SECURITY code

Continent Enterprise Firewall
Version 4

Authentication

Administrator guide

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Table of contents

List of abbreviations

AD	Active Directory
DNS	Domain Name System
HTTPS	Hypertext Transfer Protocol Secure
IP	Internet Protocol
LDAP	Lightweight Directory Access Protocol
TCP	Transmission Control Protocol
VPN	Virtual Private Network

Introduction

This manual is designed for administrators of Continent Enterprise Firewall, Version 4 (hereinafter — Continent). It contains information about the user authentication configuration.

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Version 4.1.7 — Released on December 5th, 2023.

Overview

Users can access external resources upon their successful identification and authentication.

Continent provides identification and authentication of users within a protected network by:

- the Authentication Portal (see p. **7**);
- the Identification Agent on an end-user device (see p. **8**);
- the single sign-on with Kerberos (see p. **9**).

You can create a user account using the Security Management Server local database or import it from AD.

Access is granted to groups of users by means of filtering and network address translation. A group of users is connected to a specific network object. Access granted to this group is available only on computers related to this network object.

The information about registered users and groups of users is stored in the Security Management Server database. The information about authenticated users is stored on a Security Gateway.

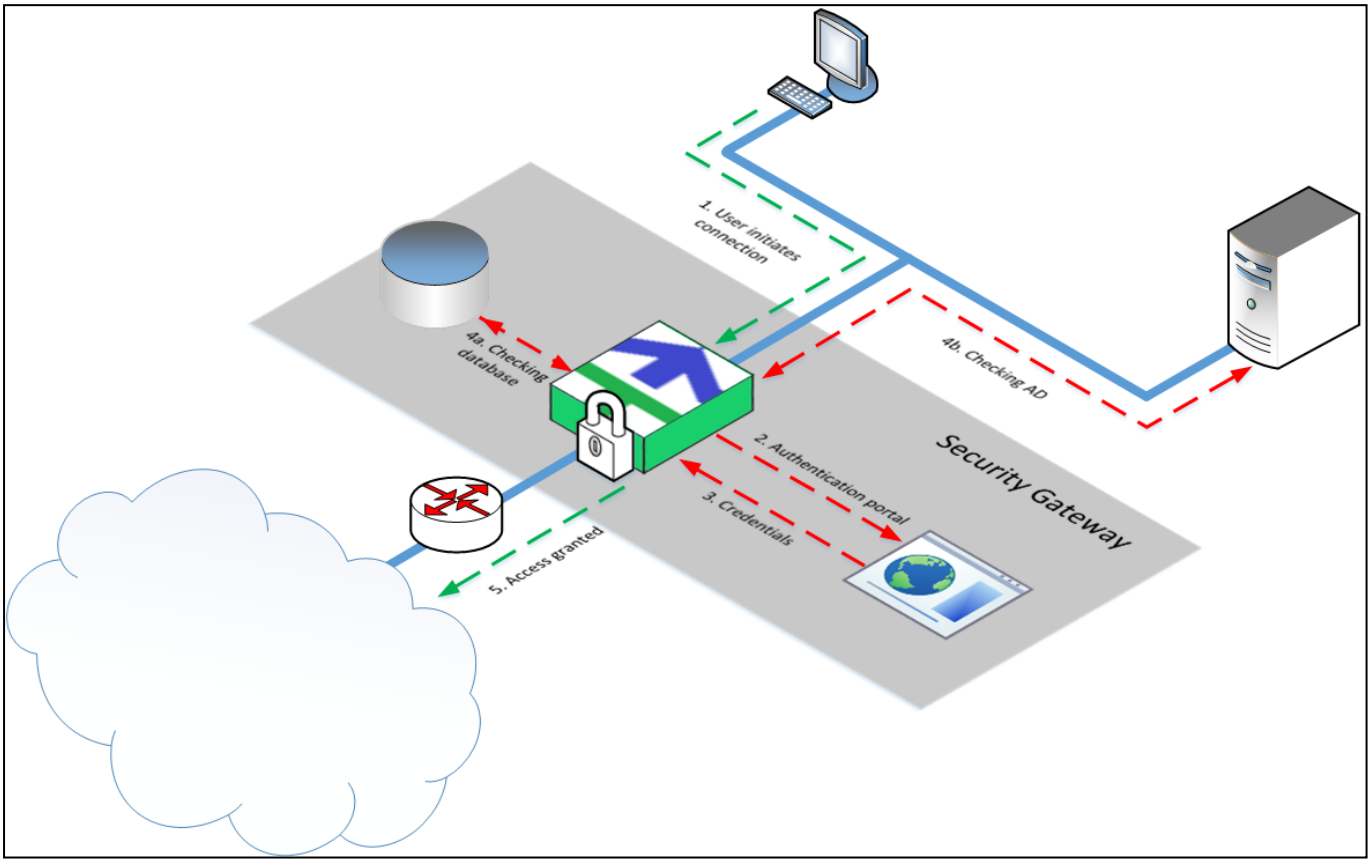
When connecting to the Firewall, a user is authenticated on the Security Gateway using non-cryptographic means via user credentials.

A Security Gateway and a connected workstation exchange data over HTTPS.

Configuration and use

How the Authentication Portal works

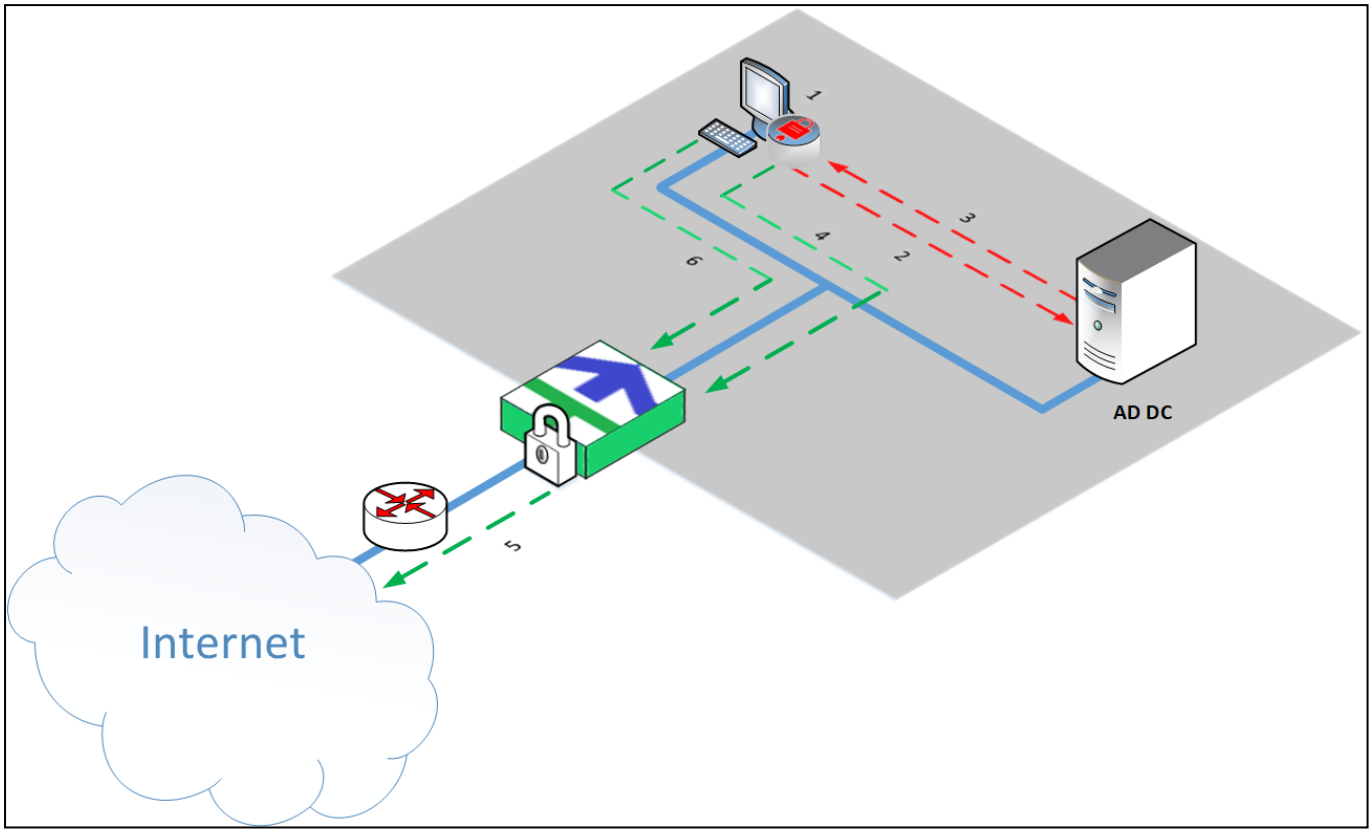
The Authentication Portal is one of the Security Gateway components that authenticates users through the web interface.



While sending an HTTP (TCP/80) or HTTPS (TCP/443) [1] request to a web page, a user is redirected to the Authentication Portal [2] if there are respective access control rules for the network from which users are redirected to the portal. If you open a web page over HTTPS, the intermediate certificate is required to establish a secure connection to a Security Gateway. The user enters his or her credentials. The credentials are sent to the Security Gateway [3]. The Security Gateway checks the local database for these credentials and if they are still valid [4a]. If the username looks like **username@domain**, the request is redirected to the AD server of the respective domain (for example, **usertst1@local.host**). The check procedure is repeated [4b]. If the match is found and the credentials are proved to be valid, then the respective data is sent to the Security Gateway, the respective temporary firewall rule is created and the user is granted access to the resource [5].

How the Identification Agent works

The Identification Agent is software that is installed on workstations to connect to the Security Gateway and to verify user credentials.



To get access to the Internet, a user runs the Identification Agent and enters his or her credentials **[1]**. Then, the agent initiates the identification in AD **[2]**. The agent receives a confirmation for the identification **[3]**. When the user attempts to access the Internet **[4]** for the first time, the agent sends the confirmation to AD and receives a permission for connection. The user is granted access to the Internet according to the Security Gateway access control rules **[5]**. When the user attempts to access the Internet again **[6]**, the agent checks the cache for a permission. If the permission has expired, the Identification Agent will request it from AD again.

