

Ringorang® Technical & Security Overview

General Description

Ringorang® is an interactive software product that increases knowledge retention and makes learning fun and compelling. It is a server-based, hosted software platform with multiple client Apps for iPhone and Android smartphones as well as Windows computers.

Participants in Ringorang® play game Challenges with other players where multiple choice questions are delivered simultaneously to everyone at random times throughout the day. Everyone is alerted by their App and plays a question with everyone else at exactly the same time. To incentivize participation in the learning Challenges, points are awarded for each question played based on “speed to answer” as well as correctness.

If players are unable to participate during this “Live Play” mode, all is not lost. They can go back into their application and play their previously un-played questions whenever they choose. Gameplay is the same except that the player earns fewer points. The important thing is that they participate in any way they can because that translates into learning and retaining the information being delivered.

Technical, Security and Privacy Information

Ringorang® utilizes a central cluster of game and corresponding database servers to coordinate and manage the game play dynamics. These servers are hosted in a secure, managed AWS environment within the United States ensuring that player information is secure and protected. Communication between client applications and servers is secured with TLS/SSL encryption.

The Ringorang® service is completely self-contained and is never connected in any way to a client’s servers or corporate network. No user data from the organization is ever required to be transmitted to or stored on the Ringorang® server.

Users signup for the Ringorang® service themselves and are never asked to divulge any sensitive personal data other than their name, gender and email address so that they can be verified as being who they say they are. Accounts are secured by a combination of username and password that the user selects during the signup process that occurs on the App.

These end-user Apps, running on player’s mobile devices and computers, have been developed by Ringorang®’s own team of software developers. Client applications communicate back with the Ringorang® Game Server, which is located in the Internet. This means that Apps must have access to the Internet in order to receive alerts from the Game Server and access game data during the course of play

If employees' mobile or desktop devices running the Ringorang® Apps are required to be behind a corporate firewall or somehow blocked from Internet access, then corporate IT permissions must be granted to allow successful operation.

Ringorang® has a strict privacy policy and will never gather any additional information about the user other than what was outlined above. Additionally, Ringorang® will never transfer to a third party or use in any way the information gathered from individuals other than to internally analyze in aggregate the performance of our product and improve its training capabilities. All data are stored in DB configured in secure network with password access.

For more information about the operation of Ringorang® or additional technical, implementation, security or privacy questions, please call (818) 539-9925 x.4 or email ITsupport@ringorang.com.

Network Firewall Configuration Requirements for Ringorang® Device Clients

The Ringorang® system is comprised of client applications that can be installed on computers running Windows 7/8/10 as well as iOS (9.0 and above) and Android (4.4 and above). All of these Client Applications communicate back to the Ringorang® Game Server in order to obtain game status information, download question data and obtain scores and leaderboard statistics. iOS Client Applications require using APNs (<https://support.apple.com/en-us/HT203609>) for communication with the Ringorang® Game Server. Additionally, login information and answer data is transferred to the same server so that users can sign into the apps and the system can keep track of their play.

The Ringorang® Mobile Client Applications require the ability to communicate with several services external to the local network. This requires corporate firewalls to be properly configured as outlined in the table below:

Table 1 Ports Protocol

Host	Protocol	Port	Description
proxy.ringorangservice.com	http/https	80/443	Requests to the Game Server. Some server requests implement long polling strategy so their duration might be up to ~3 min. Persistent connection for the long polling functionality is required.
*.cloudfront.net	https	443	Access to CDN for pictures
ringorangservice.com	http/https	80/443	Application updates for Windows app version

Test Plan

The following is a simple test plan to determine if the Ringorang® applications can communicate with the Ringorang® Game Server and successfully operate within an organization's network.

1. **TESTING DOWNLOAD.** Download the Ringorang® Application to the target device. Apps are provided for the following devices: Windows, iOS and Android. The apps are available to download from <http://install.ringorang.com>. Alternatively, the latest version of the apps are also available directly from the Apple App Store and the Google Play Store for iOS and Android devices respectively.
 - a. Once the app is installed onto the target device, launch it by double clicking or tapping on the icon. The application will launch and should display the Login Screen.
 - b. If the Login Screen does not display and instead times out after 30 seconds and displays a message such as "Looks like a connection issue", then there is a problem with the application being able to connect to the Ringorang® Game Server. Please check your firewall configuration according to information provided in Table 1 and try again.
2. **TESTING ACCOUNT SETUP.** If the Login Screen does display, then this indicates that the app is able to successfully communicate with the Game Server. At this point, create an account using your email address. Click through setup screens. You will receive an account verification email, in which you click a link to verify. At this point, you should login successfully. Click that you agree to not "drive and play". You should then be sitting on a blank "My Challenges" screen.
3. **TESTING END USER INTERACTIONS.** Enter your invite code (if one has been issued to you), or contact us at (818) 539-9925 x.4 or email ITsupport@ringorang.com and we will set up a test Challenge for you within 48 hours. The test Challenge will give you the experience of an actual end-user Challenge, with questions and alerts delivered to you across multiple days.
 - a. Once you join your Challenge, you will see the Ringorang Timeline. This scrollable screen shows all events that occur in a given Challenge, such as when Live Questions ("Qs") were delivered or notifications were sent. If the Challenge has not started yet, you can play a few sample Qs that are pre-loaded in your Timeline.

These Qs are in what we call “Solo Mode” – where you can play them at any time that is convenient for you until the end of the Challenge period. When Qs are delivered live in the actual Challenge, that is called “Group Mode” as all joined users are alerted to play the Q simultaneously. If a user misses a Q during Group Mode, the Q will be waiting to be played in Solo Mode. Any unplayed Q appearing in the Timeline with a “PLAY” button on the right is available to play. Tap on the “Play” button and participate in the Question.

- b. During a live Challenge, at specific times during the day (these pre-scheduled times will be available and even manually selectable by you in an actual Challenge, but are NOT revealed to your users), Qs will be delivered in Group Mode and can be played together with all the other joined players simultaneously on a ticking clock. The application should alert you to an incoming Q: the Ringorang® chime will play and an alert window will be displayed by the app inviting the user to click or swipe the alert in order to access the question.
- c. If you can successfully play the questions both in Group Mode and Solo Mode, then you can consider that Ringorang® application to have proper network connectivity.