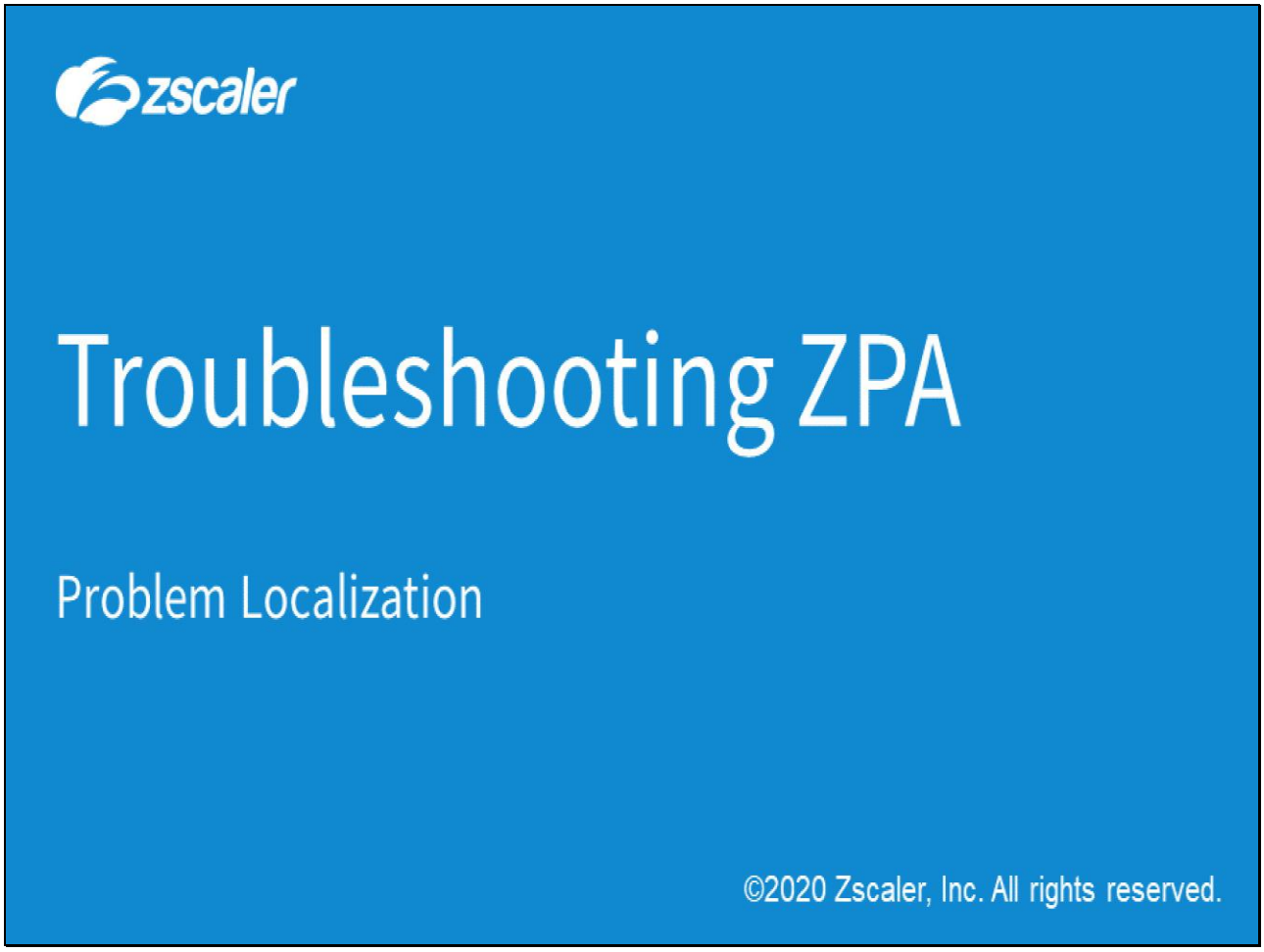
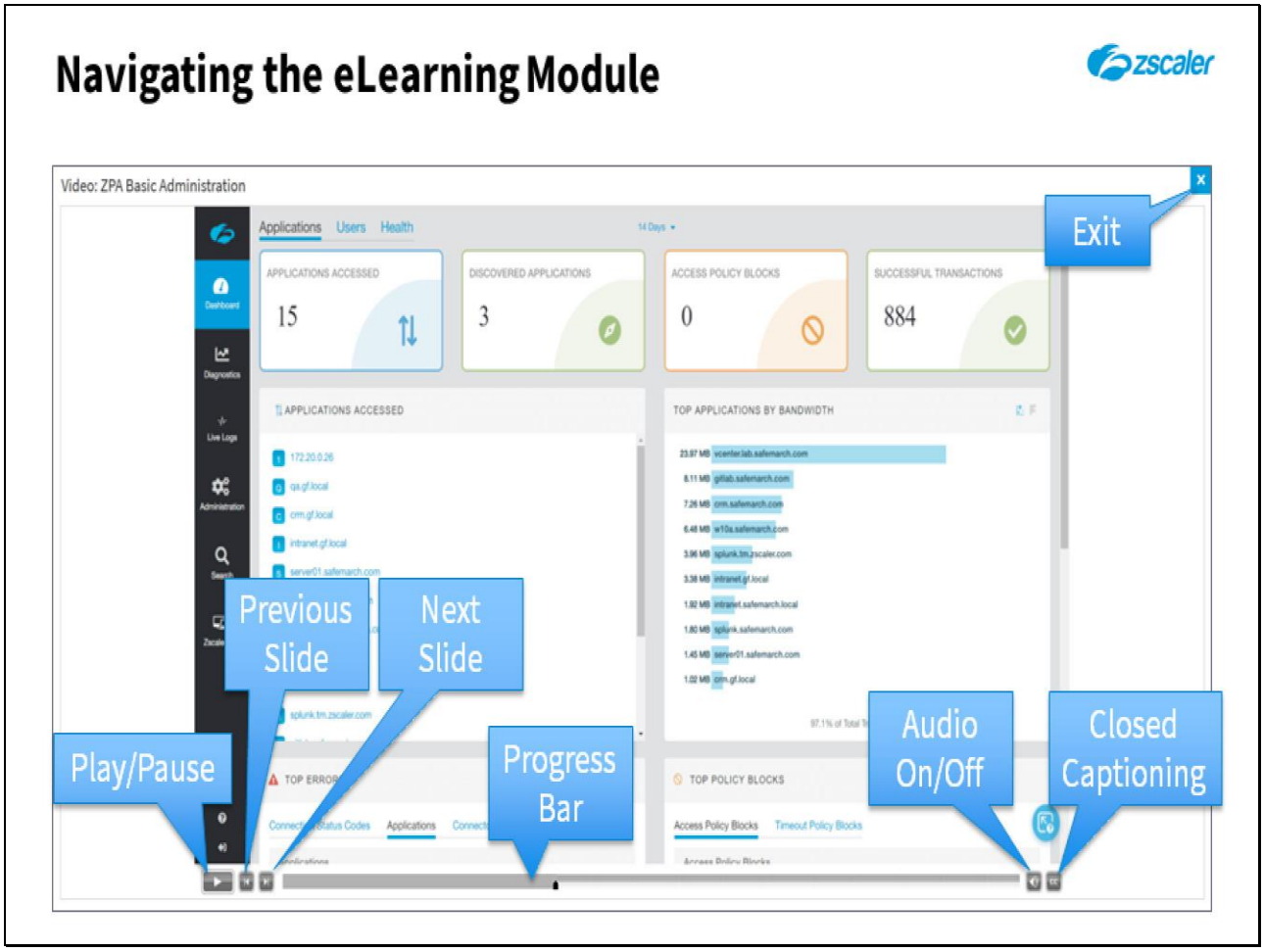
Slide 1 - Troubleshooting ZPA



Slide notes

Welcome to this training module on localizing problems when troubleshooting end user ZPA connectivity issues.

Slide 2 - Navigating the eLearning Module

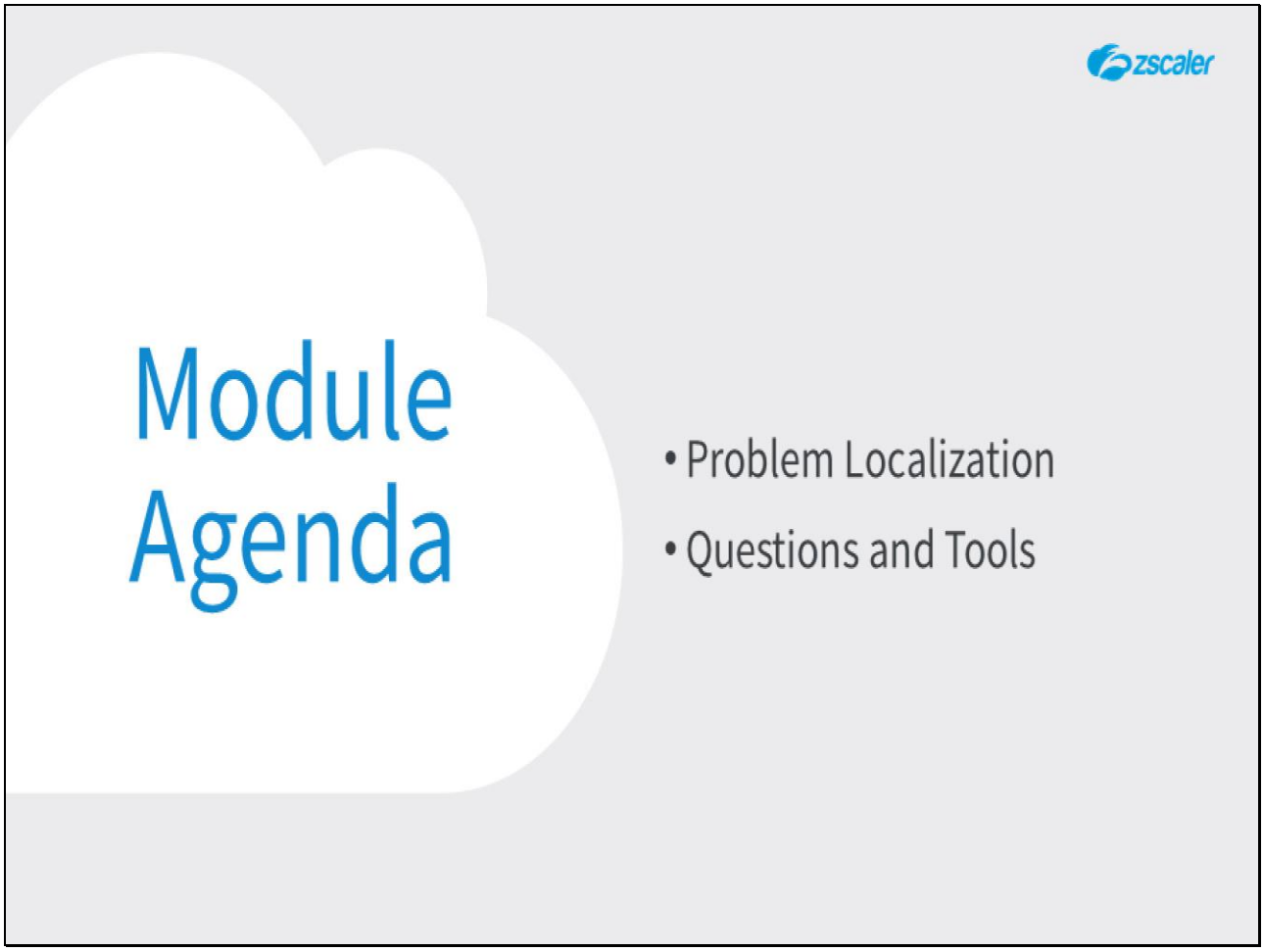


Slide notes

Here is a quick guide to navigating this module. There are various controls for playback including **play** and **pause**, **previous**, and **next** slide.

You can also mute the audio or enable Closed Captioning which will cause a transcript of the module to be displayed on the screen. Finally, you can click the **X** button at the top to exit.

