

CEM MiNiFi Java Agent 1.22.07

## MiNiFi Java Agent Installation

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The Cloudera logo is displayed in a bold, orange, sans-serif font. The word "CLOUDERA" is written in all caps, with a stylized 'E' that has a horizontal bar extending to the right.

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## System requirements for installing MiNiFi Java

Before you begin installing Cloudera Edge Management (CEM), review the system requirements for MiNiFi Java to understand which operating systems and Java Development Kits (JDK) are supported.

### Operating system support

Operating System	Version
RHEL/CentOS	7.x, 8.x
Debian	10, 11
Ubuntu	18.04, 20.04
Windows	10, Server 2016, Server 2019

### JDK support

JDK	Version
OpenJDK	JDK21
Oracle JDK	JDK21

## Installing MiNiFi Java Agent on Linux

Learn how to install the MiNiFi Java Agent on a Linux system. This guide walks you through the installation and configuration process, enabling you to start the agent seamlessly.

### Installing Java for MiNiFi Java Agent

Learn how to install Java for your agent.

#### About this task

You have to install Java on each machine where the MiNiFi Java Agent will be deployed.

#### Procedure

1. Download JDK from the appropriate website.
2. Run the installation command appropriate for your operating system:

For RHEL/CentOS:

```
yum install java-21-openjdk
```

For Debian and Ubuntu:

```
apt-get install openjdk-21-jre
```

### Installing the MiNiFi Java Agent

Learn how to install the MiNiFi Java Agent.

### Procedure

1. Download the tar.gz or ZIP files for the MiNiFi Java Agent from the appropriate source.

```
wget {java.tar.gz}
```

2. To install the MiNiFi Java Agent, extract the file to your desired home directory.  
After extraction, your MiNiFi Java Agent will be ready for configuration and use.

## Installing MiNiFi Java as a service

Learn how to install MiNiFi Java as a service.

### Procedure

1. Navigate to the MiNiFi Java installation directory.
2. Enter:

```
bin/minifi.sh install
```

You can also specify a custom name for your MiNiFi Java installation, by specifying that name during your install command. For example, to install MiNiFi Java as a service and name it as dataflow, enter:

```
bin/minifi.sh install dataflow
```

## MiNiFi Java Agent configurations

Learn about different configurations that you can perform for your MiNiFi Java Agent.

### Configuring your MiNiFi Java Agent

After you install the MiNiFi Java Agent, you need to update the configuration files.

#### About this task

If you want to configure your agent, use the `conf/bootstrap.conf` configuration file.

The MiNiFi Java Agent creates an auto-generated `minifi.properties` file at every startup. You should not use it for general agent configuration. If you want to override any property set in `minifi.properties`, you can do it by adding it to the end of the `bootstrap.conf` file.

For example, to change the content repository location, add the following to `bootstrap.conf`:

```
nifi.content.repository.directory.default=[***/path/to/repos/content***]
```

Follow these steps to configure the MiNiFi Java Agent:

### Procedure

1. From the MiNiFi home directory, open the `bootstrap.conf` configuration file.
2. Configure the agent class so that you can logically group MiNiFi Java instances according to their functionality.

```
c2.agent.class=[***/AGENT_CLASS***]
```



**Note:** Leading and trailing whitespaces are accepted for Agent Class names so consider this when configuring agents.

3. Configure the ID of the agent. If you do not specify an agent ID, MiNiFi generates a unique ID per agent instance.

```
c2.agent.identifier=[***AGENT_ID***]
```

4. Set the `c2.enable` property to true to inform MiNiFi that run time flow instructions will be received from EFM.

```
c2.enable=true
```

5. Configure your EFM server endpoint.

```
c2.rest.path.base=[***REST_API_BASE_URL***]  
c2.rest.path.heartbeat=[***HEARTBEAT_RELATIVE_URL***]  
c2.rest.path.acknowledge=[***ACKNOWLEDGE_ENDPOINT_RELATIVE_URL***]
```