A user within the protected network is granted access to the Internet and the local network resources if the following requirements are met:

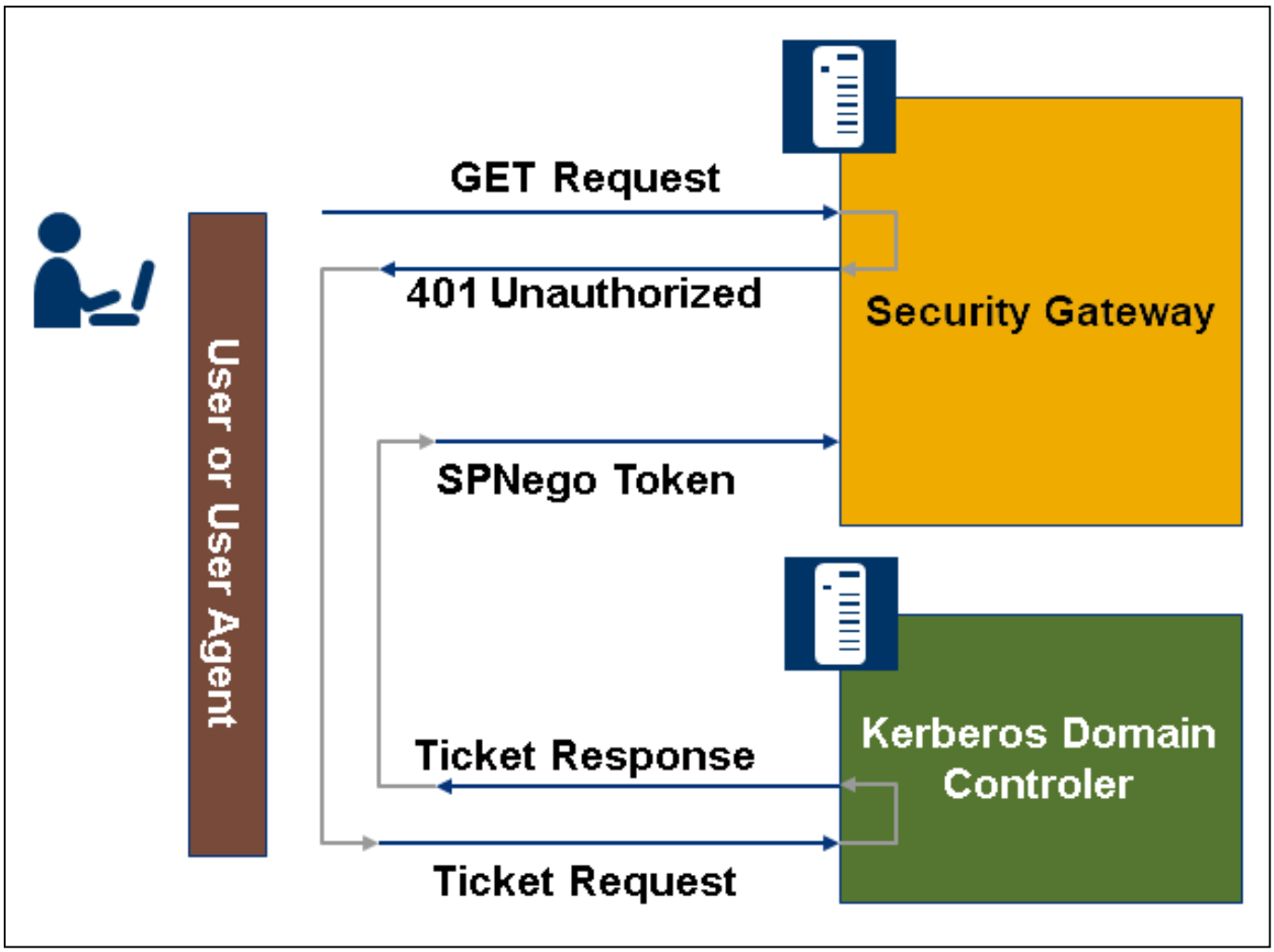
- user's credentials are confirmed and valid;
- there are access control rules for this user.

Note.
Identification Agent settings do not depend on Authentication Portal settings. Only a personal certificate connected in the Authentication Portal settings is used.

How Transparent Kerberos Authentication works

Transparent authentication means that the domain user does not receive repeated requests for authentication when accessing network resources. In this case, a user specifies the domain login and password only once, when logging in to the operating system. When the user tries to access network resources, authentication is performed automatically.

The SPNEGO protocol is used to ensure the mechanism of browser transparent authentication in Continent. The whole authentication process looks as follows:



1. A user logs on to a Windows domain from the workstation and attempts to access the Internet using a web browser. The web browser sends an HTTP request which is intercepted by a Security Gateway.
2. The Security Gateway intercepts the client's request and sends back an HTTP response with a **401 (Unauthorized)** code and the **WWW-Authenticate: Negotiate** authorization header.
3. The web browser recognizes the **Negotiate** header. Then, a search for the Security Gateway name starts in the DNS, using which a service principal name (SPN) is found.
4. Using the SPN, the local system authentication service requests a Kerberos ticket from the key distribution center (KDC). It begins the Kerberos authentication sequence, an exchange of data between the client and the KDC. As a result, the client receives a service ticket (ST), based on which the Security Gateway will trust it.
5. The web browser resends the original HTTP request, but this time the authentication user data is contained in an encrypted Kerberos ticket encapsulated in a SPNEGO token, which is passed in the HTTP authorization header.
6. The Security Gateway identifies the incoming SPNEGO token in the request, then extracts the information from the Kerberos service ticket which contains all the information needed for authentication.
7. Transparent authentication can be used both with the browser authentication via the Authentication Portal page and separately. If you use the first scenario, the client browser has to be configured (see p. **25**).

Issue authentication certificates

For the Authentication Portal operation and secure data exchange between the Security Management Server and user workstations, you need to issue authentication certificates.

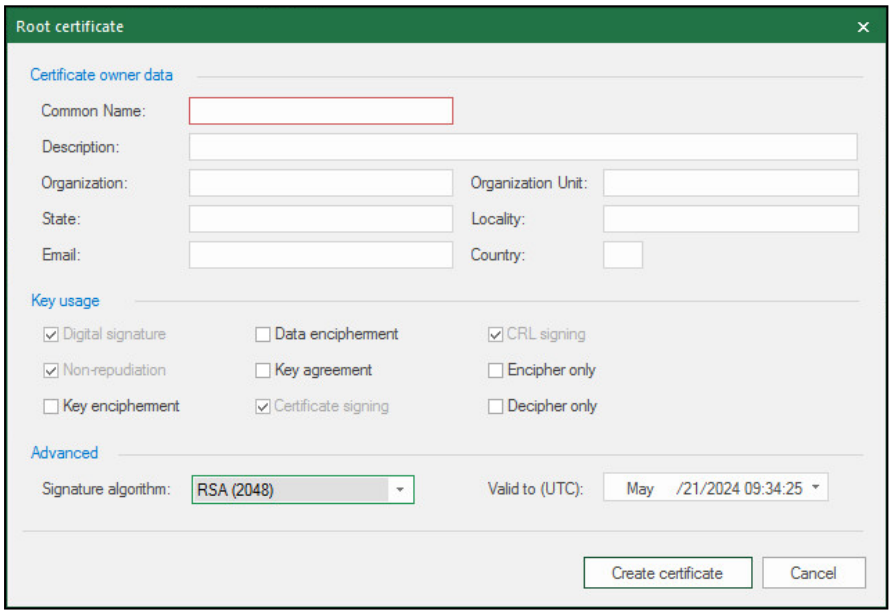
You need to issue the following certificates:

1. Issue a root RSA certificate (see p. **10**).
2. Issue an Authentication Portal certificate (see p. **10**).
3. Issue an Authentication Portal certificate for redirection (see p. **11**).

Attention!
In Continent, personal and intermediate certificates belong to the **Server certificates** group.

To issue a root RSA certificate:

1. In the Configuration Manager, go to **Administration | Certificates**
2. Click **Root certificate** on the toolbar.
   The **Root certificate** dialog box appears.

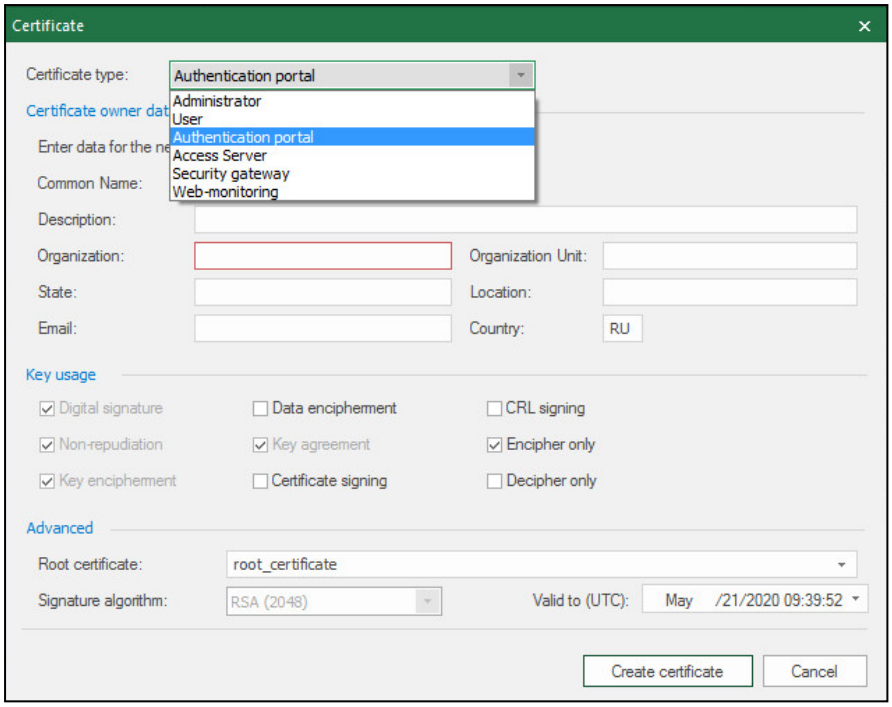


3. In the **Root certificate** dialog box, specify the required text boxes. Select the **RSA (2048)** signature algorithm and click **Create certificate**.

Note.
We recommend assigning understandable names to the root and server certificates .

To issue an Authentication portal certificate:

1. In the Configuration Manager, go to **Administration | Certificates** and select **Personal certificates**.
   The list of personal certificates appears in the display area.
2. On the toolbar, click **Certificate**.
   The **Certificate** dialog box appears.



3. In the **Certificate** dialog box, select the **Authentication portal** certificate type. Specify the required parameters and choose the root certificate created during the previous procedure.

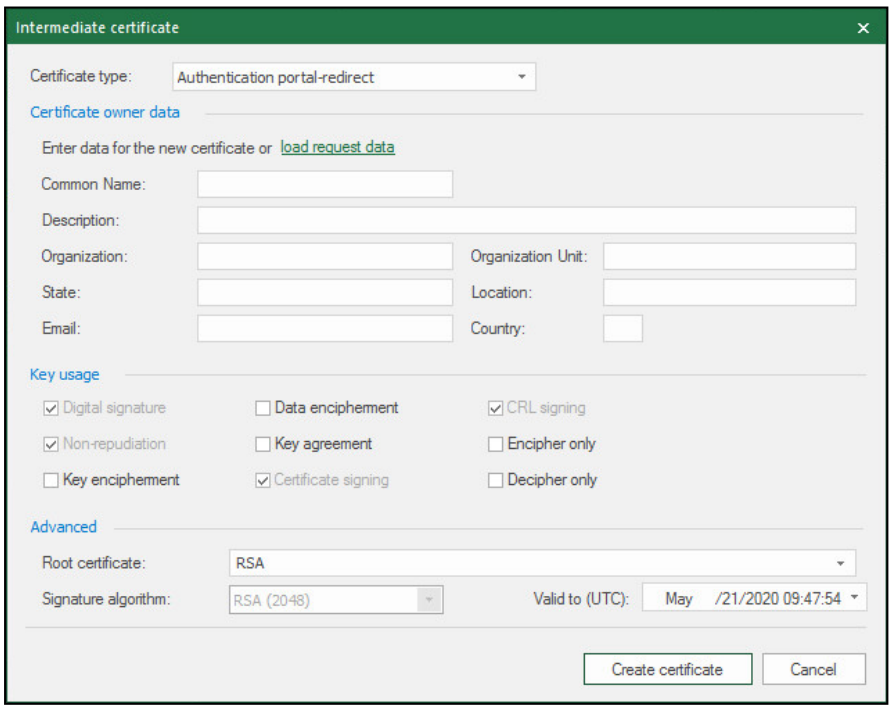
Attention!
The certificate name must be exactly the same as the fully qualified domain name (FQDN) of the Security Gateway stored in the DNS server.

To issue an Authentication Portal-redirect certificate:

1. In the Configuration Manager, go to **Administration | Certificates** and select **Intermediate CAs**.

2. On the toolbar, click **Intermediate certificate**.

The **Intermediate certificate** dialog box appears.



