

Feature Guide: OP-Push



ONPOINT

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OP Push Introduction

Push notifications are mobile only messages that are sent directly to allowed devices to alert the user of new assignments, updates or reminders. These messages include an action to launch the CellCast app and may optionally launch to a specific assignment within the CellCast app.

This document explains the process of setting up Push notifications and using Push notifications in the updated OPLS 5.6 system. The Push notification process requires a 5.6 updated OPLS online system, appropriate certificate information for the mobile applications involved, as well as the latest mobile app builds that support push notifications.

This document will walk through the proper setup and various configuration values to be set in the administration area of Course Manager, as well as what the user settings need to be to receive push messages on their mobile device.

How might this be useful?

OnPoint's LMS/CellCast solution previously supported the following messaging options:

- the "Standard" default setting which routes messages to users *inside* the online portal and *inside* the mobile apps, typically under a heading of Messages-Notifications
- Email setting which routes messages to the email on file for the user, and
- SMS setting, which sends out an SMS message to the user (requires SMS messaging option to be installed).

The newly introduced OP-Push adds a fourth type of messaging option, enabling messages to be routed to a user's mobile device outside of the installed CellCast app, and appear in the user's notification tray or message center without having to find that message in line with other emails in their in boxes. It is not uncommon to hear our customers say that their mobile users don't always pay attention to emails, so a push notification might get their attention. The mobile device in use will govern how push notifications are received and displayed to the user, though OnPoint can cause that notification when selected to launch the CellCast app and even open the app to a specific piece of content if a deep link is included in the message detail.

Note: Push notifications are currently only supported on Apple IOS devices and Android based devices; support for Windows phone and Blackberry 10 device is expected in a future release.

Section 1: OPCM and Configuration

Applications Involved

OPCM, CellCast

OPCM

The Course Manager application must be properly configured to communicate to the central OPPush application in order to send push notifications to the user's mobile device. The Push service pushes the message directly to the user's device (s) that are registered to that user through the registration process. Only devices that have had the Push process accepted will receive the push notifications. This process will be reviewed further in the user and app sections.

The Server must be configured to communicate to the OPPush application. This configuration is performed by OnPoint upon setup and upgrade of the server side applications to 5.6.

Mobile Push	
16 Push Gateway URL	https://ms153.mlearning.com/
17 Push Window Start Time	1
18 Push Window End Time	23

This configuration is managed at the server level and is unique for each customer server but NOT separate for each Customer Slice. The Push Gateway URL is the url to the OPPush service. The Push Start Time and End Time indicates the time period for which push communications will be pushed from this server. These values prevent Push notifications from going out in the middle of the night and instead queues those messages for first thing the next morning. In this example the start time is after 1:00 AM and the end time is prior to 11:00 PM. A typical setting might be 8 (8:00 AM) and 18 (6:00PM) respectively.

User Record

Each User record must be set to allow Mobile Push if the user is meant to receive Push notifications. This is a separate flag outside of the "OPT-in" process that we will discuss next.

The screenshot shows the 'USERS & GROUPS: USER EDIT' interface. The 'Notifications' section includes checkboxes for 'Standard', 'Email', 'SMS', and 'Mobile Push'. The 'Mobile Push' checkbox is checked, and a red arrow points to it. Other fields include 'First Name', 'Last Name', 'Email Address', 'Login ID', 'New Password', 'Password Hint', 'Title', 'Organization', 'Address', 'User Time Zone', 'Telephone Country Code', 'Telephone Work', 'Telephone Mobile', 'System Role', 'Account Expires', 'Preferred Language', and 'Status'.

A new Flag has been established at the User's notifications to enable Mobile Push notifications for each user. This value at the user level overrides all other Push notification settings. If this value is No (not checked), then the user will never receive Push notifications, regardless of whether they have opted in or not.

Note: For customers using an import routine(s), this value can be set as part of the import's business rules, as the users are created, if Push is to be used for that customer.

User's Mobile Profile

When a user installs any of the supported CellCast Apps, the app will prompt the user to allow Push notifications. As dictated by the various App services, Push notifications MUST be an "OPT-in" function that a user can readily opt out of. The CellCast app cannot force the push service for a user. The device-side prompting will be reviewed later in this document.

When the user accepts the prompt to allow push notifications, the user's Push id for each supported device is recorded by this prompt and passed to the user's mobile profile on the server.

