



## The logo for 'CHIME' features a blue Wi-Fi symbol above the word 'CHIME' in a bold, sans-serif font. The letters 'C', 'H', and 'E' are black, while 'I', 'M', and 'E' are blue.

## INSTALLATION GUIDE

A 3D rendering of a light blue and grey cardboard box, shown partially open and viewed from a low angle. The text 'Spring 2017' is printed on the inside of the right flap.

Spring 2017

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# CHIME INSTALLATION GUIDE

## SYSTEM REQUIREMENTS

- 64-bit Windows Server®: 2008 R2, 2012, 2012 R2
  - Server 2008 R2 requires Desktop Experience feature to be installed
  - Server 2012/2012 R2 requires Media Foundation feature to be installed
- Application cannot be installed on the same server hosting Lync®. Application will conflict with Lync® settings.
- Connection to Microsoft SQL Server®. The application supports full SQL Server® or SQL Express Edition®
  - Account with create access to SQL server (for building and updating the Chime database)
  - Account with read/write access to Chime database
    - The application supports both SQL and Windows server authentication options.
    - *Note:* For optimal performance, Chime and SQL Server should be in the same physical site.
- Read Access to Windows Active Directory

Chime 2.x (Self hosted) with Lync On-Premise support

- .Net Framework 4.5.1+
- UCMA 4.0
- SQL Server 2008 R2+ (SQL Express, Standard, Enterprise...)
- 1 Lync account for Web Client
- 1 Lync account per queue for dispatcher

Chime 2.x (Self hosted) with Office 365 support

- .Net Framework 4.5.1+
- UCMA 4.0
- SQL Server 2008 R2+ (SQL Express, Standard, Enterprise...)
- 1 Office 365 Lync account for Web Client\*
- 1 Office 365 Lync account per queue for dispatcher\*

*\*Lync Online Plan 2 and Microsoft Office 365 with Lync Plans are supported*

## HARDWARE RECOMMENDATIONS

The following are the recommended hardware configurations for Chime for Lync

# of Queues	# of Agents	RAM	Processor	Data Storage	Database Size
1-2	10	4 GB	1 - 2 Core	80 - 100 GB	4 GB
2+	10+	6-8 GB	2 - 2-4 Core	150 - 200 GB	8 - 10 GB

## REQUIRED ACCOUNTS

The following accounts will be need for the installation and/or operation of Chime.

### Active Directory Query Account

*This account will be used by Chime to query Active Directory for users*

AD Server Name: \_\_\_\_\_

AD Username: \_\_\_\_\_

Password: \_\_\_\_\_

### Chime Database Admin Account

*This account is used to create the Chime database during the installation. This account needs SQL authentication with the ability to create the database.*

*This account information is not stored, and is only utilized during creation or updating.*

SQL Server Name: \_\_\_\_\_

Username: \_\_\_\_\_

Password: \_\_\_\_\_

### Chime Database Service Account

*This account will be used by Chime to read and write information to the Chime database.*

Username: \_\_\_\_\_

Password: \_\_\_\_\_

*Account must have db\_datareader & db\_datawriter rights to Chime database*

### Chime Service Account

*This account will be used as the login for the Windows Service. If using Windows Authentication on the SQL connection, this must be the same account. This account must be granted the Local Security Setting of "Logon as a service".*

*This account must be a member of the Chime server's local Administrator group or a member of the Domain Admins group of the domain to which the Chime server is joined. This is required for the OWIN web server components which power the Chime web interface to operate.*

Username: \_\_\_\_\_

Password: \_\_\_\_\_

**Web Seeker account** - *This account will be used by Chime to connect request from the web chat to Lync experts. This account needs to be Lync enabled and not used anywhere else.*

AD Username: \_\_\_\_\_

Password: \_\_\_\_\_

**Dispatcher accounts** - *This account will be used by Chime to connect request from a seeker to Lync experts. This account needs to be Lync enabled. Each queue will need a separate dispatcher.*

## CHIME SETUP WIZARD

Once the required accounts have been provisioned for Chime, you are ready to begin the installation of the Chime application.

1. Run **ChimeSHInstaller.exe**. You will be prompted with the Chime for Lync Setup wizard.



Figure 1: Chime for Lync Setup Wizard

2. Click **Next** to proceed through the Setup wizard.

During the setup, you will need to enter the credentials for the following required accounts:

- Active Directory Query Account
- Chime Database Account
- Chime for Lync Service Account
- Web Client Dispatcher Account



## INSTALLATION TYPE

Chime has two installation options, Default and Custom. When installing using the default setting, Chime uses a default installation path and a default SQL Database name.

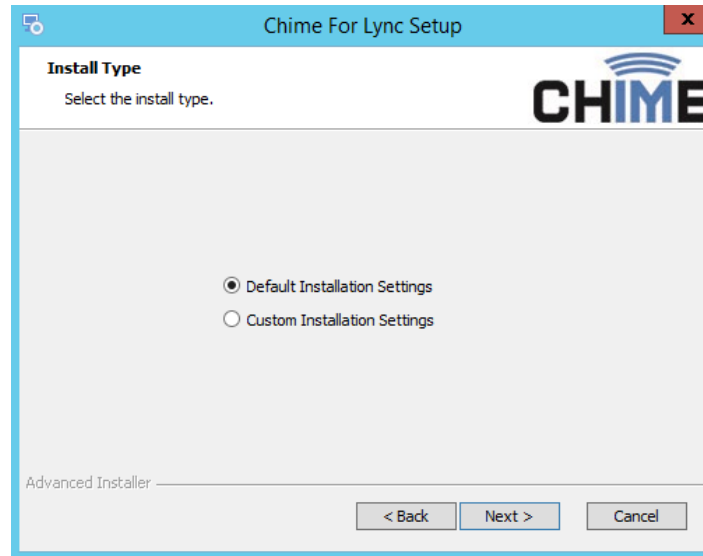


Figure 2: Default Install Type

When installing using the Custom Installation Settings, you will be able to select a specific installation path for Chime as well as more specific control over the name of the SQL Database used with Chime. Additionally, the Custom Installation Settings provides the ability to set up your Chime service to support High Availability. To use High Availability with Chime, you will need to use the Custom Installation Settings.

