



Accelerating Adaptive UI with Serverless Cloud Backend

Presented by:

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Dan Mitchell – Principal Sales Engineer

A Tale of Two Companies



DigiCom

- Medium-sized IT parts distributor
- Online customer ordering
- All inside sales, no field presence
- Few CSRs handle customer issues
- Commercial OpenEdge-based ERP



ServiTech

- Medium-sized field services company
- Lots of CSRs handle customer requests
- CSRs dispatch requests to technicians
- Techs work remote, using own devices
- CRM & Service System are .NET/MSSQL



DigiCom



ServiTech



DigiServ



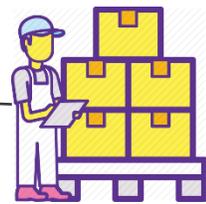
Customers



CSR



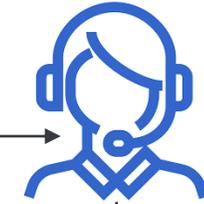
Progress OpenEdge



Inventory Worker



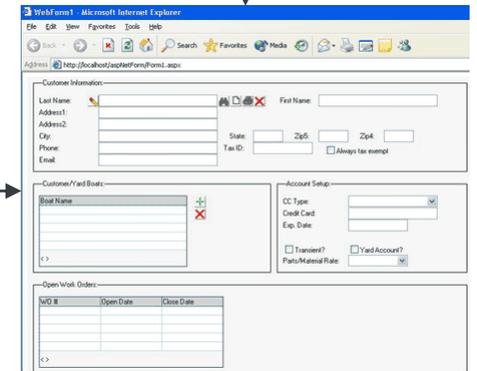
Customers



CSR



Technicians



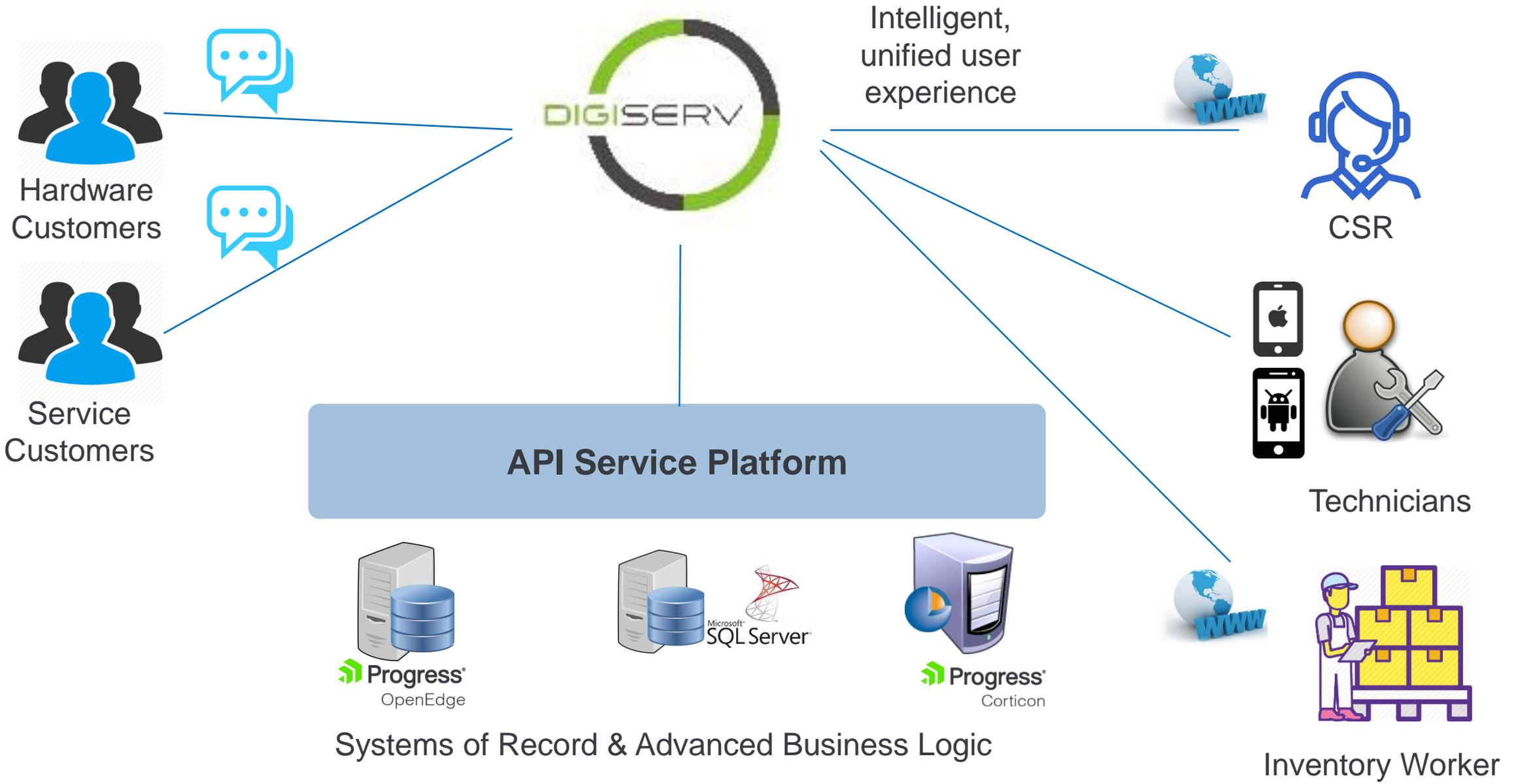
Microsoft SQL Server



DigiCom + ServiTech = DigiServ

Challenges:

- Post-merger joint CSR team downsized 75%
 - How do they support volume and diversity of inbound service requests?
- DigiCom needs access to ServiTech backend system
 - To deliver inventory/shipping notifications to field technicians
- ServiTech needs remote access to DigiCom backend system
 - Techs need to research and order replacement parts from the field
- Field techs need modern mobile apps
 - To leverage device features like geolocation, camera, messaging, push notifications...
- Growth strategy is aggressive diversification of products sold and serviced
 - How best to maintain ever more complex and numerous technician assignment rules?



