

Technical Support Guide

VERSION 6.02

2019



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About LumenVox

LumenVox is a speech automation solutions company providing technology including the LumenVox Speech Recognizer, Text-to-Speech Engine, Call Progress Analysis, and SLM solutions. We have won numerous awards for innovation and technical excellence. Based on industry standards, LumenVox' core Speech Software is certified as one of the most accurate, natural sounding, and reliable solutions in the industry. The LumenVox technology provides tools for you to effectively connect and communicate with your users, increase user satisfaction, and improve employee productivity.

At LumenVox, each client is considered a true partner. We are known for outstanding customer service and are here to support you in understanding, navigating, and assessing each phase of your project to make the process as easy as possible. And we're there for you with robust joint sales, marketing, education, training and customer support teams and programs after you've deployed your speech solution. LumenVox technology is used worldwide by companies like Verizon, GM, Toyota, Kmart, the Aussie Post, British Telecom, government agencies, over 300 banks, telecom service providers, 511 operations, and nearly 2,000 other resellers and developers.

Go to www.lumenvox.com for additional information.

Each product has its own documentation for online viewing at the LumenVox Technical Support website – www.lumenvox.com/help.

A copy of the current LumenVox End User License Agreement and the current version of this LumenVox Technical Support Guide can be found at www.lumenvox.com/legal.

Notice

Although reasonable effort is made to ensure that the information in this document is complete and accurate at the time of release, The LumenVox Corporation cannot assume responsibility for any existing errors. Changes and/or corrections to the information contained in this document may be incorporated in future versions.

Your Responsibility for Your System's Security

You are responsible for the security of your system. Product administration to prevent unauthorized use is your responsibility. Your system administrator should read all documents provided with this product to fully understand the features available that reduce your risk of incurring charges for unlicensed use of LumenVox products. Operating System Maintenance and patching for security issues are your responsibility.

Trademarks

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Technical Support from VARs

If you have purchased support from a reseller, please contact that reseller for technical support.



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Contents

About LumenVox	1
Notice	1
Your Responsibility for Your System's Security	1
Trademarks	1
Technical Support from VARs	1
Released by	2
Introduction	4
When to Contact LumenVox Technical Support	4
LumenVox Technical Support Contact Information	4
LumenVox Technical Support Hours of Availability	5
LumenVox After Hours Support Information	5
Other Contact Information	6
Customer Responsibilities	7
Before Logging a Support Request	8
Sending Files Via FTP	9
How to Log a Service Request (Support Case)	9
Designated Contacts	10
Software Downloads	12
Support Requests (Support Case)	12
Case Numbers	12
Case Severity Levels and Priority	12
Case Severity Levels and Priority - Response Times	14
Case Status	15
Submitting Support Request Updates	15
Closure of Support Requests	15
Reopening a Support Request	15
Software Releases	15
Major Releases	15



	Minor Releases	16
	Maintenance Releases	16
	Software Patches	16
	Software Versioning	16
	Release Notes	16
	Supported Versions	17
Fe	eature Request Process	19
	Submitting Feature Requests	19
	Accepting Feature Requests	19
	Feature Request Updates and Communications	19
Li	cense Files	20
	License Types	20
	Perpetual Licenses	20
	Subscription Licenses	20
	Flexible Licenses	20
	Software Maintenance	21
	Installing, Uninstalling or Moving License Files	21
R	emote Access	22
0	n-Site Support	22
Es	scalating Your Issue	22
	LumenVox Support Escalation Contacts	23



Introduction

LumenVox' technical support team is a component of LumenVox' Client Services Department and is in San Diego, CA at our company headquarters. Our goal is to provide prompt, effective technical support to customers and partners who might experience issues with their LumenVox products. This document provides guidelines for determining whom to contact, how to initiate a support request, and what customer information is required to resolve issues as quickly as possible.