For example:

```
c2.rest.path.base=http://localhost:10090/efm  
c2.rest.path.heartbeat=/api/c2-protocol/heartbeat  
c2.rest.path.acknowledge=/api/c2-protocol/acknowledge
```

6. Configure your heartbeat interval.

```
c2.agent.heartbeat.period=[***HEARTBEAT_INTERVAL***]
```

7. Configure the config directory to be used by MiNiFi:

```
c2.config.directory=./conf
```

8. Configure the C2 runtime properties.

```
c2.runtime.manifest.identifier=minifi  
c2.runtime.type=minifi-java
```

9. Restart the agent.

## Configuring communication with secured EFM

To communicate with secured EFM, you need to configure additional properties.

### About this task

If you are configuring a MiNiFi Java Agent, the configuration file is `conf/bootstrap.conf`.

### Procedure

For the Java Agent, configure the following additional properties in the `bootstrap.conf` file to communicate with a secured EFM:

```
c2.security.truststore.location=  
c2.security.truststore.password=  
c2.security.truststore.type=  
c2.security.keystore.location=  
c2.security.keystore.password=  
c2.security.keystore.type=
```

## Starting MiNiFi Java Agent

Learn how to start the MiNiFi Java Agent.

### Before you begin

Ensure that you have completed the installation steps. For instructions, see [Installing your MiNiFi Java Agent](#).

### Procedure

1. Open a terminal window and navigate to the directory where MiNiFi is installed.
2. Start the MiNiFi agent:

- To start MiNiFi in the foreground, use the following command:

```
bin/minifi.sh run
```

- To start MiNiFi in the background, use the following command:

```
bin/minifi.sh start
```

## Installing MiNiFi Java Agent on Windows

Learn how to install the MiNiFi Java Agent on a Windows platform and how to configure it. Additionally, explore the prerequisites required before you install and configure the MiNiFi Java Agent.

### Installing MiNiFi Java on Windows

Learn how to install the MiNiFi Java Agent on Windows.