What You Will See Today



User system down



Technician Acknowledges



Stock replenished via web app



Live Chat to schedule service



Contact Customer



Technician notified



Technician assigned



Order needed parts



Service completed



Technician notified

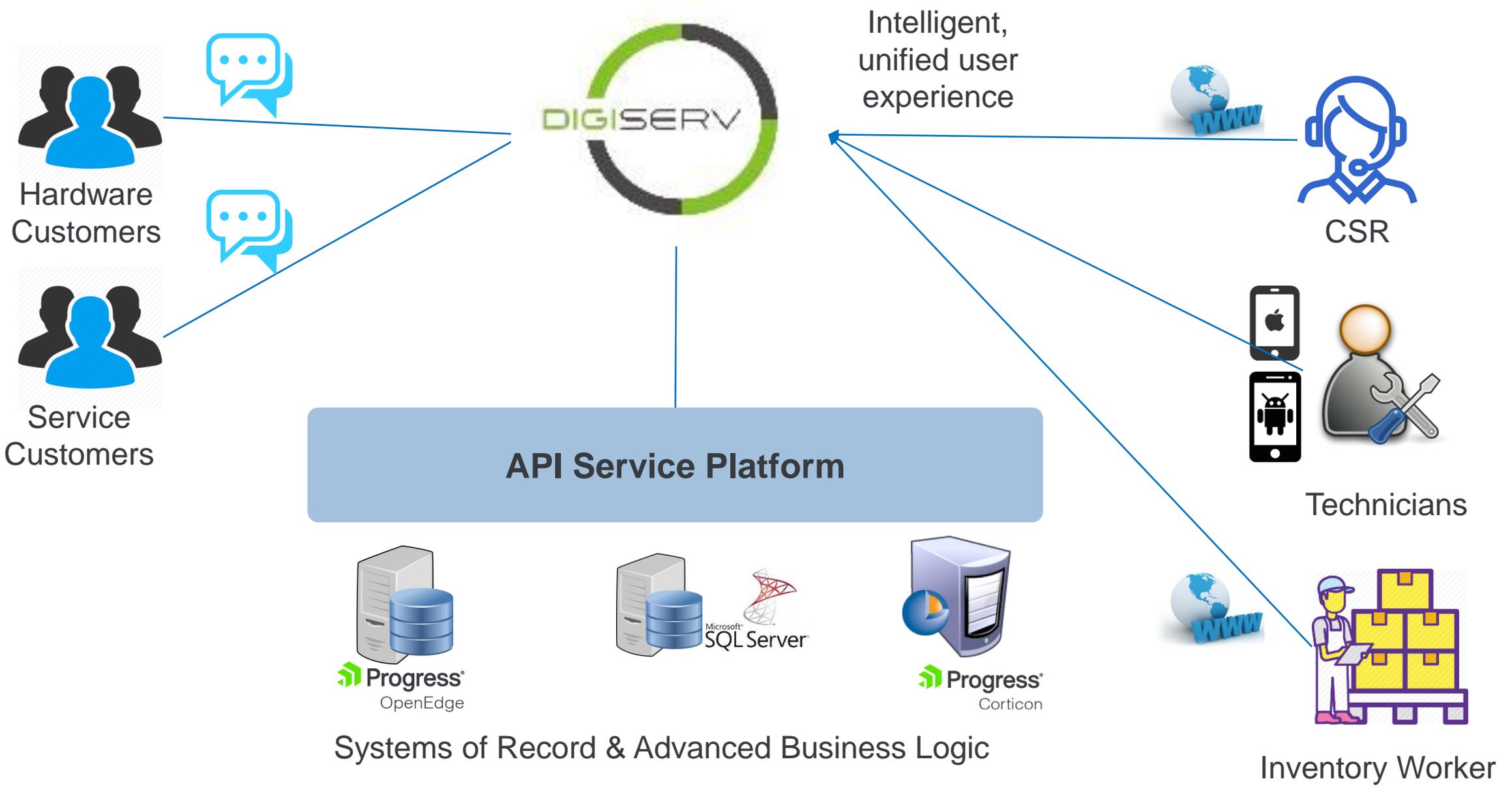


Needed part out of stock

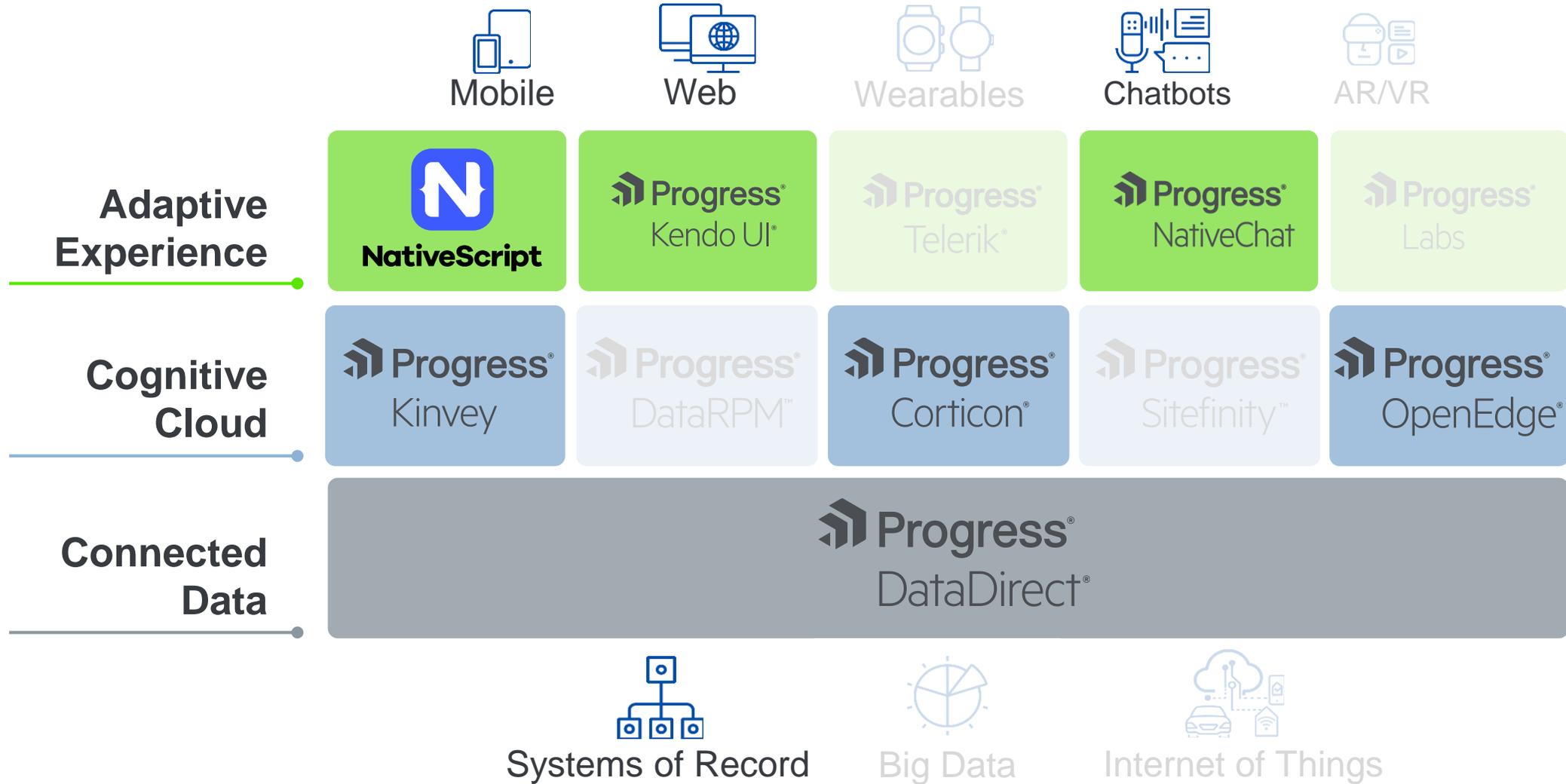


Customer Acknowledge

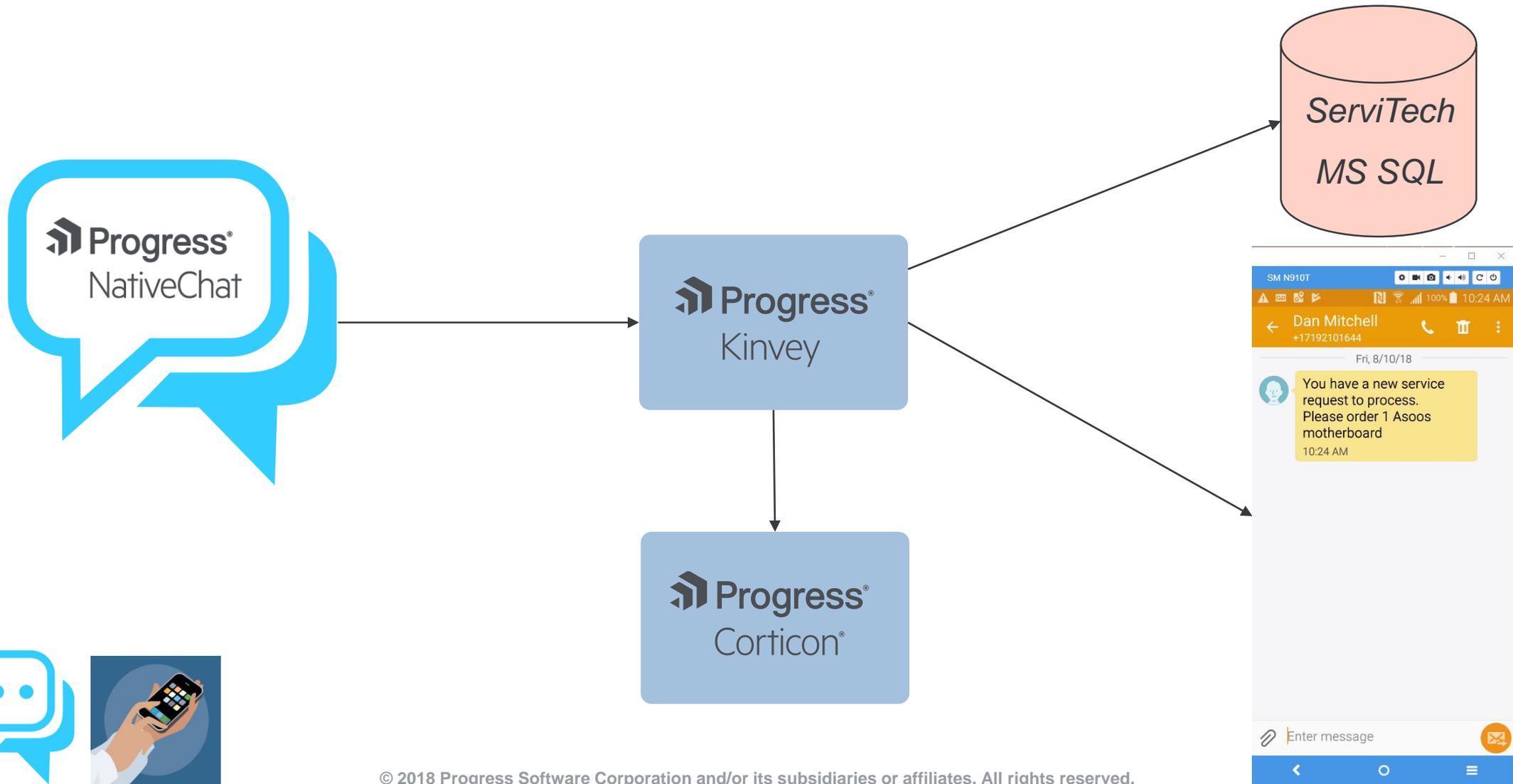
Field Service Demonstration



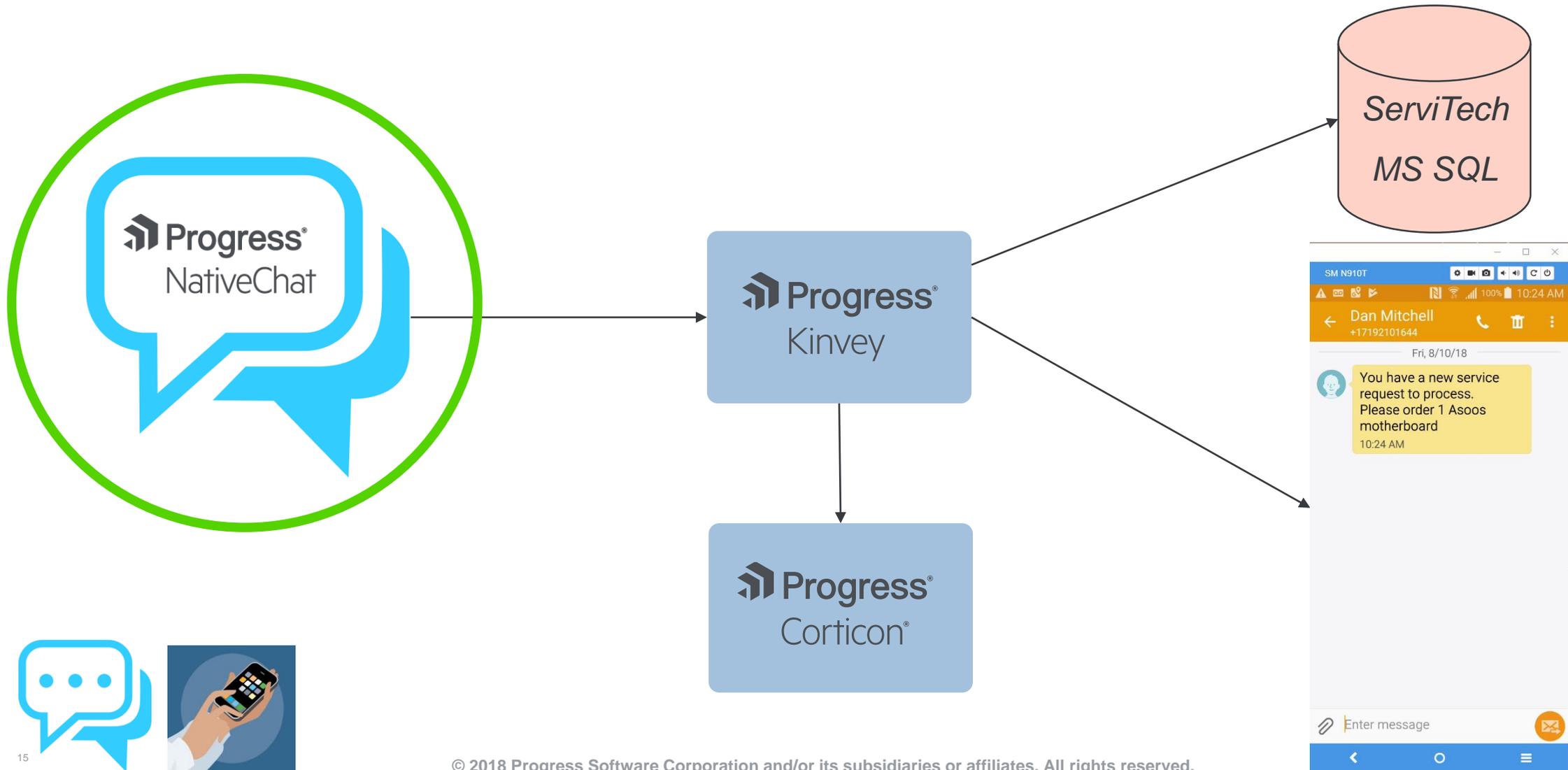
The Progress *Cognitive-first* Platform



Demo Step 1: WHAT DID YOU SEE: Chat Bot, mBaaS, Biz Rules, MSSQL and SMS



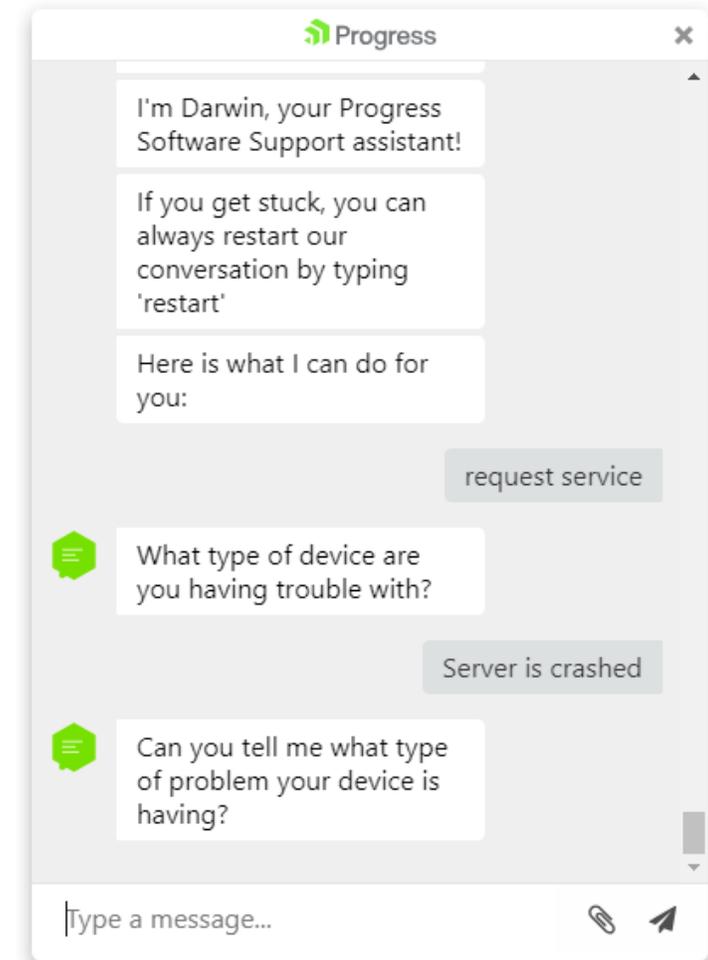
Demo Step 1: WHAT DID YOU SEE: Chat Bot, mBaaS, Biz Rules, MSSQL and SMS



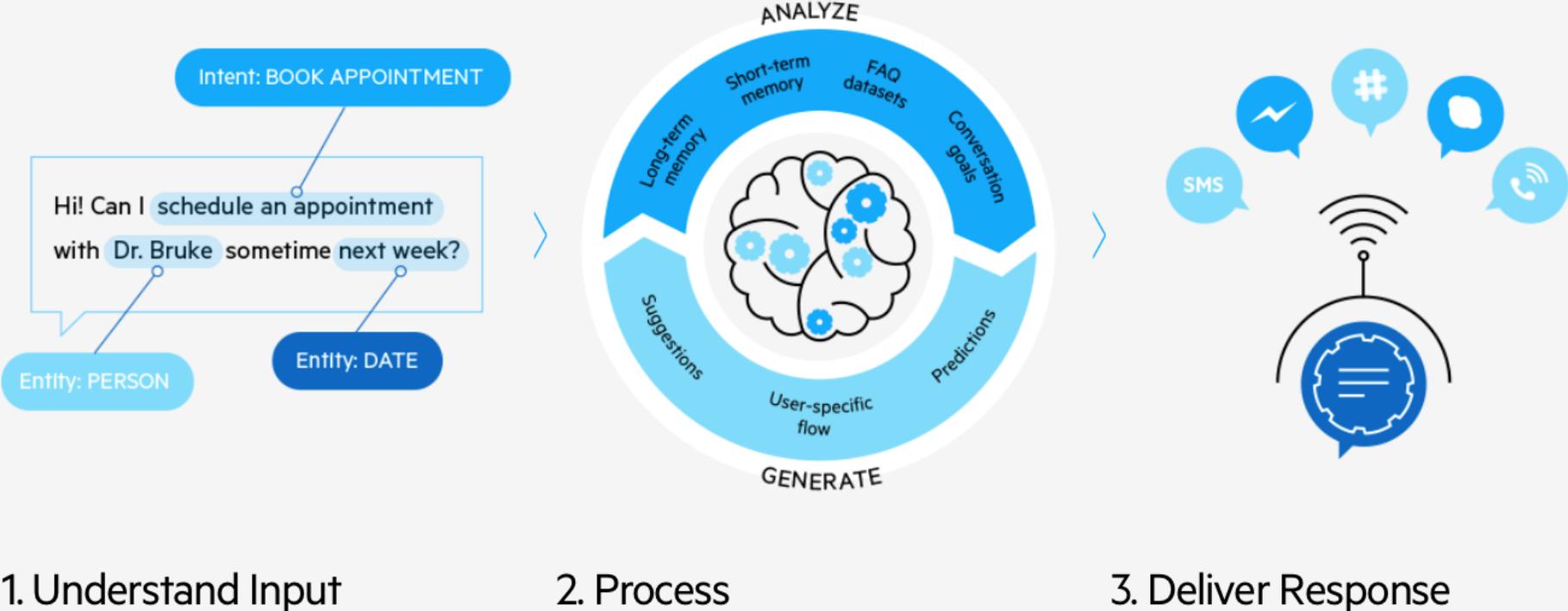
Intelligent Chat Experience

AI powered, goal driven conversation experiences

- Reduce cost and overload of your contact center
- Increase revenue with new social media and web customer communication channels
- Retain and delight more customers with better customer experiences
- Digital leadership makes you competitive, relevant and cutting edge



