Honeywell

VoiceConsole 5.5

Implementation Guide

Disclaimer

Honeywell International Inc. ("HII") reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult HII to determine whether any such changes have been made. HII makes no representation or warranties regarding the information provided in this publication.

HII shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from the furnishing, performance, or use of this material.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of HII.

©2022 Honeywell International Inc. All rights reserved.

Other product names or marks mentioned in this document may be trademarks or registered trademarks of other companies and are the property of their respective owners.

Web Address: www.sps.honeywell.com

Other product names or marks mentioned in this document may be trademarks or registered trademarks of other companies and are the property of their respective owners.

Patents

For patent information, please refer to www.hsmpats.com

TABLE OF CONTENTS

INTRODUCTION

The VoiceConsole 5.5 Implementation Guide is intended for Honeywell personnel and certified partners who are assumed to have a working knowledge of:

- Function and use of voice system management software
- Operating systems
- Wireless networking hardware and architecture
- Relational database structure and administration
- Extensible Authentication Protocol (EAP) based security

The Implementation Checklist is included in Appendix A.

Customer Support

Find most Honeywell Voice technical documentation http://help.honeywellaidc.com

Honeywell Voice Reseller Services

If you purchased equipment or services through a Honeywell Voice reseller, please contact your reseller first for support or to purchase a support plan.

Honeywell Voice Technical Support

To report Voice system support incidents or related technical issues, contact the Honeywell Technical Support Center at:

Technical Support Email: voicetechnicalsupport@honeywell.com
Technical Support Phone (US): +1 866 862 7877
Technical Support Phone (Rest of the World): +1 412 376 9384
Technical Support Phone (EMEA): +44 (0) 1344 65 6123

For assistance on all other matters, contact your Honeywell Certified Reseller or Honeywell directly at https://sps.honeywell.com/

VOICECONSOLE SYSTEM REQUIREMENTS

This section contains the server and client hardware, software, and bandwidth requirements for running VoiceConsole based on the number of devices that you will have operating at any one time at your site.

> **NOTE**
> While it is possible to run VoiceConsole in untested configurations and environments, doing so may lead to unexpected problems. Ensure that the problem is not directly related to running on unsupported environments. Attempt to reproduce the same problem in a supported environment or configuration to see if it still occurs before contacting support.

Server Requirements

The requirements in the following sections are for the server on which you will be installing the VoiceConsole server components.

Hardware Requirements

The requirements shown are the **minimum requirements**. For better performance, increase the amounts shown here.

Total # Devices Being Managed	Avg. Operator Shift Size	Avg. Operator Shift Startup Time Period	CPU of Server Machine	Server Memory	Server Hard Drive
<300	<150	<3 minutes	Intel Quad Core processor	2GB DDR	60GB
300 - 600	150 - 300	3 - 5 minutes	Dual Core Intel 3.0 GHz	4GB DDR	80GB
600 - 2500	300 - 900	5 - 15 minutes	Two machines running with Dual Core Intel 3.0 GHz each. Honeywell recommends that you install two load balance application servers and a single database server.	4GB DDR each machine	120GB each machine

> **NOTE**
> If you want to install VoiceConsole for demonstration or evaluation purposes, Honeywell

recommends that you use a machine that meets the following minimum specifications: Intel Pentium 4 2.6GHz machine, 1GB DDR of memory, and a 40GB hard drive. Honeywell does not recommend running more than 10 devices in a demonstration or an evaluation environment.

VoiceConsole running on these hardware components will produce the following average transaction times for operator loads during instances of peak load, such as shift changes.

CPU	Memory	Hard Drive	Device Con-current Loads	Avg. Trans. Time in ms
Dual Core Intel 2.0GHz	2GB DDR	40GB	300	400
Dual Core Intel 3.0GHz	4GB DDR	80GB	600	400
Two machines running with Dual Core Intel 3.0GHz each	4GB DDR each machine	120GB each machine	2500	1300

Software Requirements

Supported Operating Systems and Databases

The following operating systems and databases are supported with VoiceConsole 5.5. Any of the operating systems can be used with any of the databases.

Operating Systems

- Windows Server 2019 64-bit
- Windows Server 2016 64-bit
- Windows Server 2008 64-bit
- RedHat Linux 7
- CentOS Linux 7.2 64-bit
- CentOS Linux 6.x
- SUSE SLES15 64-bit

Remote upgrades are supported on the same database version from VoiceConsole 3.0 or newer to these versions of the operating system. If you plan on upgrading your database, you must upgrade it before performing a remote upgrade to VoiceConsole.

Databases

Because the database installation is performed separately and is not part of the VoiceConsole installation, you can either install VoiceConsole on the same server as the database, or you can install it on a separate machine. When prompted by the installer, provide the location of the local or remote database.

- Embedded
- Oracle 19c

- Oracle 18c
- Oracle 12, release 2
- Microsoft SQL Server 2019
- Microsoft SQL Server 2017
- Microsoft SQL Server 2016

Notes for VoiceConsole Operating Systems and Databases

> **NOTE**
> Honeywell recommends using a separate database (not embedded) if your site has more than 300 devices.

- Honeywell has only tested upgrades with supported databases. You may still upgrade from an unsupported database at your own risk. If you have questions regarding upgrading from an unsupported environment, please contact Honeywell technical support.

- VoiceConsole is certified to work with SQL Server database encryption. An automated performance test was executed on an encrypted SQL database. Encryption can be enabled through the SQL Server Database. While not tested with other database encryption vendors, it is expected to work.
- **Oracle**: When creating a new Oracle database, ensure that you are using the AL32UTF8 character set for non-English versions of VoiceConsole.
- **SQL**: If the SQL Server database collation is not set to be case insensitive, VoiceConsole may not work properly. When creating a new SQL Server database, ensure that you choose the proper collation for the language that the system is in with _CI included in the collation name.
- **Embedded**:
  - Embedded database is not supported in a clustered environment.
  - Exclude the vcdb directory from anti-virus scanning.
  - If the database's server is shut down frequently, refer to Microsoft documentation, and apply the appropriate hotfix.

Operating System	Database
Windows Server 2008 R2 64–bit, Standard	Embedded

Database Size

The size of your database depends on the amount of data that you have in VoiceConsole. This table lists the totals for the data elements that require database space and the estimated size your database could be based on those numbers.

License Size	Settings Translator Size	# Operators	# Operator Templates	# Task Packages	#Tasks	# Imported VoiceClients	# Device Profiles	# Devices	Estimated Minimum Database Size
4	96	100	100	2	2	2	2	20	1912 KB
4	96	50	50	2	2	3	3	30	10536 KB
4	96	100	120	2	2	2	2	20	48833 KB
4	96	200	200	4	8	3	4	50	161632 KB
4	96	200	246	5	10	3	4	50	193658 KB

The estimated minimum database size you could experience is based on the following calculation:

Estimated Size of Database (in KB) **=** 4 **+** 96 **+** (*Number of Operators* **x** 6.5) **+** (*Number of Operators* **x** *Number of Operator Templates* **x** 4) **+** *Number of Task Packages* **+** (*Number of Tasks* **x** 12.5) **+** (*Number of Imported VoiceClients* **x** 4.5) **+** (*Number of Device Profiles* **x** 3.5) **+** (*Number of Devices* **x** 2)

> **NOTE**
> Where: 4 = size of license, and 96 = size of settings translators.

Supported Application Servers

The following application servers are supported with VoiceConsole 5.5:

- BEA WebLogic11g R1 (with new installations with SUSE Linux operating systems only)

> **NOTE**
> Tomcat version 9.x is installed when VoiceConsole is installed.

> **NOTE**
> If you choose to use WebLogic as your application server, it must be installed separately from the VoiceConsole installation. See Install VoiceConsole for the First Time.

Supported Languages

The following languages are supported with this version of VoiceConsole:

- Danish
- Dutch
- English – US
- Finnish

- Portuguese
- Portuguese – Brazilian
- Spanish
- Spanish – Latin American

- French
- French – Canadian
- German
- Italian
- Japanese
- Norwegian

- Swedish
- Korean
- Polish
- Simplified Chinese
- Russian
- Traditional Chinese

MySQL 5.0 Community Server

MySQL is a no-fee database with no restrictions when run on the supported Windows and Red Hat Linux operating systems.

> **NOTE**
> Honeywell does not recommend using CentOS Linux and MySQL 5.0 Community Server with a system running more than 300 operators per shift. This restriction is limited to this operating system and database only.

When using a MySQL database with VoiceConsole, ensure that the database tables are configured to use the Inno-Db feature of MySQL by setting the default_table_type=InnoDB in the my.ini file located in the installation directory (Windows) or my.cnf file located in the /etc/ directory (CentOS Linux).

To configure MySQL to run at an optimal performance level with VoiceConsole, you should configure the following settings in the my.ini file located in the installation directory (Windows) or the my.cnf file located in the **/etc/** directory (CentOS Linux):

- default-character-set = utf8
- back_log = 50
- max_connect_errors = 10
- table_cache = 2048
- max_allowed_packet = 16M
- binlog_cache_size = 1M
- max_heap_table_size = 64M
- sort_buffer_size = 8M
- join_buffer_size = 8M
- thread_cache_size = 8

- thread_concurrency = 8
- query_cache_limit = 2M
- ft_min_word_len = 4
- thread_stack = 192K
- tmp_table_size = 64M
- innodb_log_buffer_size = 1M
- innodb_buffer_pool_size = 47M
- innodb_log_file_size = 24M
- innodb_thread_concurrency = 8
- max_connections = 100

Client Requirements

The following operating systems are supported for the VoiceConsole client:

- Microsoft Windows 10
- Microsoft Windows 8
- Red Hat Linux Workstation ES for Intel processors

The following browsers are supported for the VoiceConsole client:

- Microsoft Edge
- Mozilla® Firefox® 4.x and newer

VoiceConsole Implementation Guide

- Google Chrome

All browsers require having Java JRE 1.8 installed and configured.

Supported Voice Devices

The following voice devices are supported:

- A700x series (requires VoiceConsole 5.0 or greater, ECS installation may be required, see VoiceCatalyst 4.x Release Notes)
- A700 series
- A500

Network Bandwidth Requirements

VoiceConsole bandwidth requirements depend on the network traffic generated during peak times. Peak times for VoiceConsole are characterized by shift start-up activities, such as loading operators and Task Packages to devices.

Depending on the network topology, a network may have a direct line from each site to the server location or a single line .servicing all communications.

Direct Line for Each Site
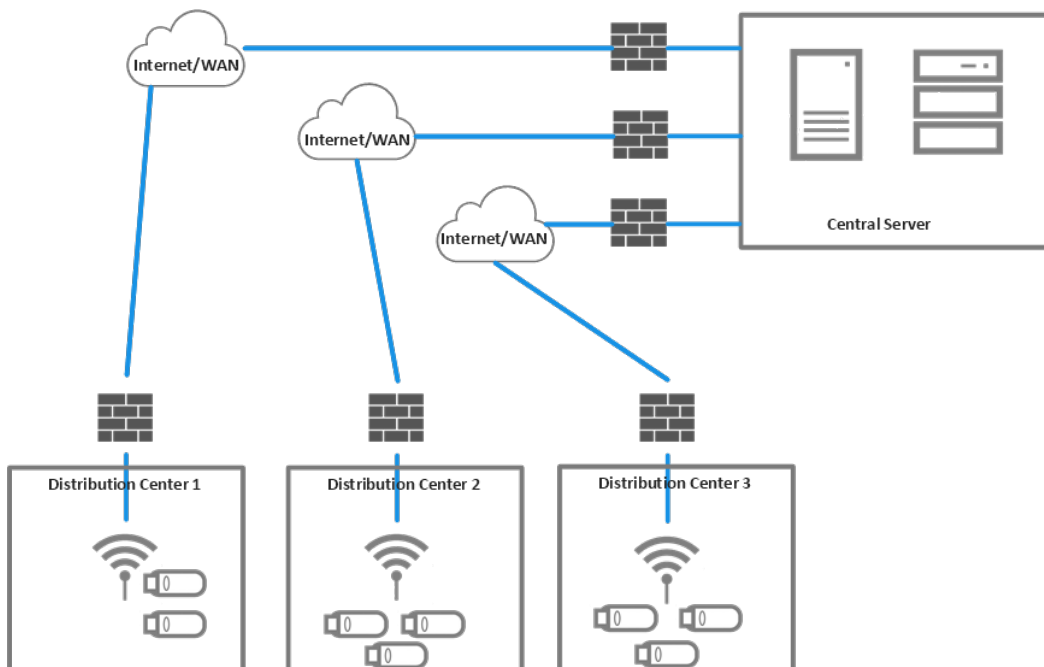
# Active Devices per Site (or shift)	Operator Load	Task Package Load	Minimum Recommended Bandwidth
10	0.2 MBps	0.2 MBps	1 MBps
50	1.03 MBps	1.28 MBps	3 MBps
100	2.06 MBps	2.56 MBps	5 MBps
200	4.12 MBps	5.12 MBps	10 MBps
300(+)	6.18 MBps	7.68 MBps	15 MBps

Single Line For All Sites
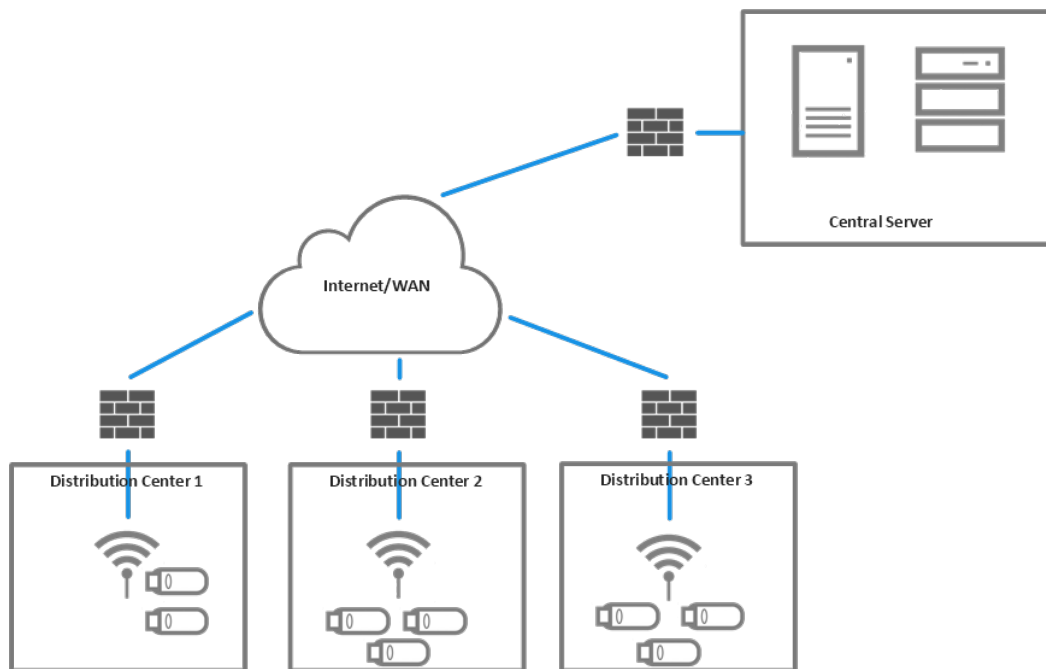
Total # of Devices Being Managed	Operator Load	Task Package Load	Minimum Recommended Bandwidth
100	0.41 MBps	0.51 MBps	1 MBps
300	1.23 MBps	1.53 MBps	3 MBps
500	2.05 MBps	2.56 MBps	5 MBps
2500	10.25 MBps	12.8 MBps	24 MBps

VoiceConsole Implementation Guide

Minimum Per Device Bandwidth Requirements

Scenario	Device Type	Total Data Transfer	Typical Elapsed Time	Bandwidth Required
Start of Shift	Any	0.416 MBps	90 seconds	50 KBps
Profile Load	A700	48 MBps	5 minutes	160 KBps
	A700x	300 MBps		1 MBps

See minimum required site bandwidth tables below.

Minimum Recommended Bandwidth per Site (Start of Shift)

Number of Active Devices	Bandwidth (MBps)
10	1
20	3
30+	5
200	10
300	15

A700 Minimum Recommended Bandwidth per Site (Profile Load)

Number of Active Devices	Bandwidth (MBps)
10	2
20	4
30+	8

A700x Minimum Recommended Bandwidth per Site (Profile Load)

Number of Active Devices	Bandwidth (MBps)
10	10
20	20
30+	30

Network Bandwidth Calculations

Assumptions and Comments

- Application and/or operator loading is completed within a 5-minute window. This is a highly conservative assumption. In real-world conditions, operator loads are typically staggered over a longer period of time.

- The bandwidth requirements specified are based on the assumption that only 1/5 of the total number of devices in the entire system will concurrently download operators within a five-minute window.
- Application loads are only required when the device application is updated. Operator loads occur at every shift change.
- The network bandwidth requirements are calculated values based on the following assumptions for typical operator and Task Package loads:
  - Typical Operator Load Transfer = 232 KB (1856 Kb) of data per device
  - Typical Task Package Load Transfer = 288 KB (2304 Kb) of data per device
- The Site Bandwidth requirements (SBWR) based on these assumptions can be determined using the following calculation:
  - SBWR Operator Load = (Devices per Site x 1856 Kb) / 300 sec
  - SBWR Application Load = (Devices per Site x 2304 Kb) / 300 sec
- The Central Site Bandwidth Requirements (CSBWR) based on these assumptions can be determined using the following calculation:
  - CSBWR Operator Load = 1/5 x SBWR Operator Load x Number of Sites
  - CSBWR Application Load = 1/5 x SBWR Application Load x Number of Sites

PLAN YOUR VOICECONSOLE INSTALLATION

VoiceConsole is designed to integrate with and support various IT infrastructures, databases, and operating systems. This section is designed to help you to understand the various implementation options available with VoiceConsole and the best practices in planning a VoiceConsole implementation.

Depending on your system configuration, the hardware and software requirements may vary. See VoiceConsole System Requirements for more information.

Single Site or Multiple Site Architecture Mode

VoiceConsole installation offers two architecture modes:

- Single-site mode, where a separate instance of VoiceConsole is installed at each voice-enabled site.
- Multi-site mode, where a single instance of VoiceConsole is used to manage the voice system components at multiple sites.