Slide 3 - Module Agenda



Slide notes

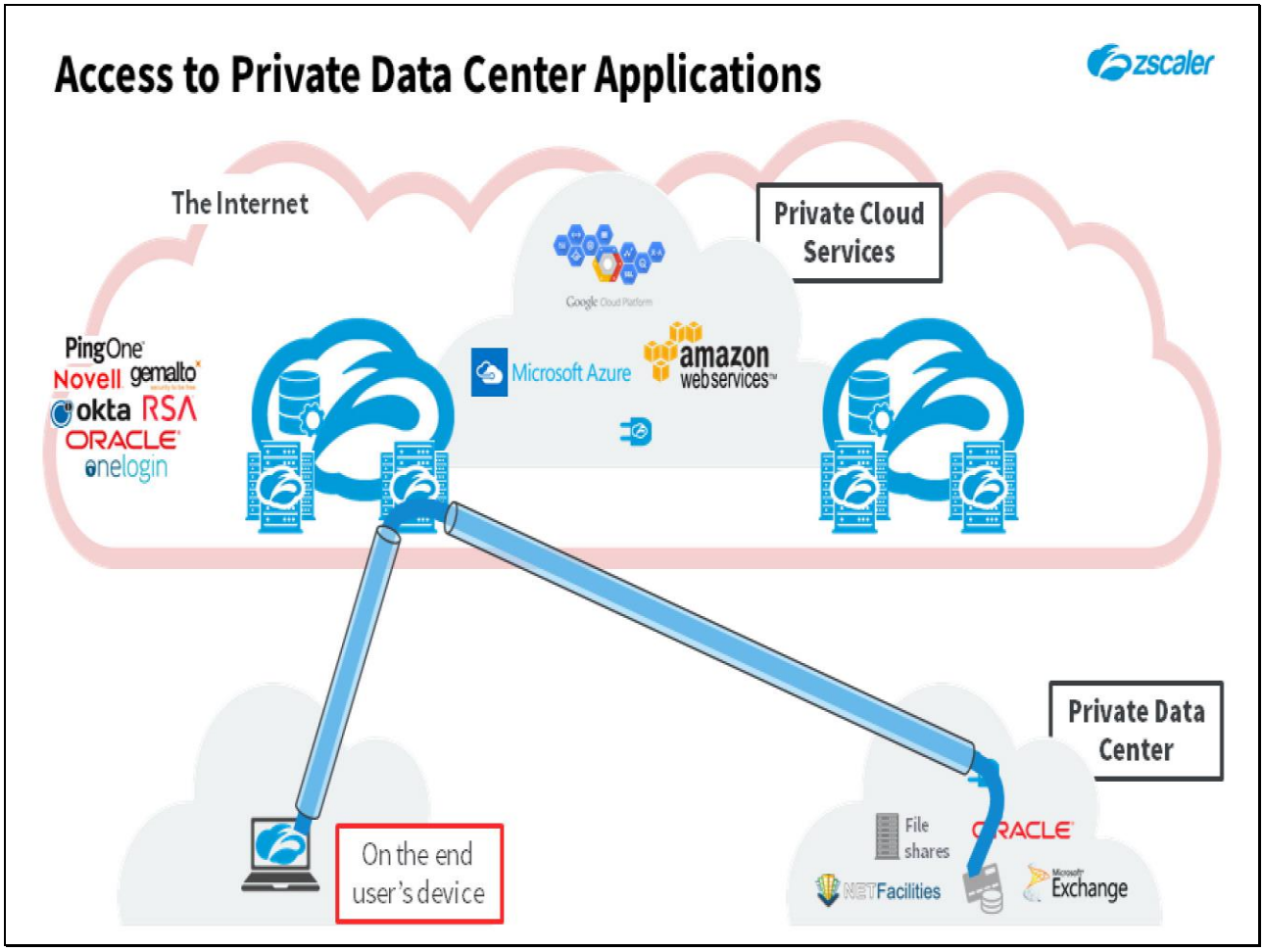
In this module, we will cover: The process of localizing a problem to identify the failure domain; and the questions and tools that can help to narrow down the precise location of a problem.

Slide 4 - Problem Localization

Slide notes

In the first section, we will look at potential problem locations, and the process of narrowing down exactly where a problem is occurring.

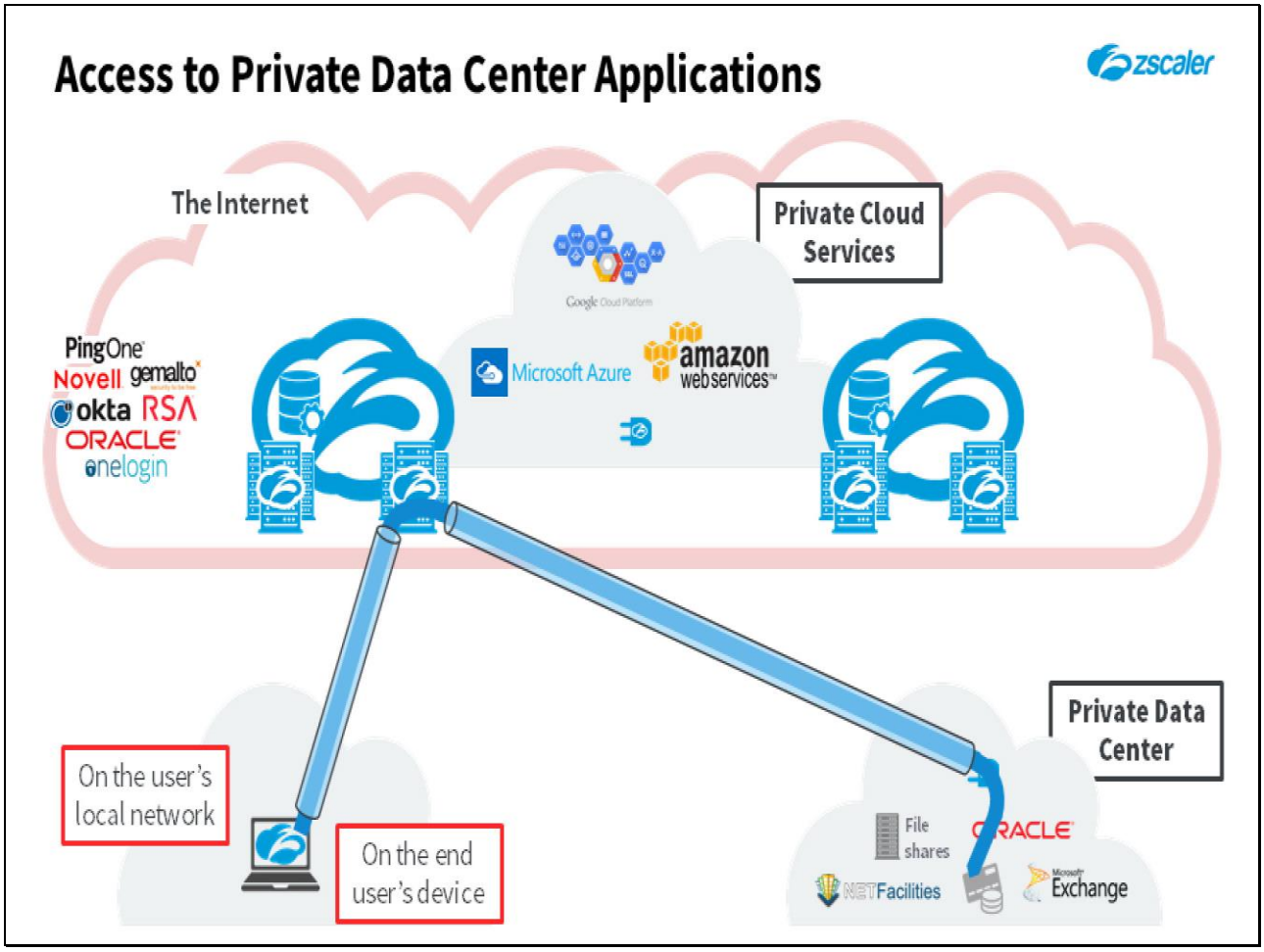
Slide 5 - Access to Private Data Center Applications



Slide notes

With the Zscaler Private Access solution, there are many places where a problem can potentially arise. There may be fundamental problems on the end user's client device, possibly Operating System related, or with the Zscaler Client Connector.

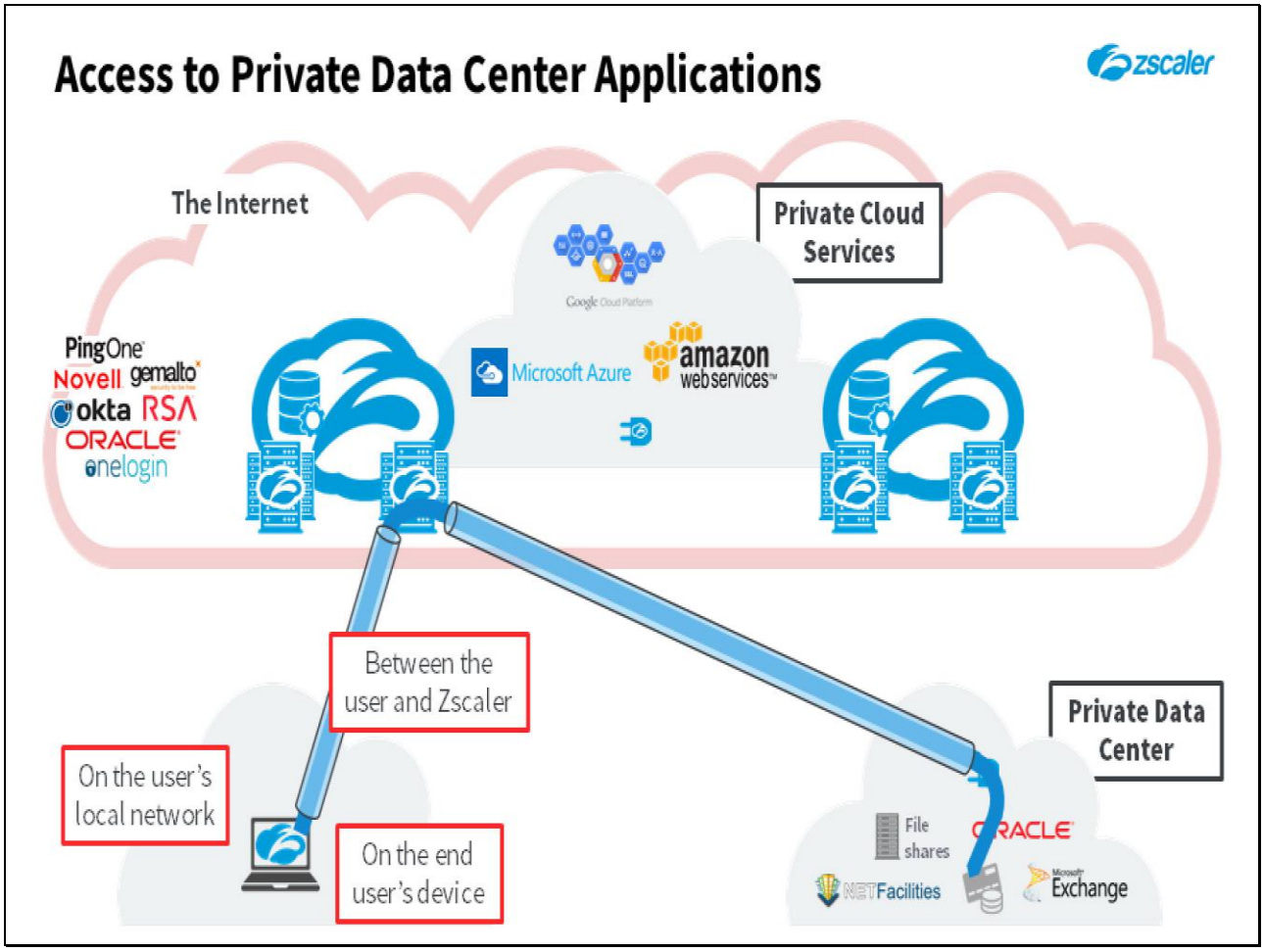
Slide 6 - Access to Private Data Center Applications



Slide notes

The end user may have basic connectivity problems on the local network.

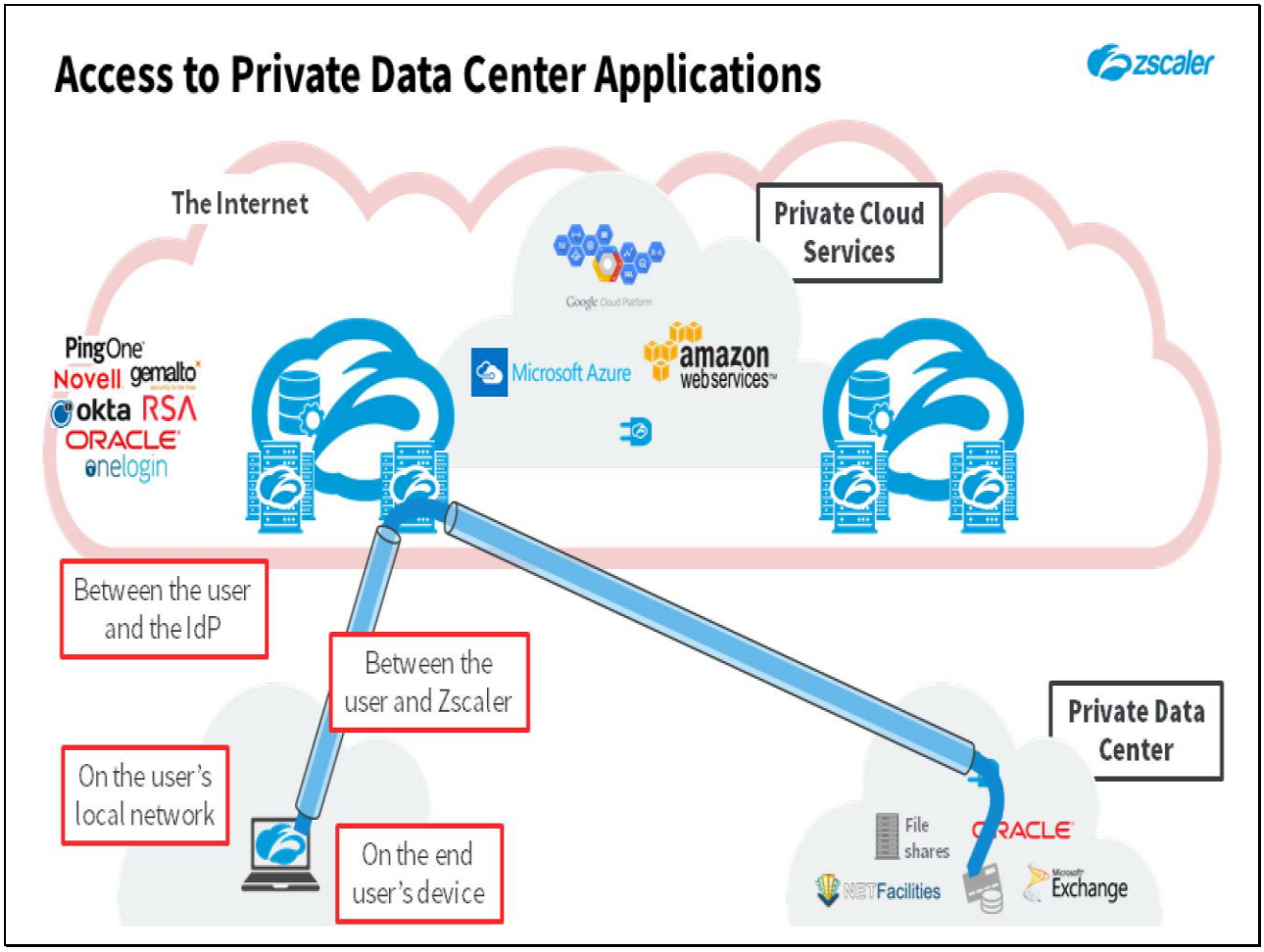
Slide 7 - Access to Private Data Center Applications



Slide notes

There may be problems between the end user's device and Zscaler.