How NativeChat Works



Intelligent Chat Experience

Declarative based Cognitive Flow

The screenshot shows the RequestTechnician interface with a declarative cognitive flow configuration. The left sidebar lists various conversational actions like 'welcome', 'help', 'restart', and 'bookServiceRequest'. The main area displays a JSON configuration for the 'conversations' object, including 'welcome' and 'help' steps with their respective messages and conditions. A 'Save' button and keyboard shortcuts are visible at the bottom.

```
1  "conversations": {  
2    "welcome": {  
3      "type": "support",  
4      "steps": [  
5        {  
6          "type": "message",  
7          "messages": [  
8            "I'm Darwin, your Progress Software Support assistant!"  
9          ]  
10         },  
11         {  
12          "type": "conversation",  
13          "conversation": "help",  
14          "conditions": [  
15            "{not ($has conversation)}"  
16          ]  
17         }  
18       ],  
19     },  
20     "help": {  
21       "type": "support",  
22       "steps": [  
23         {  
24           "type": "message",  
25           "messages": [  
26             "If you get stuck, you can always restart our conversation b  
27           ]  
28         }  
29       ]  
30     }  
31   }  
32 }
```

Synonym based training

The screenshot shows the RequestTechnician interface for synonym based training. The 'All entities' section shows 'bookServiceRequest' with 14 expressions. The 'Details' section shows a list of expressions for 'bookServiceRequest' with 'Update' and 'Cancel' buttons. The 'Value' field is set to 'bookServiceRequest'.

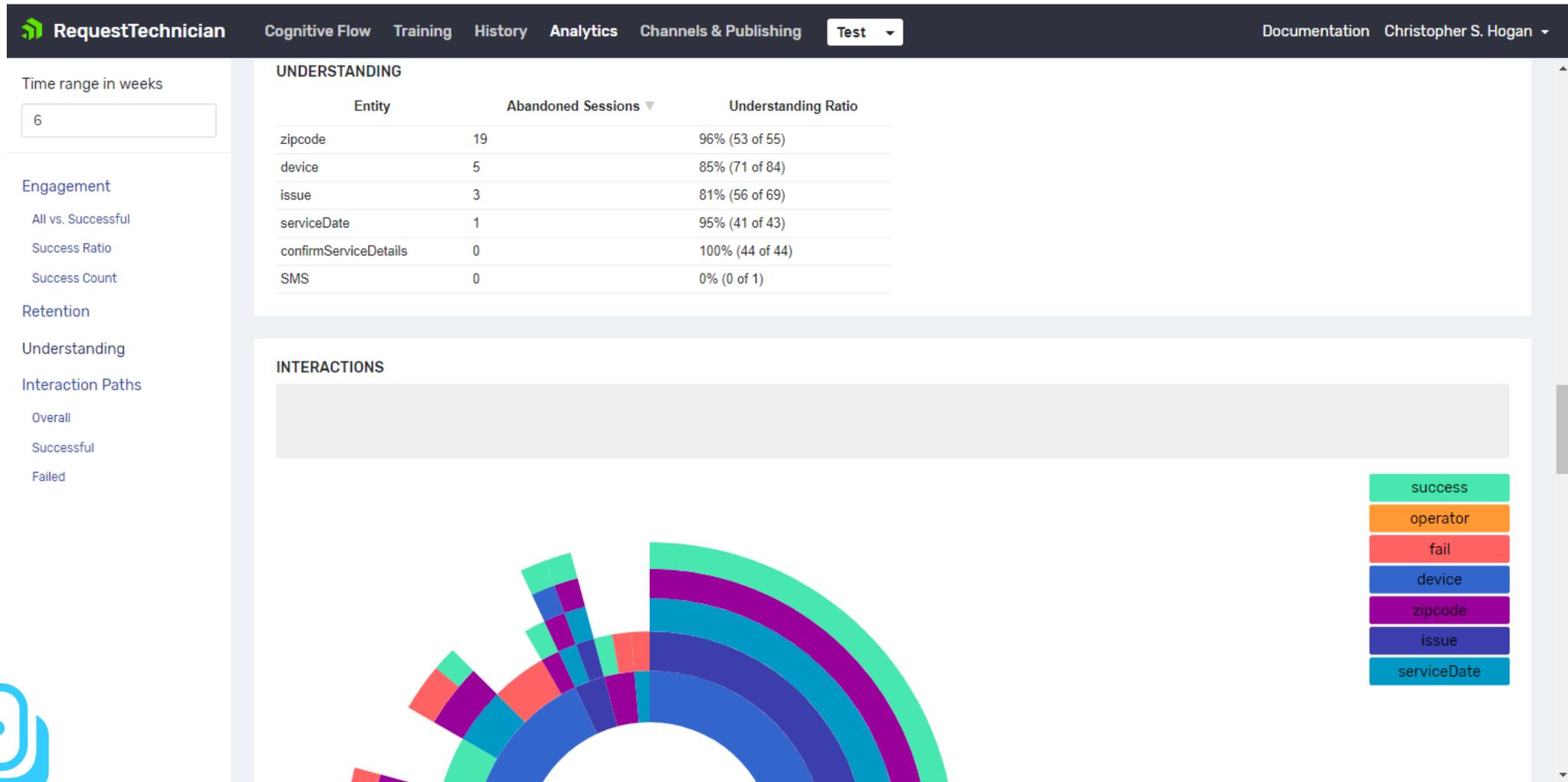
Value	Expressions #	Metadata
restart	18	
help	53	
bookServiceRequest	14	

Details for 'bookServiceRequest':

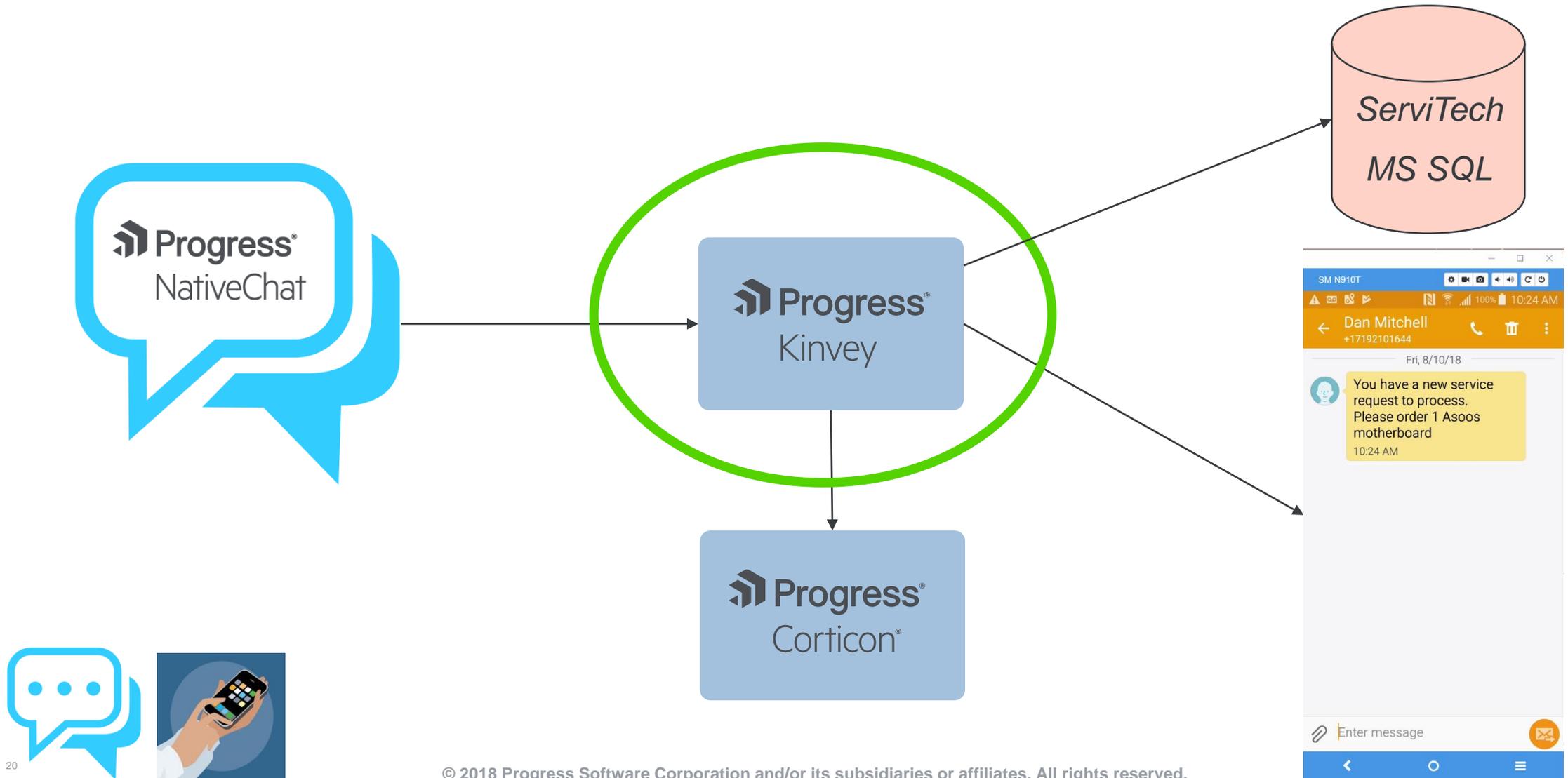
- Value: bookServiceRequest
- Expressions:
 - I need to schedule service
 - I need to request service
 - I have an issue
 - I have a problem
 - My computer is broken
 - I have an issue
 - Need a replacement



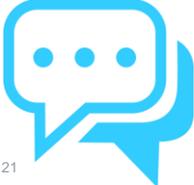
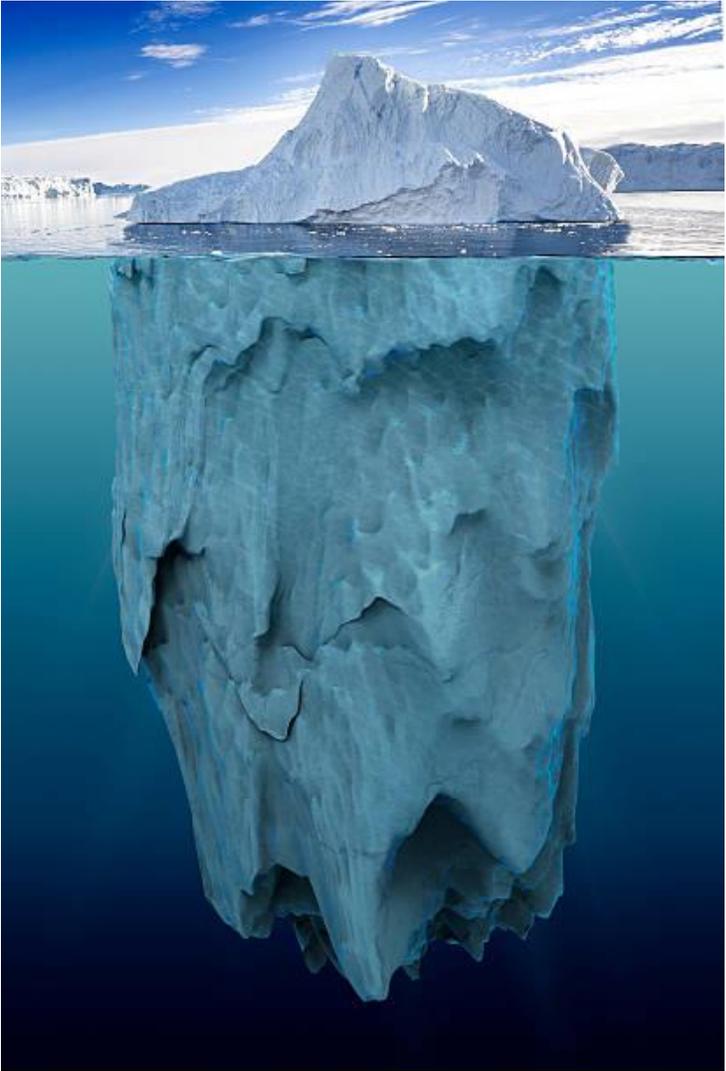
Intelligent Chat Experience



