Company

KBS Pvt Ltd

Company Type

Managed Service Provider

Industry

ITES/IT

Maintaining Business Continuity in a Pandemic with Cloud PBX, Azure Windows Virtual Desktops, and Office 365

Background:

KBS is a leading provider of managed services and technical services, supporting the technology products and Cloud infrastructure of thousands of companies and over 500,000 end users. KBS has been operating non-stop on a 24/7/365 basis for over 16 years, fully available by phone, email, and chat. When the pandemic of March 2020 arrived, KBS could not let its customers down and have a blemish on its impeccable record. With a total shutdown looming in its multiple offices, KBS needed Apps4Rent's help in quickly moving its legacy communication systems and office IT infrastructure to the public Cloud.

Solution from Apps4Rent

Apps4Rent came to the rescue with an elegant solution that combined a Cloud-based IP-PBX, Microsoft Office 365 with Teams, multi-session Windows virtual desktops, Azure Active Directory, and employee performance monitoring software. As a result, there was no deterioration in service quality or SLAs for the end users, and the productivity of its 75 people workforce actually improved while working from home.

Instead of a traditional PBX, Apps4Rent setup Issabel IP PBX in the Cloud as it is provided robust security and superior features with recording capabilities that do not yet exist in Teams. Then Apps4Rent configured the calling queues on Microsoft Teams, setup call forwarding, and made it functional in a crisis scenario.

Office desktops were moved to multi-session Windows virtual desktops on Azure and an employee monitoring software with granular activity tracking was installed on each virtual desktop. Azure AD was used to manage access and permissions for the different applications used by KBS staff according to their roles and security levels. Applications included chat software, ticketing system, and Office 365. KBS was already using Office 365 and Teams for collaboration before the pandemic, but now the power of this software was exploited to the hilt to work in real time from multiple locations.

Results

Apps4Rent delivered what KBS required – No disruptions in business operations due to high availability of appropriate infrastructure. With Apps4Rent's expertise, the migration of on-premises calling infrastructure to cloud was performed seamlessly. All the while getting improved productivity out of the employees in the work-from-home mode. There was a noticeable increase in appreciations from customers, as they were surprised by the quick response from KBS team in contrast to poor service from well known companies during the pandemic.

"The solution resembled our own phone system without any major change in the end-user experience. Issabel IP PBX integrated well with Azure and Office 365 Teams. The calls which were supposed to go on the employee desk phones on Issabel IP PBX, now come to Microsoft Teams. Apps4Rent not only provided us the most practical solution but went ahead and implemented it successfully."

Harish D., Accounts Manager, KBS Pvt Ltd.

Background:

Since 2004, KBS offered managed services and outsourced support to web hosts, internet service providers, corporate offices, and software and hardware OEMs. In order to serve its customers, KBS provides 24/7 support by phone, email, and chat. KBS staff work out of multiple offices with the bulk of them from a single location that has been operational 24/7/365 days without downtimes for the past 16 years.

The company serves thousands of customers in dozens of countries. In addition to the instant phone support using an IP PBX system, it also offered real-time chat and email support. The support team works in shared mode with numerous inbound queues in IP-PBX, chat, and a ticketing system. Each support person is provided with multiple monitor desktop with broadband connectivity and a separate IP-based phone device. In each office location, the staff were connected over a local area network to internal servers. In order to perform their duties, KBS staff often need to log into KBS and customers' software systems, with secure access provided to select employees from restricted IPs. These complexities were to be replicated in any move to the public cloud with work from home access during the pandemic.

The Covid-19 Crisis

The company was in dire need to shift entire operations for remote access, where each employee would work from home (WFH). All they required was the same productivity and efficiency even when all employees worked remotely. When the COVID-19 crisis became apparent in February 2020, KBS contacted Apps4Rent to draft a concrete plan if business operations were to completely move out of office premises. Apps4Rent responded quickly and planned a strategy to set up an infrastructure which remains fully functional in an environment where every employee works from home remotely.

Time was of the essence. All systems were tested by Apps4Rent for work from home well before the shutdown orders. Minimum internet bandwidth criteria were decided, and the staff members were asked to upgrade their home access to those specifications at company expense. With this groundwork done, KBS was prepared for basic access capability for the eventual shutdown.

Apps4Rent facilitated the team to go into WFH mode by helping create a robust infrastructure which was accessible remotely. According to the steps laid out by Apps4Rent, they started changing course of action based on that. Apps4Rent suggested an open source IP-PBX system called Issabel PBX hosted on Azure

Why Issabel IP PBX?

Since KBS wanted to setup robust and secure employee extensions on a phone system with low latency, Apps4Rent suggested Issabel IP PBX solution. Apps4Rent moved the PBX system to Issabel IP PBX is because it is ably supported on Azure cloud infrastructure. In fact, Apps4Rent had been offering Issabel PBX solution on Azure through the Azure marketplace since 2019 with enthusiastic acceptance by its customers. The traditional system is more vulnerable to outside attacks, while an Issabel IP PBX integrated to Azure provides best in class security and scalability to handle sudden spikes in call volume. This would prevent.