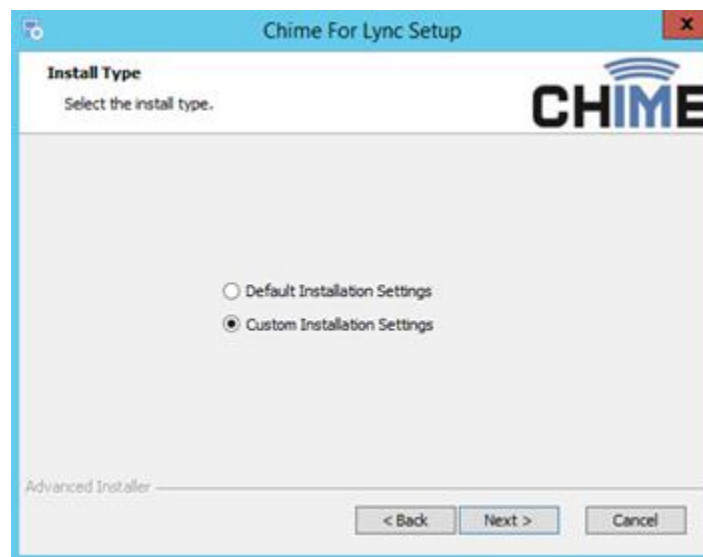


Figure 3: Custom Install Type

## CHOOSE INSTALLATION FOLDER (CUSTOM INSTALLATION ONLY)

To select an installation folder, simply click the Browse... button and navigate to the folder location you wish to install Chime. Once you have selected the desired folder location, click **Next**.

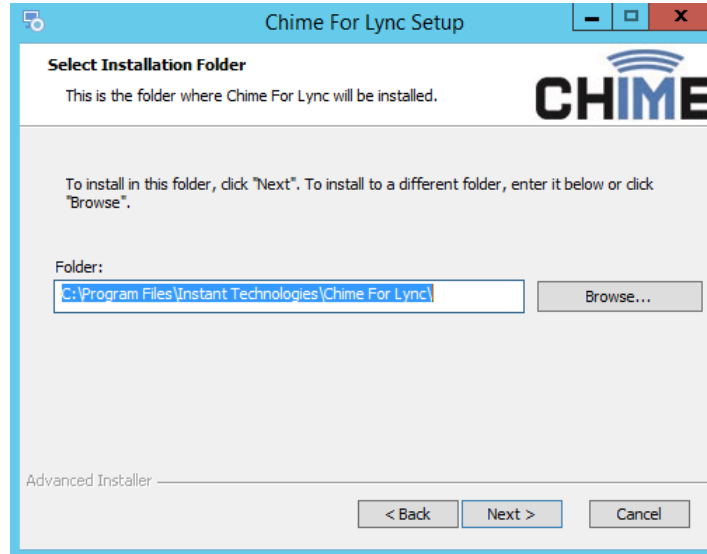


Figure 4: Custom Installation Setup

## HIGH AVAILABILITY (CUSTOM INSTALLATION ONLY)

To use High Availability with Chime, you will need to check the box indicating that this is a High Availability Server. **Note:** you will need to select this option on all of the High Availability servers.

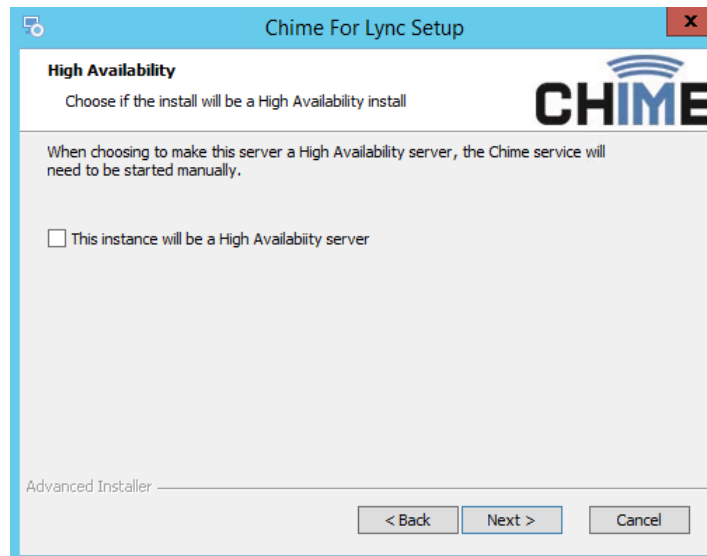


Figure 5: High Availability Installation Setup

## ACTIVE DIRECTORY AUTHENTICATION SCHEME

Beginning with Chime 2.4, we support either on premise AD or using Azure AD against Office 365. For more information on how to obtain the information required for Office 365 setups, see the document titled *Chime Office 365 Prerequisites*.

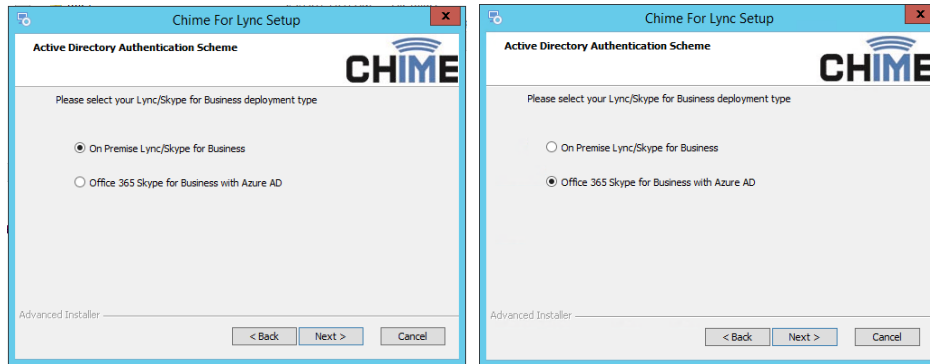


Figure 6: Choose either deployment type

## ACTIVE DIRECTORY

The first required account is Active Directory. You will need the Active Directory account information to fill out this section.

