

AppSuite Deployment

10 Apr 2020



Table of Contents

- AppSuite Deployment.....1/33**
 - Introduction.....1/33
 - Installation Task List.....2/33
 - Antivirus Setup.....3/33
 - Network Setup.....7/33

- Deployment.....12/33**
 - CTI, TAPI and TSP.....12/33
 - Operating System Updates.....13/33
 - Appsuite Updates.....15/33
 - Installation Troubleshooting.....20/33
 - Deployment Options.....24/33

AppSuite Deployment

Introduction

Imagicle offers a complete suite of applications for Unified Communications. The **Imagicle Application Suite Cross Platform** is a single package including a set of these applications integrated in a web based environment for both administration and user access.

This guide will lead you through the simple process of configuring the applications bundled in the Application Suite.

The Administration Guide is constantly updated and applies to the latest version of the package.

Installation Task List

The Application Suite can be properly set up by these simple tasks:

- Download and install the latest Application Suite package. The installation program will take care of the Operating System setup and of the software prerequisites
- Run Windows Update, then disable it
- Install the TAPI TSP or CTI driver
- Configure your company email server

These operations can take from one to four hours.

Installation should be performed by personnel skilled in both system administration and telephony system configuration, after reading the appropriate release notes and updated technical documentation.

Persons to involve in the installation process

To finalize the configuration, you may need to involve other people who are in charge of the customer's telephony and IT infrastructure:

- **IT Department:** Changing Domain Controller security policies, editing AD users, creating dedicated email accounts
- **Network / Voice Department:** Configuring the PBX, changing network firewall settings
- **Security Department:** Configuring antivirus

Antivirus Setup

The IAS installation folder, as well as all its subfolders, and Imagicle services/applications must be excluded from the antivirus scan and agents activity, otherwise applications could not work properly, unexpected behaviours could occur and a general system slowness might severely impact the operation.

Imagicle Folders

The default Imagicle ApplicationSuite installation path is "C:\Program Files (x86)\StonevoiceAS", but it can be changed during installation procedure. If you are not sure about actual installation path, you can read it on Imagicle admin web portal, click on Admin → Support → Main Info tab → "Installation Path:" (see below screenshot):



If local SQL Server Express is in use, Microsoft SQL Server installation folder should be excluded too; the default folder, in this case, is C:\Program Files\Microsoft SQL Server.

Imagicle Services and Applications

The following services and applications must be excluded from antivirus scan and agents activity, to avoid interfering their performances or stop applications' processes. <IAS_PATH> is the Imagicle ApplicationSuite installation path, as explained in previous paragraph.

Display Name	Service Name	Path to executable	Imagicle Applications
Imagicle Attendant Console	SvAttConsoleServerService	<IAS_PATH>\Apps\Attendant\Component\Assembly\ Attendant.Core.ConsoleServerService.exe	Blue's Attendant Console (Ent./Pro.)
Imagicle AXL Client (Cisco specific)	SPDAL	<IAS_PATH>\Apps\Speedy\Server\System\ SPDAL.exe <IAS_PATH>\Apps\ApplicationSuite\Component\Native\ SvSasAXL.exe	All
Imagicle Budget Control	SvBDGControlService	<IAS_PATH>\Apps\BudgetControl\Component\Assembly\ BudgetControl.core.Service.exe	Budget Control
	Recorder.Service	<IAS_PATH>\Apps\Recorder\Component\Assembly\ Recorder.Service.exe	Call Recorder

imagicle

Imagicle Call Recording		Recorder.Service.exe	
Imagicle Hotel Link	HotelLink	<IAS_PATH>\Apps\HotelLink\Component\Assembly\ HotelLink.Core.Service.exe	Hotel Link
Imagicle Hotel Link WakeUp	HotelLinkMedia	<IAS_PATH>\Apps\HotelLink\Component\Assembly\ HotelLink.Media.Service.exe	Hotel Link
Imagicle Licensing	SvSasProtectionComService	<IAS_PATH>\Apps\ApplicationSuite\Component\Assembly\ ApplicationSuite.Protection.ComService.exe	All
Imagicle Monitoring service	SvSasWatchdogService	<IAS_PATH>\Apps\FW\Component\Assembly\ FW.Watchdog.Service.exe	All
Imagicle Phone Control	SvSasPhoneControlService	<IAS_PATH>\Apps\ApplicationSuite\Component\Assembly\ ApplicationSuite.Phone.ControlService.exe	All
Imagicle PMSLink 2	PMSLink2	<IAS_PATH>\Apps\PMSLink2\Bin\ PMSLink.Core.Service.exe <IAS_PATH>\Apps\PMSLink2\ServiceMonitor\ PMSLink.ServiceMonitor.exe	Hotel Link
Imagicle Presence Server	SvPresenceServerService	<IAS_PATH>\Apps\Presence\Component\Assembly\ Presence.Server.Service.exe	Blue's Attendant Console (Ent./Pro.)
Imagicle Presence SIP/SIMPLE Connector	SvPresenceSipConnectorService	<IAS_PATH>\Apps\Presence\Component\Assembly\ Presence.SipConnector.Service.exe	Blue's Attendant Console (Ent./Pro.) Queue Manager Ent.
Imagicle Presence Skype For Business Connector (S4B only)	SvPresenceLyncConnectorService	<IAS_PATH>\Apps\Presence\Component\Assembly\ Presence.Lync.Connector.Service.exe	Blue's Attendant Console (Ent./Pro.) Queue Manager Ent
Imagicle Queue Manager Enterprise	SvQmeCoreService	<IAS_PATH>\Apps\QME\Component\Assembly\ QME.Core.Service.exe	Queue Manager Ent.
Imagicle Queue Manager Enterprise UCMA Gateway (S4B only)	OPAL Server	<IAS_PATH>\Apps\QME\Component\OpalServer\ opalservice.exe	Queue Manager Ent.
Imagicle Replication Service	Replication.Service	<IAS_PATH>\Apps\Replication\Component\Assembly\ Replication.Service.exe	All
Imagicle Service Host	SvSasService	<IAS_PATH>\Apps\ApplicationSuite\Component\Assembly\ ApplicationSuite.Core.Service.exe	All
Imagicle Speedy Synchronizer	SvSpdSyncService	<IAS_PATH>\Apps\Speedy\Component\Assembly\ Speedy.Sync.Service.exe	Speedy Enterprise

		Speedy.Sync.Service.exe	
Imgacle SSAM Shutdown	SSAMSS	<IAS_PATH>\System\ srvany.exe	SSAM
Imgacle SSAM Startup	SSAMAL	<IAS_PATH>\Apps\SSAM\Server\System\ am.exe Linemon.exe mwi.exe SvSamAngel.exe SvSamStart.exe SvSamStop.exe STapiOFF.exe STapiON.exe <IAS_PATH>\Apps\SSAM\Component\Assembly\ SSAM.Core.Tools.exe	SSAM
Imgacle StoneFax	SvSfxCoreService	<IAS_PATH>\Apps\StoneFax\Component\Assembly\ StoneFax.Core.Service.exe StoneFax.Print.Utility.exe	Stonefax
Imgacle StoneFax Startup	SFXAL	<IAS_PATH>\Apps\StoneFax\Server\System\ SFXAL.exe sfxAngel.exe AddModem.exe EnumSer.exe t38FaxEngine.exe	Stonefax
Imgacle StoneLock	SvStoneLockCoreLockService	<IAS_PATH>\Apps\StoneLock\Component\Assembly\ StoneLock.Core.LockService.exe	Stonelock
Imgacle StoneLock Enterprise	SvSloCoreService	<IAS_PATH>\Apps\StoneLock\Component\Assembly\ StoneLock.Core.Service.exe	Stonelock
Imgacle Synchronizer	SvSasSyncService	<IAS_PATH>\Apps\Fw\Component\Assembly\ FW.Sync.Service.exe	All
Imgacle Call Accounting	Blue's Service Host	<IAS_PATH>\Apps\BillyBlues\Engine\ BluesServiceHost.exe BillyBlues.Data.CallImport.exe CiscoConfigConverter.exe ReimportDiscardedCalls.exe WinReport.exe BluesScheduler.exe BRecPro.exe BLProc.exe BluesAlarms.exe PbxConnection.exe BluesPro.exe Bminer.exe	Call Accounting

Standalone Applications:

Application Name	Path to executable	Imgacle Applications
Backup and Restore	<IAS_PATH>\System\ 	All

	BackupRestore.exe	
Erlang	<IAS_PATH>\Lib\RabbitMQ\ Erlang21.2\erts-10.2\bin\erl.exe	All
Unison	<IAS_PATH>\Lib\Unison\ unison.exe	All
Billy Blue's Core wizard	<IAS_PATH>\Apps\BillyBlues\Component\Assembly\ BillyBlues.Core.Wizard.exe	All
Reset Admin credentials	<IAS_PATH>\Apps\ApplicationSuite\Component\Assembly\ ResetAdminCredentials.exe	All
Preupgrade tool	<IAS_PATH>\Apps\ApplicationSuite\Component\PreUpgradeTool\ ApplicationSuite.PreUpgradeTool\bin\Standard\ ApplicationSuite.PreUpgradeTool.exe	All
Preupgrade tool	<IAS_PATH>\Apps\ApplicationSuite\Component\PreUpgradeTool\ ApplicationSuite.RabbitPreUpgradeTool\bin\Standard\ ApplicationSuite.RabbitPreUpgradeTool.exe	All
Preupgrade tool	<IAS_PATH>\Apps\ApplicationSuite\Component\PreUpgradeTool\ ApplicationSuite.RabbitQueuesManager\bin\Standard\ RabbitQueuesManager.exe	All
Guided Config	<IAS_PATH>\Apps\BillyBlues\Engine\ guided configuration.exe	All
Node Removal Tool	<IAS_PATH>\Apps\Replication\Component\Assembly\ Replication.NodeRemovalTool.exe	Replication Service
HA Tool	<IAS_PATH>\Apps\Fw\Componenet\Assembly\ FW.HighAvailability.Tool.exe	Replication Service
Replication Upgrade Tool	<IAS_PATH>\Apps\Replication\Component\Assembly\ Replication.UpgradeTool.exe	Replication Service

Network Setup

Interaction with the company infrastructure

The following protocols and connections can be used to interact with the customer IT infrastructure. Such protocols and ports must be Allowed in the customer firewall or NAT system.

