

UCLA David Geffen School of Medicine

LEVERAGING OPENACS PACKAGE ARCHITECTURE TO BUILD A MOBILE APPLICATION API BACKEND

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GOALS & REQUIREMENTS

- Need an easily extensible mobile app infrastructure that consolidates user-specific sets of functionality behind a single sign-on
- New functionality (Tiles) can be added without requiring a new AppStore release*
- Each Tile should be of a specific type and provide a specific functionality.
- Each Tile should have the option to connect through API calls to different endpoints.
- The API endpoints can be locally managed or reference third-party vendor API.
- The Tiles should be able to be of the same type but provide different content.
- The Tiles should be visible based on the user membership.

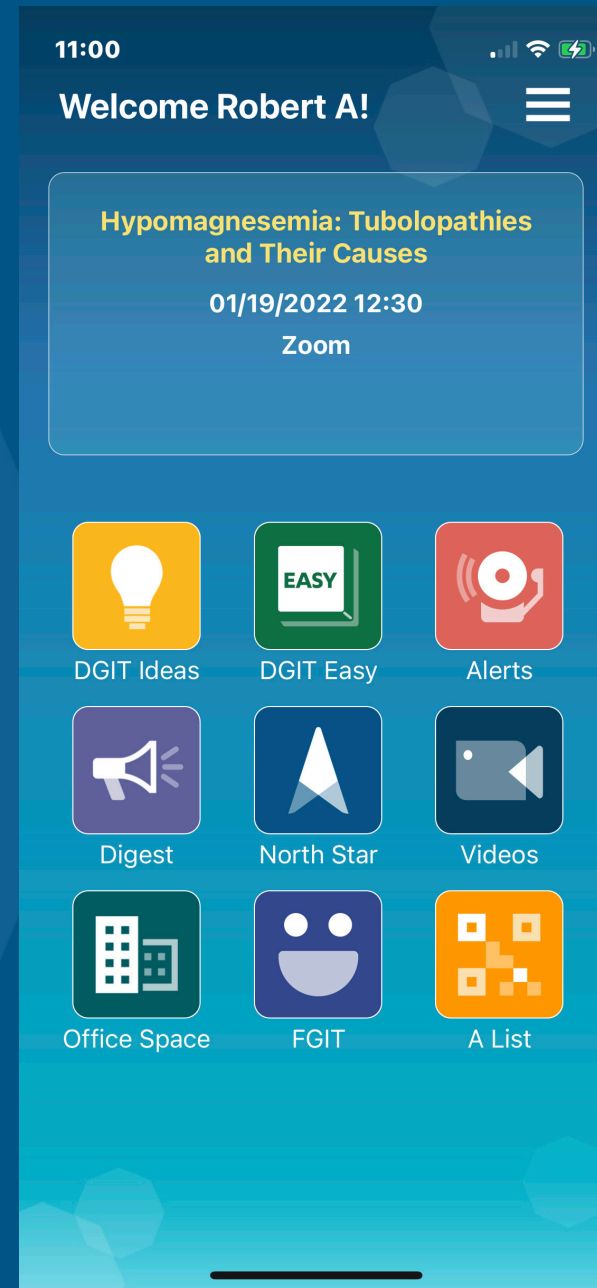
ARCHITECTURE

- Mobile App React native (both iOS and Android versions)
- Central management server OpenACS / NaviServer
- AWS Linux (EC2 or ECS) , PostgreSQL RDS Aurora



DGSOM APP:

DGIT CONNECT




General controls










Digital Sign
Data


Application Tray


TILE TYPE: WEBVIEW

Welcome Cole! 

Pediatric Neurosurgery
01/07/2022 08:00
Zoom


 DGIT Ideas	 DGIT Easy	 Alerts
 Digest	 North Star	 Videos
 Office Space	 FGIT	 A List


12:36  **Digest** 

 **ANNOUNCEMENTS**


[COVID-19 On-Site Case Location Dashboard](#)


[JCCC Trainee Membership](#)

 **SEMINARS, SYMPOSIA, & TALKS**

NEW [Renal Grand Rounds: "Improving Healthcare Equity in CKD Care" - Keith Norris, MD, PhD](#)
July 12, 2023 12:30 PM 

NEW [UCLA Pediatric Grand Rounds](#)
July 14, 2023 8:00 AM 


NEW [UCLA Pediatric Grand Rounds](#)
July 21, 2023 8:00 AM 

 **RESEARCH STUDY RECRUITMENT**








[Healthy Research Participants Needed](#)





TILE TYPE: A-LIST


Welcome Cole! 