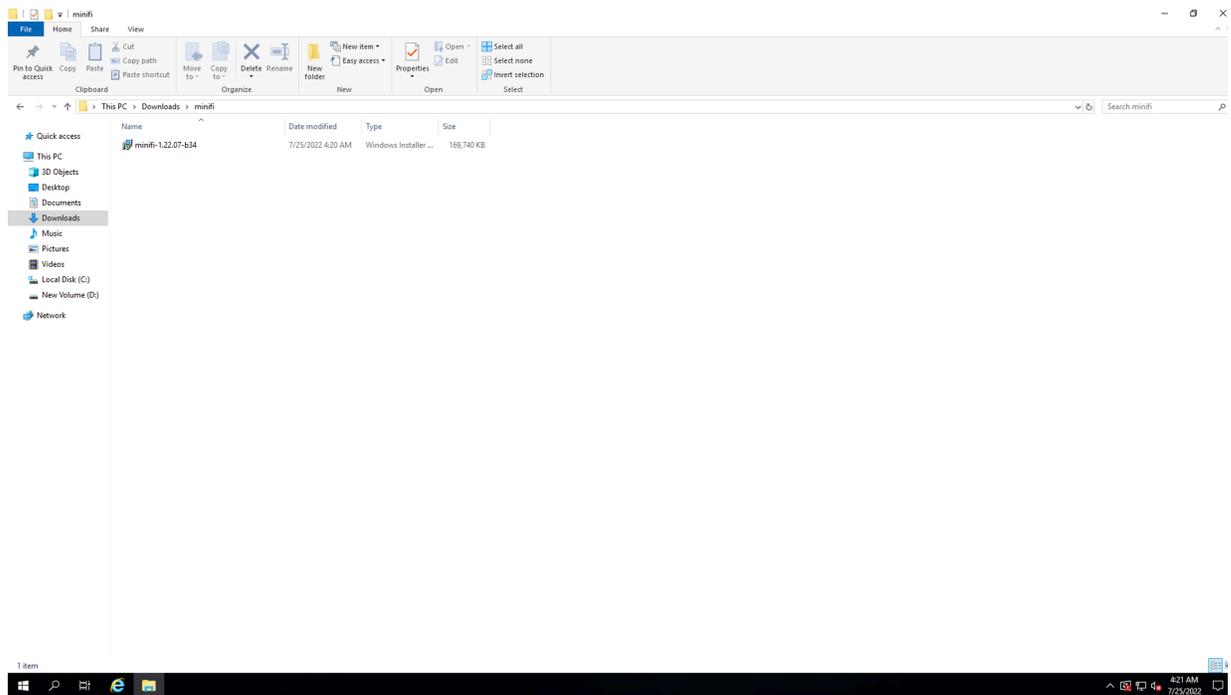
#### Before you begin

Ensure that you meet the prerequisites:

- Install JDK 21 64 bit.
- Install Java to C:/java instead of C:/Program Files because recent Windows versions mark everything in C:/Program Files as read only.
- Set the JAVA\_HOME environment variable using the 8.3 style naming conventions. For example: C:\Program\jdk21.
- Ensure that the JAVA\_HOME environment variable is pointing to a 64-bit JRE/JDK.
- Ensure that the Domain user has administrator privilege.
- Ensure that your system meets the minimum memory requirement for Windows which is 4 GB.

## Procedure

1. Download the MiNiFi Java installer on your PC through the paywall.



2. Double-click the executable file.

The CEM MiNiFi setup wizard appears, as shown in the following image:

### CEM MiNiFi setup

Package directory

Java command

java.arg.2

java.arg.3

MiNiFi service username  
  Local User

MiNiFi service password  
  Show

Enable C2

Agent Class

Agent Identifier (Optional)

Server Heartbeat URL

Server Acknowledge URL

Heartbeat period(milliseconds)

Enable C2 Security

Truststore Location

Truststore password  
  Show

Truststore type

Keystore location

Keystore password  
  Show

Keystore type

**3. Configure the following parameters:**

- Package directory

The installation directory of MiNiFi.

- java command

The path of the Java installation you would like to use.



**Note:** By default, CEM assumes that Java is on your system's path.

- java.arg.2

Sets initial and minimum heap size of JVM.

- java.arg.3

Sets the maximum heap size of JVM.

- MiNiFi service username/password

The MiNiFi service is configured to be executed by either a local user in the computer, or a domain user in the Active Directory. These parameters are the username/password pairs for the given user. For detailed user configuration, see *Configuring users for running MiNiFi Java on Windows*.

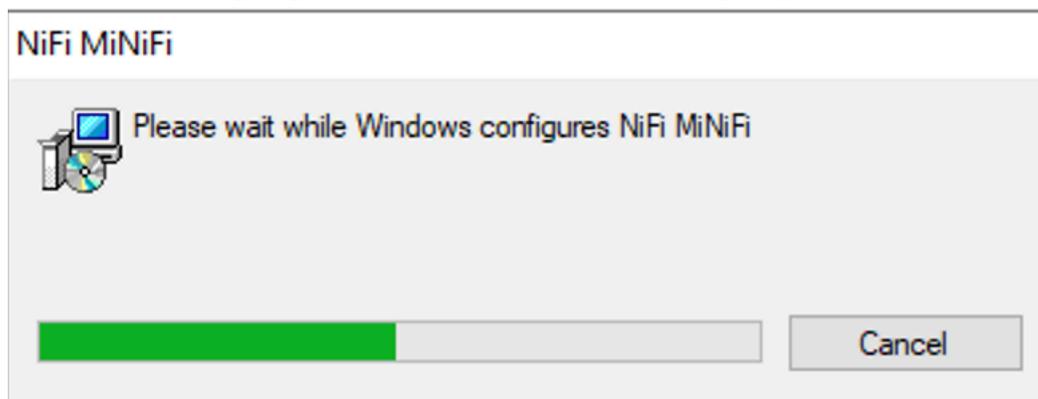
- Enable C2

If you want to integrate your agent with EFM you can set up the following basic C2 parameters:

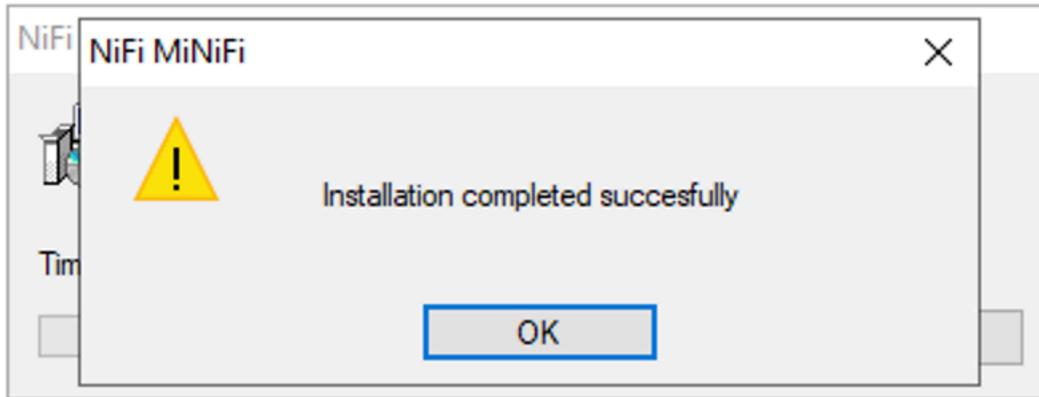
- Agent class: The agent class name.
- Agent identifier: The ID of your agent. If you skip this, an unique identifier is generated.
- Server heartbeat url: The heartbeat URL of EFM.
- Server acknowledge url: The acknowledge URL of EFM.
- Heartbeat period: The frequency of heartbeats in milliseconds.
- Enable C2 Security: If you would like to communicate with EFM in a secure way, you can set up C2 security parameters after you enable this checkbox.
  - a. Select the truststore location/password and truststore type from the dropdown.
  - b. Select the keystore location/password and truststore type from the dropdown.

