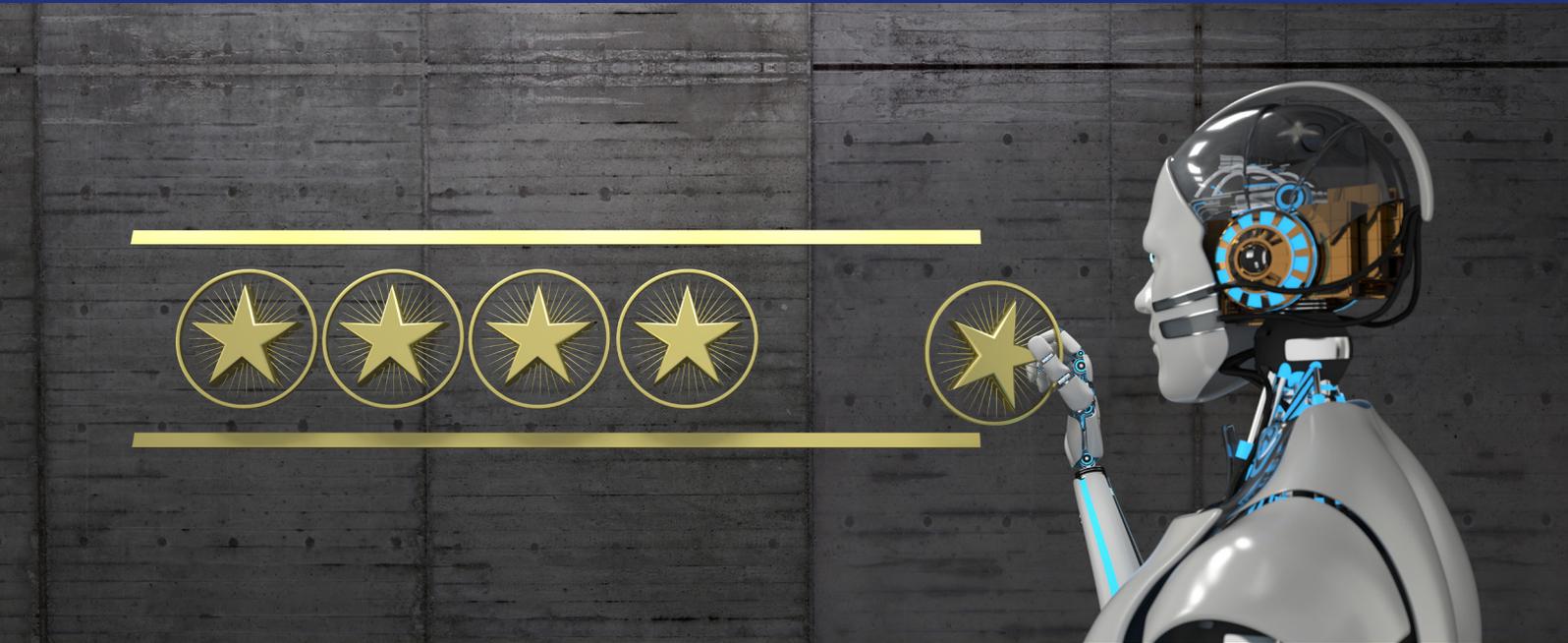


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Unlocking EVA - Deploying AI powered Virtual Agent Services in your hotel

www.fourteenip.com

Introduction

Our AI powered virtual agent service EVA, is helping hotels around the world enhance staff productivity and improve the guest experience.

Fourteen IP has been approved as a Marriott Hotels official vendor for AI Powered Virtual Agent services. This guide talks you through the various options available when it comes to deploying these services into your hotel.



What is EVA?

Our Evolution Virtual Agent service (EVA) combines intelligent IVR with AI technology and machine learning to help hotels around the world enhance staff productivity and improve the guest experience. Available 24x7x365 EVA can reduce calls to guest services by over 80% allowing staff to concentrate on guests requiring that extra personal touch.

With its almost human like interaction, EVA virtual agents can take and make calls to guests and staff in order to provide answers to regularly asked questions, take requests for wake-up calls, room items and maintenance requests and integrate with 3rd party front and back- of-house hotel systems.

With the ability to greet callers by name and loyalty status, EVA can intelligently route calls, make, amend or cancel a reservation, give directions (verbal as well as send an SMS message with MAP link). It can advise on transportation such as airport shuttle buses, provide parking information, check in and check out times and provide details of hotel facilities.