Pediatric Neurosurgery
01/07/2022 08:00
Zoom

-  DGIT Ideas
-  DGIT Easy
-  Alerts
-  Digest
-  Notifications
-  Videos
-  Office Space
-  FGIT
-  A List

12:39  A List 



Scan QR



Success!
You have been added to the attendance sheet.


OK

Scan the event QR code to be added to the attendance sheet

 Scan  History

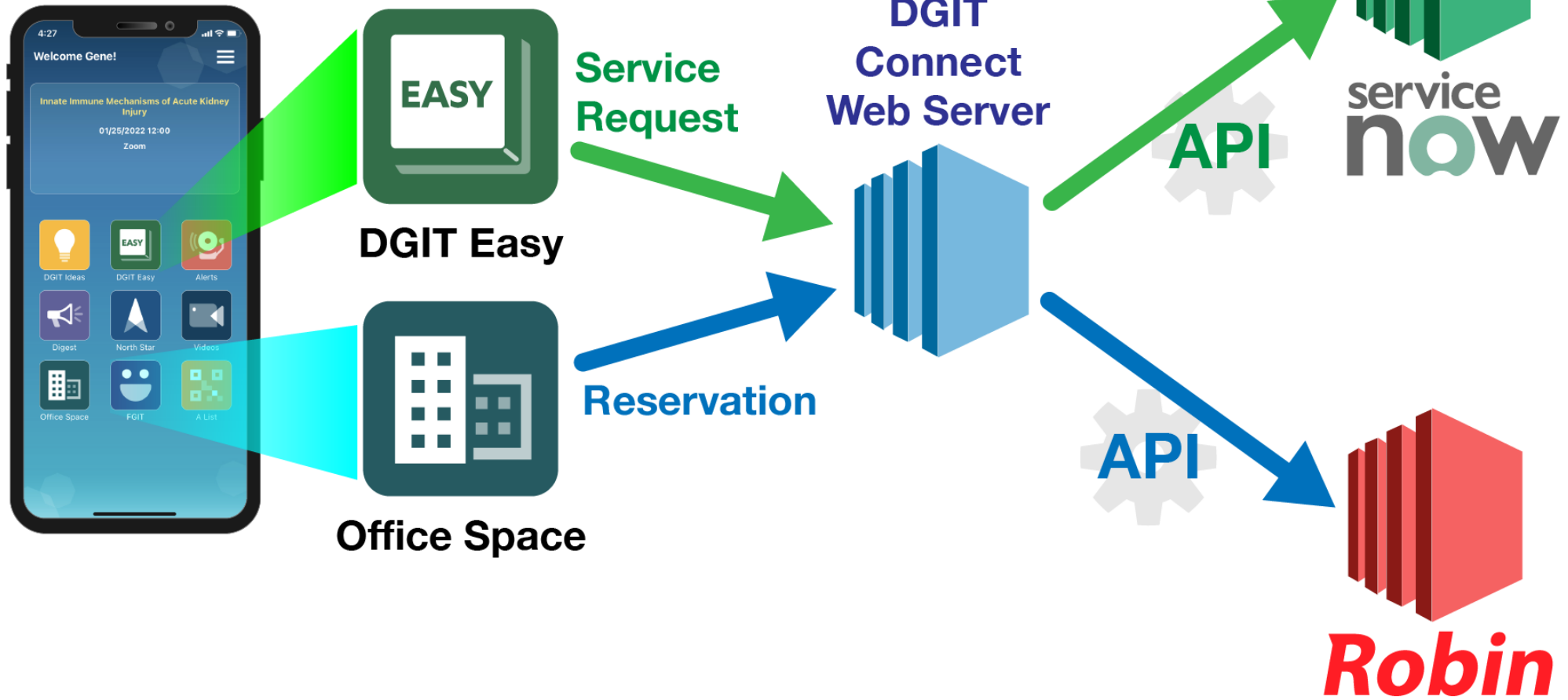
Conference QR Code

Title:	New Alist Test Conference
Description:	New Alist Test Conference
Conference Date:	Sep-15-2020 08:00 AM
External Code:	1234567890
Welcome Text:	New Alist Test Conference