Decentralized Architecture (Single-Site Mode)

A distribution center with multiple sites may want to use a single-site implementation, installing a VoiceConsole server at each site where voice is supported.
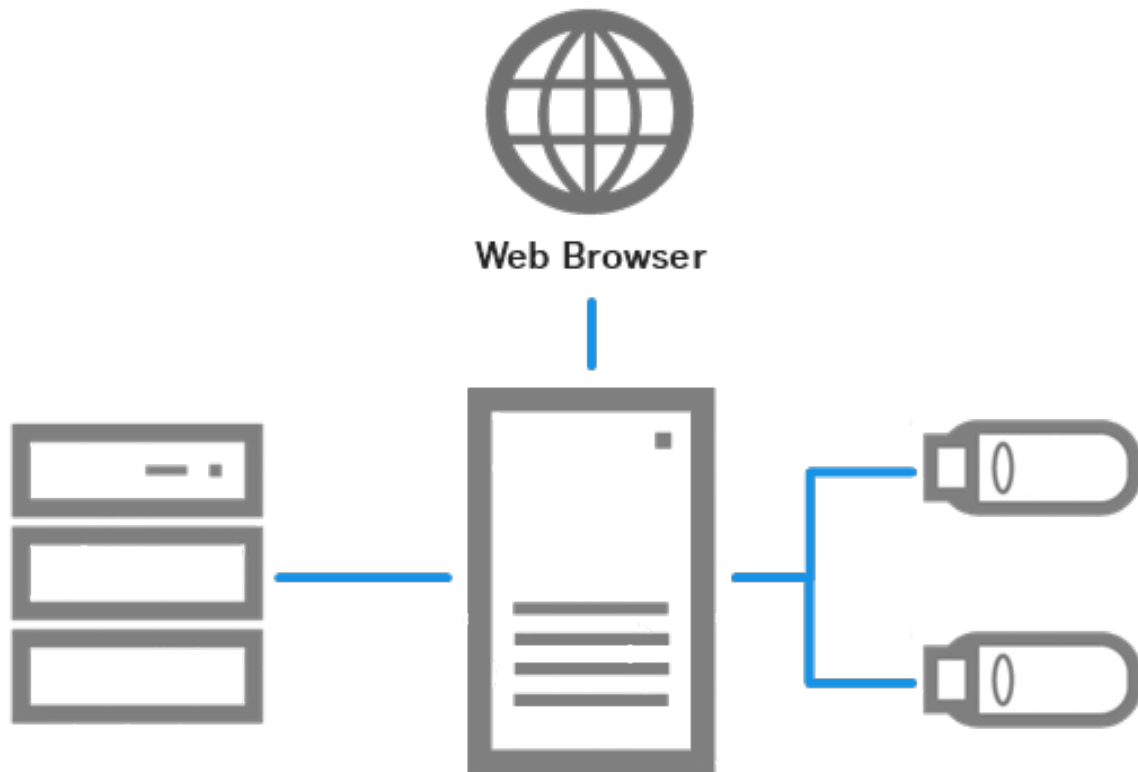
Centralized Architecture (Multi-Site Mode)

VoiceConsole can also be implemented in a centralized architecture, or multi-site mode, where one instance of VoiceConsole is used to manage the voice system components at multiple sites. In this scenario, the database and application are installed at a single site, and that installation is used to manage one or more remote sites. See Manage Multiple Sites for more information on the benefits and limitations of this configuration.
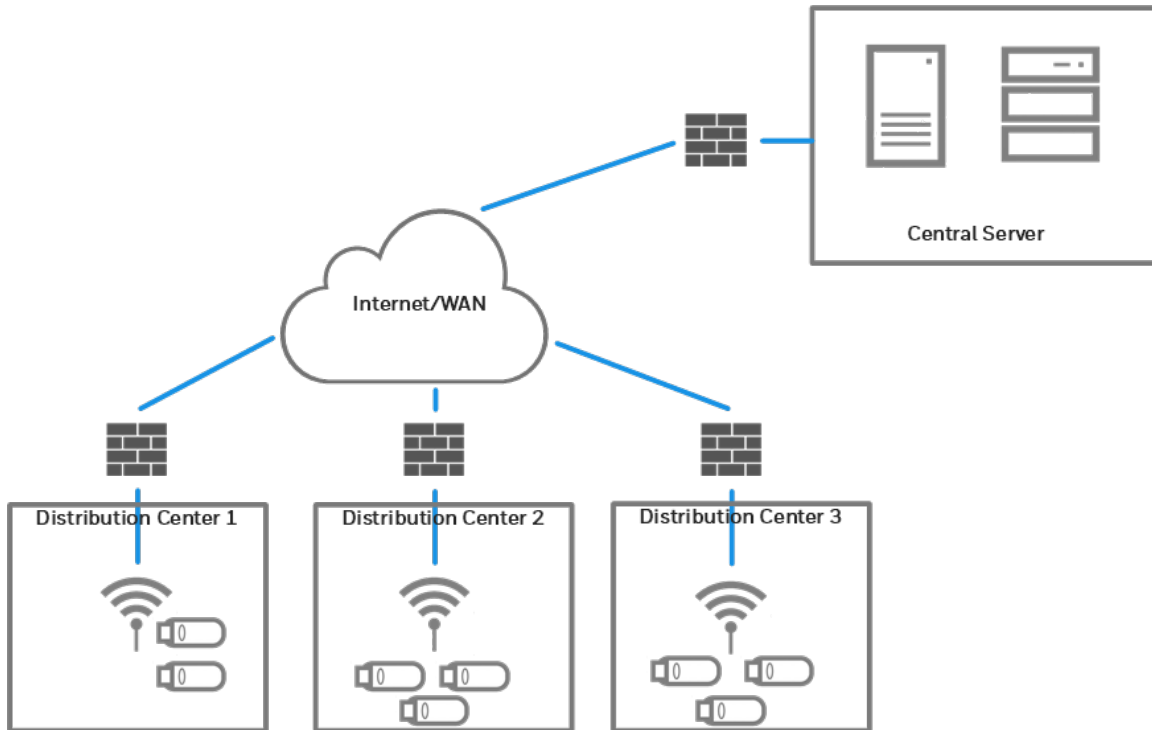
Single-Server Implementations with VoiceConsole and VoiceLink

> **NOTE**
> When installing this version of VoiceConsole along with VoiceLink 3.0 or newer, use a different database for VoiceConsole than what you are using for VoiceLink. Refer to the VoiceLink Implementation Guide for VoiceLink system requirements.

VoiceLink and VoiceConsole can be installed on the same server, in any order, but cannot share the same database. However, the database information for the first application installed can often make it easier to install the second application.

The two applications do require separate installations of Apache Tomcat and must be configured to use separate TCP/IP communication ports to avoid port conflicts. Honeywell recommends that the first installed application be running when the second is installed so that ports in use can be detected.

Linux Installation

By default, when installing with Linux the installer must be run as root.

To install as non-root:

1. Add the following to the installation xml file:

   ```
   <configuratorProperty
   ```

```
configItemNameToModify="00tomcatAccount">tomcatExisting</configuratorPr
operty>
<configuratorProperty
configItemNameToModify="01tomcatExistingUsername">EXISTING_SYSTEM_
USER</configuratorProperty>
<configuratorProperty
configItemNameToModify="02tomcatExistingPassword">PASSWORD</configurato
rProperty>
```

2. Through the installation user interface, proceed with the **system account** (the default selection).

Manage Multiple Sites

This section contains an overview of multi-site management within VoiceConsole, its benefits, and its limitations.

When VoiceConsole is installed, one default site named **Default** will exist in the system. You can create named sites and assign various other data elements to those sites as well as import software across multiple sites.

> **NOTE**
> While this feature is primarily used for different physical locations, you can define a site as anything that you want to segregate. For example, you can define sites as different operational areas within a site or you can set up separate test and production sites.

Benefits of Multi-Site Management

Centralized Management

VoiceConsole does not need to be implemented separately at each site or distribution center.

Site-Segregated View

A user with the proper privileges can easily switch between one site's data and another site's data.

Secure Access

Only users with the proper privileges can view and manage multiple sites.

Importing Software Components Across Multiple Sites

A user can select one or more sites when importing Vocollect VoiceClient software and VoiceApps (tasks) into the system, giving consistency throughout the company.

Device Management

Device profiles are linked to a site, which in turn is linked to a time zone. When a device profile is loaded to a device, the device will automatically be assigned to the proper site and time zone.

Limitations of Multi-Site Management

Network Requirements

Because the network must handle a larger number of parallel operator loads during the start of a shift, a centralized VoiceConsole installation requires an appropriate amount of network bandwidth between each site being managed and the VoiceConsole server. See VoiceConsole System Requirements for information on how much bandwidth is required.

Viewing Multiple Sites Within a Single VoiceConsole Session

You can switch between different sites within VoiceConsole, but there is currently no way to view or manage multiple sites within a single browser session. However, the **Home** page in the application displays a **Site Summary** that provides a summary of the sites in the system.

What You Need

If VoiceConsole will be installed into a multi-site environment, you will need the following information:

- Total number of sites
- Total number of devices
- Number of devices per site
- Shift size
- Shift startup times per site

Clustered and Load Balanced Environments

> **NOTE**
> The embedded database is not supported in a clustered environment.

VoiceConsole can be installed on servers that are grouped for load balancing or failover. Failover systems provide a fully redundant instance of each node, which is only brought online when its associated primary node fails. In Load Balancing systems, when a node fails, traffic intended for that node is either passed onto an existing node or load balanced across the remaining nodes.

> **IMPORTANT**
>
> In load balanced environments, it is important to configure both session affinity and IP affinity. Both session affinity and IP affinity are configured in the load balancer.
>
> Session affinity allows devises with a browser connection (such as workstation clients and other devices that use cookies) to maintain connections when passing through the load balancer.
>
> Honeywell Voice devices require IP affinity to maintain connections when passing through the load balancer.
> The Honeywell Voice devices can be individually configured to use IP affinity or all devices on the Honeywell Voice network can be configured for IP affinity.

> **NOTE**
>
> These are simple examples; they may not correspond exactly to your configuration.

Single Database with Clustered Application Servers

VoiceConsole is installed on multiple nodes of a clustered application server that communicates with a single instance of a database. All VoiceConsole clients communicate through a dispatcher.
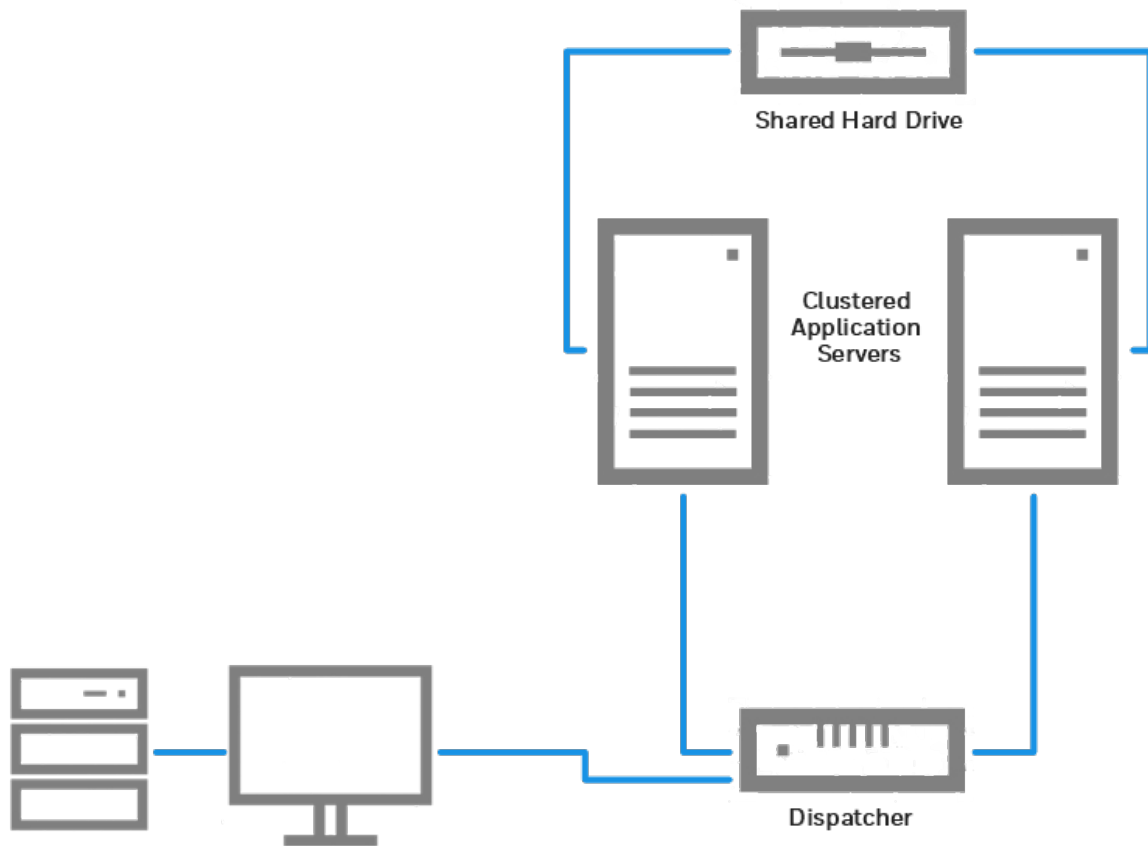
Single Application Server with Clustered Database

VoiceConsole is installed on a single application server. It communicates with a database that has multiple nodes acting as a single interface for a common underlying database.
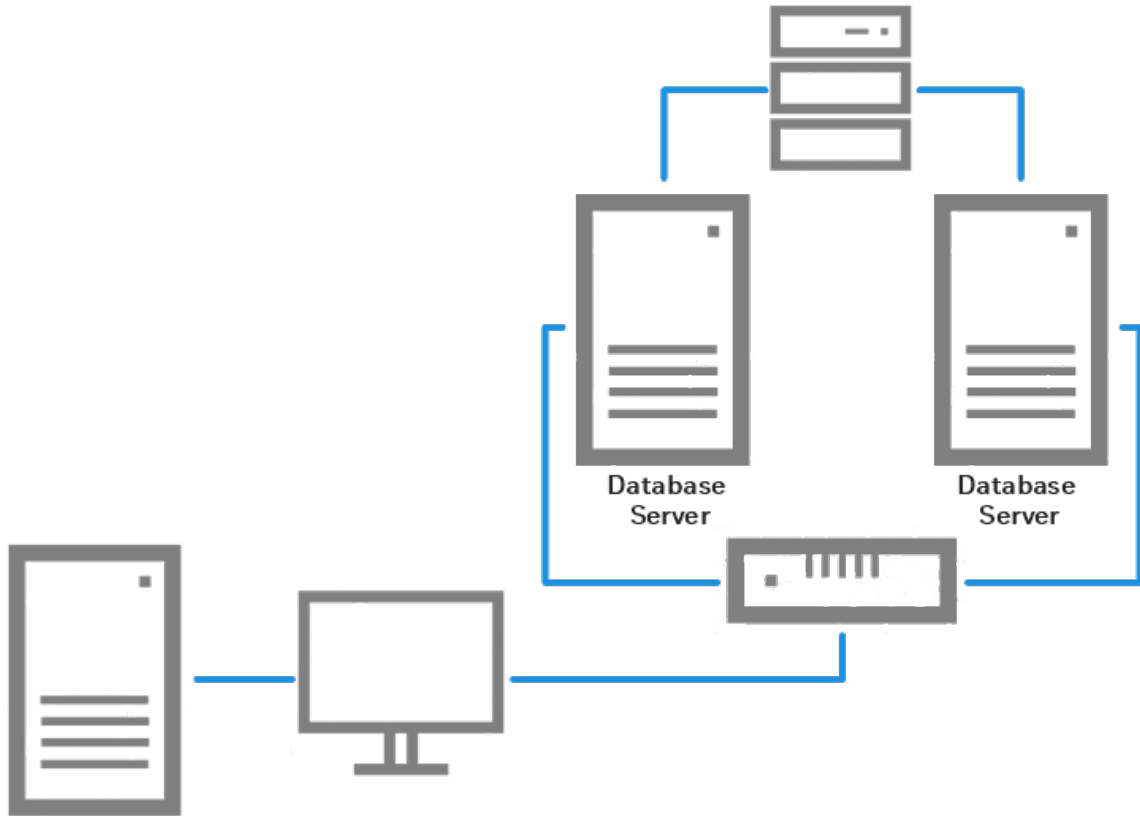
Clustered Database and Application Servers

This configuration is a combination of the two scenarios described above.

In this scenario, there are no single points of failure because both the application servers and the databases have some form of redundant response mechanism.

Benefits of Clustering/Load Balancing

Increase performance

Performance can be increased if the system is going to be under heavy stress.

Facilitate scaling

Depending on implementation, VoiceConsole could grow by adding cluster nodes without drastic changes to implementation architecture.

Fault tolerant

Depending on implementation, VoiceConsole can continue to operate after an application server and/or database failure.

Limitations of Clustering/Load Balancing

Visible failed node symptoms

If using the VoiceConsole user interface when a node fails, you may have to log in again or repeat some actions.

Risk of network bottlenecks

Potential network bottlenecks based on network infrastructure between load balancer, VoiceConsole servers, and database servers. Implementing database clustering supported by database vendor may be necessary.

Visible failover symptoms

If using the VoiceConsole user interface while a failover occurs, you may have to log in again or repeat some actions. Devices may report some errors and have to resend data if performing actions during a failover. If database failover is desired, the customer must implement it as recommended by their database vendor.

What You Need

If VoiceConsole will be installed into a clustered environment, you will need the following information.

- The logical hostname of the application server and/or database server cluster.
- The shared location of the device log and firmware files.

Security Options

VoiceConsole provides support for several authentication and encryption methods. To keep networks secure, Honeywell recommends authentication combined with a protocol that supports authentication methods.

Authentication is simply verifying that the user who is attempting to contact the network is who he says he is. Server certificates provide verification to the user that he is connecting to the proper network.

Encryption is a way of changing data into a secret code. The recipient of the data requires a pre-supplied key to decode it.

To secure web server communications, VoiceConsole supports HTTPS. To secure the connection to an embedded database, VoiceConsole supports SSL. To secure the device connectivity on a wireless network, VoiceConsole uses Extensible Authentication Protocol (EAP). This section provides a brief description of these options. See Configure Security for setup information.

You can set up the following types of authentication and encryption in device profiles:

- WEP: Wired Equivalent Privacy
- WPA/PSK and WPA2/PSK: Wi-Fi Protected Access with a Pre-shared Key

Hypertext Transfer Protocol Secure (HTTPS)

HTTPS is a networking protocol that secures web- or browser-based transactions over a network that is not secure. All HTTPS user connections are encrypted with digital certificates that tell the browser to use encryption to protect data transmissions.

This protection is effective only if the browser verifies a certificate as valid and issued by a trusted authority. Therefore, you must ensure that the server certificate is installed correctly and the browser used for VoiceConsole administration is configured to accept the certificate.

What You Need

If you are configuring VoiceConsole for HTTPS, you will need:

- Java keytool utility to create a certificate request
- A signed certificate

See Create and Install a Certificate for HTTPS for more information.