**4. Click Install.**

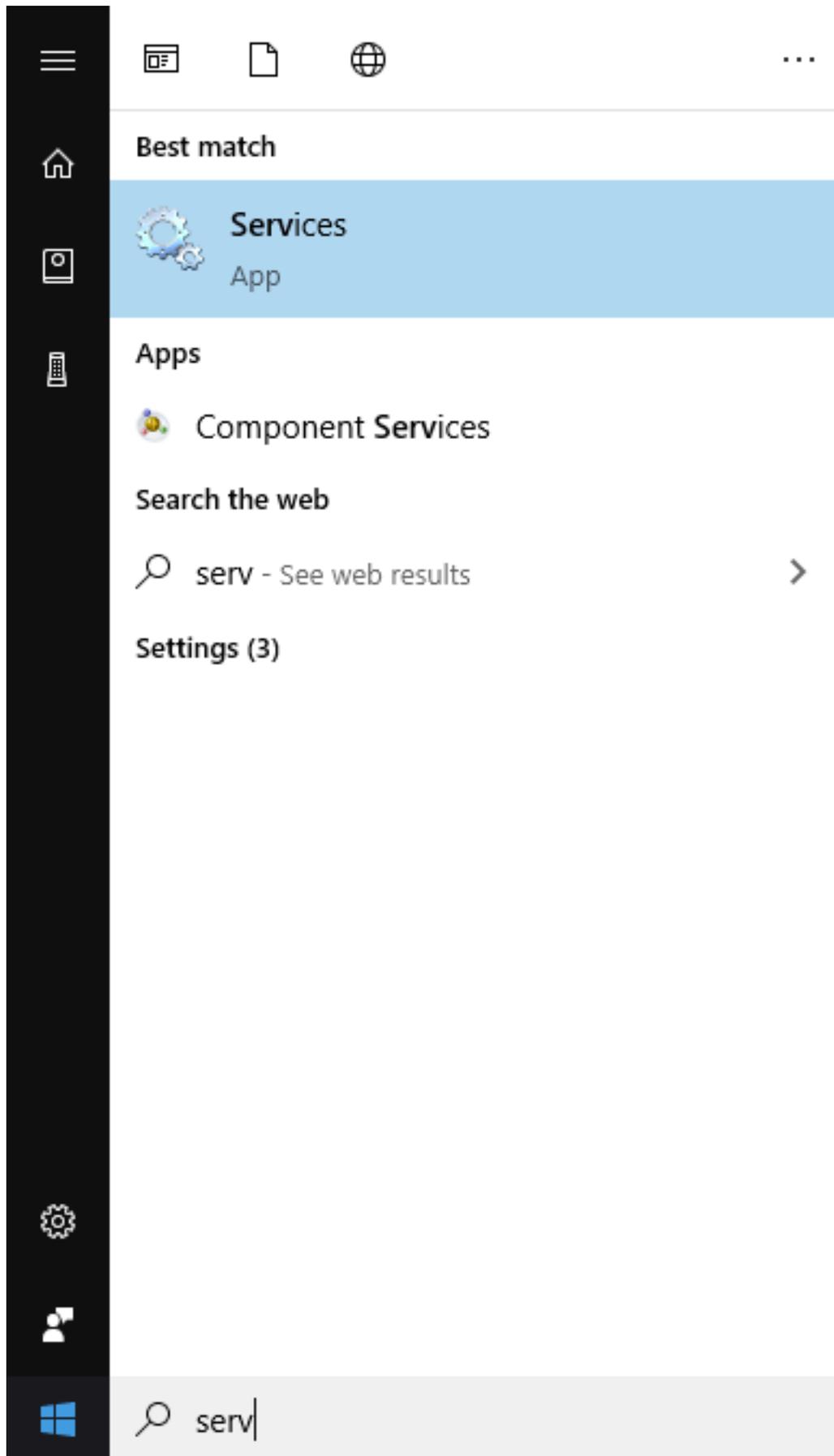
Windows starts configuring NiFi MiNiFi, as shown in the following image:



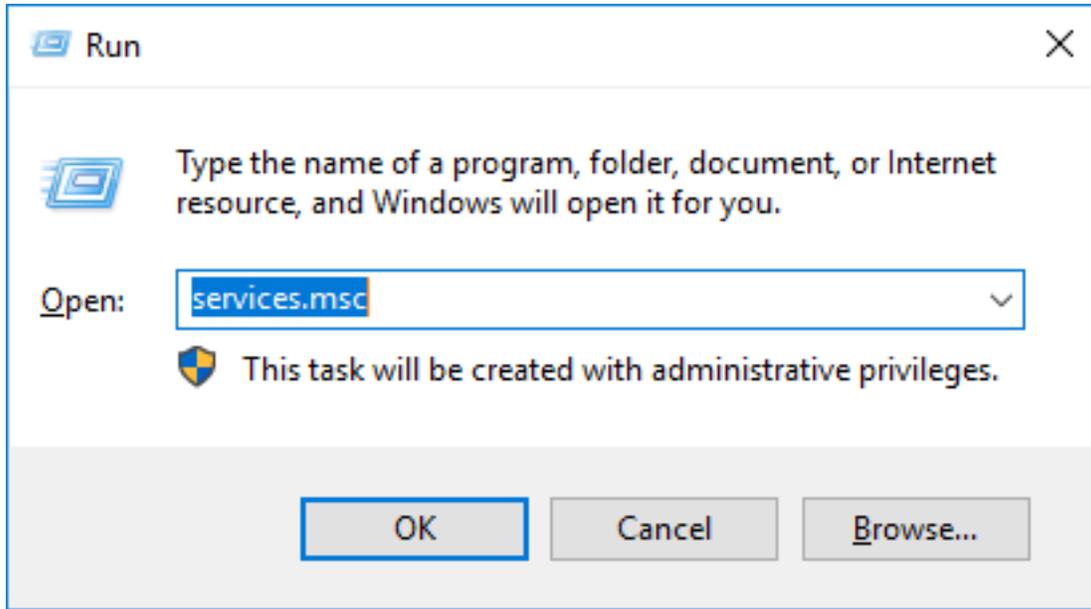
5. Click OK when installation completes.