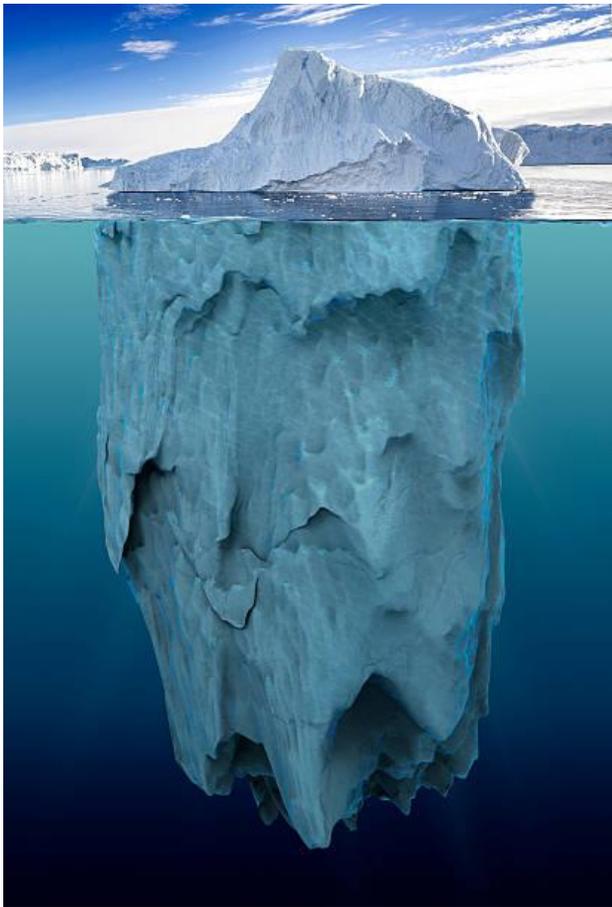
Demo Step 1: WHAT DID YOU SEE: Chat Bot, mBaaS, Biz Rules, MSSQL and SMS



Backend as a Service



Backend as a Service



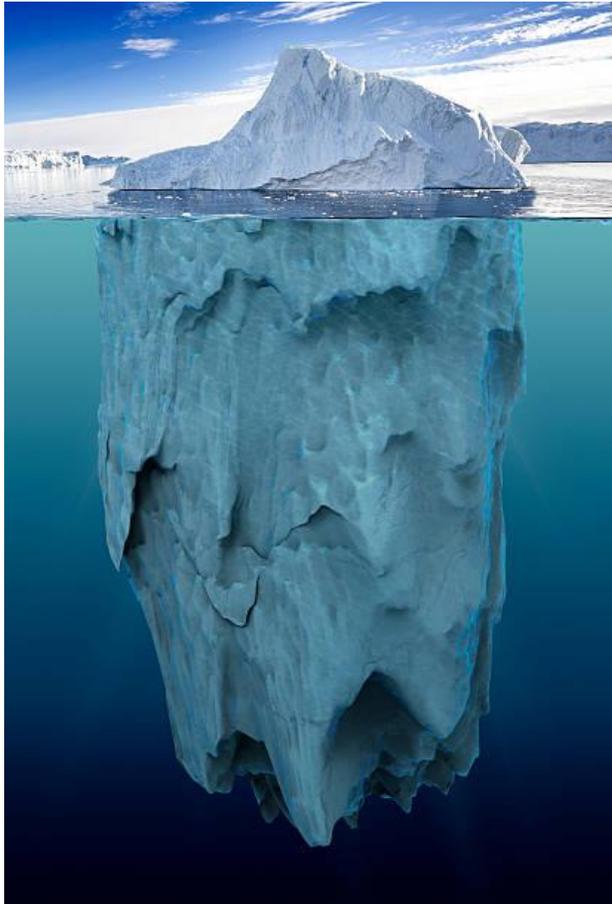
Backend as a Service



- Integration*
- Orchestration*
- Security*
- Compliance*
- Disconnection*
- Notifications*
- Scalability*
- Reliability*



Backend as a Service



- Integration*
- Orchestration*
- Security*
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- Reliability*



 **Progress**® Kinvey



Kinvey Cloud Service Accelerators

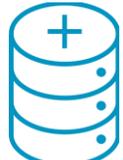
Leverage more than 20 integrated, configurable and secure serverless cloud services to reduce development, integration, maintenance and operations costs.



End-to-End Encryption



Node.js PaaS



Data & File Storage



Data Connector



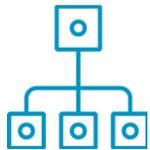
Data Sync



Cloud Caching



Push, email, SMS



Systems of Record



Live Service



Configuration Settings



Access Controls



Data Orchestration



Operational Intelligence



Auto-Scaling



Backend as a Service – Business Rules as a Service

Progress Kinvey® Apps Service Catalog Learn Support

RequestServiceT... Development

Custom Endpoints / CorticonTechService

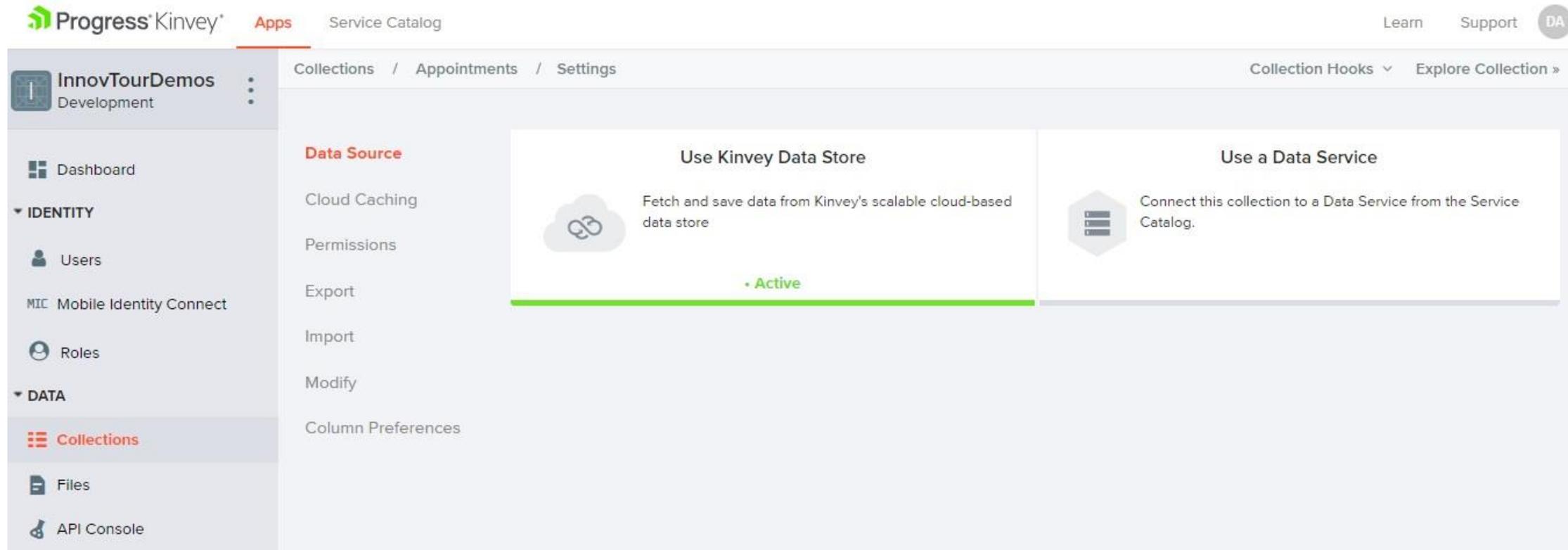
Logs Testing Save Default

- Dashboard
- IDENTITY
- DATA
- BUSINESS LOGIC
 - Collection Hooks
 - Custom Endpoints**
 - Common Code
 - Scheduled Code
- ENGAGEMENT
- SETTINGS

```
1 function onRequest(request, response, modules) {
2   var uriString = 'http://corticon-demo.dnsalias.com:8850/axis/corticon/execute';
3   var executeRequest = {
4     "Objects": [],
5     "name": "WorkAssignment"
6   };
7   executeRequest.Objects.push({
8     "date": request.body.date,
9     "device": request.body.device,
10    "serviceType": request.body.serviceType,
11    "__metadata": {
12      "#type": "Request"
13    }
14  });
15  var opts = {
16    uri: uriString,
17    method: 'post',
18    headers: {},
19    json: true,
20    body: executeRequest
21  };
22  modules.request.request(opts, function(err, resp, body) {
23    if (err) {
24      response.body = err;
25    } else {
26      response.body.suggestedTech = body.Objects[0].assignedTech;
27      response.body.skillLevel = body.Objects[0].minLevel;
28      response.complete();
29    }
30  });
31 }
```



Backend as a Service - Data Connectivity



The screenshot displays the Progress Kinvey developer console interface. At the top, the 'Progress Kinvey' logo is on the left, and 'Apps' and 'Service Catalog' are in the center. On the right, there are links for 'Learn', 'Support', and a user profile icon labeled 'DA'. Below the header, the application name 'InnovTourDemos' (Development) is shown on the left, with a breadcrumb path 'Collections / Appointments / Settings' and additional options 'Collection Hooks' and 'Explore Collection'. A left-hand navigation menu includes 'Dashboard', 'IDENTITY' (with sub-items 'Users' and 'Mobile Identity Connect'), 'DATA' (with sub-items 'Collections', 'Files', and 'API Console'), and 'Collections' is currently selected. The main content area is titled 'Data Source' and lists options: 'Cloud Caching', 'Permissions', 'Export', 'Import', 'Modify', and 'Column Preferences'. Two data source options are presented in a grid:

- Use Kinvey Data Store**: Fetch and save data from Kinvey's scalable cloud-based data store. This option is marked as **Active** with a green dot and a green underline.
- Use a Data Service**: Connect this collection to a Data Service from the Service Catalog.



Backend as a Service - Data Connectivity

Progress Kinvey **Apps** Service Catalog

InnovTourDemos Development

Collections / Appointments

Filter collections... Adv. 1-2 of 2 Appointments + Add Column

<input type="checkbox"/>	_id	_acl	_kmd	status	tech_id	address	city
<input type="checkbox"/>	5bc5685edf626d5896c6			2	300	"123 Albany Road"	"Schenectady"
<input type="checkbox"/>	5bc5685e85211d568215			1	100	"100 Main St."	"Schenectady"

Dashboard

IDENTITY

Users

MIC Mobile Identity Connect

Roles

DATA

Collections

Files



Backend as a Service - Data Connectivity

The screenshot displays the Progress Kinvey developer console interface. At the top, the 'Apps' tab is selected, showing the application 'InnovTourDemos' in 'Development' mode. The breadcrumb navigation indicates the current view is 'Collections / Appointments / Settings'. On the left, a sidebar menu lists various application settings, with 'Collections' highlighted. The main content area is divided into two columns. The left column, titled 'Data Source', lists options: Cloud Caching, Permissions, Export, Import, Modify, and Column Preferences. The right column, titled 'Use a Data Service', features a card for 'ServiTechMSSQL' which is marked as 'Active'. Below this, a table lists available service objects for the app. The table has three columns: 'Name / Type', 'Description', and 'Service Objects'. Two service objects are listed: 'ItemDataJSDOSvc' (ProgressData) and 'ServiTechMSSQL' (Microsoft SQL Server). The 'ServiTechMSSQL' entry shows a dropdown menu for the 'Service Object' set to 'APPOINTMENTS_SO'.