### ON PREMISE

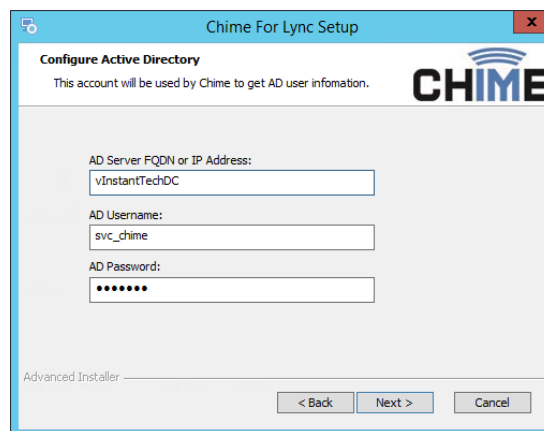
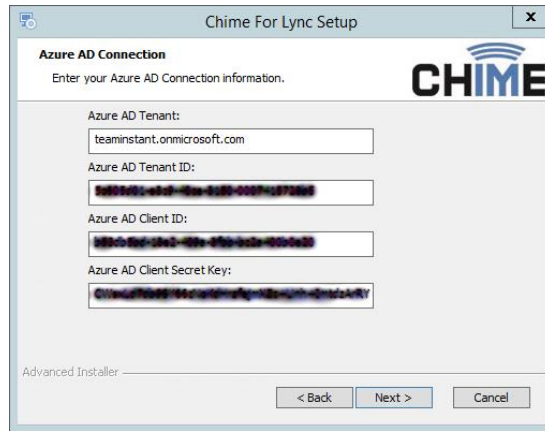


Figure 7: Active Directory Configuration

1. Enter the Active Directory Fully Qualified Domain Name, or IP Address of the server hosting Active Directory.
2. Enter the username that Chime can use to query Active Directory.
3. Enter the password for the username provided. The password will be encrypted. Chime requires read access of your Active Directory.
4. Click **Next** once you have entered the Active Directory account information.

**PREREQUISITES:**

- A.) Azure AD Application configured to sign-in and read user profile information with delegated permissions (see document title *Chime Office 365 Prerequisites* for more information)
- B.) Recorded Azure AD Tenant ID, Application Client ID, and Application API key from *Chime Office 365 Prerequisites* document.



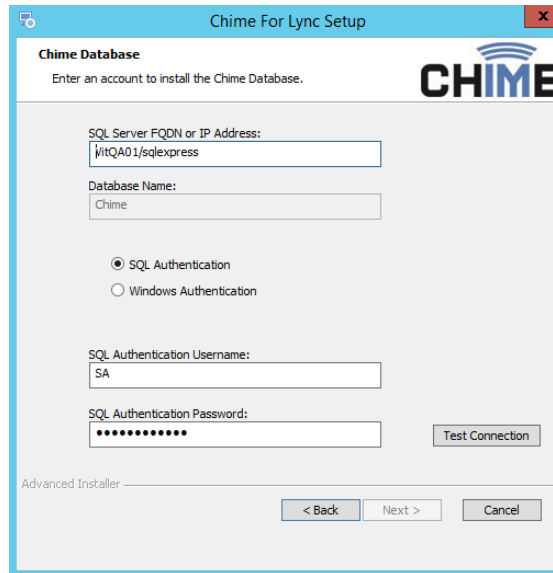
**Figure 8: Provide Azure AD information**

1. Enter the name of your Office 365 tenant in the input labeled **Azure AD Tenant**. This is usually the domain associated with your Office 365 email address, e.g. example.com.
2. Enter the **Azure AD Tenant ID** obtained the corresponding input.
3. Enter the **Azure AD Application ID** obtained in the corresponding input.
4. Enter the Azure AD Application API key in the input labeled **Azure AD Client Secret Key**.

## CHIME DATABASE

Chime requires an account with administrative rights to the SQL database. In this section of the Setup wizard, the Chime database will be created. Chime requires read/write access to its own database.

### CREATE/UPDATE THE DATABASE

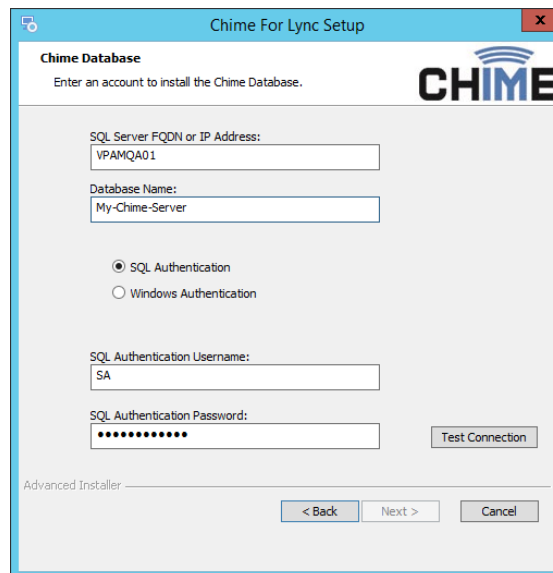


The screenshot shows the 'Chime Database' configuration window in the 'Chime For Lync Setup' wizard. The window title is 'Chime For Lync Setup' and it features the CHIME logo in the top right corner. Below the title bar, the text reads 'Chime Database' and 'Enter an account to install the Chime Database.' The configuration fields are as follows:

- SQL Server FQDN or IP Address: /litQA01/sqlexpress
- Database Name: Chime
- Authentication:  SQL Authentication,  Windows Authentication
- SQL Authentication Username: SA
- SQL Authentication Password: [masked with dots]
- Test Connection button

At the bottom, there are navigation buttons: '< Back', 'Next >', and 'Cancel'. The text 'Advanced Installer' is visible in the bottom left corner.

Figure 9: Chime Database Setup – default installation



The screenshot shows the 'Chime Database' configuration window in the 'Chime For Lync Setup' wizard, similar to Figure 9 but with custom values. The window title is 'Chime For Lync Setup' and it features the CHIME logo in the top right corner. Below the title bar, the text reads 'Chime Database' and 'Enter an account to install the Chime Database.' The configuration fields are as follows:

- SQL Server FQDN or IP Address: VPAMQA01
- Database Name: My-Chime-Server
- Authentication:  SQL Authentication,  Windows Authentication
- SQL Authentication Username: SA
- SQL Authentication Password: [masked with dots]
- Test Connection button

At the bottom, there are navigation buttons: '< Back', 'Next >', and 'Cancel'. The text 'Advanced Installer' is visible in the bottom left corner.

