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System Broadcast Application Guide

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Revision History

Revision	Date	Notes
1.0	October 2018	Initial Release



1 Introduction

Welcome to the Intel Unite® solution guide for the System Broadcast app. This guide provides instructions on installing the System Broadcast application and describes key features.

1.1 Audience

This document is designed for use by IT professionals who are responsible for installing the Intel Unite® software and adding optional features to the application.

1.2 Overview

The Intel Unite® app for System Broadcast enables the display of messages to all or a subset of all hub displays in an Intel Unite® environment .



2 System Broadcast Installation

This section describes the installation procedures for the System Broadcast application.

2.1 Prerequisites

The Intel Unite® app for System Broadcast must be installed on the hub after being uploaded to the server, and it has the following requirements.

2.1.1 Software Requirements:

- Intel Unite® software for the server, version 4.0 or greater
- Intel Unite® software for the hub, version 4.0 or greater

2.1.2 Hardware Requirements:

- A server running Windows Server* 2012

2.1.3 Server Software Requirements:

- Recommend latest Windows updates
- Windows SQL Server* 2014
- IIS* 8
 - Windows Digest/Basic Authentication Module
 - WebSocket Protocol
 - Application Request Routing install using Web Platform Installer
 - Proxy Enabled
- URL Rewrite install using Web Platform Installer
- Microsoft Visual C++ 2015 Redistributable Update (both x86 and x64) installed

2.2 Installing System Broadcast on the Hub

The System Broadcast installation requires interaction with the server and hub. This section describes the steps required to install the System Broadcast app on the server and hub.

2.2.1 Uploading the System Broadcast Package

Using a system on the same network as the Admin Portal server, complete the following steps to upload the System Broadcast installation package:

1. Open a web browser (Intel recommends Chrome* for this installation).
2. Browse to the Admin Portal (<https://<FDQN of Server>/intelunite/admin>).
3. Log in to the Admin Portal with an account that has permission to upload packages.
4. Under **Device Management** menu, click **UPLOAD PACKAGE**.
5. Browse to the location of the System Broadcast .cab package file.
6. Select the System Broadcast .cab package file.
7. Click **Open**.
8. Confirm the appearance of the Success message.



2.2.2 Approving the System Broadcast Package

Using a system on the same network as the Admin Portal server, complete the following steps to approve the System Broadcast package for installation:

1. Open a web browser (Intel recommends using Chrome for this installation).
2. Browse to the Admin Portal (**https://<FDQN of Server>/intelunite/admin**).
3. Log in to the Admin Portal with an account that has permission to approve packages.
4. Under **Device Management** menu, click **FEATURES/APP**.
5. Click **Package Approval** to display the list of package(s) awaiting approval.
6. Find the line item with the name System Broadcast.
7. Click **Approve** for the System Broadcast line item.

2.2.3 Adding System Broadcast to a Hub Configuration

Using a system on the same network as the Admin Portal server, complete the following steps to add System Broadcast to a hub configuration:

1. Open a web browser (Intel recommends using Chrome for this installation).
2. Browse to the Admin Portal (**https://<FDQN of Server>/intelunite/admin**).
3. Log in to the Admin Portal with an account that has permission to create and modify configurations.
4. Under **Device Management** menu, click **CONFIGURATIONS**.
5. Click **Hub Configurations** to display the list of hub configurations.
6. Click **Edit** next to the hub configuration that will have the System Broadcast capability.
7. Click the **plus sign** next to System Broadcast in the Available Features/Apps section, and verify that System Broadcast appears in the Selected Features/Apps section.
8. Click **Save Changes**.
9. Confirm the hub device is assigned to a hub group that has the hub configuration with System Broadcast assigned.

2.2.4 Downloading System Broadcast to a Hub

To download System Broadcast to a configured hub, complete the following steps on the hub:

1. On the hub device, close the Intel Unite® application, if it is running.
2. Open the Intel Unite® application for the hub.
3. Verify that the package is downloading on the hub.

2.3 Installing System Broadcast on the Server

The System Broadcast Application installs additional pages to the Admin Portal to access the System Broadcast configurations and feature.

2.3.1 Update the Admin Portal

To update the Admin Portal, complete the following steps on the server.

1. Confirm the server meets the requirements defined in [Section 2.1](#).
2. Copy *SystemBroadcast.Server.Installer.msi* to the server.
3. Run *SystemBroadcast.Server.Installer.msi*.
4. When the installer opens, click **Next** to display the license.