6. Search for services in the Start menu of your PC and open it, as shown in the following image:



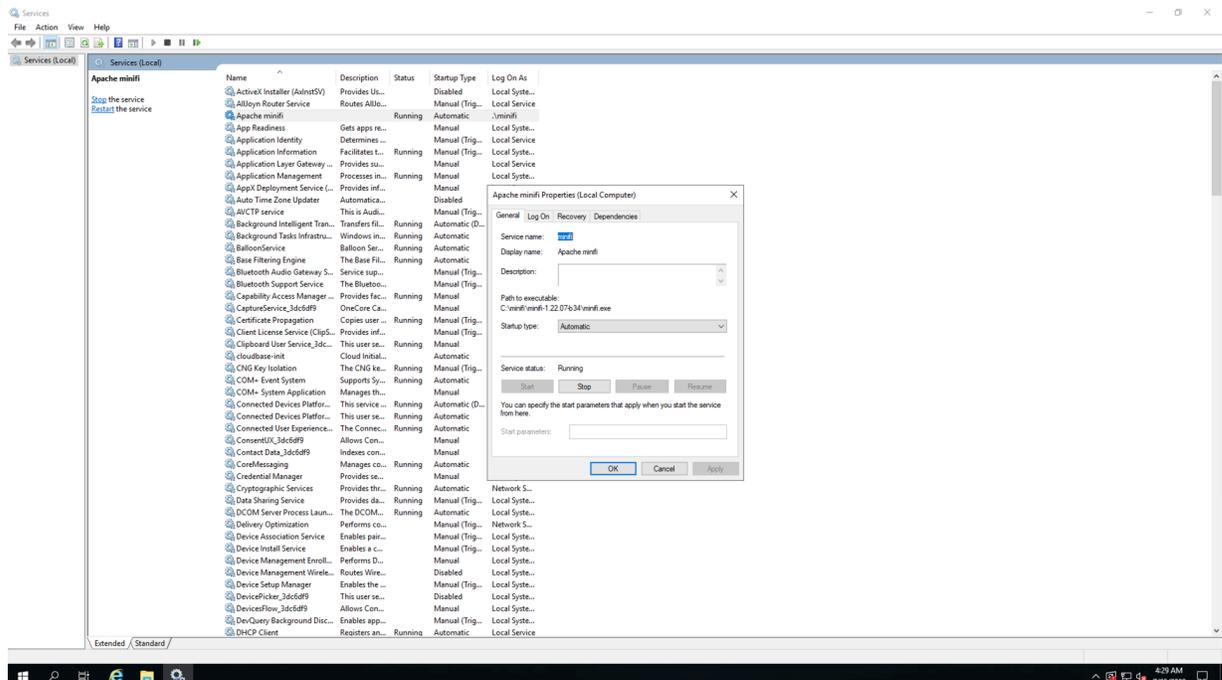
You can also run services by pressing [Windows key + R] and then typing services.msc in the Open field, as shown in the following image:



After you click OK, the Services window appears.