When to Contact LumenVox Technical Support

Before you contact technical support, please thoroughly review all product information. Also, please be sure you have reviewed your responsibilities (see "Customer Responsibilities" on page 7). LumenVox Technical Support can only assist you with the following issues:

- You have an issue with the operation of supported LumenVox products in a production or development (test) environment.
- You have an issue with licenses that requires immediate attention to ensure that a production environment remains operational or is restored to operation.
- You have post-sale technical questions about the operation of supported LumenVox products.
- You have product change or enhancement requests.
- You are notifying us of important project milestones (such as go-live dates for projects, major
 platform upgrades or LumenVox software upgrades) so that appropriate staff can be made aware of
 your plans.
- Scheduling training or other deliverables related to the purchase of any LumenVox software.
- Scheduling training, after purchase.

LumenVox Technical Support Contact Information

To contact the Support team, please call us at +1 858-707-7700 and ask for "Technical Support," or email us at Support@Lumenvox.com.

LumenVox technical support is available weekdays, between 8 a.m. and 5 p.m. Pacific Time. All calls to technical support after business hours will go to voice mail and our technical support team will respond to your request on the next business day during our regular hours.



LumenVox Technical Support Hours of Availability

LumenVox technical support is available Monday thru Friday, between 8 a.m. and 5 p.m. Pacific Time

Our offices (including technical support) are closed in observation of the follow US Holidays:

New Year's Day – January 1st
Memorial Day - last Monday of May
Independence Day - July 4th
Labor Day - first Monday of September
Thanksgiving Day - 4th Thursday of November
Christmas Day - December 25th

LumenVox After Hours Support Information

After hours' support is available as a premium offering with an additional cost. The additional costs include an annual fee for access to after hours' support, and an hourly charge for time spent on each incident at a 100% premium to the regular business hours support rate. Only **Severity 1 – Critical** status issues are eligible for After Hours Support. Our definition for **Severity 1- Critical** status is "A production system is down or severely impaired to the point where it is unusable. "(See the full LumenVox Technical Support Guide for more details). Please consult with your Sales Representative for more information, terms and conditions for after hours' support.

Customers who have subscribed to after-hours support will be given a special phone number to reach our after-hours support team.



Other Contact Information

The following items or issues are not part of the Technical Support responsibilities. Please contact the appropriate LumenVox resource for each.

Item or Issue	Appropriate Contact
LumenVox product pricing or quotations.	Please contact LumenVox Sales at +1 858-707-7700 and ask for "Sales" or contact your specific Sales Representative.
Issues related to placing or completing on-line purchases at <u>www.lumenvox.com</u>	Please contact LumenVox Sales at +1 858-707-7700 and ask for "Sales" or contact your specific Sales Representative.
Payment and billing questions or issues.	Please contact LumenVox Sales at +1 858-707-7700 and ask for "Sales"; contact your specific Sales Representative or email AcccountsReceivable@LumenVox.com
Issues with general software programming, not specific to LumenVox products.	Please contact your internal programming experts.
Issues with products or applications not produced by LumenVox, such as IVR or IVR applications.	Please contact the appropriate product vendor. If an issue crosses multiple vendors, LumenVox support can be available to work with the other vendors.
Issues with custom software developed by a third- party systems integrator.	Please contact the system integrator that developed the application.
Pre-sales design request and questions.	Please contact LumenVox Sales at +1 858-707-7700 and ask for "Sales" or contact your specific Sales Representative. They can arrange for pre-sales assistance from our Client Services team.
Contact center architecture and design questions.	Please contact LumenVox Sales at +1 858-707-7700 and ask for "Sales" or contact your specific Sales Representative. They can arrange for assistance from our Client Services team.



Customer Responsibilities

The following are customer responsibilities. To ensure that your issue is resolved as quickly as possible, please review the following list and be sure that you have met these responsibilities before contacting Technical Support. Failure to fulfill these requirements will result in delays in achieving problem resolution.

