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Genesys Mobile Services Deployment Guide

Restricting Ports

4/23/2025

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Restricting Ports

You can control access to GMS APIs by configuring your firewall to allow or block other hosts (such as public internet, intranet, specific IP addresses, and so on) from accessing TCP/IP ports on the host where GMS is running.

You can configure and enable port control through the following process:

1. Set configuration options.
2. Paste code snippet into the jetty-http.xml file.
3. Restart GMS.

Configuration

Configuration Options

You can control port access to GMS APIs by adding a `port_restrictions` section in the GMS configuration, at the node level or cluster level. This section is optional and not defined in the default template. The content of this section is a list of key/values. Where key is an URI pattern (`/genesys/1/storage/*`, `/genesys/1/service/*`, `/genesys/1/service/request-interaction`, and so on), and the value is a list of ports or a port range.

1. In Configuration Manager, select *Environment > Applications*.
2. Locate and open the Application object for GMS.
3. Select the *Options* tab.
4. Add the `port_restrictions` section, and then set the options and values with the URL and ports you wish to control.
5. Save your changes.

Example `port_restrictions` section:

Option Name	Option Value	Description
<code>/genesys/1/storage*</code>	80-90	Storage API will be accessible from port 80 to port 90.
<code>/genesys/1/service/*</code>	92-98,100	Services API will be accessible from port 92 to port 98, plus the port 100.

Important

- There are no default values or default option names. You can define various URL patterns; such as /genesys/1/resource*, /genesys/1/resource*, /genesys/1/service/*, /genesys/1/service/request-interaction, and so on.
- If the request is sent on another port, an HTTP error 403 Forbidden occurs.
- The Admin UI and APIs not listed in the port_restrictions section will be available on all ports listed in the port_restrictions section.

jetty-http.xml File

1. Go to the <GMS_HOME>/etc/jetty-http.xml file, and add the code snippet after the GMS default HTTP connector (used to open default port 8080).

Example Set connectors section:

```
<!-- ===== -->
<!-- Set connectors -->
<!-- ===== -->
<Call name="addConnector">
  <Arg>
    <New class="org.eclipse.jetty.server.ServerConnector">
      <Arg name="server"><Ref refid="Server" /></Arg>
      <Arg name="acceptors" type="int"><Property name="jetty.http.acceptors"
default="1"/></Arg>
      <Arg name="selectors" type="int"><Property name="jetty.http.selectors"
default="-1"/></Arg>
      <Arg name="factories">
        <Array type="org.eclipse.jetty.server.ConnectionFactory">
          <Item>
            <New class="org.eclipse.jetty.server.HttpConnectionFactory">
              <Arg name="config"><Ref refid="httpConfig" /></Arg>
            </New>
          </Item>
        </Array>
      </Arg>
      <Set name="host"><Property name="jetty.http.host" deprecated="jetty.host" /></Set>
      <Set name="port"><Property name="jetty.http.port" deprecated="jetty.port"
default="8025" /></Set>
      <Set name="idleTimeout"><Property name="jetty.http.idleTimeout"
deprecated="http.timeout" default="30000"/></Set>

      <Set name="acceptorPriorityDelta"><Property
name="jetty.http.acceptorPriorityDelta" deprecated="http.acceptorPriorityDelta"
default="0"/></Set>
      <Set name="acceptQueueSize"><Property name="jetty.http.acceptQueueSize"
deprecated="http.acceptQueueSize" default="0"/></Set>
      <Get name="SelectorManager">
        <Set name="connectTimeout"><Property name="jetty.http.connectTimeout"
default="15000"/></Set>
      </Get>
      <Set name="reuseAddress"><Property name="jetty.http.reuseAddress"
default="true"/></Set>
      <Set name="reusePort"><Property name="jetty.http.reusePort" default="false"/></Set>
    </New>
  </Arg>
</Call>
```

```
<Set name="acceptedTcpNoDelay"><Property name="jetty.http.acceptedTcpNoDelay"
default="true"/></Set>
<Set name="acceptedReceiveBufferSize" property="jetty.http.acceptedReceiveBufferSize"
/>
<Set name="acceptedSendBufferSize" property="jetty.http.acceptedSendBufferSize" />
</New>
</Arg>
</Call>
```

Important

- Replace the port number in the `jetty.http.port` parameters.
- For multiple ports, copy the entire `<Call name="addConnector">` property and modify it to add additional port numbers.
- To specify a range of port number, for example 8092-8095, you have to include the entire snippet in the **jetty-http.xml** file for each port: 8092, 8092, 8093, 8094, and 8095.

2. Restart GMS.

Disabling Port Restrictions

1. In Configuration Manager, select *Environment > Applications*.
2. Locate and open the Application object for GMS.
3. Select the *Options* tab.
4. Select the `port_restrictions` section.
5. Right-click, and enter a hash tag (#) in front of `port_restrictions` so it appears like this: `#port_restrictions`. The port restrictions are now disabled, and the **Service Management User Interface > Lab > Config** tab will display: port restrictions has not been enabled.

Setting Default GMS Port

By default, the GMS Port is set to 8080. You can modify this value by editing the `<GMS_HOME>/etc/jetty-http.xml` file and changing this value in the `addConnector` section. When you are finished, restart GMS.

```
<Call name="addConnector">
  <Arg>
    <New class="org.eclipse.jetty.server.ServerConnector">
      <Arg name="server"><Ref refid="Server" /></Arg>
      <Arg name="acceptors" type="int">
<Property name="http.acceptors" default="-1"/></Arg>
      <Arg name="selectors" type="int">
```

```
<Property name="http.selectors" default="-1"/></Arg>
  <Arg name="factories">
    <Array type="org.eclipse.jetty.server.ConnectionFactory">
      <Item>
        <New class="org.eclipse.jetty.server.HttpConnectionFactory">
          <Arg name="config"><Ref refid="httpConfig" /></Arg>
          </New>
        </Item>
      </Array>
    </Arg>
    <Set name="host"><Property name="jetty.host" /></Set>
    <Set name="port"><Property name="jetty.port" default="8080" /></Set>
    <Set name="idleTimeout">
  <Property name="http.timeout" default="30000"/></Set>
    <Set name="soLingerTime">
  <Property name="http.soLingerTime" default="-1"/></Set>
    <Set name="acceptorPriorityDelta">
  <Property name="http.acceptorPriorityDelta" default="0"/></Set>
    <Set name="selectorPriorityDelta">
  <Property name="http.selectorPriorityDelta" default="0"/></Set>
    <Set name="acceptQueueSize">
  <Property name="http.acceptQueueSize" default="0"/></Set>
    </New>
  </Arg>
</Call>
```

Important

Make sure that the values of the `external_url_base` option set for the load-balancer URL base and the `server/web_port` option used for CometD node to node communication are consistent with each other.