This manual summarizes the technical prerequisites for delivering SAP® training events outside of SAP offices, including virtual classroom training. Topics covered in this document include details on accessing the SAP training infrastructure through the Internet, installing Citrix Receiver, and testing connectivity performance.
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1 Setting Up Remote Training Events

If this is your first time delivering a remote training event at your hosting location, it is highly recommended that the local training administrator and the IT contact responsible for setting up the infrastructure read and understand this manual thoroughly.

Premises not provided by SAP, such as hotels, must also be prepared well before the event begins. Presently, the use of wireless network connections to deliver remote training events is not supported by SAP. Approval for using a wireless network connection during these events is granted by the local training administrator. Furthermore, all support issues related to such a connection are the responsibility of the local training administrative team.

Some countries require special approval and testing for events that are planned to take place at hotels and other rental locations. This is due to additional variables – such as bandwidth load and available technical support – that are inherent to the venue as opposed to, for example, a company’s premises.

All computers connecting to the training infrastructure must meet the prerequisites described in the following sections. The hosting site must verify that these requirements are met to deliver a remote training event.

1.1 REMOTE CONNECTION
A remote classroom consists of one instructor workstation and a number of student workstations.

Connect workstations to the SAP training infrastructure through the training location’s Internet connection with a Web browser and the Citrix Receiver. All other forms of direct access, such as telnet and file/print services, are blocked.

To control access to SAP training systems, the instructor provides students with access credentials. The local training administrator must verify with the hosting location’s network group that no security or configuration issues will prohibit the required connection.
1.2 PREREQUISITES

1.2.1 Prerequisites for Internet Access
The hosting location must provide the classroom with Internet access during the entire training event. Wireless connections for delivering SAP training events are not supported by SAP.

Recommended bandwidth requirements are 30 Kbps to 50 Kbps for each workstation used by the student or instructor. The remote training location must also have sufficient spare bandwidth available to support extra Internet traffic. We recommend 40 Kbps per connection in addition to normal demand.

All student and instructor workstations must access the Internet by using HTTPS (TCP port 443) to establish a connection to the SAP training infrastructure. If the hosting location’s proxy server or firewall requires user authentication for Internet access, the appropriate credentials must be given to the instructor and made available until the event ends.

1.2.2 Prerequisites for Student and Instructor Workstations
To access the SAP training infrastructure from classroom workstations, the following operating systems and Web browsers are supported:

• **PC operating systems** – Use Microsoft Windows 7, Windows 8, Windows 10, MacOS X Yosemite or higher.
• **Supported Web browsers** – Use HTML5-compatible browser versions. We recommend the latest versions of either Microsoft Internet Explorer, Mozilla Firefox, Google Chrome or Safari (on MacOS).
• **Web browser settings** – Enable cookies, pop-ups, and frame usage.
• **Citrix Receiver** – Install the version that corresponds to your operating system.
• **Browser certificates** – Install the Web browser certification, especially if you are using the Microsoft Windows operating system.

For more information, visit https://access.sap.com to read our FAQ articles.

**Note:** The Microsoft Edge browser included in Windows 10 is not fully tested to access the SAP training infrastructure.
1.2.3 Installing Your Citrix Receiver
If your installation of Citrix Receiver is older than version 4.3 or not yet available on your local computer, install the latest release that corresponds to your operating system and Web browser. Visit https://access.sap.com and select the Downloads link located at the upper right corner of your screen.

Note: Before installing the latest version, it is recommended that you uninstall any old versions of Citrix Receiver. We also recommend that you delete the TC Trust Center certificates and keep the VeriSign certificates for future use.

You can also download the appropriate version of Citrix Receiver by accessing Citrix’s download site at http://receiver.citrix.com.

1.2.4 Installing Citrix Receiver While Logging On
If you have not installed Citrix Receiver, you will be prompted during the logon procedure to do so.

Note: It is preferable to install the Citrix Receiver beforehand as described in the previous section.

Depending on your Web browser, you might:
• Receive a notification stating that Citrix Receiver is not installed
• Experience automatic installation

After installation is complete, you may now access the SAP training infrastructure.

Note: The first session will take longer to start up, and a black screen may appear for a short period of time (see section 3).
1.2.5 Additional Browser Trusted Sites Settings

If you are using the Firefox Web browser, add the security exception for https://access.sap.com as follows:

1. On the pop-up window notifying you that the connection is untrusted, click on the Add Exception button.

2. When the Add Security Exception pop-up window appears, enter https://access.sap.com in the Location field and select the Permanently store this exception check box. Click on the Confirm Security Exception button.