Progress Kinvey Apps Service Catalog Learn Support DA

InnovTourDemos Development Collections / Appointments / Settings Collection Hooks Explore Collection »

Data Source

- Cloud Caching
- Permissions
- Export
- Import
- Modify
- Column Preferences

Use a Data Service

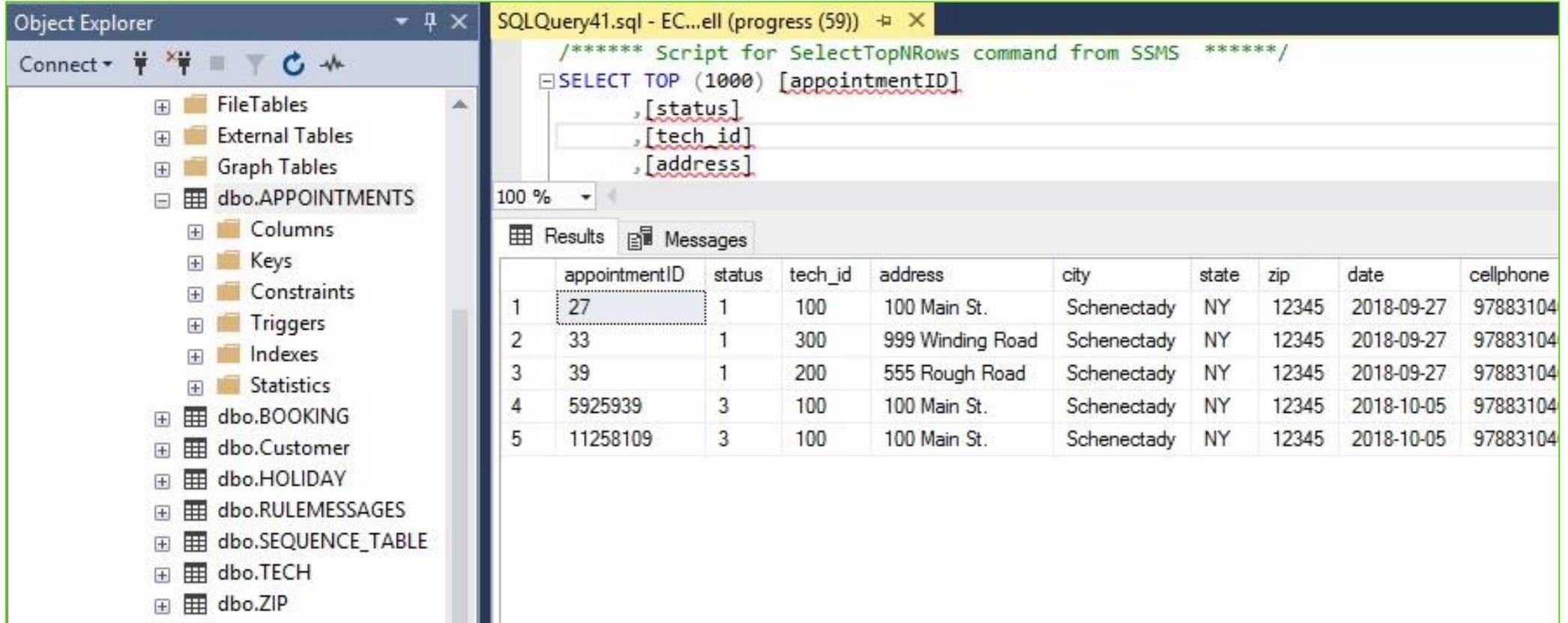
ServiTechMSSQL
Service Object: APPOINTMENTS_SO
• Active

Filter service objects... 2 Services available for this app

Name / Type	Description	Service Objects
ItemDataJSDOSvc <small>ProgressData</small>	RapidData Progress Data Service to pull ITite...	1 ⚙️
ServiTechMSSQL <small>Microsoft SQL Server</small>	This service integrates with the MS SQL DB backend of ServiTech's Service Management system, which contain... Service Object: APPOINTMENTS_SO	2 ⚙️



Backend as a Service – MSSQL Service Appointment Data



The screenshot displays the SQL Server Enterprise Manager interface. On the left, the Object Explorer shows a database structure with tables like APPOINTMENTS, BOOKING, Customer, HOLIDAY, RULEMESSAGES, SEQUENCE_TABLE, TECH, and ZIP. The main window shows a SQL query in a script editor:

```
/* Script for SelectTopNRows command from SSMS */
SELECT TOP (1000) [appointmentID]
, [status]
, [tech_id]
, [address]
```

Below the query, the Results pane shows a table with 10 columns: appointmentID, status, tech_id, address, city, state, zip, date, and cellphone. The first five rows of data are displayed:

	appointmentID	status	tech_id	address	city	state	zip	date	cellphone
1	27	1	100	100 Main St.	Schenectady	NY	12345	2018-09-27	97883104
2	33	1	300	999 Winding Road	Schenectady	NY	12345	2018-09-27	97883104
3	39	1	200	555 Rough Road	Schenectady	NY	12345	2018-09-27	97883104
4	5925939	3	100	100 Main St.	Schenectady	NY	12345	2018-10-05	97883104
5	11258109	3	100	100 Main St.	Schenectady	NY	12345	2018-10-05	97883104



Backend as a Service - Data Connectivity

Progress Kinvey **Apps** Service Catalog Learn Support DA

InnovTourDemos Development

Collections / Appointments Collection Hooks

Filter collections... Adv. v 1-5 of 5 Appointments + Add Column + Add Row

<input type="checkbox"/>	_id	_acl	_kmd	status	tech_id	address	city	state
<input type="checkbox"/>	11258109	{}	{"ect": "2018-10-16T04:37:37.51" "3"	100	100	"100 Main St."	"Schenectady"	"NY"
<input type="checkbox"/>	5925939	{}	{"ect": "2018-10-16T04:37:37.51" "3"	100	100	"100 Main St."	"Schenectady"	"NY"
<input type="checkbox"/>	39	{}	{"ect": "2018-10-16T04:37:37.51" "1"	200	200	"555 Rough Road"	"Schenectady"	"NY"
<input type="checkbox"/>	33	{}	{"ect": "2018-10-16T04:37:37.51" "1"	300	300	"999 Winding Road"	"Schenectady"	"NY"
<input type="checkbox"/>	27	{}	{"ect": "2018-10-16T04:37:37.51" "1"	100	100	"100 Main St."	"Schenectady"	"NY"

Dashboard

IDENTITY

Users

MIC Mobile Identity Connect

Roles

DATA

Collections

Files

API Console



Backend as a Service – SMS Gateway

Progress Kinvey Apps Service Catalog

InnovTourDemos Development

Custom Endpoints / SendSMS

Logs Testing Save Default

```
1 function onRequest(request, response, modules) {
2
3   var twilio = modules.twilio('AC763735715030ad4911ab667e8e659265', '8de096eac18462b44053599bde197cb3');
4   var bodyMsg = request.body.bodyMsg;
5   var sendTo = request.body.sendTo;
6   //hard coded to the number from Twilio
7   var sendFrom = '7175468986';
8
9
10  //Send an SMS text message
11  twilio.sendMessage({
12    to: sendTo, // Any number Twilio can deliver to
13    from: sendFrom, // A number you bought from Twilio and can use for outbound communication
14    body: bodyMsg // body of the SMS message
15  }, function(err, responseData) {
16    if (err) {
17      return response.error(err);
18    } else {
19      modules.logger.info(responseData);
20      response.body = {sentSMS: true}
21      return response.complete(200);
22    }
23  });
24 }
```

Dashboard

IDENTITY

Users

MIC Mobile Identity Connect

Roles

DATA

Collections

Files

API Console

BUSINESS LOGIC

Collection Hooks

Custom Endpoints



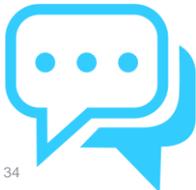
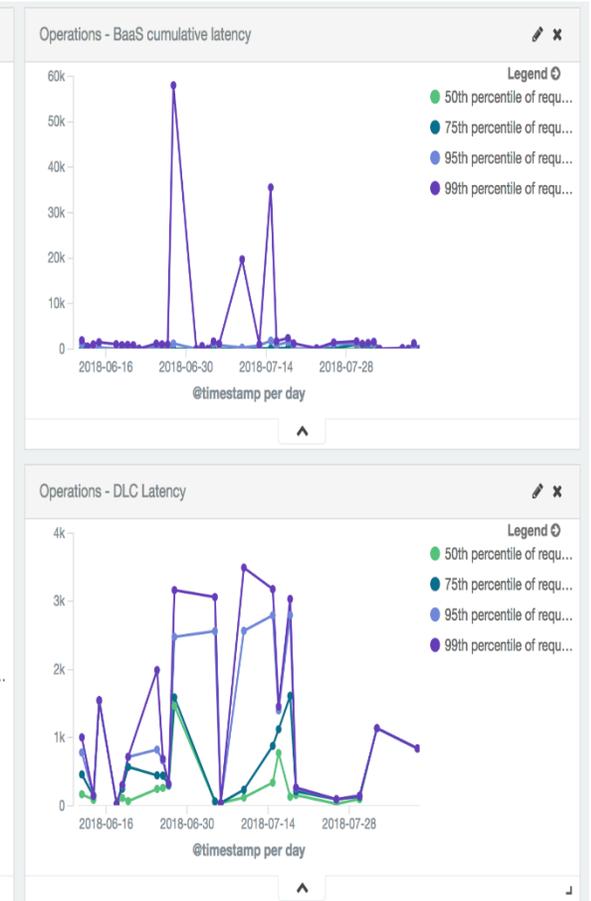
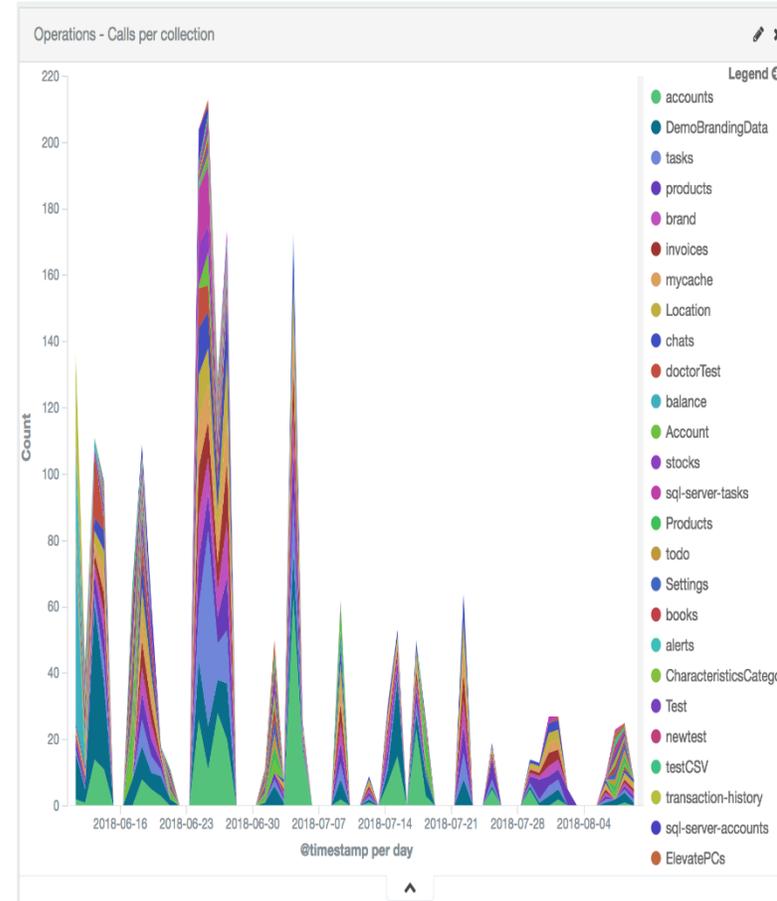
Backend as a Service – Operational Intelligence

Operations - errors raw

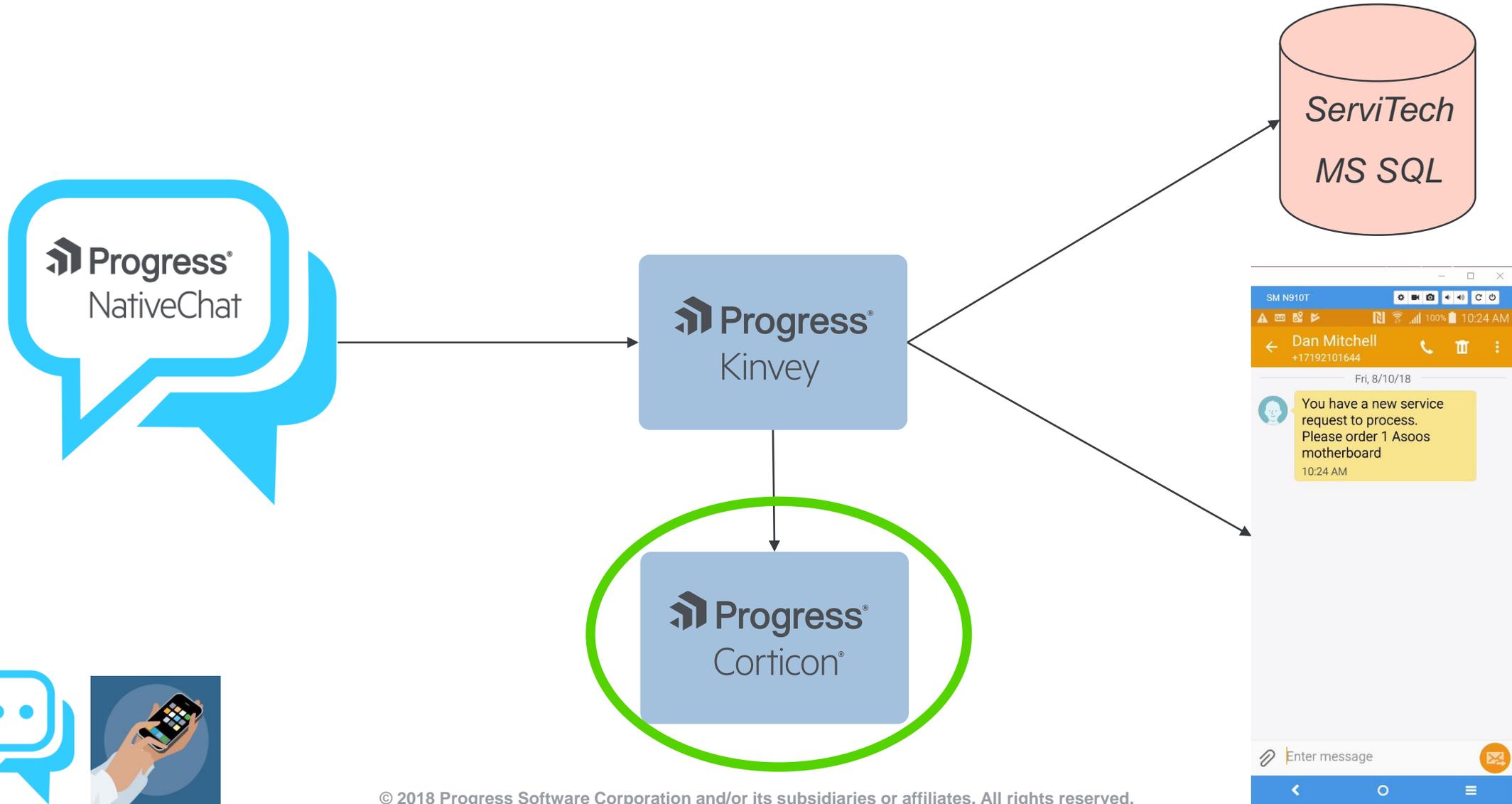
Time	statusCode	responseBody
▶ August 3rd 2018, 10:51:08.742	401	{"error":"InvalidCredentials","description":"Invalid credentials. Please retry your request with correct credentials.,"debug":"Authorization token invalid or expired"}
▶ August 3rd 2018, 10:25:46.731	401	{"error":"InvalidCredentials","description":"Invalid credentials. Please retry your request with correct credentials.,"debug":"Authorization token invalid or expired"}
▶ August 3rd 2018, 10:25:43.704	401	{"error":"InvalidCredentials","description":"Invalid credentials. Please retry your request with correct credentials.,"debug":"Authorization token invalid or expired"}
▶ August 3rd 2018, 10:25:41.167	401	{"error":"InvalidCredentials","description":"Invalid credentials. Please retry your request with correct credentials.,"debug":"Authorization token invalid or expired"}
▶ August 3rd 2018, 10:25:15.600	401	{"error":"InvalidCredentials","description":"Invalid credentials. Please retrv your request with correct

