Lync for SMB: Application and Error Prevention

Many companies can no longer imagine operating without Unified Communications (UC). Others hesitate to implement UC because they are waiting for an optimized, full-feature solution. Yet, at the same time the seamless integration of smart phones, as well as, the smooth operation of virtual offices are especially important in this day and age. This is where Microsoft offers a very appealing solution with Lync, its unified communications software. With this application it is possible for staff and customers to quickly and simply connect. Features such as instant messaging (IM), presence, audio, screen sharing (desktop sharing), video and conferencing make it an all-round communication tool in the company.

As the name "Unified Communications" suggests, Lync goes beyond traditional communication. In fact, the software from Microsoft offers a range of options for interaction, which can even be used simultaneously. That makes one thing clear: Lync has more to offer than the conventional telephone. The integrated chat feature, instant messaging (IM), allows short messages to be easily communicated. The idea is to send a quick message without having to make a call, while, at the same time, giving the recipient time to respond. In today's office setting, this chat feature can allow you to quickly reach out to a person or department for information that you require during a customer call. This saves you and your business partner's time and spares everyone

the inconvenience of having to wait for information or being put on hold. Nonetheless, the phone is still an integral part of the UC solution. However, now we are talking about Voice over IP (VoIP) or IP telephony, which transmits the call via IP network, thereby, replacing the conventional telephone system. A connection to the public fixed line telephone network occurs via so-called media gateways, which support ISDN as well as SIP connections. And, as part of the current Lync version, it is also possible to add and connect with Skype contacts.

Meeting without the Travel

In recent years it has become more common for employees, customers and business partners to be spread out all over the globe, thereby making it challenging to get all meeting participants in the same room. Here too, Lync has the ability to bring everyone together in an easy manner – using Online Meetings. The chairperson of the meeting can decide whether the "virtual conference room" is used for phone or video conferencing or also for content sharing. A Lync meeting can be scheduled very easily using Microsoft Outlook. Outlook's Scheduling Assistant can be used to make sure all participants are available during the desired time and the invitation to the virtual conference, including dial-in information and a link to join, is sent via email. Lync 2013 has, for the first time, even made it

possible to participate in or even initiate audio and video conferences using mobile devices. The Lync Mobile app combines a smartphone-suitable version of the UC software with touch functionality and a modern user interface. Even real VoIP is possible on mobile devices using a Wi-Fi connection or data plan, and no longer has to be initiated via the server as with Lync 2010. And there is no difference in functionality between Windows Phone, iPhone or Android smartphone. For many companies this functional equivalence between the mobile operating systems is very important especially when

employees are using their own devices.

Another important aspect of Lync is Desktop Sharing, which enables the content on a presenter's computer screen to be visible to other participants of the meeting. This helps to visualize meeting topics and review content as a group without having to actually meet in person. And you can not only show your screen but you can also give a participant control over it. This function is perfect for support purposes and remote maintenance that require a qualified technician to solve a problem without them having to be physically onsite.
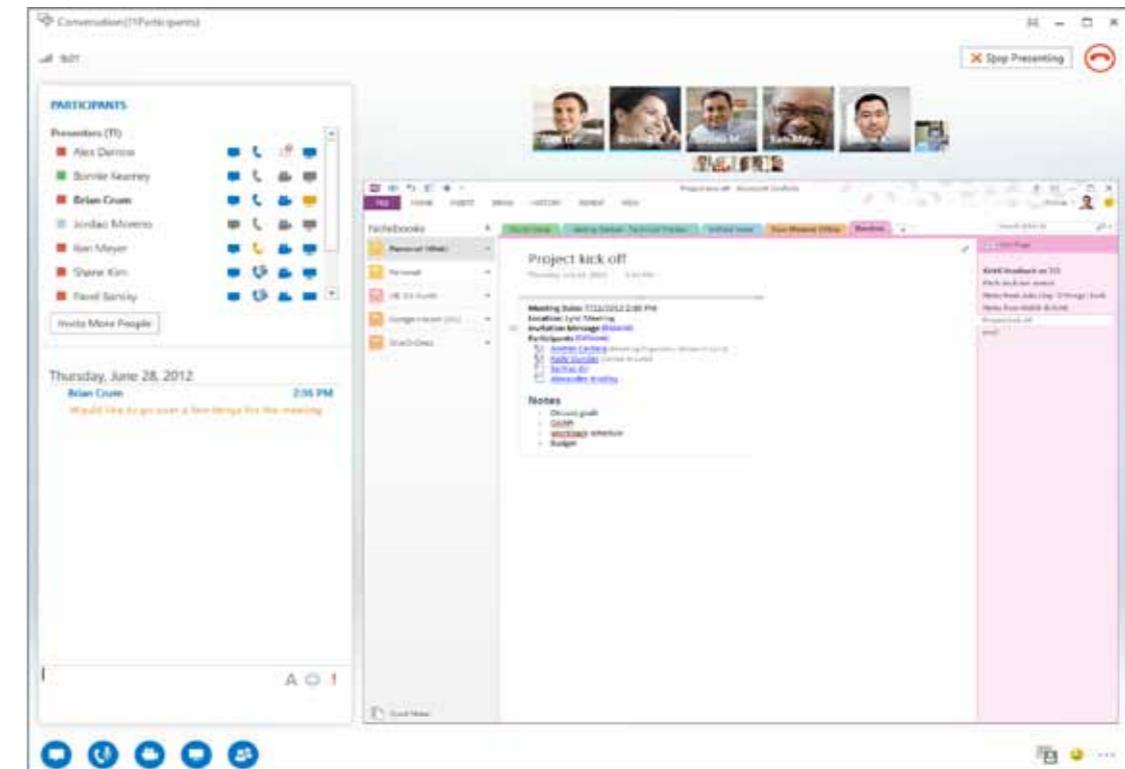
Source: Microsoft
During video conferencing via Lync, notes and documents can be jointly used thanks to OneNote.

