

BOMGAR™

**Security Provider Integration
RADIUS Server**

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RADIUS Server for Authentication

Integration of your Bomgar Appliance with external security providers enables administrators to efficiently manage user access to Bomgar accounts by authenticating users against external directory stores. This guide is designed to help you configure the Bomgar Appliance to communicate with a RADIUS security provider for the purpose of user authentication.

Note: To define group policies based upon groups within a remote server, you must configure both the LDAP group provider and the RADIUS user provider. You then must enable group lookup from the user provider's configuration page. One group security provider can be used to authorize users from multiple servers, including LDAP, RADIUS, and Kerberos. For group policy setup and for other security provider configurations, see the additional guides provided at www.bomgar.com/docs.

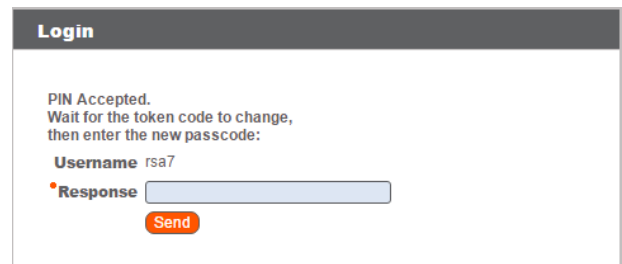
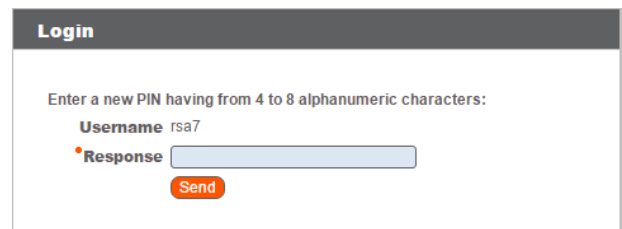
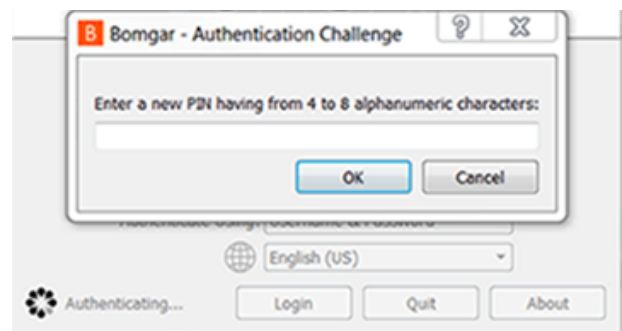
Authenticate Using One-Time Passwords (OTP)

When using the Radius security provider, you can choose to use a one-time password (OTP) service provider, such as RSA SecurID. An OTP is simply a randomized password that is generated by a third-party service provider through a token or some other means and changes within a certain time frame to provide an extra layer of security upon login.

Within your OTP provider's interface, you can configure a prompt to appear asking for credentials on the login screens for the Bomgar representative console and /login administrative interface. Once configured, users must enter their Bomgar username and password and then the OTP into the prompt.

If the OTP is entered correctly, access to the Bomgar representative console or /login administrative interface will be granted. However, if the OTP is entered incorrectly, a new prompt will appear asking for the password to be re-entered.

Should you need any assistance, please contact Bomgar Technical Support at help.bomgar.com.



Create and Configure the RADIUS Security Provider

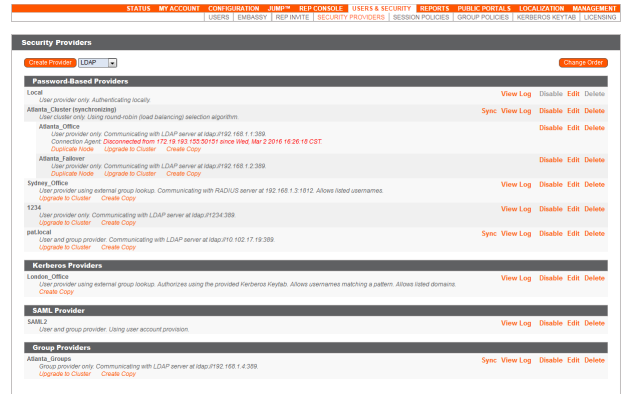
Go to `/login > Users & Security > Security Providers`.

From the dropdown, select the type of server you want to configure. Then click the **Create Provider** button.

Alternatively, you can copy an existing provider configuration by clicking **Create Copy**.

If you want to copy one node in a cluster, click **Duplicate Node**.

Enter the settings for this security provider configuration as detailed below.



General Settings

Name

Create a unique name to help identify this provider.

Enabled: This provider is enabled

If checked, your Bomgar Appliance can search this security provider when a user attempts to log in. If unchecked, this provider will not be searched.

Display Names: Keep display name synchronized with remote system

These values determine which fields should be used as the user's private and public display names.

Authorization Settings

Only allow the following users

You can choose to allow access only to specified users on your RADIUS server. Enter each username separated by a line break. Once entered, these users will be available from the **Add Policy Member** dialog when editing group policies on the `/login > Users & Security > Group Policies` page.

