

# tekVizion 360 Automation Solution Guide

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A comprehensive guide outlining the features and processes of tekVizion's 360 Automation Platform.



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# Introduction

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In addition to tekVizion's world class testing labs and expertise, tekVizion 360 includes the 360 Automation Platform (360 AP) for Unified Communications that provides the ability to automate test execution and verification of the calling, meetings, and messaging features. The 360 AP helps Service Providers (SPs) to adapt and keep up with continuously evolving SaaS solutions, and have utmost confidence when deploying network upgrades or changes with continuous testing.

With the 360 AP SPs can continuously author, execute, schedule, and test end-to-end call scenarios with IP Phones and calling services offered through UC clients. SPs can leverage 360 AP capabilities for network configuration validation, PSTN interconnect, critical call scenario validation, new service deployment, and vendor software update testing prior to implementation of changes into production environments.

The 360 AP can perform the required sets of validations and display the results while maintaining detailed logs for further analysis. The historic information on test executions helps users maintain a track of issues across versions. Efficiency improvements are easily realized through scalability and repeatability facilitated by the tekVizion 360 AP.

## How It Works

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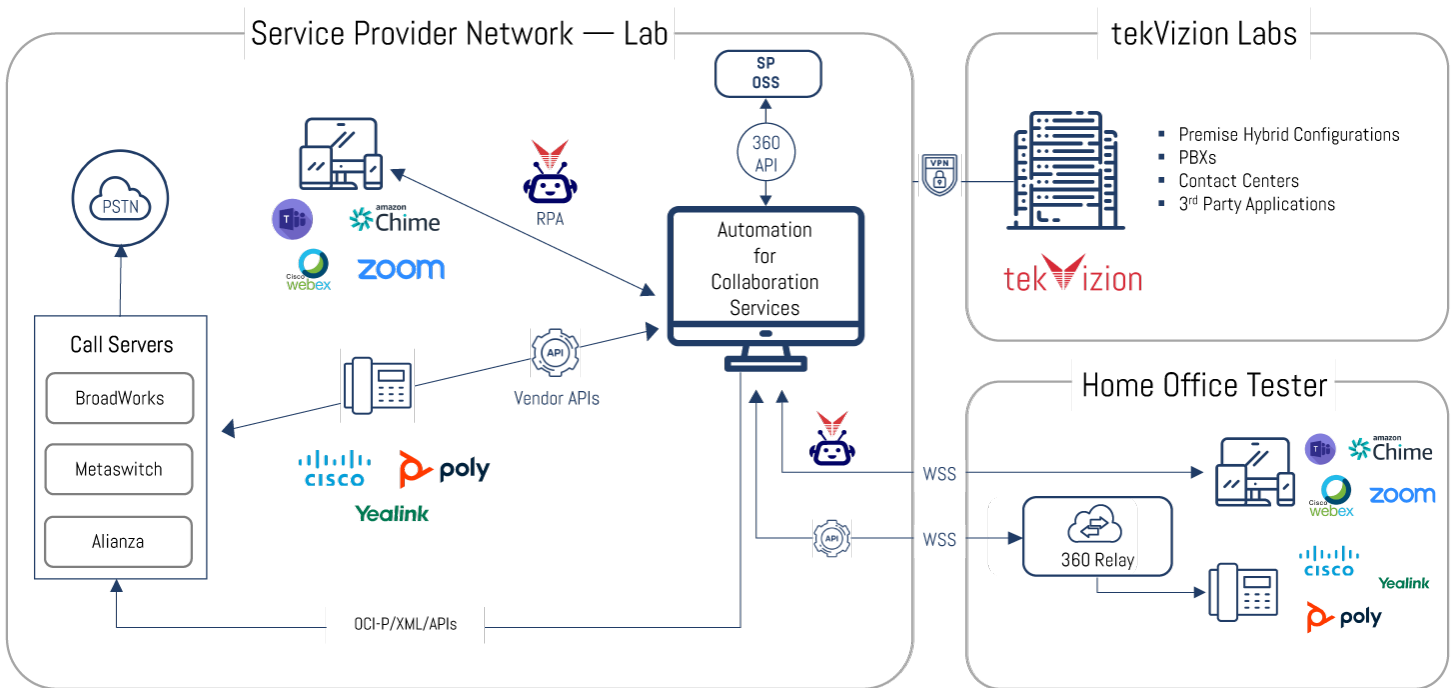
360 AP is deployed in the SP data center which can be hosted in a private/public cloud hosted by the SP. 360 AP can communicate and drive IP Phones through API as long as they are network reachable. For scenarios where IP Phones are not reachable, a mini bot called 360 Relay can be installed to proxy the message communication between the desktop IP Phone and 360 AP using secure web sockets.