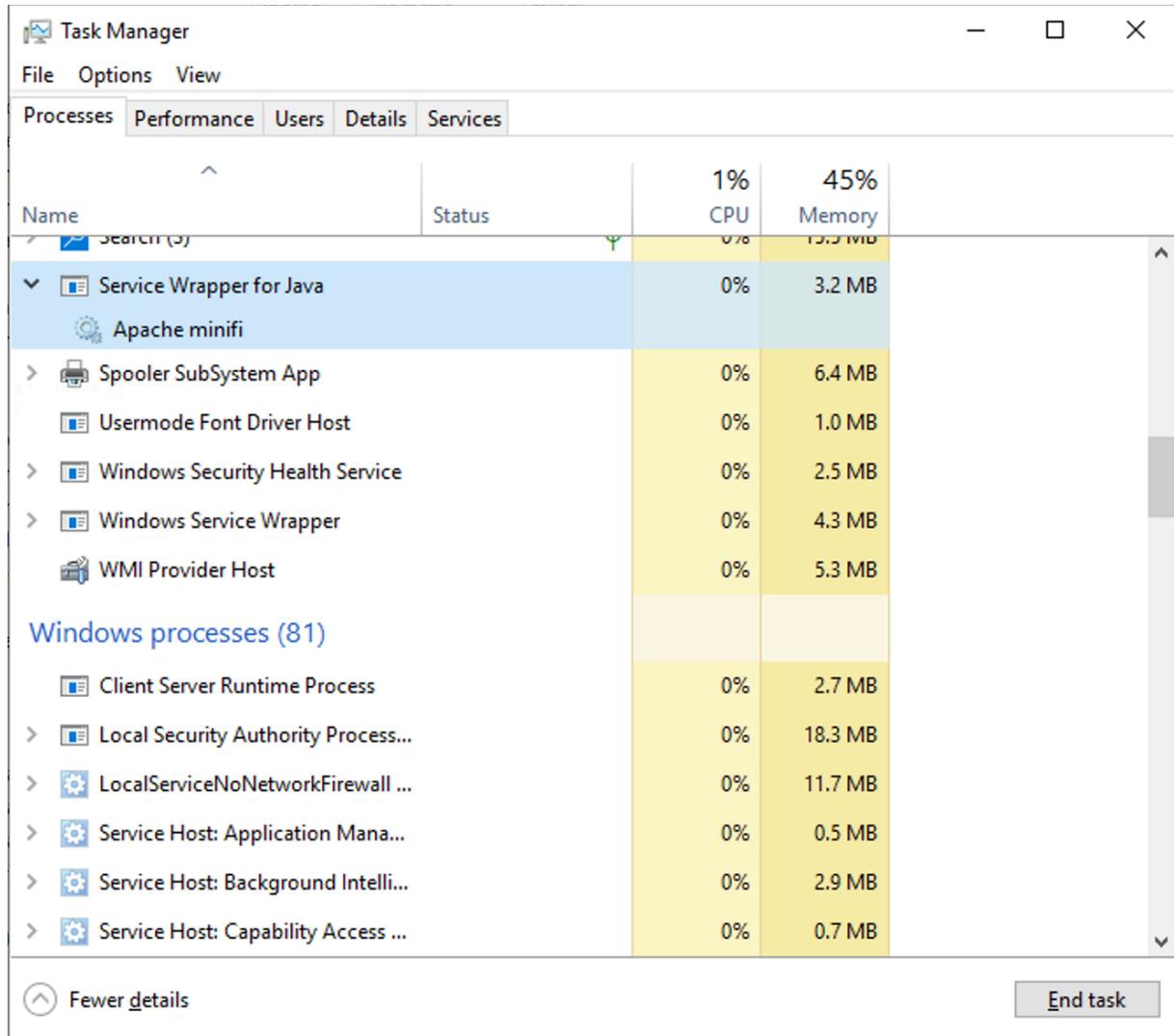


- In the Services window, double-click Apache MiNiFi.  
The Apache MiNiFi Properties (Local Computer) window appears.