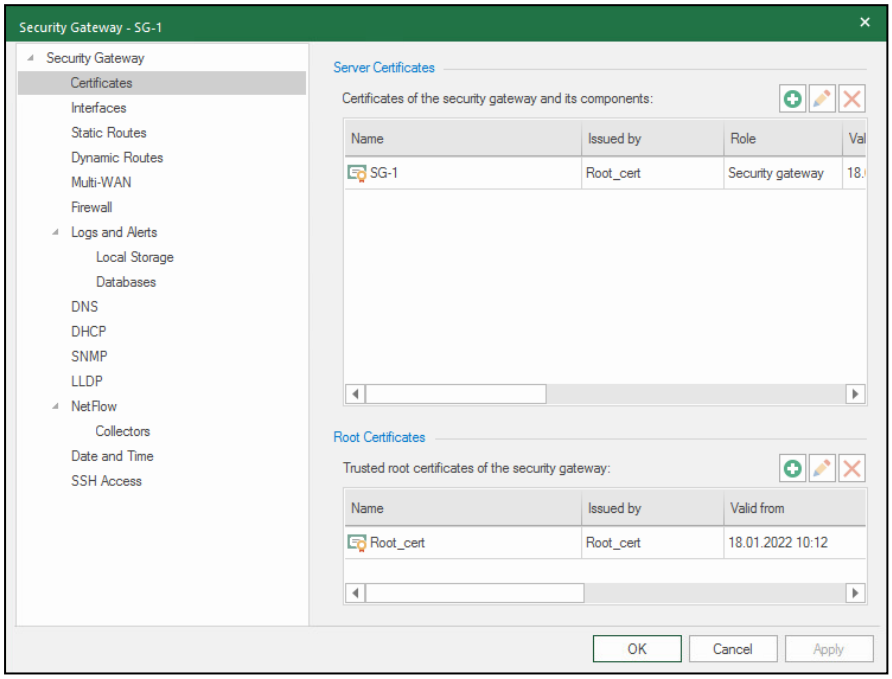
3. In the **Intermediate certificate** dialog box, specify the required text boxes, select the root certificate created for the Authentication Portal and click **Create certificate**.

Add a certificate to the Security Gateway

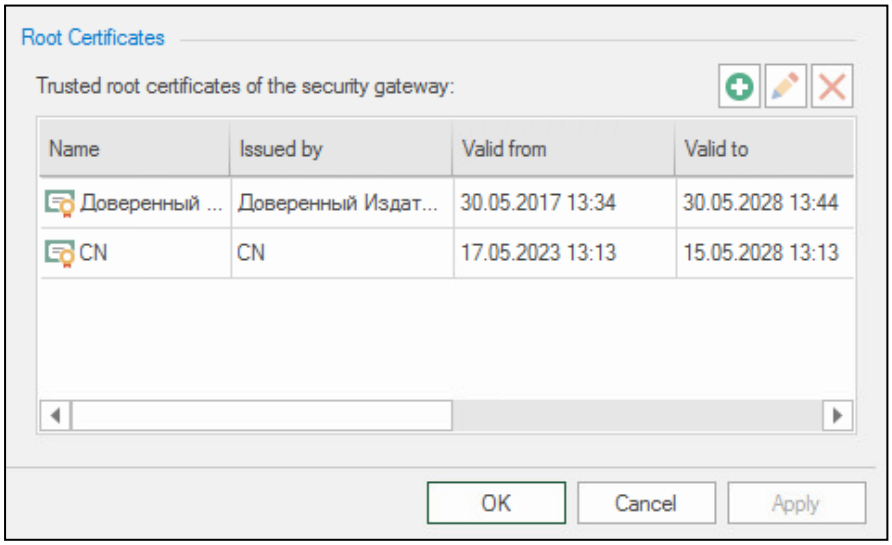
When Authentication Portal certificates are issued, it is necessary to add them to the Security Gateway.

To add certificates to the Security Gateway:

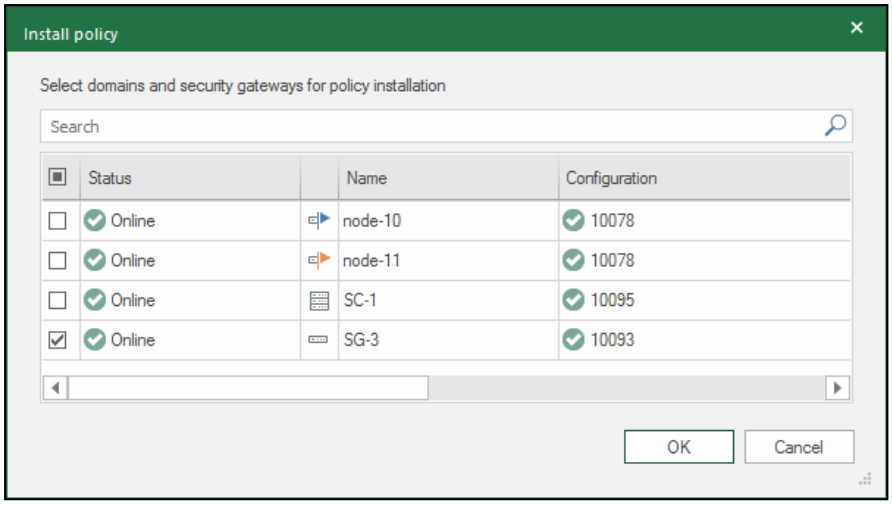
1. On the navigation panel, go to **Structure**.
2. In the display area, select the Security Gateway and click **Properties** on the toolbar.
   The **Security Gateway** dialog box appears.



3. Go to **Security Gateway | Certificates**.
4. Add the created Authentication Portal and Authentication portal-redirect certificates to the **Certificates of the security gateway and its components** list by clicking .
5. Add the created root RSA certificate to the **Trusted root certificates of the security gateway** list by clicking .



6. Click **OK**.
7. On the toolbar, click **Install**.
   The **Install policy** dialog box appears.



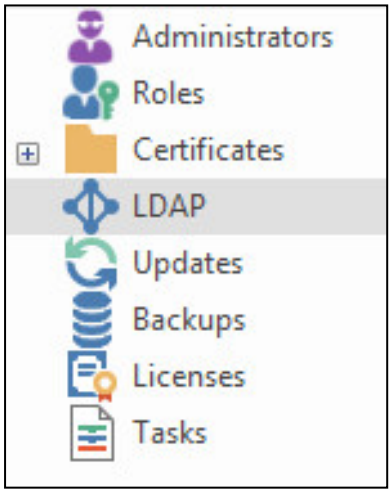
8. Select the required Security Gateways and click **OK**.
   The changes are sent to the Security Gateways.

Add users over LDAP

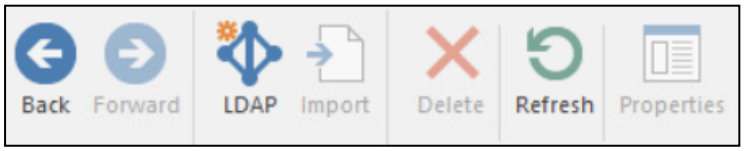
At this step, an administrator adds users over LDAP or creates new ones. For more information about creating, deleting and editing user accounts, see Continent Enterprise Firewall. Version 4. Administrator Guide. Firewall. Continent supports user authentication using AD over LDAPS.

Configure LDAP

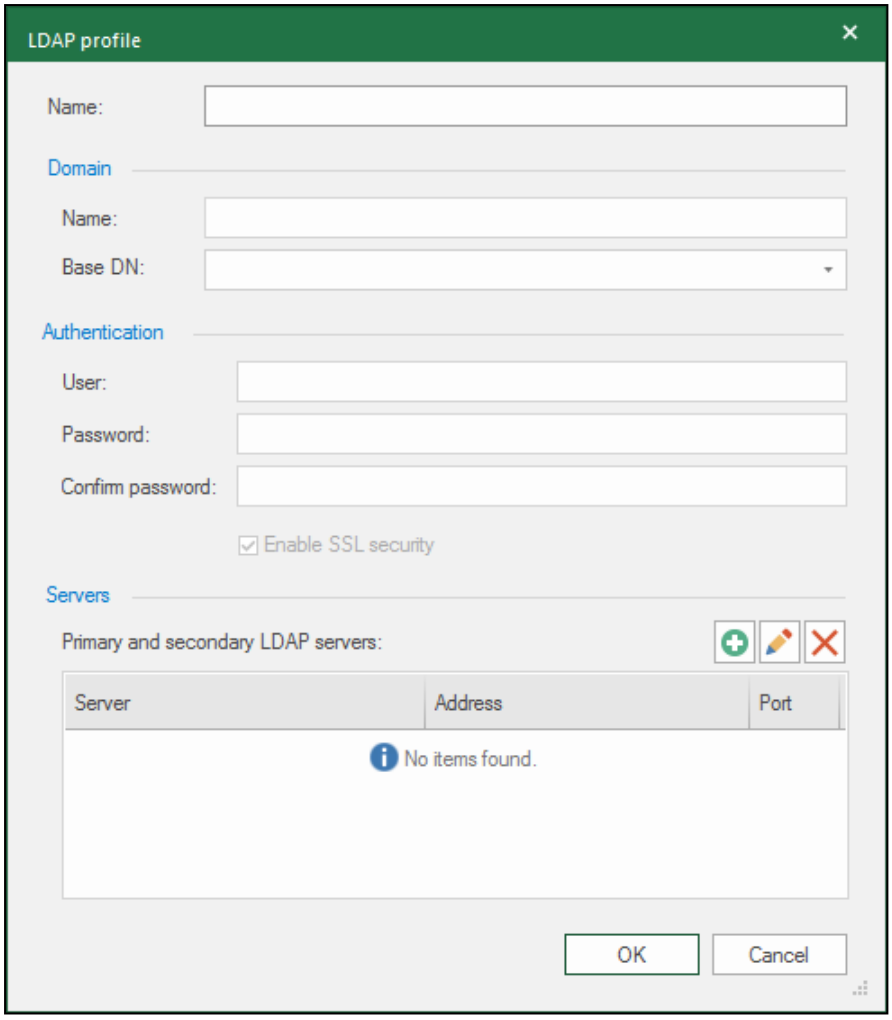
1. In the Configuration Manager, go to **Administration** and select **LDAP**.



2. On the toolbar, click **LDAP**.



   The **LDAP profile** dialog box appears.



3. Specify the required parameters in the respective text boxes.

Note.
To enable AD, use the domain administrator account. We recommend creating a separate account for this purpose.

In the **Authentication** group box, enter the credentials of the domain administrator in the **User** and **Password** text boxes.

4. In the **Servers** group box, add the AD server IP address and a port by clicking . To edit the added server, click , to delete — .