Note: As the push ID is often changed by the Device, this information MUST be retrieved and updated by the CellCast app and should not be provided by any type of bulk upload.

Section 2: Creation of Push Notification

Applications Involved

OPCM

Object Triggered Notifications

Push notifications are built into the standard Triggered notification system inside the Course Manager application. The Triggered notification at the Course, Nugget, Assessment Set, Activity, and Skill Profile levels have been updated to include Push functionality as noted in the following image.

Note: Push notifications cannot include any html, special tags or urls, and also are limited to 140 characters.

The Deep Link for Push notifications should NOT be copied into the message area of the notification. The action of creating the link will automatically place that link into the "Action" section of the Push

The screenshot shows the 'Triggered Notification' configuration window in the ONPOINT DIGITAL system. The 'Trigger' is set to 'Assigned-To-Course' and the 'Title' is 'Course Assignment'. The 'Message Text' field is highlighted in yellow and contains the text 'Assigned To new Course'. The 'Send To' dropdown is set to 'User'. The 'Mobile Push (140 character limit)' checkbox is checked. The 'Deep Links' section is also highlighted in yellow and contains a URL: 'http://opcm.com/Standard/Check/Utility/SCORM/course/1'. The 'Deep Links' section has 'Create Links' and 'Remove Links' buttons.

From the Triggered notification, there is a secondary tab for defining the Push / SMS text as well as setting if the mobile deep link is to be included in the Push action.

Push text is restricted to 140 characters and that does include the deep link Mobile action. It is important to restrict text to these limits as anything over that limit will be cut off in the delivered message. Substitution variables from the fields area can be included but will not correctly increase the character count so it is recommended to type the message fully. The Push title is used for finding the Push Notification in the Mobile Push Queue and is not counted towards the 140 character limit nor sent to the mobile apps.

From the notification area, the push message can be defined and scheduled. It is recommended to push the notification immediately when the trigger action occurs. The Push timing process will prevent push notifications from being sent outside of the specified business hours. Push notifications can also ONLY be sent to the User that is assigned to the object.

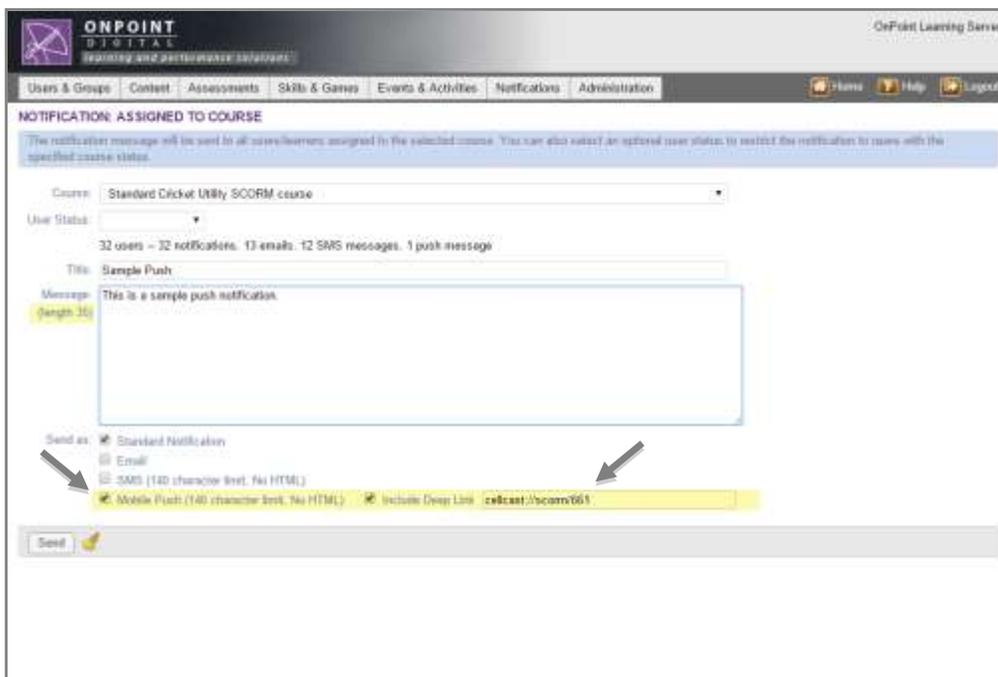
Push notifications support an optional fixed 'deep link' action to a specified object in OPLS that can be added at the notification level. Actions can only be added for the object that the Triggered notification is established for. If no mobile deep link is created for a notification then the default action of all push notifications is to open the CellCast app. This Action, if created, is automatically added to the Push notification in the appropriate field when the notification is generated. The Action field cannot be edited and is ONLY automatically created based on the deep link being created.