Extensible Authentication Protocol

VoiceConsole will be distributing credentials to devices in the device profile. Once these credentials are on the devices, the devices will use them to connect to the wireless network. Credentials only need to be entered once per site, operator, or device until the credentials need to be changed. When necessary, VoiceConsole will manage the distribution of the new credentials.

How to configure EAP in VoiceConsole is described in detail in Configure EAP for the Site.

Site-wide Configuration

Although VoiceConsole offers three credential association types – site-based, device-based, and operator-based – each of these must be configured on a site-wide basis. That is, even if the client selects to have device- or operator-based security, all devices and operators at a particular site must use the same type of security. This is reinforced by the User Interface, which requires that you select one and only one EAP type per site. See the section labeled Association Types for more information on these types.

Restricted User

If EAP authentication is selected for the restricted user, the device connects to the network with a restricted set of credentials, identifying itself as a Honeywell device. It can only connect to VoiceConsole for the purpose of loading the proper credentials. You can further restrict this user's access by assigning it to a different SSID that only has access to a portion of the network. This different SSID may be on an open network. In this case, you would not need credentials for the restricted user. Without the restricted user solution, Honeywell would require that the

credentials be loaded onto each device through the serial port if the credentials expire or become obsolete when the password is changed.

The restricted user also has the following roles:

- When the device is in the charger, the restricted user is used to log onto the network.
- Credentials are distributed through the restricted user through TouchConfig or over the network.
- The restricted user can load tasks and operators.

> **NOTE**
> If you are using static IP addresses rather than DHCP, the restricted user must be on the same network as the non-restricted network, because devices cannot support two static IP addresses.

You can configure the following Extensible Authentication Protocol methods for each site:

- **EAP-TLS**: EAP-Transport Layer Security
- **EAP-TTLS/MSCHAPv2**: EAP-Tunneled Transport Layer Security/Microsoft Challenge Handshake Authentication Protocol
- **PEAPv0/EAP-MSCHAPv2**: Protected Extensible Authentication Protocol/Microsoft Challenge Handshake Authentication Protocol
- **PEAPv1/EAP-GTC**: Protected Extensible Authentication Protocol/Generic Token Card
- **LEAP**: Lightweight Extensible Authentication Protocol

Association Types

Because the devices do not provide a user interface for entering usernames, passwords, and Personal Identification Numbers: Honeywell developed the concept of *Association Types*. Association types determine the point at which credentials are required.

For each site, you can select one of the following:

Site Based

There is a single username and password or certificate for all operators and devices at a given site.

Device Based

Each device will have its own username and password or certificate. In this configuration, operators don't need to be involved in the authentication process, because all authentication is between the device and the authentication server.

Operator Based

Each operator must log onto VoiceConsole to enter a username and password and, optionally, a PIN. The operator must enter that password (and PIN, if selected) on the device before he can connect to the full network.

The EAP options will either be configured by or with significant input from an IT professional. It is this person who will make the decision as to which type of configuration will be used at this site and will have the needed information.

What You Need

If you are configuring VoiceConsole for EAP, you will need the following information.

- The EAP type used.
- Association type.
- Type of credentials that the client wants the device to use to authenticate to the network.
- Whether the user will need to enter a PIN to get onto the network.
- Whether the device will log off when it goes into the charger.
- The username and password or certificate of the restricted user that the device will use when it is in the charger in order to communicate to VoiceConsole.
- If Certificate is selected, Honeywell strongly recommends using PEM or base 64 formatted certificates.
- The PIN that the user must enter to log onto the network.

LDAP settings are optional for site- and device-based association types. They are required for the operator-based association type. If you choose to use LDAP, you will also need:

- The hostname of the machine on which the LDAP server is running.
- The port on which the LDAP server is listening.
- The username that VoiceConsole will use when attempting to find the distinguished name of an operator in the Directory Service.
- The password that VoiceConsole will use when attempting to find the distinguished name of an operator in the Directory Service.
- The search base that VoiceConsole will use when trying to find a particular user in the Directory Service.
- The attribute that VoiceConsole will search on when trying to find a particular user in the Directory Service.
- The attribute that VoiceConsole will modify when changing the password of a user in the Directory Service.

SAML SSO Configuration

This process configures VoiceConsole to use SAML-based single sign on.

SAML (Security Assertion Markup Language) is an open source format for authentication and authorization between an Identity Provider and a Service Provider which is used to offer a single sign on service.

- Service Provider – In this instance, it is VoiceConsole.
- Identity Provider – The identity provider creates, maintains, and manages the identity information for users and provides user authentication to service providers.

Enable SAML SSO During Installation

This option must be selected during VoiceConsole installation.

VoiceConsole Implementation Guide

> **IMPORTANT**
> This option is only available during new installations of VoiceConsole. SAML cannot be confugured during an upgrade installation.

Configure SAML

The following process builds the trust between the Identity Provider (IDP) server and VoiceConsole.

1. Copy the SAML metadata file from the IDP server to the VoiceConsole installation directory as follows:
    a. Create a directory named **idp-meta** at *<VoiceConsole installation directory>*\Vocollect\VoiceConsole\tomcat\webapps\VoiceConsole.
    b. Copy the SAML metadata file of the IDP server to the directory created above.
    c. Rename file file to **idp-meta.xml**.
    d. Restart the VoiceConsole service.

2. Generate the VoiceConsole SAML metadate file.
    a. Download by going to the following URL: <protocol>://*<VoiceConsole DNS>*/VoiceConsole/saml/metadata/meta.action
3. Configure the VoiceConsole SAML metadata file in the IDP server.

> **NOTE**
> Ensure that **UserID** is configured to send as an attribute in assertion.

> **IMPORTANT**
> - **For a first-time installation:** Talkman Startup Tool and Rest/SOAP API authentication is available using only the default users (admin and vocollect) with the default passwords.
> - **For an upgrade installation (where SAML/SSO was enabled in a prior installation):** Talkman Startup Tool and Rest/SOAP API authentication is available using only users that existed before the upgrade. Users created after the upgrade will not work.

Configure the Browser

Before installation, you need to ensure that your browser is configured properly.

Regardless of which browser you are using, you must configure your browser as follows to enable the application to work correctly and provide security:

- Browser must be set to reload the page at each visit.
- JavaScript must be enabled.
- Browser must be configured to accept cookies.
- Browser must have the maximum number of simultaneous connections set to your preference for the Device Dialog Display feature.

These browser settings are typically accessed by selecting **Tools** > **(Internet) Options**.

The following subsections cover browser configurations specific to the type of browser that you may be using.

Firefox Configuration

These changes are only required when viewing VoiceConsole in Firefox.

Before you can use certain features in the Firefox browser, you must make the following configuration changes:

1. In your browser's address bar, type: `about:config`
   The browser then displays a list of properties.
2. Type `signed` in the filter box, just above the list of properties.
3. Find the entry named **signed.applets.codebase_principal_support** in the property list, and double-click the entry to change the value from false to true. This change will enable you to copy records from VoiceConsole tables to the Windows clipboard.
4. Click **OK**.
5. Type `browser.link` in the filter box, just above the list of properties.
6. Find the entry named **browser.link.open_newwindow** in the property list, and double-click the entry. Change the value to **2**. This change will enable context-sensitive help links to open in a new browser window.
7. Restart the browser.

In addition to the previous process, do the following to verify that your browser is configured to open new pages in a new window:

1. Select **Tools** > **Options**.
2. Click **Tabs**.
3. For the parameter, **New pages should be opened in**, click the option to open new pages in a new window.
4. Click **OK**.

Configure Firefox for the Device Dialog Display Feature

To fully use the Device Dialog Display feature, Honeywell recommends configuring Firefox to modify the limit of simultaneous connections.

To do this:

1. In your browser's address bar, type: `about:config`
   The browser then displays a list of properties.
2. Type `max-con` in the filter box, just above the list of properties.
3. Find the entry named **network.http.max-connections-per-server** in the property list, and double-click the entry.
4. Change the value to the maximum number of simultaneous connections that you want.
5. Click **OK**.
6. Type `max-per` in the filter box, just above the list of properties.
7. Find the entry named **network.http.max-persistent-connections-per-server** in the property list, and double-click the entry.
8. Change the value to the maximum number of simultaneous connections that you want.
9. Click **OK**.
10. Restart the browser.

Install the USB Driver

If you are using Microsoft Windows, you may need to install the USB driver located on the VoiceConsole 5.5 software DVD to use the maintenance port on Honeywell Voice A700 devices. The necessary driver is already installed on Linux systems.

Install the USB Driver on Windows

Once the device is connected to the USB port on a computer running Windows, the necessary USB driver – CDC-ACM driver – should install automatically. If it does not:

1. Open Windows Device Manager.
2. Find and right-click **Talkman USB Serial** in the list of devices.
3. Select **Update Driver Software**, and follow the directions pointing the search to the VoiceConsole 5.5 software DVD to locate the CDC-ACM driver.

INSTALL VOICECONSOLE FOR THE FIRST TIME

This section describes how to install VoiceConsole for the first time; that is, when there are no previous instances of VoiceConsole at your site.

> **NOTE**
> To avoid any potential issues, Honeywell highly recommends **against** installing VoiceConsole from a shared network drive. If the application cannot be installed directly from the distribution media (DVD), it must be copied to local drive prior to install.

- Close all other applications before installing.
- When installing with Windows, you must run the installer as an administrator. When installing with Linux, the installer must be run as root unless configured for a non-root installation.
- On Windows, navigate to the `install.exe` on the DVD or copied location. On Linux, if you are using Intel or AMD architecture, copy the files from the VoiceConsole DVD, or other source, to your computer, and execute the **install.sh** file.
- When you install this version of VoiceConsole for the first time, the following two users are installed with the application with default passwords:

  - admin/admin
  - vocollect/voiceworks

System Components

The following system components are installed when you install VoiceConsole 5.5.

- Apache Tomcat
- Java™ JRE
- VoiceConsole Web Application
- VoiceConsole Online Help
- Hardware Documentation

Available Ports and Protocols

VoiceConsole uses the following protocols:

- Internet Control Message Protocol (ICMP)
- Hypertext Transfer Protocol (HTTP)
- Hypertext Transfer Protocol with Secure Sockets Layer (HTTPS)

The Apache Tomcat Service uses the following ports by default for proper startup and shutdown:

Use	Default	Direction
HTTP	9090	Inbound
WebSocket	9091	Both
HTTPS	9443	Inbound (Browser Only)
Shutdown	9006	Internal

WebLogic uses the following ports and protocols:

Use	Default	Direction
AJP	9010	Internal
The following TCP port must be available for communication between VoiceConsole and VoiceClient:		
TERMINAL_TCP_PORT	21050	Both

If these ports are not available, the next available ports are used.

Standard Installation Procedure

1. If one is not already installed, install the database platform. If you are using the Embedded Database, proceed to step 3.
2. Create a blank VoiceConsole database and a user with create, read, and write permissions to the database. When you run the installer in the next step, the database schema will be created automatically.
3. Run the installer.
   The **Introduction** window appears.
4. Click **Next**.
   The **License Agreement** window appears.
5. Accept the terms of the license agreement, and click **Next**.
   The **Select Installation Path** window appears.
6. Click **Next** to install to the default path or, if necessary, browse to the desired installation path and click **Next**. The **Software to Install** window appears.
7. Click **Next**.
   The **Copying Software** window displays the installer progress during the copy of the individual selected software and the entire copying process.
8. When the copying process is finished, click **Next**.
   The **Remote Upgrade** window appears.
9. Select **No**, and click **Next**.

   The **Cluster Configurations** window appears.
10. Select **No** to select a standard installation, and click **Next**. If you want to install to a clustered environment, see Install into a Clustered Environment for more information.
    The **Configuration and Installation** window displays three tabs to configure your installation.
11. Click the **Tomcat Server Configuration** tab.
12. Enter the appropriate information for your Tomcat server configuration.

    Tomcat Login Information

Choose an account, and enter the account username and password, if necessary.

In Windows, if you select **Use Existing Account**, ensure that the account entered has the necessary permission described below:

> **NOTE**
> If you want to use NT authentication for SQL Server databases for a Windows installation, you must use an existing account.

- **Read** permission to the directory from which the installation program is being run
- **Log On As a Service** rights and permissions (refer to Tomcat documentation for setup information).
- **Write** permissions to all paths provided during installation for the install folder, log files directory, application files location
- **Write** permissions to the shared drive for a clustered install (if applicable)

Tomcat Path Configuration

Confirm the default path to the location where the log files will be stored, or – if necessary – browse to the desired path. Log files track user activities in the VoiceConsole application.

Tomcat Port Configuration

Confirm the default ports that the application server will use, or – if necessary – enter different ports.

13. Click the **Database Configuration** tab.
14. Enter the appropriate information for your database.

    a. SQL Server

       For installations using SQL Server, you must enter the information listed in the following table:

> **NOTE**
> SQL Server does not enable TCP/IP by default. You must manually enable TCP/IP before the installation can complete successfully.

For Basic

Field	Description	Valid Entry Format
Database Hostname	DNS name or IP address of the machine hosting the database.	
Database Port	The port that the database uses.	Must be an integer between 1 and 65535. Default is 1433.
Database Name	The name of the database.	

For Advanced

Field	Description	Valid Entry Format
JDBC URL	The JDBC URL for the database.	jdbc:sqlserver://<host>:<port>; DatabaseName=<database name>

For Both Basic and Advanced

Field	Description	Valid Entry Format
Authentication Type (Windows installs only where existing user specified for Tomcat Server configuration)	The authentication type used to connect to the database.	If installing on Windows and an existing user was specified for the Tomcat Service configuration, you can select to use NT Authentication. Otherwise, select SQL Server Authentication.
Database Username	The username that the application should use to log into the database. This is disabled if using NT Authentication.	
Database Password	The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.	
Database Schema	The database schema that you are using.	

b. Oracle

For installations using Oracle, you must enter the following information:

For Basic

Field	Description	Valid Entry Format
Database Hostname	DNS name or IP address of the machine hosting the database.	
Database Port	The port that the database uses.	Must be an integer between 1 and 65535. Default is 1521.
SID or Service Name	The SID or Service Name of the Oracle database.	

For Advanced

Field	Description	Valid Entry Format
JDBC URL	The JDBC URL for the database.	jdbc:oracle:thin:@<host>:<port>:<database name>

For Both Basic and Advanced

Field	Description	Valid Entry Format
Database Username	The username of a user with administrative privileges.	
Database Password	The password of a user with administrative privileges.	

c. Embedded Database

Field	Description	Valid Entry Format
New Database Password	The password of the database administrator account that the application will use to log into the database. The embedded database will be configured to use this password. After installation, users can connect remotely using the "sa" username and this password.	If left blank, the "sa" user will not require a password. Cannot contain single or double quotation marks. Must be retyped in the **Confirm New Database Password** field.
Database Port	The port that the database uses.	Must be an integer between 1 and 65535. Default is 9101. For the proper startup and shutdown of the database, these ports cannot overlap with the ports that Apache Tomcat uses.

15. Click the **VoiceConsole Configuration** tab.
16. Enter the appropriate information for your VoiceConsole configuration.

VoiceConsole Hostname

Specify the hostname of the machine onto which you are installing VoiceConsole.

Display Dialog Port

Confirm the default port that the application server will use for the Display Dialog feature.

Enable HTTPS Support

Select to enable secure HTTPS on all pages of VoiceConsole. Certain pages are still secure if this check box is not selected.

Storage Directory

Specify where you would like to have application files stored.

VoiceConsole Implementation Guide

> **NOTE**
> The storage directory must have enough room to store device logs, which could grow very large in a short amount of time. See VoiceConsole System Requirements for more information. Additionally, VoiceConsole performance may be negatively affected if the storage directory is on a shared network drive with low throughput. If not required for clustering, Honeywell recommends having this location on a local drive.

Enable SAML SSO

Check to enable Federation SAML (Security Assertion Markup Language) Single Sign On. Additional configuration is necessary to use this feature after the installation is completed.

17. Click **Install Now**.

    The installation begins. When the first part of the VoiceConsole installation is successfully completed, click **OK**.
    If installing on Windows, the **Setup Shortcuts** window appears. If installing on Linux, go to step 19.

18. If desired, select the program group in the **Start** menu to place the shortcut within or edit the path of the shortcut. If you do not want a VoiceConsole shortcut on the **Start** menu, clear the **Create shortcut in the Start menu** checkbox. A shortcut to VoiceConsole is placed on the desktop automatically after the installation process completes.

19. Click **Next**.

    When the installation is complete, the **Installation Finished** window appears.

20. If desired, click **Generate script** to generate an .xml file with your installation choices to use for silent or automatic installations.

21. Click **Done**.

    The Vocollect VoiceConsole Installer closes, and the VoiceConsole application opens.

Install into a Clustered Environment

This installation procedure is different from the standard installation procedure in that you must install on each node in the cluster individually. The license that was provided to you must be imported into each installation.

> **NOTE**
> Installing in a clustered environment:
> - The embedded database is not supported in a clustered environment.
> - If you are installing into an Active/Passive cluster configuration, make sure that the active node has access to shared resources – for example, the log and firmware files location.

Install Into the First Node

1. If one is not already installed, install the database platform.
2. Create a blank VoiceConsole database and a user with create, read, and write permissions to the database. When you run the installer in the next step, the database schema will be created automatically.

3. Run the installer.

    The **Introduction** window appears.
4. Click **Next**.

    The **License Agreement** window appears.
5. Accept the terms of the license agreement and click **Next**.

    The **Select Installation Path** window appears.
6. Click **Next** to install to the default path, or – if necessary – browse to the desired installation path and click **Next**.

    The **Software to Install** window appears.
7. Click **Next**.

    The **Copying Software** window displays the installer's progress during the copy of the individual selected software and the entire copying process.
8. When the copying process is finished, click **Next**.

    The **Cluster Configurations** window appears.
9. Select **Yes**, select a directory that can be accessed by all cluster nodes by the same path, and click **Next**.

    For Windows operating systems, Honeywell recommends using a UNC path (ex. \\ComputerName\Path) as the **Shared Storage** directory.

    The **Configuration and Installation** window displays three tabs to configure your installation.
10. Enter the appropriate information for your Tomcat server configuration.

    Tomcat Login Information

    Choose an account, and enter the account username and password, if necessary.

    In Windows, if you select **Use Existing Account**, ensure that the account entered has the necessary permission described below:

    If you want to use NT authentication for SQL Server databases for a Windows installation, you must use an existing account.
    - **Read** permission to the directory from which the installation program is being run.
    - **Log On As a Service** rights and permissions.
    - **Write** permissions to all paths provided during installation for the install folder, log files directory, application files location.
    - **Full Control** permissions to the shared drive for a clustered install (if applicable).

    Tomcat Path Configuration

    Confirm the default path to the shared storage location where log files will be stored, or– if necessary – browse to the desired path. Log files track user activities in the VoiceConsole application.