Guests can automatically request a late checkout, ask for breakfast locations and times, internet and WiFi passwords and issues, gym, pool and business centre opening hours and directions, request housekeeping services or report an issue or complaint.

Deploying EVA at your hotel

Getting the most from EVA

EVOLUTION VOICE™ CLOUD TELEPHONY ★★★★★

To achieve the best results from our AI powered Virtual Agent service we recommend that EVA is used in conjunction with our Evolution Voice hotel cloud telephony service.

In addition to reducing your monthly telephony costs, our Evolution Voice service integrates seamlessly with EVA, removing the need for any T1/PRI circuits or SIP Trunks, thereby reducing costs and any potential points of failure. Evolution Voice provides 100% seamless integration with EVA.

If however you are not ready to migrate fully to the cloud just yet, our EV Connect service could enable you to connect an on-premise PBX to EVA, although there are some technical limitations to be aware of.

EV Connect™

Our EV Connect service enables on-premise PBX systems to benefit from hosted telephony features such as extension-to-extension dialling between properties, centralized & distributed working environments such as operator overflow from one property to another and centralized call centres.

EV Connect can provide (subject to PBX capabilities):

- Extension to extension dialling between properties
- Names display between properties
- Multiple centralised and/or distributed services can be deployed such as call centre functionality
- Add more extensions to a property without having to upgrade the current on-premise PBX
- **Integration with EVA our AI powered Virtual Assistant for hotels**

The type of primary rate connection and what information can be passed over the primary rate link determines what functionality can be achieved

An important point to note is that when using cloud telephony services with EVA there are no voice channel restrictions. However, on-premise PBXs require a voice channel for each external concurrent call.

Types of Primary Rate Interface

Chances are, if you are not using a cloud telephony platform, you will still be using Primary Rate Circuits for your hotel telephony. Even if you are using SIP Trunks, more often than not, your PBX will be using its Primary Rate Interface via a SIP gateway. There are a number of different types of Primary Rate Circuit which include:

- CAS - Channel Associated Signalling
- NI2 - National ISDN2
- NI2 with Jazzware
- QSIG - Q Signalling

As mentioned, the combination of Primary Rate Circuit and the on-premise PBX that are being used will determine what functionality is available when using EVA and EV Connect™. The following information outlines the functionality available for each Primary Rate Circuit set up.

CAS ★

Channel Associated Signalling or CAS - also known as per-trunk signalling (PTS) - has 24 voice channels and no data channels so functionality is limited. No guest extension numbers or guest names can be sent as there is no data channel. This means that guest calls cannot be identified by an associate should EVA need to transfer the guest call back to the PBX. In addition, CAS does not have the ability to recognise and therefore drop channels, should a call be transferred back to the PBX by EVA. Therefore it is prone to channel congestion (see page 6).

As CAS does not meet the Marriott Brand Standards of greeting guests with their name and loyalty status, we do not recommend its use.

NI2 ★★

NI2 is the National ISDN2 standard most commonly used for a Primary Rate Interface consisting of 23 voice channels and 1 data channel. NI2 integrates better with EV Connect than CAS and could receive guest extension numbers (and potentially guest names too) over the NI2 data channel. This however, is subject to the installed PBX's functionality. This means that guest calls could be identified by an associate should EVA need to transfer the guest call back to the PBX (Note: There are limitations on the number of characters that NI2 supports).

As with CAS, NI2 does not have the ability to recognise and therefore drop channels should a call be transferred back to the PBX by EVA and therefore is prone to channel congestion (see page 6).

NI2 with Jazzware ★★

By adding Jazzware to an NI2 equipped PBX, when guests check in, their details are stored in both the phone system and the EV Connect phone book. Providing the PBX can send the guest extension number over the NI2 data channel, EVA can look up the guest name via its link to Jazzware and pass the combined information back to the PBX. This means that guest calls could be identified by an associate should EVA need to transfer the guest call back to the PBX. This functionality requires that Jazzware be installed as the middle-ware between the PBX and PMS.

NI2 does not have the ability to recognise and therefore drop channels should a call be transferred back to the PBX by EVA and therefore is prone to channel congestion.

QSIG ★★

QSIG is a networking protocol for signalling between PBXs and typically has additional features (subject to PBX functionality) that could allow for a much tighter integration with EV Connect. The exact functionality available is determined by the PBX's QSIG feature set but this should offer a stronger integration than either CAS or NI2.