Once the triggered notification has been saved, then the actual Push notification will be generated when the trigger action occurs and those messages will be generated and written to the Mobile Push Queue. This Mobile Push Queue is sent out to the users every 5 minutes.

Ad Hoc Send Notifications

Push notifications can also be utilized from the Send Notifications process under Notifications that allows for sending Push notifications to users already assigned to an object based on status or to all members of a specific Group.

From the Notifications menu in OPCM, the administrator can select Send Notifications and then any of the available ad hoc notification processes to send a Push Notification to the users that fit the specified criteria.



The Ad Hoc notification has a similar check box to send the notification to Push. If the "Include Deep Link" option is selected, then the action to link directly to the assignment will also be included in the message to the app. Ad Hoc Notifications are immediately added to the Mobile Push Queue and then sent out on the specified interval (usually every 5 minutes).

As with the Triggered notifications, the Push notification Title is not sent to the mobile app nor counted towards the 140 character limit. The title is used for finding the message in the Mobile Push Queue.

Note: Deep Links for launching content are ONLY available from the object specific Ad Hoc notifications. This is to ensure that the message is going out to individuals that are assigned to the message and can launch it. Deep links should NOT be added to the message area in an Ad Hoc notification to a Group or content assignees as the message area does not support this function and the message will likely be made undeliverable.

Section 3: Mobile Push Queue

Applications Involved

OPCM

Reviewing the Queue

The Mobile Push Queue provides a location to see all generated Push notifications and their current status as reported by the OPpush service. The OPpush service can only indicate if the message was sent and does not include any information as to whether the user opened the message. The Mobile Push queue is accessed from OPCM by navigating to the Notifications menu and then selecting Mobile Push queue.

Delete	User	Device	Date	Title	First After	Status	Date Sent
<input type="checkbox"/>	Coakley, Phil	ipad	Apr-1-2015 14:14	Nugget Assignment	Apr-1-2015 14:14	Forwarded	Apr-1-2015 14:15
<input type="checkbox"/>	Coakley, Phil	android_tablet	Apr-1-2015 14:14	Nugget Assignment	Apr-1-2015 14:14	Forwarded	Apr-1-2015 14:15
<input type="checkbox"/>	Coakley, Phil	ipad	Apr-1-2015 14:05	Nugget Assignment	Apr-1-2015 14:05	Forwarded	Apr-1-2015 14:07
<input type="checkbox"/>	Coakley, Phil	android_tablet	Apr-1-2015 14:05	Nugget Assignment	Apr-1-2015 14:05	Forwarded	Apr-1-2015 14:07
<input type="checkbox"/>	Brandenburg, Wade	ipad	Mar-31-2015 09:09	Nugget Assignment	Mar-31-2015 09:09	Forwarded	Mar-31-2015 09:11
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 16:01	Nugget Assignment	Mar-30-2015 16:01	Forwarded	Mar-30-2015 16:03
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 15:55	Assessment Set Assignment	Mar-30-2015 15:55	Forwarded	Mar-30-2015 15:57
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 15:50	Course Assignment	Mar-30-2015 15:50	Forwarded	Mar-30-2015 15:51
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 15:50	Course Assignment	Mar-30-2015 15:50	Forwarded	Mar-30-2015 15:51
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 15:42	Course Assignment	Mar-30-2015 15:42	Forwarded	Mar-30-2015 15:43
<input type="checkbox"/>	Olson, Peg	ipad	Mar-30-2015 15:42	Course Assignment	Mar-30-2015 15:42	Forwarded	Mar-30-2015 15:43
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 17:01	Skill Profile Assignment	Mar-29-2015 17:01	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 17:01	Nugget Assignment	Mar-29-2015 17:01	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 17:01	Course Assignment	Mar-29-2015 17:01	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 17:01	Activity Assignment	Mar-29-2015 17:01	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 17:01	Course Assignment	Mar-29-2015 17:01	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 16:35	Course Assignment	Mar-29-2015 16:35	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 16:35	Course Assignment	Mar-29-2015 16:35	Forwarded	Mar-30-2015 01:00
<input type="checkbox"/>	Olson, Peg	ipad	Mar-29-2015 16:25	Skill Profile Assignment	Mar-29-2015 16:25	Forwarded	Mar-30-2015 01:00

Messages can be filtered by status, date, and user. For each push notification triggered, a Push Notification is created for all Push-allowed devices in the user's mobile profile. If a user has accepted the Push Prompt then the message will appear in the Mobile Push Queue.