Why Route Calls Through Issabel IP PBX?

Since KBS was already using Office 365 E5 plan, why not use Microsoft Teams directly? Why switch to Issabel IP PBX and integrate it with Azure, and then again integrating call queues to Microsoft Teams? Why bring a third-party PBX system to make things more complicated?

Many organizations need audio recording to automatically record their calls for legal purposes. Microsoft Teams currently does not offer recording feature for the incoming calls from external systems. Recording an audio call is not possible due to Microsoft's compliance issues. Only meetings are recorded or one-to-one calls but there is no solution for full PSTN recording.

Thus, many organizations use a third-party SBC (Issabel IP PBX in KBS's case) to have Direct Routing facility on Teams. It also provides full feature set including audio call recording other things, integrated with Azure WVDs and Microsoft Teams.

However, Microsoft recently announced at Ignite that it is working to have a compliant call recording solution but is not readily available at this point. Therefore, Apps4Rent suggested the most practical solution available.

What Did Apps4Rent Do?

Since KBS was already with Office 365 E5 plan, it could use Windows Virtual Desktop (WVD) infrastructure on Azure. Firstly, Apps4Rent implemented Azure AD sync and set up Azure WVDs for each user, so they could securely access the company data from the trusted device locations.

Apps4Rent integrated Issabel IP PBX with Microsoft Teams on Azure WVD. This helped in reducing over heads on the IT team while improving security, latency, and configuration with other Microsoft products. KBS already used Office 365 for emails, so Azure integration made it a complete package which could be used forever.

Challenges in Setting Up On-Premises Environment in the Cloud

User adoption

Moving a fully functional PBX setup to the cloud is always a challenge, especially when your employees have been trained on it from years. Apps4Rent manoeuvred its strategy to cause zero disruptions to the end users. KBS stuck to Apps4Rent's plan diligently and implemented the steps with meticulous detail. All call queues and forwarding were integrated seamlessly. Since Issabel IP PBX and Teams were integrated meticulously, the entire call process was seamless even for the WFH mode. User adoption was not an issue with KBS as it did not break any workflow. Apps4Rent tested the performance of various soft phones until the right solution was found that met quality criteria under home bandwidth conditions.

Emulating the desktop experience was important as the support staff are power users, simultaneous accessing multiple applications for communications and business. During the pandemic, Azure was in high demand and Microsoft was temporarily running out of resources. Fortunately, Apps4Rent could subscribe in time for a local tenant with sufficient resources. With some experimentation, the right specifications for WVD were determined to deliver the desktop experience the support staff were used to with the local area network in the KBS office. After that, the admins had to work through Azure AD to implement single signon and multi-factor authentication to improve security and productivity.

Meeting SLAs

The second thing was the concern about supporting the customers. Since they were in a business where meeting Service Level Agreements (SLAs) was mandatory, it was particularly challenging to move the phone system to Azure without changing phone numbers and other important resources. Also, it was important that they do not lose control of the tight-knit infrastructure which they have cultivated for years while doing this.

Security

Integrating Issabel IP PBX with Teams was challenging as there is always a risk of security at all levels. Like with every cloud adoption, security was always going to be a major challenge. There are major critical applications which needed to be secured such as financial applications. Also, there was a need of hierarchy-based permissions which had to be set accordingly. Users had to verify their credentials before they could login into their WVDs using their trusted devices. Apps4Rent configured Windows Virtual Desktop with Multi-Factor Authentication which made the systems more secure.

Employee Monitoring

We set up screen monitoring for the employees using a third-party application called ActiveTrak. This enabled to track the employee activity. ActiveTrak mitigates the risks of data breaches, keeping vigilance on employees as they are working from home.

Was the Implementation Successful?

A resounding yes! Customers could call on the same numbers without need of changing the widely circulated phone number. The only obvious change was: Instead of getting phone calls on desk phones, the voice staff would get calls on Microsoft Teams, which was installed as a desktop application on their Azure Windows Virtual Desktop (WVD).

Apps4Rent got the entire KBS infrastructure shifted on the cloud within a week. Once they left their office premises, they were up and running on Azure WVD in no time. There was no loss of crucial employee hours in setting up the business environment, as Apps4Rent was already aware of the scenario. Apps4Rent were given strict deadlines, as KBS realized that work from home would be soon inevitable.

Conclusion

Apps4Rent moved the local environment to the cloud as it is, without any data loss or downtime. The business continuity was maintained without compromising security. The employees were able to work without any loss of productive hours. All the features such as voice mail, conference calling, interactive voice response, call recording and automatic call distribution were working as efficiently as before. Remote desktop experience was as smooth as working in the office and access to applications was secured through Azure AD services. All in all, Apps4Rent elegantly combined the best of breed solutions to work together to deliver the results KBS required to keep its 500,000 end users oblivious of any changes during the pandemic.