For all UC Clients, a 360 Bot is installed on the desktop or laptop which will connect back to 360 AP using secure WebSocket. Unless any provisioning must be verified on the Call Server, there is no integration required between 360 AP and Call Server. SPs can integrate 360 AP to their existing applications and benefit from the 360 AP's capabilities which comes with north bound REST APIs that help easy integration with other applications.

SPs can test their trunks or Direct Routing (DR) against numerous on-demand configurations available in tekVizion labs. A VPN tunnel is established between the SP network and tekVizion lab — with this SPs can provision the end points in their lab with various vendor configurations and automate the SIP trunk testing activity with 360 AP.

# How It Works (Cont.)

With work environment's shifting more towards work from home, engineers can connect the phones and UC clients in their home network to the 360 AP in the SP Lab and perform the testing as usual. Without the need of a home VPN router and with help of 360 Relay, users can connect the IP Phones in their home network to 360 AP in SP lab.



## What's in the Diagram?

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### UC Clients

- 360 AP leverages *Robotic Process Automation* (RPA) to emulate user actions on the SaaS clients and thus helps validating the solution and functionality as if a human is performing the testing.

### IP Phone

- The *IP Phone* is an endpoint that registers to BroadWorks. 360 AP leverages the APIs on the phones and performs actions to execute different call scenarios.

### 360 Automation Server

- The 360 Automation Server is the brain behind the complete automation. It holds the information of endpoints, test scenarios, projects, logs, and test reports. It is also the control center of project executions where users can either perform on-demand or scheduled executions because the server can control both UC Clients and IP Phones.

### 360 Bot

- The 360 Bot is a lightweight application installed on UC client computers; this connects to the server via WebSocket. This Bot interacts with both the automation server and UC client to perform the necessary actions on the UC client based on the commands received from the server and then relays the essential data on the test executions back to the server.

## What's in the Diagram? (Cont.)

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### 360 Automation Relay

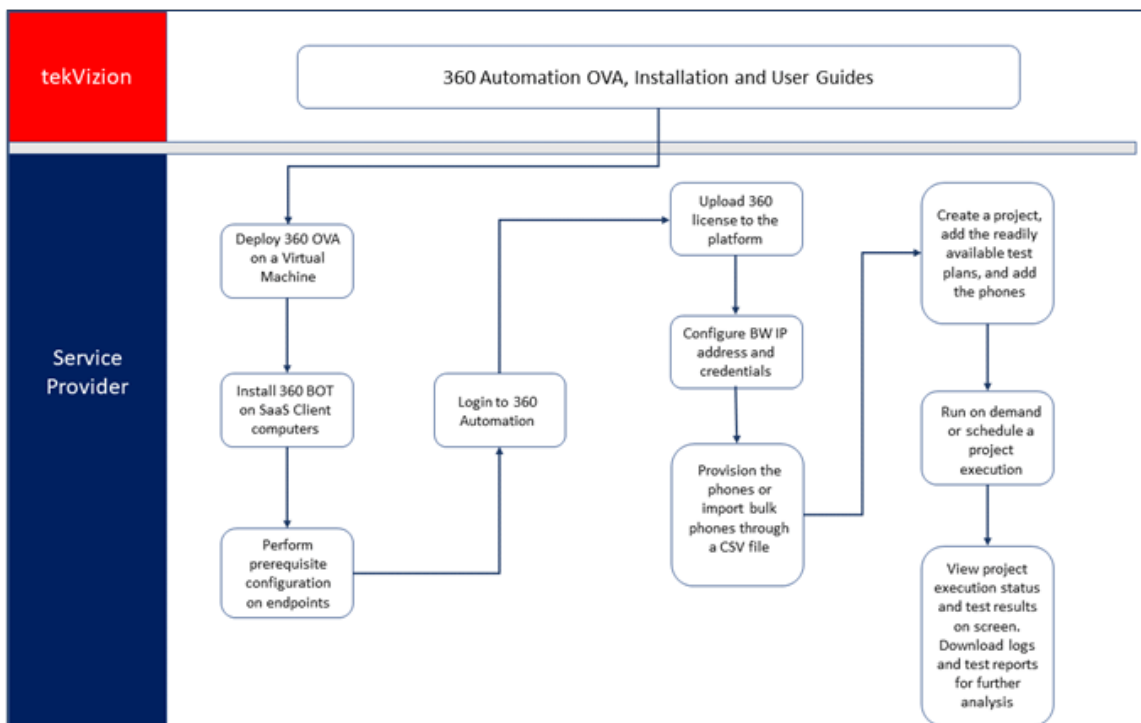
- *360 Automation Relay* is used to establish a connectivity between the automation server and IP Phones that do not support WebSocket connectivity and cannot reach the automation server.