Protocol	Direction (From Imagicle Server Perspective)	TCP-IP Ports (Remote peer)	TCP-IP Ports (Imagicle Server)	Usage	Imagicle Applications
LDAP	OUT	TCP 389	Any (TCP)	The LDAP connection is optionally used to collect information from the customer LDAP or Active Directory server in order to populate the users list.	All
SMTP (SSL)	OUT	TCP 25 TCP 465 (SSL)	Any (TCP)	Used to send email notifications to advise about alarms, fax notifications, voicemail notifications, scheduled reports. Can be used with or without SSL support.	All
IMAP	OUT	TCP 143 TCP 993 (SSL)	Any (TCP)	Used by Stonefax to retrieve email messages from the company mail server to allow the mail2fax feature. This is alternative to the POP3 protocol	Stonefax
POP3	OUT	TCP 143 TCP 995 (SSL)	Any (TCP)	Used by Stonefax to retrieve email messages from the company mail server to allow the mail2fax feature. This is alternative to the IMAP protocol.	Stonefax
EWS	OUT	TCP 443	Any (TCP)	Used by Stonefax to retrieve email messages from the company MS-Exchange email server to allow the mail2fax feature. This protocol can be also implemented to connect to MS-Office365 cloud-based email service	Stonefax
Microsoft Sharing Protocol	IN/OUT	UDP 137 UDP 138 TCP 139 TCP 445 UDP 445	Any (TCP)	Optionally used to access customer's network shared folders for backup purposes (IAS backup, fax backup).	All
TCP	IN/OUT	- NA -	- NA -	Specific TCP ports may be used by Hotel Link to connect to the customer PMS, depending on the PMS model/version. Contact Imagicle for further details	Hotel Link

Interactions between Blue's Attendant Console Clients and the IAS server

Following protocols and connections are used between Blue's Attendant console clients and the IAS server(s). These connections are used by following clients:

- Blue's Attendant Professional
- Blue's Attendant Enterprise
- Blue's One Personal

Protocol	Direction (From Imagicle Server Perspective)	TCP-IP Ports (Remote peer)	TCP-IP Ports (Imagicle Server)	Usage	Imagicle Applications
Legacy	IN	Any (TCP)	TCP 51234	Client-Server communications between clients and the Imagicle Blue's Attendant / CTI Server.	BAE BAP BOE
Legacy (S4B only)	IN	Any (TCP)	TCP 21050	Client-Server communications between One Desktop for Skype For Business and Mondago GoConnect Server.	BAE BAP
HTTP	IN	Any (TCP)	TCP 80	Optionally used for Centralized Live Update system	

Interactions with the PBX

The following protocols are used to interact with any PBX. Such protocols and ports must be allowed in the customer firewall or NAT system.

Protocol	Direction (From Imagicle Server Perspective)	TCP-IP Ports (Remote peer)	TCP-IP Ports (Imagicle Server)	Usage	Imagicle Applications
AXL(Cisco specific)	OUT	TCP 8443,8080	Any (TCP)	Secure protocol to retrieve configuration information from Cisco CallManager (phone status, users list, CallManager Version).	All
SIP	IN/OUT	UDP 5060	UDP 5060	SIP communications to establish outgoing and incoming calls from/to Imagicle Stonefax (fax server)	StoneFax
SIP	IN/OUT	UDP 5062 TCP 5062	UDP 5062 TCP 5062	SIP communications to establish outgoing and incoming calls from/to Imagicle ACD and IVR services.	Queue Manager Ent.
SIP	IN/OUT	TCP 5063	TCP 5063	SIP communications to establish secure outgoing and incoming calls from/to Imagicle ACD and IVR services	Queue Manager Ent
SIP	IN/OUT	UDP 5064	UDP 5064	SIP communications for presence notifications	Queue Manager Ent. Blue's Attendant Console (Ent./Pro.)
SIP	IN/OUT	UDP 5066	UDP 5066	SIP communications for Hotel Link voice services calls (incoming and outgoing voice calls)	Hotel Link
SIP	IN/OUT	UDP 5070 TCP 5070	UDP 5070 TCP 5070	SIP communications for Call Recording (incoming voice calls)	Call Recorder
SIP	IN/OUT	TCP 5071	TCP 5071	SIP communications for Secure Call Recording (incoming voice calls)	Call Recorder
H.323	IN/OUT	TCP 1720	TCP 1720	H.323 communications to establish outgoing and incoming calls from/to Imagicle voice/fax applications (SSAM or StoneFax, depending on the version of Imagicle Application Suite)	Stonefax SSAM
H.323	IN/OUT	TCP 1721	TCP 1720 TCP 1721	H.323 communications to establish outgoing and incoming calls from/to Imagicle fax server.	Stonefax
RTP/T.38	IN/OUT	UDP > 1024*	UDP >= 5000	Real-time voice streams. Real-time data streams for T.38 fax relay.	Stonefax Queue Manager Ent. SSAM Call Recorder Hotel Link
HTTP (Cisco specific)	IN	Any (TCP)	TCP 80	CURRI invocation for External Call Control (Cisco UCM specific)	Speedy Enterprise Stonelock
FTP	IN	Any (TCP)	TCP 21 TCP 22	FTP CDR upload	Billy Blue's

* Cisco devices normally work in the 16384-32766 UDP port range.

Interactions with IP Phones and other voice devices

Following protocols are used to interact with the IP phones, ATA devices, Voice Gateways and Session Border Controllers. Such protocols and ports must be allowed in the customer firewall or NAT system.

Protocol	Direction (From Imagicle Server Perspective)	TCP-IP Ports (Remote peer)	TCP-IP Ports (Imagicle Server)	Usage	Imagicle Applications
HTTP (Cisco specific)	IN	Any (TCP)	TCP 80	XML services, accessed by IP Phones	Speedy Stonelock IVR Manager
HTTP (Cisco specific)	OUT	TCP 80	Any (TCP)	XML notifications to Cisco IP Phones	Speedy Stonelock
RTP/T.38	IN/OUT	UDP > 1024*	UDP >= 5000	Real-time voice streams. Real-time data streams for T.38 fax relay.	Stonefax Queue Manager Ent. SSAM Call Recorder Hotel Link

* Cisco devices normally work in the 16384-32766 UDP port range.

Interactions among Imagicle nodes in a cluster

Following protocols are used for inter-node communications between two joined nodes in the same Imagicle High Availability cluster. If HA environment involves a Disaster Recovery scenario, below protocols and ports must be allowed among different Data Centers, over a WAN.

Protocol	TCP/UDP Ports (from/to Imagicle Nodes)	Usage
Microsoft Share Protocol	UDP 137	Various file sharing
	UDP 138	
	UDP 445	
	TCP 139	
	TCP 445	
HTTP	TCP 80	Various IIS activities
	TCP 443	
SQL	TCP 1433*	Database updates
	UDP 1434	
RDP	TCP 3389	Remote Desktop transactions
IPC	TCP 52000-52999 (range)	Inter process communications
	TCP 4369	
	TCP 5672	
	TCP 15672	
	TCP 25672	

*SQL Server listens to inbound communications using a random TCP port. To force a specific port (TCP 1433), please follow the procedure available here: <https://docs.microsoft.com/en-us/sql/database-engine/configure-windows/configure-a-server-to-listen-on-a-specific-tcp-port>

Note: Maximum allowed latency (RTT) for inter-nodal communications is 100msec.

Other network communication

Following protocols and connections can be used to interact with the customer IT infrastructure. Such protocols and ports must be Allowed in the customer firewall or NAT system.

Protocol	From	To	Usage
HTTP	Management workstation Users workstations (Any TCP port)	IAS Server TCP port 80	Application administration. WEB access to Imagicle applications for end-users.
HTTPS	Management workstation Users workstations (Any TCP port)	IAS Server TCP port 443	As above, using secure HTTP connections.
ANY	IAS Server (Any TCP/UDP port)	IAS Server (Any TCP/UDP port)	In the case of High Availability configurations that involve multiple IAS servers, full connectivity must be available between IAS servers (no firewall or NAT) to allow content synchronizations between multiple nodes.

Communications with Internet services

There are a number of external Internet-based services that should be reachable from IAS Server. These include Imagicle Online Cloud Licensing Server and Internet email services, like Office365 and Google Mail.

Protocol	From	To	Usage
HTTPS	IAS Server TCP Port 443, 8080, others	https://api.imagicle.com , Google Mail, MS-Office365, etc.	Imagicle Online Cloud Licensing Server and Internet email services

Starting from IAS rel. 2019.Summer.1, Imagicle Suite allows to configure a proxy server to reach above Internet services. More info are available in [this KB](#).

Traffic requirements

In addition to the network connections described above and related firewall rules, following considerations and requirements must be considered in a deployment scenario.

- SIP / H.323 / T.38:
 - Voice and fax streams with real time requirements:
 - ◆ Low Latency (maximum 80 ms RTT)
 - ◆ Wide Bandwidth (up to 80 Kbps for each simultaneous call, depending on the adopted voice codec)
- TAPI / JTAPI
 - Call Control with real time requirements:
 - ◆ Low Latency (maximum 80 ms RTT)
 - ◆ Lightweight protocol (no need for wide bandwidth)
- (S)FTP
 - ◆ Basically file transfer with no real-time requirements
 - ◆ Used bandwidth depends on the actual traffic figure
- AXL
 - ◆ Medium Latency (up to 150 ms RTT)
 - ◆ Low Bandwidth
- ECC CURRI (HTTP)
 - ◆ Low Latency (maximum 80 ms RTT)

Additional Server requirements

The Internet Options of the Imagicle Application Suite server should have the **proxy settings disabled**. Configuring a proxy may impact on service-to-service communications with the PBX or with other IAS nodes.