If you leave this field blank, all users who authenticate against your RADIUS server will be allowed; if you allow all, you must also specify a default group policy.

LDAP Group Lookup

If you want users on this security provider to be associated with their groups on a separate LDAP server, choose one or more LDAP group servers to use for group lookup.

Default Group Policy

Each user who authenticates against an external server must be a member of at least one group policy in order to authenticate to your Bomgar Appliance, logging into either the /login interface or the representative console. You can select a default group policy to apply to all users allowed to authenticate against the configured server.

Note that if a default policy is defined, then any allowed user who authenticates against this server will potentially have access at the level of this default policy. Therefore, it is recommended that you set the default to a policy with minimum privileges to prevent users from gaining permissions that you do not wish them to have.

Note: *If a user is in a default group policy and is then specifically added to another group policy, the settings for the specific policy will always take precedence over the settings for the default, even if the specific policy is a lower priority than the default, and even if the default policy's settings are set to disallow override.*

Connection Settings

Hostname

Enter the hostname of the server that houses your external directory store.

Port

Specify the authentication port for your RADIUS server. This is typically port **1812**.

Connection Method

If you are using an external directory store in the same LAN as your Bomgar Appliance, the two systems may be able to communicate directly, in which case you can leave the option **Proxy from appliance through the Connection Agent** unchecked and move on.

If the two systems are unable to communicate directly, such as if your external directory server is behind a firewall, you must use a connection agent. Downloading the Win32 connection agent enables your directory server and your Bomgar Appliance to communicate via an SSL-encrypted, outbound connection, with no firewall configuration. The connection agent can be downloaded to either the directory server or a separate server on the same network as your directory server (recommended).

In the case above, check **Proxy from appliance through the Connection Agent**. Create a **Connection Agent Password** for use in the connection agent installation process. Then click **Download Connection Agent**, run the installer, and follow the installation wizard. During installation, you will be prompted to enter the security provider name and the connection agent password you created above.

Shared Secret

Provide a new shared secret so that your Bomgar Appliance and your RADIUS server can communicate.

Timeout (seconds)

Set the length of time to wait for a response from the server. Note that if the response is **Response-Accept** or **Response-Challenge**, then RADIUS will wait the entire time specified here before authenticating the account. Therefore, it is encouraged to keep this value as low as reasonably possible given your network settings. An ideal value is 3-5 seconds, with the maximum value at three minutes.

Save Changes

Click **Save Changes** to save this security provider configuration.

Configuration Specific to Windows 2000/2003 IAS

Each user who will be authenticating with your IAS server must have remote access permission. The remote access permission can be defined via the Active Directory **Users and Computer** snap-in. View the properties for the appropriate user. On the tab **Dial-in**, grant the **Allow Access to Remote Access** permission.

You can also configure this permission through the remote access policy. Please consult your Windows documentation for the proper steps.

IMPORTANT!

The policy must allow for authentication via PAP, as this is the only RADIUS method currently supported by Bomgar. Review your IAS policy and ensure that this method is supported as a means of authenticating via your Bomgar Appliance.

Cluster RADIUS Providers for Load Balancing or Failover

To create a cluster of security providers, first create a security provider configuration for a server you wish to include in the cluster. On the main security providers page, locate this security provider and click **Upgrade to Cluster**. This creates a cluster with one node. To add more servers to the cluster, click **Duplicate Node**. Edit the new node to point to a different server you want in this cluster.

When editing a cluster, you will see a section to modify the cluster settings.

Cluster Settings *(Visible Only for Clusters)*

Member Selection Algorithm

Select the method to search the nodes in this cluster.

Top-to-bottom first attempts the server with the highest priority in the cluster. If that server is unavailable or the account is not found, the next highest priority server is attempted. The search moves down through the list of clustered servers until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

Round-robin is designed to balance the load between multiple servers. The algorithm choose at random which server to attempt first. If that server is unavailable or the account is not found, another random server is attempted. The search continues at random through the remaining servers in the cluster until either the account is found or it is determined that the account does not exist on any of the specified and available servers.

Retry Delay

Set how long to wait after a cluster member becomes unavailable before trying that cluster member again.

To move a security provider from a cluster to a stand-alone security provider, click **Create Copy**. This copies the settings to a new, top-level security provider. You can then delete the originating node.

Test the Settings of the RADIUS Integration

After entering configuration settings for a security provider, test the configuration at the bottom of the security provider's edit page.

Test Settings

Username and Password

Enter a username and password for an account that exists on the server you are testing. This account must match the criteria for login specified in the configuration above.

Try to obtain user attributes and group memberships if the credentials are accepted

If this option is checked, your successful credential test will also attempt to check user attributes and group lookup. Note that for these features to be successfully tested they must be supported and configured in your security provider.

Start Test

If your server is properly configured and you have entered a valid test username and password, you will receive a success message. Otherwise, you will see an error message and a log that will help in debugging the problem.