Summary of Supported EV Connect Features

	CAS	NI2	QSIG	CLOUD PBX
EVA External Call Routing	✓	✓	✓	✓
EVA Internal Call Routing - No Extn. and No Name	✓	✓	✓	✓
Internal EVA Call Routing - With Extn. and No Name		✓ See note 1	✓ See note 1	✓
Internal EVA Call Routing - With Extn. and With Name		✓ See notes 1&2	✓ See notes 1,2&3	✓
Issues with voice channel congestion avoided			✓ See note 4	✓

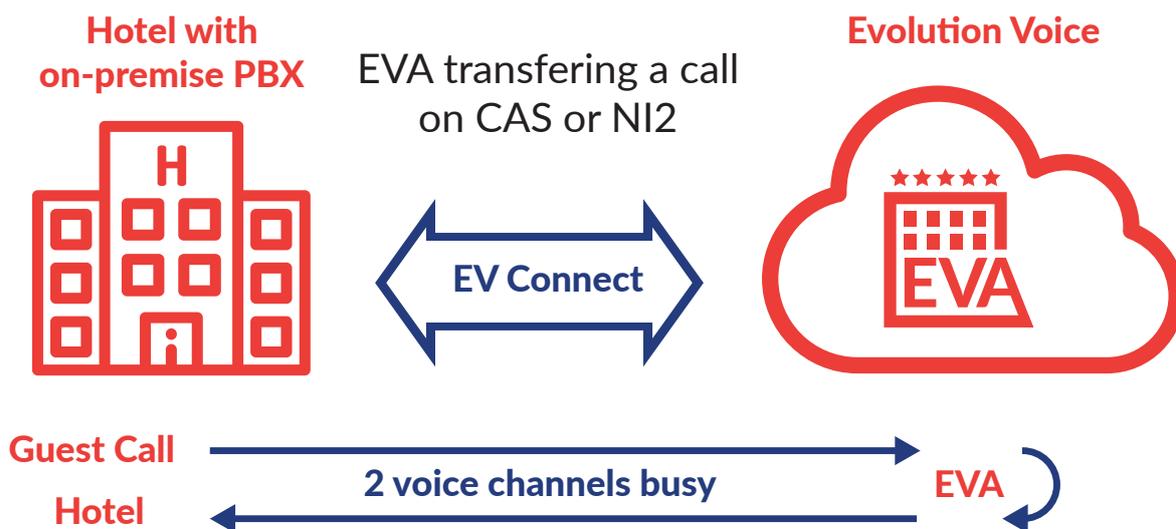
Notes

1	Calling party Number must be sent as the extension number to the EV Connect trunk in the ISDN set up message, in the Q.931 protocol in calling party number field. Most (but not all) PBX's support this in NI2 and QSIG
2	Not all PBX's can send the name in Q.931. However, if we receive the Extension number we can use Jazzware to add the name field.
3	Nearly all PBX's that support QSIG also support both Extension number and Name display with Q.931 signalling. In this case Jazzware is not needed.
4	Neither CAS or NI2 are networking protocols so cannot release voice channels when a call is transferred back to the on-premise PBX from EVA - hence causing channel congestion. Dependent on the PBX's QSIG capabilities, channel congestion may be avoided.

Voice Channel Congestion

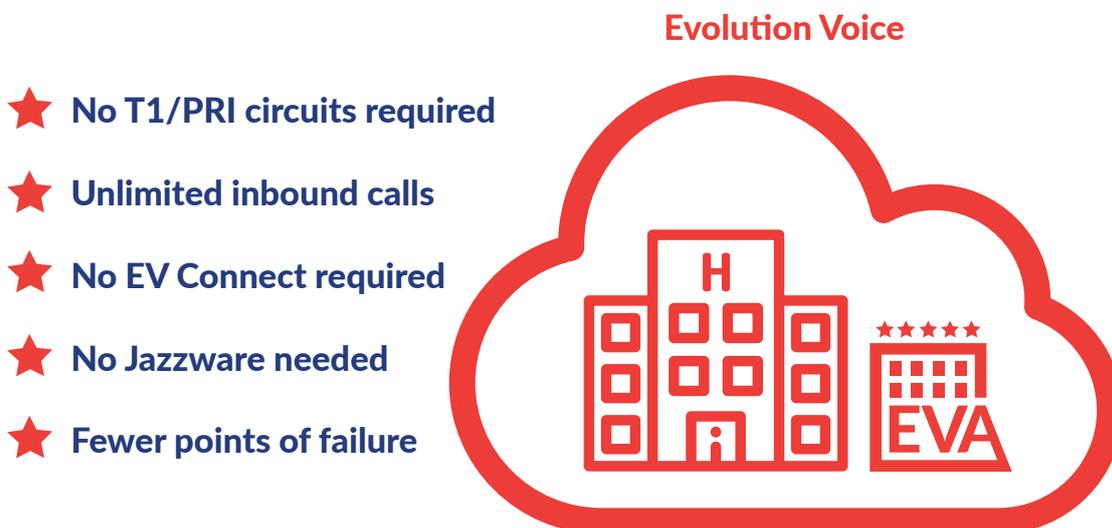
In addition to the signalling limitations explained already, consideration should be given to the number of voice channels you have connected to your hotel and the additional load that deploying EVA on an on-premise PBX will place on them.