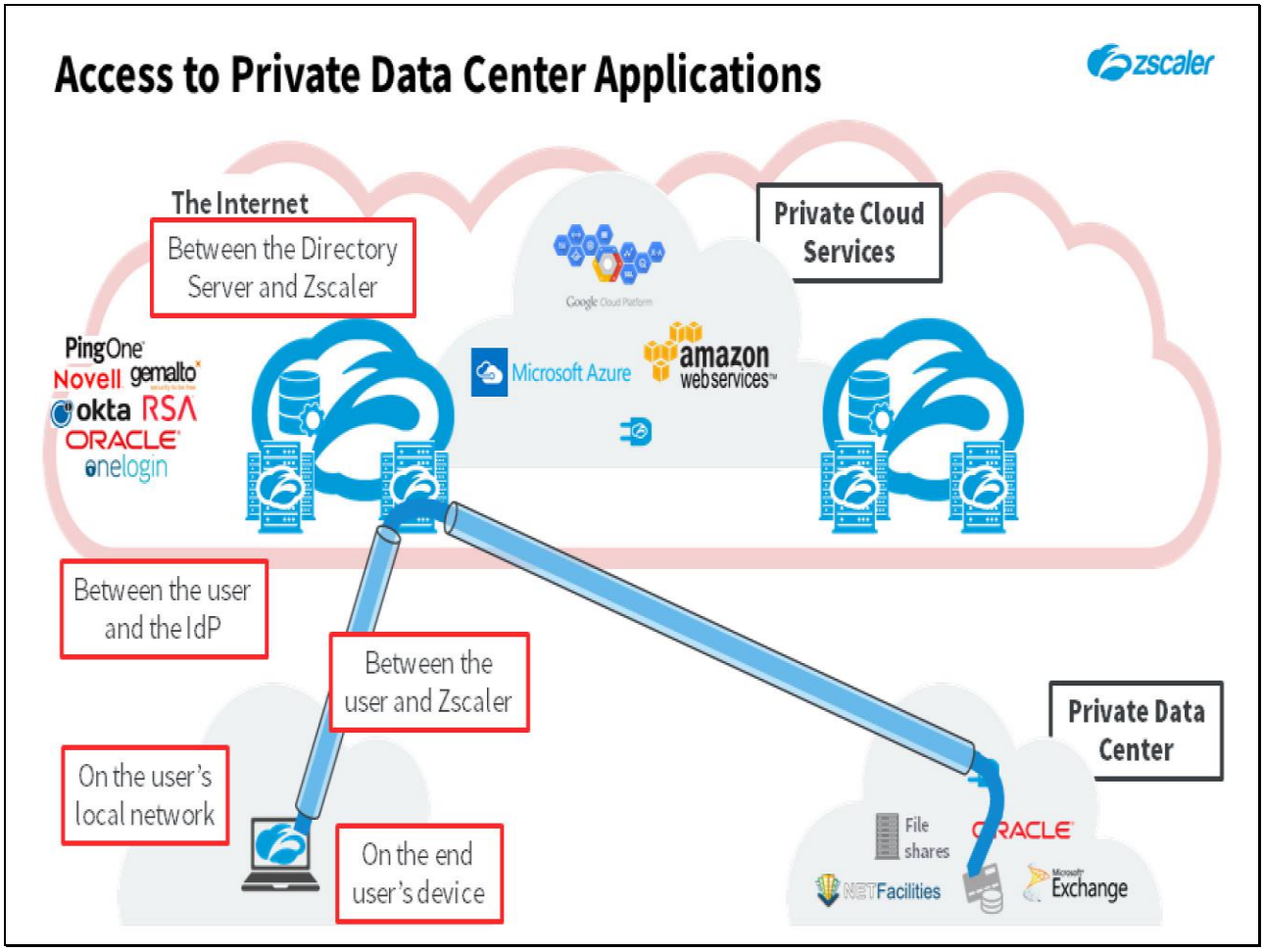
Slide 8 - Access to Private Data Center Applications



Slide notes

There may be problems on the connection between the end user and the authentication service or IdP.

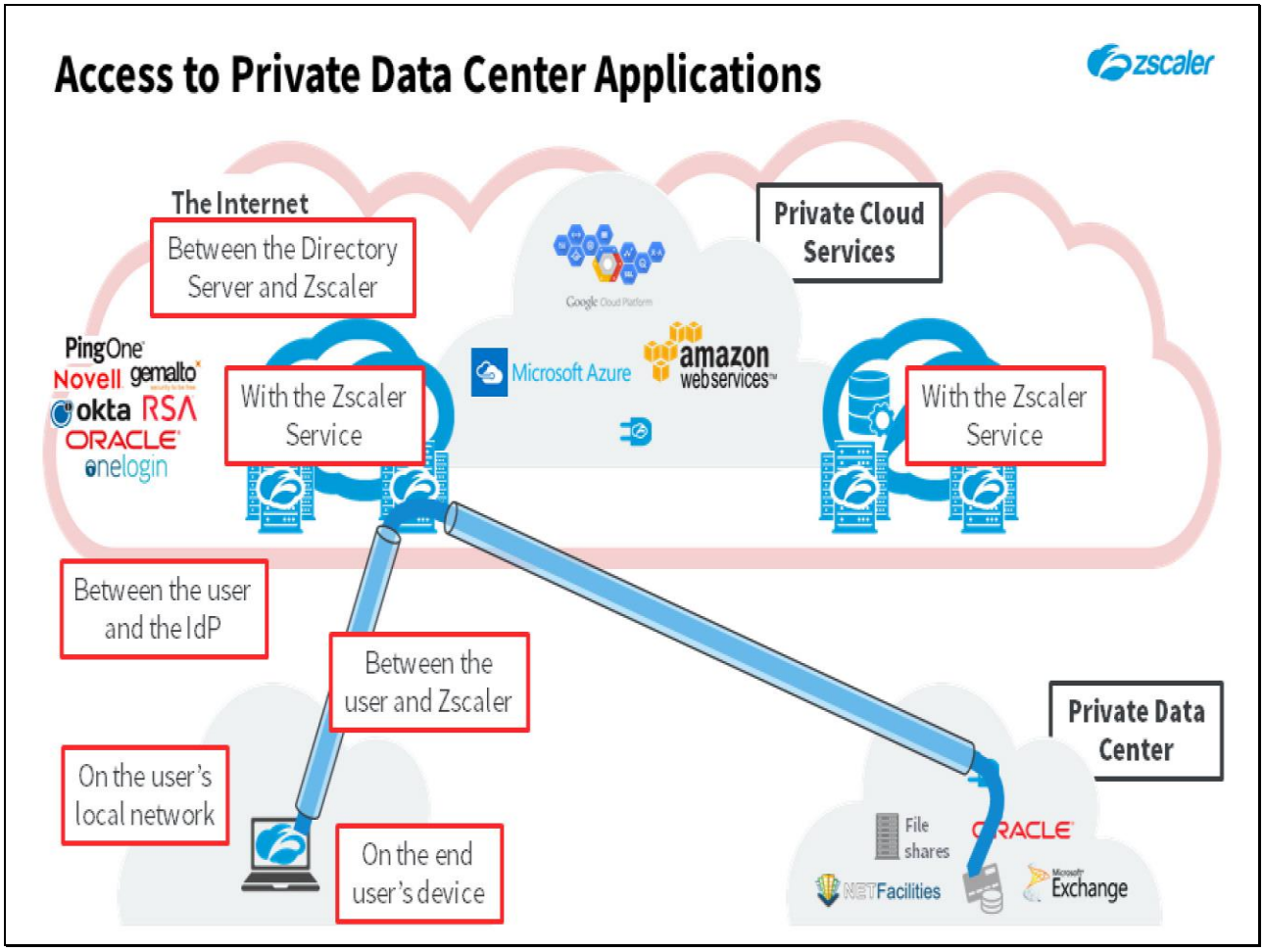
Slide 9 - Access to Private Data Center Applications



Slide notes

Or there can be problems between the authentication service and Zscaler.

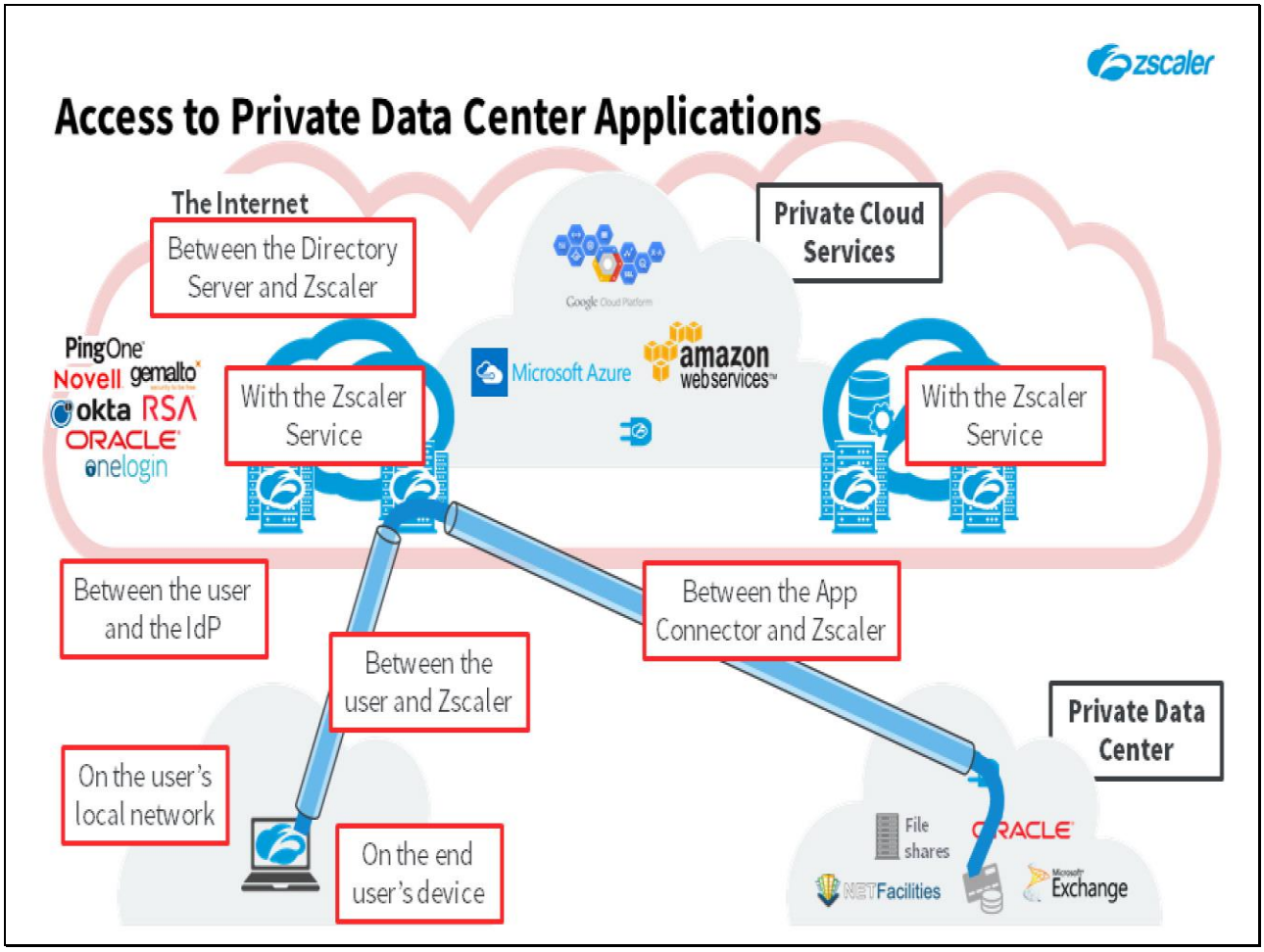
Slide 10 - Access to Private Data Center Applications



Slide notes

There may be problems with the Zscaler service itself, either infrastructure issues, or misconfigurations of settings or policies.

