

## MiNiFi Java Agent Installation

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## Install the MiNiFi Java agent

Learn how to install the MiNiFi Java agent. You need to install and configure the MiNiFi Java agent and then start it. You can also do the same on Windows.

### System requirements for MiNiFi Java

Before you begin your installation of Cloudera Edge Management (CEM) software, carefully review the system requirements for MiNiFi Java to understand operating system and JDK support.

#### 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	JDK8, JDK11
Oracle JDK	JDK8, JDK11

### Installing MiNiFi Java agent on Linux

Learn how to install the MiNiFi Java agent on Linux, install it as a service, and start it.

#### Installing Java for MiNiFi Java agent

You should install Java on each machine where you will install a MiNiFi Java agent.

##### Procedure

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

For RHEL/CentOS:

```
yum install java-1.8.0-openjdk
```

For Debian and Ubuntu:

```
apt-get install openjdk-8-jre
```

#### Installing the MiNiFi Java agent

To install your MiNiFi Java agent, you need to download the software for the agent and extract it.

### Procedure

1. Download the tar.gz or zip files for the MiNiFi Java agent.

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

2. To install the MiNiFi Java agent, extract the file to your desired home directory.

## 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 nifi.properties file at every startup. You should not use it for general agent configuration. If you want to override any property set in nifi.properties, you can do it using the NiFi Properties Overrides section at the end of the config.yml file.

For example, to change the content repository location, you need to override the default path:

```
NiFi Properties Overrides: {  
  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. Configure MiNiFi to recognise the changes in the config.yml file during publishing:

```
nifi.minifi.notifier.ingestors=org.apache.nifi.minifi.bootstrap.configuration.ingestors.FileChangeIngestor
nifi.minifi.notifier.ingestors.file.config.path=./conf/config-new.yml
nifi.minifi.notifier.ingestors.file.polling.period.seconds=5
```



**Note:** This step is not needed if you are running MiNiFi Java agent version 1.23.02 or higher.

10. 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 agent

After MiNiFi is installed and configured, you can start it. Learn how to start your MiNiFi agent.

### Procedure

1. From a terminal window, navigate to the MiNiFi installation directory.
2. To start MiNiFi in the foreground, enter:

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

3. To start MiNiFi in the background, enter:

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

## Installing MiNiFi Java agent on Windows

Learn how to install the MiNiFi Java agent on Windows and configure it. Also learn about the prerequisites before you install and configure the MiNiFi Java agent.

### Before you begin installing MiNiFi Java on Windows

Before you begin your MiNiFi Java installation on Windows, ensure that you meet the prerequisites.

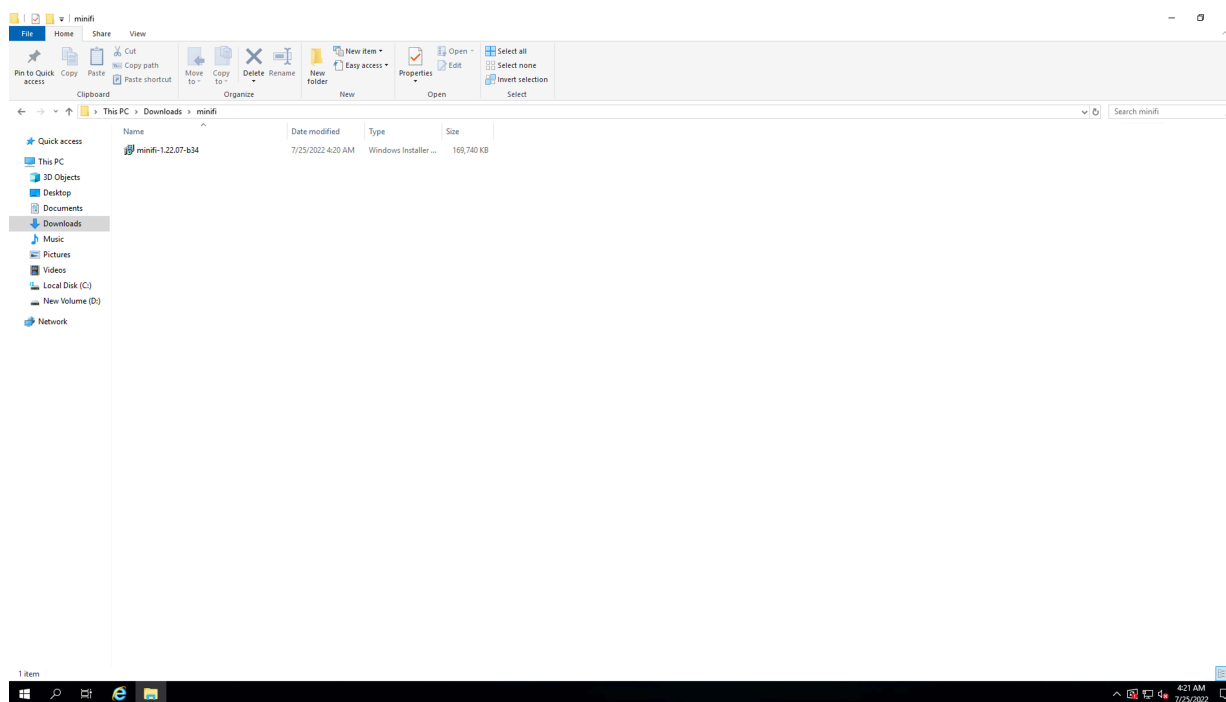
- Install JDK 8.0 64 bit.
- Install Java to C:/java instead of C:/Program Files because recent Windows versions mark everything in C:\Program Files as read only.
- Set the JAVA\_HOME environment variable using the 8.3 style naming conventions. For example: C:\Program\jdk1.8.0.
- Ensure that the JAVA\_HOME 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 4GB.