### UCaaS Solutions Integration (*More Solutions to Come*)

- BroadWorks (BW)
  - The 360 Automation Server integrates with BW through *OCI-P* (Open Client Interface – Provisioning) and establishes a secure connection to perform provisioning changes to the BW System through its APIs. With this capability configuration changes can be implemented to BW users from the 360 AP.

## Getting Started

The installation and usage of tekVizion 360 automation is a simple process which is illustrated in the diagram below. Follow these steps to have your first test automation ready.



The 360 AP installation document will guide the users through the installation of 360 automation software and 360 BOT. The user guide will help the users get hands on with accessing the automation platform, creating users and roles, configuring the endpoints, writing the scripts, executing automation projects, and analyzing the test results. These documents can be obtained following the engagement of tekVizion services.



## Virtual Machine Requirements for 360 AP

Automation software comes in the form of an **OVA file** ready to be deployed in a virtual environment. **ESXI 5.5** or later is required to deploy the 360 automation platform.

The hardware requirements of the virtual on which the OVA is deployed are:

CPU (Cores)	RAM	Storage	TC Ports
4	16GB	200GB	80, 8080, 9090, 443, 8443

### 360 Bot Requirements

The Bot is installed on the computers of the UC Clients. A **Windows 10 64-bit operating system** is required with a minimum of **Intel Dual-Core 2.xx GHz or AMD processor and 4 GB of RAM**. A prerequisite is the computers should have **developer mode enabled**.

## 360 Automation Salient Features

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With 360 Automation, SPs can automate test executions from basic to advanced call scenarios. tekVizion 360 datasheet provides an exhaustive list of features that can be automated. Below is the list of 360 AP capabilities from which the SPs can benefit.

### Auto Discovery

- The IP Phones and UC clients are auto discovered on the 360 AP and this makes the management of the endpoints easier.

### Preloaded Test Suites

- The 360 AP comes with predefined set of test suites and test executions that can be performed right out of the box. Users can also create custom test scripts, modify and build on top of the existing scripts.

### Test Execution

- Users can perform test automation either through scheduling or on-demand execution. They can also schedule recurring executions of the projects making the test automation completely hands-free.

## 360 Automation Salient Features (Cont.)

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### Parallel Testing

- With the capability to execute multiple projects simultaneously and RBAC, multiple teams can utilize the 360 AP for diverse and distinct test executions.

### Reporting

- Run-time status, error-reporting, logs, and project reports complement the capability of 360 automation. The AP maintains historic data of test executions that helps in comparison of results at different time periods and further helping in root cause analysis.

## Vendors Supported

The following vendors and models are supported based on the version of the 360 AP.

Vendor	Models
Cisco	<ul style="list-style-type: none"> <li>• Webex</li> <li>• MPP : The 68xx,78xx and 88xx series</li> </ul>
Poly	<ul style="list-style-type: none"> <li>• SoundPoint IP 3xx, 4xx, 5xx, 6xx</li> <li>• SoundStation IP 5000, 6000, 7000, and Duo conference phones</li> <li>• VVX 3xx, 4xx, 5xx, 6xx, and 1500</li> <li>• SoundStructure</li> <li>• CCX400, CCX500, CCX600 and CCX700 Series phones</li> </ul>
Yealink	<ul style="list-style-type: none"> <li>• T5, T4, T2 series IP phones</li> <li>• CP920 ,CP960</li> </ul>
Grandstream	<ul style="list-style-type: none"> <li>• GXP16xx, 17xx, 21xx Series</li> </ul>
Microsoft	<ul style="list-style-type: none"> <li>• Teams (Summer 2021)</li> </ul>
CounterPath	<ul style="list-style-type: none"> <li>• CounterPath (Fall 2021)</li> </ul>

## Provisioning and Usage of 360 AP

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The **360 User Guide** will help users understand the processes and workflows of accessing the automation platform, creating users and roles, configuring the endpoints, writing the scripts, executing automation projects, and analysing the test results.

All installation and user guides can be obtained following engagement of tekVizion services.

For any questions regarding tekVizion's 360 Automation Platform and/or Solution Guide, please reach to your tekVizion contact, or send an email to [info@tekvizion.com](mailto:info@tekvizion.com).