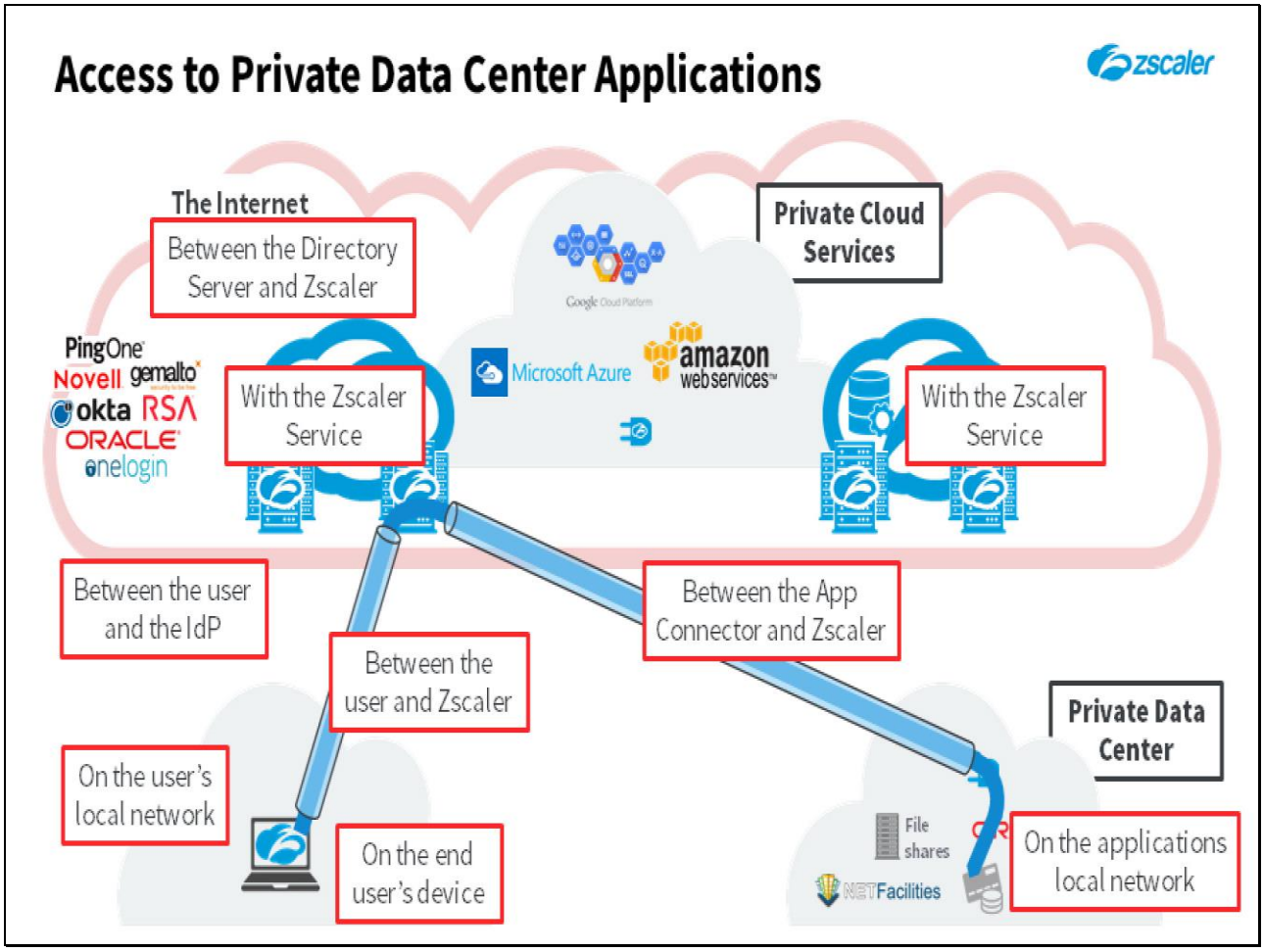
Slide 11 - Access to Private Data Center Applications



Slide notes

Problems can arise between the App Connectors and the ZPA infrastructure.

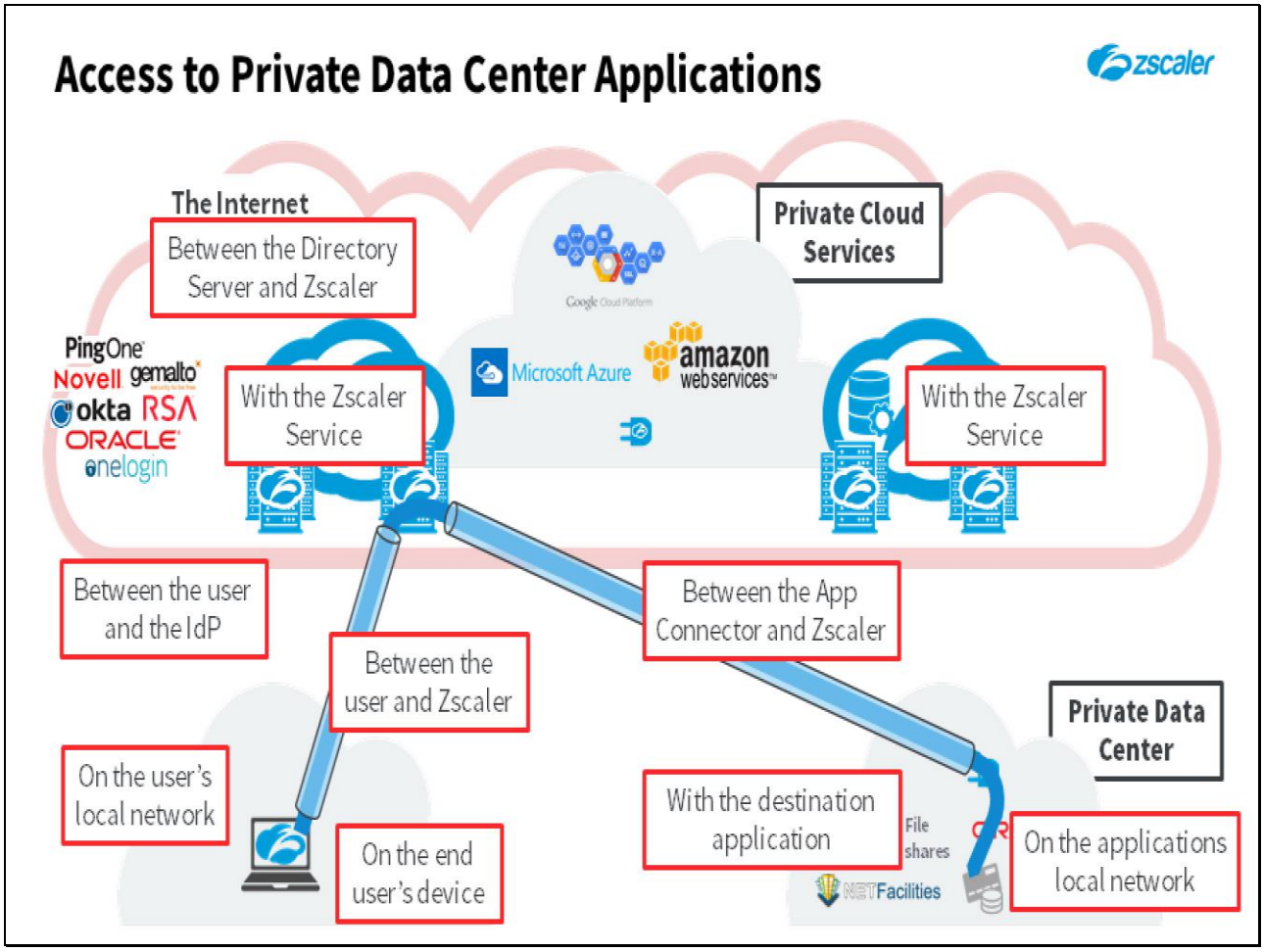
Slide 12 - Access to Private Data Center Applications



Slide notes

There can be problems on the destination network, between the App Connector and the target application.

Slide 13 - Access to Private Data Center Applications



Slide notes

Or, the target application may be experiencing an outage, or may be misconfigured for the users in question.

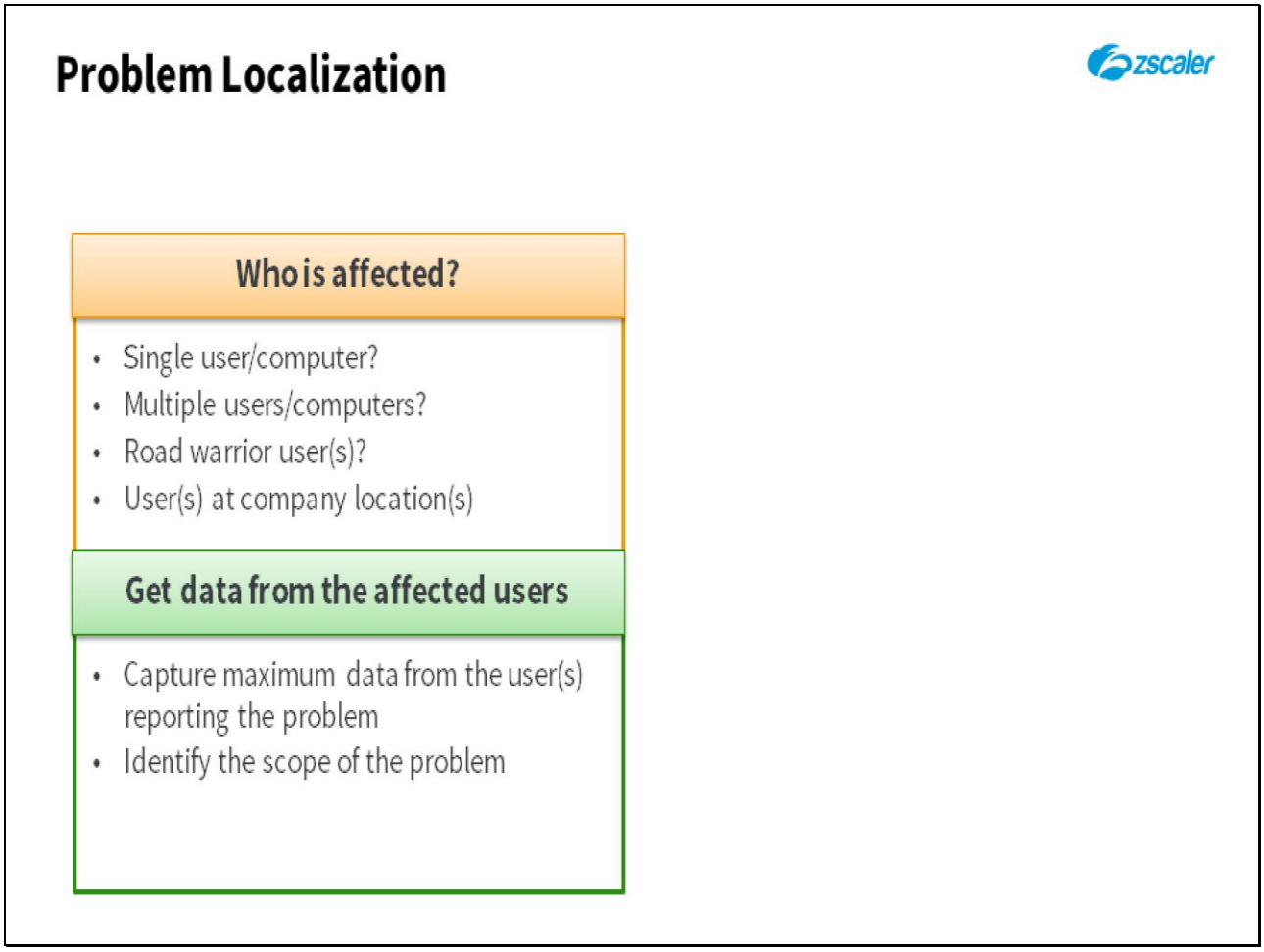
Slide 14 - Problem Localization

Slide notes

To narrow down the scope of the problem, and effectively identify the true location of the issue, you must identify precisely who is affected by it.

Is it an issue for a single user, or a single client machine (or type of machine)? Are multiple users or machines affected? Does the problem only affect road warriors? Is it only a problem for users connecting from fixed locations? …or does it affect all users regardless of connectivity?