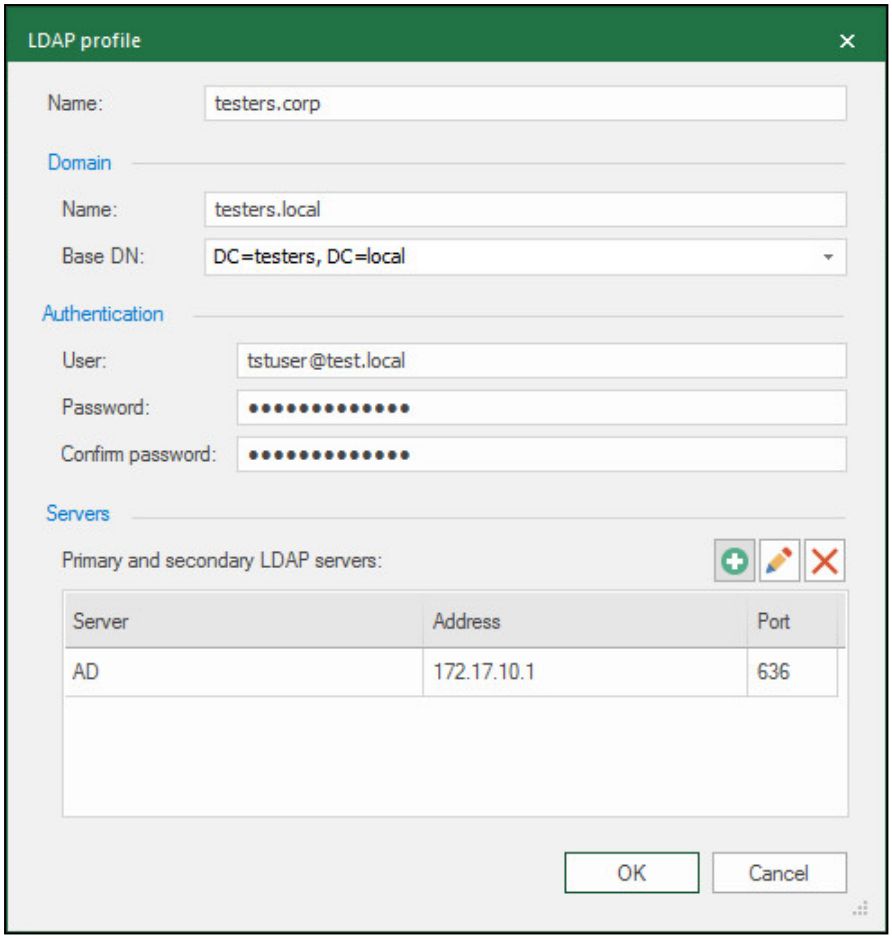
5. Specify the AD server IP address and port for connection in the **LDAP profile** dialog box.

Attention!
It is forbidden to use the following characters in the AD server divisions:

«	»	#	*	(	)	=	+	\	;	"	>	<	,

Attention!
The connection to the AD server is established over LDAPS.

Note.
To support the LDAPS protocol, ports with the same number must be configured on the workstation with the Configuration Manager and on the AD server.



6. Click **OK**.

   The created LDAP profile appears in the display area.

7. On the navigation panel, go to **Structure**, select the required Security Gateway and click **Properties** on the toolbar.

   The respective dialog box appears.

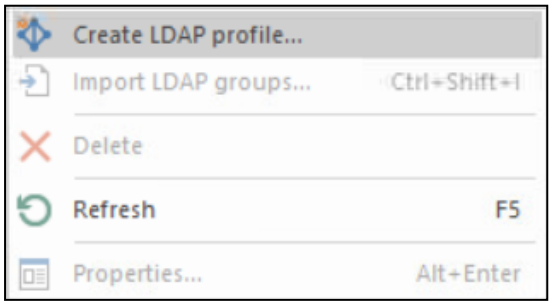
8. On the left, select **User Identification**.

   The respective parameters appear on the right.

9. In the **LDAP profile** drop-down list, select the profile created at step **5**.

10. Click **OK**.
11. On the toolbar, click **Install policy** and select the Security Gateway for which you specified the LDAP profile, then click **OK**.
12. Go back to **Administration** and select **LDAP**.

    The LDAP context menu appears.



13. Click **Import LDAP groups**.

Attention!
In Continent, only groups can be imported.

If AD is connected successfully, the **LDAP groups import** dialog box appears.

Note.
The Security Management Server creates a group import command for all Security Gateways to which the current profile is bound in the **User Identification** properties. You can import profiles that are not connected to any Security Gateway. After one of the Security Gateways responds, the Security Management Server saves imported groups in its configuration.

14. Select groups to import and click **Import**.

Note.
The Configuration Manager starts to work slower if there are many AD groups. It is recommended to use Active Directory nested groups.

After the import is completed, you receive the respective message. Imported groups can be added to filtering and translation rules.

Note.
To delete a group in the list of Security Management Server objects, first delete it in AD and then import groups once again. If you delete a group in AD and do not import groups, the group remains in the Security Management Server database.
If a new group with the same name is created in AD, you must re-import the group from AD to update the ObjectGUID of the group in the Security Management Server database. If new groups are created in AD, you need to import them from AD to use them in Firewall rules.

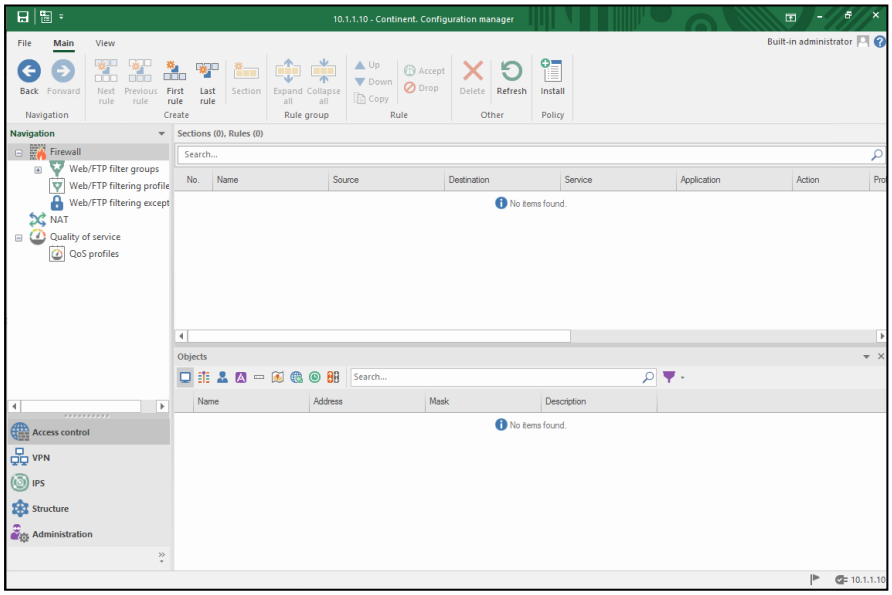
Create Firewall rules

To ensure correct operation of the Authentication Portal, traffic should pass through the DNS protocol from the client to the server and the Security Gateway with the configured **Authentication Portal** component.

Note.
In case of difficulties while working in Access control, see Continent Enterprise Firewall. Version 4. Administrator guide.Firewall.

To create Firewall rules:

1. In the Configuration Manager, go to **Access control**.



2. Right-click the display area and click **Create first/last rule**.
   The created rule appears in the list.
3. Create access rules.

For example:
To create a permitting access rule for a user, type the user's account name in the **Source** box, type the name of a resource to which the user will be granted access in **Destination**, specify the protocols for user access in **Service**, in **Action** select **Drop**.

4. Click **Install** on the toolbar to install the policy.

Note.
Before you install the policy, make sure you enabled the **User Identification** component..

Authentication Portal

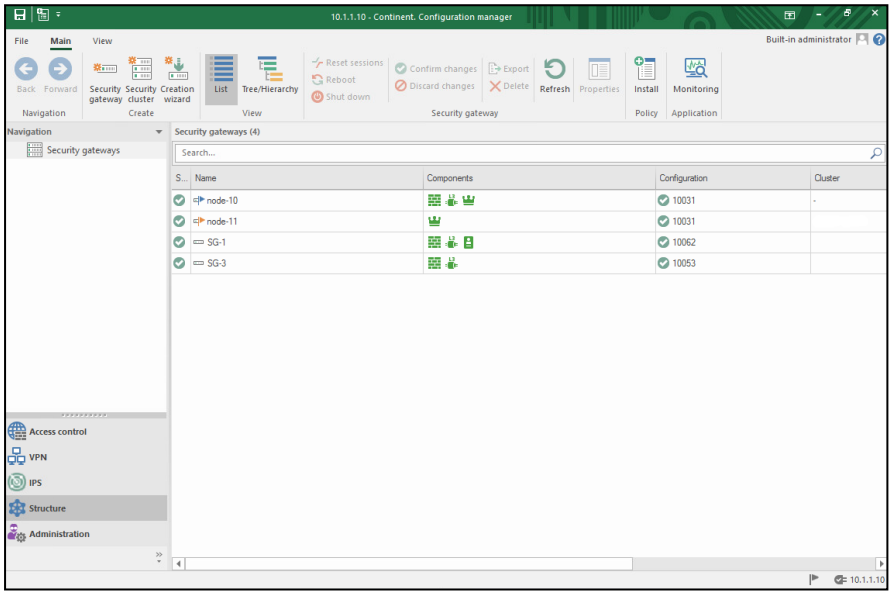
Preconfigure the Security Gateway

To preconfigure the Security Gateway, perform the following steps:

- Activate the User Authentication component on the Security Gateway.
- Configure the DNS settings for the Security Gateway.
- Configure the time and date (NTP) settings.

To preconfigure the Security Gateway:

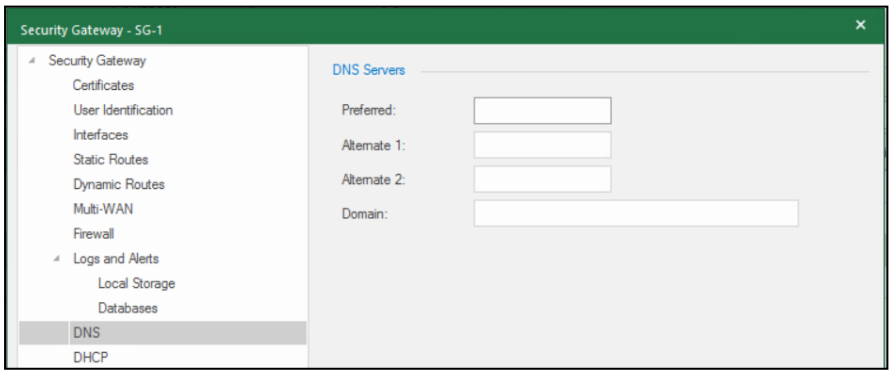
1. In the Configuration Manager, go to **Structure**.



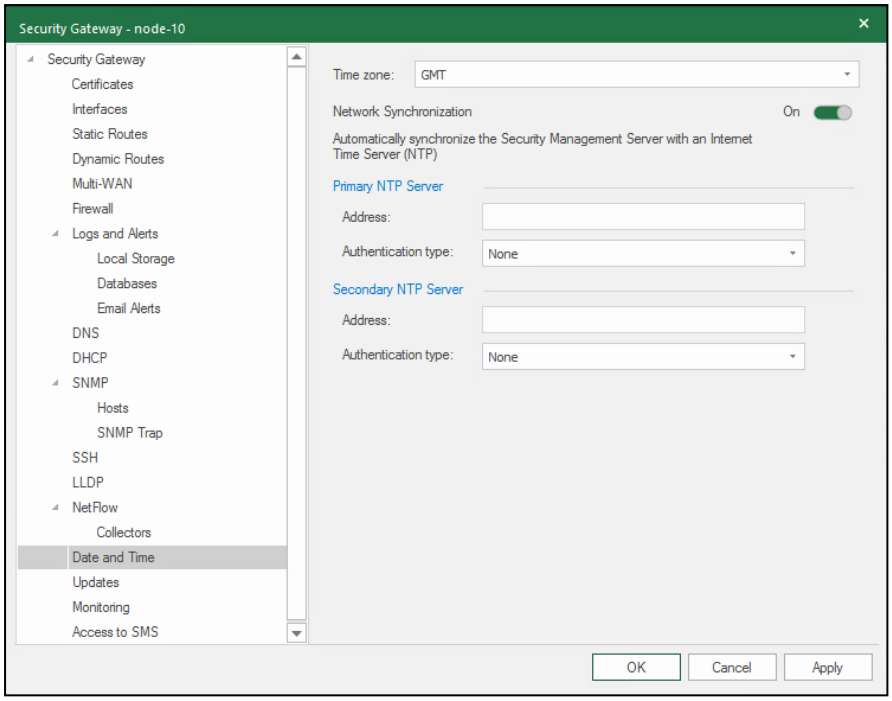
2. Right-click the required Security Gateway and select **Properties**.
3. In the **Components** group box, select the **User Identification** check box and click **Apply**.