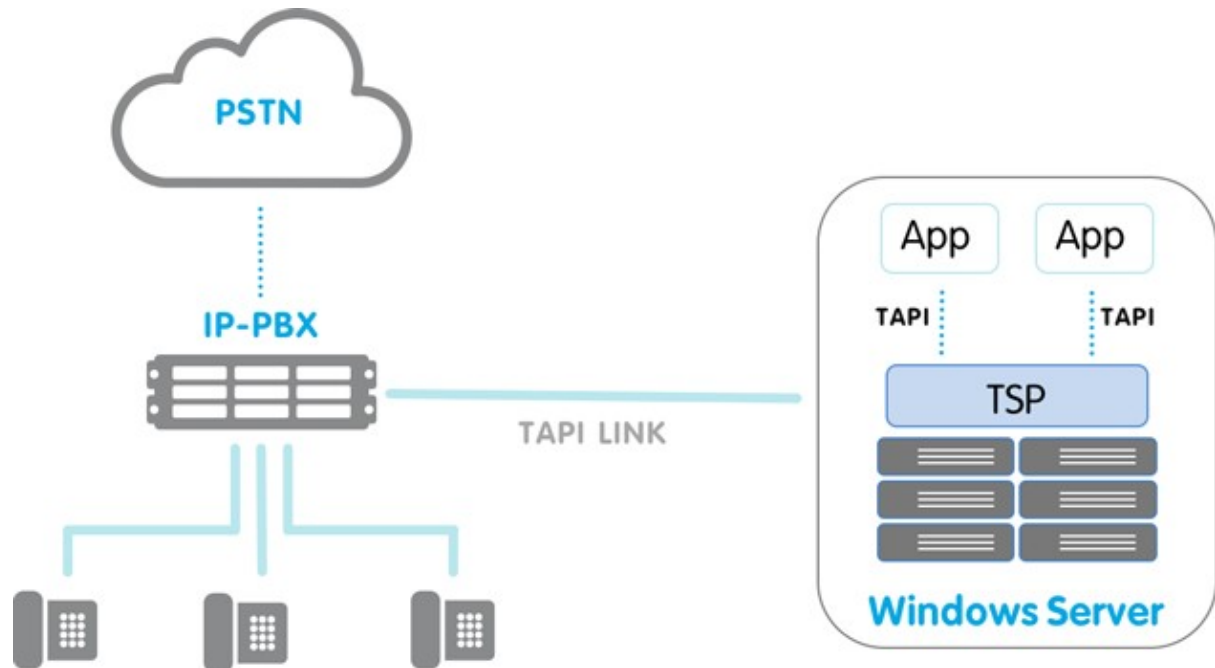
Deployment

CTI, TAPI and TSP

The TSP (Telephony Service Provider) is an interface between the PBX and the Windows Operating System. Once installed, it works as a system driver which interacts with the PBX through TCP and allows making calls, monitoring and controlling IP phones. This is also known as CTI (Computer Telephony Integration).

On the Windows platform, applications interact with the TSP through TAPI (Telephony Application Programmers Interface).

Some Imagicle Applications need a TSP installed on the same server on which they run.



CTI configuration is usually accomplished in these steps:

- Device association: work on the PBX to create a list of devices to be controlled through TAPI
- TSP Installation: download and configure a solution specific driver

The following Imagicle applications require a TSP to be correctly installed and configured on the server:

- Queue Manager Enterprise
- StoneLock
- Budget Control
- Blue's Attendant Server / CTI server (covers Blue's Attendant Professional and Enterprise editions, Blue's One Enterprise)

You can find the detailed setup procedures under each application section.

Note: CTI integration is not natively available for the CuCME telephony platform. For that platform, a CSTA driver is available on project basis. Please contact Imagicle for more information.

Operating System Updates

If your Imagicle Application Suite is installed into an actual/virtual server equipped with an outdated OS version (like Windows Server 2003 or 2008), you might need to update the operating system to a recent Windows Server 2016 or Windows Server 2019.

You can't simply perform the Windows Server update procedure on top of your existing installation, because this is going to change several system files and eventually corrupt Imagicle Suite installation and relevant licenses.

The correct procedure for Windows operating system update implies deploying a **new server from scratch, with new OS, in place update is not allow**.

Update procedure

The update to a new Windows Server OS version is accomplished through the following steps:

- if Imagicle installation is **stand-alone** (only one independent machine):
 - ◆ if the new server is going to have the **same IP** of the old one:
 - ◇ deploy a new server, with an Imagicle Suite version equal or greater than the old server: you can follow our guide [here](#), in case of a new actual server appliance. Otherwise, if you have a virtualized environment, you can deploy a new VM by following our guide [here](#)
 - ◇ assign a temporary IP to the new Imagicle server
 - ◇ if required, remember to install also the Cisco TSP plugin and to configure it, you can follow our guide [here](#)
 - ◇ stop all Imagicle services on old Imagicle server
 - ◇ perform a backup of the old Imagicle installation, with the [Backup and Restore tool](#)*
 - ◇ copy the backup on the new Imagicle installation
 - ◇ take note of old Imagicle server's IP address and then shut it down
 - ◇ change IP address on new Imagicle server's network card to above noted IP
 - ◇ perform a restore on new Imagicle installation, with the [Backup and Restore tool](#)
 - ◇ verify that all data have been moved to new Imagicle server
 - ◇ re-activate your Imagicle licenses on new appliance, from [Imagicle activation portal](#)
 - ◇ reboot new Imagicle server
 - ◇ end
 - ◆ if the new server is going to have a **different IP**:
 - ◇ deploy a new server, with an Imagicle Suite version equal or greater than the old server: you can follow our guide [here](#), in case of a new actual server appliance. Otherwise, if you have a virtualized environment, you can deploy a new VM by following our guide [here](#)
 - ◇ assign the IP to the new Imagicle server
 - ◇ if required, remember to install also the Cisco TSP plugin and to configure it, you can follow our guide [here](#)
 - ◇ stop all Imagicle services on old Imagicle server
 - ◇ perform a backup of the old Imagicle installation, with the [Backup and Restore tool](#)*
 - ◇ copy the backup on the new Imagicle installation
 - ◇ perform a restore on new Imagicle installation, with the [Backup and Restore tool](#)
 - ◇ verify that all data have been moved to new Imagicle server
 - ◇ re-activate your Imagicle licenses on new appliance, from [Imagicle activation portal](#)
 - ◇ reboot new Imagicle server
 - ◇ update the new Imagicle server's IP accordingly, where it is required (e.g. PBX, Attendant Console clients, etc.)
 - ◇ end
- if Imagicle installation is a **cluster** (set of two or more Imagicle installations that have been configured to work together):
 - ◆ **⚠** if the new servers are going to have the **same IP** of the old ones:
 - ◇ deploy the new servers, with an Imagicle Suite version equal or greater than the old servers: you can follow our guide [here](#), in case of a new actual server appliance. Otherwise, if you have a virtualized environment, you can deploy a new VM by following our guide [here](#)
 - ◇ assign temporary IPs to all new Imagicle servers
 - ◇ [don't create the cluster at this point](#)
 - ◇ if required, remember to install also the Cisco TSP plugin on all servers and to configure it, you can follow our guide [here](#)
 - ◇ stop all Imagicle services on old Imagicle primary node server

- ◇ perform a backup of the old Imagicle primary node installation, with the [Backup and Restore tool](#)*
- ◇ copy the backup on the new Imagicle primary node installation
- ◇ take note of old Imagicle servers' IP addresses and then shut them down
- ◇ change IP addresses on new Imagicle servers' network cards to above noted IPs
- ◇ perform a restore on the new Imagicle primary node installation, with the [Backup and Restore tool](#)
- ◇ verify that all data have been moved to new Imagicle primary node server
- ◇ re-activate your Imagicle licenses on all new Imagicle appliances, from [Imagicle activation portal](#)
- ◇ reboot new Imagicle primary node server
- ◇ create the new cluster, following the guide [here](#)
- ◇ end
- ◆ if the new servers are going to have **different IPs**:
 - ◇ deploy the new servers, with an Imagicle Suite version equal or greater than the old servers: you can follow our guide [here](#), in case of a new actual server appliance. Otherwise, if you have a virtualized environment, you can deploy a new VM by following our guide [here](#)
 - ◇ assign IPs to all new Imagicle servers
 - ◇ [don't create the cluster at this point](#)
 - ◇ if required, remember to install also the Cisco TSP plugin on all servers and to configure it, you can follow our guide [here](#)
 - ◇ stop all Imagicle services on old Imagicle primary node server
 - ◇ perform a backup of the old Imagicle primary node installation, with the [Backup and Restore tool](#)*
 - ◇ copy the backup on the new Imagicle primary node installation
 - ◇ perform a restore on the new Imagicle primary node installation, with the [Backup and Restore tool](#)
 - ◇ verify that all data have been moved to new Imagicle primary node server
 - ◇ re-activate your Imagicle licenses on all new Imagicle appliances, from [Imagicle activation portal](#)
 - ◇ reboot new Imagicle primary node server
 - ◇ create the new cluster, following the guide [here](#)
 - ◇ update the new Imagicle servers' IPs accordingly, where it is required (e.g. PBX, Attendant Console clients, etc.)
 - ◇ end

* Backups are forward - compatible since Imagicle 2012.2.1 release. E.g. if you have the backup of a 2012.2.1 configuration, you will be able to restore it over a new 2020.1.1 installation. If you have older Imagicle versions, please contact Imagicle Tech Support for additional details.