The various device Push services only supply limited information as to delivery and as such the Mobile Push Queue can only indicate if the message was pushed to the Push service (indicated by the status of "Forwarded").

Section 4: Mobile App (User) Settings

Applications Involved

CellCast

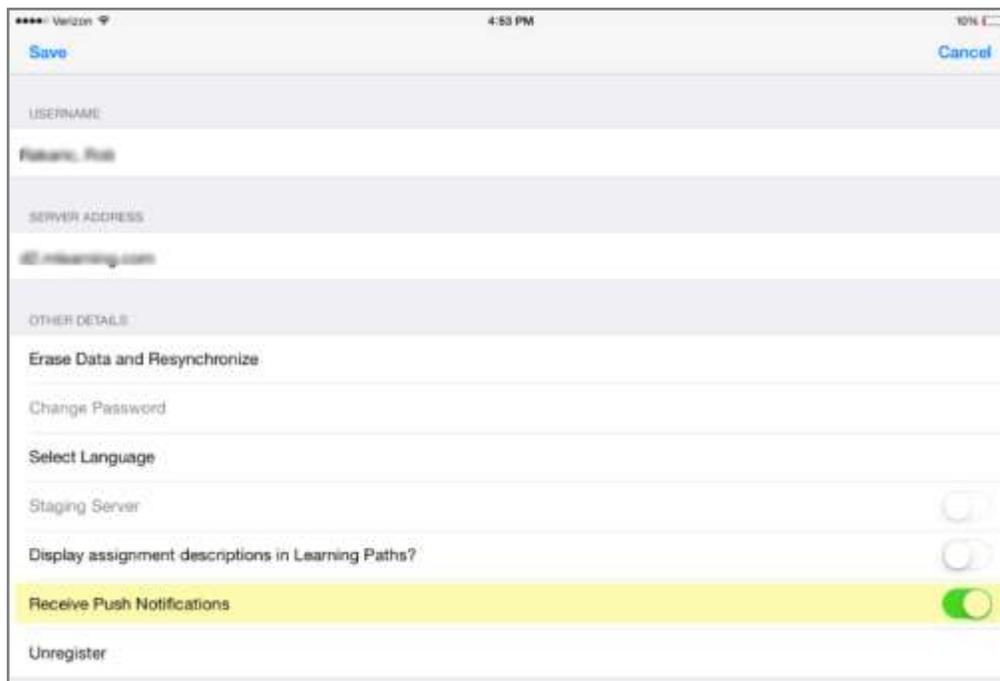
Defining the Settings

Each CellCast mobile application supports the initial Push notification prompt as well as the ability for the user to change that setting from within the app's Settings menu.

When the CellCast app is installed it will prompt the user to access / allow Push notifications. In IOS, once this action has been initially displayed it will not reappear or prompt the user again unless the re-prompt configuration has indicated that the app should prompt once more due to specific time lapse.

Allowing Push notifications immediately records and passes the user's device-specific Push ID to the server and it will appear in the user's mobile profile. If the user elects to "Opt-out", then "Opt-out" is passed to the server side and appears in the user's mobile profile for that device type.

At any point in time a user can elect to turn the "Receive Push Notifications" selection on or off through the Settings menu.



Setting this value to 'on' will pass the Push Id to the user's mobile profile and setting it to off will delete the Push Id and replace it with "Opt-out" for that specific device type for that user.