- You must have Technical Support Entitlement (time) available in your account before any support request will be considered "Opened."
- You must be a Designated Contact (as described in "Designated Contacts" on page 10) to report a new Service Request or to update an existing Support Request.
- You must have a complete understanding of the technical infrastructure in which the LumenVox product is installed.
- You must be able to specify the name of the LumenVox product you are using and the version number of that product.
- You must be able to provide an accurate description of the issue and its business impact including the observed behavior and the expected behavior.
- You must be adequately trained to use LumenVox products.
- You must report each issue separately, so they can be individually tracked to a successful resolution.
 Reporting multiple issues on one form or adding new issues into correspondence about an existing issue may result in problems being overlooked and not resolved.
- You must be able to transfer information (for example, log files, configuration files, Linux core file, etc.) electronically to help us analyze your issue.
- You must be willing to work with the Support Representative to resolve your issue.
- If you have requested **Severity 1 Critical** status for your issue, a customer contact must always be available to work with LumenVox Technical Support in the resolution of your issue.
- Severity 1 Critical Status issues may not be submitted via email. They may only be submitted by phone.



Before Logging a Support Request

Before contacting LumenVox Support, please be sure that you have searched the <u>LumenVox Knowledge</u>
<u>Base</u> for your issue. Most common issues can be resolved by reading through the comprehensive collection of articles in the Knowledge Base. If you still wish to open a new support request, please have the following ready:

- A clear description of the problem.
- If you can reproduce the issue, clear instructions on how to do so.
- A list of actions you have taken so far in attempting to solve the issue.
- The set of LumenVox configurations on the active machine(s).
 - Use the <u>LumenVox Dashboard</u>'s Diagnostics tab to collect this information and submit it to LumenVox Technical Support. (This is the preferred method to submit information).
- A set of LumenVox text logs covering the relevant time period.
 - The steps below can be done manually as describe below or through the use of the <u>LumenVox Dashboard</u>'s Diagnostics tab.
 - If you do not already have logging verbosity set to 3 in your LumenVox configuration files using the Diagnostics Tab in the LumenVox Dashboard, please do so
 - If you can reproduce the issue you are reporting at will, please clear the LumenVox logs by deleting or moving the log files, restart all of the LumenVox services, and then replicate the problem so that it is clearly visible in a fresh set of logging.
 - On Windows, log files will be stored in Program Files\LumenVox\Engine\Logs\ (or \TTS Server\Logs\)
 - On Linux, logs are stored in /var/log/lumenvox/
 - Use the Diagnostics Tab in the LumenVox Dashboard to submit test results, logging and any other requested files.
 - Please create a zip or tarfile containing all the logs.
- If your issue concerns speech recognition performance or TTS pronunciations, please <u>enable</u> response file (also known as ".callsre file") logging and have a set of response files available.



- If your issue involves communication between a voice platform and LumenVox over MRCP, please produce a packet capture file that can be correlated with the logs.
 - On Windows, you can use the free, open-source tool Wireshark to generate packet captures.
 - o On Linux, most distributions include the topdump utility:
 - /usr/sbin/tcpdump -s 0 -w /root/tcpdump1
 - If you have questions on how to generate appropriate packet captures, please contact LumenVox Support.

Sending Files Via FTP

In the event that the data in log files is too large to be readily sent via e-mail, LumenVox maintains an FTP server that can be used to upload data. The URL of this server is ftp://ftp.lumenvox.com

Please contact LumenVox Support to get an account on this FTP server. The server supports standard FTP as well as the SCP and SFTP protocols.

How to Log a Service Request (Support Case)

Service Requests (Cases) may be submitted via:

- E-mail at <u>Support@LumenVox.com</u>
- Telephone Please call us at +1 858-707-7700 and ask for "Technical Support"

Important: **Severity 1 – Critical Cases** may not be submitted via e-mail. Please call us to open a **Severity 1 – Critical Cases case**.