### Installing MiNiFi Java on Windows

Learn how to install the MiNiFi Java agent on Windows.

## Procedure

1. Download the MiNiFi Java installer in 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*.

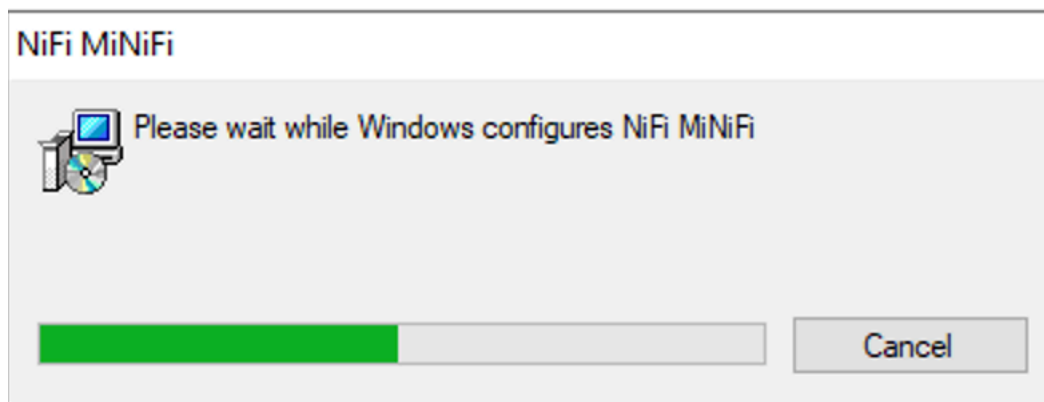
- Enable C2

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

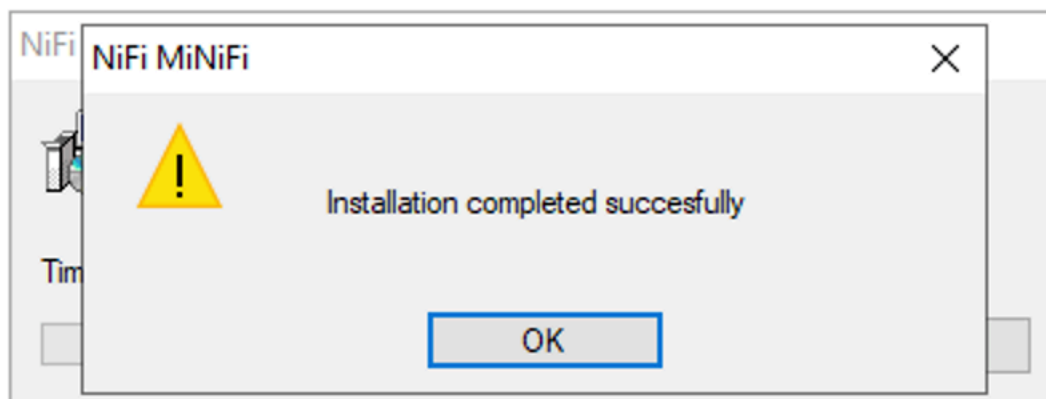
- Agent class: The agent class name.
- Agent identifier: The ID of your agent. If you skip this, an unique identifier is generated.
- Server heartbeat url: The heartbeat URL of EFM.
- Server acknowledge url: The acknowledge URL of EFM.
- Heartbeat period: The frequency of heartbeats in milliseconds.
- 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.

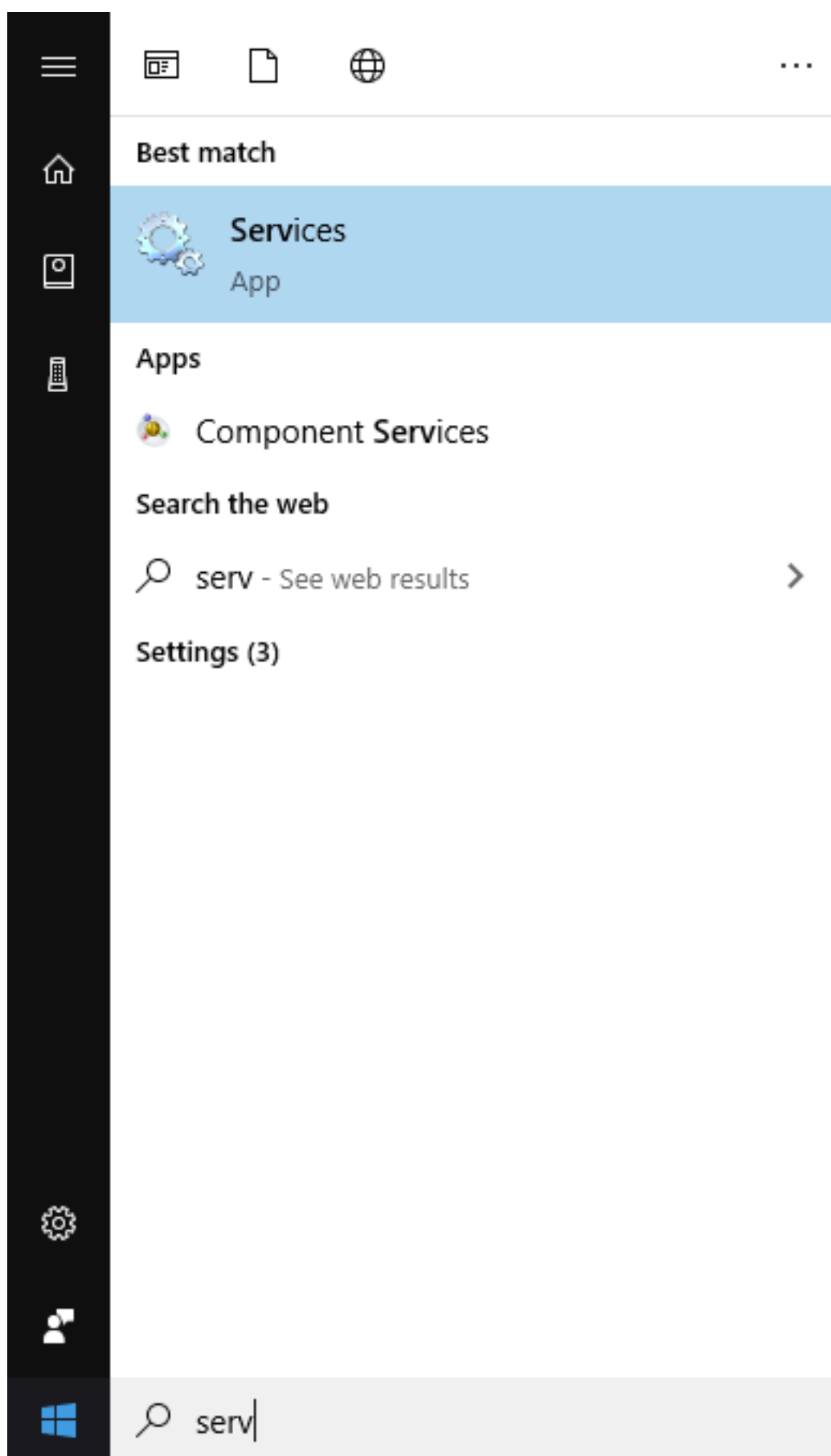
Windows starts configuring NiFi MiNiFi, as shown in the following image:



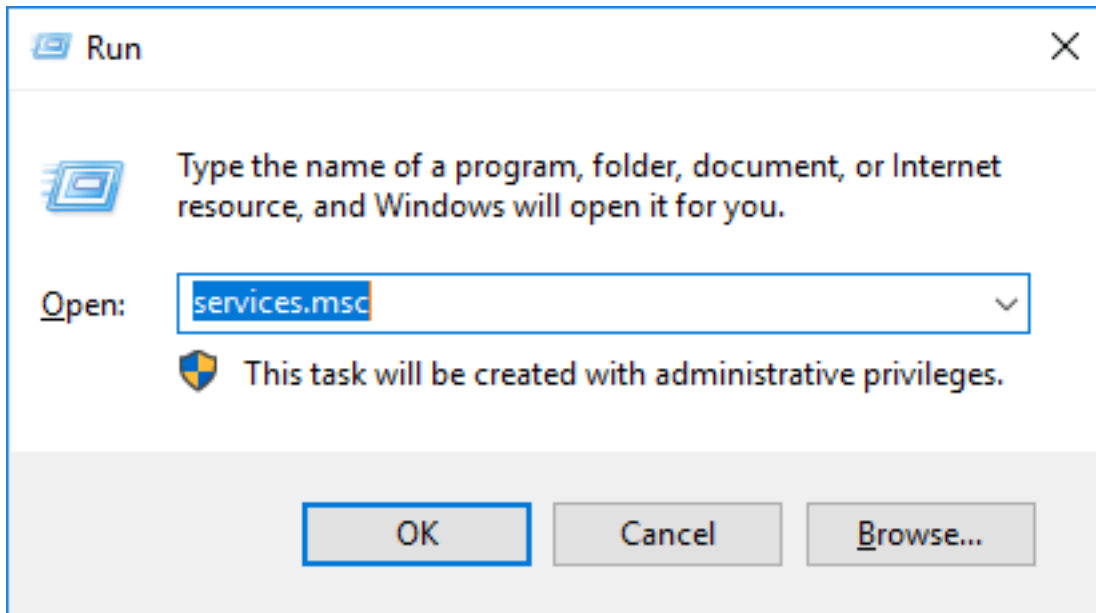
5. Click OK when installation completes.



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:

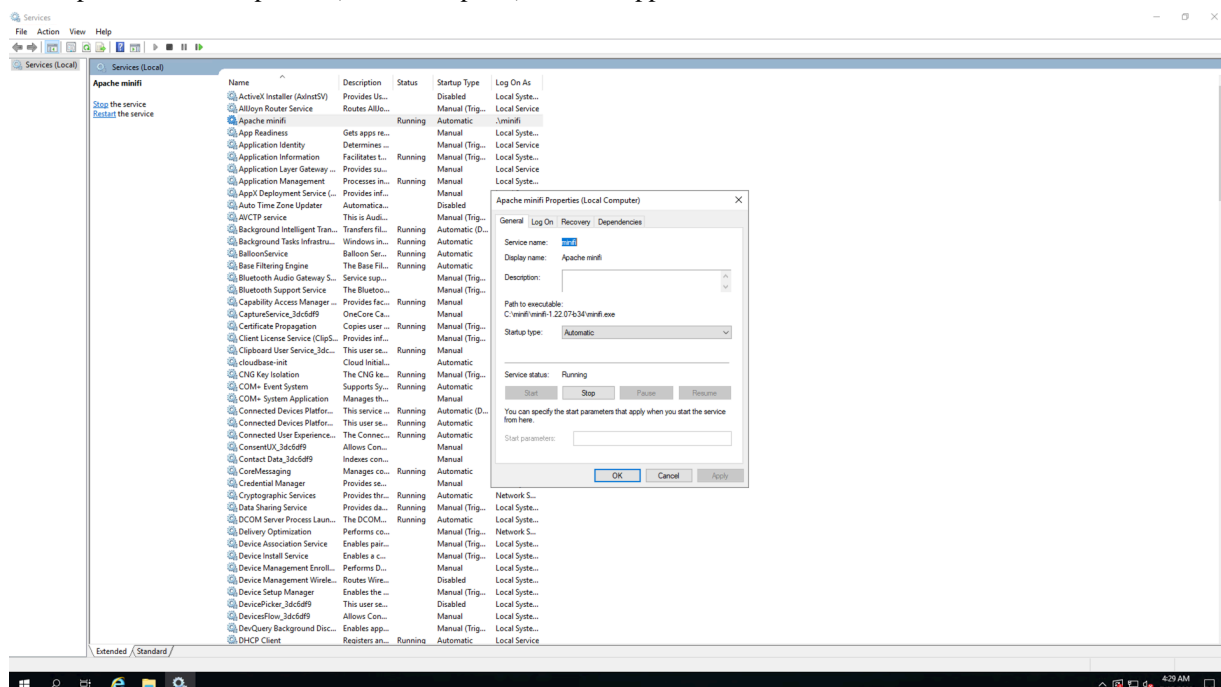


After you click OK, the Services window appears.



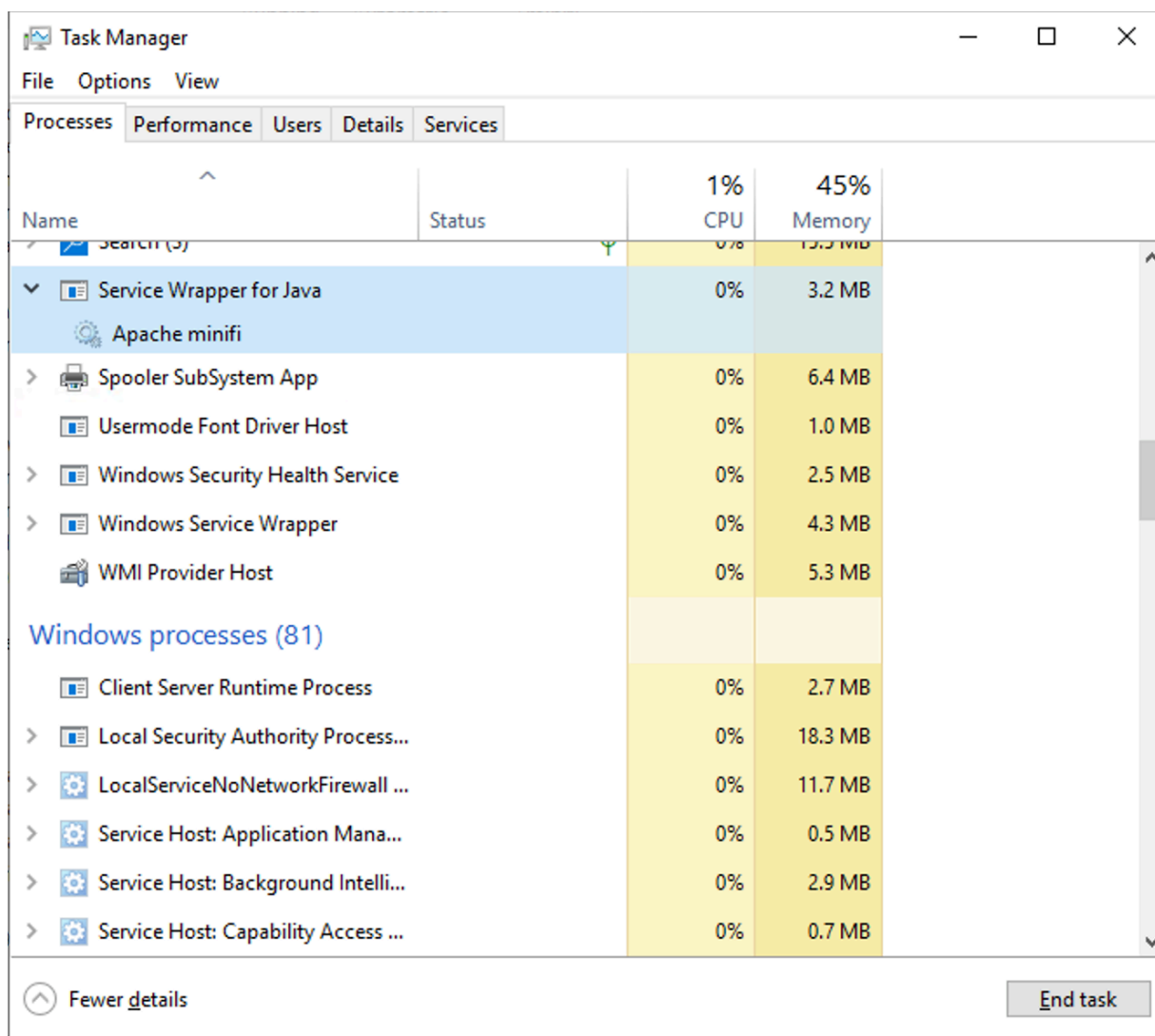
7. In the Services window, double-click Apache minifi.

The Apache minifi Properties (Local Computer) window appears.



8. 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

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

### 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

Browse

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

Browse

Truststore password

☐ Show

Truststore type

jks

▼

Keystore location

Browse

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.