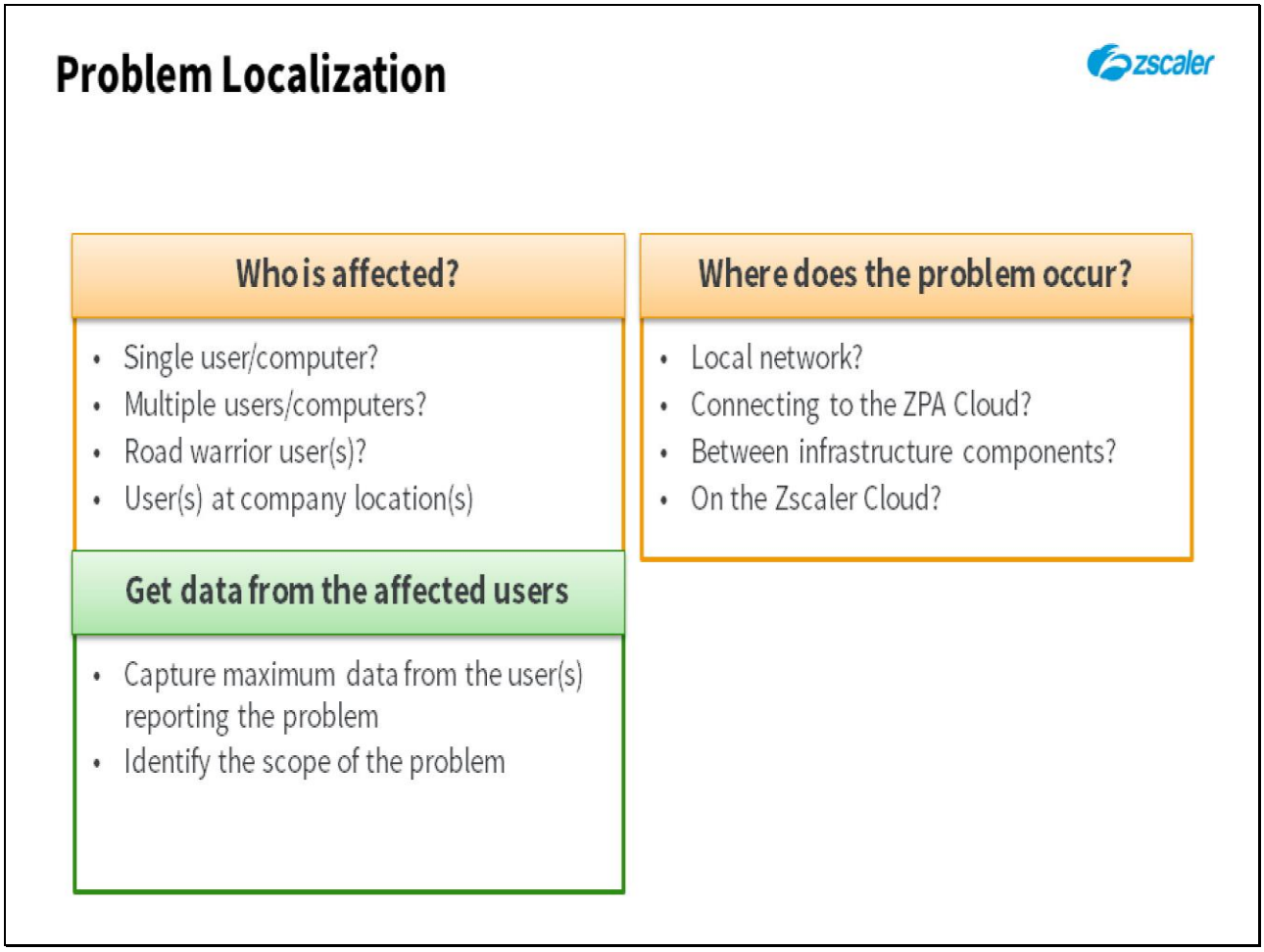
Slide 15 - Problem Localization



Slide notes

The best way to identify the scope of the issue is to capture the maximum data from the affected end users. This may require you to access their client devices remotely to see the issue with your own eyes, and to capture data directly.

Slide 16 - Problem Localization

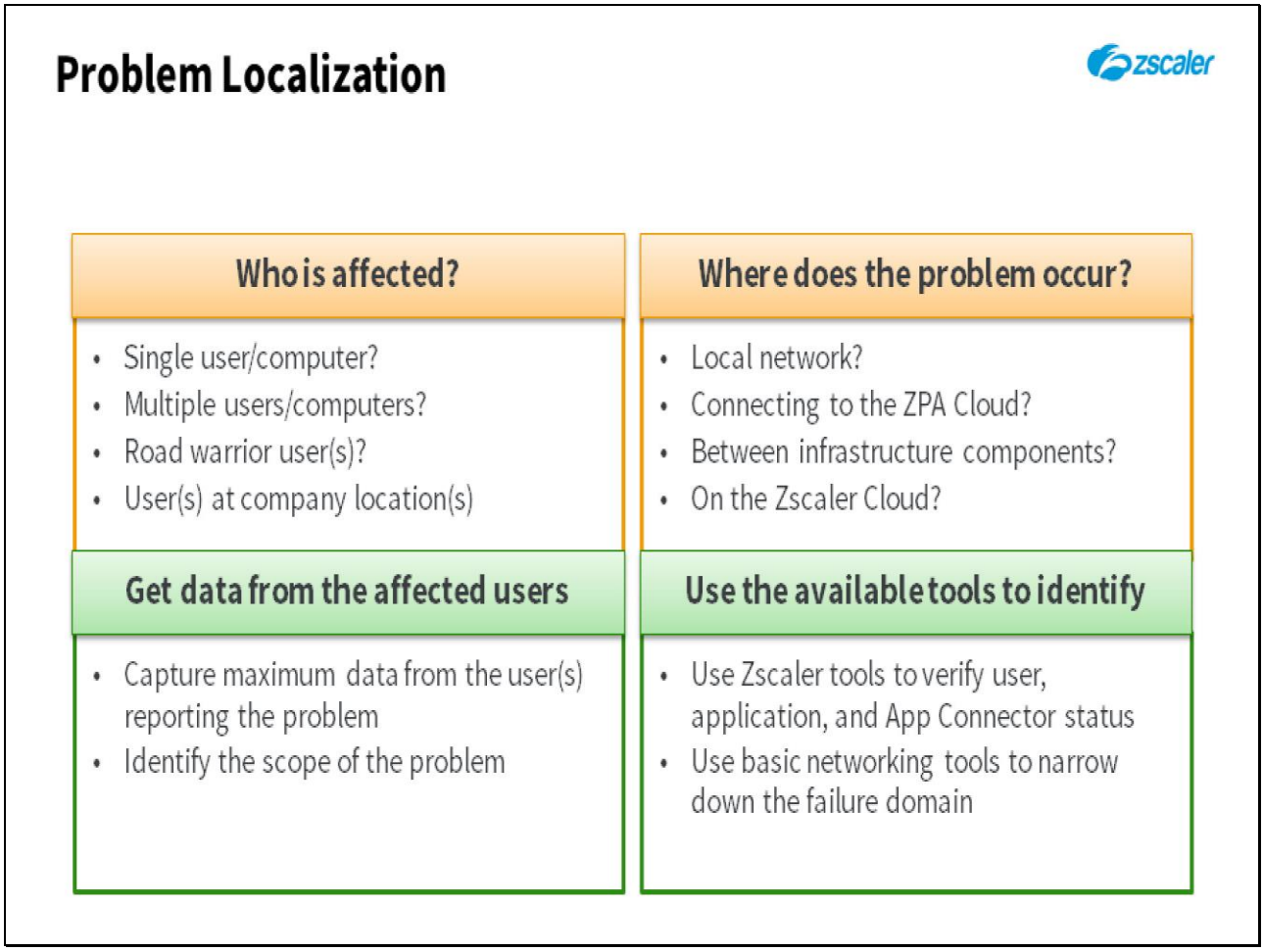


Slide notes

Having figured out who is affected by the problem, you then need to start homing in on the precise location of the problem.

Is it a local issue? Is it an uplink problem to the ZPA Cloud? Are there infrastructure components implicated (such as the SAML IdP)? Or is it an issue with the Zscaler service?

Slide 17 - Problem Localization



Slide notes

Here you will need to use the available tools, and a process of trial and error to identify the failure domain. This may require you to access the ZPA admin portal to view data from the **Dashboards**, or the **Diagnostics** page.

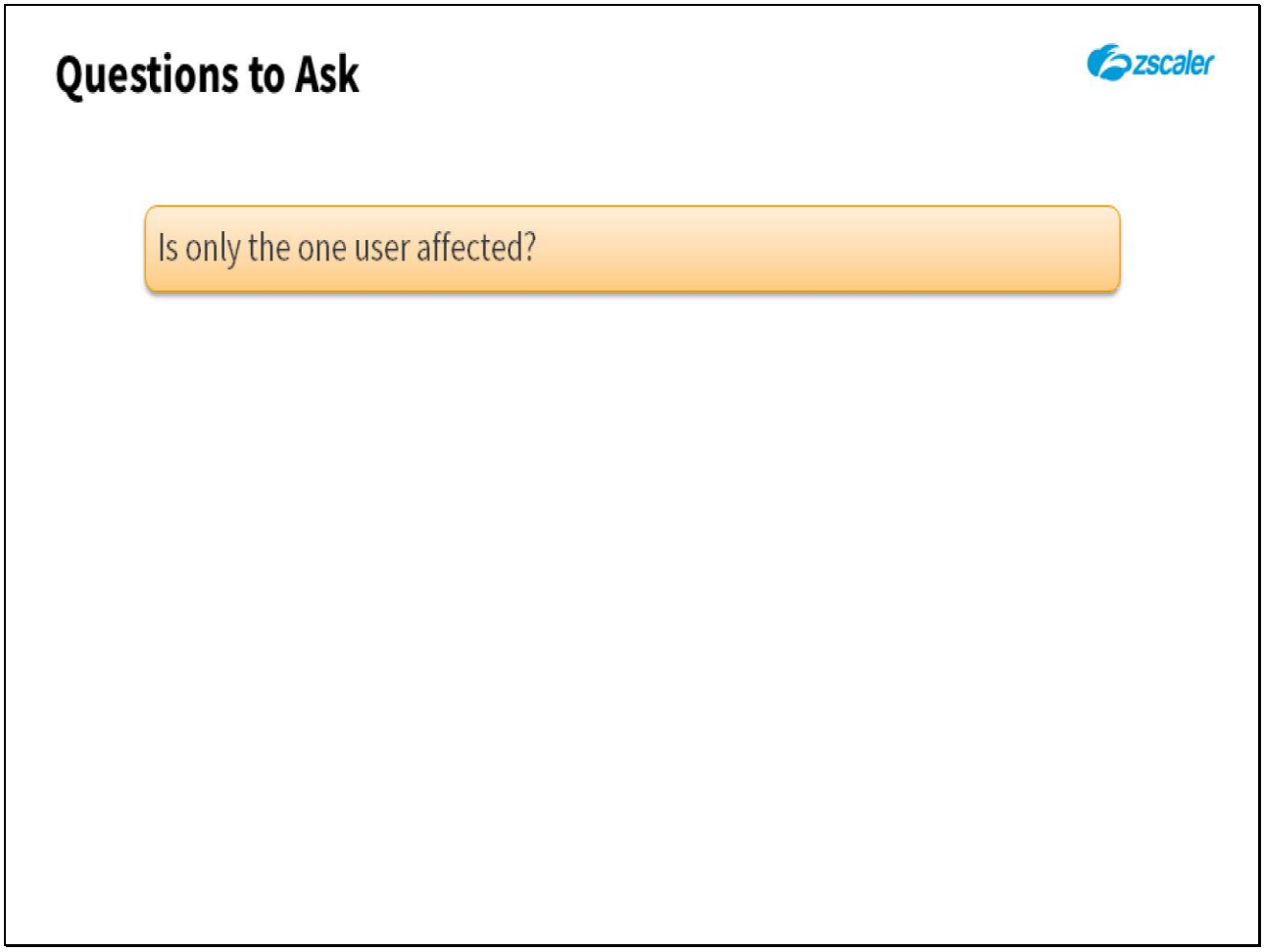
You may also need to use basic network troubleshooting tools such as **ping** and **traceroute**, either on the user's network, or that of the target application, to narrow down the failure domain.

Slide 18 - Questions and Tools

Slide notes

In the next section, we will look at some of the questions to ask, and the tools to use to effectively narrow down the failure domain.

