

Blackboard Help

Home / Learn / Administrator / Self- and Managed-Hosting / Release Notes / Individual Releases /
9.1 SP 14 / New Features

Test IP Address Filtering

Restrict High-Stakes Learn Tests by Location

As increasing numbers of institutions are delivering high-stakes tests using Learn, there is also an increased desire on the part of course facilitators, instructors, and administrators to prevent students from cheating. High-stakes tests are often delivered to students in proctored lab environments to ensure that students can be identified (e.g. using an ID) and monitored while taking a test. However, if the Learn test can be accessed from any location during the testing window, students could conspire to take a test from a different location, or have someone else take the test from another location on their behalf, compromising the security of the testing environment.

IP addresses identify specific PCs and are a good method to enforce the location-restriction requirements described above. In this release, tests can be restricted by location, where locations can be specified by administrators to correspond to specified IP addresses or IP ranges.

Restricting Location

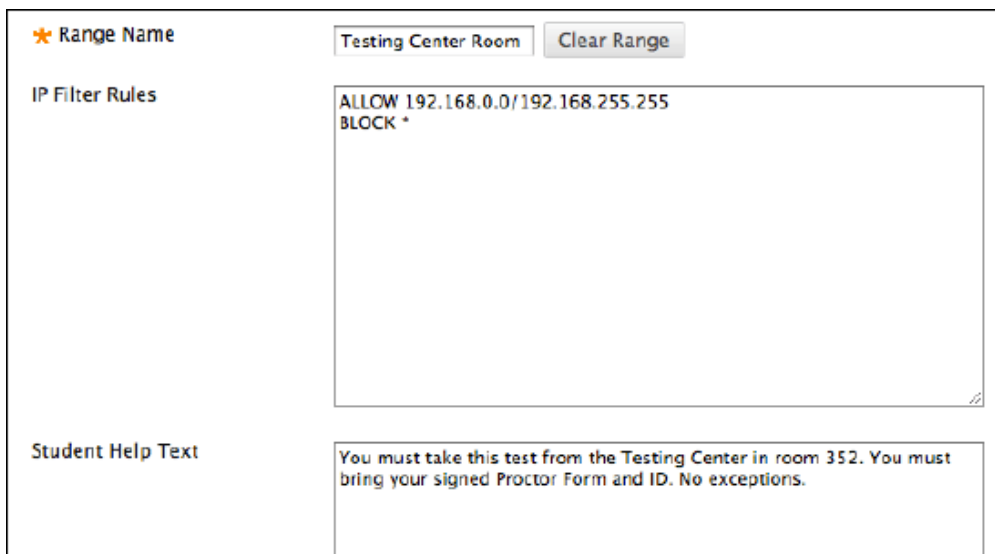
The first step to take advantage of location restriction is for an administrator to create a range of IP addresses to correspond to one or more network segments that are used exclusively in the testing environment/s, and to give that range a natural language name. The range can be composed of as many different filters as necessary to correctly capture the part of the network in use in the testing environment. Custom descriptive help text, to be shown to students in the event that they access the test from outside the range, can also be provided.

Create a range of IP addresses

You can only create one range. You can add multiple labs to the range.

1. From the System Admin panel, select *Course Settings* and select *Grading Security Settings*.
2. Type a range name. This range name should be easily understood and identified by instructors when they are selecting IP Ranges from their course.
3. Type the IP addresses in the *IP Filter* field.
 - List one IP filter per line and use the word **BLOCK** or **ALLOW** before the IP address.
 - **ALLOW 123.456.3.3** is an example of an IP filter.

