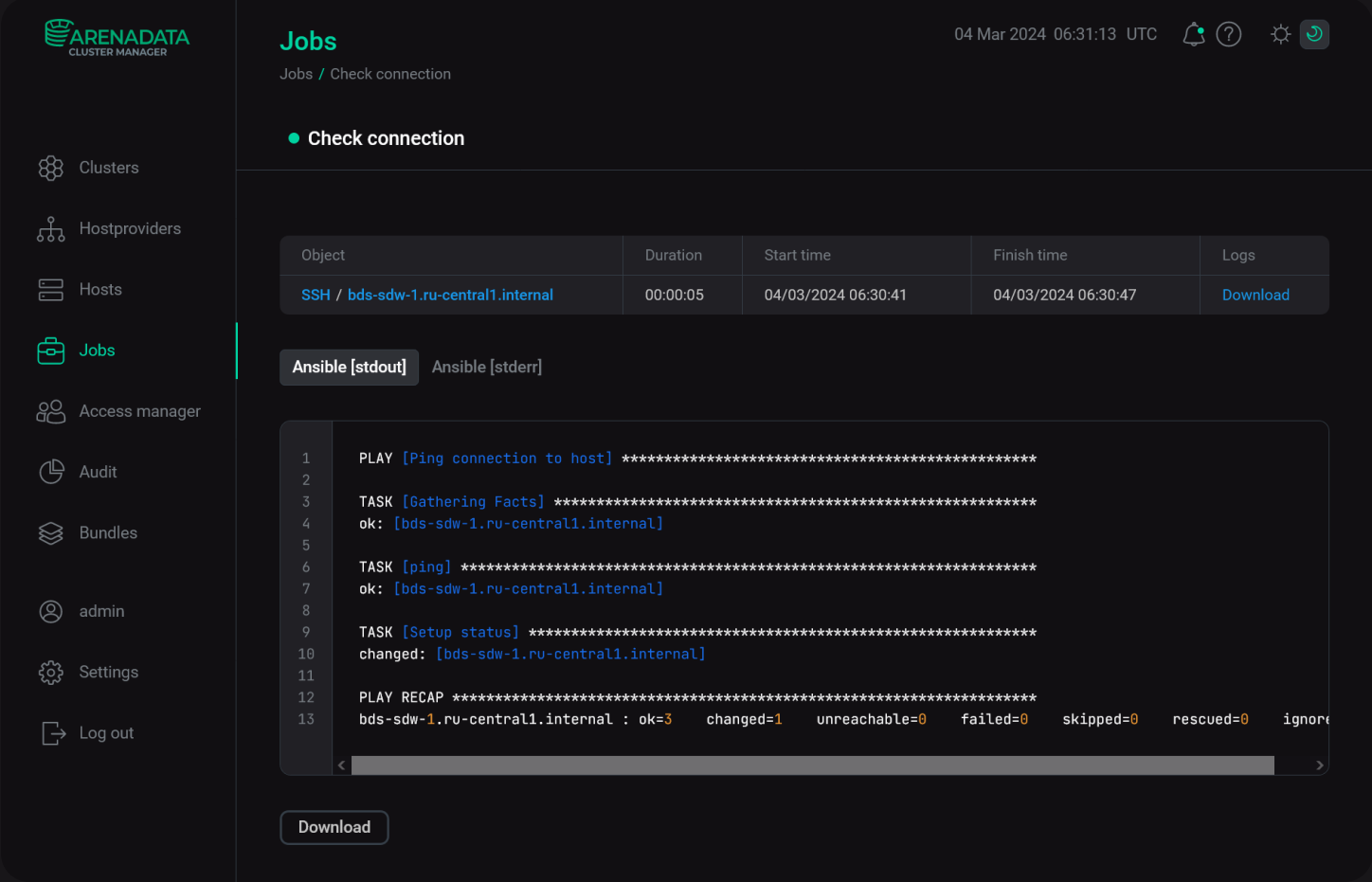
Host actions

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.