Appsuite Updates

Upgrading to the latest version requires: performing a full backup, installing the latest installation package over the existing installation, and checking the configuration. Detailed procedures follow. Before updating, please ensure you have downloaded the right package and that it is covered by a maintenance agreement (see below).

Version Numbers and Version Compatibility

The Application Suite has a main version number that applies to the whole installation package.

The version number is the one you may find in the filename of the installation package. It is composed by four parts: Major Version, Release season, Build and Hotfix.

For instance, version **2020.1.1.h2** means **Application Suite version 2020 Winter build #1, hotfix 2**.

You may always upgrade to the latest version, even when Major version is not the same. E.g. you can install 2020.3.1 over 2015.1.1. In any case, all the applications are backwards compatible.

Imagicle requires the specific applications being upgraded to be covered by a Maintenance Agreement. Please refer to the official [website](#) for more information about available ImagicleCare plans.

Note: different releases of the Application Suite cannot be installed on the same machine at the same time.

Update procedure

To update an existing installation to the latest build:

- Perform a Backup with the Backup and Restore tool
- Install the new package over the existing one, on the same machine
- Choose the same installation folder
- Reboot the server

Upgrading Imagicle Billing also requires to fully run the Configuration Wizard to the last step.

Cluster installations require a slightly different procedure, detailed in the High Availability section.

Upgrading StoneFAX to version 2012.12.x or later from a previous version

Upgrading Stonefax will cause all the faxes to disappear from the user's Inbox and Outbox. This is because they are now managed through a different process. To make old faxes available to the users, go to the StoneFAX Manage Service web page and click on the "Import Old Faxes" button. If there is no such button, no fax needs to be imported. Before importing the faxes, please make sure the user's list is correctly configured.

Upgrading from a Stonevoice Application Suite for CallManager Express

The CME suite no longer exists and has been replaced by the generic Imagicle Application Suite for Cisco UC. You can upgrade your Stonevoice Application Suite for CallManager Express to this edition being aware that:

1. SSAM Professional will be replaced by the SSAM Enterprise. The upgrade does not require reconfiguration, except for the MWI pattern on CME. Please check the relevant section of this guide for details
2. Billy Blues'4 does not require reconfiguration
3. StoneFAX does not require reconfiguration
4. Speedy, will be replaced by the Speedy Enterprise 64 users. The upgrade does not require reconfiguration
5. IVR Manager will be replaced by the IVR Manager 4 gateways. The upgrade does not require reconfiguration
6. Concerto is no longer available in the new suite, upgrading will result in the program being removed from your system
7. Queue Manager Professional will be replaced by the more powerful Enterprise version with 4 channels, but will require a full reconfiguration.

imagicle

After upgrading, you need to re-activate the license of every application you were using: you can get a new license at no additional cost for each application you have a **valid maintenance contract** for. Please contact imagicle Sales Team (sales@imagicle.com) to renew or learn more.

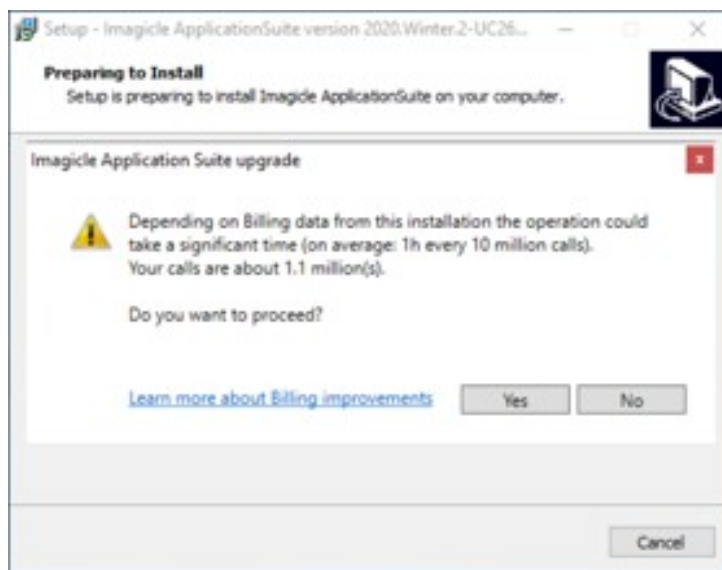
If you are still running the old Billy, please contact imagicle sales to purchase the upgrade to Billy Blue's 4.

If you don't want to go through the upgrade process, the latest downloadable version of Imagicle Application Suite for CME is Spring 2013 (2013.3.3). Please check www.imagicle.com/go/eol for end of support info.

Special recommendations when upgrading to 2020.Spring.1 release or above

Billing data migration

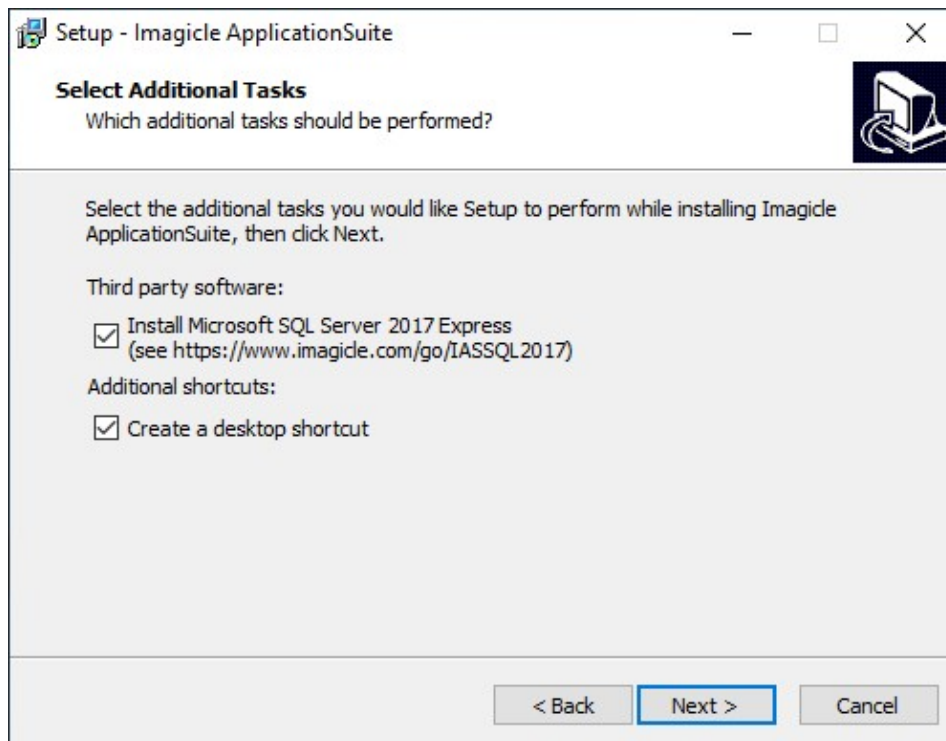
When upgrading from release 2020.Winter.1 or older to 2020.Spring.1 or above, setup package automatically migrates all billing data from old to new data warehouse within SQL database. For this reason, you get a message about possible delays in migrating CDRs. See below:



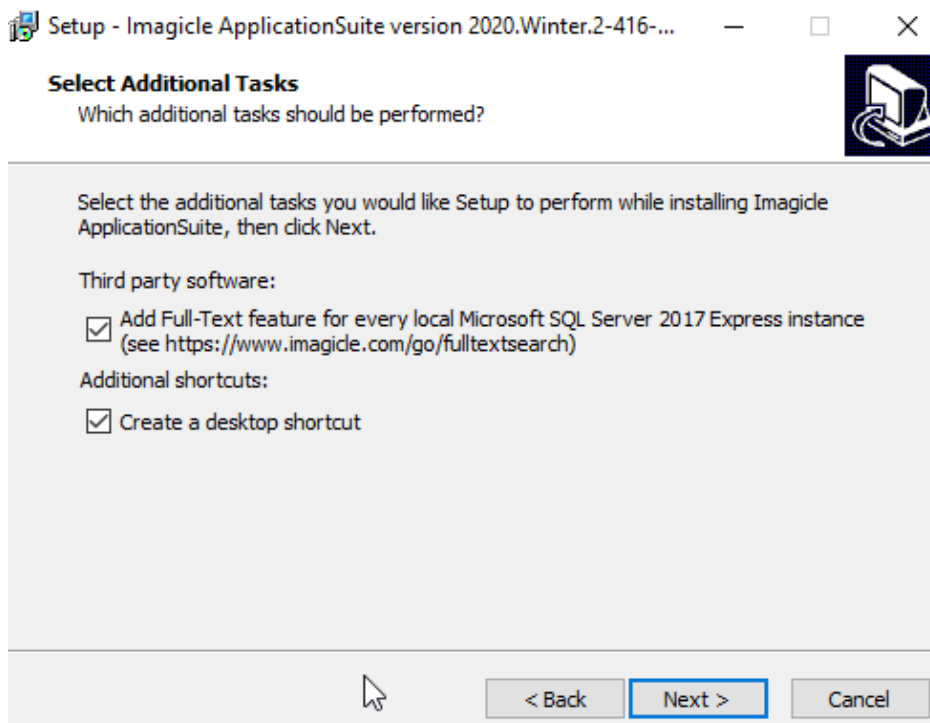
When an Imagicle cluster with replicated DB is in place, above migration is performed in master node only (regardless the order nodes are updated), so above message is not displayed in subsequent nodes. When using a shared DB, migration happens during first node update.