   The **User Identification** appears in the menu.

   The component is now activated. You can install policies regulating user identification and authentication.
4. On the left, select **DNS** and specify the preferred DNS server address in the **Preferred** text box. If necessary, specify alternative DNS addresses in the **Alternative 1** and **Alternative 2** fields.



5. Click **Apply**.
6. On the left, select **Date and Time**.



7. Turn on the **Network Synchronization** toggle.

   The **Primary NTP Server** and **Secondary NTP Server** groups of parameters become available for editing.
8. Select the **Use NTP server** option.
9. Specify the **Address** and **Authentication type** in the **Primary NTP Server** group.

> **Note.**
> If necessary, set authentication using a symmetric key and/or specify an additional NTP server.

10. On the toolbar, click **Install**, select the required Security Gateways and click **OK**.

Authentication parameters configuration

The authentication mechanism is implemented through the Authentication Portal and via Kerberos.

To ensure correct operation of the Authentication Portal, it is necessary to configure the Security Gateway setting first. Then configure the Active Directory parameters depending on the required authentication method and the Security Gateway authentication settings.

Authentication via the Authentication Portal

For correct operation of the authentication through the Authentication Portal mechanism, perform the following steps on the AD side:

- On the domain DNS server, create an account corresponding to the Security Gateway;
- Create an account for the LDAP profile in the AD domain.

To create an account corresponding to the Security Gateway:

1. Run a DNS server snap-in.
2. Create an account of A type on the DNS server.
3. Specify the following parameters:
   - In the **Node name** field, specify the Security Gateway name for which an account is being created.

   The fully qualified domain name (FQDN) of a node will be specified automatically.

> **Note.**
> The FQDN of a node must be exactly the same as the Authentication Portal certificate name.

   - In the **IP address** field, specify the IP address of the internal interface of the Security Gateway.
   - Select the **Create RTP record** check box.
4. Click **Add node**.

To create an Active Directory user account:

1. Run the Active Directory snap-in.
2. In the context menu of the **Users** section, click **New** | **User**.

   The **New object - User** dialog box appears.
3. Specify the required parameters and click **Next**.

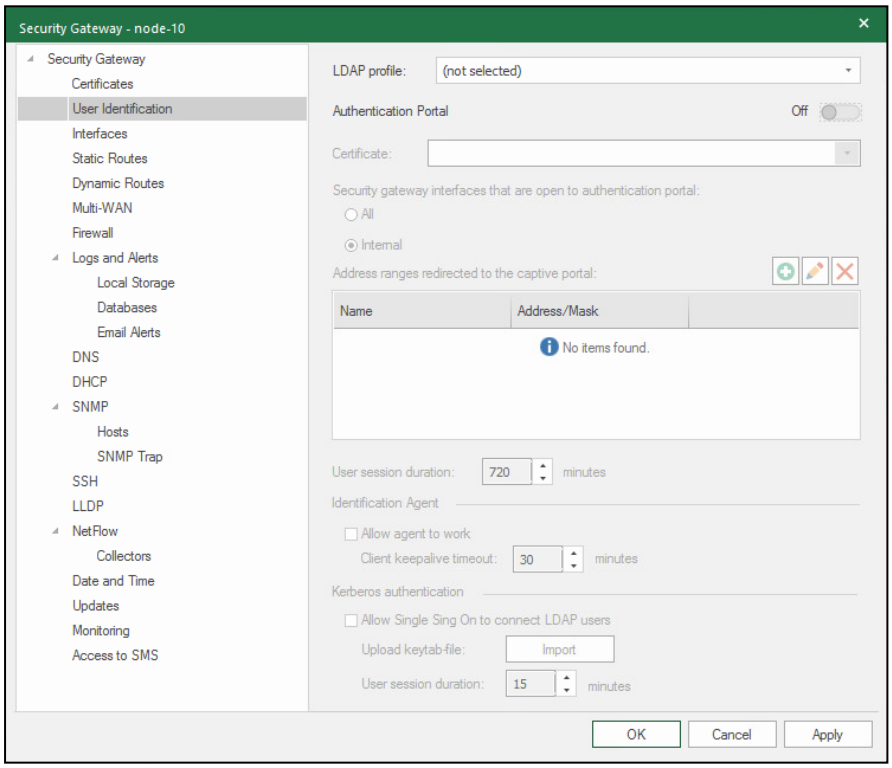
> **Note.**
> The value of the **User logon name** field will be used when the keytab file is created.

4. Set a password for the user account.
5. Select the **Password never expires** check box and click **Next**.
6. The created account will be displayed in the directory tree of the Active Directory.

> **Attention!**
> When configuring the AD controller on the DNS server, the Security Gateway address and its DNS name must be specified as the IP address.To ensure proper operation, create the A record type, the CNAME record type cannot be used.

To configure the Authentication Portal:

1. On the left, select **User Identification**.

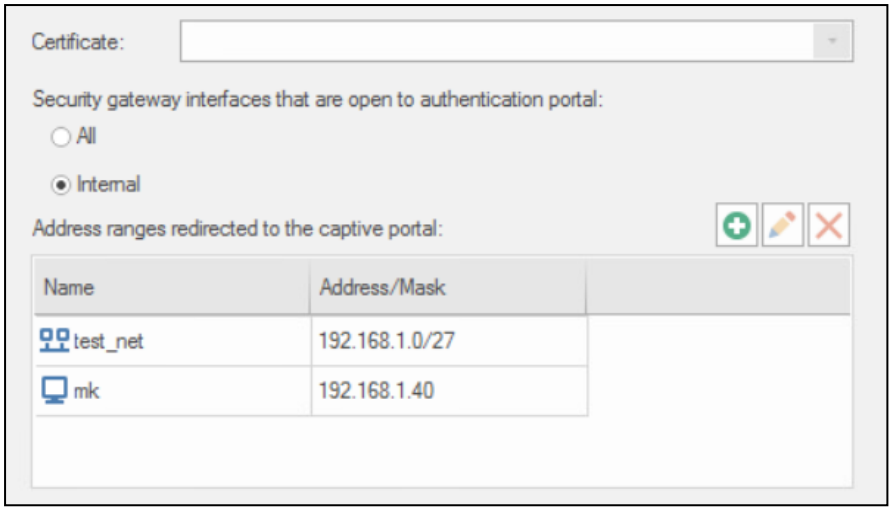


2. If it is necessary to add users, select a LDAP profile in the **LDAP profile** drop-down list (to create users, see **Add users over LDAP** on p. **13**).
3. Turn on the **Authentication Portal** toggle and click **Apply**.

   The connection settings are now available for editing.
4. Specify the duration of a user session in minutes in the **User session duration** spin box.

> **Note.**
> The user session duration ranges from 5 to 1440 minutes.

5. Select the **Allow agent to work** check box to enable usage of the Identification Agent for authentication at the portal.
6. Specify the client keepalive timeout in the respective spin box.
7. In the **Certificate** drop-down list, select the Authentication Portal personal certificate.



8. Select interfaces that will be available to the Authentication Portal.

Note.
If you select **All**, then all interfaces are available to the Authentication Portal. If you select **Internal**, then only interfaces that are internal according to the topology are available to the Authentication Portal.

9. In the **Address ranges redirected to the captive portal** group, click .

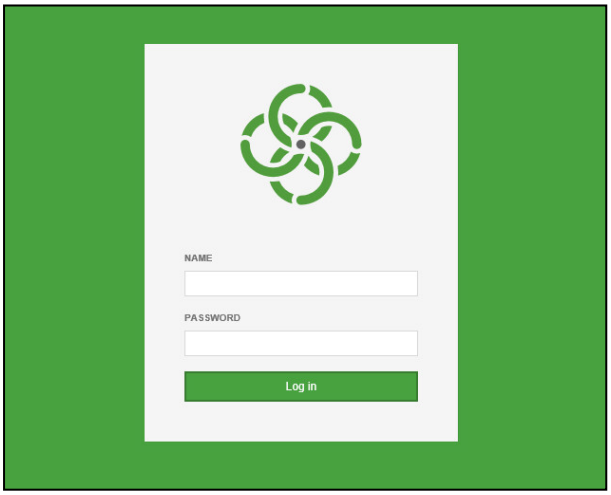
   The list of available network objects appears.

10. In the list of network objects, select the network objects that could be redirected to the Authentication Portal.

Note.
If it is necessary, create a new network object. To do so, click **Create**. In the appeared dialog box, specify the required parameters and click **OK**.

11. Click **OK** to save the changes.

If all the settings are correct, a user's browser is displayed as in the figure below.

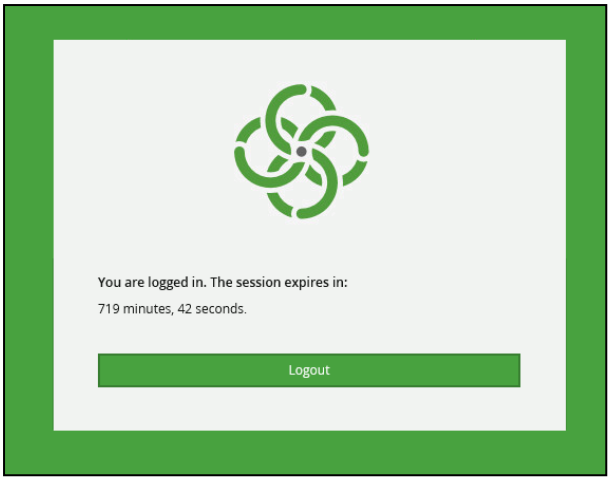


Note.
If you access the Authentication Portal directly, the name of the Authentication Portal personal certificate appears in the browser address bar.

To access the Internet, enter user's credentials in the respective text boxes, then click **Login**. If the server is to check a local database for the user's credentials, enter a username without a domain. In the case of using the AD server, specify a username and a domain, divided by **@** (for example, **usertst1@local.host**).

Note.
If a certificate warning appears when loading the portal page, add the root certificate used to generate the portal certificate to the root trusted certification authorities on the user's workstation.

If the authentication is successful, you receive the respective message.



To continue working on the Internet:

- open a new browser tab.

To end the session:

- click **Log out**.

Configure Transparent Kerberos Authentication

Transparent Kerberos or Single Sign-On (SSO) authentication allows users to access authorized resources without explicit authentication. The user is authenticated through Active Directory when logging in to the OS. When accessing resources, the Firewall verifies the authentication in Active Directory without asking the user for credentials again, i.e. authentication on the Firewall is automatic for the user.

SSO can operate either in parallel with the Authentication Portal or independently. However, SSO requires configuration to work in parallel with the Authentication Portal.

SSO functions correctly if the following requirements are met:

- Transparent Authentication works only for domain accounts, not for local accounts. A LDAP profile with the used domain must be added to the Configuration Manager.
- The system time on the Configuration Manager, Security Gateway, domain controller and user workstations must be synchronized with the current local time. We recommended using a corporate NTP server for synchronization.
- For user workstations and Security Gateways of Continent, network connectivity with the domain controller and DNS server must be provided.
- Configuration Manager, Security Gateway, domain controller, as well as user workstations must use the same DNS server for name resolution.

SSO is configured in the following order:

1. Configure a LDAP profile on the Configuration Manager and import user groups from the domain controller (see p. **13**).

   This step is required so that the Configuration Manager can verify that the user authentication to the Active Directory.

   Note.
   If the required LDAP profile is already configured, no additional configuration is required.