Operations - requests raw

Time	statusCode	url
▶ August 10th 2018, 08:42:35.877	304	/user/kid_ZJk02vOUFG/_count
▶ August 10th 2018, 08:42:33.879	200	/user/kid_ZJk02vOUFG/_count
▶ August 10th 2018, 08:42:33.815	200	/appdata/kid_ZJk02vOUFG/mycache/_count



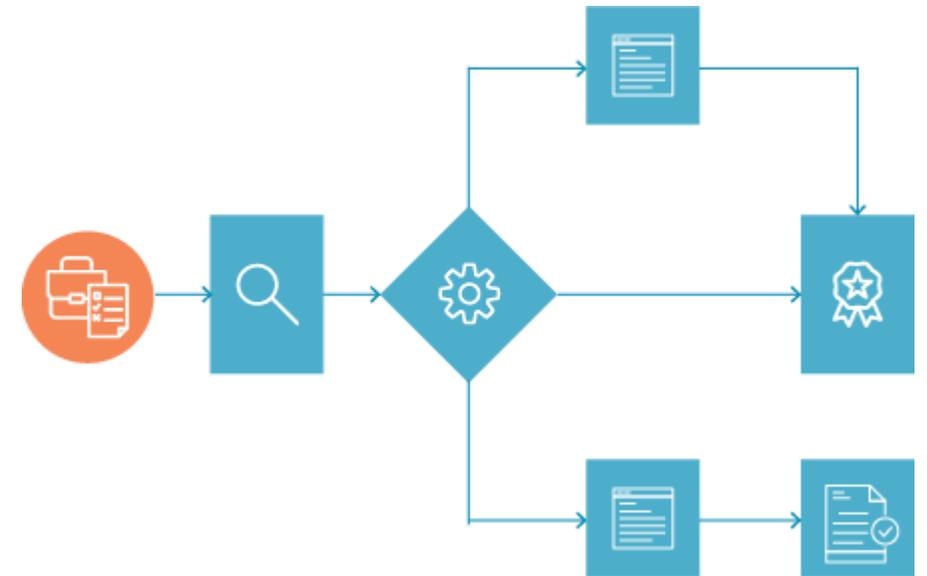
Demo Step 1: WHAT DID YOU SEE: Chat Bot, mBaaS, Biz Rules and SMS



Empower business users to manage business rules

- Empower subject matter experts
- Reduce burden on development teams
- Industry leading performance & scalability

 Progress® Corticon®



Business Rules

emineLevel.ers - Progress Developer Studio

Window Help

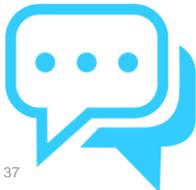
Quick Access Corticon Designer

Dell.ecore *WorkAssignment... *WorkAssignment... *WorkAssignment... *TestDB.ert *WorkAssignment... WorkAssignment_...

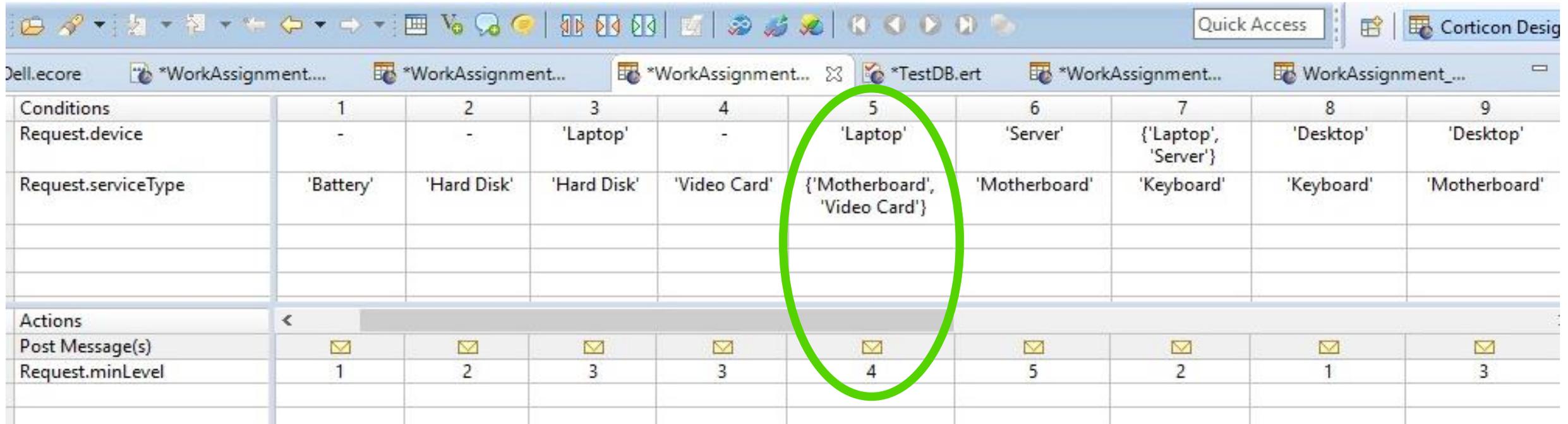
Conditions	1	2	3	4	5	6	7	8	9
a Request.device	-	-	'Laptop'	-	'Laptop'	'Server'	{'Laptop', 'Server'}	'Desktop'	'Desktop'
b Request.serviceType	'Battery'	'Hard Disk'	'Hard Disk'	'Video Card'	{'Motherboard', 'Video Card'}	'Motherboard'	'Keyboard'	'Keyboard'	'Motherboard'
c									
d									
e									
Actions									
Post Message(s)	✉	✉	✉	✉	✉	✉	✉	✉	✉
A Request.minLevel	1	2	3	3	4	5	2	1	3
B									
C									
D									
Overrides			2		4				

Rule Statements Rule Messages Properties Comments Problems Error Log

Ref	ID	Post	Alias	Text	Rule Name	Rule Link
1		Info	Request	Battery service requires a level 1 or higher tech		
2		Info	Request	Hard Disk service requires a level 2 or higher tech		
3		Info	Request	Hard Disk service on laptops requires a level 3 or higher tech		
4		Info	Request	Video Card service requires a level 3 or higher tech		
5		Info	Request	Motherboard and Video Card service on laptops requires a level 4 or higher tech		
6		Info	Request	Motherboard service on servers requires a level 5 or higher tech		
7		Info	Request	Keyboard service on laptops and servers requires a level 2 or higher tech		
8		Info	Request	Keyboard service on desktops requires a level 1 or higher tech		
9		Info	Request	Motherboard service on desktops requires a level 3 or higher tech		



Business Rules



Conditions	1	2	3	4	5	6	7	8	9
Request.device	-	-	'Laptop'	-	'Laptop'	'Server'	{'Laptop', 'Server'}	'Desktop'	'Desktop'
Request.serviceType	'Battery'	'Hard Disk'	'Hard Disk'	'Video Card'	{'Motherboard', 'Video Card'}	'Motherboard'	'Keyboard'	'Keyboard'	'Motherboard'
Actions	<								
Post Message(s)	✉	✉	✉	✉	✉	✉	✉	✉	✉
Request.minLevel	1	2	3	3	4	5	2	1	3

If the **device** type is a **laptop** AND the **service type** is **motherboard** or **video card** replacement then the minimum technician **skill level** required for that service task is **4**



Business Rules

The screenshot displays a Business Rules Editor interface. At the top, there are several tabs: 'Dell.ecore', '*WorkAssignm...', '*WorkAssignm...', '*WorkAssignm...', '*WorkAssignm...', and 'WorkAssignm...'. The main workspace shows a ruleflow diagram with four activities connected in a sequence: 'DetemineLevel' → 'EvaluateSchedules' → 'DetermineDistance' → 'AssignTech'. A 'Palette' window on the right lists various ruleflow elements: Connection, Rulesheet, Ruleflow, Service Call-out, Branch, Subflow, and Iterative. Below the workspace, there is a toolbar with icons for 'Rule Statements', 'Rule Messages', 'Properties', 'Comments', 'Problems', and 'Error Log'. The 'Properties' panel is active, showing the following fields:

- Rule Vocabulary: /Dell/Vocabulary/Dell.ecore (with a 'Browse...' button)
- Major Version: 1
- Minor Version: 0
- Version Label: (empty)
- Effective Date: / / (with a dropdown arrow)
- Time: 0 0 0 AM (with 'Clear' button)
- Expiration Date: / / (with a dropdown arrow)
- Time: 0 0 0 AM (with 'Clear' button)
- Total Number of Rules: 23