Use of Lync in SMB

Today, the crucial question for many companies and administrators is: What do you think about the Cloud? Lync also offers you a choice. First however, you should know that Lync is available in three different versions which build upon one another and are linked to licensing models: Lync Standard, Lync Enterprise and Lync Plus. If you are only looking for a solution for internal communications, then Lync Standard is the suitable version. The necessary requirements are straightforward, so it can be considered the ideal starting point. However, in this case, you will still require a fixed line phone network for external calls with customers and business partners. In terms of cost and maintenance, the online version of Lync, which is operated via the Cloud, is the top recommendation for internal communications solutions. Then, only the administrative tasks remain to be done by company's IT department. Everything else is handled by the cloud provider under contract.

If Lync should be used for both internal communications, as well as, external communications with contacts and business partners, then you need a fully extensive, externally accessible Unified Communications & Collaborations Solution. This requires either Lync Enterprise or Lync Plus. The first is always necessary when employees frequently communicate within the team and have to conduct many telephone conferences. It can save a lot of time if this can be done directly from the workstation and employees can immediately return to other tasks.

Finally, if you add Lync Plus, you are able to com-

pletely replace the conventional telephone system, because you can reproduce a comprehensive telephone switchboard. That means that internal and external phone calls are equally possible and the entire Lync functionality, including presence, chat, telephone and video conferencing, as well as, content sharing can be used. A complete on premise server solution is typically used in this scenario. However, hybrid options using both on premise and cloud installations are also possible. Lync Online is available for use together with any license for Lync Server, serving as a bridge to the Cloud and allowing companies to integrate a local telephone system. You will still have to define which employees use Lync Server or Lync Online, but since in the new version both groups receive standardized SIP addresses, this can be easily changed.

Source: violetkaipa - Fotolia
Microsoft Lync helps you to contact colleagues, employees and customers quickly and easily.

Preparing Staff and Technology

Before Microsoft Lync can be implemented in your company, it is a good recommendation to involve the HR department in the project, because the technology standardizes communication and changes how people collaborate. However, not everyone responds equally well to being easy-to-reach anywhere, anytime. What can seem to some as being "omnipresent" can even lead to a temporary diminishment of work-life balance. In many cases, employees already familiar with modern communication tools, such as Skype or social media, find it very easy to work with Lync. All employees new to this style of communication usually require special training. In addition to end user training, open communication early on with employees is therefore also necessary to set the right expectations. In the end, employees shouldn't be taken by surprise or feel that they are being monitored. Despite the options to show presence or connect via mobile device, it is easy to log off from these services outside of work hours and relax.

A company that wants to install Lync should also consider technical preparations to prevent problems from occurring. In order to use Lync real time communications such as voice and video in good quality across a network, specific network requirements must be met to ensure a stable VoIP session. This particularly concerns the duration of the transmission and its fluctuations, as well as, the deficits during the transport of signals. Therefore you need to know that with VoIP, the voice is first digitalized and then encoded accordingly.

Digitalized voice sends a continuous signal with a constant bit-rate. In order to transport such a voice signal in good quality via an IP network, the network has to ensure a specific bandwidth for virtual connections between IP telephones – meaning: for a VoIP session.

Quelle: Sergey Nivens – Fotolia
When implementing Microsoft Lync you have the option: Cloud or On-Premise Installation, or both (Hybrid)?

The end-to-end delay of the voice signal has a significant influence on the quality of the VoIP telephone call – that is the time required for the voice signal to leave the speaker's mouth and reach the recipient's ear. The main cause of this delay is the transmission time of the IP packets with voice via an IP network. The delay occurs mainly because of the temporary storage of the IP packets in routers, switches, and WAN/LAN amplifiers or because of incorrectly configured VoIP servers and end points (e.g. desktops/telephones) as the IP packets have to make their way through the network. Every router, switch and WAN/LAN amplifier requires time to interpret the header in

the IP packet and make a suitable routing decision. If an IP packet reaches an overloaded component while on its way, it has to wait in queue for a few minutes and, in an extreme case, will even be discarded completely. The end-to-end delay that has materialized strongly compromises the quality of the telephone call.

Network issues such as insufficient bandwidth, packet loss, and delay can impair the quality of Lync real time communications and disrupt your UC implementation. With UC Point's Dynamic Network Analysis for Lync (UCP DNA) it is possible to measure the IP infrastructure and identify possible causes for issues with Lync real time communications. This unique method is a vendor-independent measurement and analysis procedure to specify exactly what is affecting the network performance when using VoIP and video technology.

Summary

Microsoft Lync is a modern unified communications solution that, alongside large companies, is also very suitable for small and midsized businesses. Speed and efficiency are particularly important, especially in this sector. The numerous communication possibilities that Microsoft Lync combines to a single platform can be used to simplify daily operations and processes in the workplace.