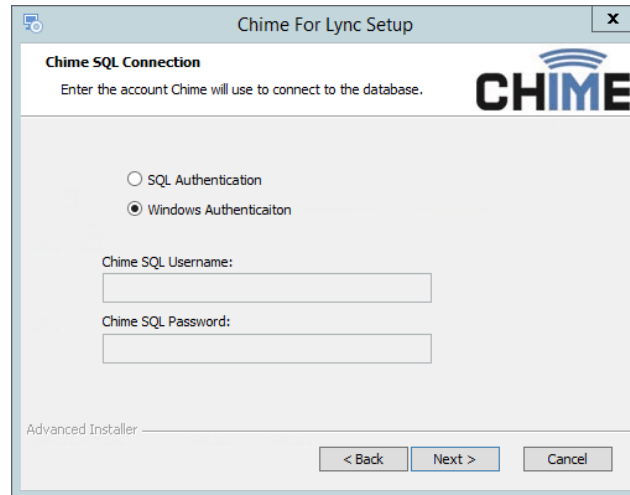
Figure 10: Chime Database Setup – custom installation

1. Enter the Fully Qualified Domain Name or IP address of the SQL Server where the Chime database will be installed.
2. Provide the username of the account that will be used to create the Chime database. This account needs *sys\_admin* rights for the SQL Server.
3. Enter the password for the SQL account.

*If you chose the Custom Install option, you are able to change the name of the Database.*

4. Click on **Test Connection** once the require account information has been entered.
5. Click **Next** to proceed.

## CONFIGURE DATABASE SERVICE ACCOUNT



**Figure 11: Configure Database Service Account**

1. Choose the authentication scheme Chime will use to connect to the database.

If using SQL Authentication:

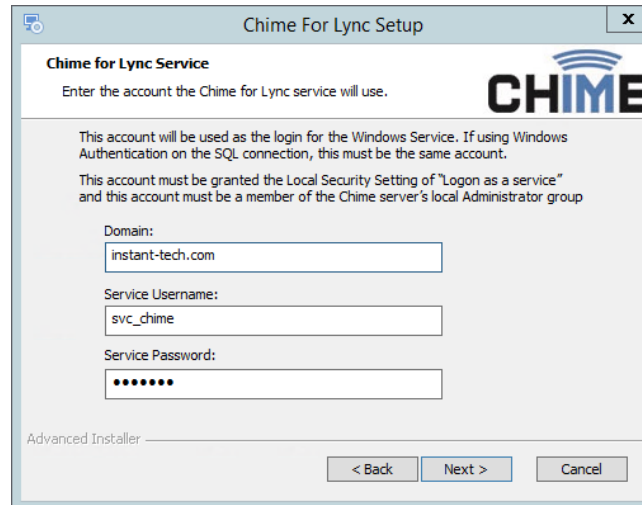
- a. Enter the username for the service account Chime will use to access the database.
- b. Enter the password for the service account

If using Window Authentication, the service account provided in the next screen will be used to connect to the database.

2. Click **Next** to proceed.

## SERVICE ACCOUNT

The Chime for Lync Service account is the account that will be used to run the Chime Self-Hosted application.



The screenshot shows a window titled "Chime For Lync Setup" with a close button (X) in the top right corner. The main heading is "Chime for Lync Service" with the instruction "Enter the account the Chime for Lync service will use." and the CHIME logo. Below this, there are two paragraphs of text: "This account will be used as the login for the Windows Service. If using Windows Authentication on the SQL connection, this must be the same account." and "This account must be granted the Local Security Setting of 'Logon as a service' and this account must be a member of the Chime server's local Administrator group". There are three input fields: "Domain:" with the text "instant-tech.com", "Service Username:" with the text "svc\_chime", and "Service Password:" with a masked password of seven dots. At the bottom left, it says "Advanced Installer". At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Figure 12: Chime Service Account

1. Enter the name of the domain that the Chime service account belongs to.
2. Provide the username of the account that will be used to run Chime.
3. Enter the password for the provided username.
4. Click **Next** to proceed through the installation.



## WEB CLIENT CONFIGURATION

### ON-PREMISE

Chime For Lync Setup

**Web Seeker Account**

Please enter in the information for the web seeker account.

CHIME

Web Client SIP URI:  
sip:mattdevtestweb@instant-tech.com

Web Client Username:  
mattdevtestweb

Web Client Password:  
••••••••

Web Client Domain:  
instant-tech

Lync FE Pool/Server URL:  
vityncfe.instant-tech.com

Advanced Installer

< Back   Next >   Cancel

Figure 13: Web Client configuration screen

1. Enter the information requested in the appropriate fields.
2. Click **Next** to continue.

### OFFICE 365

Chime For Lync Setup

**Web Seeker Account**

Please enter in the information for the web seeker account.

CHIME

Office 365 Domain:  
instant-tech.com

Office 365 Username:  
qaweb

Office 365 Password:  
••••••••

Office 365 SIP URI:  
qaweb@instant-tech.com

Office 365 Skype for Business URL:  
sipdir.online.lync.com:443

The URL shouldn't need to be changed.

Advanced Installer

< Back   Next >   Cancel

Figure 14: Web Client configuration screen

1. Enter the information requested in the appropriate fields.
2. Click **Next** to continue.

## INSTALLATION OPTIONS

Optionally, you may customize the installation with the available Installation Options. By default, the installation will add a few routing tags to the Chime database (e.g., password reset, software installation, hardware, mobility, etc.). For most installations and upgrades, this is the recommended setting. If the default skill-routing tags are not desired, uncheck this option.

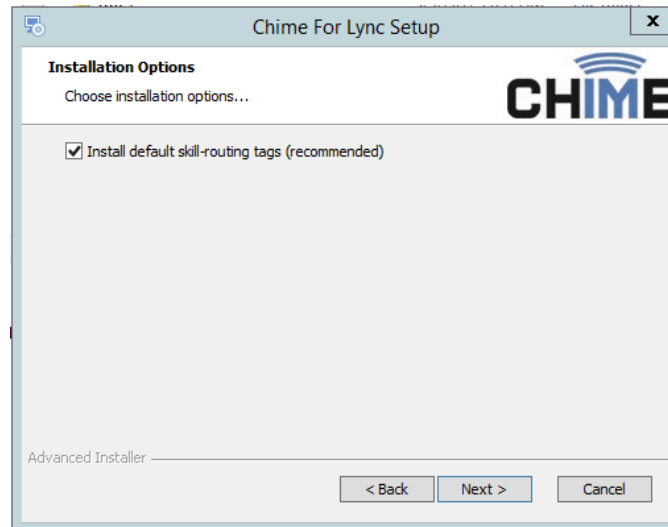


Figure 15: Installation Options screen

## READY TO INSTALL

Press the **Install** button to begin installing Chime.