SQL Server Express instance update, including Full-Text Search service

When upgrading from release 2020.Winter.1 or older to 2020.Spring.1 or above, setup wizard prompts you to install a local MS-SQL Server 2017 Express Edition instance, if not yet available. You can accept the installation (highly recommended) or you can keep existing internal/external SQL Server instance by unchecking relevant SQL install option. See below screenshot:



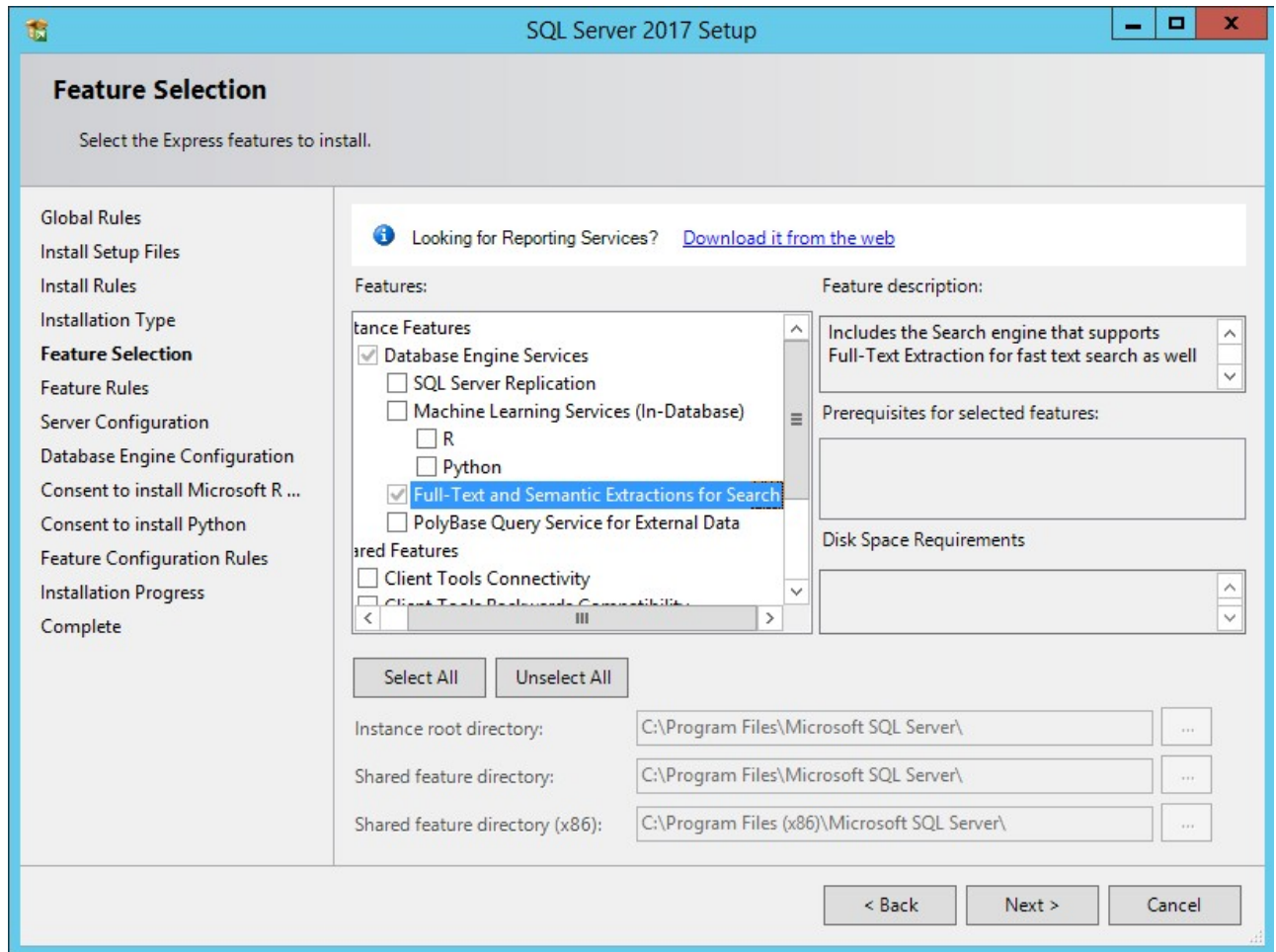
If a local MS-SQL Server 2017 Express Edition instance is already installed in your IAS, and it does not include Full-Text Search service, you have the possibility (mandatory from Spring 2021 and above) to add this very important indexing service, which allows a much quicker contact search across multiple Speedy directories, even involving millions of contact, without having to wait several seconds to get a response. In this case, the following window appears:



Manual installation of Full-Text Search service on SQL Server versions other than 2017

When local SQL server version is different than 2017 Express or you are dealing with an external SQL Server instance, you can manually install the Full-Text service.

To add Full-Text Search feature into your existing SQL instance, you must run SQL Server installer, paying attention to use "Express Advanced" package and not "Express Core" package (only in case of SQL Server Express). Please add **Full-Text and Semantic Extractions for Search** feature to chosen instance. See below sample:



Repairing an existing installation

To repair an existing installation, install the same package (i.e. same version number) over the existing one just like in the case of a minor upgrade.

Repairing StoneFax installation

During the update, the Setup program could ask you if you want to repair the existing *StoneFax* installation. This means creating the virtual serial ports and the virtual modems again.

If *StoneFax* are already correctly installed and running, **do not select the repair option**. Repairing a working installation may cause problems and need a real repair later.

Changing the default language

To change the default language for the Suite, perform a Repair Installation and make a different choice.

imagicle

The default language affects the web interface, the Attendant Console interface and the audio files of the users for whom the "user language" field in the User Management is blank.

Note - Users' welcome messages for the *SSAM* application will remain in the old language even if installing a complete Application Suite package in a different language.

License status and configuration after the update

Once an application is registered on a machine, the registration is persistent among different versions even after uninstalling and reinstallation. There is no need to register again if you perform an upgrade of the IAS package on the same machine.

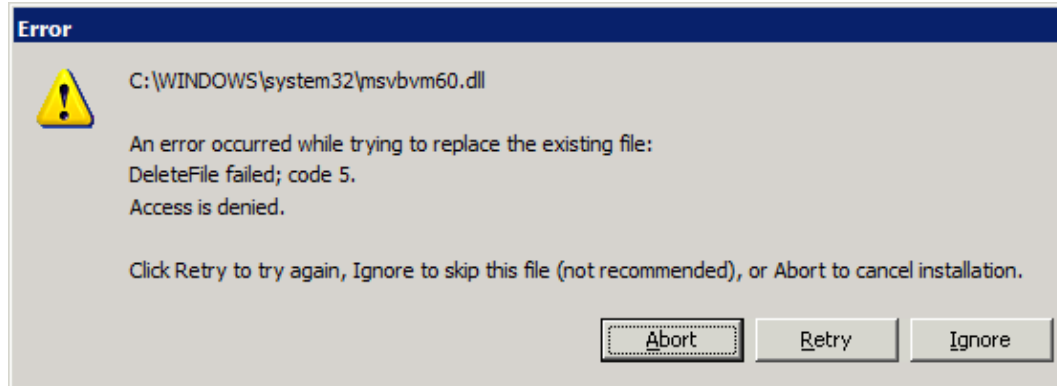
Imagicle might releases new applications when a new Application Suite package is issued. New applications might **replace** the old ones. Old applications may also be **discontinued** but not replaced.

On the technical side, an application is considered **new** when it has brand new features which dramatically improve the user experience. On the commercial side, a new application has a different commercial code and different license string or activation token. New and replaced applications require a new license.

Installation Troubleshooting

Error Copying Files

Should a message similar to this one pop up:

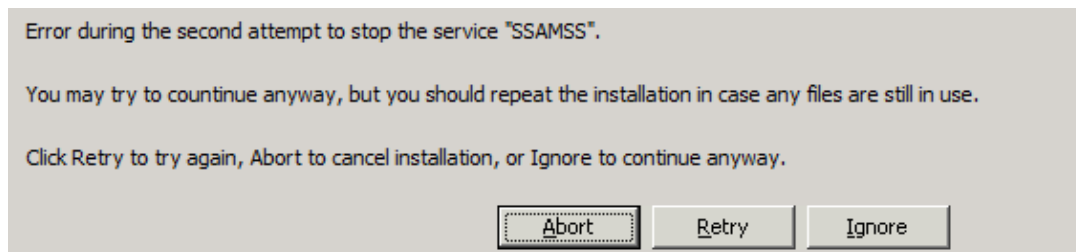


to correctly install the Application Suite, try the following solutions in order:

1. Close all the other running applications and click *Retry*.
2. Use the Task Manager to terminate the running Imagicle processes (if any) and click *Retry*.
3. If the filename is msvbvm60.dll, you may click *Ignore*. For other files, you should click *Abort*.

Error Stopping Services

The following message box may be displayed before the file copy step of the installation:



This error is common when a Imagicle service is partially uninstalled, either because the uninstall program was interrupted or because the system was not restarted after uninstallation. To correctly install the Application Suite, try the following solutions in order:

1. Run iisreset
2. Stop IIS from the IIS Manager (remember to restart it when the installation is completed)
3. In Windows Service Manager, check that all the Imagicle services are stopped
4. Reboot the machine and repeat the installation.
5. Click *Ignore*. In this case, some files may still be in use. See also Error Copying Files.

Error Running the Backup Utility

The following message box may be displayed when you click the *Run Backup Utility Now* button of the *Backup Data* wizard page:

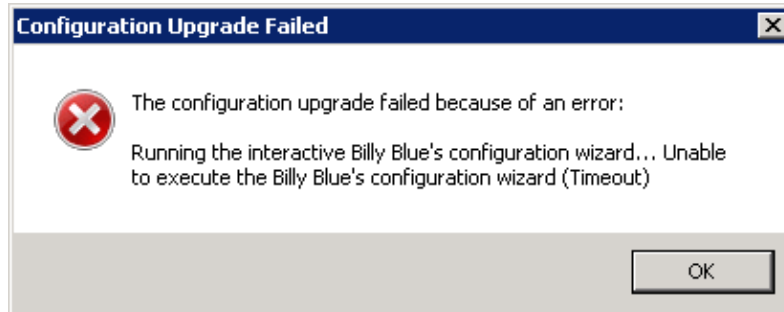
Unable to execute the Stonevoice Backup Utility: The directory name is invalid.