Section 5: Push Notifications and Actions in CellCast

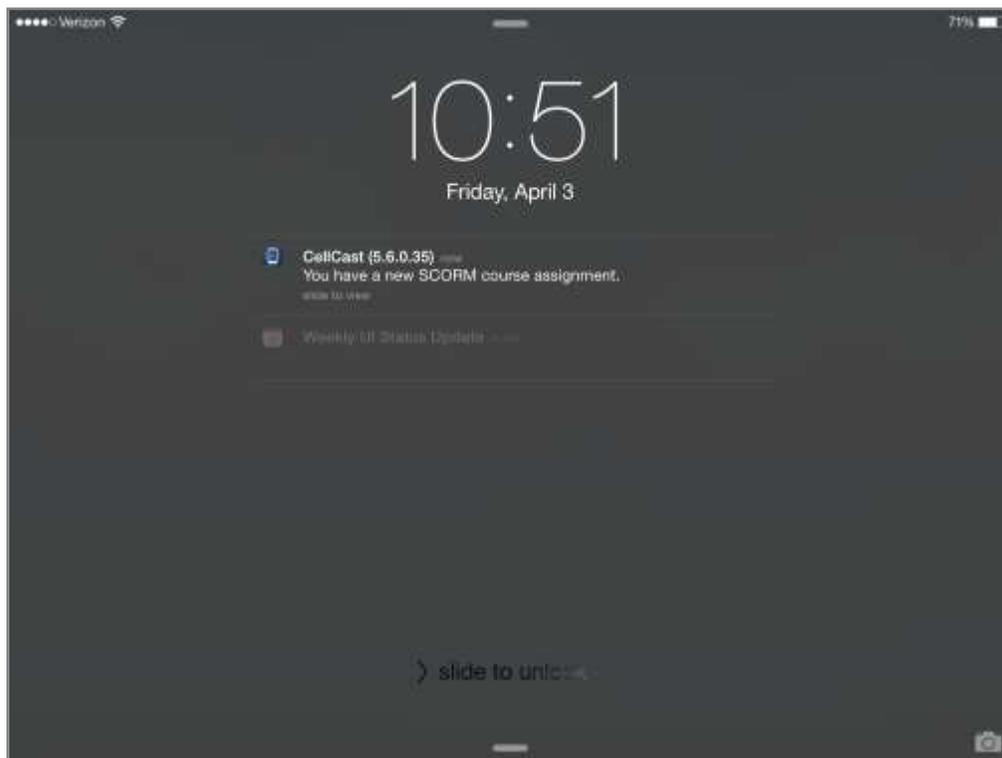
Applications Involved

CellCast

Notification

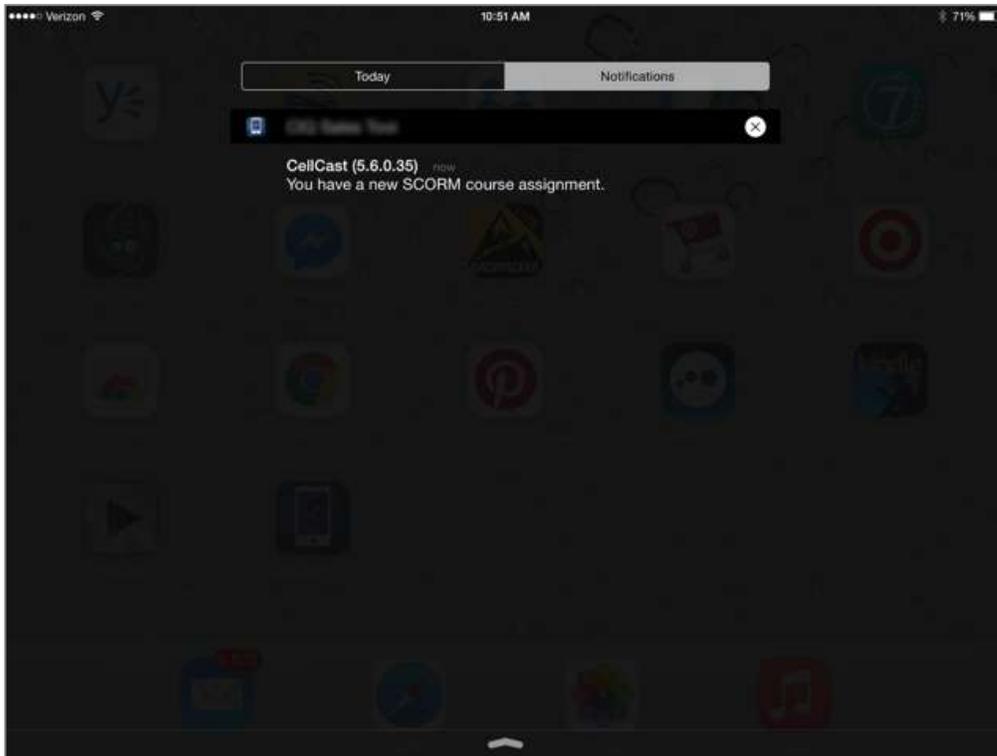
Once the Push notification has been sent out by the OPPush service, the message is forwarded to the Device Specific Push service and then delivered to the Mobile Device.