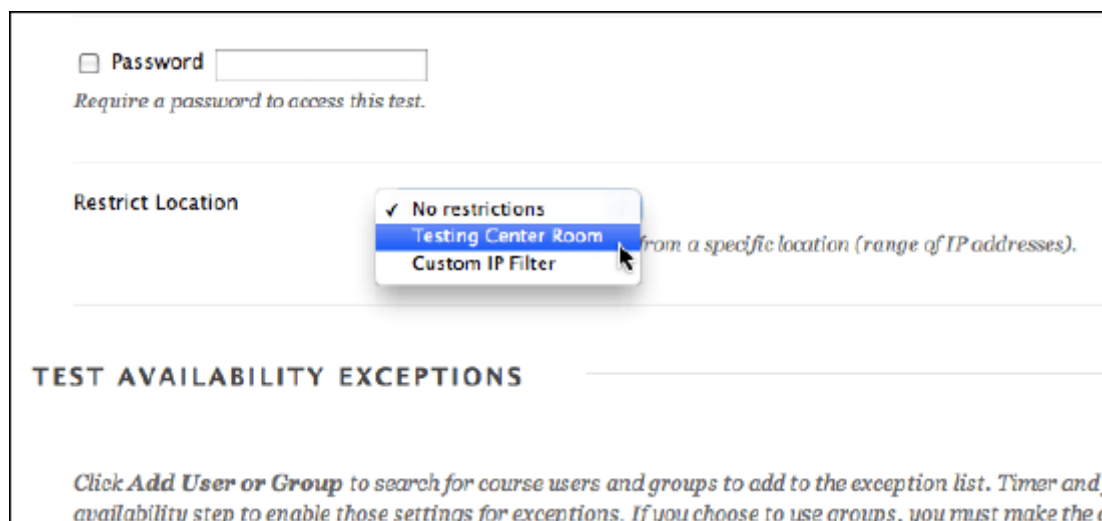
- Wildcards (*) are allowed in any position of the IP address.
 - IPv4 and IPv6 syntax are supported.
 - Specify an IP filter range by inserting a forward slash between two IP addresses. **ALLOW 192.168.0.0/192.168.255.255** is an example of an IP filter that uses a range.
 - Only students who are using a computer with an IP address in the allowed range can access the test or survey.
4. Type information for students about where the test is located and any other information that is appropriate in the *Student Help Text* field.



The screenshot shows a form for configuring an IP range. It has three main sections: 'Range Name', 'IP Filter Rules', and 'Student Help Text'. The 'Range Name' section has a text input field containing 'Testing Center Room' and a 'Clear Range' button. The 'IP Filter Rules' section has a text area containing 'ALLOW 192.168.0.0/192.168.255.255' and 'BLOCK *'. The 'Student Help Text' section has a text area containing 'You must take this test from the Testing Center in room 352. You must bring your signed Proctor Form and ID. No exceptions.'

5. Select *Submit*.

Once an IP Range has been created, it is available for selection within a course, on the respective test options page.



The screenshot shows the 'Test Options' page. It has a 'Password' section with a checkbox and a text input field. Below it is a 'Restrict Location' section with a dropdown menu. The dropdown menu is open, showing three options: 'No restrictions', 'Testing Center Room', and 'Custom IP Filter'. The 'Testing Center Room' option is selected. Below the dropdown menu is a section titled 'TEST AVAILABILITY EXCEPTIONS'. At the bottom of the page, there is a note: 'Click Add User or Group to search for course users and groups to add to the exception list. Timer and availability step to enable those settings for exceptions. If you choose to use groups, you must make the a'.

Test Availability Exceptions

There may be situations where an instructor needs to make an exception for a student or group of students to allow them to take the test from someplace outside of specified location (IP range). When this is the case, the instructor may use the *Test Availability Exceptions* to exclude specified students and/or groups of students from the location restriction.

Students with this exception enabled are able to take the test from any location, even if it is restricted for other students.

In a high-stakes testing situation the proctor or instructor can

override a restriction that has been enforced by the system from the *Test Begin* page. From here instructors are shown the individual instances when users were prevented from accessing a test, along with an option to override this restriction to allow a user to continue taking the test.