Calls to an on-premise PBX using CAS or NI2 PRI circuits are sent to EVA via EV Connect using one voice channel. When EVA connects that call to an extension, a second voice channel is then made busy. If this happens several times at once, all voice channels can become busy and further calls would not be able to reach the hotel.



When using a QSIG PRI connection, once the call is connected to the extension, the secondary voice channel is released, reducing the chances of callers not getting through.

By fully migrating to the Fourteen IP cloud telephony service - Evolution Voice - you can avoid all of the above issues, reduce monthly telephony costs, access full voice and EVA functionality and deliver an **outstanding guest engagement experience**.



Getting Started

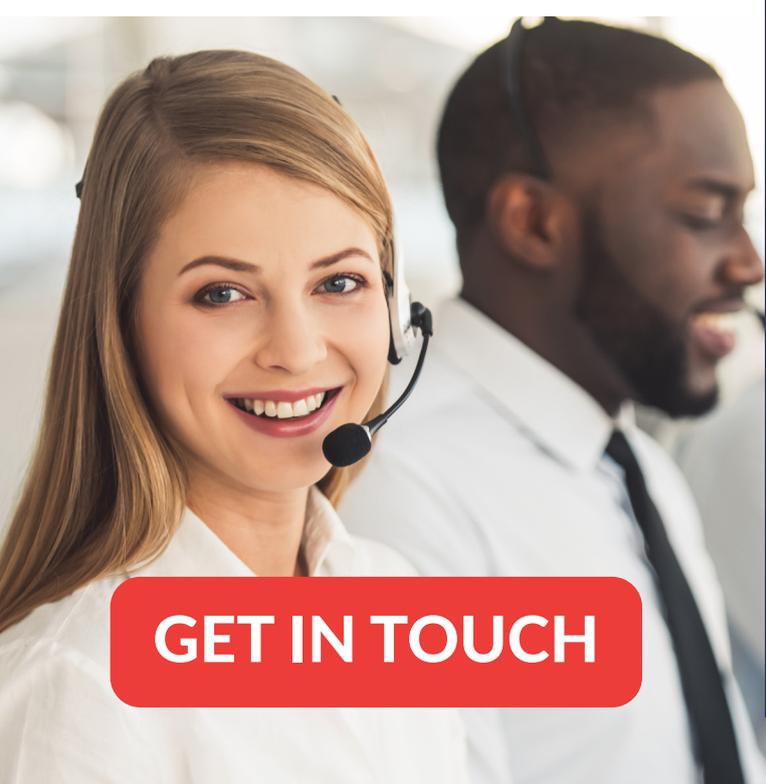
Fourteen IP has more than ten years' experience of supporting hotels with cloud based telephony and guest engagement solutions. The team are perfectly placed to advise you on the most cost effective route to deploying our EVA virtual agent services based on your current PBX. Our solution design team can guide you through the options and help you achieve the greatest functionality and operational productivity.

About Fourteen IP

Founded in 2011, Fourteen IP has established itself as the global carrier for the hospitality industry with its Evolution Voice services being deployed in over 300,000 hotel rooms across 24 countries, supporting leading hotels and groups worldwide.

Focused on the hospitality industry Fourteen IP has offices in the USA, UK, Canada, Mexico and the Czech Republic and is an approved vendor for the Hyatt, Marriott, Hilton and many more hotel groups.

Services include Cloud Telephony, Connectivity, SIP Trunking, Webex Conferencing and Collaboration, Guest Administration and EVA, our AI powered, front and back-of-house Virtual Agent solution.



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