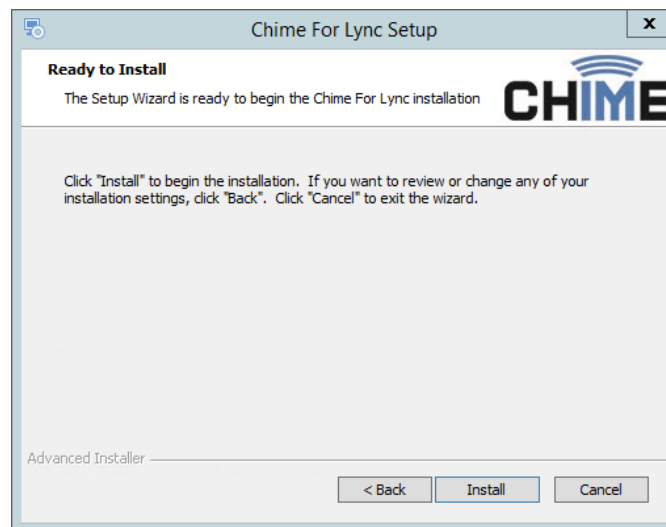


Figure 16: Install Chime

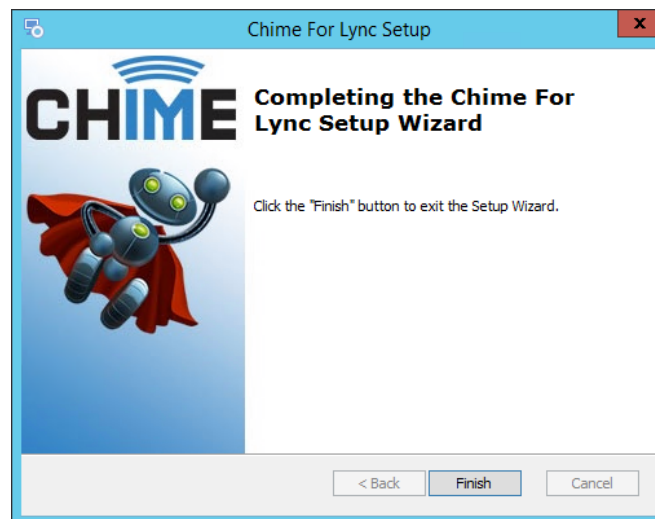


Figure 17: Install Complete

Click **Finish** to close the setup wizard and launch the configuration wizard.

## CHIME CONFIGURATION WIZARD

Once all the required account information has been filled out in the Chime Setup wizard, you will be prompted with the next part of the installation, the Configuration Wizard. In this section you will do the following:

- Verify Active Directory account information
- Verify and test connection to the SQL Database
- Setup the Chime Web Client
- Pick the first administrative user for the Chime application
- Configure SSL Certificates (optional)

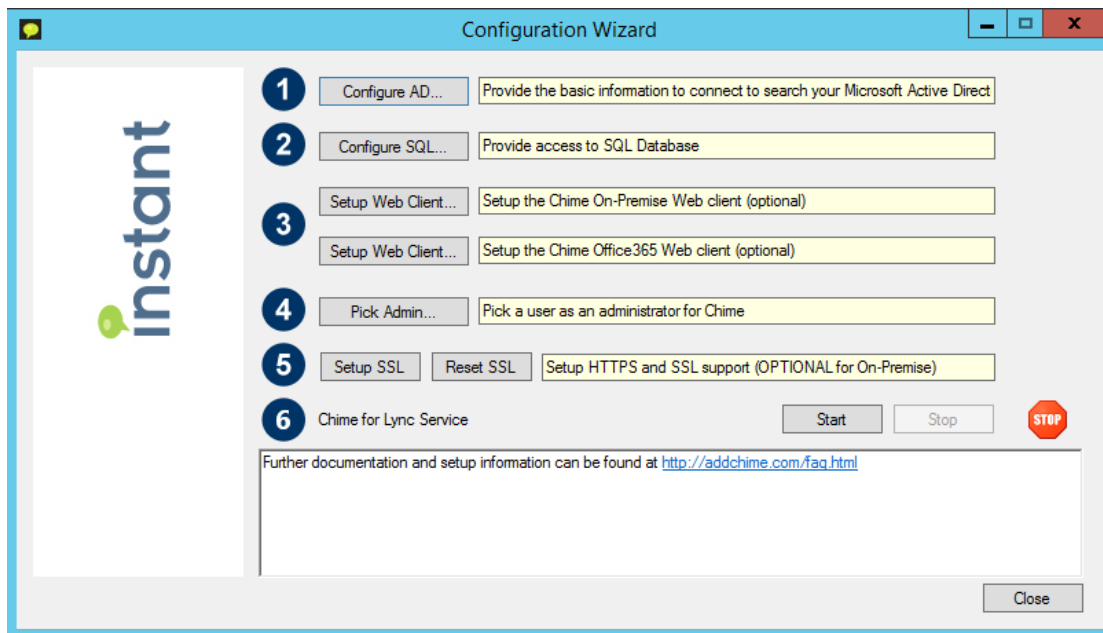


Figure 18: Configuration Wizard

## CONFIGURE ACTIVE DIRECTORY

In the first step of the configuration wizard, you will need to verify your active directory credentials.

### ON PREMISE

1. Click **Configure AD**.
2. Enter the Active Directory FQDN, username, and password (if not provided during the previous installation process).
3. Click **Validate**.

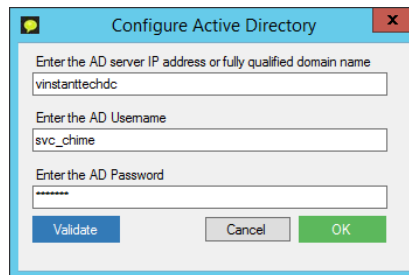


Figure 19: Active Directory

4. Click **OK** on the alert once you have been notified that we've successfully connected to Active Directory.
5. Click **OK** to proceed to the next step.

### OFFICE 365

Verify that the information in these fields matches what was provided during the installation phase. You can test to be sure that we can connect using the information provided using this tool.

1. Enter your **Azure AD Tenant**.
2. Enter your **Azure AD Tenant ID**.
3. Enter your **Azure AD Client ID**.
4. Enter your **Azure AD Client Secret Key** (API key).
5. Click **Text...** to verify that we can connect using the provided information
6. Click **Save** to save the information and close the window.