2. Create Authentication portal and Authentication portal-redirect certificates and bind them to the Security Gateway (see p. **10**).

   Attention!
   If the Authentication Portal has already been configured, no additional configuration is required. In this case, you can use the DNS record of the Authentication Portal, which should already be created.

   The Authentication Portal certificate name must match its domain address assigned on the DNS server (see step **5**), so it is necessary to name the certificate accordingly (in the FQDN record format). For example, **SG01.DOMAIN.LOCAL**.

Note.
To configure the Authentication Portal on the cluster, you need to issue two certificates of the Authentication Portal type with the same name (one for each node). When you configure the cluster identification settings, the portal certificates are automatically defined and will not be displayed will not be displayed in the Configuration Manager.
When configuring a record on the DNS server, the virtual address of the cluster is specified.

3. Create and configure a computer account in the Active Directory (see p. **16**).
4. Issue a keytab file (see p. **23**).
5. Configure a DNS server (see p. **24**).
6. Configure Kerberos protocol authentication in the Configuration Manager.
7. Create Firewall rules for domain users (see p. **16**).
8. Configure browsers on user workstations (see p. **25**).

To create and configure a computer account:

1. Create a computer account in the **Computers** section of the Active Directory snap-in tool or using PowerShell by running the following command:

   ```
   dsadd computer "CN=krb,CN=Computers,DC=testers,DC=local"
   ```

   where **krb** — computer account name, **Computers** — the AD membership, **testers** and **local** — domain address.

   ```
   PS C:\Users\Администратор.WIN-KIE0LPT41AL> dsadd computer "CN=krb,CN=Computers,DC=testers,DC=local"
   dsadd Успешно:CN=krb,CN=Computers,DC=testers,DC=local
   ```

2. Specify the SPN for a user account in PowerShell by running the following command:

   ```
   setspn -A HTTP/sg01.testers.local krb
   ```

   where **sg01.testers.local** — the domain address of a Security Gateway specified in the DNS server and Authentication Portal certificate name, **krb** — computer account name created on the previous step.

   ```
   PS C:\Users\Администратор.WIN-KIE0LPT41AL> ktpass /princ HTTP/SG01.testers.local@TESTERS.LOCAL /mapuser testers\krb /pas
   s * /crypto ALL /ptype KRB5_NT_PRINCIPAL /out C:\SG01.keytab
   Targeting domain controller: TST-ADS01.testers.local
   Successfully mapped HTTP/SG01.testers.local to KRB$.
   ```

To issue a keytab file:

1. Generate a keytab file by running the following command:

   Attention!
   The command is case-sensetive. You cannot use special characters in user names and names of organizational units.

   ```
   ktpass /princ HTTP/sg01.testers.local@TESTERS.LOCAL /mapuser testers\krb /pass *
   /crypto ALL /ptype KRB5_NT_PRINCIPAL /out C:\test.keytab
   ```

   where **sg01.testers.local** is the domain address of Security Gateway specified on the DNS server, as well as the Authentication Portal certificate name, followed by **@** and an uppercase domain address name (in this case it is **TESTERS.LOCAL**), **testers\krb** is the **krb** account in the **testers** domain, **/pass *** means that after entering the command, a user will be prompted to enter the password, **/crypto** specifies the encryption type, **/out** specifies the path to save the keytab file.

   ```
   PS C:\Users\Администратор.WIN-KIE0LPT41AL> ktpass /princ HTTP/SG01.testers.local@TESTERS.LOCAL /mapuser testers\krb /pas
   s * /crypto ALL /ptype KRB5_NT_PRINCIPAL /out SG01.keytab
   Targeting domain controller: TST-ADS01.testers.local
   Successfully mapped HTTP/SG01.testers.local to KRB$.
   ```

2. Enter and confirm the password for the computer account. Confirm the password change.
3. The **krb** account is a computer account, not a user account. This choice is made for security reasons since a computer account does not allow logging in to the domain using its credentials, unlike a user account.

   A keytab file will be generated according to the specified values and saved to the specified folder. For a Security Gateway cluster, a general keytab file is created. We recommend using different service principal names (SPNs) for the authentication on the independent nodes.

You must add the created keytab file to the Security Management Server in the Configuration Manager.

Attention!
If the root certificate was changed, generate a keytab file again and add it to the Security Gateway.

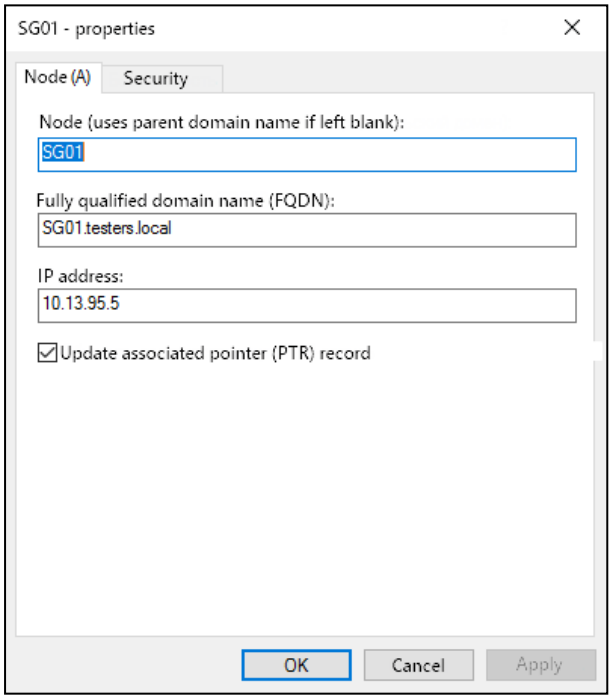
Example:

```
Type the password for HTTP/SG01.testers.local:
Type the password again to confirm:
WARNING: Account KRB$ is not a user account (uacflags=0x1021).
WARNING: Resetting KRB$'s password may cause authentication problems if KRB$ is being used as a server.

Reset KRB$'s password [y/n]?  y
Password successfully set!
WARNING: pType and account type do not match. This might cause problems.
Key created.
Key created.
Key created.
Key created.
Key created.
Output keytab to C:\SG01.keytab:
Keytab version: 0x502
keysize 64 HTTP/SG01.testers.local@TESTERS.LOCAL ptype 1 (KRB5_NT_PRINCIPAL) vno 3 etype 0x1 (DES-CBC-CRC) keylength 8 (
0x61d629ef5bad235d)
keysize 64 HTTP/SG01.testers.local@TESTERS.LOCAL ptype 1 (KRB5_NT_PRINCIPAL) vno 3 etype 0x3 (DES-CBC-MD5) keylength 8 (
0x61d629ef5bad235d)
keysize 72 HTTP/SG01.testers.local@TESTERS.LOCAL ptype 1 (KRB5_NT_PRINCIPAL) vno 3 etype 0x17 (RC4-HMAC) keylength 16 (0
xe44def62f0fdb5b125210ce0bcb448d9)
keysize 88 HTTP/SG01.testers.local@TESTERS.LOCAL ptype 1 (KRB5_NT_PRINCIPAL) vno 3 etype 0x12 (AES256-SHA1) keylength 32
 (0x252da628821454f6b461ace1fdafa6faeef313de814df24c71719126434fd6df)
keysize 72 HTTP/SG01.testers.local@TESTERS.LOCAL ptype 1 (KRB5_NT_PRINCIPAL) vno 3 etype 0x11 (AES128-SHA1) keylength 16
 (0x5c7246708c8bdf61f3099aa8317d3d30)
```

To configure the DNS server:

1. Launch the DNS server snap-in.
2. Create an account corresponding to the Authentication Portal certificate name.
3. Specify the IP address of the internal Security Gateway interface as an IP address. If an IP address is specified for a cluster, enter the virtual address of the cluster internal interface.

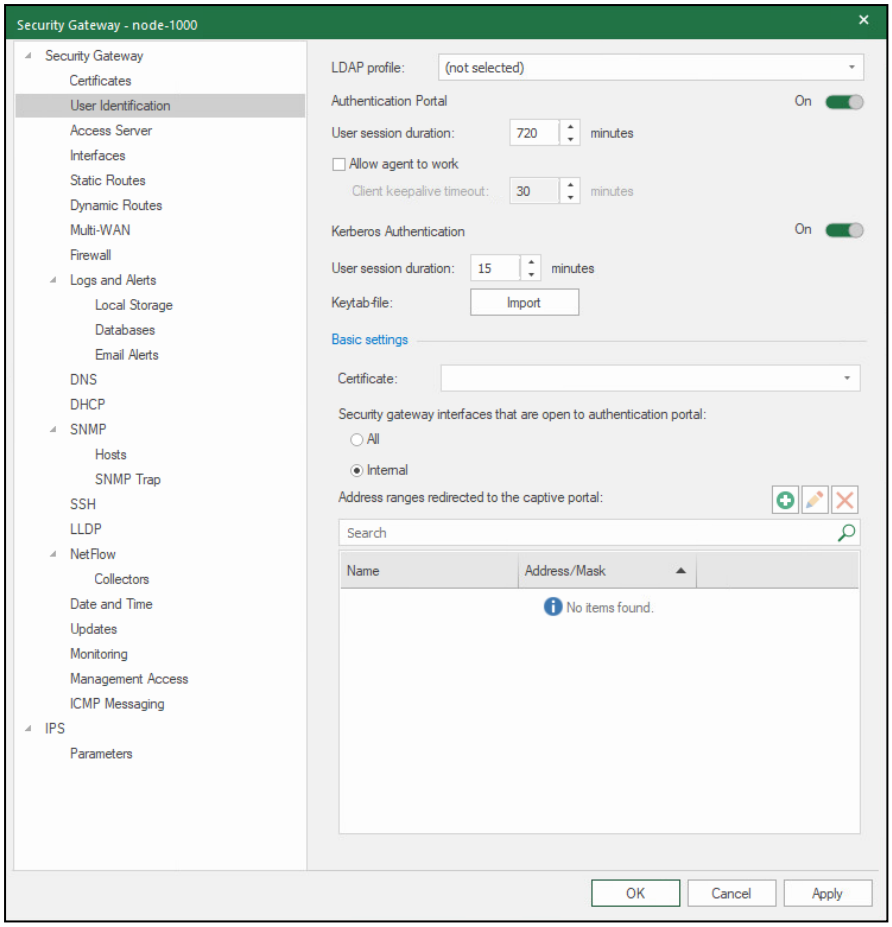


4. Click **OK**.

To configure authentication via Kerberos in the Configuration Manager:

1. Go to **Structure**, select the Security Gateway with the Authentication Portal and click **Properties** on the toolbar.

   The respective dialog box appears.
2. On the left, select **User Identification**.
3. In the **LDAP profile** drop-down list, select the created LDAP profile.
4. Turn on the **Kerberos Authentication** toggle.



The **Kerberos Authentication** group of parameters becomes available for editing.

5. Specify the required user session duration in minutes.

> **Note.**
> The user session varies from **5** to **14440** minutes.

6. In the **Kerberos Authentication** group of parameters, click **Import**.

   The standard file explorer appears.

7. Select the created keytab file.
8. In the **Certificate** drop-down list, select the Authentication Portal certificate.
9. Select interfaces that will be available for the Authentication Portal.

> **Note.**
> If the **All** check box is selected, the authentication is performed on each interface. If the **Internal** check box is selected, then authentication is performed on internal interfaces.

10. In the **Address ranges redirected to the captive portal**, specify IP addresses of the users who can use transparent Kerberos authentication.

> **Note.**
> If it is necessary, create a new network object. To do so, click **Create**. In the appeared dialog box, specify the required parameters and click **OK**.

Configure the browser to authenticate users through the Authentication Portal

The browsers have to be configured to correctly authenticate users via the Authentication Portal when Kerberos authentication is enabled. To configure the browsers centrally, it is recommended to use group policies.