    Tomcat Port Configuration

    Confirm the default ports that the application server will use, or – if necessary – enter different ports.
11. Click the **Database Configuration** tab.

12. Enter the appropriate information for your database.

    a. SQL Server

For installations using SQL Server, you must enter the information listed in the following table:

> **NOTE**
> SQL Server does not enable TCP/IP by default. You must manually enable TCP/IP before the installation can complete successfully.

For Basic

Field	Description	Valid Entry Format
Database Hostname	DNS name or IP address of the machine hosting the database.	
Database Port	The port that the database uses.	Must be an integer between 1 and 65535. Default is 1433.
Database Name	The name of the database.	

For Advanced

Field	Description	Valid Entry Format
JDBC URL	The JDBC URL for the database.	jdbc:sqlserver://<host>:<port>; DatabaseName=<database name>

For Both Basic and Advanced

Field	Description	Valid Entry Format
Authentication Type (Windows installs only where existing user specified for Tomcat Server configuration)	The authentication type used to connect to the database.	If installing on Windows and an existing user was specified for the Tomcat Service configuration, you can select to use NT Authentication. Otherwise, select SQL Server Authentication.
Database Username	The username that the application should use to log into the database. This is disabled if using NT Authentication.	
Database Password	The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.	
Database Schema	The database schema that you are using.	

b. Oracle

For installations using Oracle, you must enter the following information:

For Basic

Field	Description	Valid Entry Format
Database Hostname	DNS name or IP address of the machine hosting the database.	
Database Port	The port that the database uses.	Must be an integer between 1 and 65535. Default is 1521.
SID or Service Name	The SID or Service Name of the Oracle database.	

For Advanced

Field	Description	Valid Entry Format
JDBC URL	The JDBC URL for the database.	jdbc:oracle:thin:@<host>:<port>:<database name>

For Both Basic and Advanced

Field	Description	Valid Entry Format
Database Username	The username of a user with administrative privileges.	
Database Password	The password of a user with administrative privileges.	

13. Click the **VoiceConsole Configuration** tab.
14. Enter the appropriate information for your VoiceConsole configuration.

Field	Description
VoiceConsole Hostname	Specify the hostname or IP address of the machine controlling the cluster.
Display Dialog Port	Confirm the default port that the application server will use for the Display Dialog feature.
Enable HTTPS Support	Select to enable secure HTTPS on all pages of VoiceConsole. Certain pages are still secure if this check box is not selected.
Storage Directory	Confirm the default path to the shared storage location accessible by all cluster nodes where you would like to have application files stored. The storage directory must have enough room to store device logs, which could grow very large in a short amount of time. See VoiceConsole System Requirements for more information. Additionally, VoiceConsole performance may be negatively affected if the storage directory is on a shared network

Field	Description
	drive with low throughput. If not required for clustering, Honeywell recommends having this location on a local drive.

15. Click **Install Now**.

    The installation begins. When the first part of the VoiceConsole installation is successfully completed, click **OK**.
    If installing on Windows, the **Setup Shortcuts** window appears. If installing on Linux, go to step 18.
16. If desired, select the program group in the **Start** menu to place the shortcut within or edit the path of the shortcut. If you do not want a VoiceConsole shortcut on the Start menu, clear the **Create shortcut in the Start menu** checkbox. A shortcut to VoiceConsole is placed on the desktop automatically after the installation process completes.
17. Click **Next**.

    The installation continues. When the installation is complete, the **Installation Finished** window appears.
18. If desired, click **Generate script** to generate an .xml file with your installation choice data to use for silent or automatic installations.
19. Click **Done**.

    The Vocollect VoiceConsole Installer closes, and the VoiceConsole application opens.

Install into Additional Nodes

> **NOTE**
> If you are installing into an Active/Passive cluster configuration, make sure that the active node has access to shared resources – for example, the log and firmware files location.

1. Run the installer

    The **Introduction** window appears.
2. Click **Next**.

    The **License Agreement** window appears.
3. Accept the terms of the license agreement, and click **Next**.

    The **Select Installation Path** window appears.

4. Click **Next** to install to the default path or, if necessary, browse to the desired installation path and click **Next.**

    The **Software to Install** window appears.
5. Click **Next**.

    The **Copying Software** window displays the installer progress during the copy of the individual selected software and the entire copying process.
6. When the copying process is finished, click **Next**.

    The **Cluster Configurations** window appears.

7. Select **Yes**, select the directory that you entered in step 9 of , and click **Next**.

   The **Configuration and Installation** window contains three tabs to configure your installation.
8. Click the **Tomcat Server Configuration** tab.
9. In the **Tomcat Path Configuration** field, confirm the default path to the shared storage location where log files will be stored, or – if necessary – browse to the desired path.

   Fields on the tabs of the **Configuration and Installation** window are populated with installation information entered when you installed VoiceConsole on the first node. Only the **Tomcat Path Configuration** field can be edited.
10. Click the **Database Configuration** tab and the **VoiceConsole Configuration** tab to verify that the information automatically entered.
11. Click **Install Now**.

    The installation begins. When the first part of the VoiceConsole installation is successfully completed, click **OK**.
    If installing on Windows, the **Setup Shortcuts** window displays. If installing on Linux, go to step 14.
12. If desired, select the program group in the **Start** menu to place the shortcut within or edit the path of the shortcut. If you do not want a VoiceConsole shortcut on the **Start** menu, clear the **Create shortcut in the Start menu** checkbox.
13. Click **Next**.

    The installation continues. When the installation is complete, the **Installation Finished** window displays.
14. If desired, click **Generate an automatic installation script** to generate an *.xml* file with your installation choice data to use for silent or automatic installations.
15. Click **Done**.

    The **Vocollect VoiceConsole Installer** closes, and the VoiceConsole application opens.

Secure the Database Password

Regardless of the database used, the installation program stores the *database.properties* file in the target installation folder. This file includes the database password and username that the application uses to log into the database (unless you are using SQL Server with NT Authentication). To protect the database user, database passwords in this file are encrypted. However, this file is a plain text file that can be read by any text editor. Therefore, if you want to secure this file, follow the appropriate steps to secure it with Windows or Linux file permissions, depending on the operating system that you are using.

Change the Embedded Database Password

This section describes the process to change the embedded database password on a previously installed version of VoiceConsole.

1. Ensure that VoiceConsole is running.
2. Open a command prompt/terminal window.

VoiceConsole Implementation Guide

3. Navigate to the VoiceConsole lib directory.

   Default locations are `C:\Program Files\Vocollect\VoiceConsole\tomcat\webapps\VoiceConsole\WEB-INF\lib` on Windows or `/opt/Vocollect/VoiceConsole/tomcat/webapps/VoiceConsole/WEB-INF/lib` on RedHat Linux or CentOS Linux.
4. Type the command `java -cp ./hsqldb-2.3.0.jar org.hsqldb.util.DatabaseManagerSwing`
5. Press **Enter**.

   The **Connect** window opens.
6. Enter the following connection settings:
   - Setting Name: VoiceConsole DB
   - Type: HSQL Database Engine Server
   - Driver: org.hsqldb.jdbcDriver
   - URL: jdbc:hsqldb:hsql://localhost:<port entered on install>/vcdb
   - User: sa
   - Password: leave this field blank
7. Click **OK**.

   The HSQL Database Manager window opens.

8. Type `SET PASSWORD 'YourNewPassword'';checkpoint;` into the text box.
9. Click **Execute SQL**.
10. Open the VoiceConsole database.properties file in a text editor.

    Default locations are `C:\Program Files\Vocollect\VoiceConsole\tomcat\webapps\VoiceConsole\WEB-INF\classes\database.properties` on Windows or `/opt/Vocollect/VoiceConsole/tomcat/webapps/VoiceConsole/WEB-INF/classes/database.properties` on RedHat Linux or CentOS Linux.
11. Change the values for `hibernate.connection.password` and `archive.hibernate.connection.password` to the new password.
12. Save the file.
13. Restart VoiceConsole, and log into VoiceConsole with the existing admin account to confirm that the database connection has been established.

Perform a Silent Installation

> **NOTE**
> When installing or upgrading, to avoid any potential issues, Honeywell highly recommends **against** installing VoiceConsole from a shared network drive. If the application cannot be installed directly from the distribution media (DVD) it must be copied to local drive prior to install.
>
> - Close all other applications before installing.
> - When you install this version of VoiceConsole for the first time, the following two users are installed with the application with default passwords:
>   - admin/admin
>   - vocollect/voiceworks

A silent install or upgrade is available by providing an *.xml* file with the information that would be provided during a user interface installation. The *.xml* file is provided as a command line argument to the installer executable, batch, or script file to perform the installation.

Perform a Silent Installation

You have two options for generating an *.xml* file for a silent installation:

1. Run the installer; choose all the options that you need, and then on the **Installation Finished** window (last window), click **Generate script** to generate the *.xml* file with your installation choices. See Install VoiceConsole for the First Time or Upgrade from Previous Versions for instructions for installing or upgrading and generating the script.
2. Manually create the *.xml* file. Below are some examples of *.xml* files.

Standard installation

```xml
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<AutomatedInstallation langpack="eng">
<ImagePanel id="UNKNOWN (ImagePanel)"/>
<com.izforge.izpack.panels.HTMLLicencePanel id="licencepanel"/>
<com.izforge.izpack.panels.UpgradePanel id="upgradepanel"/>
<com.izforge.izpack.panels.TargetPanel id="targetpanel">
<!-- This is the suggested installation path for Windows. -->
<!-- <installpath>C:\Program Files (x86)\Vocollect\VoiceConsole</installpath> -->
<!-- This is the suggested installation path for Unix-based operating systems. If using
Linux, remove the Windows installation path above and uncomment this path. -->
<!-- <installpath>/opt/Vocollect/VoiceConsole</installpath> -->
<installpath>C:\Temp\5.5</installpath>
</com.izforge.izpack.panels.TargetPanel>
<com.izforge.izpack.panels.PacksPanel id="packspanel">
<pack index="0" name="application" selected="true"/>
<!-- This is the Windows Java Runtime Environment. -->
<pack index="1" name="jreWindowsx86" selected="true"/>
<!-- These are the other available Java Runtime Environment. If using Linux, remove the
Windows Java Runtime Environment above and uncomment the appropriate pack below. -->
<!-- <pack index="1" name="jreLinux86x" selected="true"/> -->
</com.izforge.izpack.panels.PacksPanel>
<com.izforge.izpack.panels.InstallPanel id="installpanel"/>
<com.izforge.izpack.panels.LegacyUpgradePanel id="legacyupgradepanel"/>
<com.izforge.izpack.panels.RemoteUpgradePanel id="remoteupgradepanel">
<remoteUpgrade>false</remoteUpgrade>
</com.izforge.izpack.panels.RemoteUpgradePanel>
<com.izforge.izpack.panels.ClusterPanel id="clusterpanel">
<clusteredInstall>false</clusteredInstall>
<clusterSharePath/>
</com.izforge.izpack.panels.ClusterPanel>
<com.izforge.izpack.panels.configurator.ConfiguratorPanel id="configuratorPanel">
<configuratorData>
```

```
<!-- Configuration fields that need user specified values. -->
<!-- ###EDIT THE CONFIGURATION FIELDS. SEE CHART FOR ALL POSSIBLE FIELDS.### -->
<configuratorProperty
configItemNameToModify="07sqlDatabaseSchema">dbo</configuratorProperty>
<configuratorProperty configItemNameToModify="01voiceConsoleHostname">IT-
4173</configuratorProperty>
<configuratorProperty configItemNameToModify="01databaseServer">SQL
Server</configuratorProperty>
<configuratorProperty
configItemNameToModify="05sqlDatabaseUsername">sa</configuratorProperty>
<configuratorProperty
configItemNameToModify="01tomcatLogDirectory">C:\Temp\5.5\logs</configuratorProperty>
<configuratorProperty configItemNameToModify="#date">Jun 19, 2013 4:26:15
PM</configuratorProperty>
<configuratorProperty
configItemNameToModify="testConnection">true</configuratorProperty>
<configuratorProperty configItemNameToModify="06sqlDatabasePassword">database_
password</configuratorProperty>
<configuratorProperty
configItemNameToModify="04voiceConsoleStorageDirectory">C:\Temp\
5.5</configuratorProperty>
<configuratorProperty
configItemNameToModify="03sqlDatabaseName">silent5</configuratorProperty>
<configuratorProperty configItemNameToModify="01sqlDatabaseHostname">it-
4173</configuratorProperty>
<configuratorProperty
configItemNameToModify="06voiceConsoleSamlSSO">false</configuratorProperty>
</configuratorData>
</com.izforge.izpack.panels.configurator.ConfiguratorPanel>
<com.izforge.izpack.panels.ShortcutPanel id="shortcutpanel">
<!-- ###EDIT SHORTCUT SETTINGS.### -->
<programGroup name="Vocollect\VoiceConsole"/>
<shortcut KdeSubstUID="false" categories="" commandLine="start" createForAll="false"
description="Go to VoiceConsole web application" encoding="" group="true"
icon="C:\Temp\5.5\tools\vocollect_icon.ico" iconIndex="0" initialState="1" mimetype=""
name="VoiceConsole" target="C:\Temp\5.5\bin\WebApplication.url" terminal=""
terminalOptions="" tryexec="" type="1" url="" usertype="0"
workingDirectory="C:\Temp\5.5\bin"/>
</com.izforge.izpack.panels.ShortcutPanel>
<com.izforge.izpack.panels.VocollectFinishPanel id="finishpanel"/>
</AutomatedInstallation>
```

Clustered installation

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<AutomatedInstallation langpack="eng">
<ImagePanel id="UNKNOWN (ImagePanel)"/>
```

```
<com.izforge.izpack.panels.HTMLLicencePanel id="licencepanel"/>
<com.izforge.izpack.panels.UpgradePanel id="upgradepanel"/>
<com.izforge.izpack.panels.TargetPanel id="targetpanel">
<!-- Installation Directory -->
<!-- ###EDIT THE INSTALLATION DIRECTORY PATH.### -->
<installpath>C:\Temp\5.5</installpath>
</com.izforge.izpack.panels.TargetPanel>
<com.izforge.izpack.panels.PacksPanel id="packspanel">
<pack index="0" name="application" selected="true"/>
<pack index="1" name="jreWindowsx86" selected="true"/>
</com.izforge.izpack.panels.PacksPanel>
<com.izforge.izpack.panels.InstallPanel id="installpanel"/>
<com.izforge.izpack.panels.LegacyUpgradePanel id="legacyupgradepanel"/>
<com.izforge.izpack.panels.RemoteUpgradePanel id="remoteupgradepanel">
<remoteUpgrade>false</remoteUpgrade>
</com.izforge.izpack.panels.RemoteUpgradePanel>
<com.izforge.izpack.panels.ClusterPanel id="clusterpanel">
<clusteredInstall>true</clusteredInstall>
<!-- Cluster settings -->
<!-- ###EDIT CLUSTER SETTINGS.### -->
<clusterSharePath>C:\Shared\Vocollect</clusterSharePath>
</com.izforge.izpack.panels.ClusterPanel>
<com.izforge.izpack.panels.configurator.ConfiguratorPanel id="configuratorPanel">
<configuratorData>
<!-- Configuration fields that need user specified values. -->
<!-- ###EDIT THE CONFIGURATION FIELDS. SEE CHART IN NEXT SECTION FOR ALL POSSIBLE
FIELDS.### -->
<configuratorProperty
configItemNameToModify="07sqlDatabaseSchema">dbo</configuratorProperty>
<configuratorProperty configItemNameToModify="01voiceConsoleHostname">it-
4173</configuratorProperty>
<configuratorProperty configItemNameToModify="01databaseServer">SQL
Server</configuratorProperty>
<configuratorProperty
configItemNameToModify="05sqlDatabaseUsername">sa</configuratorProperty>
<configuratorProperty
configItemNameToModify="01tomcatLogDirectory">C:\Shared\Vocollect\logs</configuratorPro
perty>
<configuratorProperty configItemNameToModify="#date">Jun 20, 2013 9:53:41
AM</configuratorProperty>
<configuratorProperty
configItemNameToModify="testConnection">true</configuratorProperty>
<configuratorProperty configItemNameToModify="06sqlDatabasePassword">database_
password</configuratorProperty>
<configuratorProperty
```

```
configItemNameToModify="04voiceConsoleStorageDirectory">C:\Shared\Vocollect</configurat
orProperty>
<configuratorProperty
configItemNameToModify="03sqlDatabaseName">silent5</configuratorProperty>
<configuratorProperty configItemNameToModify="01sqlDatabaseHostname">it-
4173</configuratorProperty>
<configuratorProperty
configItemNameToModify="06voiceConsoleSamlSSO">false</configuratorProperty>
</configuratorData>
</com.izforge.izpack.panels.configurator.ConfiguratorPanel>
<com.izforge.izpack.panels.ShortcutPanel id="shortcutpanel">
<!-- Start menu shortcut settings -->
<!-- ###EDIT SHORTCUT SETTINGS.### -->
<programGroup name="Vocollect\VoiceConsole"/>
<shortcut KdeSubstUID="false" categories="" commandLine="start" createForAll="false"
description="Go to VoiceConsole web application" encoding="" group="true"
icon="C:\Temp\5.5\tools\vocollect_icon.ico" iconIndex="0" initialState="1" mimetype=""
name="VoiceConsole" target="C:\Temp\5.5\bin\WebApplication.url" terminal=""
terminalOptions="" tryexec="" type="1" url="" usertype="0"
workingDirectory="C:\Temp\5.5\bin"/>
</com.izforge.izpack.panels.ShortcutPanel>
<com.izforge.izpack.panels.VocollectFinishPanel id="finishpanel"/>
</AutomatedInstallation>
```

Notes on install file formatting

- Line endings must match the requirements of the server operating system in use.
- Property names are case sensitive.
- Property values must not end in whitespace.

If you performed a silent install of VoiceConsole version 3.0 or 3.0.1 in a Linux or Unix environment and now want to run a silent upgrade, you will have to reset directory permissions after the upgrade is complete.

As root user, stop the VoiceConsole service. Reset the installation directory ownership to the expected user account using the **chown** command with the recursive switch, then restart the service. For example:

```
chown -R vocollect /opt/Vocollect/VoiceConsole
```

Initiate a Silent Installation or Upgrade

Once the properties file is created and saved in the appropriate location, the user can run the silent installer using one of the following commands.

- To execute the silent installer on Windows, open the Command prompt, and type the following:

```
install.exe <xmlFileName>.xml
```

```
install.bat <xmlFileName>.xml
```
- To execute the silent installer on Linux, run the command:

```
install.sh <xmlFileName>.xml
```

Configuration Fields

Tomcat Settings

00tomcatAccount

Field Description

Type of Tomcat account.

> **NOTE**
> If you want to use NT authentication for SQL Server databases for a Windows installation, you must use an existing account.

Values

- tomcatExisting
- tomcatLocalSystem (Windows) (default)
- tomcatVocollectUser (Unix-based) (default)

Installation Type

All

01tomcatExistingUsername

Field Description

Existing account username.

Installation Type

Tomcat Existing User.

02tomcatExistingPassword

Field Description

Existing account password.

Installation Type

Tomcat Existing User.

01tomcatLogDirectory

Location where log files will be stored.

Values

path

Installation Type

All

01tomcatListenPort

Field Description

HTTP Port.

Values

9090 (default)

Installation Type

All

02tomcatSSLPort

Field Description

HTTPS Port.

Values

9443 (default)

Installation Type

All

03tomcatAjpPort

Field Description

AJP Port.

Values

9011 (default)

Installation Type

All

04tomcatShutdownPort

Field Description

Shutdown Port.

Values

9006 (default)

Installation Type

All

Database Settings

01databaseServer

Field Description

Type of database.

Values

- Embedded DB (default)
- SQL Server
- Oracle

Installation Type

All.

02databaseSettingsMode

Field Description

Type of setting.

Values

- Basic Settings
- Advanced Settings

Installation Type

SQL / Oracle

O2embeddedDatabasePassword

Field Description

The password of the database administrator account that the application will use to log into the database.

Installation Type

- Embedded DB
- Basic Settings

O2embeddedDatabasePasswordConfirmation

Installation Type

- Embedded DB
- Basic Settings

O3embeddedDatabasePort

Field Description

The port that the database uses.

Values

9101 (default)

Installation Type

- Embedded DB
- Basic Settings

O1sqlDatabaseHostname

Field Description

DNS name or IP address of the machine hosting the database.

Installation Type

- SQL Server / Oracle
- Basic Settings

O1oraDatabaseHostname

Field Description

DNS name or IP address of the machine hosting the database.

- SQL Server / Oracle
- Basic Settings

O2sqlDatabasePort

Field Description

The port that the database uses.

Values

- 1433 (SQL default)
- 1521 (Oracle default)

Must be an integer between 1 and 65535.

Installation Type

- SQL Server / Oracle
- Basic Settings

O2oraDatabasePort

Field Description

The port that the database uses.

Values

- 1433 (SQL default)
- 1521 (Oracle default)

Must be an integer between 1 and 65535.

Installation Type

- SQL Server / Oracle
- Basic Settings

O3sqlDatabaseName

Field Description

The name of the database.

Installation Type

- SQL Server / Oracle
- Basic Settings

O3oraDatabaseName

Field Description

The name of the database.

Installation Type

- SQL Server / Oracle
- Basic Settings

O1sqlDatabaseJdbcUrl

Field Description

The JDBC URL for the database.

Values

- jdbc:sqlserver://<host>:<port>; DatabaseName=<database name>
- jdbc:oracle:thin:@<host>:<port>:<sid>

Installation Type

- SQL Server / Oracle
- Advanced Settings

O1oraDatabaseJdbcUrl

Field Description

The JDBC URL for the database.

Values

- jdbc:sqlserver://<host>:<port>; DatabaseName=<database name>
- jdbc:oracle:thin:@<host>:<port>:<sid>

Installation Type

- SQL Server / Oracle
- Advanced Settings

O4sqlDatabaseAuthMode

Field Description

The authentication type used to connect to the database.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server
- Basic Settings

04adv_sqlDatabaseAuthMode

Field Description

The authentication type used to connect to the database.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server
- Advanced Settings

05sqlDatabaseUsername

Field Description

The username that the application should use to log into the database. This is disabled if using NT Authentication.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server / Oracle
- Basic Settings

04oraDatabaseUsername

Field Description

The username that the application should use to log into the database. This is disabled if using NT Authentication.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server / Oracle
- Basic Settings

03adv_sqlDatabaseUsername

Field Description

The username that the application should use to log into the database. This is disabled if using NT Authentication.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server / Oracle
- Advanced Settings

02adv_oraDatabaseUsername

Field Description

The username that the application should use to log into the database. This is disabled if using NT Authentication.

Values

- SQL Server Authentication
- NT Authentication

Installation Type

- SQL Server / Oracle
- Advanced Settings

06sqlDatabasePassword

Field Description

The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.

- SQL Server / Oracle
- Basic Settings

06oraDatabasePassword

Field Description

The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.

Installation Type

- SQL Server / Oracle
- Basic Settings

04adv_sqlDatabasePassword

Field Description

The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.

Installation Type

- SQL Server / Oracle
- Advanced Settings

03adv_oraDatabasePassword

Field Description

The password of the user that the application should use to log into the database. This is disabled if using NT Authentication.

Installation Type

- SQL Server / Oracle
- Advanced Settings

07sqlDatabaseSchema

Field Description

The database schema that you are using.

Installation Type

- SQL Server / Oracle
- Basic Settings

07oraDatabaseSchema

Field Description

The database schema that you are using.

Installation Type

- SQL Server / Oracle
- Basic Settings

05adv_sqlDatabaseSchema

Field Description

The database schema that you are using.

Installation Type

- SQL Server / Oracle
- Advanced Settings

05adv_oraDatabaseSchema

Field Description

The database schema that you are using.

Installation Type

- SQL Server / Oracle
- Advanced Settings

VoiceConsole Settings

01voiceConsoleHostname

Field Description

Hostname of the machine onto which you are installing.

Installation Type

All

02displayDialogPort

Field Description

Default port that the application server will use for the Display Dialog feature.

Values

9091 (default)

Installation Type

All

03voiceConsoleHTTPSOption

Field Description

Enable secure HTTPS on all pages of VoiceConsole. Certain pages are still secure if this check box is not set.

Values

- true
- false

Installation Type

All

04voiceConsoleStorageDirectory

Field Description

Specify where you would like to have application files stored.

Values

path

Installation Type

All

06voiceConsoleSamlSSO

Field Description

Enable SAML Single SignOn (SSO) as part of the VoiceConsole installation.

Values

- true
- false (default)

Installation Type

All

UPGRADE FROM PREVIOUS VERSIONS

> **IMPORTANT**
> Honeywell strongly recommends that you back up the database that you are using for the previous version of VoiceConsole before upgrading to this version.
>
> Honeywell strongly recommends first testing the upgrade in a lab environment prior to upgrading in production. The test environment should contain the most recent snapshot of your production database to provide the most accurate representation for your upgrade test efforts.
>
> To avoid any potential issues, Honeywell highly recommends **against** installing VoiceConsole from a shared network drive. If the application cannot be installed directly from the distribution media (DVD), it must be copied to the local drive prior to install.

- Close all other applications before installing.
- When upgrading with Windows, you must run the installer as an administrator. When installing with Linux, the installer must be run as root unless configured for a non-root installation.
- Honeywell has only tested upgrades with supported databases. The installer may prohibit you from upgrading from an unsupported database. If you have questions regarding upgrading from an unsupported environment, please contact Honeywell technical support.
- On Windows, navigate to `install.exe` on the DVD or the location to which the files were copied. On Linux, if you are using Intel or AMD architecture, copy the files from the VoiceConsole DVD, or other source, to your computer and execute the `install.sh` file.

> **NOTE**
> SAML SSO cannot be enabled during an upgrade installation. It can only be enabled during a new installation.

Default Ports

- Ports 9090, 9443, 9010, 9006, and 9091 are used by default by the Apache Tomcat Service for proper startup and shutdown. If these ports are not available, the next available ports are used.
- TERMINAL_TCP_PORT port 21050 must be available.
- UDP port 21055 must be available.

See Available Ports and Protocols for more information on these ports.

Data Agent

In previous versions of VoiceConsole, the *Operational Acuity Agent* data agent service could be installed. This service is no longer supported and is no longer installed with VoiceConsole 5.5.

For customers who installed the service and are upgrading to VoiceConsole 5.5, Honeywell recommends either disabling or removing it. Use the service manager (`services.msc`) or applicable Linux service management system to disable it.

To completely remove the service in Windows, run the Windows command in an elevated command prompt: `sc delete 'opacuity-agent'`.

For Linux, Honeywell recommends consulting with the server's Linux Administrator because of Service Management differences.

Upgrade from VoiceConsole 4.1 and Newer to VoiceConsole 5.5

> **NOTE**
> If you chose to use WebLogic as your application server, VoiceConsole must be upgraded using a different process.

1. Run the installer.

   The **Introduction** window appears.
2. Click **Next**.

   The **License Agreement** window appears.
3. Accept the terms of the license agreement, and click **Next**.

   The **Upgrade VoiceConsole** window appears.
4. Click **Next**.

   The **Copying Software** window displays the installer's progress during the copy of the individual selected software and the entire copying process.
5. When the copying process is finished, click **Next**.

   The **Configuration and Installation** window appears.

   > **NOTE**
   > Fields on the tabs of the **Configuration and Installation** window are populated with previous installation information, and only the **Enable HTTPS support** checkbox can be edited.

6. Click **Install Now**.

   The installation begins. When the first part of the VoiceConsole installation is successfully completed, click **OK**.
   If installing on Windows, the **Setup Shortcuts** window appears. If installing on Linux, go to step 9.

7. If desired, select the program group in the **Start** menu to place the shortcut within or edit the path of the shortcut. If you do not want a VoiceConsole shortcut on the **Start** menu, clear the **Create shortcut in the Start menu** checkbox. A shortcut to VoiceConsole is placed on the desktop automatically after the upgrade process completes.
8. Click **Next**.

    The upgrade continues. When the upgrade is complete, the **Installation Finished** window appears.
9. If desired, click **Generate an automatic installation script** to generate an .xml file with your installation choice data to use for silent or automatic installations.
10. Click **Done**.

    The **Vocollect VoiceConsole Installer** closes, and the VoiceConsole application opens.

Upgrade from VoiceConsole 4.1 and Newer with an Embedded Database to VoiceConsole 5.5

If you are upgrading from an installation with an embedded database, you must first shut down the embedded database by issuing the shutdown command in the Embedded Database Utility, and then upgrade to VoiceConsole 5.5.

To launch the Embedded Database Utility:

1. If Java is installed, navigate to and open *installFolder*\tomcat\webapps\VoiceConsole\WEB-INF\lib\ hsqldb-2.3.0.jar.

    If Java is not installed, from the command line, run "*installFolder*\jre\bin\java.exe" –jar "*installFolder*\tomcat\webapps\VoiceConsole\WEB-INF\lib\hsqldb-2.3.0.jar".

    The HSQL Database Manager opens, displaying the Connect window.

2. Enter the following connection settings:

    Setting Name

    VoiceConsole DB

    Type

    HSQL Database Engine Server

    Driver

    org.hsqldb.jdbcDriver

    URL

    jdbc:hsqldb:hsql:*//*localhost:*port entered on install/*vcdb

    User

    sa

    Password

Enter the password for the database specified during install. If a password was not specified, leave this field blank.

3. Click **OK**.

   You are now connected to the database.
4. In the text box, type `SHUTDOWN`.
5. Click **Execute SQL**.

> **NOTE**
> The following error appears because the HSQL Database Manager is no longer connected to the database. This is expected. Click **OK**.
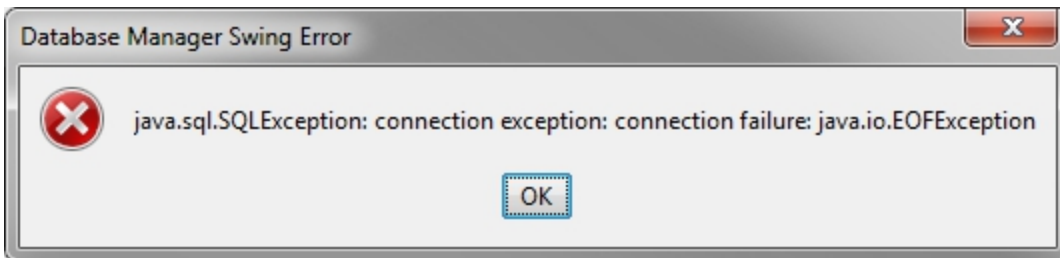
6. Close the HSQL Database Manager.
7. Upgrade to VoiceConsole 5.5 following the steps described in "Upgrading from VoiceConsole 4.1 to VoiceConsole 5.5" or "Performing a Silent Upgrade from VoiceConsole 4.1".

Upgrade from an Existing Installation on a Different Computer

> **IMPORTANT**
> Before beginning the installation, stop the VoiceConsole service on the computer from which you are installing. Failure to do so may result in corrupt data in your new installation.

> **NOTE**
> If you plan on upgrading your database, you must upgrade it before performing a remote upgrade to VoiceConsole.

> **NOTE**
> For an HTTPS installation:
>
> - You cannot migrate devices to an embedded database to complete a remote upgrade as described in "Migrating the Devices to the New Computer" on page 1.
> - You must migrate devices to the embedded database first, then upgrade.

> • If you are performing a remote upgrade where HTTPS is enabled in the original installation, you must disable HTTPS, perform the remote upgrade, then enable HTTPS. See Create and Install a Certificate for HTTPS.

> **NOTE**
> Locations specified throughout this procedure must be shared by the computers containing the existing installation and the location of the new installation.

1. Shut down the existing installation of VoiceConsole.
2. Run the installer.
   The **Introduction** window appears.
3. Click **Next**.
   The **License Agreement** window appears.
4. Accept the terms of the license agreement, and click **Next**.
   The **Select Installation Path** window appears.
5. Click **Next** to install to the default path or, if necessary, browse to the desired installation path and click **Next.**
   The **Software to Install** window appears.
6. Click **Next**.
   The **Copying Software** window displays the installer progress during the copy of the individual selected software and the entire copying process.
7. When the copying process is finished, click **Next**.
   The **Remote Upgrade** window appears.
8. Select **Yes**.
9. Enter the directory information, and click **Next**.
   The remote storage directory must contain the DeviceLogs and Files folders. If the default folders were used in the existing installation (4.2 and newer), the remote installation directory and the remote storage directory are the same.

   The **Configuration and Installation** window displays three tabs to configure your installation.

10. Review configuration information and, if desired, make changes. For definitions of the fields on each tab, see Install VoiceConsole for the First Time starting at step 10.
11. Click **Install Now.**
    The installation begins. When the first part of the VoiceConsole installation is successfully completed, click **OK**.
    If installing on Windows, the **Setup Shortcuts** window appears. If installing on Linux, go to step 14.
12. If desired, select the program group in the **Start** menu to place the shortcut within or edit the path of the shortcut. If you do not want a VoiceConsole shortcut on the **Start** menu, clear the **Create shortcut in the Start menu** checkbox. A shortcut to VoiceConsole is placed on the desktop automatically after the upgrade process completes.
13. Click **Next**.
    The upgrade continues. When the upgrade is complete, the **Installation Finished** window appears.
14. If desired, click **Generate an automatic installation script** to generate an .xml file with your installation choice data to use for silent or automatic installations.

15. Click **Done**.
The Vocollect VoiceConsole Installer closes, and the VoiceConsole application opens.

Migrate the Devices to the New Computer

After installing VoiceConsole, you need to configure the devices to point to the new server. Follow these steps:

1. Change the hostname of the original instance of VoiceConsole to the hostname specified in Step 9 in Upgrade from an Existing Installation on a Different Computer.
   - If the original instance is a 3.0 or newer VoiceConsole installation, change the hostname in **Device Management > Device Profiles > Edit hostname for all profiles.**
2. In the original instance of VoiceConsole, reload device profiles to selected devices that will use VoiceConsole 5.5. See the **VoiceConsole Online Help** for that version of VoiceConsole for more information.

These devices can now be used with the new installation.

Upgrade in a Clustered Environment

These procedures are for upgrading from VoiceConsole 4.1 and newer in a clustered environment to VoiceConsole 5.5 in a clustered environment.

- You can only upgrade to VoiceConsole 5.5 in a clustered environment from VoiceConsole 4.1 or newer.
- The embedded database is not supported in a clustered environment.
- If you are installing into an Active/Passive cluster configuration, make sure that the active node has access to shared resources – for example, the log and firmware files location.
- You must delete the cluster resource associated with the `VocollectWebApplicationsVC` service prior to initiating the upgrade. After the upgrade is complete on all nodes, add the cluster resource again to prevent application irregularities and failures because the cluster manager interferes with the upgrade process. During the upgrade, the installer stops the `VocollectWebApplicationsVC` service then attempts to delete and recreate it. With a clustered service, however, the cluster manager attempts to restart the service, causing the web service to restart; then it prevents the installer from deleting the service.

Upgrade from an Existing VoiceConsole Cluster Installation to VoiceConsole 5.5 in a Fail-Over Clustered Environment

1. Stop the VoiceConsole service on all nodes.
2. On the active node, upgrade VoiceConsole to VoiceConsole 5.5.

> **IMPORTANT**
> In a clustered environment, if you are upgrading from VoiceConsole 3.x, 4.0, or 4.0.1 with a database supported in VoiceConsole 5.5, you must first manually upgrade the active node to VoiceConsole 4.1 or newer using the VoiceConsole 4.1 or newer installer located in the LegacySupportFiles folder on the DVD or other location on Windows if the files were copied from the DVD to another location. Then, upgrade to VoiceConsole 5.5. If your previous installation of VoiceConsole 3.x, 4.0, or 4.0.1 uses a database that is not supported in VoiceConsole 5.5, you cannot upgrade in a clustered environment.

3. Failover by shutting down the cluster service on the currently active node.

   The other cluster node becomes active.
4. On the new active node, upgrade VoiceConsole to VoiceConsole 5.5.

> **IMPORTANT**
> In a clustered environment, if you are upgrading from VoiceConsole 3.x, 4.0, or 4.0.1 with a database supported in VoiceConsole 5.5, you must first manually upgrade the active node to VoiceConsole 4.1 or newer using the VoiceConsole 4.1 or newer installer located in the **LegacySupportFiles** folder on the DVD or other location on Windows if the files were copied from the DVD to another location. Then, upgrade to VoiceConsole 5.5. If your previous installation of VoiceConsole 3.x, 4.0, or 4.0.1 uses a database that is not supported in VoiceConsole 5.5, you cannot upgrade in a clustered environment.

5. Repeat steps 3 and 4 for all nodes in the cluster.
6. Restart your computer.
7. Restart the cluster.

Upgrade from an Existing VoiceConsole Cluster Installation to VoiceConsole 5.5 in a Load Balancing Clustered Environment

1. On the first node, upgrade VoiceConsole to VoiceConsole 5.5.

> **IMPORTANT**
> In a clustered environment, if you are upgrading from VoiceConsole 3.x, 4.0, or 4.0.1 with a database supported in VoiceConsole 5.5, you must first manually upgrade the active node to VoiceConsole 4.1 or newer using the VoiceConsole 4.1 or newer installer located in the **LegacySupportFiles** folder on the DVD or other location on Windows if the files were copied from the DVD to another location. Then, upgrade to VoiceConsole 5.5. If your previous installation of VoiceConsole 3.x, 4.0, or 4.0.1 uses a database that is not supported in VoiceConsole 5.5, you cannot upgrade in a clustered environment.

2. Repeat step 1 for all nodes in the cluster.

Migrate from One Database to Another

> **IMPORTANT**
> If you are migrating from a previous version of VoiceConsole, Honeywell strongly recommends that you back up the database that you are using for the previous version before upgrading to this version of VoiceConsole.

By performing the steps below, you can migrate from one database to another and keep existing operators and tasks; but devices, device profiles, task packages, and voice process software must be created/imported in the VoiceConsole on the new database.

Contact your Honeywell representative about services offered to support migration between databases that allow you to keep all your existing information and automate this process below.

- This database migration procedure does not apply if you are using the VoiceConsole embedded database.
- The process below is for VoiceConsole 3.0 and newer. For migration on prior versions of VoiceConsole, contact your Honeywell representative.
- Honeywell recommends exporting operators in small groups of less than 100 if you have a large number in your system.
- Honeywell recommends downloading tasks in small groups of less than 100 if you have a large number in your system.

1. Within each site, if applicable, export all operators and their templates from your VoiceConsole system by selecting **Move Operators** > **Export all operators** under **Operator Actions** on the View Operators page in your currently installed VoiceConsole system.
2. Download all tasks from your VoiceConsole system by selecting every task row on the **View Tasks** page, and selecting the **Download selected task** action under **Task Actions** in your currently installed VoiceConsole system.
3. Install the new, supported database.
4. Install VoiceConsole.

5. If necessary, create sites in the new installation of VoiceConsole.
6. Within each site, if applicable, import the operators you exported in step 1 by selecting **Move Operators** > **Import operators** under **Operator Actions** on the **View Operators** page, and selecting the appropriate .zip file. Repeat this step for each .zip file that you exported in step 1.
7. Import the tasks that you downloaded in step 2 by selecting **Import Task** under **Task Actions** on the **View Tasks** page, and selecting the appropriate .zip file. If applicable, indicate the site into which the imported tasks should go. Repeat this step for each .zip file that you exported in step 2.
8. For each site, if applicable, connect devices, import your process software, and create task packages and device profiles in VoiceConsole on the new database.

LICENSING

Honeywell generates and provides you with a license file that lets you run the software according to your purchase agreement.

You must enter a valid license before you can load device profiles, operators, or task packages onto devices. The license must also support the total number of devices connecting to VoiceConsole, not the number of devices per site. That is, you only need one license to cover all of your sites, but that license must support the total of all devices at all of the sites. If you need to add more devices, contact Honeywell Customer Service for a new license.

If you are installing into a clustered environment, you will need to know both the number of devices and the number of nodes into which you will be installing. You will need to import the license into each installation of VoiceConsole on each node.

Import License

After you install VoiceConsole, the license file must be imported into the system before you can use the application.

1. Under **Administration**, click **Licenses**.
2. Under **License Actions**, select **Import license**.
   The **Import License** page opens.
3. Click **Browse**, and navigate to and select the file to import.
4. Select the license type: **Permanent** or **Temporary**.
5. Click **Import License**.
6. After reading the license agreement, click **I accept the license agreement** located at the bottom of the page.

The license file is imported. Once the application is licensed, the licensee company name is displayed in the top right corner of the application.

Permanent License

This option should be selected when installing the primary VoiceConsole license assigned to you.

Temporary License

This option should be selected when a temporary license is installed to allow a demo of new devices.

A temporary license appends the permanent license. Devices allowed in either license are supported.

When the temporary license expires, the devices included in the permanent license are still valid.

Apply License

An inactive VoiceConsole license can be activated:

1. Under **Administration**, click **Licenses**.
2. Select a license (or multiple licensees) from the list of licenses that is inactive.
3. Under **License Actions**, select **Apply license**.

The license file is activated.

Delete License

A VoiceConsole license can be deleted:

1. Under **Administration**, click **Licenses**.
2. Select a license (or multiple licensees) from the list of licenses.
3. Under **License Actions**, select **Delete license**.
4. Confirm that you wish to delete the license or cancel the operation.

The license file is deleted.

View License Agreements

After a license has been imported, you can view the license agreement on the **View Licenses** page.

1. Under **Navigation**, click **Licenses**.
2. Under **License Actions**, select **View agreement**.
   The **View License Agreement** page opens.
3. If you want to print the license agreement, click **Printable View** at the bottom of the **View License Agreement** page.
   The agreement opens in a browser window from which you can print the agreement.

CHAPTER

7

CONFIGURE SECURITY

VoiceConsole provides support for several authentication and encryption methods. To keep networks secure, Honeywell recommends authentication combined with a protocol that supports authentication methods.

To secure web server communications, VoiceConsole supports HTTPS. To secure the connection to an embedded database, VoiceConsole supports SSL. To secure the device connectivity on a wireless network, VoiceConsole uses Extensible Authentication Protocol (EAP).

- Enabling HTTPS involves obtaining and installing a certificate. See Installing a certificate for detailed steps.
- Enabling SSL for an embedded database involves obtaining and installing a certificate, and modifying the database.properties file. See the section below for detailed steps.
- Enabling EAP consists of the following procedures. This section describes the first two procedures. See VoiceConsole help for more details of loading device profiles.
  - ○ Configuring EAP for each site
  - ○ Creating device profiles with EAP selected
  - ○ Loading the device profiles

> **NOTE**
> These security configurations should be performed by a System Administrator, or the settings should be provided by a System Administrator.

Configure SSL for an Embedded Database

Honeywell does not transmit embedded database passwords over the network. However, if you connect to an embedded database remotely, you can configure VoiceConsole to use an SSL-encrypted connection.

Using an SSL-encrypted connection requires a certificate, similar to HTTPS. You can purchase a certificate and install it, or create your own. See Create and Install a Certificate for HTTPS. If you purchased a certificate, and just need to install it, see Install the Certificate

- You must have the Java JDK installed to export and import the certificate. The Java JDK is installed with VoiceConsole.
- If the certificate is purchased, and not self-signed, skip steps 1 and 2 below and proceed directly to step 3 (modification of the database.properties file).

1. Export the certificate from the server's keystore: From the command line type
   "`keytool -export -keystore server.store -alias existing_alias -file server.cer`"
   where:

- `server.store` is the name of your server keystore
- `existing.alias` is the alias of the certificate (keystore) entry
- `server.cer` is the file name of the certificate that you are creating.
2. Import the file from Step 1 into the client keystore. From the command line type

   "`keytool -import -trustcacerts -keystore` *trust.store* `-alias` *new_alias* `-file` *server.cer*"
   Make sure to use the same certificate filename and alias as Step 1. Type `y` to confirm the import.

> **NOTE**
> `trust.store` can either be a non–existent file (that is created with this command) or the existing trust store into which you are importing the certificate.

3. Edit the <Installation directory>tomcat/webapps/VoiceConsole/WEB-INF/classes/database.properties file to add the following properties:
   - hsql.server.tls=true
   - hsql.server.keystore=<LocationOfKeystore>
   - hsql.server.keystore.password=<theKeystorePassword> (this will be encrypted when VoiceConsole is restarted)
   - hsql.server.trustStore=<LocationOfTrustStore> (this is only needed for self–signed certificates that are not added to the system trust store)
4. In the `database.properties` file, edit the `hibernate.connection.url` and `archive.hibernate.connection.url` properties to replace `jdbc\:hsqldb\:hsql` with `jdbc\:hsqldb\:hsqls`. Make sure to also replace localhost with the host name specified in the certificate.
5. Restart VoiceConsole.

For more information, see the HSQL documentation at http://hsqldb.org/doc/2.0/guide/listeners-chapt.html#listeners_tls-sect (specifically Examples 13.1 and 13.2).

Create and Install a Certificate for HTTPS

VoiceConsole provides a self–signed certificate to be used when Hypertext Transfer Protocol Secure (HTTPS) is enabled. This certificate provides a heightened level of security with HTTPS.

If you want a higher level of security, Honeywell recommends creating and installing your own certificate.

Create a Certificate Signing Request

To create a certificate, you need to first create a certificate signing request.

1. Copy and paste the following command into a terminal session on the machine where the Java keytool is located. The command assumes that the Java keytool is installed on your server.

   Replace the variables that appear in bold with your own information.