Additional notes and technical details:

- The *Restrict Location* setting on the *Test Options* page is not displayed to instructors until an administrator has created at least one IP Filter.
- Location restriction is also available for surveys.
- Other tools like SCORM, Assignments, Self & Peer Assessments, etc., do not include location restriction.
- IPv4 and IPv6 range checking will both be supported.
- Load-balanced and SSL-offloaded client installs can support this feature, as long as the **X-Forwarded-for** HTTP header is properly configured at the balancer/off-loader.
- All course reuse operations that include test deployments (meaning the copy or package includes content AND tests, not just tests or just content) include location restriction information.
- A new public API is available to other tools to compare the user's IP address to the named IP address range set by the system admin, and determine whether the user is in range or out of range.
 - Custom range creation or checking, custom error messages and security logging, overrides or other features built for this project are NOT exposed via public API.

Security Logs

All errors and overrides are logged in the new Security Log with [event codes](#) 36, 37, and 38.

Event Codes

| Event Code | Security Event | Changes | Description |
|------------|---|---|---|
| 36 | User Starting an Assessment Violated IP Address Rule | New Event for Test IP Address Filtering | Identifies intentional and unintentional violations to the IP Address value or range restrictions set on an Assessment. An assessment that begins with an IP Address value/range restriction only has a severity of "0" |
| 37 | User Taking or Finishing an Assessment Violated IP Address Rule | New Event for Test IP Address Filtering | Identifies intentional and unintentional violations to the IP Address value or range restrictions set on an Assessment. An assessment that may start meeting the IP Address rule but then violates it during or at the completion of an assessment. |
| 38 | IP Address Rule Overridden for an Assessment Attempt | New Event for Test IP Address Filtering | Test Proctors may need to override a given blocked attempt for a particular student if the IP Address/Range was not configured correctly by the Administrator. These exceptions would be logged. |

Example Rows

| Event Code | Security Event | Example Single Row |
|------------|---|--|
| 36 | User Starting an Assessment Violated IP Address Rule | timestamp=Aug 08 2008 08:08:08.888 EDT app_vend=blackboard app_name=learn app_ver=9.1.14000.0 evt_code=36 evt_name=User Starting an assessment or Continue Attempt Violated IP Address Rule sev=0 cat=assessments outcome=failure dhost=appsec-demo src_ip=10.1.1.1 suid=_2_1 suser=student1 session_id=1000 msg=User starting assessment or continue attempt for course assessment <_3_1> violated IP Address rule. The violation was logged and the attempt was blocked. May be an indicator of a potentially inadvertent test policy violation or a misconfigured IP Address rule. http_useragent=Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.0; Trident/5.0) act=blocked request=/webapps/assessment/take/launchAssessment.jsp |
| 37 | User Taking or Finishing an Assessment Violated IP Address Rule | timestamp=Aug 08 2008 08:08:08.888 EDT app_vend=blackboard app_name=learn app_ver=9.1.14000.0 evt_code=37 evt_name=User Taking or Finishing an assessment or Continue Attempt Violated IP Address Rule sev=2 cat=assessments outcome=success dhost=appsec-demo src_ip=10.1.1.1 suid=_2_1 suser=student1 session_id=1000 msg=User taking or completing assessment course assessment <_3_1> violated IP Address rule. The violation was logged. May be an indicator of a |

| | | |
|----|--|---|
| | | <_3_1> violated IP Address rule. The violation was logged. May be an indicator of a potentially inadvertent test policy violation or a misconfigured IP Address rule. http_useragent=Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.0; Trident/5.0) act=logged request=/webapps/assessment/do/take/saveAttempt |
| 38 | IP Address Rule Overridden for an Assessment Attempt | timestamp=Aug 08 2008 08:08:08.888 EDT app_vend=blackboard app_name=learn app_ver=9.1.14000.0 evt_code=38 evt_name=IP Address Rule Overridden for an assessment Attempt sev=2 cat=assessments outcome=success dhost=appsec-demo src_ip=10.1.1.1 suid=_3_1 suser=instructor1 session_id=1001 msg=Test administrator overrode a test policy violation for user <_2_1> for course assessment <_3_1> because it violated IP Address rule. May be an indicator of a potentially inadvertent test policy violation or a misconfigured IP Address rule. http_useragent=Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0) act=logged request=/webapps/assessment/dwr/call/plaincall/AssessmentDWRFacade.overrideFilterBlocks.dwr |

To Learn More

To learn more, see [Restrict Tests by Location](#).