To configure Chrome, Yandex, Atom, Sputnik, Microsoft Edge, Internet Explorer browsers:

1. In the Control Panel menu, click **Manage browser add-ons**.

   The **Internet properties** dialog box appears.

2. Go to the **Security** tab and click **Local intranet**.

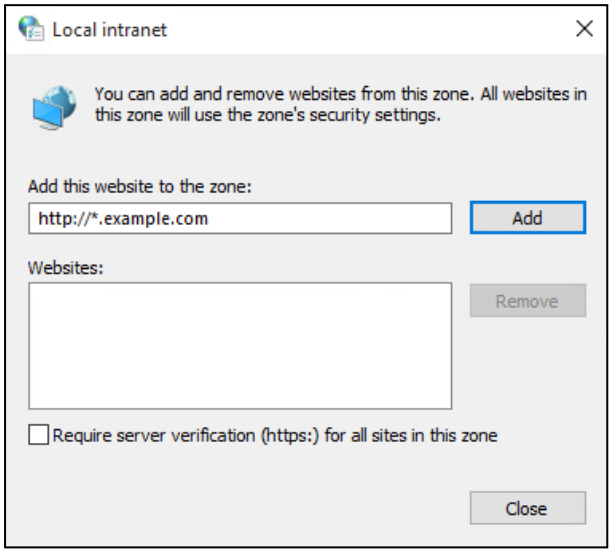
3. Click **Sites**.

   The **Local intranet** dialog box appears.

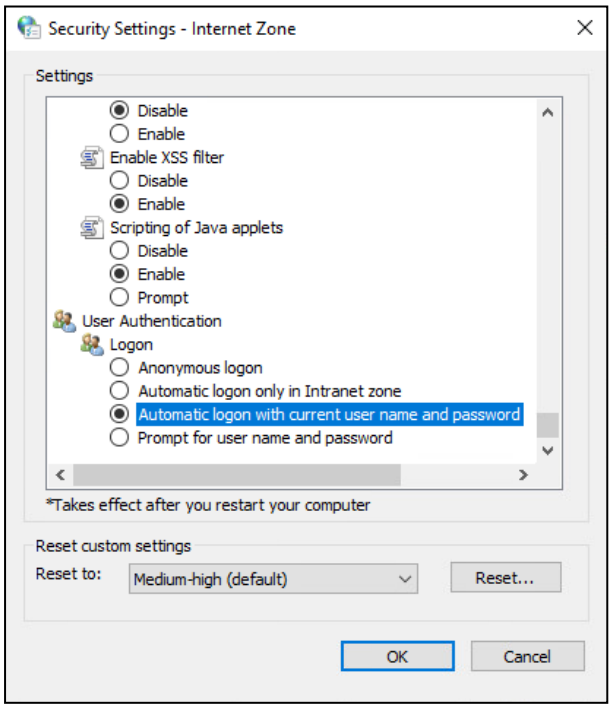
4. In the **Local intranet** dialog box, click **Advanced**.

   The list of websites appears.

5. In the **Add this website to the zone** field, specify the domain of the Authentication Portal via the HTTPS protocol and click **Add**.



6. Click **Close** and then click **OK**.
7. On the **Security** tab, specify the following parameters:
   - In the **Security level for this zone** group, click **Custom level**.
   - In the **User Authentication | Logon** group, select the **Automatic logon with current user name and password** option.
   - Click **OK**.



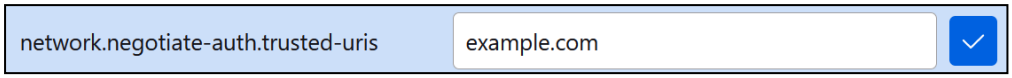
8. In the **Internet properties** dialog box, click **Apply**.

To configure the Firefox browser:

1. In the browser address bar, type **about:config**.

   The **Advanced Settings** window opens in the current tab.

2. In the search box, type **network.negotiate**.
3. In the **network.negotiate-auth.trusted-uris** and **network.negotiate-auth.delegation-uris**, click **Edit**.
4. Specify the domain name of the Authentication Portal and click **Save**.



Identification Agent

Install the Identification Agent on a computer with Windows OS.

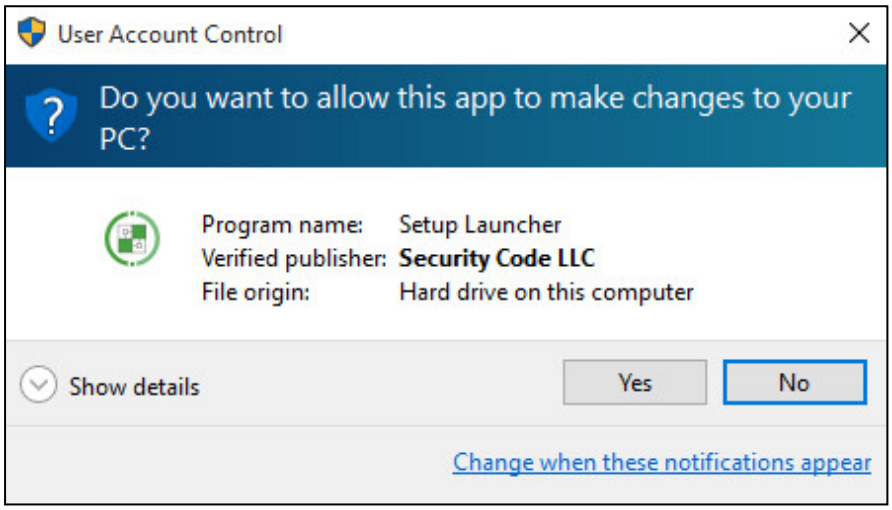
Before enabling the Identification Agent, configure the Authentication Portal (see p. **18**).

To enable the Identification Agent with AD, configure LDAP interconnection (see p. **13**).

Install the Identification Agent

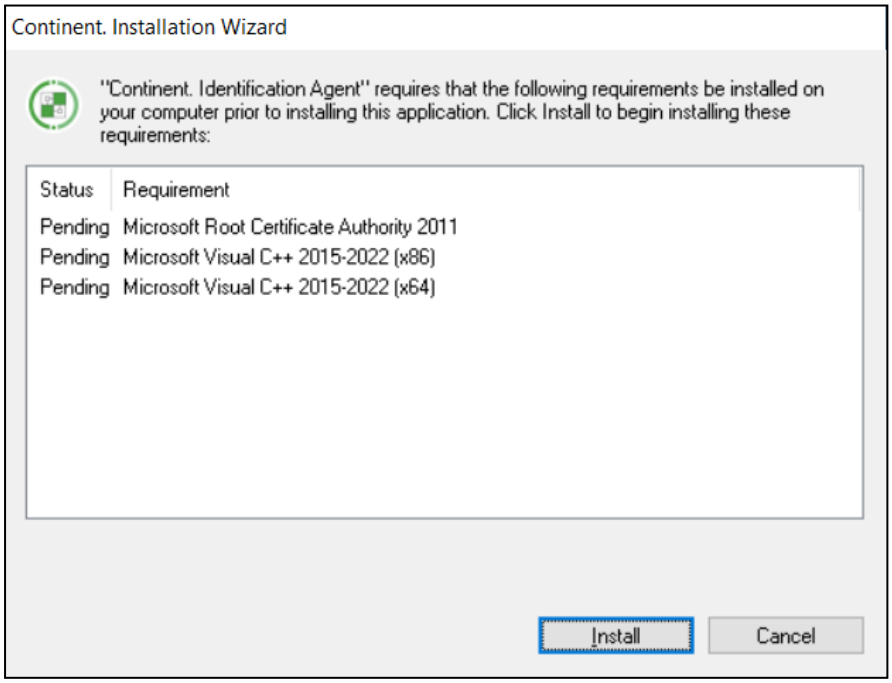
To install the program:

1. Log on to the system as an administrator.
2. Insert the installation disk in the disk drive and, in the distribution folder, run **setup.exe**. Allow the program to make changes to the computer if necessary.

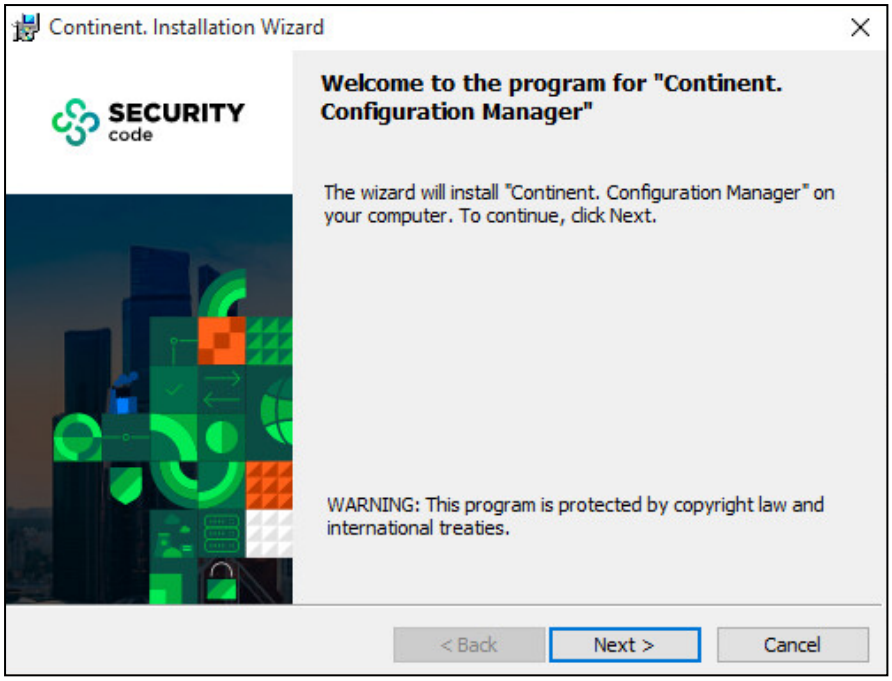


3. Before installing the Identification Agent, make sure the components that are required for its correct operation are installed.

   The **Installation Wizard** appears as in the figure below.

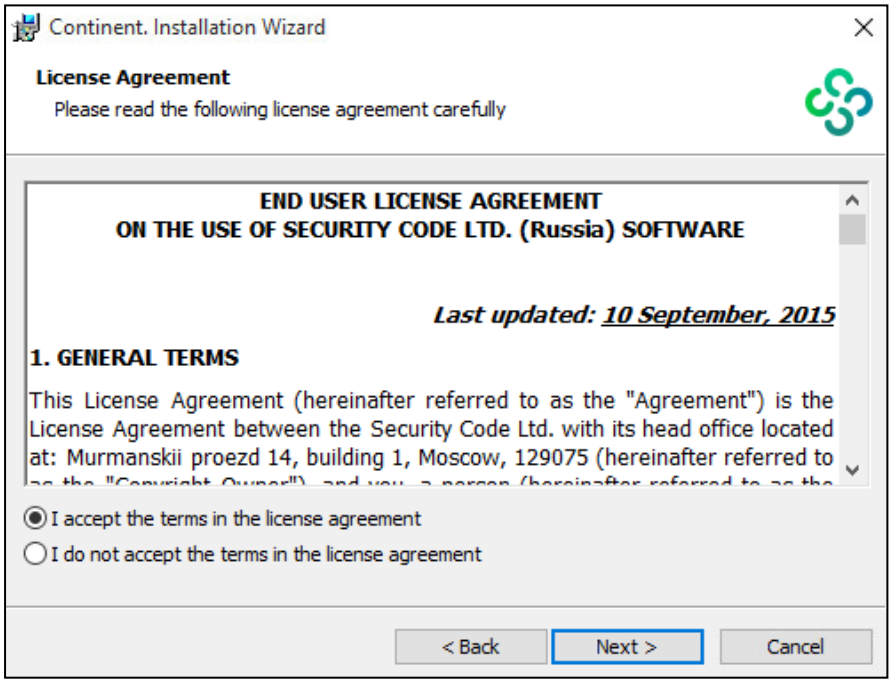


   The **Continent. Installation Wizard** dialog box appears.