If you have more than one issue that requires assistance, please open a separate support request for each unique issue. If while working on a service request, LumenVox identifies multiple issues, we will open additional service requests for each issue, so that we may track the lifecycle of each.



Designated Contacts

LumenVox can only provide support to designated contacts that are on record for your account. We will periodically ask you to review the information associated with your account, including approved support contacts and their contact information.

If you wish to add additional approved support contacts, please email us their contact info (must include name, email address and work phone number), or call us at +1 858-707-7700 and ask for "Support." We can take the names and contact information for the additional contacts and note their access to technical support.



LumenVox Technical Support Services

LumenVox offers the following technical support services:

Service	Description
Technical Support	Technical Support provides remote assistance with the following:
Support	Questions related to the normal functioning, installation, and configuration of LumenVox software and license deployment.
	Troubleshooting issues related to the installation or configuration of LumenVox software and license deployment.
	Issues related to bugs or defects in the normal functioning of LumenVox software (includes supported versions only, which is generally two years from the date of GA).
	Help with general LumenVox product questions and reasonable guidance and general recommendations on high level development, voice user interface (VUI) design, and grammar troubleshooting.
	Technical Support IS NOT INTENDED to resolve issues related to:
	Developing end-user applications or grammars.
	Application Tuning, Grammar development or training.
	Non-LumenVox systems, the network or deployment environment.
	Provide consulting services which may be sold separately by LumenVox and require a Statement of Work.
	Standard support is available during LumenVox business hours and after-hours support (at a premium rate) is available for Severity 1 - Critical cases. After hours Severity 1-Critical Cases will incur a minimum 1-hour technical support charge at premium hourly rates and requires the purchase of an after hours' support agreement.
	Remote access support is available as needed.
	Technical Support is available via telephone and e-mail, except for Severity 1 - Critical cases which may only be submitted by phone.



Software Downloads

All LumenVox software may be downloaded from http://www.lumenvox.com/packages/

Linux users are encouraged to use YUM to manage download and installation. For more details, please see our Knowledge Base article at:

http://www.lumenvox.com/knowledgebase/index.php?/article/AA-00628/152/

Support Requests (Support Case)

The following sections describe the types and lifecycle of support requests.

Case Numbers

When a support request is opened, it is tracked as a "case." Each specific question or problem should be tracked as a separate case and will be assigned a case number. You will be provided with this case number after a support request is logged in the LumenVox case tracking system. Please refer to this number in future correspondence with LumenVox Support relating to this case.

Case Severity Levels and Priority

To prioritize the handling of Support Requests (Cases) we use a short list of severity codes, as detailed in the table below. Each Support Request (Case) must be assigned a Severity code between 1 and 4. The table below provides detailed descriptions and symptoms to aid in determining the correct severity to assign.



Severity	Summary	Detailed Description	Symptoms
1 Critical	A production system is down or severely impaired to	Errors which cause a production outage for the customer and cannot be resolved by a restart or workaround.	Supported product totally inoperative. Corruption or destruction of Data.
	the point where it is unusable.	This is a critical error or failure in the operation of LumenVox Software which results in a major or total failure of the software to perform substantially in accordance with its specification and results in a major or total interruption to the functioning of the business of a partner.	Supported Product subject to catastrophic failures (50% or greater degradation of service) Degraded performance (throughput/response) such that the Supported Product is not usable in production (50% or greater degradation of service).
2	A production system is impaired but	High-impact error where the supported product is operating in a significantly impaired fashion or a	The supported product is running, but with repeated interruptions.
Major	usable.	major function is unusable. This error cannot be resolved by a restart or workaround, but customer is able to run in production.	Degraded performance (throughput/ response) such that there is a severe impact on use, including intermittent errors.
			Time-sensitive error important to long- term productivity that is not causing an immediate stoppage of work
3	Any error in production	Errors which do not have a significant impact on production.	Non-critical or non-major errors.
Minor	that does not qualify for	Errors that can be resolved by a	Non-critical or non-major degradation in performance (throughput/ response).
	severity 1 or 2, or any error affecting a	restart or workaround.	Intermittent Errors with low or no impact on customer operations.
	non- production system.	Any error which was originally reported as P1 or P2 but has temporarily solved with a work-around will be reduced to P3 provided there is no remaining significant impact to production use.	Errors in test, development, or other non-production systems.
4	Any issue which does	Errors which do not affect the use of the Supported Product	Errors in documentation.
Other	not meet the criteria for severity 1, 2, or 3 issues.	New feature requests Cosmetic issues	Development-related support that does not impact project schedule