- Check the services setup and click OK.

9. In the Task Manager window confirm whether the process is running.



10. Exit or close the window when done.

### Related Information

[Configuring users for running MiNiFi Java on Windows](#)

## Configuring users for running MiNiFi Java on Windows

Learn how to configure the MiNiFi Java MSI. The MSI file adds the Windows service for MiNiFi Java. The service is configured to be run by either a local user in the computer, or a domain user in the Active Directory.

### Using a Local User for MiNiFi Java Windows Service

There is no prerequisite to use a local user for the Windows service. The installer automatically sets up the user.

The installer also grants the following privileges to the specified user:

- SeCreateSymbolicLinkPrivilege
- SeServiceLogonRight

If the computer is a part of a domain, then the Local User checkbox appears in the MiNiFi setup window. Check the Local User checkbox to specify that a local user is used to execute the installed service.

**CEM MiNiFi setup**

Package directory  
C:\minifi

Java command  
java

java.arg.2  
-Xms12m

java.arg.3  
-Xmx24m

MiNiFi service username  
minifi  Local User

MiNiFi service password  
 Show

Enable C2

Agent Class

Agent Identifier (Optional)

Server Heartbeat URL

Server Acknowledge URL

Heartbeat period(milliseconds)  
5000

Enable C2 Security

Truststore Location

Truststore password  
  Show

Truststore type  
jks

Keystore location

Keystore password  
  Show

Keystore type

If a user specified in MiNiFi service username does not exist, the installer creates one with the specified MiNiFi service password. If the user already exists, the installer updates its password with the specified password.

### Using a Domain User for MiNiFi Java Windows Service

Before you begin, ensure the following:

- The computer must be part of the domain.
  - The specified user must exist in the domain, and a correct password must be provided.
  - ActiveDirectory PowerShell module must be available.
1. In the Group Policy Management Editor, set permission to Log on as a service.
  2. Navigate to a machine where MiNiFi Java is installed and enter the following command:

```
gpupdate
```

The gpupdate command is a machine-wide command and can be executed from any directory on the MiNiFi machine.

3. Install the ActiveDirectory PowerShell module by entering the following in the PowerShell console:

```
Add-WindowsFeature RSAT-AD-PowerShell
```

4. In the MiNiFi setup window, uncheck the Local User checkbox, and then click Install.

## Uninstalling MiNiFi Java Agent on Linux

Learn how to uninstall the MiNiFi Java Agent on your Linux system.

### Uninstalling MiNiFi Java

#### About this task

Follow this procedure if the MiNiFi agent was started without being installed as a service, using either the `minifi.sh start` or `minifi.sh run` command.

#### Procedure

1. Stop the MiNiFi agent using the following command.

```
[<<path_to_minifi_directory>>]/bin/minifi.sh stop
```

2. Remove the installation directory using the following command.

```
rm -rf [<<path_to_minifi_directory>>]
```

For example, if you have installed the MiNiFi agent under `/opt/cloudera/minifi`, you can run the following commands:

```
/opt/cloudera/minifi/bin/minifi.sh stop && rm -rf /opt/cloudera/minifi
```

### Uninstalling MiNiFi Java as a service

### About this task

Follow this procedure if the MiNiFi agent was installed as a service with the bin/minifi.sh install [*<<serviceName>>*] command.

### Procedure

1. Stop the MiNiFi service using the following command.

```
systemctl stop [<<service_name>>]
```

2. Remove the service script using the following command.

```
rm -rf /etc/init.d/[<<service_name>>]
```

3. Navigate to the MiNiFi directory and remove its contents with the following commands.

```
cd [<<minifi_directory>>]; rm -rf *
```

For example, if you have installed the MiNiFi service named dataflow under /opt/cloudera/minifi, you can run the following commands:

```
systemctl stop dataflow; rm -rf /etc/init.d/dataflow; cd /opt/cloudera/minifi; rm -rf *
```