OK

This error may appear if your home directory is on a network drive that is not accessible. If this message appears, launch the *Backup and Restore* utility from the Start Menu.

Database Creation Timeout

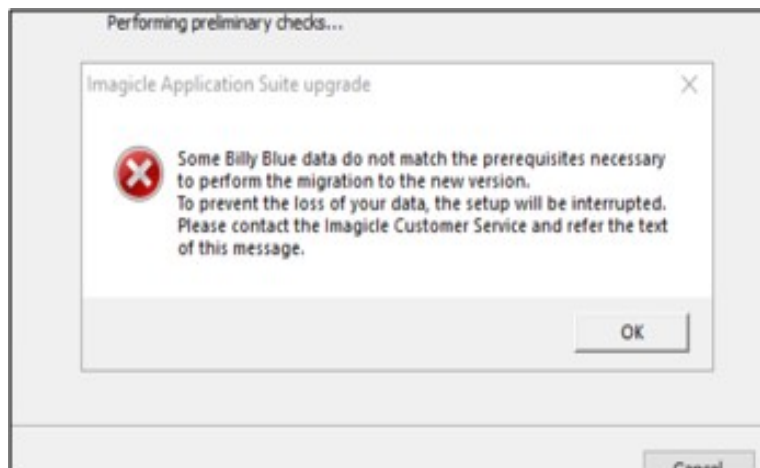
This message might appear on slow systems, if certain phases take too long to complete:



To recover wait for the User Synchronization to complete, press **OK**, then press **Retry**, then configure the database with the same credentials pressing **Next** twice.

Failure during billing data migration, while upgrading to 2020.Spring.1 release or newer

While upgrading IAS from 2020.Winter.1 or older to 2020.Spring.1 or newer, a billing data migration to a new SQL data warehouse is automatically triggered. If, during the migration, the routine encounters spurious records in "Chiamate" and "ChiamateInterne" DB tables, the process is stopped with the following message:



Please contact Imagicle Support for details about solving this issue.

Installation log files

The installation program creates a log file during setup. It can be useful to tell if all the files were correctly copied, ole dll registered, services installed...

The file location on Windows 2008 is:

imagicle

C:\Users\\AppData\Local\Temp\2

where username is the account which started the setup program.

The log file names are like this "Setup Log <current date> #001.txt". E.g.:

Setup Log 2011-01-21 #001.txt

Setup Log 2011-01-21 #002.txt

....

Analysing log files is a complex task which may be delegated to Imagicle Technical Support Team.

Problem with data execution prevention

If this message is displayed on the server, please check that Data execution prevention is disabled.





Deployment Options

You can freely download the Application Suite from Imagicle web site. The creation of an account with a valid email address might be required.

There are two deployment options:

1. Through Imagicle Virtual Appliance, which is easier and faster
2. Downloading the setup package and installing it on a Windows server

Both the Virtual appliance and the Setup package include SQL Server Express edition, which is free and suitable for small and medium business deployments. To deploy using an external SQL server database, see below.

Deploying ApplicationSuite through Virtual Appliance

The Imagicle Virtual Appliance (VAI) is a fully functional and ready-to-go **VMware** OVA including both Windows Server 2016 Standard or Windows Server 2012 R2 Standard OS and Imagicle ApplicationSuite, together with MS-SQL Server 2017 Express Edition.

Windows OS runs in evaluation mode for 180 days. A suitable Windows Server license, not provided by Imagicle, must be bought and activated on the server within that time.

To setup the VAI, follow these steps:

- Download the OVA file (approx. 15 GBytes)
- Deploy it on the VMware host. The procedure depends on the VMware version you are using. Please refer to VMware documentation.
- When you deploy the OVA, VMware will ask you to accept VMware Eula
- If you are running an ESX environment, you'll be asked which **preset profile** you want to use for the virtual machine (see below)
- Start the VM
- Windows first time bootstrap prompts you to choose the OS language, time zone and keyboard setting. Please note that if you want to run Imagicle Application Suite with Arabic interface, you have to select the English language.
- You are subsequently logged in as ImagicleVAI user, which is a local Administrator. The password is ImagicleVAI.
- A welcome web page tells you what to do next, then you'll be redirected to the web administration login page

All Imagicle applications run with full features for 30 days.

After the VAI deployment, you must go through the AppSuite common configuration steps, then configure the single applications, as described in the product configuration guides.

Imagicle OVA profiles

Note: preset profiles do not apply to a deployment within VMware Workstation.

AX Server

- Imagicle VAI configuration that supports up to 3 Apps (Medium business)
- Imagicle VAI configuration that supports up to 5 Apps (Small business)

Details:

- CPU: 2 vCPU with 2.5Ghz reservation
- Memory: 6.0 GB with 6.0 GB reservation
- Disk: 1 - 80 GB disk

BX Server

imagicle

- Imagicle VAI configuration that supports up to 3 Apps (Large business)
- Imagicle VAI configuration that supports up to 5 Apps (Medium business)
- Imagicle VAI configuration that supports up to 7 Apps (Small business)

Details:

- CPU: 4 vCPU with 4.8 GHz reservation
- Memory: 8.0 GB with 8.0 GB reservation
- Disk: 1 - 80 GB disk

CX Server

- Imagicle VAI configuration that supports up to 5 Apps (Large business)
- Imagicle VAI configuration that supports up to 7 Apps (Medium business)
- Imagicle VAI configuration that supports up to 11 Apps (Small business)

Details:

- CPU: 6 vCPU with 6.9 GHz reservation
- Memory: 12.0 GB with 12.0 GB reservation
- Disk: 1 - 120 GB disk

DX Server

- Imagicle VAI configuration that supports up to 7 Apps (Large business)
- Imagicle VAI configuration that supports up to 11 Apps (Medium business)

Details:

- CPU: 8 vCPU with 8.9 GHz reservation
- Memory: 16.0 GB with 16.0 GB reservation
- Disk: 1 - 120 GB disk

Virtual Hardware Considerations

If you install Imagicle applications on a Virtual Machine, you must allocate the amount of RAM, CPU power and disk space stated in the section above. The virtual hardware resources (CPU and RAM) must be **reserved**, that is, they must not be shared with other virtual machines and CPU Limit must **never be set** (see image below).

▼ CPU	2	<i>i</i>
Cores per Socket	2	Sockets: 1
CPU Hot Plug	<input type="checkbox"/> Enable CPU Hot Add	
Reservation	6000	MHz
Limit	Unlimited	MHz
Shares	Normal	1000
Hardware virtualization	<input type="checkbox"/> Expose hardware assisted virtualization to the guest OS <i>i</i>	
Performance counters	<input type="checkbox"/> Enable virtualized CPU performance counters	
Scheduling Affinity	Hyperthreading Status: Not active Available CPUs: 4 (Logical CPUs) 0, 2, 4-7 <i>i</i>	
CPU/MMU Virtualization	Automatic <i>i</i>	
▼ Memory		
RAM	4096	MB
Reservation	8192	MB
	<input type="checkbox"/> Reserve all guest memory (All locked)	
Limit	Unlimited	MB

Save Cancel

No overprovisioning. Required HD provisioning is **Thick Provisioned - Eager Zeroed**.

Deploying ApplicationSuite through the Setup Package

Download the latest package released for your telephony system from Imagicle web site, and run the installer.

Setup Wizard Details

This section describes the operations performed by the setup utility and the information you'll be asked.

imagicle

Network installation is supported, meaning that you can execute the setup program from a network share.

When the package starts, you are prompted to choose a language. The language of the Setup user interface is always English. The language selection dictates default web portal language.

Prerequisites Verification and Installation

The operating system requirements and prerequisites verification is automatically executed before the main installation wizard starts. Compatibility with other Imagicle Products installed on the machine is also checked. Should a requirement fail, the setup package will try to install it automatically.

Warning: please reboot the server each time the setup asks you to do so!



License Agreement

You are required to accept the terms of the License Agreement to install the Application Suite. The main License Agreement for the package covers the entire IAS version being installed.

Information about Antiviral Software

If an antivirus is installed on the target machine, it must be disabled at least for the duration of the Application Suite installation. When the installation is finished, we recommend configuring the antivirus to exclude the folder where IAS has been installed. More info are available [here](#).

More over:

- Remember to enable the Microsoft Windows DEP (Data Execution Prevention) only for Windows programs and services
- Disabling Windows Defender is mandatory

Backup Data

imagicle

This page is displayed only when you are reinstalling over an existing IAS installation. Click the button to launch the [Backup and Restore](#) utility of the installed IAS version. If the *Backup and Restore* utility does not start, see the troubleshooting section below.