Case Severity Levels and Priority – Response Times

Customers will be entitled to response times based on their contractual service level agreement and the severity of issue. The following table outlines the relationship between severity, service level, and resolution.

Severity	Support Response Time	Resolution Goals	Resolution Method
1	1 hours	Resources dedicated: Continuously until Error is resolved	Error Correction
Critical	8am -5pm PT Progress Update: every 4 hours		
	M-F	Resolution target time: 24 hours	
2	4 hours	Resources dedicated: Continuously during LumenVox' normal business hours until Error is resolved	Error Correction
Major	8am -5pm PT	Progress Update: Daily	
	M-F	Resolution target time: 48 hours	
3	8 Hours	Resources dedicated: As needed during LumenVox' normal business hours.	Update
Minor	8am -5pm PT	Progress Update: Upon determined path to resolution, and then upon actual resolution.	
	M-F	Resolution target time: Next minor or major release	
4	24 Hours	Resources dedicated: As needed during LumenVox' normal business hours.	Update, at LumenVox' discretion
Other	8am -5pm PT	Progress Update: Upon determined path to resolution, and then upon actual resolution.	
	M-F	Resolution target time: To be determined based on development priorities and scheduling.	



Case Status

Submitting Support Request Updates

At any time, you are encouraged to provide updates to LumenVox Support should the status of the case change. For example, if the severity changes, you find a workaround, or you learn new details about the nature of the underlying case, please notify LumenVox Support so that we can update the information in your support request (case).

Please simply contact LumenVox Support and reference the case number. The case will be updated with the new details you provide.

Closure of Support Requests

You may close a support request if you feel the problem is resolved, or for some reason you decide that it no longer requires the attention of LumenVox Support. Simply contact LumenVox Support to let them know that you would like the case closed.

LumenVox Support may also close a support request if the case is pending a response from you and you have not replied for an extended period. In such a case, you will be informed by e-mail of the closure.

Reopening a Support Request

If you would like to re-open a closed support request at any time, you may do so by contacting LumenVox Support and referencing the case number. This is preferable to opening a new support request, provided the issue is the same as was covered under the old support request.

Software Releases

LumenVox releases new versions of its software products on a periodic basis. There are three kinds of software releases: Major, Minor, and Maintenance.

Major Releases

A Major Release represents a version of LumenVox that has changed in a very significant way, e.g. many new features have been added or some significant change has been made to the way that components function. While LumenVox does not have an official schedule for the release of software, historically LumenVox has averaged around one major release every 12-18 months.



Minor Releases

A Minor Release represents a version of LumenVox that has changed in a significant way, but not significantly enough to warrant a Major Release. The most common reason for Minor Releases is to add new functionality to the software. Historically LumenVox has averaged about 3-4 Minor Releases per Major Release.

Maintenance Releases

A Maintenance Release is issued to fix a defect. Occasionally new functionality is included in a Maintenance Release. Historically there is usually 1 or 2 Maintenance Releases per Minor Releases.

Software Patches

Note that, as a policy, LumenVox does not provide patches to software. If technical issues are identified that require a change to software, that fix will be made in the next released version of the LumenVox software. Issues with high severity may cause LumenVox to expedite the release of the next version, but customers should not expect that an older version of the software will receive a fix.