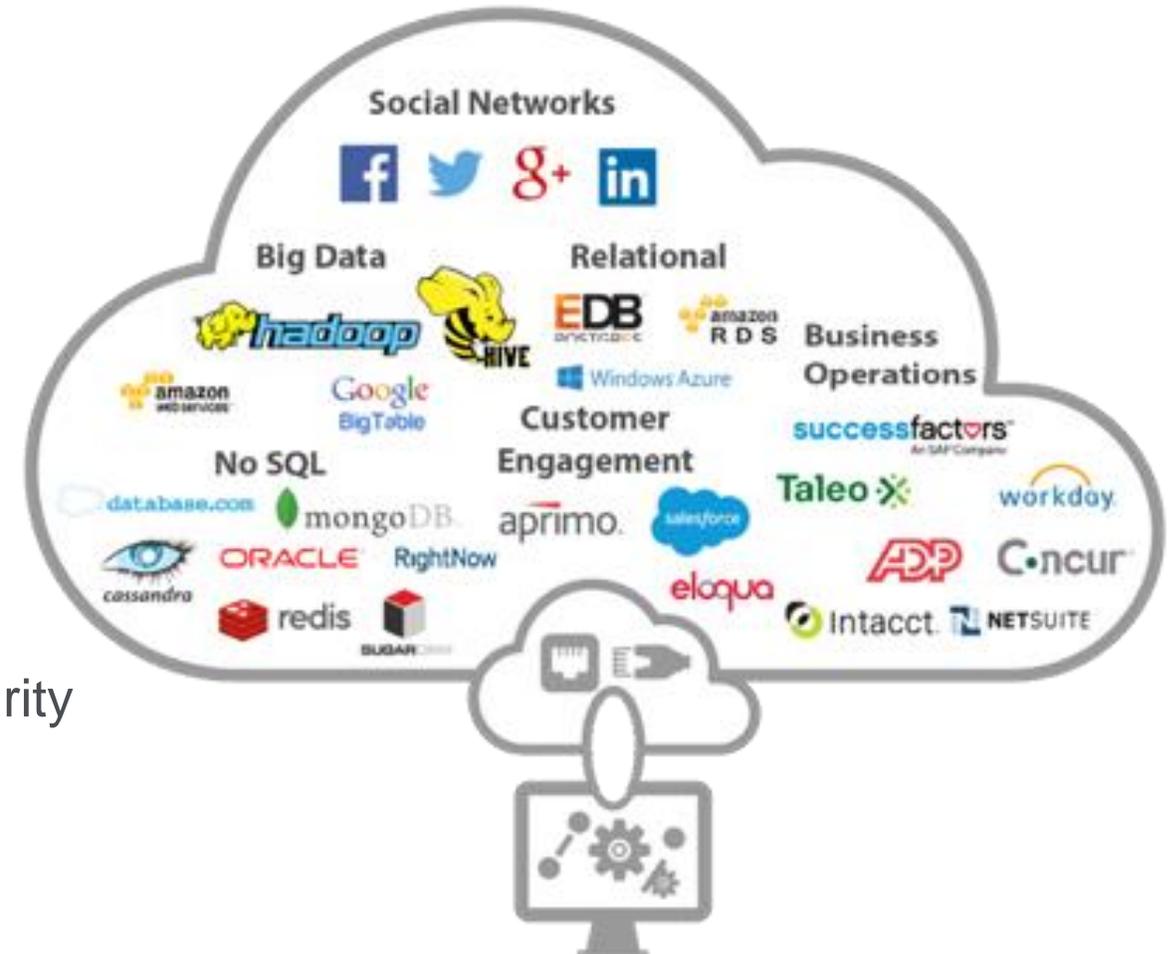


Data Connectivity

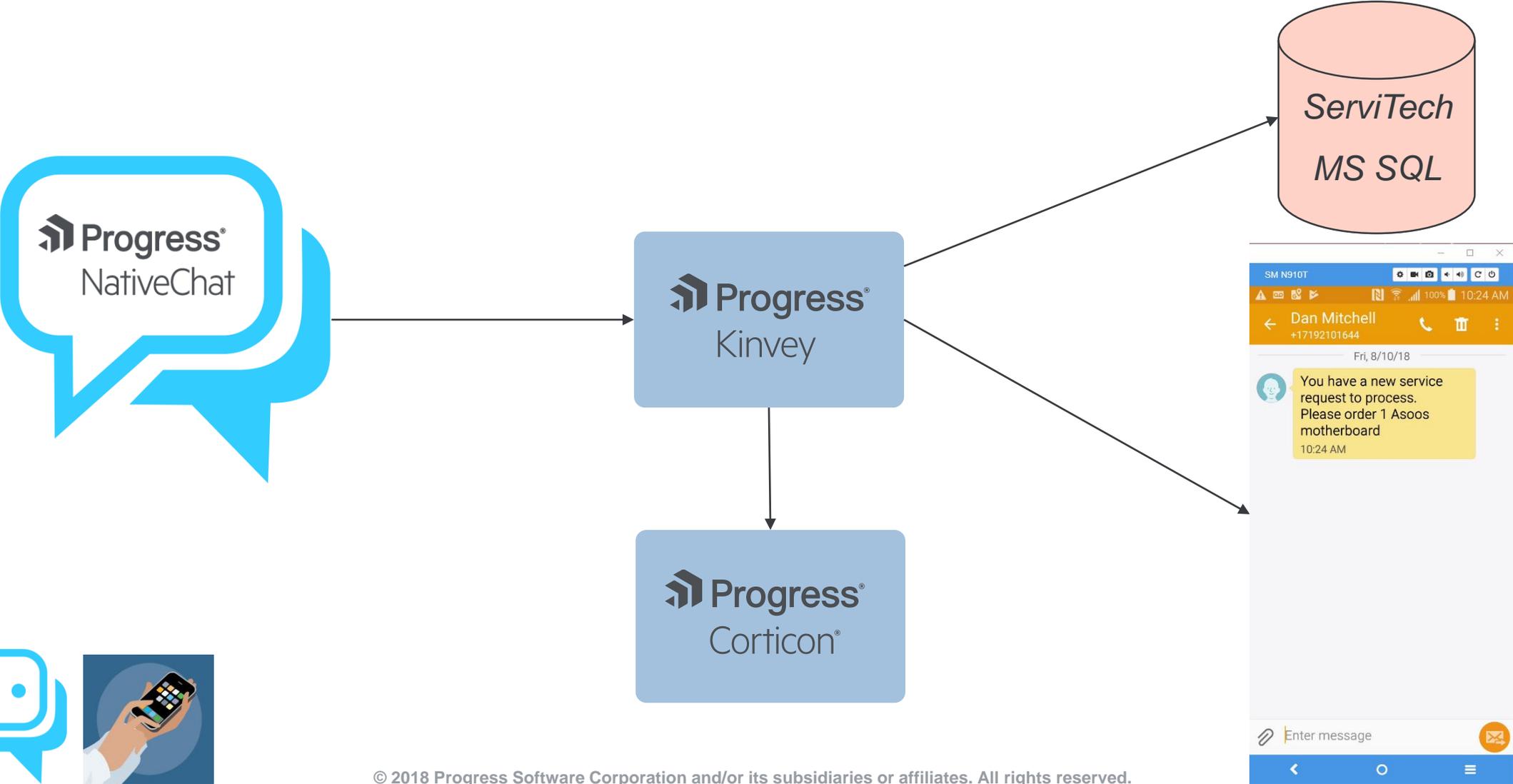
The Industry Standard for Data and Application Connectivity



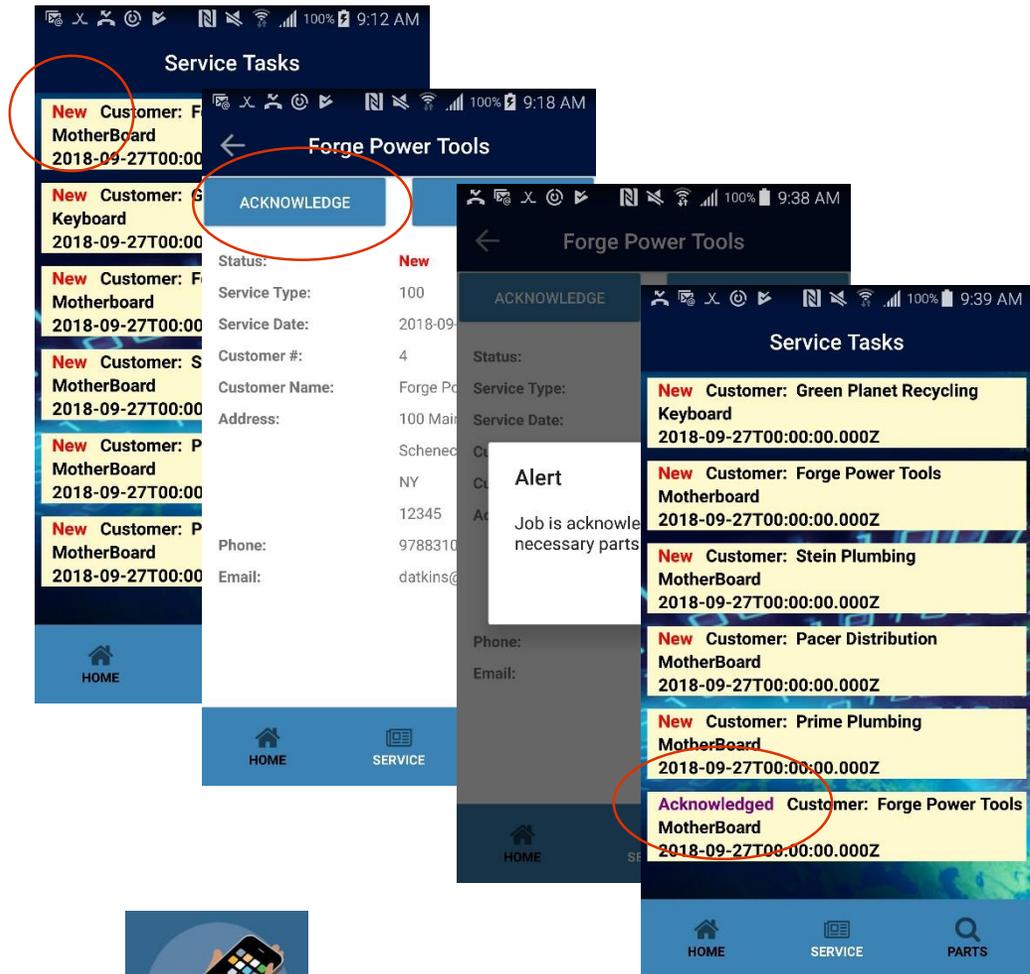
- 9 of the top 10 BI vendors embed DataDirect
- Long history of industry standards leadership
- Patented hybrid integration approach
 - cloud / on-premise / both
- Best-in-class performance, scalability and security



Demo Step 1: RECAP WHAT YOU SAW: Chat Bot, mBaaS, Biz Rules, MSSQL and SMS



Demo Step 2a: WHAT DID YOU SEE: Native Mobile App and mBaaS




NativeScript


**Progress®
Kinvey**

*Rapid
Connector*

**ServiTech
MS SQL**



Demo Step 2a: WHAT DID YOU SEE: Native Mobile App and mBaaS



Mobile App Development – What is the Challenge?

- “Swift” for Apple
- “Java” for Android
- Develop the same app twice
- Try to keep apps looking the same and code in sync

A collage of images illustrating mobile app development challenges. It features two code snippets on the left and right, a Swift logo in the center, and an Android logo on the right. In the middle, two smartphone screens display energy monitoring data. The left screen shows 'AVERAGE COMBINED POWER' at 23 WATTS with a thumbs up icon and a 250% increase since last month. The right screen shows 'Recommendation' for 'APPLIANCE LAMPS' with an estimated saving of 4.12 KWH and 16 days in the next. The background is a light gray with faint code text.

```
<1> cmd - tns run...  
:config phase: createDefaultIncludeFile  
+found plugins: tns-core-modules-wi  
+ creating include.gradle file for  
tApp/platforms/android/configurations/tr  
dules-wi  
Renaming directory to flavor name  
tApp/platforms/android/src/tns-core-mod  
~/NativeScriptApp/platforms/android/src/  
:config phase: createPluginsConfigFile  
Creating product flavors include.g
```

```
CodeSign build/emulator/NativeScriptApp.app  
cd ~/NativeScriptApp/platforms/ios  
export  
CODESIGN_ALLOCATE=/Applications/Xcode.app/Contents/De  
/Tools/bin/XcodeDefa chain/usr/bin/codesign  
te  
export  
PATH="/Applications/Xcode.app/Contents/Developer/Plat  
PhoneSimulator.platform/Developer/usr/bin:/Applicat  
/Contents/Developer/usr/bin:/Users/tj/.rbeny/sha  
/bin:/bin:/usr/bin:/usr/sbin:/usr/local/bin:/usr
```

Mobile App Development – What is the Answer? NATIVESCRIPT!

- Create truly native iOS and Android apps from a single codebase in JavaScript, TypeScript or Angular
- No need to write bridging code. All native functionality is available from single codebase.
- Get native performance and user experience



NativeScript

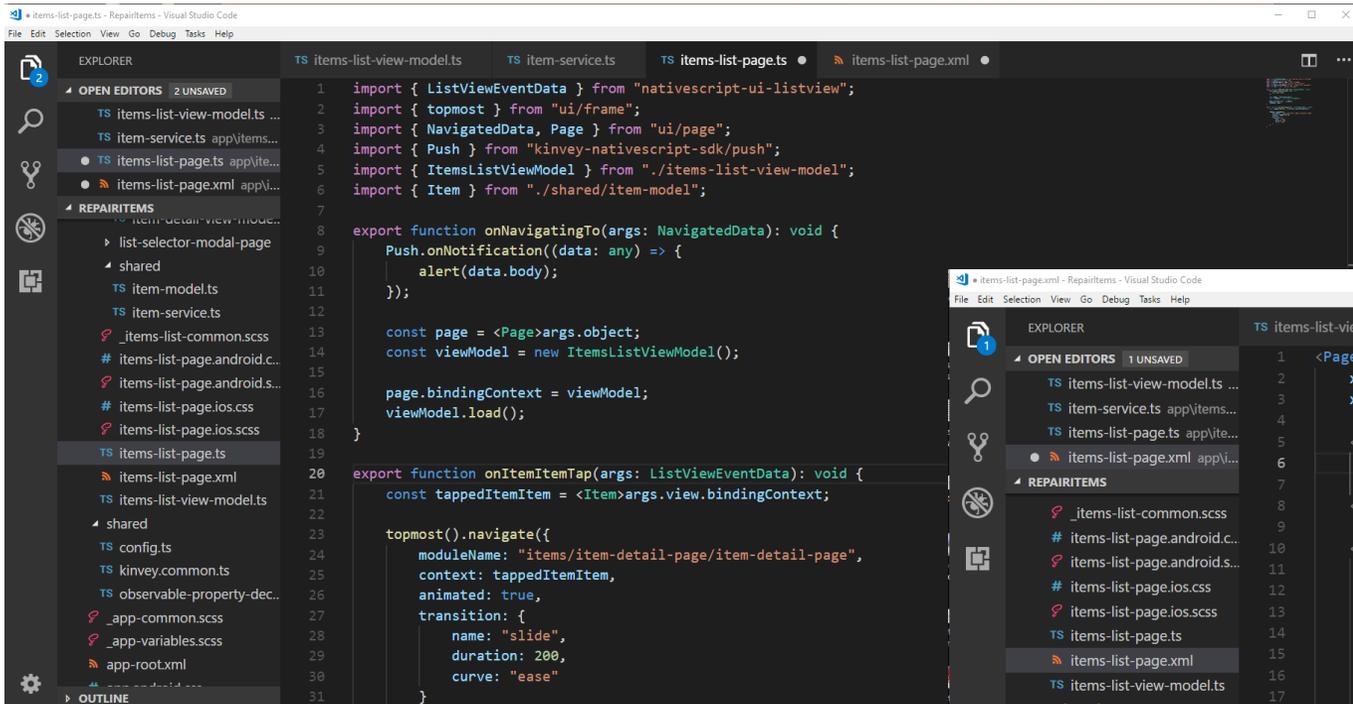


The collage features several elements: a terminal window on the left with code for configuring plugins and flavors; a central smartphone displaying a 'Home' screen with 'AVERAGE COMBINED POWER' at 23 WATTS and a 'RECOMMENDATION' screen showing 'APPLIANCE LAMPS' with a recommendation of 4.12 KWH and an estimated saving of 16 DAYS; and the Angular logo on the right. A yellow arrow points from the code to the smartphone, and a red arrow points from the Angular logo to the code.