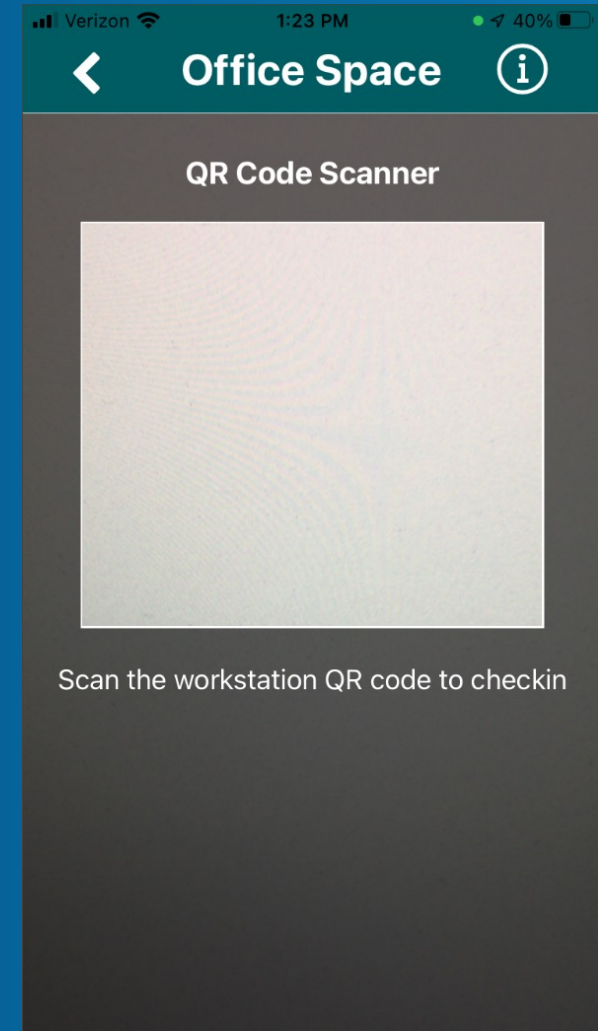
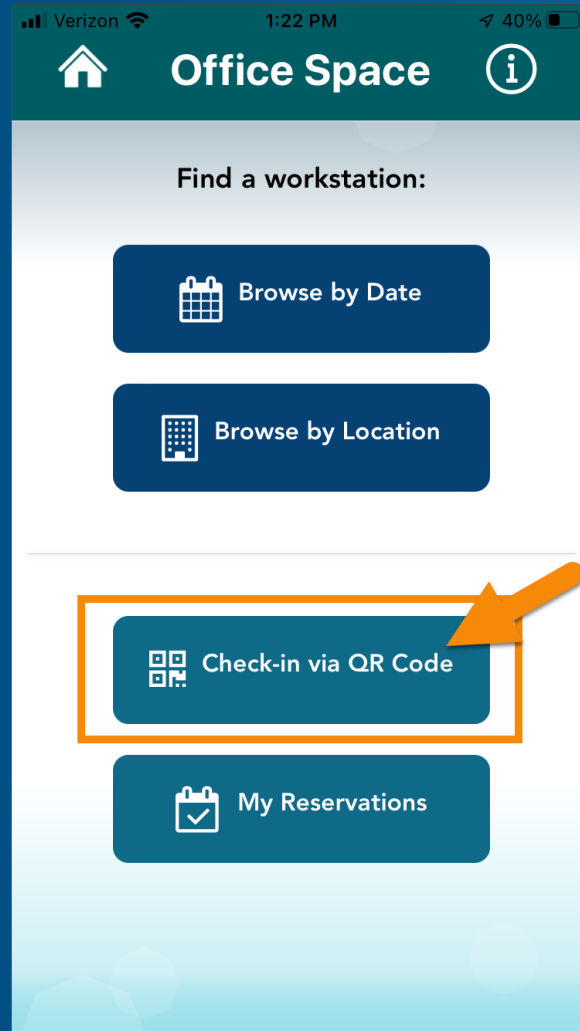
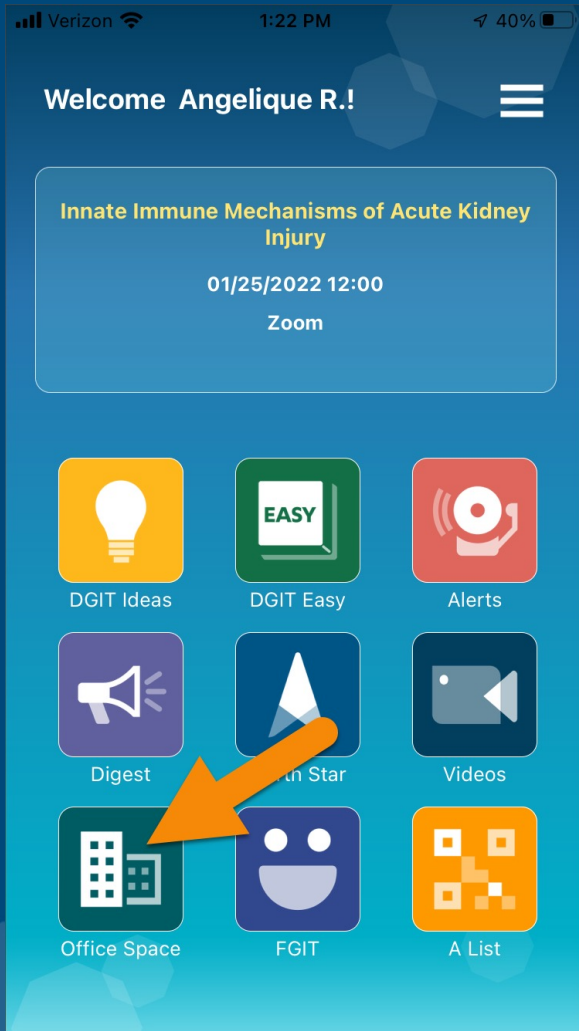


