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Cloud APS Tutorial

Running AKCPro Server in the cloud

AKCPro Server (APS) is supported only on Windows. Therefore, when running it in the cloud, the cloud instance (Virtual Machine) would also need to be Windows-based.
In this guide we will provide instructions how to set up a cloud APS on AWS (Amazon Web Services).

After the AWS instance is set up, the client units need to use the APS VPN service to connect to it.
VPN is supported on SEC5 and sensorProbe+ units, and unsupported on sensorProbe units.
Important: sensorProbe+ units also require a separate VPN license.
AWS has a monthly fee for using its services.

Step-by-step details for setting up APS in the cloud and connecting a client unit to it over VPN:

Step 1:

Create an AWS user account.

We recommend to use AWS Lightsail as it has better pricing, and easy to set up for new customers. If more capacity/features are needed, later you can switch to the more advanced AWS EC2.

About AWS Lightsail:
https://aws.amazon.com/lightsail/
https://lightsail.aws.amazon.com/ls/docs/en_us/articles/getting-started-with-amazon-lightsail

Step 2:

Create a new instance (cloud server).

Hardware specs for the AWS instance:
1-2 CPUs and at least 2 GB RAM, for example the **t3a.small** type (2 CPU, 2 GB RAM).
It’s recommended to use 4 GB RAM (t3a.medium), if the VM will run any other applications besides APS.

For running APS we recommend using *Windows Server 2012 R2* OS and not the Server 2016 or 2019 versions, as these are using much more RAM and APS doesn’t use the extra features provided by newer Windows Server versions.
If you would still choose Windows Server 2016 or 2019 then the minimum RAM requirement is 4 GB+ but 6-8 GB recommended.

You should select a geographical region close to your location for better performance.

AWS Lightsail getting started guide, how to create an instance and how to connect to it:
https://lightsail.aws.amazon.com/ls/docs/en_us/articles/get-started-with-windows-based-instances-in-lightsail

Details on AWS Windows Server 2012 R2 instances and pricing estimation:
https://aws.amazon.com/marketplace/pp/B00KQOWCAQ

Step 3:

Assign a static IP address to the newly created AWS instance. This will be necessary for using the VPN running on APS.

AWS Lightsail static IP configuration guide:
https://lightsail.aws.amazon.com/ls/docs/en_us/articles/lightsail-create-static-ip

After the IP is set up, connect to the instance through Remote Desktop and set up the basic settings as on a standard Windows installation (server name, timezone, customizations etc.).
Search and apply all Windows OS updates.
Reboot and check that the assigned fixed external IP is working on your cloud server – you can verify it in AWS Lightsail console and by connecting Remote Desktop.

Next set up the AWS firewall rules.

Important: edit the firewall rules in the AWS console, not inside Windows settings!

AWS Lightsail best practices and firewall configuration guide:
https://lightsail.aws.amazon.com/ls/docs/en_us/articles/best-practices-for-securing-windows-based-lightsail-instances

APS requires these firewall ports to be opened (some can be customized):

- Communication from the client units to the APS: **Port 5000 UDP & TCP**
- APS WebUI: **Port 8080 TCP** (HTTPS: port 8081 TCP), customizable
- APS VPN: **Port 1194 TCP**, customizable
- Communication from the APS to the client units: SNMP **Port 161 UDP**, customizable

AWS Lightsail has extensive online documentation, if you have any other questions regarding AWS configuration:
https://lightsail.aws.amazon.com/ls/docs/en_us/overview

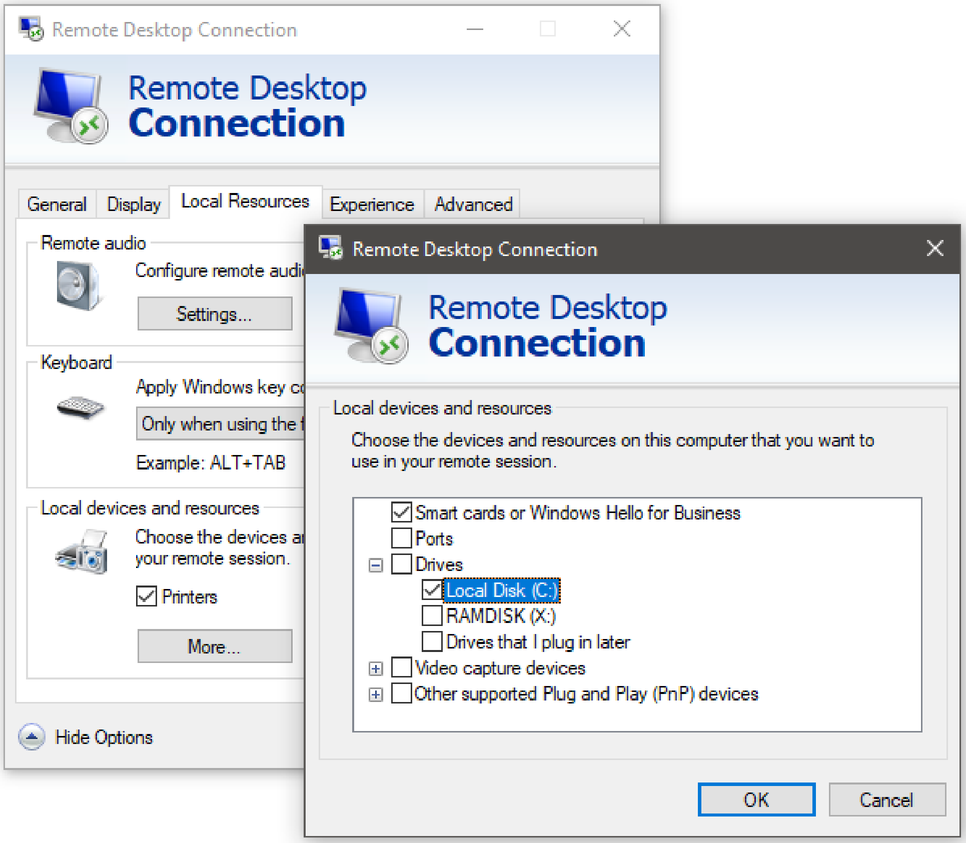
Step 4:

Connect again to the AWS instance through Remote Desktop.

Download and install the latest APS version from the AKCP website, as you would on a standard physical PC.

Note: the installer could be downloaded on a local PC and copied to the instance via shared folders or FTP. Windows Server 2012 doesn't have a browser (except a feature restricted Internet Explorer).

The easiest way to copy the APS installer to the cloud server is by using Remote Desktop file sharing.



☑ Printers

Choose the devices and resources on this computer that you want to use in your remote session.

☑ Smart cards or Windows Hello for Business
□ Ports
□ Drives
☑ Local Disk (C:)
□ RAMDISK (X:)
□ Drives that I plug in later
□ Video capture devices
□ Other supported Plug and Play (PnP) devices

Enable this option under **Local Resources** / **More…** and click to share drive C (or another drive where the installer is downloaded).

After connecting through Remote Desktop, the shared local drive's contents will be available under the cloud server's drive listing under "This PC".

Important: disable this option when it's not required, and you copied over the APS installer file. Any changes for this setting apply only on reconnection.

If you need help with installing APS, you can refer to the full APS HTML Manual.

After APS has finished installing, connect to the installed AWS APS from your local PC's browser to continue configuring APS.

If the firewall settings are correct, you can connect by: AWS-Static-IP:8080
For example if your AWS static IP is: 35.158.13.219
Then using this IP you can connect to the APS running on the AWS instance by:
http://35.158.13.219:8080

Step 5:

Configure AWS APS as you would on a standard PC.

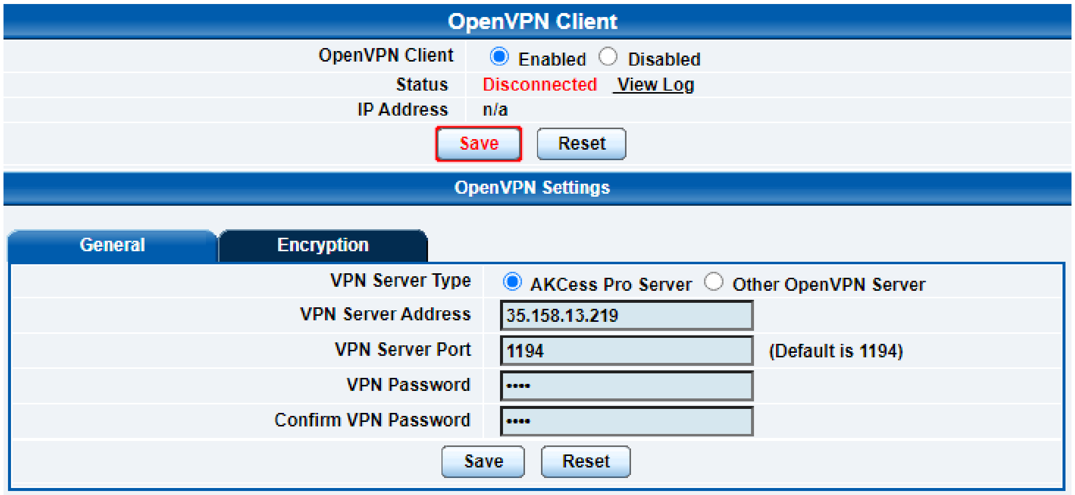
Important: change the APS "admin" user's password to a secure password, if you haven't done so during installation.

Set up the VPN settings in APS options, then enable it.
You could customize the VPN port from the default 1194, but then adjust the AWS firewall settings accordingly.
If you need help with configuring APS VPN, you can refer to the full APS HTML Manual.

Step 6:

Connect the client unit to the AWS APS.

Configure the VPN option on the SEC5/SP+ unit:
use the AWS static IP to connect to, and the same VPN parameters as you set up on the APS side (encryption, password, port).



OpenVPN Client

OpenVPN Client	● Enabled ○ Disabled
Status	Disconnected View Log
IP Address	n/a

OpenVPN Settings

VPN Server Type	● AKCess Pro Server ○ Other OpenVPN Server
VPN Server Address	35.158.13.219
VPN Server Port	1194 (Default is 1194)
VPN Password	••••
Confirm VPN Password	••••

The unit should be able to connect if the AWS firewall settings are correct.
Check the system log on the unit to see if there are any problems during the VPN connection.

If the VPN is connected successfully, wait until the client unit adds itself to the APS console. This can take a few minutes but should be automatic. No need to add the unit manually.

Please contact support@akcp.com if you have any further technical questions or problems.

Thanks for Choosing AKCP!