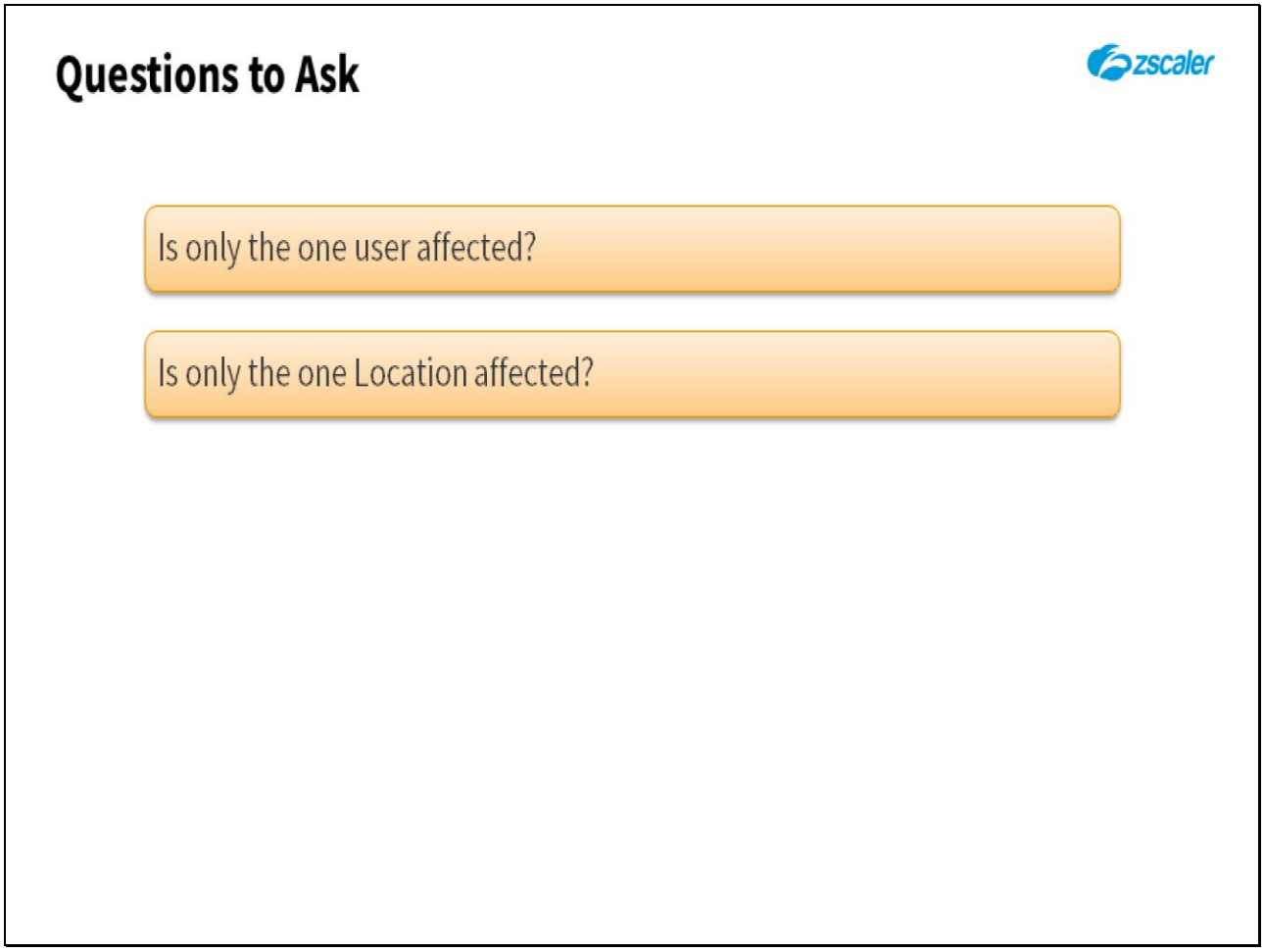
Slide 19 - Questions to Ask



Slide notes

Some questions to ask an end user calling in to report a problem, include: Whether they are the only one affected by the problem, …or do they know of others with the same issue?

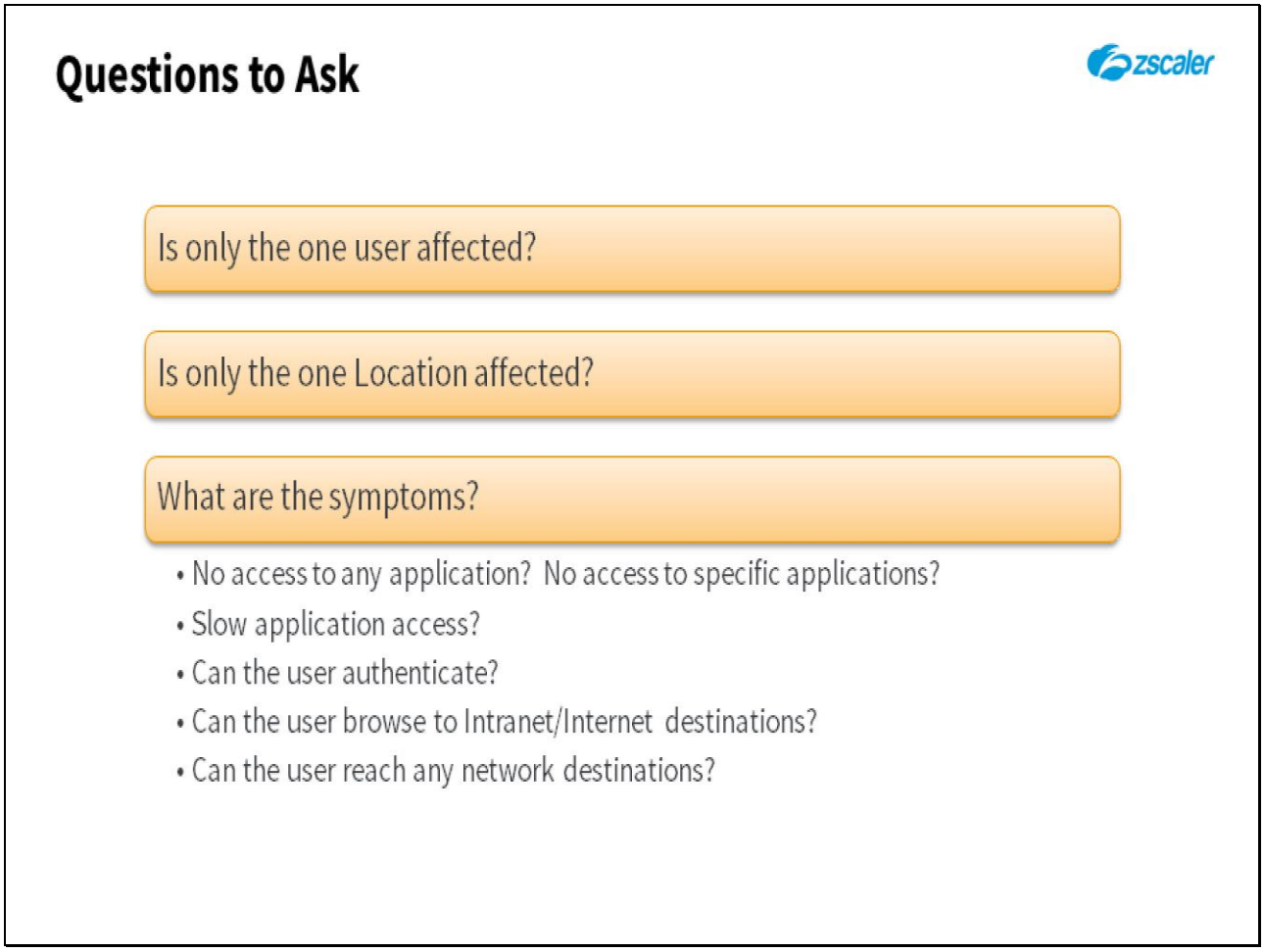
Slide 20 - Questions to Ask



Slide notes

Does the problem only happen at the one location? Or is it an issue from several, or even all locations? …or is it only a problem for Road Warriors ?

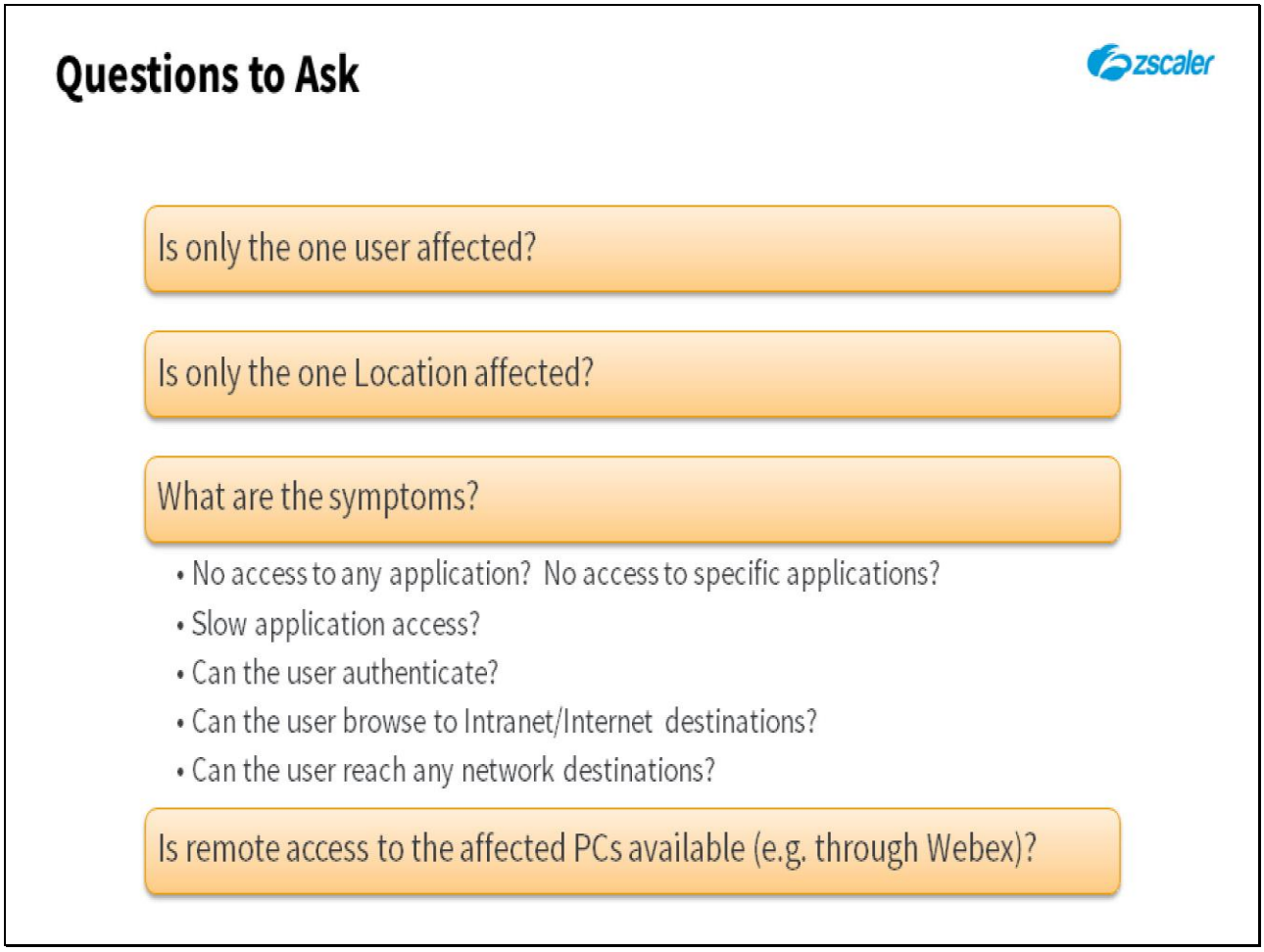
Slide 21 - Questions to Ask



Slide notes

What exactly are the symptoms? No access to any application at all? Access only to some of the applications? Slow connectivity, or response from some, or all applications? Is the user able to authenticate? Can the user browse to Intranet or Internet destinations? Can the user reach any network destination at all?

Slide 22 - Questions to Ask

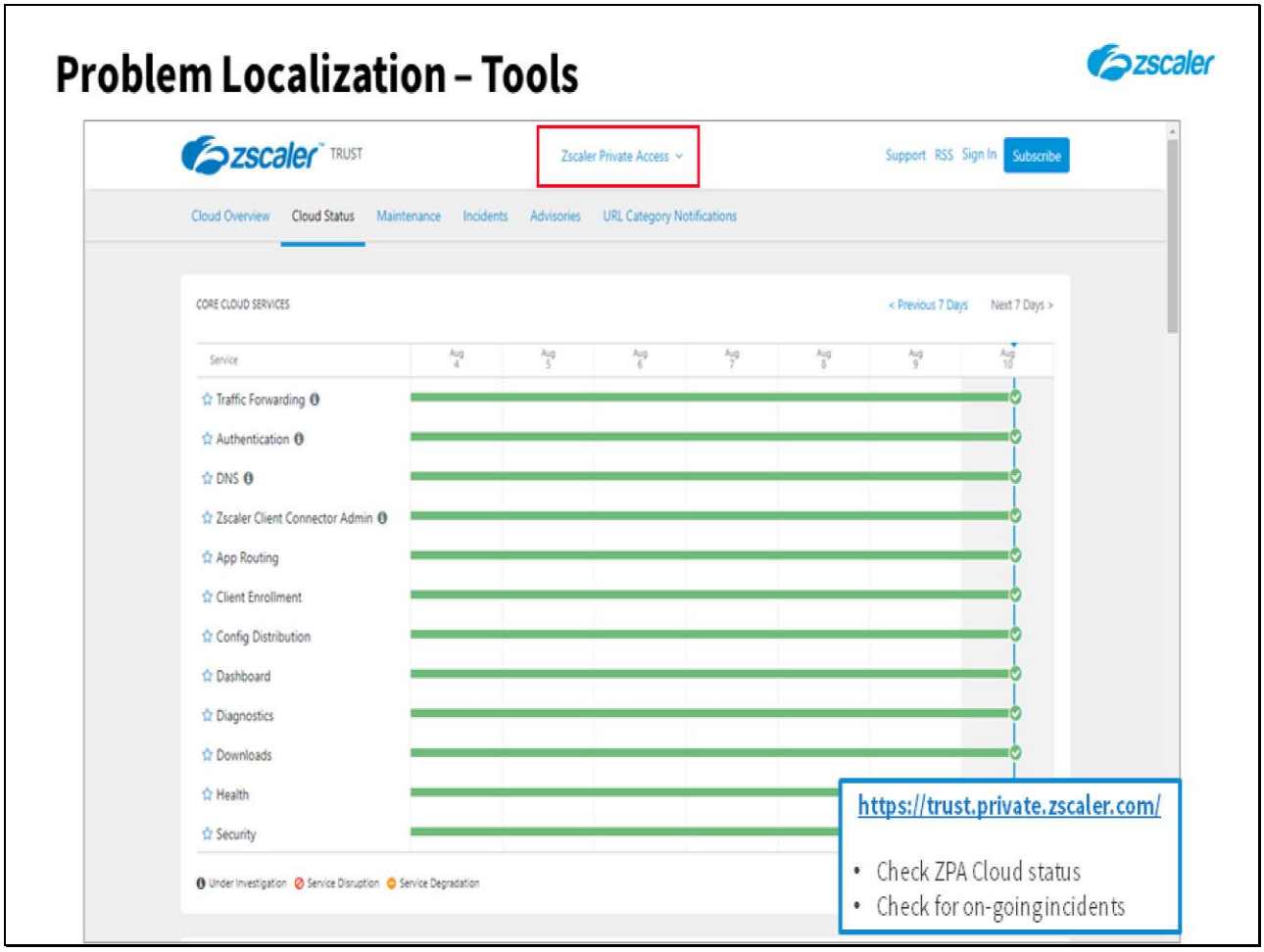


Slide notes

There is nothing that beats actually seeing the problem for yourself. So if at all possible arrange to get onto an affected device, either physically, or using some remote collaboration tool such as Webex.