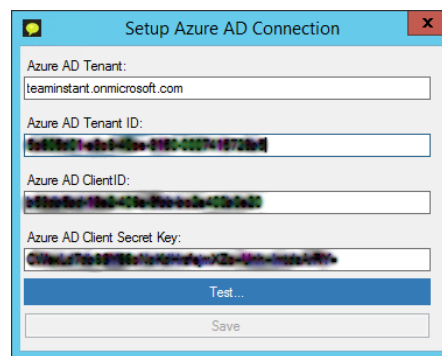


Figure 20: Azure AD Connection info

## CONFIGURE SQL

In this section you will need to enter the required account information for the Chime SQL account. This account needs read and write access to the Chime database.

1. Click **Configure SQL** in the configuration wizard.
2. Enter the name of the SQL instance that Chime will be hosted on.

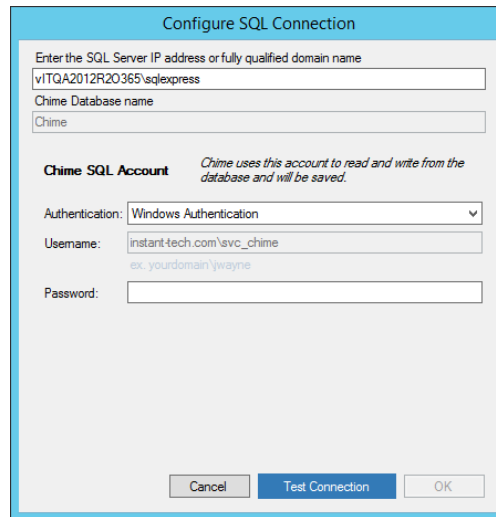


Figure 21: SQL Connection

3. Select the appropriate authentication method for the Chime SQL account.
4. Enter the username and password for the Chime SQL account.
5. Click on **Test Connection** to test the connection to the database.

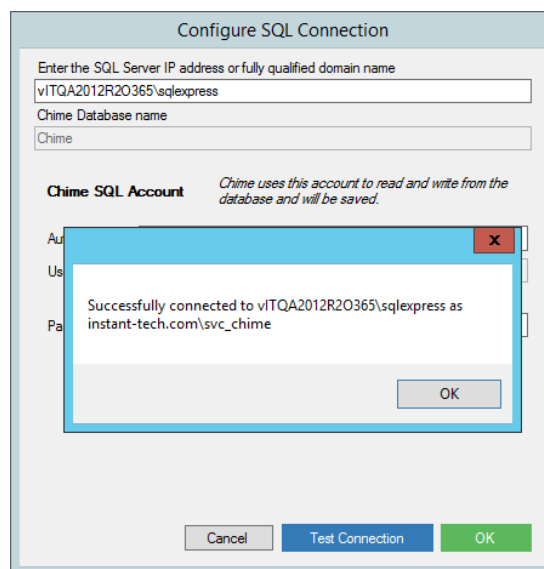


Figure 22: Test SQL Connection

6. Click **OK** once you have successfully connected to the database.
7. Click the green **OK** button in the Configure SQL Connection window to proceed to the next step.

## SETUP WEB CLIENT (OPTIONAL)

There are two options in the configuration wizard for setting up the Web Client:

1. Setup the Chime on premise web client – uses your on premise Lync Server
2. Setup the Chime Office 365 web client – uses an Office 365 Lync-enabled account

### ON PREMISE

Follow these instructions to setup the Web Client with an on premise Lync Server.

1. Click **Setup Web Client...** in the configuration wizard.
2. Enter a SAM account name to search for, and click **Search for Lync Account**. The wizard will query Active Directory for a Lync-enabled account matching the provided name.
3. Select the desired account, and the wizard should pre-populate whatever fields it can obtain from Active Directory.
4. Provide information for any missing fields.
5. Click **Verify**, and the wizard will attempt to log in using the credentials provided.
6. Click **OK** once the information has been verified to save the values and close the window.

The screenshot shows the 'Setup Chime Web Client' dialog box. The search input field contains 'mattdev'. The search results list shows two accounts: 'sip.mattdevtestdispatch@instant-tech.com' and 'sip.mattdevtestweb@instant-tech.com'. The second account is selected. The form fields are: 'Account SIP URI' (sip.mattdevtestweb@instant-tech.com), 'Account Username' (mattdevtestweb), 'Account Password' (masked with dots), 'Account Domain' (instant-tech), and 'Lync FE Pool/Server URL' (vityncfe.instant-tech.com). At the bottom are 'Verify', 'Cancel', and 'OK' buttons.

Figure 23: Web Client configuration

Follow these instructions to setup the Web Client with an Office 365 account.

1. Click **Setup Web Client...** in the configuration wizard.
2. Provide the required information for the web client dispatcher account.
3. Click **Test**, and the wizard will attempt to log in using the credentials provided.
4. Click **OK** once the information has been verified to save the values and close the window.