Software Versioning

The version of any piece of LumenVox software is numbered in the X.Y.ZZZ format, where *X* is the Major Version, *Y* is the Minor Version, and *ZZZ* is the Maintenance Version. For example, the first public release of a new Major Version of LumenVox might be numbered 11.0.100 to indicate that its Major Version is 11, its Minor Version is 0, and its Maintenance Version is 100. A new Maintenance Release might be versioned 11.0.200, and the next Minor Release would be 11.1.100.

LumenVox keeps the versions of its products in synch, so any release will have the same version, e.g. the ASR and TTS would both be versioned 11.0.100. The one exception to this policy is that ASR acoustic models and TTS voices, which rarely change between Minor Releases, are generally not re-versioned for Maintenance Releases. Because these files are usually quite large, this policy saves users from having to download large files that have not changed. For example, the 11.0.300 ASR could be used with an 11.0.100 acoustic model.

**** All components of an individual LumenVox Installation must be from the same release. LumenVox does not support mixing components of a single individual installation from multiple releases.

Release Notes

Comprehensive Release Notes are available for each release of the software. They are in the LumenVox Knowledge Base online at: http://www.lumenvox.com/knowledgebase/index.php?/article/AA-01461/9/



We strongly encourage you to subscribe to subscribe to updates to this specific Knowledge Base article. You can do so from within the article.

Supported Versions

LumenVox offers technical support for versions of our software released within the last two years (i.e. the last 24 months or 2 major releases, whichever is greater). Technical support includes help with installation, configuration, licensing, etc. It also includes help working around technical issues, where possible. Currently supported releases are highlighted in **BOLD**, all other releases are deprecated and should be considered unsupported.

Release History (Version numbers and release dates):

17.0.400 (March 23, 2019)	17.0.200 (February 28, 2019)
16.0.200 (July 25, 2018)	16.0.100 (February 15 , 2018)
15.1.200 (May 15, 2017)	15.1.100 (January 20, 2017)
15.0.400 (October 20, 2016)	14.2.100 (April 11, 2016)
14.1.300 (February 16, 2016)	14.1.100 (January 11, 2016)
14.0.100 (September 25, 2015)	13.1.100 (July 23, 2015)
13.0.400 (May 22, 2015)	13.0.300 (April 9,2015)
13.0.100 (January 6, 2015)	12.2.100 (September 2, 2014)
12.1.100 (February 10, 2014)	12.0.100 (November 18, 2013)
11.3.100 (August 27, 2013)	11.2.200 (May 22, 2013)
11.2.100 (May 6, 2013)	11.1.100 (March 14, 2012)
11.0.300 (November 20, 2012)	10.5.300 (September 21, 2012)
10.5.200 (August 29, 2012)	10.5.110 (August 14, 2012)
10.4.500 (May 25, 2012)	10.4.300 (March 19, 2012)
10.4.200 (February 1, 2012)	10.4.100 (January 20, 2012)
10.3.200 (November 7, 2011)	10.3.100 (November 1, 2011)
10.2.900 (October 13, 2011)	10.2.700 (October 7, 2011)
10.2.800 (September 22, 2011)	10.2.700 (September 13, 2011)
10.2.600 (August 25, 2011)	10.2.500 (August 5, 2011)
10.2.400 (August 3, 2011)	10.2.200 (July 27, 2011)
10.2.100 (July 22, 2011)	10.1.600 (July 13, 2011)



10.1.500 (June 20, 2011)

10.1.300 (May 24, 2011)

10.1.100 (April 11, 2011)

10.0.1019 (Feb. 14, 2011)

9.2.400 (February 26, 2010)

9.2.200 (February 9, 2010)

9.0 (July 2009)

8.5.100 (May 2008)

10.1.400 (June 1, 2011)

10.1.200 (April 22, 2011)

10.0.1020 (Feb. 21, 2011)

9.5.100 (May 10, 2010)

9.2.300 (February 16, 2010)

9.1 (October 2009)

8.6 (January 2009)

8.0.300 (December 2007)



Feature Request Process

Though they are both treated similarly, a Feature Request differs from a Support Request in that a Feature Request is not a question about existing functionality, nor a report of a defect in the LumenVox software. A Feature Request is related to functionality that is not included in any current release of the LumenVox software. Customers are encouraged to submit Feature Requests as they identify functionality they would like to see in the product, but LumenVox makes no guarantee of its ability to implement such requests.