Ideally you should be able to take over control of the machine, to run tests, and possibly install software, such as the Zscaler Analyzer tool.

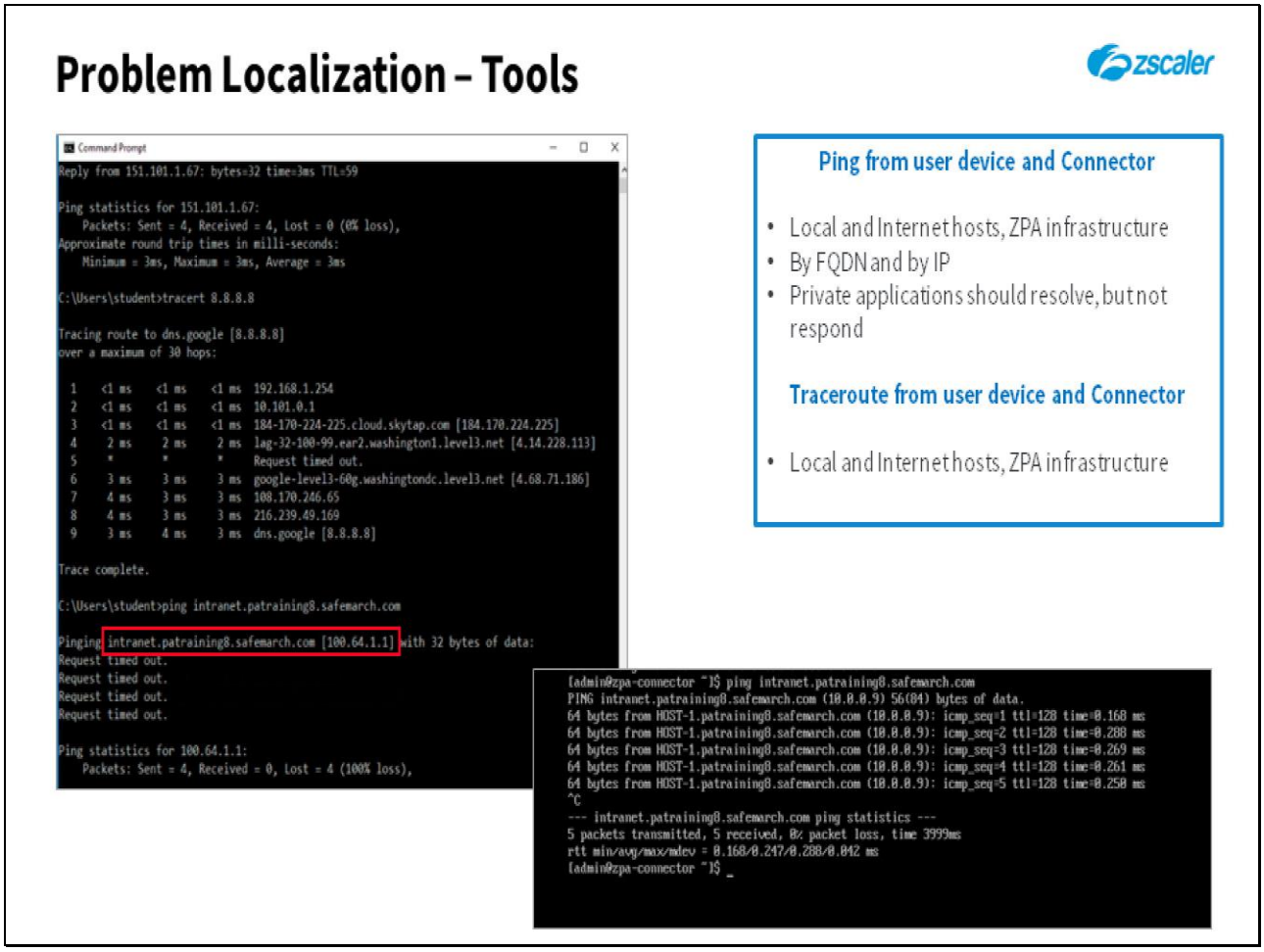
Slide 23 - Problem Localization – Tools



Slide notes

One of your first checks when an end user calls in with a problem should be the **Zscaler Trust site** for the ZPA Cloud, to check for known outages or known issues.

Slide 24 - Problem Localization – Tools



Slide notes

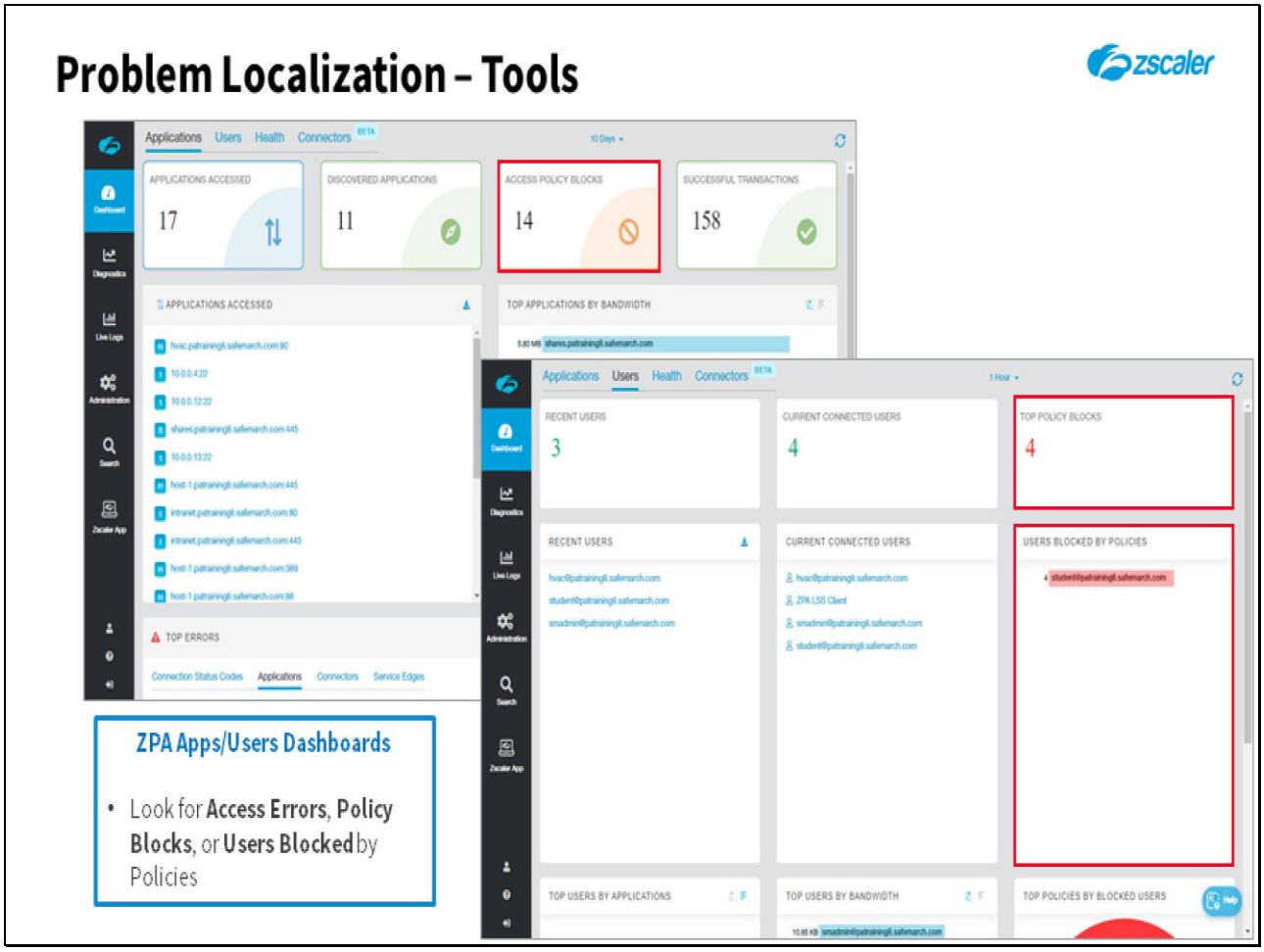
Do not neglect basic network connectivity tools such as a **ping**, both from the client device, and from the relevant App Connector. Test for responses from Intranet and Internet destinations, and from ZPA public network components. Also test using IP addresses and FQDNs (to verify that DNS is resolving OK).

Note that private applications accessible only by ZPA should resolve to a **100.64.0.0/16** IP address on the client device, but they will not respond to any pings.

Another basic network troubleshooting tool is to do a **traceroute** from the user's device, and from the appropriate App Connector. Once again, run the test against Intranet and Internet destinations, including key ZPA public infrastructure components.

If CLI access to the App Connector is not available, do these tests from a host device adjacent to it on the same subnet.

Slide 25 - Problem Localization – Tools

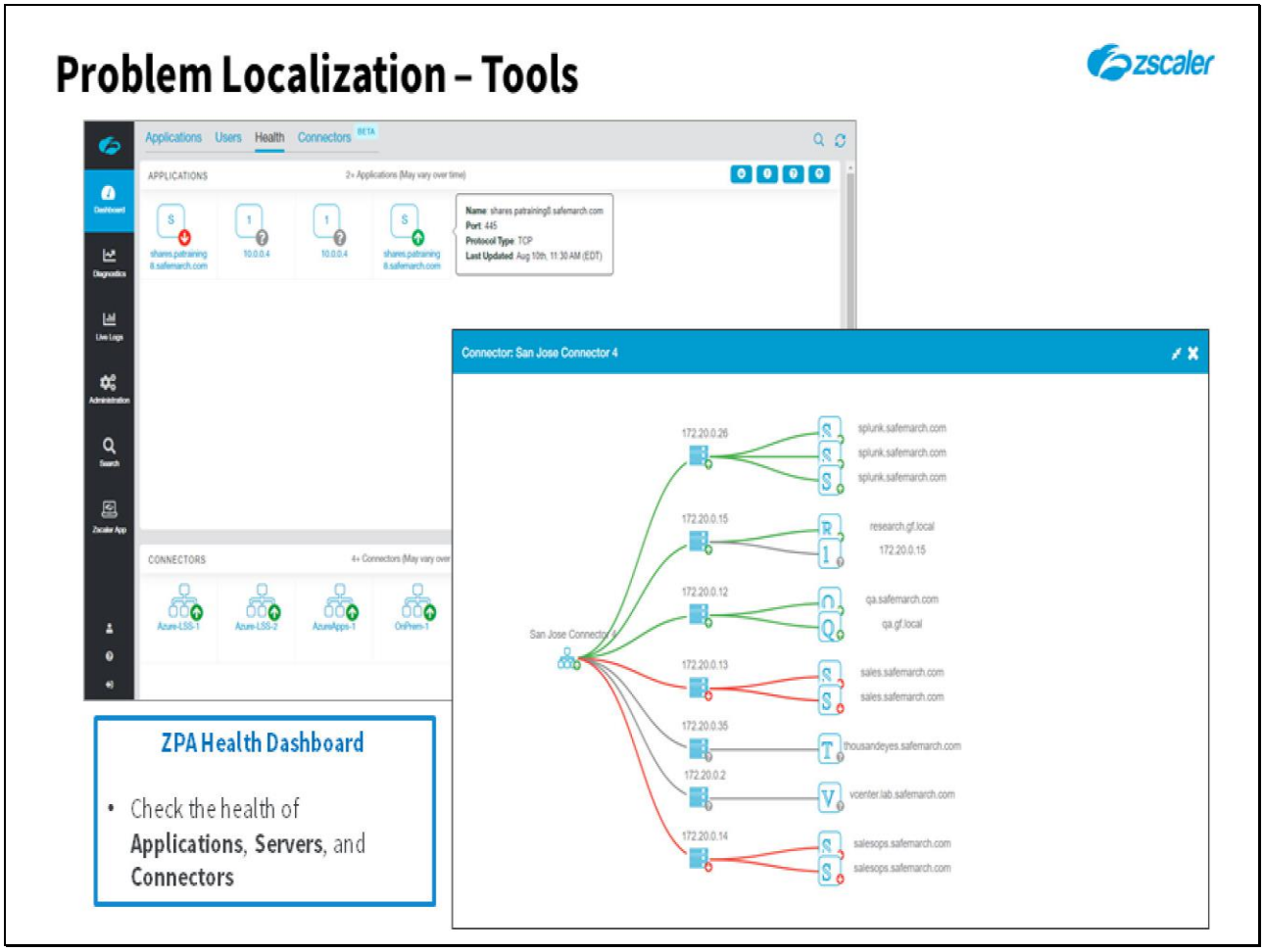


Slide notes

There are several ZPA-specific tools for troubleshooting available from the ZPA admin portal.