5. Read the license, check the checkbox to accept the terms and click **Next** to proceed to the **Database Server** configurations.
6. On the **Database Server** page, enter the FQDN of the SQL server (or "localhost" for local SQL server installs), in the **Database Host Name** text field.
7. Select either Windows or SQL Authentication. For Windows Authentication, you must have Active Directory setup on your network.
 - For SQL Authentication, you must enter credentials for an account with the **sysadmin** role
 - Click **Test Connection** to test the credentials. If the test fails, check your SQL server configuration.
 - If your SQL Server instance is installed on a separate machine, you will need to either use SQL Authentication or run the System Broadcast server under a custom Windows account with SQL access (the default Windows account for the System Broadcast server is **NT Authority\Local Service**). If you decide to run the System Broadcast server under a different account, you may also need to grant that account read access to the SystemBroadcast certificate in the Cert Store.
8. Click **Next** to proceed to the **Host Server** configurations.
9. Enter values for **Http Port** and **Web Socket Port** or leave the defaults.
10. Enter the username for the Windows Account of the primary system administrator into the **Admin Username** text field,. Immediately after successful installation, this user will have access to the admin web site with the admin privilege level and will be able to grant access to other users.
11. Select an authentication mechanism:
 - For **Windows** and **Digest Authentication**, the corresponding IIS module must be installed and Active Directory must be set up on your network
 - If **Basic Authentication** is selected, it is very important to require SSL encryption for all IIS websites. The installer will configure all websites with SSL encryption required.
12. Click **Next** to continue the installation.
13. Click **Install** to start the installation.
14. After the installer finishes, the admin website should be available. Browse to <https://<FQDN of the server>/systembroadcast/admin> (from a remote client) Server logs should be available in the Event Viewer under Application and Services Logs → SystemBroadcastServerLog



3 System Broadcast Configuration

System Broadcast configuration involves the following:

- Setting the System Broadcast module property
- Manage users
- Manage displays
- Manage groups
- Manage messages
- Manage tokens
- Manage system configuration

3.1 Setting the System Broadcast Module Property

The System Broadcast module property must be set before System Broadcast will work properly.

Follow these steps to set the System Broadcast module property:

1. Browse to the Admin Portal web page (<https://<FQDN of the server>/intelunite/admin>).
2. Login into the Admin Portal.
3. From the **Device Management** drop down menu, select **Hubs and Clients** to display the **Device Groups** page.
4. On the **Device Groups** page, click **Hubs** tab to display hubs.
5. Select a device group or a hub device by clicking on the group name or hub device name that has a configuration that contains the System Broadcast module.

Note: If a hub device is selected, the setting of the System Broadcast property will only apply to that device. If a group is selected, the setting of the System Broadcast property will apply to all devices in that group.

6. Select **View Group Details** from the **select action** drop down menu.
7. Click the **Edit Properties** button above the list of module properties.
8. Enter the FQDN of the System Broadcast server into the **System Broadcast Server** text field.
9. Click the **Save** button.

3.2 Managing System Broadcast Users

Access and use of System Broadcast is managed through the Users page. On the Users page, the following actions are available:

- Add a new user
- Disable an existing User
- Change permissions of an existing User

3.2.1 Adding a New User

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Users** at the top of the page to display the Users page.
3. Enter the User ID into the User ID text box.
4. Set the permissions for the user by placing a check in the checkbox next to the permission(s). More than one permission can be set. By default Read permission is the only permission set.
5. Click the **Save** button.



3.2.2 Disabling an Existing User

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Users** at the top of the page to display the Users page.
3. To disable an existing User, place a check in the Inactive column checkbox for that user.

3.2.3 Changing Permissions of an Existing User

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Users** at the top of the page to display the Users page.
3. To change the permissions of an existing user, check or uncheck the boxes for Read, Write, and Admin permissions. Placing a check in a checkbox grants permission, while unchecking it denies permission.

3.3 Managing Displays

Management of displays includes the following actions:

- Define displays
- Assign displays to one or more groups
- Delete displays

3.3.1 Defining Displays

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Displays** at the top of the page to display the Displays page.
3. Enter a string in the **Display ID** field.
4. Click **Save**.

3.3.2 Assigning Displays to One or More Groups

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Displays** at the top of the page to display the Displays page.
3. Click **Edit Groups** for a display.
4. Select one or more groups from the list of **Available Groups**.
5. Click **Add**.
6. Verify that the selected group or groups are listed under **Currently Assigned Groups**. To remove a group from the Currently Assigned Groups, select the group and click **Remove**. Note: More than one group can be selected for removal.
7. Click **Save**.

3.3.3 Deleting Displays

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Displays** at the top of the page to display the Displays page.
3. Click **Delete** associated with the display to be deleted.
4. Click **Confirm** when the confirmation dialogue box pops up.

3.4 Managing Groups

Management of groups includes the following actions:



- Define a group
- Assign displays to a group
- Delete group

3.4.1 Defining a Group

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Groups** at the top of the page to display the Groups page.
3. Enter a string in the **Display ID** field.
4. Click **Save**.

3.4.2 Assigning Displays to a Group

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Groups** at the top of the page to display the Groups page.
3. Click **Edit** for a group.
4. Select one or more displays from the list of **Available Displays**.
5. Click **Add**.
6. Verify that the selected group or groups are listed under **Displays Currently in Group**. To remove a display from the Displays Currently in Group, select the display(s) and click **Remove**. More than one display can be selected for removal.
7. Click **Save**.