Push notifications appear in the Notifications hub specific to each device type and the images below are specific to iPad. When a push notification is delivered to the mobile device, it will appear on the lock screen.



The message appears with the application that it pertains to as well as the push message. From the Lock screen sliding to view the push message will invoke the Push action. The push action will either attempt to launch a specific assignment or it will open the CellCast app to the main page if no Deep link was created.

If the Device is not on the lock screen then the Push notification appears in the notification hub specific to that device type.

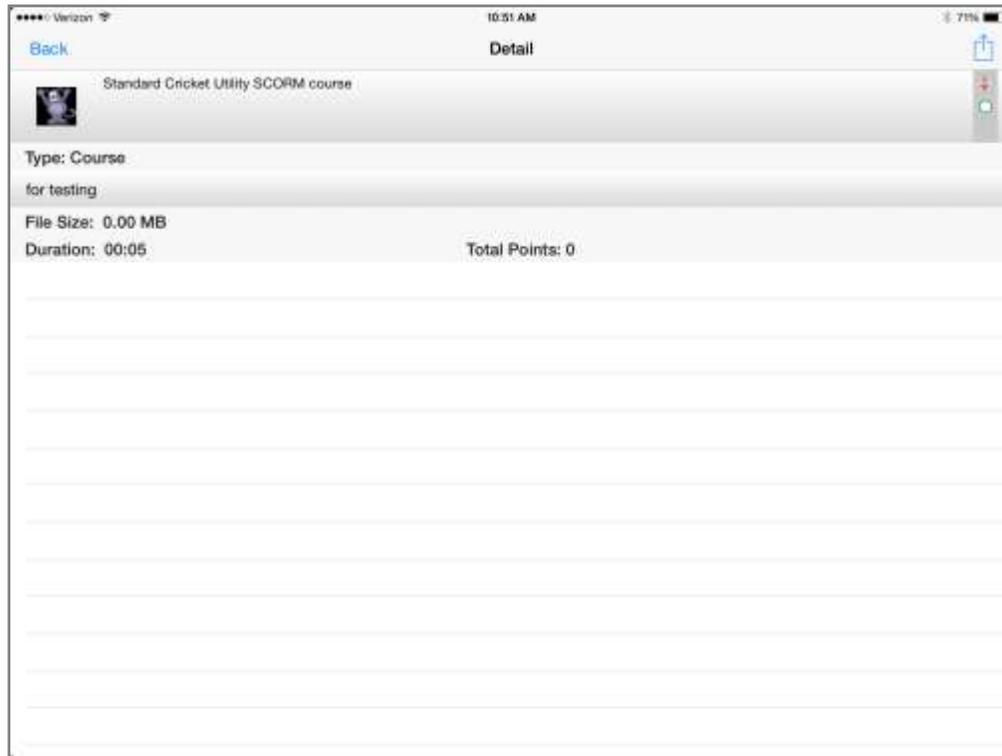


The same actions apply from the Notification hub. All unread notifications will appear here.

Tapping the Push notification from the notifications hub will invoke the Action associated with the push notification. There are three possible app reactions to the Action being called and these actions all depend on how the assignment is associated with the user.

- 1) If the User is assigned to the Object that the Deep link refers, then the CellCast app will perform a light call to the server to retrieve all necessary information and then launch the assignment.
- 2) If the user is not assigned to the Object that the Deep Link refers but the Object is available in the catalog, then the CellCast app will perform a light call to the server which will assign the Object to the user and then provide all necessary information to launch the assignment.
- 3) If the user is not assigned to the Object that the Deep Link refers and the Object is also NOT available in the Mobile catalog, then the app will display a message indicating that the requested assignment is not available.

Assignment launch functions will open CellCast and immediately launch to the assignment detail page as seen below (for a Course, Nugget or Assessment Set).



Once the Push notification has been selected then it is removed from the notifications hub.

Push notifications are supported with the following app and server side updates:

- OPLS 5.6
- iPad 5.6 release
- iPhone 5.6 release
- Android 5.6 release

Support for BlackBerry 10, Windows 8.1 Tablet, and Windows Phone are planned for a future release.