Select Destination Location

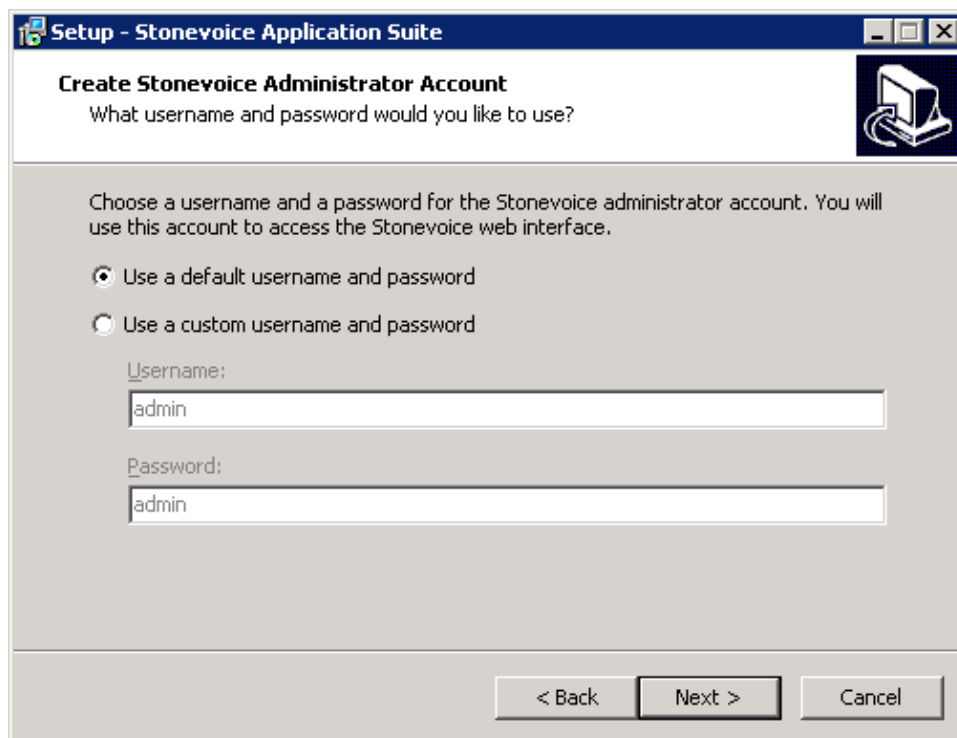
If you are installing the IAS for the first time on the target machine, you may select any folder you wish.

Note - The file system of the volume you are installing the IAS on must be **NTFS**. You cannot install the IAS on FAT file systems.

If you uninstalled the IAS from the target machine previously, you should install the IAS in the same folder where the previous package was installed.

Create Imagicle Web Administration Account

This page allows you to modify the default username and password that the Imagicle Application Suite administrator will use to log on to the IAS web interface. This page also allows you to recover from a lost username or password because it will overwrite existing credentials.



The IAS administrator is a *super user* which always has full permissions on all the applications, and is allowed to configure the system and create other users with limited or extended permissions. This user cannot be deleted.

If you choose to accept the default value, the administrator will be able to access the IAS using the following default credentials:

Username: **admin**

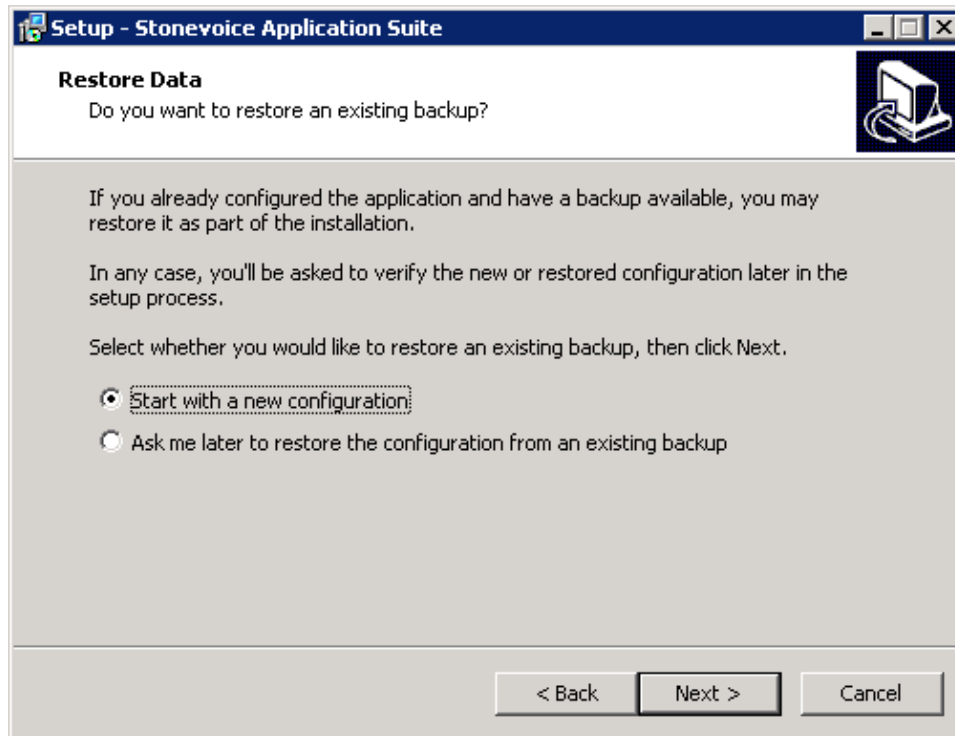
Password: **admin**

These credentials may be modified later from within the IAS web interface.

Choose between clean setup and upgrade

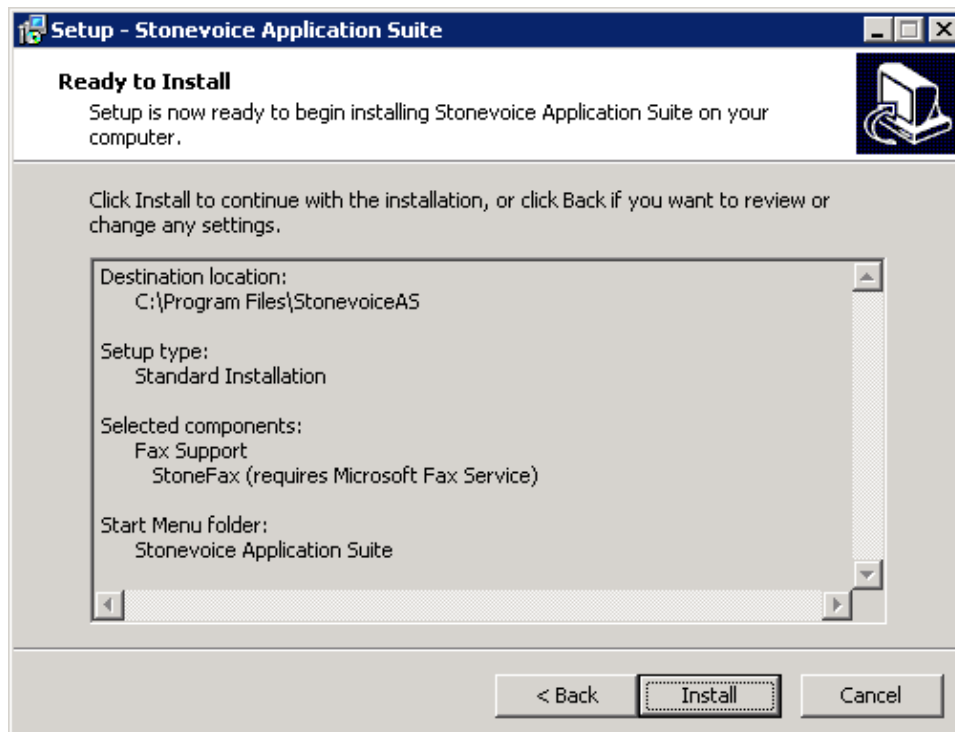
imagicle

If you are making a fresh installation, select "start with a new configuration". If you are performing an upgrade or a migration, select the other option. In this case the Setup program will launch the Restore tool when appropriate, asking for the location of the backup files.



Begin installation

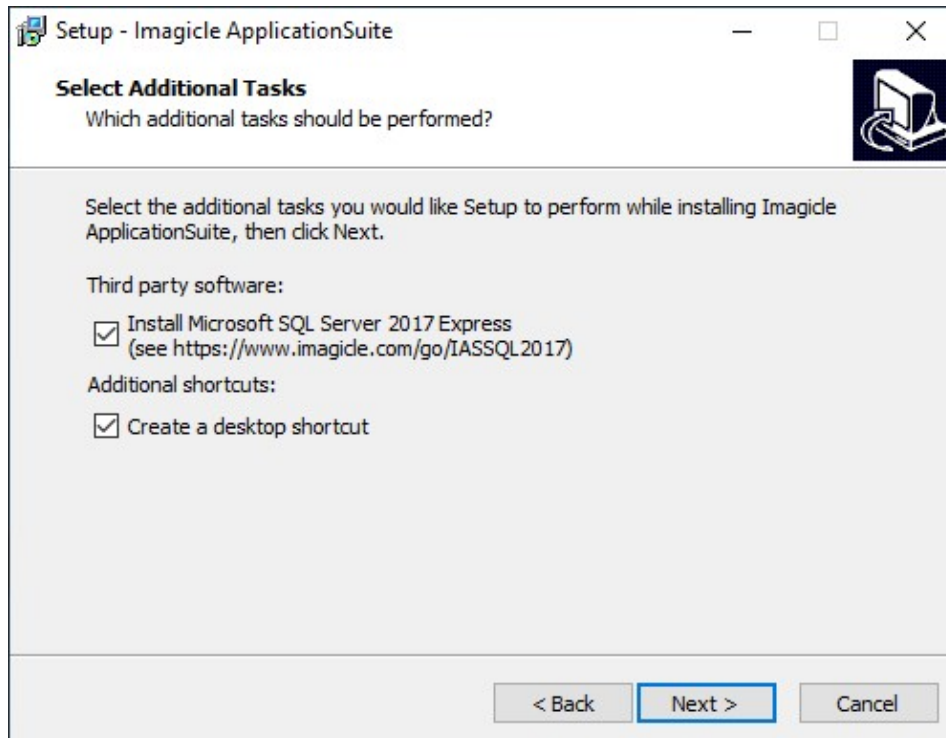
Review the information and press the "Install" button to start copying files and installing services.



Installing 2020.Spring.1 release or newer

Starting from Spring 2020 release, the installation package embeds MS-SQL Server 2017 Express Edition, including Full-Text Search Service. This optional SQL service (mandatory from Spring 2021 release and above) allows a much quicker contact search across multiple Speedy directories, even involving millions of contact, without having to wait several seconds to get a response. You can also decide to avoid the installation of this service at a later wizard stage, even if it's not recommended.