[Print](#) [Close](#)

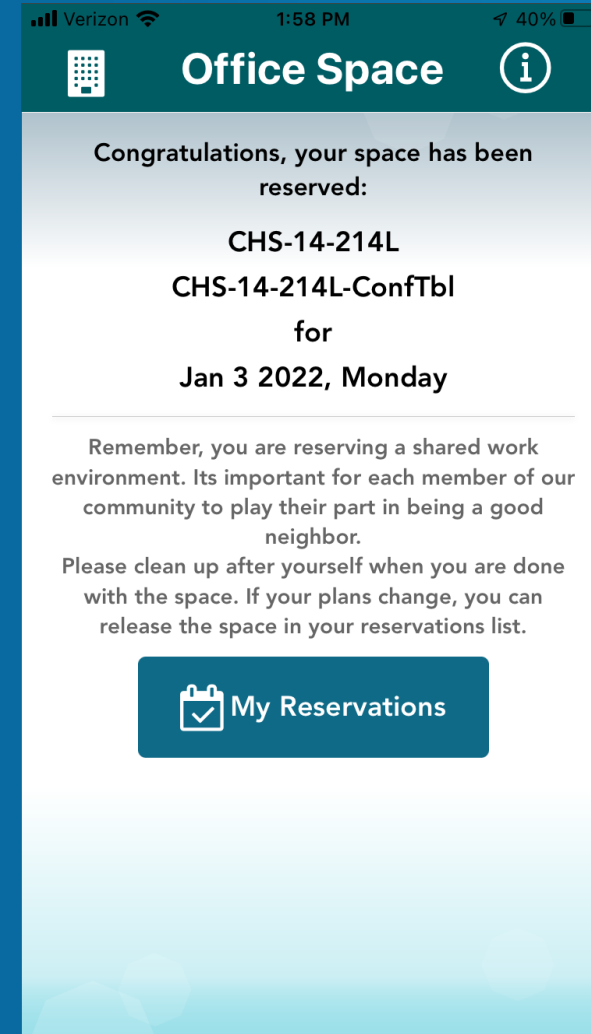
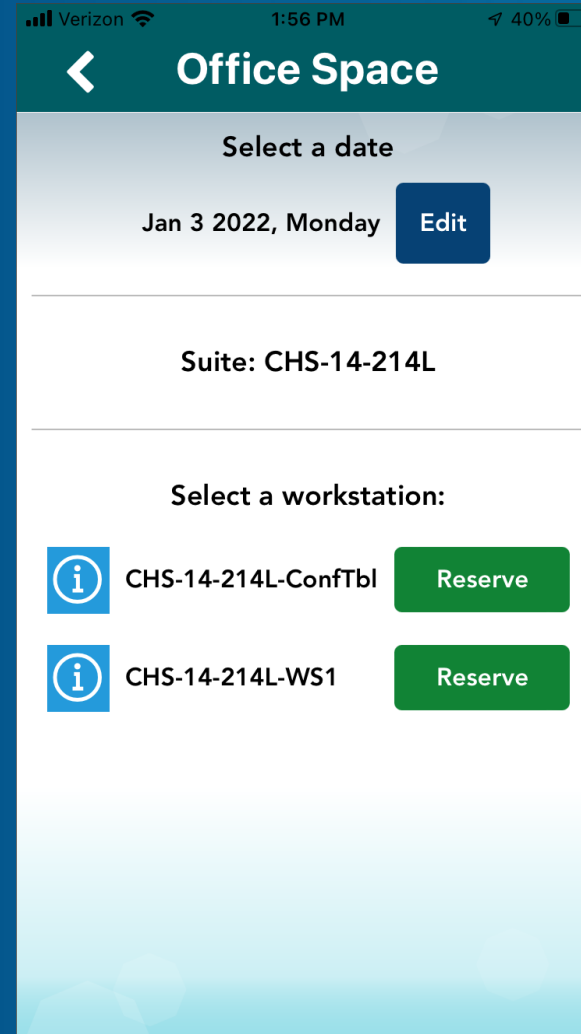
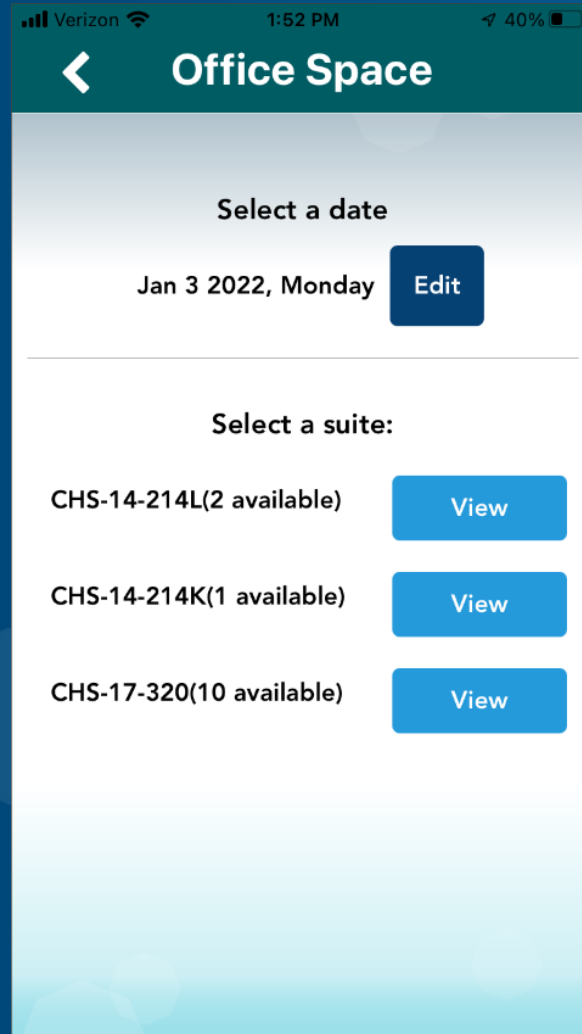
DGIT Connect App



OFFICE SPACE: To reserve/check-in a workstation in person:



OFFICE SPACE: To reserve a workstation in advance:



BASE TILE

COMMON PARAMETERS

DAC =
DGSOM App – Common



Parameter ▲	Type ⇅	Scope ⇅	Description ⇅
_dac_appCode	string	instance	This is unique identifier for the appCode – defaults refName_InstanceId
_dac_appDescription	string	instance	General description of the app
_dac_appDisplayInformation	string	instance	The information that gets displayed to the user for the Tile
_dac_authTokenP	string	instance	Whether the tile requires to pass the auth token
_dac_deployableP	string	instance	Whether the tile is ready to be deployed
_dac_deprecatedP	string	instance	Whether this tile is deprecated
_dac_helpUrl	string	instance	Help url for each tile
_dac_localStoreP	string	instance	Whether the tile has it's own local store
_dac_pushNotificationP	string	instance	Whether the tile is going to be using push notifications
_dac_refPackageId	number	instance	Package Id of the package that handles the tile information on the backend
_dac_tileBackgroundColor	string	instance	The background color of the tile
_dac_tileBackgroundImageUrl	string	instance	The background image of the tile
_dac_tileIcon	string	instance	The icon to display
_dac_tileLabelColor	string	instance	The label color of the tile
_dac_tilePriority	number	instance	The order to display the tile in the frontend
_dac_tileTitle	string	instance	Label for the icon

CUSTOM TILE

DATI: DGSOM App – Tile Internal

DATC: DGSOM App – Tile Customizable

TILE PARAMETERS

Parameter ▲	Type ⇅	Scope ⇅	Description ⇅	Section ⇅
_dati_digestUrl	string	instance	Digest url endpoint	DATI

Parameter ▲	Type ⇅	Scope ⇅	Description ⇅	Section ⇅
_dati_getRootUrl	string	instance	Will return the root API endpoint that the frontend will use to customize its own API calls	DATI

Parameter ▲	Type ⇅	Scope ⇅	Description ⇅	Section ⇅
_dati_getHistoryUrl	string	instance	url for a-list endpoint	DATI
_dati_recordAttendanceUrl	string	instance	url for a-list attendance record endpoint	DATI

INSTANCE INHERITANCE

COMMON PARAMETERS AND TILE PARAMETERS



Dac

_dac_appCode	<input type="text" value="tile--office-space-prod"/>	<small>(i) This is unique identifier for the appCode – defaults refName_\$instance_id</small>
_dac_appDescription	<input type="text" value="Office Space"/>	<small>(i) General description of the app</small>
_dac_appDisplayInformation	<input type="text" value="Need to come into the office? Reserve a workstation with the C"/>	<small>(i) The information that gets displayed to the user for the Tile</small>
_dac_authTokenP	<input type="text" value="f"/>	<small>(i) Whether the tile requires to pass the auth token</small>
_dac_deployableP	<input type="text" value="t"/>	<small>(i) Whether the tile is ready to be deployed</small>
_dac_deprecatedP	<input type="text" value="f"/>	<small>(i) Whether this tile is deprecated</small>
_dac_helpUrl	<input type="text"/>	<small>(i) Help url for each tile</small>
_dac_localStoreP	<input type="text" value="f"/>	<small>(i) Whether the tile has it's own local store</small>
_dac_pushNotificationP	<input type="text" value="t"/>	<small>(i) Whether the tile is going to be using push notifications</small>
_dac_refPackageId	<input type="text" value="33077"/>	<small>(i) Package Id of the package that handles the tile information on the backend</small>
_dac_tileBackgroundColor	<input type="text" value="#005C63"/>	<small>(i) The background color of the tile</small>
_dac_tileBackgroundImageUrl	<input type="text"/>	<small>(i) The background image of the tile</small>
_dac_tileIcon	<input type="text" value="https://dgit-app-api-v2.ctrl.ucla.edu/file-storage/view/tile_icons/"/>	<small>(i) The icon to display</small>
_dac_tileLabelColor	<input type="text" value="white"/>	<small>(i) The label color of the tile</small>
_dac_tilePriority	<input type="text" value="30"/>	<small>(i) The order to display the tile in the frontend</small>
_dac_tileTitle	<input type="text" value="Office Space"/>	<small>(i) Label for the icon</small>

Dati

_dati_getRootUrl	<input type="text" value="https://connect.dgsom.ucla.edu/v2/app/tile/office-space/"/>	<small>(i) Will return the root API endpoint that the frontend will use to customize its own API calls</small>
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PACKAGE DEPENDENCIES AND PROVIDES

Services Extended



Provides a relation between a parent package and a child package and allows to inherit the parameters we need to share among the children.