```
keytool -genkey -alias tomcat -keyalg RSA -keysize 2048 -keystore
<keystorePath>/.keystore -dname "CN=<Domain name of server>, O=<Your
Organization>, OU=<Organizational Unit>, L=<City>, ST=<State>,
C=<Country>"
```

> **NOTE**
> If you are running this command on Windows, paste it into the command prompt, and
> ensure that the JDK bin folder is in your PATH environment.

2. Press **Enter**.
3. Enter a keystore password.
4. Press **Enter**.

5. Copy and paste the following command, replacing the bold variables with your information.

```
keytool -certreq -alias tomcat -file <csrPath>/<csrFileName>.csr -
keystore <keystorePath>/.keystore
```

6. Verify keystore password.
7. Press **Enter**, and complete the creation.

The Java keytool utility creates your private key and certificate signing request as <keystorePath>/ .keystore and <csrPath>/<csrFileName>.csr.

Get a Certificate from a Certificate Authority

> **NOTE**
> To enable HTTPS for communications between the device and VoiceConsole, you must use
> an external certificate authority.

1. Send the files created by the Java keytool to a certificate authority, such as WebTrust.
2. Purchase a certificate.

The following certificate authorities are currently enabled:

- COMODO Certification Authority
- Cybertrust Educational CA
- DigiCert Global CA
- DigiCert High Assurance CA - 3
- Entrust Certification Authority - L1B
- EssentialSSL CA
- GlobalSign Domain Validation CA
- GlobalSign Organization Validation CA
- Go Daddy Secure Certification Authority
- Microsoft Internet Authority
- Microsoft Secure Server Authority
- Network Solutions Certificate Authority
- Starfield Secure Certification Authority
- Thawte SGC CA

- VeriSign Class 3 Extended Validation SSL CA
- VeriSign Class 3 Extended Validation SSL SGC CA
- VeriSign Class 3 Secure Server CA
- VeriSign Class 3 Secure Server CA - G2
- www.verisign.com/CPS Incorp.by Ref. LIABILITY LTD.(c)97 VeriSign

Install the Certificate

> **NOTE**
> If you are running this command on Windows:

1. Paste it into the command prompt
2. Ensure that the Java JDK bin folder is in your PATH environment

> **NOTE**
> To run the keytool command, install Java JDK or use the included keytool program that is installed alongside VoiceConsole/VoiceLink in the `<install Path/jre/bin>`.

> **NOTE**
> Open in command prompts to run the commands below.

From a Certificate Authority

1. Place the certificate file that you received from a certificate authority into the directory where your private key and certificate signing request were saved.

2. Run the following command, replacing the variables with your information.

   ```
   Keytool -import -trustcacerts -alias tomcat -file
   certificateFileName.p7b -keystore keystorePath/.keystore
   ```

3. A confirmation of installation appears.

Generate Your Own Self-Signed Certificate

To generate a self-signed certificate that is valid for a specified number of days, perform the following steps:

1. Copy and paste the following command into a terminal session on the machine where the Java keytool is located. The command assumes that the Java keytool is installed on your server.

   Replace the variables with your own information.

   ```
   keytool -genkey -validity number of days -alias tomcat -keyalg RSA -
   keysize 2048 -keystore keystorePath/.keystore -dname "CN=Domain name of
   ```

server, O=*Your Organization*, OU=*Organizational Unit*, L=*City*, ST=*State*, C=*Country*"

2. Press **Enter**.
3. Enter a keystore password, and press **Enter**.
4. Enter the same password to confirm, and press **Enter**.
5. Press **Enter** again to confirm using the same password for the Tomcat alias.

Configure Tomcat

1. In a text editor, open the Tomcat server.xml file.

2. Update the location of the keystore file and the keystore password in the Tomcat connector definitions in Tomcat's server.xml file.

   There are two connector definitions that will require this change. Each connector definition is a separate Connector XML element.

   Example:

   ```
   <Connector port="9443"
   protocol="org.apache.coyote.http11.Http11NioProtocol"
   connectionTimeout="10000" tomcatAuthentication="false"
   keepaliveTimeout="5000" backlog="50" maxThreads="10" scheme="https"
   secure="true" SSLEnabled="true" clientAuth="false" sslProtocol="TLS"
   keystorePass="keystorePasswordEnteredAbove"
   keystoreFile="keystorePath/.keystore"/>
   ```

   The keystore file parameter is relative to this directory (<install Path> tomcat/webapps/VoiceConsole) unless absolute path is provided.
3. Save the file.
4. Restart Tomcat.

Configure EAP for the Site

To get to the pages letting you configure EAP for a site, perform the following steps:

1. In the **Administration** section, click **Sites**.
2. In the **View Sites** list, select the site that you want to configure.
3. Under **Site Actions**, select **Configure EAP for selected site**.

   The **Configure Behavior** page opens.

Configure Behavior

1. Select one of the EAP types. For information on each of these types, see Extensible Authentication Protocol.

   Either **Password** or **Certificate** will be automatically selected in the **Type** section, depending on what EAP type you selected.

> **NOTE**
> If **Certificate** is selected, Honeywell strongly recommends using PEM or base 64 formatted certificates.

2. Select the manner in which the devices will connect to the network in the **Association** section. For more information on association types, see Extensible Authentication Protocol.
3. Specify whether you want to use PINs in addition to a username and password. This is recommended if you are setting up an operator-based configuration.
4. Specify whether you want to force the device to log off of the network when it is placed in the charger. It will then log onto the network as the restricted user.
5. If you opt to force a logoff, you should provide restricted user credentials for the device to use while in the charger. You may proceed without providing valid restricted user credentials; but if you choose to do so, the devices must be serially loaded every time they are removed from the charger.
6. Click **Next**.

   The **Configure LDAP** page opens.

Configure LDAP

1. Select whether to enable LDAP.

> **NOTE**
> If you selected operator-based association, LDAP settings are required.

2. If an LDAP configuration already exists, you can select it. Otherwise, select **Create New Configuration**.
3. Specify whether you want to use SSL. If so, you can view trusted certificate sites and add to them by clicking the **View Trusted Certificates** action.
4. Enter the server host and port.
5. Specify your desired parameters in the **Search User Distinguished Name** and **Search User Password** fields.
6. Enter the search base (where to look) and searchable attribute (what to look for) on the LDAP server.
7. Enter the password that it is to change once it is located.
8. If you want to test the Directory Server that you entered, enter the test user name, and click the **Directory Server Connection Information** button.
9. Click **Next**.

   The **Configure Credentials** page opens.

Configure Credentials

1. Enter or change the server credentials by selecting a certificate, if desired.

> **NOTE**
> You may choose to not use a certificate, but Honeywell strongly recommends that you do use one for added security.

2. Specify whether to use the same SSID and EAP type for the restricted user as entered in the Configure LDAP page. If you do not want to use the same EAP type and SSID, enter the EAP type and SSID for the restricted user. If you want the restricted user to have only access to a portion of the network, this is where you would enter that information.
3. Enter information for the users.
4. Click **Next**.

   The **Summary** page opens.

Summary

1. Review the summary of the selections that you made in the previous steps.
2. Click **Done**.

> **NOTE**
> If you created an operator-based association, Honeywell recommends that you create a shortcut to the Operator Login page, and place the shortcut on the desktop of the computer on which operators will be changing their credentials.

CONFIGURE VOICECONSOLE LOGS

The Logs page in the **Administration** tab of the VoiceConsole user interface displays several types of logs. Logs track user activities in the application and are useful for analyzing unexpected issues. Many of the logs listed on this page are generated by Apache Tomcat. In most cases, you will not need to reference these logs.

For troubleshooting purposes, you may need to review VoiceConsole-specific logs. These logs are created using `log4` (learn more at https://logging.apache.org/log4j/).

- **VoiceConsole.log**: Contains INFO, WARN, ERROR, and FATAL level messages that result from device communication or user actions.
- **VoiceConsole.err**: Contains a subset of the VoiceConsole log. It contains all information logged at a level ERROR or more critical.

Logging Levels

Logs can be configured to log user and application events at different levels of severity. In order from least critical to most critical, the levels are:

- TRACE
- DEBUG
- INFO
- WARN
- ERROR
- FATAL

A specific logging level will record events at that severity level and all levels above it. For example, logging set at WARN will record all events at level WARN, ERROR, and FATAL.

The logging configuration file can be found at <InstallLocation>\VoiceConsole\tomcat\webapps\VoiceConsole\WEB-INF\classes\log4j.properties.

To change the logging level for the two log files together or separately, modify the appropriate threshold property or root category.

Parameters for both logs

```
log4j.rootCategory=INFO,voc
```

VoiceConsole.log parameters only

```
log4j.appender.voc.Threshold=DEBUG
```

```
log4j.logger.com.vocollect=DEBUG,voc_err
```

VoiceConsole.err parameter only

```
log4j.appender.voc_err.Threshold=ERROR
```

Log Count and Maximum Size

By default, VoiceConsole keeps up to 30 log files and 30 archived log files, each at a maximum size of 4 MB. You can increase the number or size of the log files if necessary.

To change the log size and count for `VoiceConsole.log` and `VoiceConsole.err`, perform the following steps.

1. Stop the `VocollectWebApplicationsVC` service.
2. Find the logging configuration file at
   InstallLocation\VoiceConsole\tomcat\webapps\VoiceConsole\WEB-INF\classes\log4j.properties.
3. Open log4j.properties in a text editor.

4. Modify the MaxFileSize or MaxBackupIndex properties as shown below.

   ```
   VoiceConsole.log parameters for logs
   log4j.appender.voc.MaxFileSize=4MB
   log4j.appender.voc.MaxBackupIndex=30
   VoiceConsole.log parameters for archived logs
   log4j.appender.voc.MaxArchiveFileSize=4MB
   log4j.appender.voc.MaxArchiveBackupIndex=30