Submitting Feature Requests

A Feature Request should be submitted in the same ways as Support Requests (see How to Log a Service Request on page 9). The following information should be provided:

- An indication that the request is for a new feature, and not a Support Request.
- A clear description of the feature. If it helps to illuminate the request, please provide LumenVox logs, configuration files, or packet captures.
- The importance of the request. (<u>Severity Level</u>)

Accepting Feature Requests

At its discretion, LumenVox may accept a Feature Request for future development. At this point the request will be forwarded to LumenVox Engineering to be scheduled. There may be a significant length of time before requests can be implemented.

Feature Request Updates and Communications

When an accepted Feature Request is implemented in a released version of the LumenVox software, LumenVox Support will close the Feature Request and notify the requestor. If you have any questions or comments about a pending Feature Request, you may submit Request Updates following the same procedure as for a standard Support Request (see Submitting Support Request Updates on page 15).



License Files

LumenVox uses a custom-built licensing mechanism. The individual unit of licensing is a "port" which represents an active connection between a client and a server (e.g. an MRCP connection between a voice platform and the LumenVox ASR Server).

License Types

LumenVox offers several types of licensing for its customers. For more information about licensing, please see the <u>Licensing Overview</u> article in the LumenVox Knowledge Base.

<u>LumenVox Customer Portal</u> (Legacy)

Perpetual Licenses

The most common type of license used by LumenVox customers is a Perpetual License (aka "on premise") license. This license is tied to a physical or virtual License Server established and maintained by the customer. The customer first creates a grouping of ports (called a "Deployment") using the <u>LumenVox.com</u> Customer Portal. The customer then generates a Server ID file (called an "Info.bts file") using the LumenVox License Server software and associates the Server ID file with the Deployment online. This allows the customer to download a License File and install it using the LumenVox License Server.

Once downloaded and installed, the ports in the License File will function indefinitely (though Software Maintenance may be required, see "Software Maintenance"). As the License File is tied to information about the hardware of the machine hosting the License Server (e.g. the MAC Address), a License File cannot be moved without first uninstalling it using the Uninstall Feature of the LumenVox.com Customer Web Portal.

For assistance moving licenses, please open a new Support Request with LumenVox Support.

Subscription Licenses

Subscription Licenses are used by customers who wish to reduce capital expenditures by paying for licenses monthly instead of an initial fixed cost. They are also commonly given to customers for time-limited purposes such as trials or load testing.

Flexible Licenses

Beginning with version 11.0.300, LumenVox introduced our Flexible License process. With Flexible licensing the customer installs and maintains a LumenVox License Server as part of their local software stack. The License Server communicates with our cloud hosted LumenVox Flexible License Portal via HTTP or HTTPS to automatically update the local license server with changes in the customer's license account, allowing for easy changes to the machine's licensing. This licensing model allows for measured consumption of



LumenVox services (ASR, TTS & CPA) and can accommodates some overconsumption, which can be billed after the fact, depending on your contract. Please speak with your Sales Representative for more information. Reference the Flexible Licensing Overview in our knowledgebase for additional details.

Flexible Licensing does not require manual intervention once it is configured and running. All license changes and updates flow automatically from LumenVox' License Cloud to your local LumenVox License Server daily.