Services Provided

- Provides service tile--office-space, version 1.0.1d

Services Required

- This package does not require any services.
- Add a service required by this package

Services Extended












- Extends service dgit-base-tile, version 1.3.0 (remove)
 - Provided by DGIT Base Tile, version 1.3.0
- Add a service extended by this package

Services Embedded




- This package does not embed any services.
- Add a service embedded by this package

TILE ADMINISTRATION

Tiles Administration:

					
Tile Alerts	Tile AList	Tile Digest	Tile Easy	Tile FGIT	Tile Ideas
					Tile Walkup
Tile North Star	Tile Office Space	Tile Rewards	Tile Videos		

Access Administration:

		
Groups	Tiles	Associate Groups/Tiles

TILE MANAGEMENT

Tiles

Show entries

Search:

	Tile ID	Version ID	Module Name	Module Key	App Code	Tile Priority	Actions
	2529	32839	DGIT Base Tile	dggit-base-tile		0	Manage
	2683	32933	Tile AList	tile--a-list	tile--a-list-2683	50	Manage
	2694	32893	Tile Digest	tile--digest	tile--digest-2694	15	Manage
	3754	32880	Tile North Star	tile--northstar	tile--northstar-3754	20	Manage
	3783	32921	Tile Orders	tile--orders	tile--orders-3783	99	Manage
	4677	32893	Tile Digest Internal	tile--digest	tile--digest-4677	99	Manage
	11915	32933	Tile AList Internal	tile--a-list	tile--a-list-11915	99	Manage
	12600	32876	Tile iGrok	tile--igrok	tile--igrok-12600	99	Manage
	17297	32872	Tile Alerts	tile--alerts	tile--alerts-17297	10	Manage
	21833	34468	Tile Videos	tile--connect-videos	tile--connect-videos-21833	25	Manage
	21850	34468	Tile FGIT	tile--connect-videos	tile--connect-videos-21850	45	Manage
	23033	32925	Tile Rewards	tile--rewards	tile--rewards-23033	99	Manage
	23069	32884	Tile Ideas	tile--ideas	tile--ideas-23069	1	Manage
	25253	32897	Tile Easy	tile--easy	tile--easy-25253	5	Manage
	25703	32917	Tile Generic	tile--generic	tile--generic-25703	99	Manage
	31335	32905	Tile Office Space	tile--office-space	tile--office-space-prod	30	Manage
	35188	35099	Tile Walkup	tile--walkup	tile--walkup-35041	1	Manage

Showing 1 to 17 of 17 entries

Previous **1** Next



CTRL MOBILE HUB

Services Provided

- Provides service ctrl-mobile-hub, version 1.11.1

Services Required

- Requires service ctrl-jwt, version 1.0.0 ([remove](#))
 - Provided by [CTRL JWT, version 1.0.0](#)
 - Provided by [CTRL JWT, version 1.1.0](#)
- Requires service ctrl-onesignal-push, version 1.0.0 ([remove](#))
 - Provided by [CTRL OneSignal Push Notification, version 1.0.0](#)
- Requires service ctrl-ws-restful, version 1.10.1 ([remove](#))
 - Provided by [Generic RESTFUL WS Interface, version 1.10.1](#)
 - Provided by [Generic RESTFUL WS Interface, version 2.0.0](#)
- Requires service dgit-base-tile, version 1.3.0 ([remove](#))
 - Provided by [DGIT Base Tile, version 1.3.0](#)
- Requires service dgit-group-tiles, version 1.0.0d ([remove](#))
 - Provided by [DGIT Group Tiles Management, version 1.0.0d](#)
- Requires service dgit-tile-management, version 1.0.0 ([remove](#))
 - Provided by [DGIT Tile Management, version 1.0.0](#)
- Requires service group-user-management, version 1.1.0 ([remove](#))
 - Provided by [Group User Management, version 1.1.0](#)
- [Add a service required by this package](#)

Services Extended

- This package does not extend any services.
- [Add a service extended by this package](#)

Services Embedded


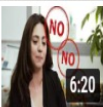

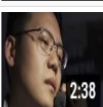


- This package does not embed any services.
- [Add a service embedded by this package](#)