3.4.3 Deleting Displays

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Groups** at the top of the page to display the Groups page.
3. Click **Delete** associated with the group to be deleted.
4. Click **Confirm** when the confirmation dialogue box pops up.

3.5 Managing Messages

Management of messages includes the following actions:

- Create a message
- Delete a message

3.5.1 Creating a Message

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Messages** at the top of the page to display the Messages page.
3. Select **New Message** from the **Select Message** drop down menu.
4. Enter a name for the message into the **Message Name** field.
5. A message consists of three parts, the header, the body, and the footer. The header and the footer can display text, while the body can display both text and an image. Enter desired text to be displayed in the header, body, and footer text field. When displaying text, the text color and the background color can be defined by clicking the square next to **Background Color** or **Text Color**, and selecting a color. To display an image in the body, enter the URL for the image into the **Image URL** field of the body section. **Note:** A message must have either text in the **Text** field of the body section or a URL in the **Image URL** field of the body section.
6. Click **Save**.



3.5.2 Deleting a Message

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Messages** at the top of the page to display the Messages page.
3. Select the message to be deleted from the **Select Message** drop down menu.
4. Click **Delete** at the bottom of the page.
5. Click **Confirm** when the confirmation dialogue box pops up.

3.6 Managing Tokens

Management of tokens includes the following actions:

- Create a token
- Extend token expiration
- Deactivate a token

3.6.1 Creating a Token

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Tokens** at the top of the page to display the Token page.
3. Click **Create New Token**.

3.6.2 Extending Token Expiration

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Tokens** at the top of the page to display the Token page.
3. Click **Extend** under the expiration time of a token to extend the expiration time.

3.6.3 Deactivating a Token

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Tokens** at the top of the page to display the Token page.
3. Place a check in the checkbox in the **Inactive** column to make that token inactive.

3.7 Managing System Configuration

Management of system configuration includes the following actions:

- Set network ports
- Enabling and Disabling SSL

3.7.1 Setting Network Ports

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **System Configuration** at the top of the page to display the System Configuration page.
3. Enter the port numbers that are used by system broadcast into the **Port 1** and **Port 2** fields.
4. Click **Update**.

3.7.2 Enabling SSL

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).



2. Click **System Configuration** at the top of the page to display the System Configuration page.
3. Enable SSL by selecting **Yes** for Use SSL on localhost.
4. Select a certificate from the **Certificate** drop down menu.
5. Click **Update**.

3.7.3 Disabling SSL

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **System Configuration** at the top of the page to display the System Configuration page.
3. Disable SSL by selecting **No** for Use SSL on localhost.
4. Click **Update**.



4 Using System Broadcast

Once System Broadcast have been configured, messages can be broadcast to hub displays. Messages can be broadcast to either a predefined group (for example, a collection of hub displays) or to one or more manually selected displays.

4.1 Broadcasting to a Predefined Group

Follow the steps below to broadcast to a group:

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Alerts** at the top of the page to display the Alerts page.
3. Select **Group(s)** from the **Send Message To** list.
4. Select one or more groups from the list of groups by putting a check in the checkbox associated to the group.
5. From the **Select Message** drop down menu, select a preset message.
6. Click the **Send** button to broadcast the message.

4.2 Broadcasting to One or More Displays

Follow the steps below to broadcast to a one or more displays:

1. Browse to the System Broadcast web page (<https://<FQDN of the server>/systembroadcast/admin>).
2. Click **Alerts** at the top of the page to display the Alerts page.
3. Select **Display(s)** from the **Send Message To** list.
4. Select one or more displays from the list of displays by putting a check in the checkbox associated to the display.
5. From the **Select Message** drop down menu, select a preset message.
6. Click the **Send** button to broadcast the message.

4.3 Dashboard

The system broadcast dashboard displays the hub display statuses:



5 Using A Token

The tokens generated from the System Broadcast Token page are used for authenticating. The syntax for a Send Alert POST and Clear Alert POST are included in the sections below.

5.1 Send Alert

- URL: /systembroadcast/api/message/sendalert
- HTTP Verb: POST
- Params:
 - ApiKey (string)
This is the api token. Tokens are managed on the admin portal.
 - Message (object)
 - ID_Message (int)
This is the ID_Message field from the Messages table in SQL for the alert being sent
 - ListID_Hub (Array<string>)
This is an array of Displays from the Displays tab on the admin portal. This param is optional. If it is not included, the alert will be broadcasted to all displays.

5.2 Clear Alert

- URL: /systembroadcast/api/messag/clearalert
- HTTP Verb: POST
- Params: Same

5.3 Example

```
"ApiKey": "12345789adbdefg",  
"Message": {  
  "ID Message": 1  
}  
"ListID Hub": {  
  "some.hub.id",  
  "some.other.hub.id"  
}
```