   VoiceConsole.err parameters for logs
   log4j.appender.voc_err.MaxFileSize=4MB
   log4j.appender.voc_err.MaxBackupIndex=30
   VoiceConsole.err parameters for archived logs
   log4j.appender.voc_err.MaxArchiveFileSize=4MB
   log4j.appender.voc_err.MaxArchiveBackupIndex=30
   ```

   The `MaxFileSize` and `MaxBackupIndex` values should not exceed the space available where the logs are stored.
5. Save your changes.
6. Restart the `VocollectWebApplicationsVC` service.

Log Location

The location of the `VoiceConsole.log` and `VoiceConsole.err` is specified during installation.

To change the log location at any time after installation, perform the following steps.

1. Stop the `VocollectWebApplicationsVC` service.
2. Find the logging properties files at
   InstallLocation\VoiceConsole\tomcat\webapps\VoiceConsole\WEB-INF\classes.
3. Open `log.properties` in a text editor.

4. Modify the `system.log.directory` value.

   ```
   system.log.directory=C:\\Program
   Files\\Vocollect\\VoiceConsole5.5\\Logs
   ```

5. Save your changes.
6. Open `log4j.properties` in a text editor.

7. Modify the `applicationLogs` value.

   ```
   applicationLogs=C:\\Program Files\\Vocollect\\VoiceConsole5.5\\Logs
   ```

8. Save your changes.
9. Restart the `VocollectWebApplicationsVC` service.

9

INCREASE VOICECONSOLE MEMORY MANUALLY

There may be situations where the memory that VoiceConsole uses will need to be increased, such as when you want to import a VoiceClient with many languages.

Increase VoiceConsole Memory in Windows

1. Navigate to *InstallLocation*\VoiceConsole\tomcat\bin.
2. As an administrator, if available, run the `VocollectWebApplicationsVCw.exe` file.
   The **VocollectWebApplicationsVC Properties** window opens.
3. On the Java tab, enter the desired value in the **Maximum memory pool** field.
4. Click **Apply**.
5. Restart the **VocollectWebApplicationsVC** service.

Increase VoiceConsole Memory in Linux/Unix

1. Navigate to *InstallLocation*\VoiceConsole\tomcat\bin.
2. Edit the `setenv.sh` file by finding where –Xmx is defined for `JAVA_OPTS` and changing the value.
3. Save the file.
4. Restart the **VocollectWebApplicationsVC** service.

MULTI-SERVER/SITE IMPLEMENTATIONS WITH VOICECONSOLE AND

VOICECHECK

Time Zone Considerations

It is important to consider time zones in any implementation where VoiceCheck and VoiceConsole are installed on different servers and where multiple sites are set up in both applications.

Time zones affect the time stamps that are recorded for VoiceCheck and VoiceConsole activity.

- Actions performed by device operators: The time zone is defined by the VoiceConsole site with which each device is associated. Therefore, time stamps in device messages are set according to the time zone on the VoiceConsole server.
- Actions performed by VoiceConsole users: The time stamps are set by the VoiceConsole server.
- Actions performed by VoiceCheck users: The time stamps are set by the VoiceCheck server.

Both applications have rules about when certain actions can be performed. If time stamps differ, due to either of the scenarios described below, it can cause unexpected errors.

- **Multi-Server Implementations**: In implementations where VoiceConsole and VoiceCheck are installed on different servers, it is important to ensure that the time on these servers is synced.
- **Multi-Site Implementations**: When you set up a site in VoiceConsole and VoiceCheck, you must specify the time zone where that site is located. You must ensure that the same time zone is specified for a site in both applications. You are not required to specify the same site name, but consider using the same name for simplicity. Once your sites are set up in both applications, you can load a device profile for each site.

Working with Tasks in Multi-Site Implementations

Perform the following procedure to import the task software and create a task package for each site.

1. Navigate to the voice process software file (.vad).
2. In VoiceConsole, create a new task package, and select **Import New Task** from the **Name** list on the Select Task page.
3. On the Set Values page on the **Task Settings** tab, enter the site for which you are creating the task package in the **Site Name** field.

4. Complete the task package creation process.
5. Repeat the previous three steps for each site you are supporting.

Creating Additional Sites in VoiceConsole for Multiple Site Implementations

In order to support multiple site implementations, several steps need to be taken within both VoiceConsole and VoiceCheck. The VoiceConsole steps are documented below and must be performed first. See Creating Additional Sites in VoiceCheck for Multiple Site Implementations for the VoiceCheck steps.

The steps you must perform to create additional sites in VoiceConsole when VoiceCheck is also implemented are:

- Create site-specific task files for each site.
- Create a new site in VoiceConsole.
- Create a site-specific user in VoiceConsole.
- Migrate operators from an existing VoiceConsole database.
- Import a task to the new site.
- Create a task package for the new site.
- Create a device profile for the new site.

Each step is described in the following subsections.

> **NOTE**
> You will need to verify that your license supports the number of operators you are adding.

Creating Sites

1. Log into VoiceConsole as an administrator.

2. In the **Administration** section, click **Sites**.
3. Under **Site Actions**, select **Create new site**.
    The Create Site page opens.
4. Enter the site-specific information for the new site.
5. Click **Create site**.

Creating Site-Specific Task Files

For each site being used, a site-specific task file must be created.

1. Navigate to the task directory in the Vocollect Tasks directory, and highlight the task zip file in use.
2. Create a copy of this file (being used in production), and rename it with a meaningful name for each new site that will be created.
3. Open the first of the newly created task zip files. Within the zip file, the tasksite.txt file needs to be renamed to "point" to the new site. Initially, all of the tasks have a tasksite.txt file that specifies "DEFAULT".
4. To change the tasksite.txt file, extract the contents of each newly created zip file to a working directory. Open the tasksite.txt file.

5. Edit the tasksite.txt file, and change the word "DEFAULT" to the name of the new site. In the example below, the site is named VAL.
6. Repeat this process for all of the sites that were created.

Creating a Site-Specific User for the Site

You need to create a site-specific administrator who can only view the site to which they are assigned.

1. Click the **Administration** tab, and select the newly created site from **Site Information**.
2. Under **Administration**, click **Users**.
3. Under **User Actions**, click **Create new user**.
   The Create User page opens.
4. Enter the name (username) and password for the new site administrator.
5. Select **Administrator** in the **Roles** field for the user.
6. Select the one site to which they are granted access in the **Sites** field.
7. Click **Create user**.

Migrating Operators from an Existing VoiceConsole Database

If implementing a new system, you may not need to perform the steps in this section. The steps below show how to migrate operator templates from an existing VoiceConsole implementation.

1. To move operators from one site to another, click the **Operator Management** tab.
2. Under **Navigation**, click **Operators**.
3. On the View Operators page, select the operators that you want to move.
4. Under **Operator Actions**, select **Move Operators** > **Move/Add selected operators to a site**.
5. From the **Destination Site** drop-down list in the **Move/Add selected operators to site** window, select the newly created site.
6. Select Move the Operator to the selected site.
7. Click **OK**.
8. Confirm that the operators appear in the new site by switching the **Site Information** drop down list.

Importing a Task to the New Site

1. Click the **Device Management** tab.
2. Under **Task Actions**, select **Import Task**.
   The Select Task File page opens.
3. Select **Task File (*.vad, *.zip, *.tas)**.
4. Click **Browse** to navigate to and open the file containing the updated tasksite.txt file you created.
5. Click **Next**.
   The application analyzes the selected file to determine which files must be imported for the task to function properly.
   The Select Task Components page opens, and the appropriate files are displayed in the bottom section of that page.
6. Give the task a meaningful name.
7. Click **Next**.
   The Select Sites page opens.

8. Select the sites at which this task will be available.

> **NOTE**
> VoiceConsoledoes not prevent you from selecting a site that differs from the site names in the tasksite.txt file; make sure that the correct task and site combination is chosen in this process.

9. Click **Import Task**.

Creating a Task Package for the New Site

1. Under **Navigation**, click **Task Packages**.
2. Under **Task Package Actions**, select **Create new task package**.
   The Select Task page opens.
3. Create the task package as normal, by providing information in the fields on this page.
4. Click **Create Task Package**.

> **NOTE**
> Every task package requires that the advanced settings be specified for each new site. Honeywell recommends that these settings be saved in a separate text document and then pasted in the advanced settings box at the time of creating the new task package.

Creating a Device Profile for the New Site

1. Click the **Device Management** tab.
2. Under **Navigation**, click **Device Profiles**.
3. Under **Device Profile Actions**, select **Create new device profile**.
4. On the Select Vocollect VoiceClient page, enter a meaningful name for the device profile in the **Profile Name** field.
5. Select the appropriate version of VoiceClient from the drop-down list, and click **Next**.
6. On the Select Configuration Source page, click **Next**.
7. On the Configure Profile page, enter the applicable settings for wireless security on the **Network Configuration** and **Advanced Settings** tabs.
8. Click **Finish**.

Creating Additional Sites in VoiceCheck for Multiple Site Implementations

In order to support multiple site implementations, several steps need to be taken within VoiceConsole and within VoiceCheck. The VoiceCheck steps are documented below. See Multi-Server/Site Implementations with VoiceConsole and VoiceCheck for the VoiceConsole steps.

For multiple-site installations of VoiceCheck, you must create sites in addition to the singular default site.

Creating Sites

1. Log in as the global administrator of VoiceCheck, and select the **Administration** tab.
2. In the left navigation pane, click **Sites**.
3. Under **Site Actions**, click **Create a New Site**.
4. On the Create Site page, enter the new site name and site-specific information.
5. Click **Save**. The new site appears in the View Sites list.

Creating a Site-Specific User for the Site

Perform the following steps to create a site-specific administrator for the new site.

1. Under the **Administration** tab, click **Users**.
2. Click **Create New Login**.
3. Enter the new user name and password, and click **Save**.
4. On the Create User page, enter the Role, Sites, and Status information.

   - For **Role**, select **Administrator**.
   - For **Sites**, select the site that you just created.
   - For **Status**, select **Enabled**.
5. Click **Save** to complete the creation of the user.

> **TIP**
> For other users who will have access to this site, you will need to go back to the original site and edit the users so that they have access to view or use this new site.

DATA PROTECTION

This section contains some procedures you can follow to protect your data and what to do if your VoiceConsole installation becomes unresponsive or shuts down unexpectedly.

> **IMPORTANT**
> Honeywell strongly recommends having your IT staff develop and implement a disaster recovery plan specific to your company's needs.

Backing Up and Restoring the Database

Honeywell strongly recommends that you schedule regular database backups. If a disaster occurs in which the database is corrupted or no longer available, you can restore a previous backup to use.

During installation, you were prompted for the database JDBC URL. This is the database that you should mark to be backed up. Refer to the documentation provided by Oracle or Microsoft for information on how to back up and restore your database.

For detailed procedures on how to back up the various types of databases, see Back Up and Restore the VoiceConsoleDatabase.

Application Redundancy

The ability to failover the application server is also an option. You can install an instance of the VoiceConsole application server installed on multiple machines, all configured to communicate with the same database. This configuration will work with two or more application server nodes. In this configuration, the database is the single point of failure.

VoiceConsole can also be configured to be on a single application server that communicates with a database that has been clustered, meaning that the database has multiple nodes acting as a single interface for the common underlying database.

In the case of Microsoft SQL Server, the database nodes are given a single interface for the JDBC connection string. In the case of Oracle, multiple database application nodes are connected to a common underlying database structure, and the JDBC connection string contains a multiple host listing. If a database node fails, either the Oracle JDBC thin client or the Windows SQL Server management utility would automatically switch to a new connection to the appropriate database server.

If VoiceConsole Becomes Unresponsive or Shuts Down Suddenly...

Save the Log Files

The first thing that you should do if VoiceConsole becomes unresponsive is to save all of the VoiceConsole log files because Honeywell may need them to properly troubleshoot the situation. By default, the log files are stored in:

1. Windows: C:\Program Files\Vocollect\VoiceConsole\Logs or C:\Program Files (x86)\Vocollect\VoiceConsole\Logs
2. RedHat Linux, SUSE Linux, and CentOS Linux: /opt/Vocollect/VoiceConsole/Logs

Stop and Restart the Service

Stop and restart the VoiceConsole 5.5 service as follows:

Windows

1. Click the **Start** button, and select **Settings** > **Control Panel**.
2. Double-click **Administrative Tools**.
3. Double-click **Services**.
4. In the **Services** window, locate VoiceConsole Service.
5. Stop and restart the service.

RedHat Linux, SUSE Linux, and CentOS Linux

Type the following:

```
/bin/sh /etc/init.d/VocollectWebApplicationsVC start
/bin/sh /etc/init.d/VocollectWebApplicationsVC stop
/bin/sh /etc/init.d/VocollectWebApplicationsVC restart
```

If this is unsuccessful, shut down and restart the machine hosting the server, and verify that VocollectWebApplicationsVC service successfully started. You should also verify that the database is up and available.

UNINSTALL VOICECONSOLE

> **NOTE**
> If an embedded database was used, the database is not preserved. If a SQL or Oracle
> database was used, the database is preserved.
>
> - The VoiceConsole service stops automatically during this process.
> - If you are uninstalling an instance of VoiceConsole that was installed in a clustered
>   server environment, the uninstaller will not remove files from the shared files
>   directory. To completely remove VoiceConsole, remove all log and firmware files from
>   the shared directory.

Uninstall VoiceConsole for Windows

1. With administrator privileges, run the `uninstall.bat` file at *InstallDirectory/*Uninstaller.

   The uninstall application opens and verifies the uninstall.
2. Click **Uninstall**.
3. When the uninstall process is finished, click **Quit**.
   A command window displays, and the uninstall begins. Do not close the window until the
   uninstall is complete.

   VoiceConsole is uninstalled, and all VoiceConsole data are removed.

Uninstall VoiceConsole for Linux

1. With root privileges, run the `uninstall.sh` file at *InstallDirectory/*Uninstaller.

   The uninstall application opens and verifies the uninstall.
2. Click **Uninstall**.
3. When the uninstall process is finished, click **Quit**.

   VoiceConsole is uninstalled, and all VoiceConsole data are removed.

Uninstall in a Clustered Environment

Follow the appropriate process above for Windows or Linux.

Perform a Silent Uninstall

If VoiceConsole was installed or upgraded using a silent installation, Honeywell recommends
that you uninstall the application by running the `silent_uninstall.bat` file (Windows) as an

administrator or the `silent_uninstall.sh` file (Unix-based) with root privileges located at *InstallDirectory/*Uninstaller.

VOICECONSOLE IMPLEMENTATION CHECKLIST

The following is a checklist of information that you must obtain or decisions that you must make before installing VoiceConsole.

Basic System Information	
Server Operating System	• Windows Server 2019 64-bit • Windows Server 2016 64-bit • Windows Server 2008 64-bit • RedHat Linux 7 • CentOS Linux 7.2 64-bit • CentOS Linux 6.x • SUSE SLES15 64-bit
Client Operating System	• Microsoft Windows 10 • Microsoft Windows 8 • Red Hat Linux Workstation ES for Intel processors
Browser	• Microsoft Edge • Mozilla® Firefox® 4.x and newer • Google Chrome

Personnel - Provide the Name and Phone Number for Each	
Your Database Administrator	Name:
	Phone:
Your System Administrator	Name:

Personnel - Provide the Name and Phone Number for Each

	Phone:
Voice Champion	Name:
	Phone:
Warehouse Supervisor	Name:
	Phone:

Pre-Implementation Information

Total devices for each VoiceConsole server
Server Requirements
Bandwidth Requirements

Database Information

Relational Database Management System	• Embedded • Oracle 19c • Oracle 18c • Oracle 12, release 2 • Microsoft SQL Server 2019 • Microsoft SQL Server 2017 • Microsoft SQL Server 2016
Hostname of Database Server	
Port Number for Database	
Database Administrator Username and Password	

Database Information

JDBC URL:

Oracle Example:

jdbc:oracle:thin:@localhost:1521:VC

SQL Example:

jdbc:sqlserver://localhost:1433;DatabaseName=VC

Multi-site Information

Total Number of Sites

Total Number of Devices

Number of Devices per Site

Shift Size

Shift Startup Times per Site

Clustered Server Information

The logical hostname of the application server
and/or database server cluster

The shared location of the device log and
firmware files

Installation Information

Windows User with Administrator Privileges

OR

RedHat Linux/CentOS Linux/SUSE Linux User
with Root Privileges

Installation Information	
Hostname for VoiceConsole Installation	
Time for VoiceConsole to Perform Database Maintenance	
Directory into which VoiceConsole Should Be Installed	

Security	
Encryption	WEP
	WPA
	WPA-2
Authentication	PSK
	EAP
HTTPS (optional)	Signed Certificate
	Tomcat configured
EAP Type (If using EAP)	EAP-TLS
	EAP-TTLS/MSCHAPv2
	PEAPv0/EAP-MSCHAPv2
	PEAPv1/EAP-GTC
	LEAP
Association Type	Site Based
	Device Based
	Operator Based

LDAP settings are optional for site- and device-based association types. They are required for the operator-based association type. If you choose to use LDAP, you will also need the following:

LDAP Settings	
Host	

LDAP Settings
Port
Search User Distinguished Name
Search User Password
Search Base
Searchable Attribute
Password Attribute

BACK UP AND RESTORE THE VOICECONSOLE DATABASE

This section describes how to back up and restore the VoiceConsole database. Note that the methods described here are among the many options available.

> **WARNING**
> Honeywell strongly recommends having your Database Administrator develop and implement a disaster recovery plan specific to your company's needs.

See the vendor documentation for information on backing up and restoring the database.

Oracle 19c, 18c, and 12c Enterprise

For more information on backing up and restoring Oracle enterprise databases, see the information found in the document Oracle Database 2-Day DBA and the section titled *Performing Backup and Recovery*. See also:

- Oracle 12c Release 2 – https://docs.oracle.com/en/database/oracle/oracle-database/12.2/bradv/introduction-backup-recovery.html
- Oracle 18c – https://docs.oracle.com/en/database/oracle/oracle-database/18/bradv/introduction-backup-recovery.html
- Oracle 19c – https://docs.oracle.com/en/database/oracle/oracle-database/19/bradv/introduction-backup-recovery.html

Assumptions

The procedures in this section were developed based upon the following assumption:

- The default Flash Recovery Area settings were chosen in the Database Configuration Assistant when the VoiceConsole database was created.

How to Create a Backup of the VoiceConsole Database

Log into the database

1. Open the Oracle Enterprise Manager Database Control for the VoiceConsole database.
2. Log in with the SYS username and password.
3. Select **Connect As SYSDBA** from the dropdown list.
4. Click the **Login** button.

Configure ARCHIVELOG mode for the VoiceConsole database

1. From the *Database Instance* home page, select **Maintenance** > **Recovery Settings**.
2. In the **Media Recovery** section, check the box for **ARCHIVELOG Mode** if it is not already checked.
3. Click **Apply** to save your changes. You will now be taken to the Confirmation screen. It will inform you that you need to restart the database for the change to take effect.

> **NOTE**
> Restarting the database will make the VoiceConsole system unusable for a short period of time. Perform this step when no one is using the VoiceConsole system.

4. Click **Yes** on the Confirmation screen. A page asking you to input Host and Target Database Credentials will appear.
5. Enter the OS username and password you used to install Oracle for the **Host Credentials**.
6. Leave the Database Credentials user name and password blank.

   If you receive an error like *RemoteOperationException: ERROR: wrong password for user*, try entering *both* the Host Credentials and Database Credentials. If this doesn't work, set up the OS user to be able to log on as a batch job in the server's Local Security Policy. To do this, follow these steps:
   a. Select **Start** > **Settings** > **Control Panel** > **Administrative Tools** > **Local Security Policy**.
   b. In **Local Policies**, select **User Rights Assignment**.
   c. Add the OS user to Log on as a Batch Job. Now you should be able to get past the Host and Target Database Credentials page.
   d. In Restart Database: Confirmation page, click the **Yes** button. You will be taken to the Restart Database: Activity Information page, informing you that the database restart may take some time.
   e. Wait about five minutes, and then click the **Refresh** button. This should take you back to the Database Login page.
7. Log back in using the SYS username and password, and then choose **Connect As SYSDBA** from the drop-down list. After you restart the database, the VoiceConsole system can be used again.

Configure the Backup Policy

1. From the *Database Instance* home page, go to **Maintenance** > **Backup Settings** > **Policy**.
2. Under **Backup Policy**, check the box beside **Automatically backup the control file and server parameter file (SPFILE) with every backup and database structural change**.
3. Scroll to the bottom of the page, and under the **Host Credentials** section, enter the OS username and password.
4. Click **OK**.

Schedule a database backup

1. From the *Database Instance* home page, go to **Maintenance** > **Schedule Backup**.
2. At the bottom of the **Schedule Backup** page, enter your OS Host Credentials.
3. Under the section **Oracle-Suggested Backup,** click **Schedule Oracle-Suggested Backup**.
4. Select **Disk** as the destination media for the backup.

5. Click **Next**. You will now be taken to the **Setup** page, which explains how the Oracle-suggested backup works.
6. There are no settings on this page; so click **Next**.
7. You will now be taken to the **Schedule** page where you will need to specify the start date, time zone, and daily backup time.
8. We recommend that you schedule the daily backup for a time when database activity will be low.
9. Click **Next**. You will be taken to the **Review** page. Here you will see some details of the backup schedule.
10. Click **Submit Job** to complete the process.
11. In the **Status** page, you can click **View Job** or click **OK** to return to the database home page.

How to Restore a Database Backup

1. From the *Database Instance* home page, select **Maintenance** > **Perform Recovery**.
2. Recover to the current time or a previous point-in-time.
3. Scroll to the bottom of the page. In the **Host Credentials** section, enter the OS username and password.
4. Click **Perform Whole Database Recovery**. A **Confirmation** page now appears, informing you that this operation will temporarily shut down the database.
   a. Stop the VoiceConsole service.
   b. On the **Confirmation** page, click **Yes**. You will be taken to a **Recovery Wizard** page, informing you that it will take a few minutes to shut down and restart the database.
   c. Wait a few minutes, then click the **Refresh** button on this page.
5. On the *Database Instance* page, click **Perform Recovery**.
6. Enter your OS Host Credentials.
7. Click **Continue**. Another *Database Login* window will appear.
8. Enter the SYS username and password.
9. Select **SYSDBA** from the **Connect As** login. You will be taken back to the **Perform Recovery** page with an information message at the top saying that the current status is MOUNTED.
10. Click the **Recover to the current time or a previous point-in-time** radio button.
11. Scroll to the bottom of the page, and under the **Host Credentials** section, enter the OS username and password.
12. Click **Perform Whole Database Recovery**.
13. On the **Perform Whole Database Recovery: Point-in-time** page, specify whether to recover all transactions to your database up to the present time (complete recovery), or only transactions up through some point in time (point-in-time recovery).
14. Select **Recover to the current time**.
15. Click the **Next** button.
16. The next page will ask if you want to restore the files to a different location. Select **No**.
17. Click the **Next** button. The **Review** page will display the options that you chose.
18. Click the **Submit** button. A window indicating progress will appear.
19. When the process is complete, the **Perform Recovery: Result** page will appear with a message that the operation succeeded.
20. Scroll to the bottom of the page, and click the **Open Database** button.
21. Click **OK** on the **Result** page.
22. Start the VoiceConsole service.

SQL Server

For more details regarding backup and restore in SQL Server, see Microsoft's documentation.

Assumptions

The procedures in this section were developed based upon the following assumptions:

- The VoiceConsole database is using the simple recovery model.
- Vocollect VoiceConsole 5.5 is installed on the server to which a database is being restored. The instructions below include stopping the VoiceConsole 5.5 service on the machine to which the database is being restored.
- This document addresses the architecture of a primary server with VoiceConsole and the database installed on the same server, and one or more backup servers with VoiceConsole and the database installed. If a different architecture is being used, then some of the steps will be different.
- The database cannot be in use during the time of a restore operation; so any instance of the VoiceConsole 5.5 service pointing to the database being restored must be stopped.
- The restore operation is always restoring an existing VoiceConsole database. The procedures listed below do not address restoring the database to a database server on which there is no existing VoiceConsole database. This is possible, but the procedure is not covered in this document.

How to Create a Backup of the VoiceConsole Database

1. Open **SQL Server Management Studio** and connect to the database server.
2. Click **Databases**.
3. Right-click on the VoiceConsole database (the actual name is whatever was chosen at install time).
4. Select **Tasks**.
5. Select **Back Up**. The **Back Up Database** window will appear.
6. In the **Backup type** drop-down list, select **Full**.
7. For Backup component, select **Database**.
8. In the **Backup set** section, enter a name for the backup, or accept the default.
9. Enter a description, if desired.
10. In the **Destination** section, select **Disk** for **Back up to**.
11. Accept the default destination, or use the **Add** and **Remove** buttons to specify a different destination.
12. In the **Select a page** navigation bar on the left, select **Options**.
13. In the **Overwrite media** section, select **Back up to the existing media set**.
14. Select **Overwrite all existing backup sets**.
15. In the **Select a page navigation bar** on the left, select **General**.
16. Click **OK** at the bottom of the window. The progress meter at the bottom left of the window indicates the status of the process.
17. When the backup is complete, click **OK** to close the **Back Up Database** window.

How to schedule a backup of the VoiceConsole database

1. Follow the steps in How to Create a Backup of the VoiceConsole Database.
2. On the menu bar at the top of the **Back Up Database** window, select **Script > Script Action to Job**. The **New Job** window will appear.
3. On the **General** page, change the name of the job, the owner, and description if desired, or accept the default settings.
4. In the **Select a page** navigation bar on the left, select **Schedules**.
5. Click the **New** button at the bottom of the window. The **New Job Schedule** window appears.
6. In the **Name** field, give the schedule a name.
7. Make sure that the Schedule type is set to **Recurring**.
8. Use the rest of the fields in this window to set the schedule and time that the backup will run. Honeywell recommends backing up the database daily and scheduling the backup to run at a time of light system usage.
9. When you are done configuring the schedule, click **OK** in the **New Job Schedule** window.
10. In the New Job window, click **OK**. The script that creates the backup will run. The progress meter at the bottom of the **Back Up Database** window indicates the status of the process.
11. When the process is complete, click **Cancel** at the bottom of the **Back Up Database** window to close the window.
12. Verify that the backup job was created by expanding **SQL Server Agent**, and then expanding **Jobs**. The new backup job will appear.

How to Restore the VoiceConsole Database

How to restore a backup of the VoiceConsole database to the server on which the backup was created

1. VoiceConsole needs to be stopped to restore the database. The application will be unavailable while the database is being restored.
2. Select **Start > Control Panel > Administrative Tools > Services**.
3. Select the VoiceConsole service, and stop the service.
4. Open SQL Server Management Studio, and connect to the database server.
5. Expand Databases.
6. Right-click on the VoiceConsole database (the actual name that was chosen at install time).
7. Select **Tasks**.
8. Select **Restore**.
9. Select **Database**. The **Restore Database** window will appear.
10. The default settings should be correct. Click **OK**. The restore process begins. The progress meter at the bottom left of the window indicates the status of the process.
11. When the process is complete, click **OK** to close the window.
12. Start the VoiceConsole service.

How to restore a backup of the VoiceConsole database to a different server than the one on which the backup was created

1. Copy the backed up database file to the server to which the backup will be restored.
2. Select **Start > Control Panel > Administrative Tools > Services**.

3. Select the VoiceConsole service, and stop the service.
4. Open SQL Server Management Studio, and connect to the database server.
5. Expand Databases.
6. Right-click on the VoiceConsole database (the actual name that was chosen at install time).
7. Select **Tasks**.
8. Select **Restore**.
9. Select **Database**. The **Restore Database** window will appear.
10. In the **Source for restore** section, select **From device**.
11. Click the **...** button. The **Specify Backup** window appears.
12. For **Backup Media**, select **File (.bak)**.
13. Click the **Add** button to navigate to the location of the backup file.
14. Browse to the backup file, and click **OK**. The backup location will now be listed in the **Specify Backup** window.
15. Click **OK**.
16. In the **Select the backup sets to restore** table, check the box in the **Restore** column for the backup.
17. In the **Select a page** navigation bar on the left, select **Options**.
18. Select the check box for **Overwrite the existing database**.
19. All other settings should be correct. Click **OK** at the bottom of the **Restore Database** window. The restore process will begin. The progress meter located in the bottom left corner of the window indicates the status of the process.
20. When it is complete, click **OK** to close the **Restore Database** window.

> **IMPORTANT**
> For this procedure to be successful, you must perform the following steps.

1. SQL Server logins have a unique Security ID (SID) that belongs to a particular instance of SQL Server.
2. If there are any users in the VoiceConsole database, you must update the user records in the restored database so that they refer to the SID of the corresponding SQL Server login on the instance of SQL Server on this server.
3. Run the following command against the VoiceConsole database in SQL Query Analyzer to find users that must have their SID changed:

```
EXEC sp_change_users_login' Report'
```

4. If any records are returned, run the following command for each user returned:

```
EXEC sp_change_users_login
'Auto_Fix', username
```
where *username* represents the user name that needs to have its SID fixed.
The command should display the following output indicating that the user's SID was fixed:

```
The row for user "voice_console_db_22" will be fixed by updating its
login link to a login already in existence.
The number of orphaned users fixed by updating users was 1.
The number of orphaned users fixed by adding new logins and then
updating users was 0.
```

5. Start the VoiceConsole service.

Embedded Data Storage/Embedded Database

How to Create a Backup of the VoiceConsole Database

VoiceConsole uses HSQLDB as the embedded database.

How to back up the VoiceConsole database using the VoiceConsole application

VoiceConsole is configured by default to back up your database daily. To manually create a back up, in the VoiceConsole application under **Administration**, click **Schedules**. Select the **Backup Data** process, and click the **Run selected job** action.

By default, backup .tar files are stored in:
- Windows: C:\Program Files\Vocollect\VoiceConsole\Database\Backup
- Linux: /opt/Vocollect/VoiceConsole/Database/Backup

> **NOTE**
> Honeywell recommends that you keep a known, good backup in an alternative location if a total system failure occurs.

How to Restore the VoiceConsole Database

You can restore the VoiceConsole Database by performing the following steps:

1. Shut down VoiceConsole.
2. Delete existing database files in <InstallDir>/Database/vcdb.
3. As an administrator, execute the command

   ```
   java -cp {path-to-hsqldb-jar}/hsqldb-2.3.0.jar
   org.hsqldb.lib.tar.DbBackup --extract {path-to-backup}/{backup-file-
   name} {destination-directory-for-datafiles}
   ```

   > **NOTE**
   > Ensure that you put the correct version of your HSQLDB in the command line.

   The database, HSQLDB, will extract the datafiles to the named data directory.

   > **NOTE**
   > If a previous backup detected corrupt data, the backup file created from that process is named `vc_backup.bad`. Do not use this file, but it may be helpful to Honeywell technical support for diagnosis.

4. Apply read/write permissions to the **vcdb** folder in *InstallDir/*Database.
5. Restart VoiceConsole.

INITIAL SETUP

This image shows an overview of the initial setup in VoiceConsole. This diagram shows only required steps. Optional configurations, such as setting up sites and setting up operator teams are described in detail in VoiceConsoleOnline Help.

APPENDIX D
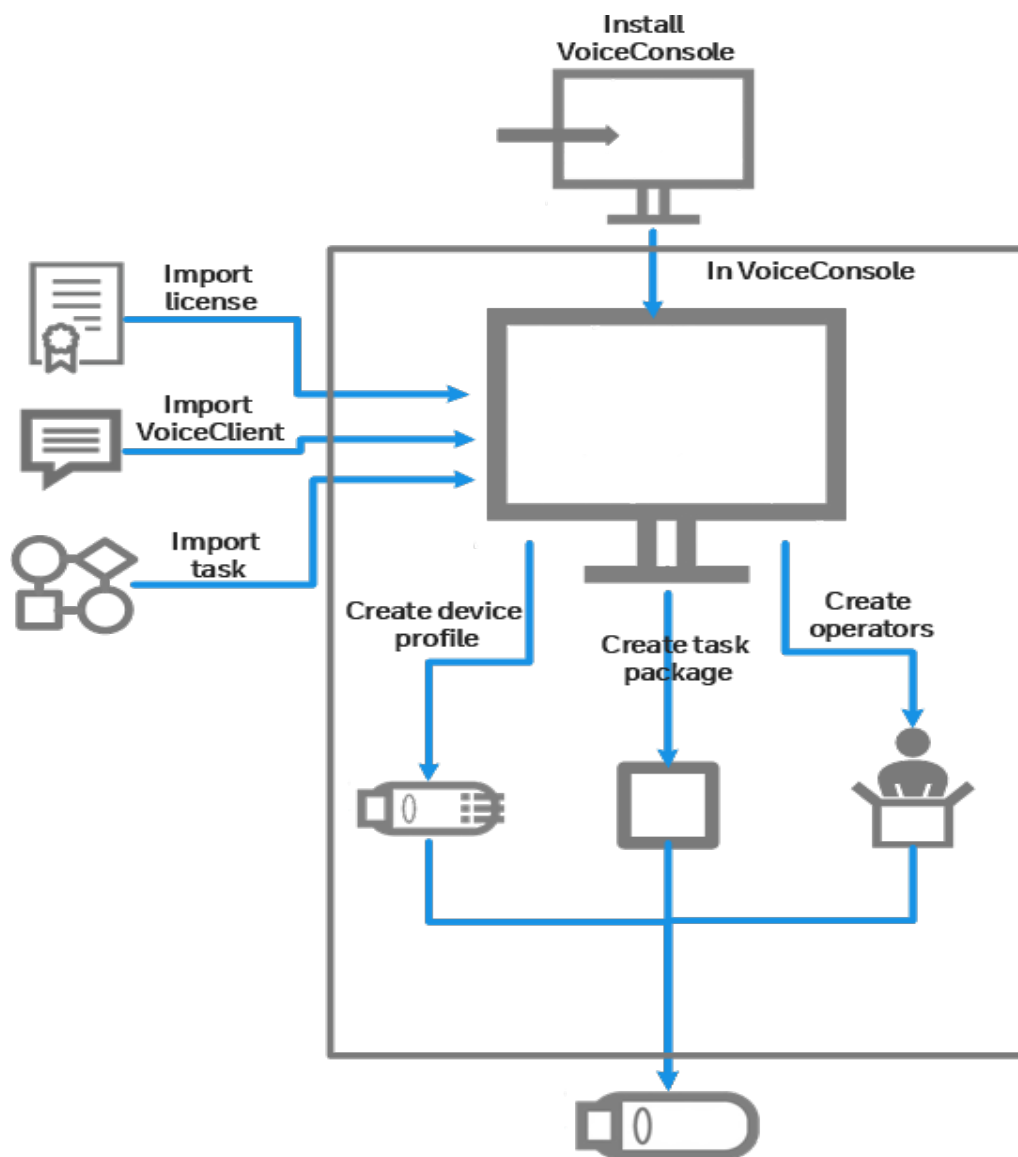
SET UP RAPIDSTART

Vocollect VoiceCatalyst 1.2 and newer support the use of RapidStart, an automated audio-visual training application that guides new employees on how to use the voice system and follow best practices, and enables operators to train their templates using smartphones or tablets without the need for a dedicated training device such as the QTerm. The RapidStart task file is provided on the VoiceCatalyst 1.2 and newer DVD, pre-configured to connect to a Bluetooth-enabled display device.

The application should be accessible using the browser on a smartphone, tablet, laptop, or PC. High-level testing has been performed on iPhone, iPad, and several Android devices, but Honeywell strongly recommends testing your configuration before deploying in a production environment.

For optimal performance when using a smartphone or tablet, the device should have a touch screen with a minimum resolution of 320 x 240.

For details, see VoiceCatalyst 1.2 or newer release notes.

1. Import the RapidStart task file, RapidStart*version*.vad, into VoiceConsole from the VoiceCatalyst DVD.
2. Create a task package from the RapidStart task.

> **NOTE**
> You will only need to perform these first two steps once. Perform the remaining steps each time you want to train a new user.

3. In VoiceConsole, create the new operator, and associate with him the task package that he will use to do his work on a regular basis.
4. Load the training task to a Honeywell Voice device running VoiceCatalyst 1.2 or newer.
5. Load the operator to the Honeywell Voice device.
6. Connect the device to the same network as the Honeywell Voice device, and enter the IP address of the Honeywell Voice device or the hostname (in the form of vv-*deviceserialnumber*) in your browser address bar.
7. Connect a headset to the Honeywell Voice device.
8. Hand the Honeywell Voice device, display, and connected headset to the operator, and ask the operator to push the yellow Play/Pause button to begin using RapidStart.

VOICECONSOLE VERSION HISTORY

The following table lists the version history – including release date and build information – for all released versions of VoiceConsole.

VoiceConsole 5.x

Version	Release Date	Tomcat
5.6	4/30/2022	9.0.50
5.5	10/01/2021	9.0.50
5.4.1	01/14/2021	9.0.12
5.4	06/12/2020	9.0.12
5.3	01/29/2020	9.0.12
5.2.1	07/08/2019	9.0.12
5.2 SP1	04/09/2019	9.0.12
5.2	03/04/2019	9.0.12
5.1	04/28/2016	7.0.42
5.0	07/30/2013	7.0.35

VoiceConsole 4.x

Version	Release Date	Tomcat
4.2 Rev B	01/21/2013	7.0.23
4.2 Rev A	11/12/2012	7.0.23
4.1	12/01/2011	7.0.14
4.0.1	02/25/2011	6.0.14
4.0	12/02/2010	6.0.14

VoiceConsole 3.x

Version	Release Date	Tomcat
3.2	09/01/2010	6.0.14
3.1.1 Rev B	11/16/2009	6.0.14
3.1.1 Rev A	11/13/2009	6.0.14
3.1	08/20/2009	6.0.14
3.0.1 Rev B	07/09/2009	6.0.14
3.0.1 Rev A	05/15/2009	6.0.14
3.0 Rev B	12/12/2008	6.0.14
3.0 Rev A	11/19/2008	6.0.14

Honeywell
9680 Old Bailes Road
Fort Mill, SC 29707

www.sps.honeywell.com