Parameter ▲	Type ⇅	Scope ⇅	Description ⇅	Section ⇅
appBackgroundImageUrl	string	instance	Mobile Hub customizable background image	Url
authCtrlRestPackageId	number	instance	Package ID of the Ctrl WS Restful package to get the JWT	Auth
currentEventsUrl	string	instance	UCLA on campus current events API url	Url
currentVersion	string	instance	Current Version	Version
defaultPublicGroup	string	instance	The group that all of the users will get for default tiles	Group Tiles
loginMethod	string	instance	Parameter to handle the login method form the app: local or okta	Auth
minimumVersion	string	instance	Minimum Version	Version
minimumVersionMessage	string	instance	Minimum Version Message	Version
onesignalPackageId	string	instance	Package Id of the ctrl-onesignal-push package	Notifications

TILE INSTANCE CONTENT ADMINISTRATION


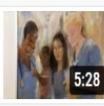

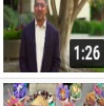
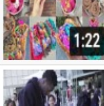

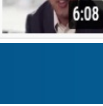
FGIT Bits Add Video

Show entries Search:

Thumbnail	Title	Link	Description	Created By	Created At	Modified By	Modified At	Actions
	ZOOM!	https://youtu.be/cWUOFyGHn7Y		Melody Chen	08/26/2021 17:26	Melody Chen	08/26/2021 17:26	Edit Remove
	35 Q's with Sherly	https://youtu.be/froXhGYv4FE		Melody Chen	08/26/2021 17:26	Melody Chen	08/26/2021 17:26	Edit Remove
	Labor Day Picnic	https://youtu.be/ziqznuRrRo		Melody Chen	08/26/2021 17:27	Melody Chen	08/26/2021 17:27	Edit Remove
	October 31, 6:00 PM	https://youtu.be/x7rPKT_pWk		Melody Chen	08/26/2021 17:27	Melody Chen	08/26/2021 17:27	Edit Remove
	FGIT Thanksgiving Picnic	https://youtu.be/cXtJDQLOynY		Melody Chen	08/26/2021 17:27	Melody Chen	08/26/2021 17:27	Edit Remove
	DGIT Team Building & Staff Appreciation Day	https://youtu.be/5aQY0JJTuUE		Melody Chen	08/26/2021 17:28	Melody Chen	08/26/2021 17:28	Edit Remove

Videos Add Video

Show entries Search:

Thumbnail	Title	Link	Description	Created By	Created At	Modified By	Modified At	Actions
	Geffen Hall - A Health Science Learning Environment for the 21st Century	https://youtu.be/bSzrtTcRIUk		Melody Chen	08/02/2021 13:10	Melody Chen	08/02/2021 13:13	Edit Remove
	School of Nursing Building Tour	https://youtu.be/bEkRDBBB-N4		Melody Chen	08/26/2021 16:39	Melody Chen	08/26/2021 16:39	Edit Remove
	Match Day 2021	https://youtu.be/OWZJTU-J_Ko		Melody Chen	08/26/2021 16:42	Melody Chen	08/26/2021 16:42	Edit Remove
	How do we serve pediatric patients with rare immune diseases?	https://youtu.be/lyqQyJfFebg		Melody Chen	08/26/2021 16:21	Melody Chen	08/26/2021 16:21	Edit Remove
	UCLA Alum Brings Rolled Ice Cream to the South Bay	https://youtu.be/f2YnZ-4kNgg		Melody Chen	08/26/2021 16:22	Melody Chen	08/26/2021 16:22	Edit Remove
	Lakers Visits UCLA Mattel Children's Hospital UCLA Health	https://youtu.be/v_bR4k44ZcA		Melody Chen	08/26/2021 16:23	Melody Chen	08/26/2021 16:23	Edit Remove
	UCLA Mattel Children's Hospital: Food Allergies	https://youtu.be/-LBVQGoWVOQ		Melody Chen	08/26/2021 16:23	Melody Chen	08/26/2021 16:23	Edit Remove

CHALLENGES, LESSONS & QUESTIONS

- **If we want to add a new common parameter, we need to run an upgrade on the base tile and on all the packages that extended the base tile.**
- **Services extended vs embedded, what is the difference and what are the use cases?**
- **Is there a documentation on how to use the services properly?**

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Huang, Khy

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UCLA David Geffen School of Medicine

THANK YOU!