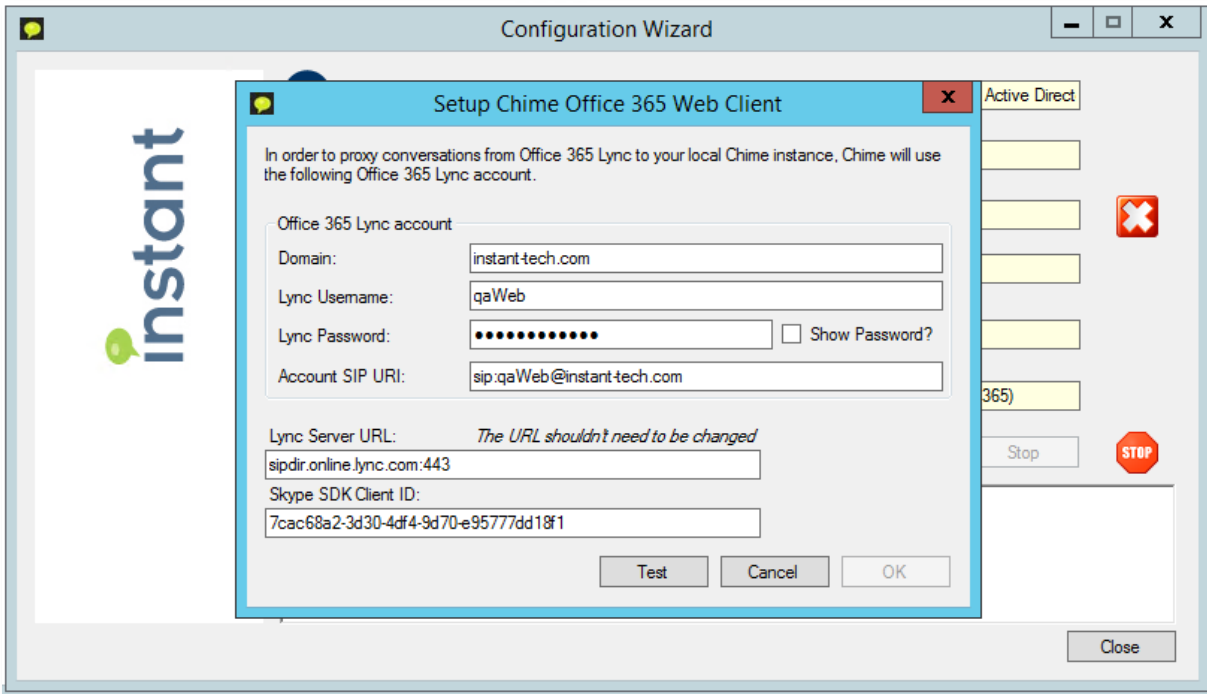


Figure 24: Web Client Configuration

**Account SIP URI:** The SIP URI for a Lync-enabled Office 365 account. The Chime Web Client will log in as this account.

**Account Domain:** The name of the domain that the chosen Office 365 account belongs to.

**Account Username:** The full username of the chosen Office 365 account.

**Account Password:** The password for the username provided.

**Lync Server URL:** Provide the Lync Server URL. For Office 365 this should be:  
***sipdir.online.lync.com:443***

**Skype SDK Client ID:** The Azure AD Application Client ID for the Native Application used to connect to Skype for Business over UCWA.



## PICK ADMIN USER

Chime will need a Lync-enabled account to be configured as the first Admin user of Chime. That person will be able to add other people once they log in.

1. Click on **Pick Admin** from the Configuration Wizard.
2. Enter the partial or full username of the person who will be the first admin. Click Search to find the user.

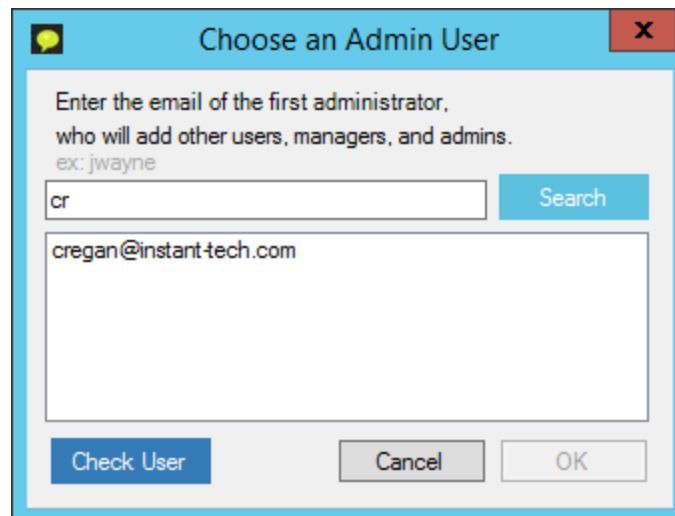


Figure 25: Pick Admin User

3. Select the correct user from the list, and click Check User.

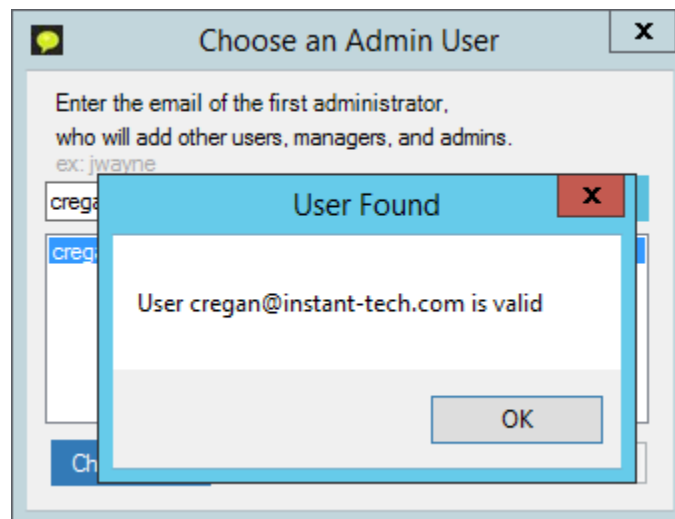


Figure 26: Check User

4. Once you've verified that the user picked is valid, click OK. Then, click OK in the Choose Admin user window to proceed to the next step of the Configuration Wizard.

## SETUP SSL (OPTIONAL)

The configuration wizard provides a tool to register an SSL certificate with the Chime application. As a prerequisite, you will need to have a valid SSL certificate installed on the server. Once the certificate has been installed on the server, you can follow these steps.

1. Click **Setup SSL**.
2. Click through the prompts to register listeners for ports 80 and 443 (or click OK if already reserved).

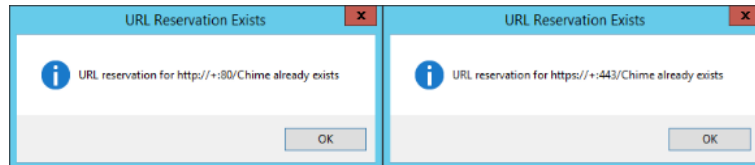


Figure 27: URL Reservations

3. Select the desired SSL Certificate from the list provided. Click on the desired certificate and click **OK** to try and use that certificate. If you don't see the certificate desired, click **Cancel**, and another list will be displayed.