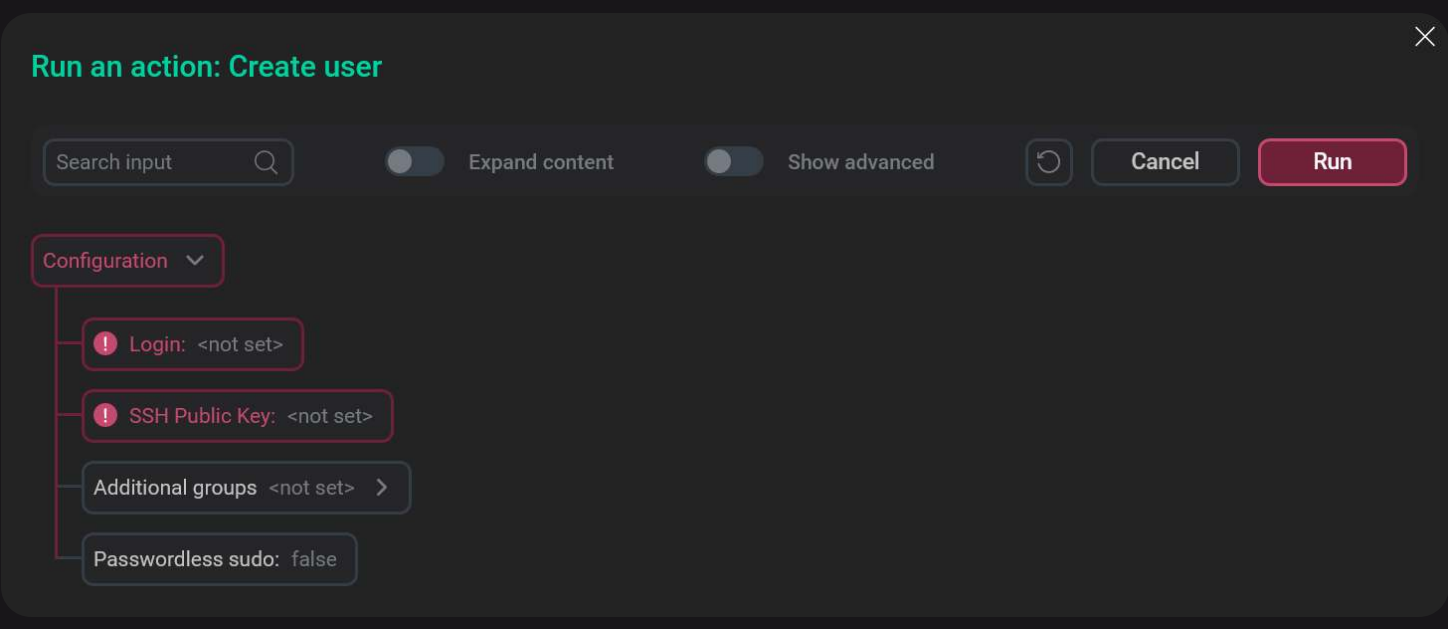
The job page

All available host actions are listed below.

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

NOTE

If you need to add users to all hosts that are based on the SSH hostprovider, run the [Create users](#) action.



Check connection

The **Check connection** action checks the ability to connect to the host via SSH. During the connection attempt, the **Username** and **Password/SSH private key** field values from the [host configuration parameters](#) are used.

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

TIP

It is recommended to run **Check connection** for each host that is added via the [Create host](#) action. This allows you to ensure that the host settings are valid and the SSH connection can be established based on them.



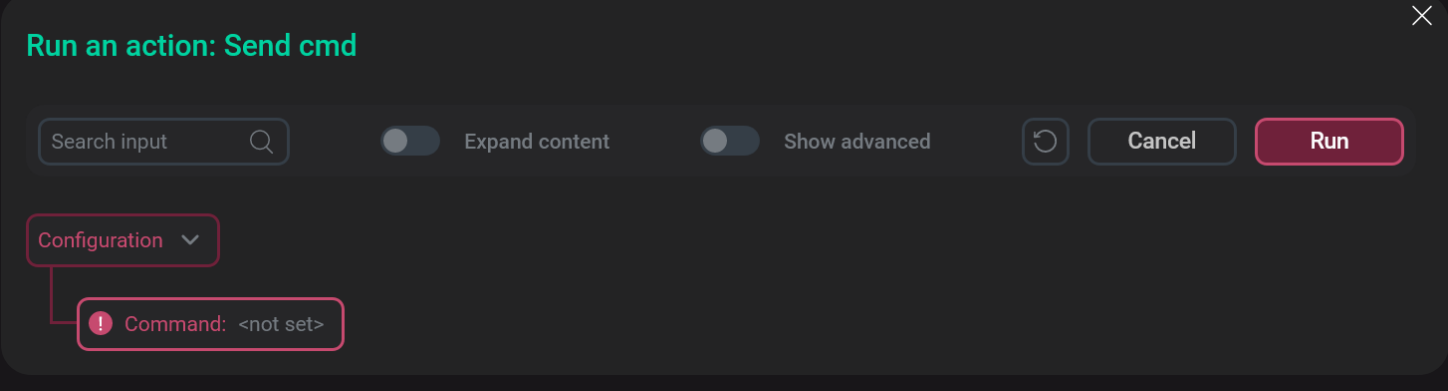
Install rng-tools

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](#).

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.

IMPORTANT

Run the **Install statuschecker** action for each host that is added via the [Create host](#) action. This allows you to track the status of services and components that will subsequently be installed on the host during the deployment of product clusters via ADCM.





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2.13

Date: 09.10.2024

Misc/Internal

Updated dependencies

2.12

Date: 09.09.2024

Bug fixes

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

2.11

Date: 01.11.2023

New functions

On the ***Main*** tab of the host page in ADCM, added information for SSH connection to the host

2.10

Date: 06.04.2023

Improvements

Private SSH keys are now replaced with  symbols when being displayed in ADCM