Note: *When testing a cluster, the cluster will test its member servers according to its operating mode, either in order or priority or at random. If the first attempted server is properly configured and you have entered a valid test username and password, you will receive a success message. Otherwise, the cluster will attempt the next security provider.*

If the test username and password properly bind to any of the servers, you will receive a success message, even if the other servers are improperly configured. You will receive an error message only if you are unable to bind to any of the clustered servers.

Note: *For further help, see "[Troubleshoot RADIUS Server Integration Errors](#)" on page 11.*

Prioritize and Manage Security Providers: RADIUS Servers and Others

Change Order

Once you have set up your security providers, you can configure the order in which your Bomgar Appliance attempts to authenticate users.

On the **Security Providers** page, click **Change Order**. Then drag and drop the configured providers to set their priority. Clustered servers move as one unit and can be prioritized within the cluster.

After making changes to the order of priority, click the **Save Changes** button.

Sync

Synchronize the users and groups associated with an external security provider. Synchronization occurs automatically once a day. Clicking this button forces a manual synchronization.

View Log

View the status history for a security provider connection.

Disable

Disable this security provider connection. This is useful for scheduled maintenance, when you want a server to be offline but not deleted.

Security Providers		Change Order
Current Provider: LDAP		
Password-Based Providers		
Local	User provider only. Authenticating locally.	View Log Disable Edit Delete
Atlanta_Cluster (Replicating)	User provider only. Using round-robin (load balancing) selection algorithm.	Sync View Log Disable Edit Delete
Atlanta_Office	User provider only. Communicating with LDAP server at ldap://192.168.1.1:389	Disable Edit Delete
	Connector Agent. Disconnected from 172.19.181.103:389 since Wed, Mar 2 2016 16:26:18 CDT	
	Duplicate Node Upgrade to Cluster Create Copy	
Atlanta_Telnet	User provider only. Communicating with LDAP server at ldap://192.168.1.2:389	Disable Edit Delete
	Upgrade to Cluster Create Copy	
Spidey_Office	User provider using external group lookup. Communicating with RADIUS server at 192.168.1.3:1812. Allows listed usernames.	View Log Disable Edit Delete
	Upgrade to Cluster Create Copy	
1234	User provider only. Communicating with LDAP server at ldap://1234:389	View Log Disable Edit Delete
	Upgrade to Cluster Create Copy	
patrick	User and group provider. Communicating with LDAP server at ldap://10.102.17.19:389	Sync View Log Disable Edit Delete
	Upgrade to Cluster Create Copy	
Kerberos Providers		
London_Office	User provider using external group lookup. Authenticates using the provided Kerberos Keytab. Allows usernames matching a pattern. Allows listed domains.	View Log Disable Edit Delete
	Create Copy	
SAML Provider		
SAML2	User and group provider. Using user account provision.	View Log Disable Edit Delete
Group Providers		
Atlanta_Groups	Group provider only. Communicating with LDAP server at ldap://192.168.1.4:389	Sync View Log Disable Edit Delete
	Upgrade to Cluster Create Copy	

Troubleshoot RADIUS Server Integration Errors

Failed Logins

The best way to troubleshoot a failed login is to test the settings in the security provider's configuration page. The section below helps you to understand the messages you may receive.

If testing a username and password from the **Security Providers** page provides no errors but the user cannot log into Bomgar using those same credentials, please check that at least one of the following sets of criteria is met.

1. The user has been expressly added to an existing group policy.
2. A default group policy has been set for the security provider configuration created to access the server against which the user is authenticating.
3. The user is a member of a group that has been expressly added to an existing group policy, and both user authentication and group lookup are configured and linked.

Message 1: Authentication Failed

1. The username and password that you are testing do not match.
2. Reenter the credentials or attempt another username and password.

Message 10: Server Unavailable

1. Your DNS information may be incorrect. You can test if your DNS server resolves by using the tools on the **Support > Utilities** page in your Bomgar /appliance interface.
2. You must use the correct shared secret between RADIUS and your Bomgar Appliance.
3. If a user who can normally authenticate cannot connect, check if the user's hours are restricted on the RADIUS server.
4. If you are using an IAS server, the user authenticating must have remote access permission enabled.
5. Authentication via PAP must be enabled. This is the only RADIUS method currently supported by Bomgar. Edit your IAS policy and ensure that this method is supported as a means of authenticating via the Bomgar Appliance.

Error 6ca and Slow Logins

1. A **6ca** error is a default response signifying that the Bomgar Appliance has not heard back from the DNS server. It may occur when attempting to log into the representative console.
2. If users are experiencing extremely slow logins or are receiving the **6ca** error, verify that DNS is configured in your /appliance interface.

Troubleshooting Individual Providers

When configuring an authentication method tied to group lookup, it is important to configure first user authentication, then group lookup, and finally group policy memberships. When troubleshooting, you will want to work in reverse.

1. Verify that the group policy is looking up valid data for a given provider and that you do not have any **@@@** characters in the **Policy Members** field.
2. Next, if a group provider is configured, verify that its connection settings are valid and that its group **Search Base DN** is in the proper format.

3. If you want to use group lookup, verify that the security provider is set to look up group memberships of authenticated users.
4. To test the user provider, set a default policy and see if your users are able to log in.