1.2.6 Additional Browser Plug-In Settings

If you are using the Google Chrome Web browser, allow plug-ins when prompted.

1. Select the Always allow plug-ins on button.
2. Click on the Done button.
2 Network Performance Tests

2.1 NETWORK CONNECTION TESTING
Test the network connection of your hosting location before connecting to the SAP training infrastructure.
2. Verify that your connection is suitable by clicking on the Performance check link at the top of the screen or visiting https://access.sap.com/AccessPortal/cct/speedtest.html.

Note: We strongly recommend performing this test on at least two computers located in the room where the training event will take place.

3. Start the performance test by following these steps:
   • Select your region by clicking on the appropriate continent. Its color will turn yellow once selected.
   • Click on the Start Test button to obtain latency, download-speed, and bandwidth measurement results to and from the SAP data centers.
4. Review the results of the test by using the following color keys that indicate network performance:
   - **Green** – Good latency and bandwidth
   - **Yellow** – Sufficient latency and bandwidth
   - **Red** – Insufficient latency and bandwidth, meaning the network is unsuitable to connect to the SAP training infrastructure

5. Click the *Help* button to obtain a detailed description of the tool and get more information on the continuous latency test or the easy check.

6. Send your test results if you are using Microsoft Outlook by clicking on the *Send Results* button.
2.2 NETWORK STABILITY TESTING
This test should be performed for all on-site classroom training events held outside of SAP premises. Virtual classroom students who are not participating in an on-site classroom event do not need to perform this test. We strongly recommend performing this test on at least two computers located in the room where the training event will take place.

**Note:** Credentials are required to carry out this test.

2. Connect to your region.
3. Select *Training Landscape (WTS / VDI Training)*.
4. Type in the following credentials:
   - Username: **testconnection**
   - Password: **Te5tConnect!on**
5. Click the Test Connection tool.

![Test Connection](image)

**Note:** Wait for the test connection clock to run for two hours to confirm that your network connection is stable without the threat of disconnections or time-outs.

After the test is complete, log off the Citrix Receiver training landscape screen by clicking on the drop-down menu next to your username at the top of the page.

![Log Off](image)

### 2.3 ALTERNATIVE PERFORMANCE CHECK DURING THE TEST CONNECTION RUN

This test should be performed for all on-site classroom training held outside of SAP premises that encounter any issues on-site during the performance tests described in sections **2.1** and **2.2**. Virtual classroom students who are not participating in an on-site training event do not need to perform this test.

**Note:** The username and password information provided in section **2.2** are not suitable to perform this test. Please contact the SAP Education organization for the proper credentials. In North America, this information is only available when the instructor is on-site.
2. Connect to your region.
3. Select *Training Landscape (WTS / VDI Training)*.
4. Type in the credentials provided by SAP Education.
5. From the Citrix Receiver training landscape screen, click *Common Training* and leave the session open to confirm that your network connection is stable without the threat of disconnections or time-outs for two hours.

**Note:** It is suggested that this alternative test is conducted in parallel with the test connection run described in section 2.2.
After you have finished this test, log off by following these two steps:

1. Click on the **Log off** button in the **Start** menu of the Citrix Receiver desktop.

2. Click on the drop-down menu next to your username at the top of the Citrix Receiver training landscape screen.
3 Connect to Your SAP Training Environment

3.1 THE EXTERNAL VIRTUAL DESKTOP PORTAL
To access SAP training systems:
2. Click on your corresponding region on the world map.

Note: Connect to the region closest to your hosting location to minimize physical latency time between your classroom workstations and the SAP training infrastructure. Please follow the training instructor’s guidelines for accessing. For some training courses, it may be necessary to connect to a different region.

If you do not have the appropriate Citrix Receiver already installed on your computer, refer to section 1.2.

If you encounter a connection issue, click on the FAQ link located at the upper right corner for more information. For additional support, contact your hosting location’s IT team.
3.2 REGIONAL LOGON PAGE
After you have chosen your region, select the Training Landscape option to connect to the SAP training infrastructure.

The training instructor will provide all participants with credentials on the morning of the first day of the training event. Click on the Login button.

Note: Passwords are case sensitive. Also, user credentials provide access during the specified period only.
3.3 ACCESSING YOUR TRAINING ENVIRONMENT

After you have logged on, the Citrix Receiver training landscape screen will appear with applications preconfigured globally. Click on the application icon in the center of the screen to start it.