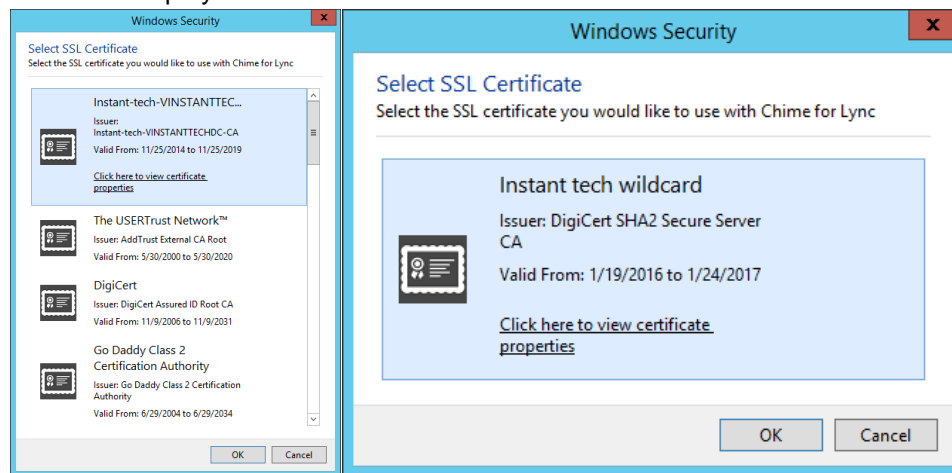


Figure 28: Selecting SSL Certificates

4. Click to **OK** to execute the command to register the SSL Certificate.

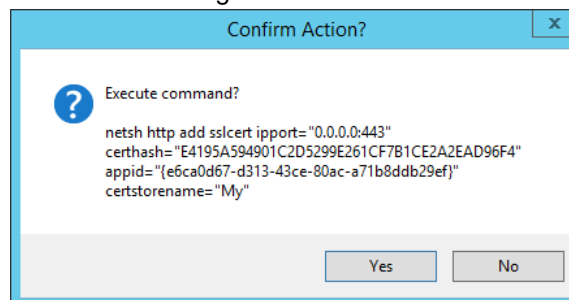


Figure 29: Executing SSL Command

## START THE CHIME APPLICATION

### STARTING FROM CONFIGURATION WIZARD

Click the **Start** button on the configuration wizard to start the Chime service.

### STARTING FROM SERVICES

1. Log on to the server that Chime is hosted on.
2. Go to the Control Panel, and navigate to Administrative Tools.
3. Open 'Services'.
4. Find 'Chime for Lync' in the list of services.
5. Right-click on Chime for Lync and click 'Start'.

### ISSUES STARTING CHIME

#### UNABLE TO START THE CHIME SERVICE – INCORRECT LOGON

If you are unable to start the Chime service due to a logon failure, it's possible that you entered the incorrect credentials for the Chime Service account during the install. To verify these credentials, follow these steps:

1. Log on to the server that Chime is hosted on.
2. Go to the **Control Panel**, and navigate to **Administrative Tools**.
3. Open '**Services**'.
4. Find '**Chime for Lync**' in the list of services.
5. Right-click on Chime for Lync and click on '**Properties**'.
6. Navigate to the '**Log On**' tab.
7. **Click OK** once the account credentials have been changed or verified.
8. Follow the steps to start the Chime service.

#### UNABLE TO START THE SERVICE – LOG ON AS A SERVICE

If you are unable to start the Chime service, and receive an error message that the account doesn't have the proper rights, you will need to give administrative rights to the Chime Service account.

1. Log on to the server that Chime is hosted on.
2. Go to the **Control Panel**, and navigate to **Administrative Tools**.
3. Open '**Local Security Policy**'
4. Under '**Local Policies**', click on '**User Rights Assignment**'.
5. Click on '**Log On as a Service**', and then click on **Add User or Group**.
6. Enter the service account name, and click '**Check Names**'
7. **Click OK** once you've selected the service account to add.
8. Follow the steps to start the Chime service.

## UNABLE TO START THE SERVICE – SERVICE ACCOUNT NOT AN ADMINSTRATOR

If you are unable to start the Chime service, and receive an error message saying to check that account can log on as a service, you will need to add the Chime service account to the administrator group on your system.

1. Log on to the server that Chime is hosted on.
2. Go to the **Control Panel** and navigate to **Administrative Tools**.
3. Open **'Computer Management'**.
4. Under **'Local Users and Groups'**, click on **'Groups'**.
5. Right-click on **'Administrators'** and select **'Properties'**.
6. Click **'Add'**, enter the service account name and click **'Check Names'**.
7. Select the correct Chime service account and click **'OK'** back to Administrator Properties.
8. Click **'Apply'** and then **'OK'**
9. Follow the steps to start the Chime service.

## ACCESS THE CHIME APPLICATION

Once you've successfully installed Chime, you are ready to access the application.

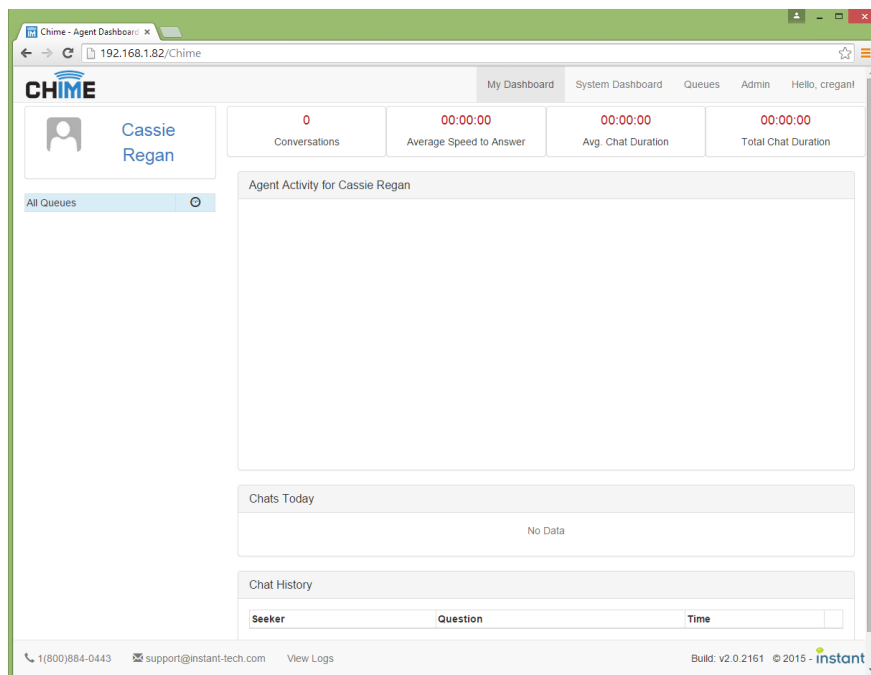
1. Type in the URL of the Chime instance. It will look something like this:

**Error! Hyperlink reference not valid.**

- or -

**Error! Hyperlink reference not valid.**

2. Log in to the application.
3. You are ready to add more administrators, agents, and start routing chats.



**Figure 30: Chime Agent Dashboard**