4. Click **Next** to continue.

   The license agreement appears as in the figure below.



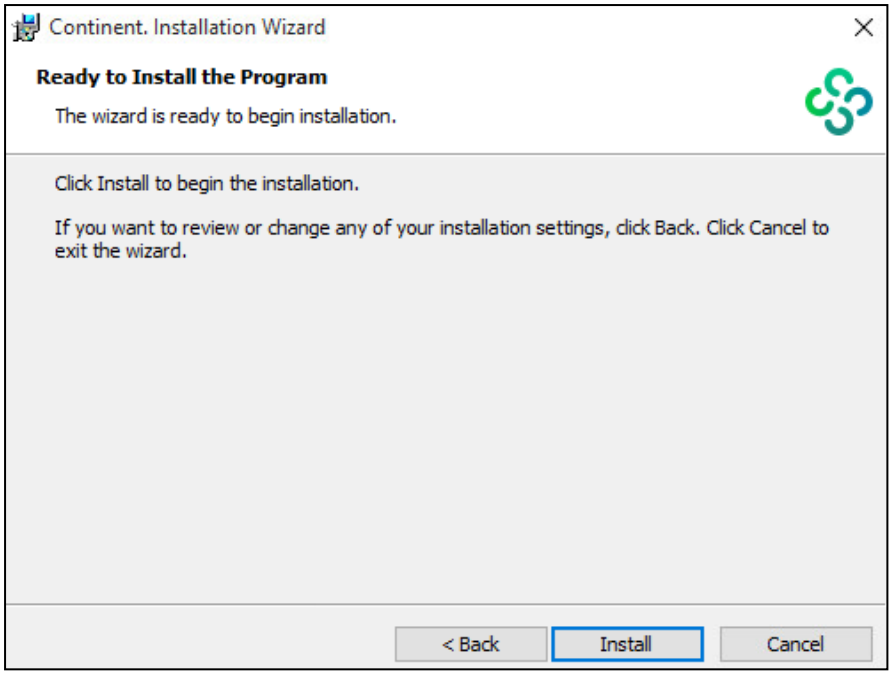
5. Read the license agreement. If you accept the terms, select the **I accept the terms in the license agreement** check box and click **Next >**.

   In the appeared dialog box, specify a destination folder for the program files.

   Note.
   By default, the installation wizard copies files to **\Program files\Security Code\User authentication**. To install the program to another folder, click **Browse** and specify a folder in the appeared dialog box.

6. Click **Next >**.

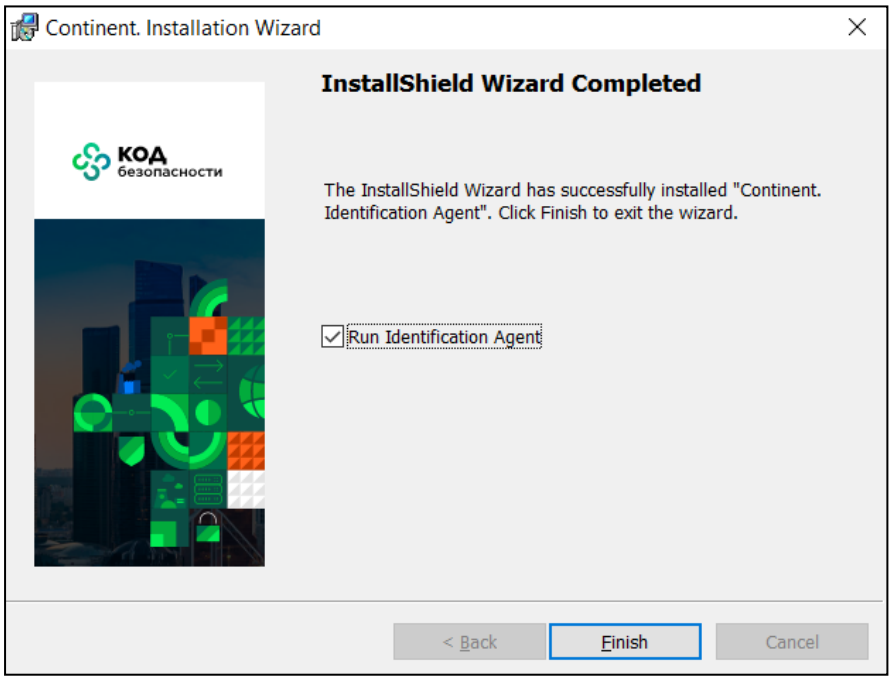
   The **Ready to Install the Program** dialog box appears.



7. Click **Install**.

   The installation wizard copies files to the destination folder. The appearing messages display information about the installation status.

   After the successful installation, you receive the respective message.



8. If you want to start the program after the installation, select the **Run Identification Agent** check box and click **Finish**. In the system control area, the following icon appears:  .

Run the Identification Agent

To run the program manually:

- Go to Windows Start menu, select **All apps**, expand the **Security Code** folder and select **Identification Agent**.

  As the program runs, the icon of the program appears in the Windows tray.

To make the program run at startup:

1. In the Windows tray, right-click the Identification Agent icon and select **Settings**.
   The respective dialog box appears.
2. Select the **Start automatically agent** check box and click **OK**.

Configure the Identification Agent

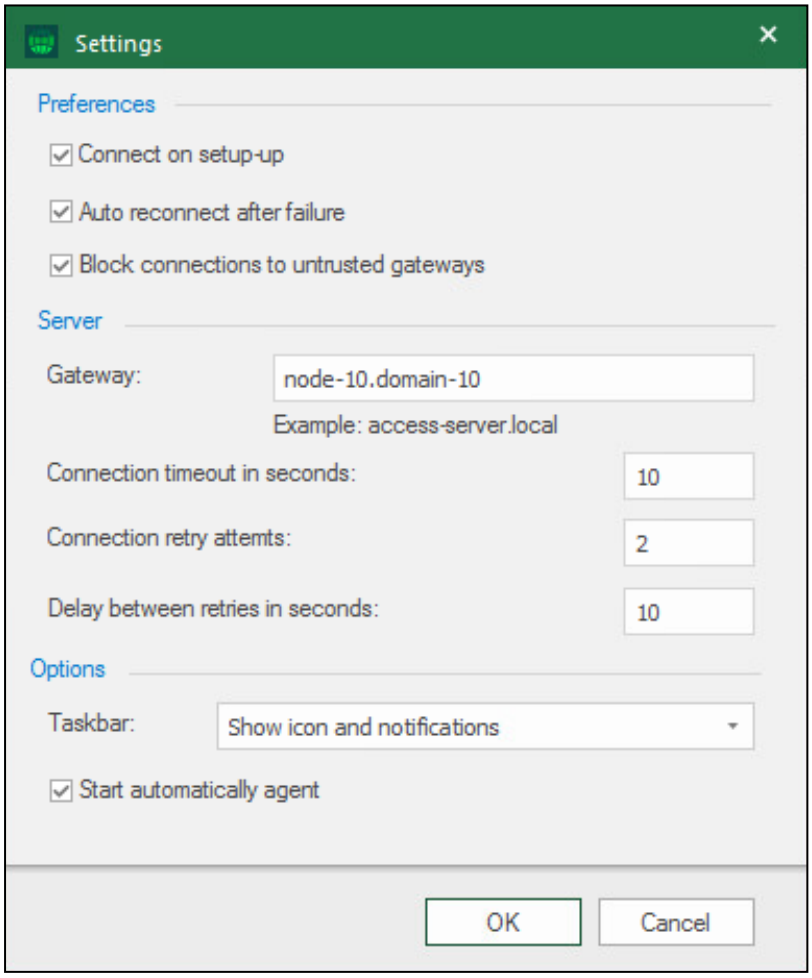
To configure the connection using the Configuration Manager:

1. Go to **Structure**, select the Security Gateway with the Authentication Portal and click **Properties** on the toolbar.
   The respective dialog box appears.
2. On the left, select **User Identification**, then select the **Identification Agent** check box.
3. Set the **Client keepalive timeout** value (maximum wait time — 120 minutes, minimum wait time — 5 minutes).

4. Click **OK**.
5. Click **Apply** to save the configuration.

To configure the connection on a user's workstation:

1. In the Windows tray, right-click the **Identification Agent** icon and click **Settings**.
   The respective dialog box appears as in the figure below.



2. In the **Gateway** text box, enter the domain name of the required AD server.

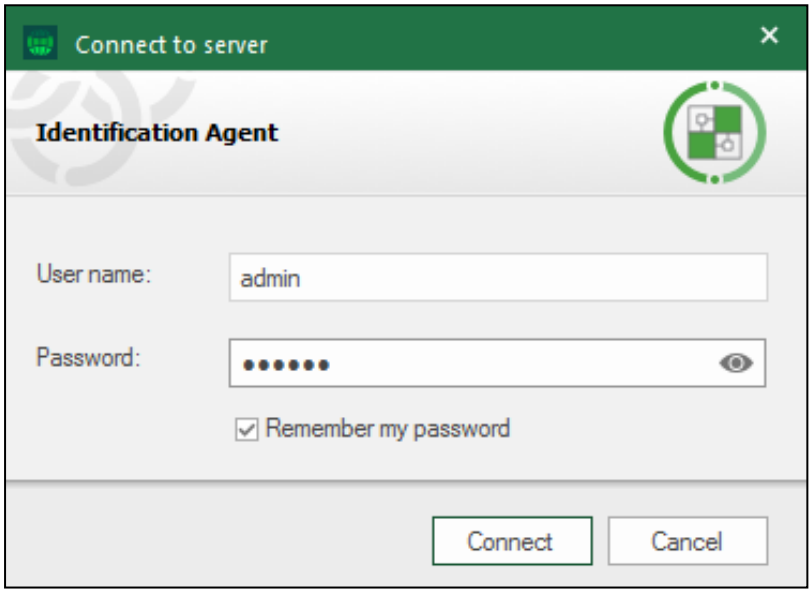
3. Select the required check boxes and specify other text boxes.
   The connection timeout value can be between 5 and 60, the number of connection retry attempts is between 1 and 5, the delay between retries is between 1 and 60.
4. Click **OK** to save the settings.

Note.
An untrusted server means:
- the server certificate is signed with an untrusted root certificate;
- the certificate is expired;
- the certificate is not a server certificate.

Connect to the Security Gateway

To connect to the Security Gateway:

1. Right-click the Identification Agent icon in the Windows tray and click **Connect**.
   The dialog box appears as in the figure below.



2. Enter the credentials and select the **Remember my password** check box if necessary.

Note.
To verify user credentials on the AD server, specify the user name and domain separated by @ (for example, **usertst1@local.host**).

3. Click **Connect**.

During the connection, the color of the icon indicator switches from red to green and flickers. As soon as the connection is established, the indicator stops flickering, and the icon turns green: .
If all procedures are performed correctly, a user is granted access to resources beyond the Firewall.

Uninstall the Identification Agent

To uninstall the program:

1. In the Windows Start menu, go to **Control panel** and select **Programs and Features**.
2. Select **Continent. Identification Agent** and then click **Uninstall**.
   After performing preparatory actions, the uninstall dialog box appears.
3. Click **Next**.
   The uninstallation confirmation dialog box appears.
4. Click **Uninstall**.
   The program deletes files. After a successful uninstallation, you receive the respective message.
5. Click **Finish**.