Check both the **Applications** and **Users** Dashboards looking for error messages relating to the user, or application(s) in question. Drill down as necessary to investigate the nature of any errors reported, or to view recent diagnostic activity.

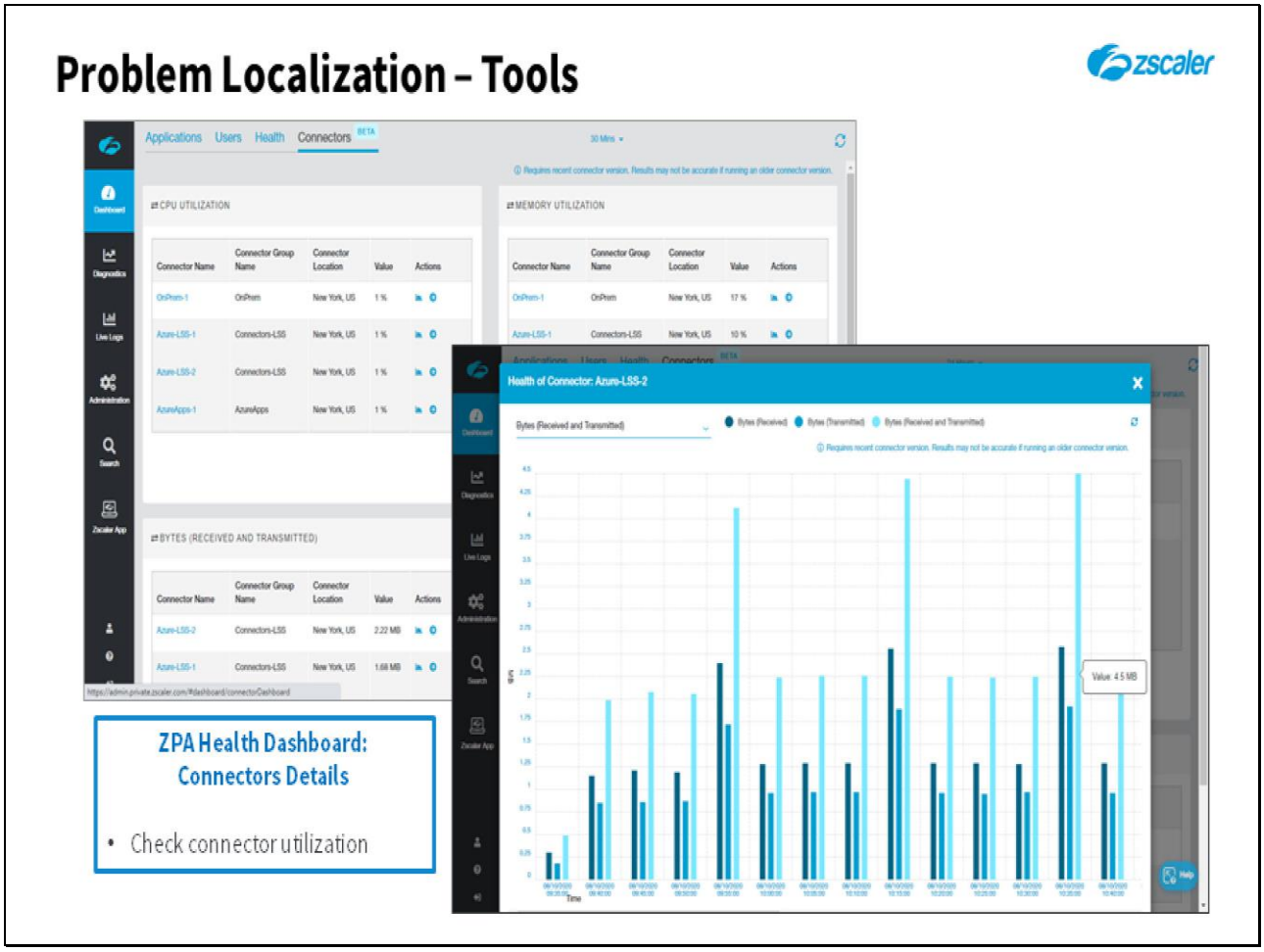
Slide 26 - Problem Localization – Tools



Slide notes

At the ZPA admin portal, check the **Health** Dashboard to understand the status of the various infrastructure components; Applications, Servers, and Connectors. Drill down as necessary to investigate the nature of any errors reported, or to view recent diagnostic activity.

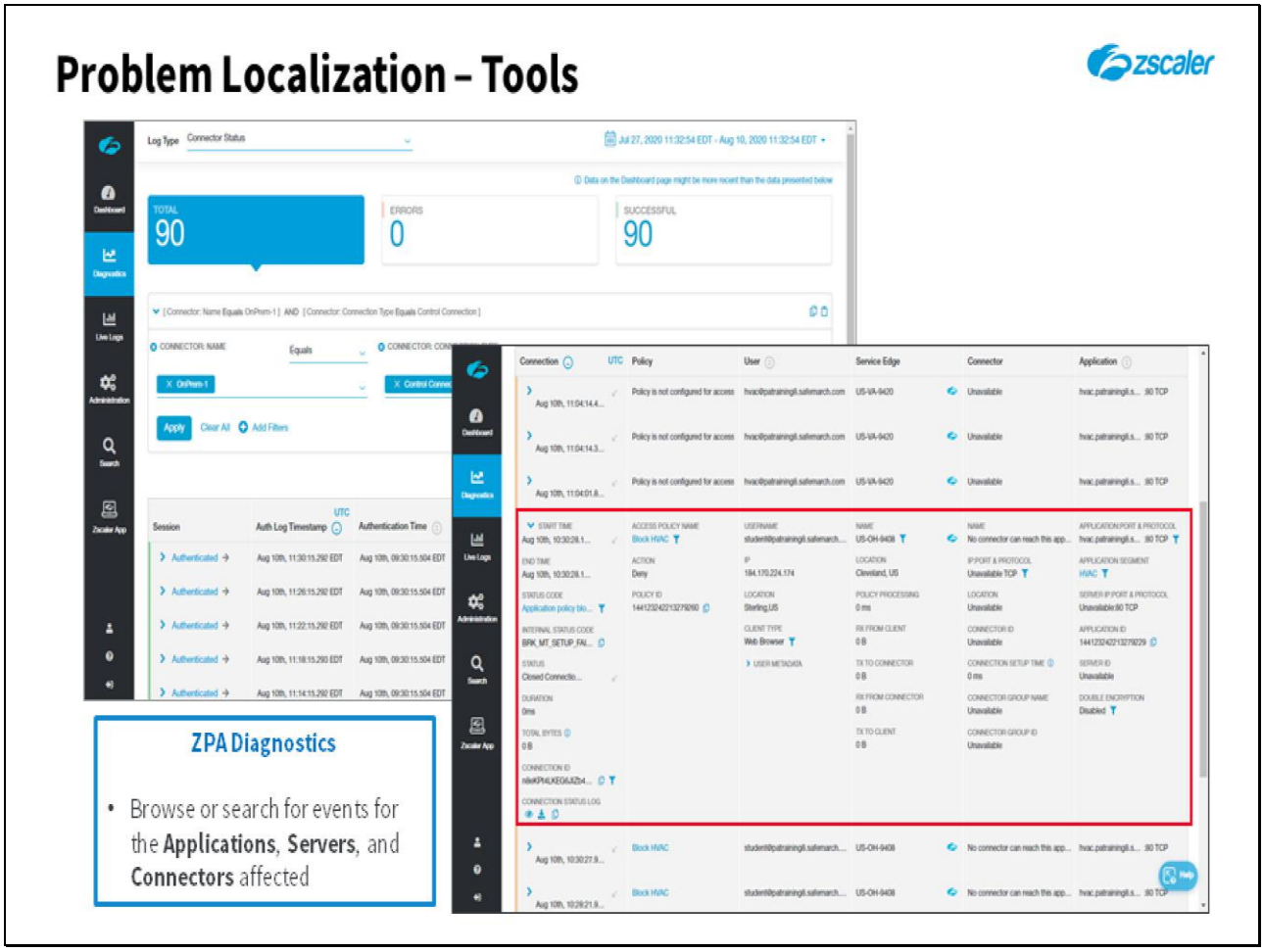
Slide 27 - Problem Localization – Tools



Slide notes

The **Connectors** dashboard includes a number of widgets that display detailed health information about all App connectors in an organization, including CPU and memory utilization, Bytes received and transmitted, Mtunnel count and health charts.

Slide 28 - Problem Localization – Tools

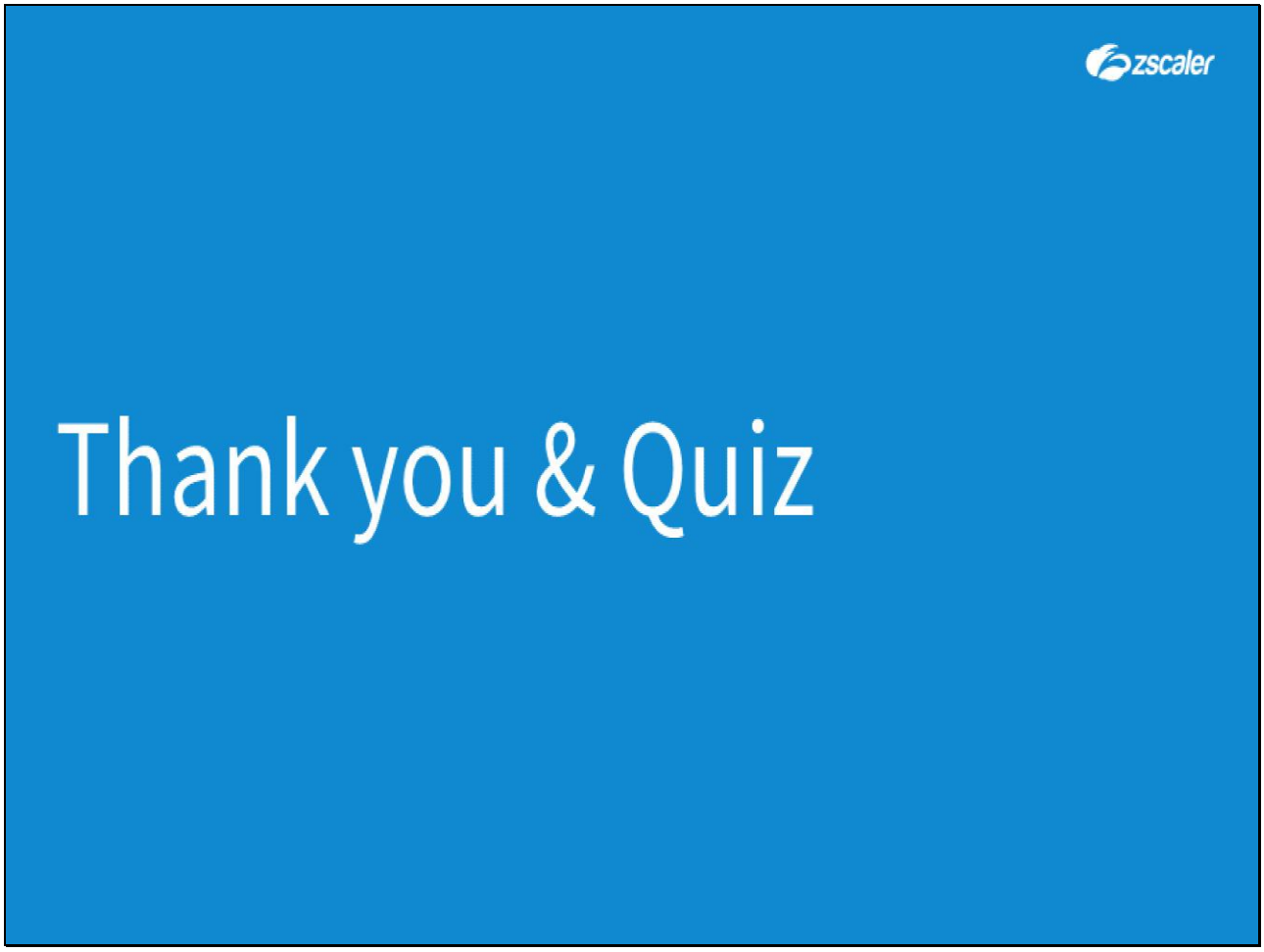


Slide notes

The ZPA admin portal also contains a **Diagnostics** page, where you can filter and search log messages by the **User**, **Application**, and **Connector** in question.

This is a powerful interface for researching and investigating problems with the ZPA environment, and includes both real-time, and historic views of the log messages.

Slide 29 - Thank you & Quiz



Slide notes

Thank you for following this training module on localizing problems, we hope this module has been useful to you and thank you for your time.

What follows is a short quiz to test your knowledge of the material presented during this module. You may retake the quiz as many times as necessary in order to pass.