Effective with the release of LumenVox 14.1.100, all new installations will only be licensed using LumenVox Flexible Licensing. Our older legacy licensing system will continue to operate on existing systems. Any upgrades to new releases, hardware migrations, renewal of software maintenance agreements, license resets, additions to or removal of licenses from existing installations or other changes to the actual license files will require migration to LumenVox Flexible licensing. As of December 31, 2016, we have deprecated the older Legacy License System.

Software Maintenance

Software Maintenance allows customers to use the latest version of the LumenVox software. As long a customer's Software Maintenance contract associated with a license is current, the customer is entitled to use the newest release of LumenVox software. This is represented in the License file as a Software Maintenance Expiration Date associated with a group of ports. After this date, the ports under license will no longer function with new releases of LumenVox software.

For example, if a License file contained a group of ports with a Software Maintenance Expiration Date of March 31, 2017 then the customer would not be able to use a version of the LumenVox software released in April 2017 (but all earlier releases would work). Attempting to use newer versions of the software than the Software Maintenance Expiration Date allows will result in runtime errors.

Subscription Licenses do not have Software Maintenance Expiration Dates.

Installing, Uninstalling or Moving License Files

When using Legacy or Flexible licenses, please refer to the LumenVox Knowledge base article entitled "<u>Licensing Overview</u>" for detailed instructions



Remote Access

As part of providing technical support, LumenVox Support may ask for Remote Access to any relevant machines. As this is frequently the most expedient way to resolve problems, it is highly recommended that you allow LumenVox Support this access.

Our preferred method of accessing machines remotely is through direct Secure Shell (SSH) on Linux or Remote Desktop Protocol (RDP) on Windows. If you can configure firewalls to allow us to directly use SSH or RDP to access a machine, we recommend you do so.

If those are not options, LumenVox Support may ask to schedule a WebEx or GoToMeeting session in which you share control of your desktop and provide Remote Access that way.

At the discretion of LumenVox Support, we may also choose to use a different method of Remote Access (e.g. VPN or other remote access software) of your preference. Please contact LumenVox Support with any questions about specific questions about Remote Access.

On-Site Support

On-site support is available on request. If you request on-site support, you are responsible for associated travel costs and LumenVox employee travel time as part of the cost at our business day support rate.

Escalating Your Issue

Should you have any concerns about our response to your support request, the first point of escalation would be the Technical Support Representative who has been your point of contact for the issue. You can confirm the name of the Support Request (Case) owner by viewing the acknowledgement & status emails that you have received from LumenVox or by calling LumenVox Technical Support.

Please contact your support representative and explain your concern, he/she will endeavor to resolve your concern directly.

If your support representative is unable to successfully address your concern, the next step would be to escalate, as listed in the table below. If the Vice President cannot assist you, or is not available in the time frame needed, you can then contact the second and subsequent escalation points as listed in the table below. LumenVox recommends that you do not escalate issues through any other contacts that you may have in the company.



LumenVox Support Escalation Contacts

Escalation Level	Contact Person	Contact Information
First Contact	Technical Support Representative	Please call us at +1 858-707-7700 and ask for "Support"
Second Level Escalation Point	Rob Coughlin Director, Customer Success	Office: +1 (858) 707-7700 and ask for "Rob Coughlin" Mobile: +1 (781) 367-1963 E-mail: robcoughlin@lumenvox.com
Third Level Escalation Point	Jeff Hopper Vice President, Client Services	Office: +1 (858) 707-7700 and ask for "Jeff Hopper" Mobile: +1 (206) 919-9603 E-mail: jeff@lumenvox.com
Fourth Level Escalation Point	Tim Walsh Vice President, Sales & Business Development	Office: +1 (858) 707-7700 and ask for "Tim Walsh" Mobile: +1 (617) 448-4779 E-mail: timwalsh@lumenvox.com
Final Contact	Edward Miller C.E.O.	Office: +1 (858) 707-7700 and ask for "Edward Miller" Mobile: +1 (619) 559-5554 E-mail: ed@lumenvox.com