If you do not see the icon for your required application on the screen, you can add it by clicking the + button on the left-hand side of the screen.

Click on the All Apps link on the left-hand side. You will see a folder structure that includes all resources available to the user. Click on the required resources to move application icons to the center of the screen. You will also find that the resource is checkmarked in green under the All Apps menu structure.
To connect to the SAP training environment based on your instructor’s guidelines on the first day of class, click on the corresponding application icon on the Citrix Receiver training landscape screen. The most commonly used applications include:
1. Access the SAP training environment through the Common Training WTS
2. Open a Remote Desktop Session to the SAP training environment
3. Log on to the SAP Consultant Certification portal
4. Start the SAP DB – BR GUI
5. Run the Test Connection tool as described in section 2.2

**Note:** If you only open a remote desktop session to the SAP training system, click on the *Remote Desktop Connection* icon to experience better performance. If you encounter any issues, initiate a remote desktop session by starting the Common Training WTS first.

Once you start the Citrix Receiver desktop (see application icons 1, 2, and 4 on your screen as represented above), a session window appears and the logon process begins.
Depending on your browser, the following pop-up box may appear:

If this occurs, you may choose to block or permit session access to your local resources. You can change this access at a later date through the Citrix Receiver toolbar. To disable this pop-up window in the future, click on the check box *Do not ask me again for this site.*

At the top of the session window, the Citrix Receiver toolbar is displayed. You can show or hide this toolbar by clicking on the black bar with an arrow pointed down at the top of your screen.

To hide the toolbar, click on the black bar with an arrow.

To show the toolbar, click on the black bar with an arrow again.
### 3.3.1 Citrix Toolbar Settings

In the toolbar, there are several function buttons.

- **Home**: Return to the Citrix Receiver training landscape screen.
- **Ctrl+Alt+Del**: Send this key combination to the session.
- **Preferences**: See below for details.
- **Full-screen**: Switch the session window to full-screen mode. In this mode, your local keyboard key combinations can be used within the session, except Ctrl+Alt+Del.
- **Disconnect**: Disconnect the session.

If you are disconnected from your session due to situations such as loss of network connection, you can reconnect in 10 minutes.

**Note**: You can disconnect the session by clicking on the x button located at the upper right corner of your screen.

If you select the *Preferences* menu, you can choose from multiple settings to fit your needs. The screenshots below show recommended settings.
3.4 ADDITIONAL SECURITY SETTINGS
To deliver a safe and successful training experience for all SAP training events worldwide, SAP offers an infrastructure with network and Citrix ICA protocol connection security.

As a result, the following limitations exist within the SAP training systems:
• User access on the C: drive is disabled.
• The user environment and files are stored on a network drive associated with the workstation client name and mapped on drive N: for user access.
• Client workstation drive mapping is disabled.
• Cut-and-paste functionality between the Citrix Receiver session and the local workstation is disabled.
• Sound is disabled to help ensure better bandwidth.
• Microsoft Internet Explorer Internet settings are configured by SAP and disabled for users.

3.5 LOGGING OFF
At the end of your training day, log off by performing these steps:
1. Click on Log off in the Start menu of the Citrix Receiver desktop.
2. Log off the Citrix Receiver training landscape screen by clicking on the drop-down menu next to your username located at the top of the page.

Note: The system will disconnect sessions that are inactive for several hours.
4 Troubleshooting

Detailed guidance and solutions for resolving technical issues are available at https://access.sap.com/Home/Faq.

Note: If you encounter issues related to network connection, contact the IT administrative team of your hosting location first for problem analysis, testing, and resolution.

The instructor will report issues that the class experiences in case support is required from the SAP Education organization during the training event.

With any support requests, SAP requires the following information:

• The training event ID number provided by the instructor, or the course name and collection number
• Citrix Receiver session information including server, username, session, and client details found by clicking on the Start menu and the WTS Session Info link
• E-mail address and/or telephone number of the instructor or a contact person at the hosting location
• A detailed description of the problem so it can be recreated by the support representative
5 Readiness Checklist

Are you ready to start your SAP training?

1. Does your computer meet all operating system requirements? (See section 1)
2. Do you have the required browser installed on your computer with the necessary configuration? (See section 1.2.)
3. Have you tested your performance from the hosting location where you will be connecting to the SAP training infrastructure? (See section 2.)
4. Are you familiar with working on an SAP training system? (See section 3.)

If you answered “yes” to these questions, you are all set. When you are finished working on your training system, please do not forget to log out properly, as described in section 3.5.

Enjoy your training experience with SAP.