Installation package prompts you to proceed with SQL 2017 installation. If you are going to leverage an existing, external SQL Server instance, you can uncheck relevant installation. See below sample:



Post-copy installation steps

Once the application files are installed, additional configuration is required.

Local Area Code and Other Location Information

The following message is displayed when installing *StoneFax*.

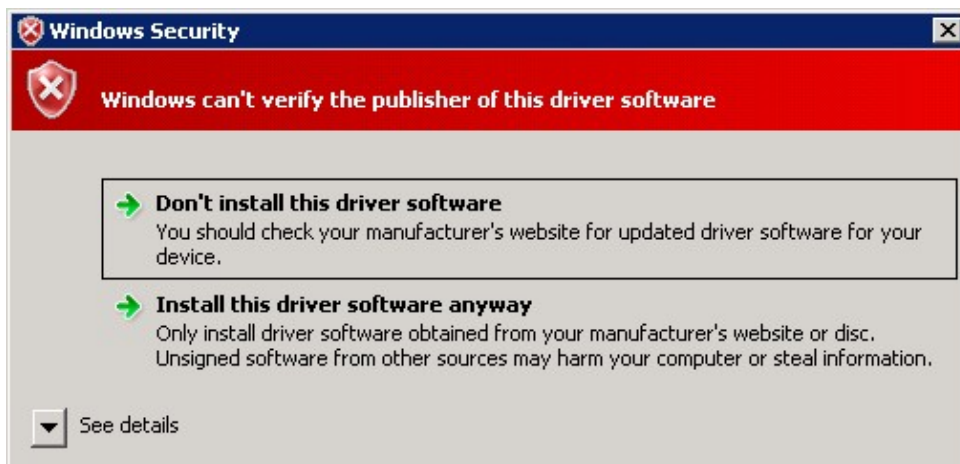
Now the "Phone and Modem Options" Control Panel applet will show to set the local area code. This operation is mandatory to send faxes.

OK

Choose your country and your local area code. Press OK. twice to close the control panel windows. Setup will resume when you press ok.

Driver installation

The following alert is displayed when installing *StoneFax*. Press Yes / Install this Driver Anyway.

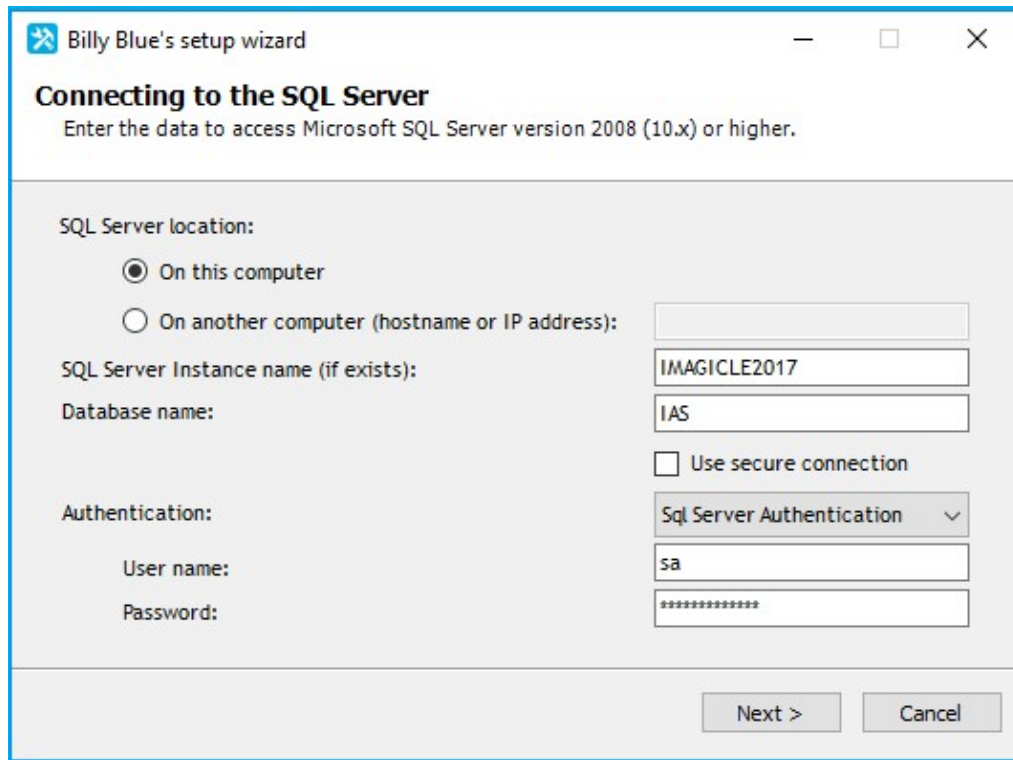


Database connection

When installing the ApplicationSuite for the first time, by default, the IAS setup package installs a Microsoft SQL Express 2017 instance on the machine, to store configuration and data.

Here are the default settings for the local SQL server:

- SQL server instance: **IMAGICLE2017**
- Database name: **IAS**
- Username: **sa**
- Password: **SvB1llyBlues\$** (case sensitive)

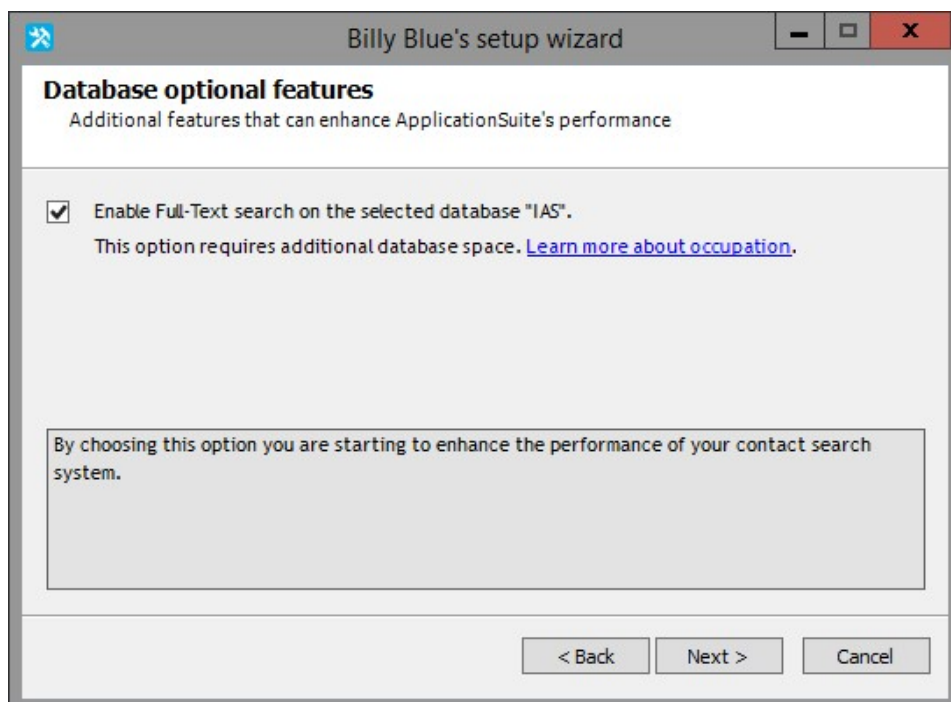


Accessing the database through **Windows Authentication** is supported, see [this page](#) for the required configurations to enable it.

Optionally, you can use a secure connection to an external, trusted, SQL Server.

You may test the connection by pressing the "Connection test" button.

On Imagicle 2020.Spring.1 release and above, when you press "Next", the installation package prompts you to confirm the installation of Full-Text Search SQL indexing service (mandatory from Spring 2021 release and above). See below screenshot:



imagicle

This windows also appears if you have chosen another external SQL Server 2017 instance. If the alternative instance is from a different SQL version, then you are prompted to manually install Full-Text service by running relevant SQL Server setup.

When you hit "Next", the **IAS** database will be added or updated (if already existing).

Using an external SQL Server

As mentioned above, the Imagicle Application Suite can install a SQL Express 2017 instance to store configuration and data. However, you can leverage your own SQL Server instance, which can be installed on the same server or running on an external server.

In this case:

- Please, don't need create the database in advance: the database will be automatically created with by the setup procedure or running the DB configuration wizard of the application Suite.
- A SQL user must be created using the script specified at [this page](#). Alternatively, you can leverage the Windows authentication mechanism, applying the configurations described in the same page.

During the setup, in the setup DB wizard form, provide:

- the SQL server hostname/IP Address and, if different from standard, the port number (comma separated, for instance "172.10.54.22,1435")
- the SQL instance name
- the database name
- the user credentials of the user created at the previous point (if SQL authentication has been chosen).

When you press "Next", the IAS database will be added or updated.

High availability notes

If leveraging an external SQL server, both the *AlwaysOn Failover Cluster Instances* and the *AlwaysOn Availability Groups* SQL server configurations are supported for high availability scopes.

If the AlwaysOn Availability Group configuration is used, a limitation applies to the restore mechanism: in such case, please, contact Imagicle to obtain the procedure needed to restore an Imagicle backup.

Server Restart

Restart may be required when installing StoneFax. After restart you will have to wait while virtual hardware (modem) is created. This step might take some minutes to complete. After that, if required by the setup program, reboot a second time.

Setup Imagicle Billing (Billy Blue's or Blue's Enterprise)

You'll be asked if you want to configure Billing call acquisition at the end of setup. You can safely skip this operation if you do not plan to evaluate or use that application. Blue's configuration wizard can be run later, if needed, from the start menu.

Evaluation grace period

When the IAS is installed for the first time on a server appliance, all the applications are available in evaluation mode and they will expire after 30 days, if not registered.