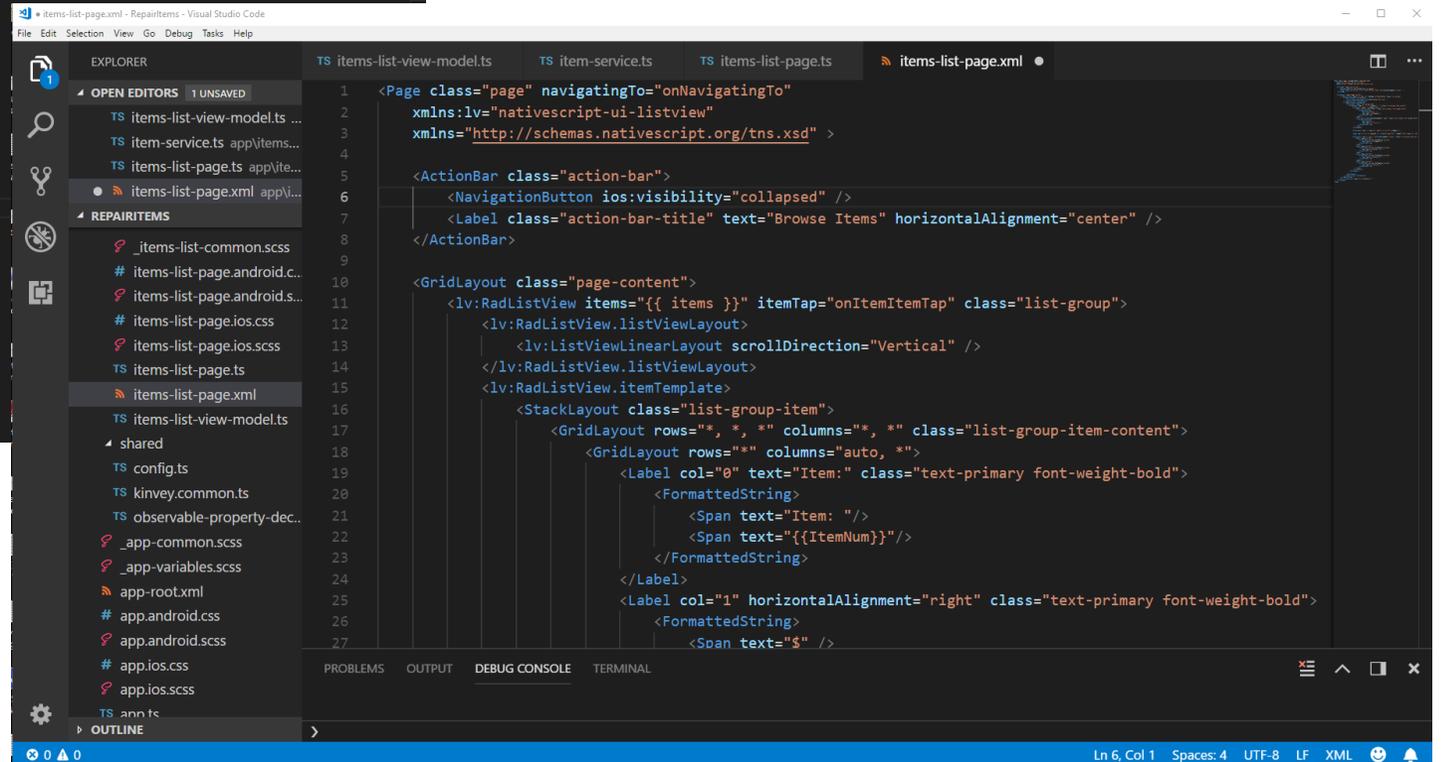
```
<1> cmd - tns run...  
:config phase: createDefaultIncludeFile  
+found plugins: tns-core-modules-wi  
+ create include.gradle file for  
tApp/platforms/android/configurations/tr  
modules-wi  
Renaming directory to flavor name  
tApp/platforms/android/src/tns-core-mod  
~/NativeScriptApp/platforms/android/src/  
:config phase: createPluginsConfigFile  
Creating product flavors include.g
```

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NativeScript Development – Javascript and HTML



```
1 import { ListViewEventData } from "nativescript-ui-listview";
2 import { topmost } from "ui/frame";
3 import { NavigatedData, Page } from "ui/page";
4 import { Push } from "kinvey-nativescript-sdk/push";
5 import { ItemListViewModel } from "../items-list-view-model";
6 import { Item } from "../shared/item-model";
7
8 export function onNavigatingTo(args: NavigatedData): void {
9     Push.onNotification((data: any) => {
10         alert(data.body);
11     });
12
13     const page = <Page>args.object;
14     const viewModel = new ItemListViewModel();
15
16     page.bindingContext = viewModel;
17     viewModel.load();
18 }
19
20 export function onItemItemTap(args: ListViewEventData): void {
21     const tappedItemItem = <Item>args.view.bindingContext;
22
23     topmost().navigate({
24         moduleName: "items/item-detail-page/item-detail-page",
25         context: tappedItemItem,
26         animated: true,
27         transition: {
28             name: "slide",
29             duration: 200,
30             curve: "ease"
31         }
32     });
33 }
```

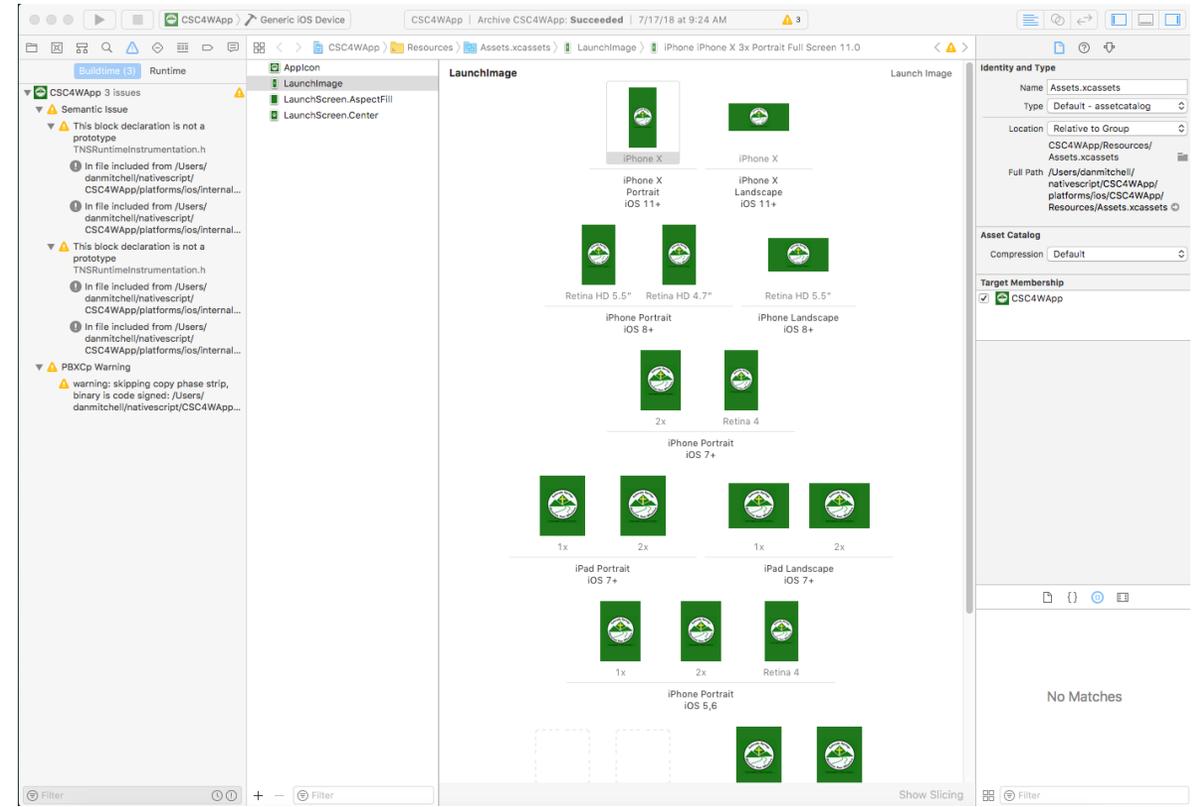
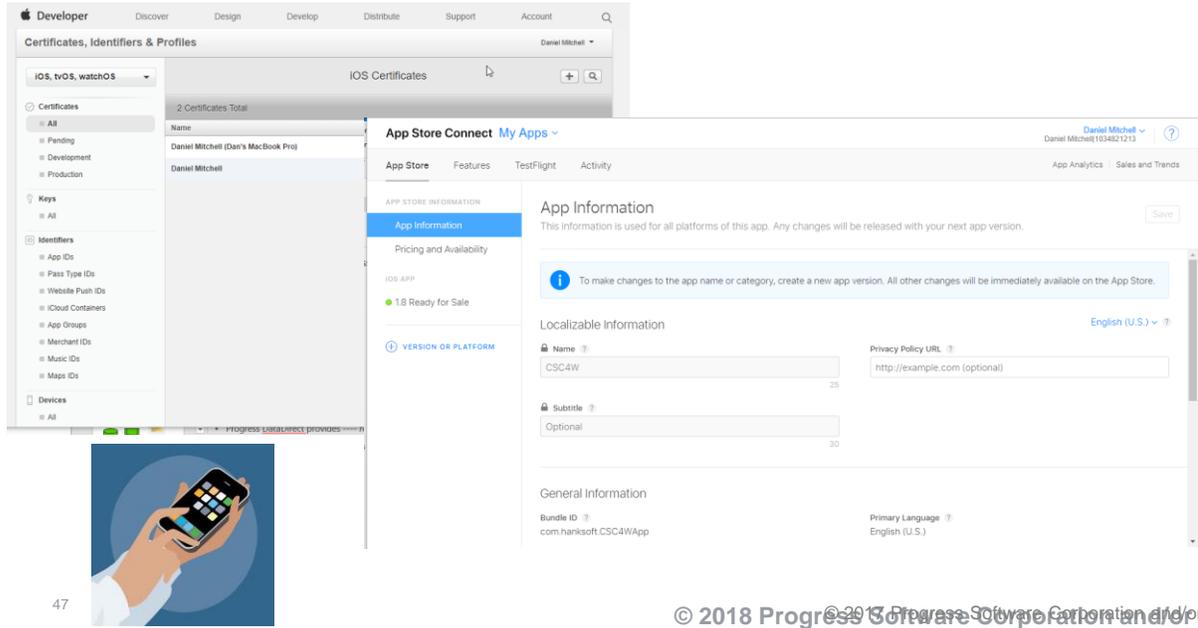


```
1 <Page class="page" navigatingTo="onNavigatingTo"
2     xmlns:lv="nativescript-ui-listview"
3     xmlns="http://schemas.nativescript.org/tns.xsd" >
4
5     <ActionBar class="action-bar">
6         <NavigationButton ios:visibility="collapsed" />
7         <Label class="action-bar-title" text="Browse Items" horizontalAlignment="center" />
8     </ActionBar>
9
10     <GridLayout class="page-content">
11         <lv:RadListView items="{ { items } }" itemTap="onItemItemTap" class="list-group">
12             <lv:RadListView.listViewLayout>
13                 <lv:ListViewLinearLayout scrollDirection="Vertical" />
14             </lv:RadListView.listViewLayout>
15             <lv:RadListView.itemTemplate>
16                 <StackLayout class="list-group-item">
17                     <GridLayout rows="*, *, *" columns="*, *" class="list-group-item-content">
18                         <GridLayout rows="*" columns="auto, *">
19                             <Label col="0" text="Item:" class="text-primary font-weight-bold">
20                                 <FormattedString>
21                                     <Span text="Item: "/>
22                                     <Span text="{ { ItemNum } }"/>
23                                 </FormattedString>
24                             </Label>
25                             <Label col="1" horizontalAlignment="right" class="text-primary font-weight-bold">
26                                 <FormattedString>
27                                     <Span text="$" />
28                                 </FormattedString>
29                             </Label>
30                         </GridLayout>
31                     </StackLayout>
32                 </lv:RadListView.itemTemplate>
33             </lv:RadListView>
34         </GridLayout>
35     </Page>
```

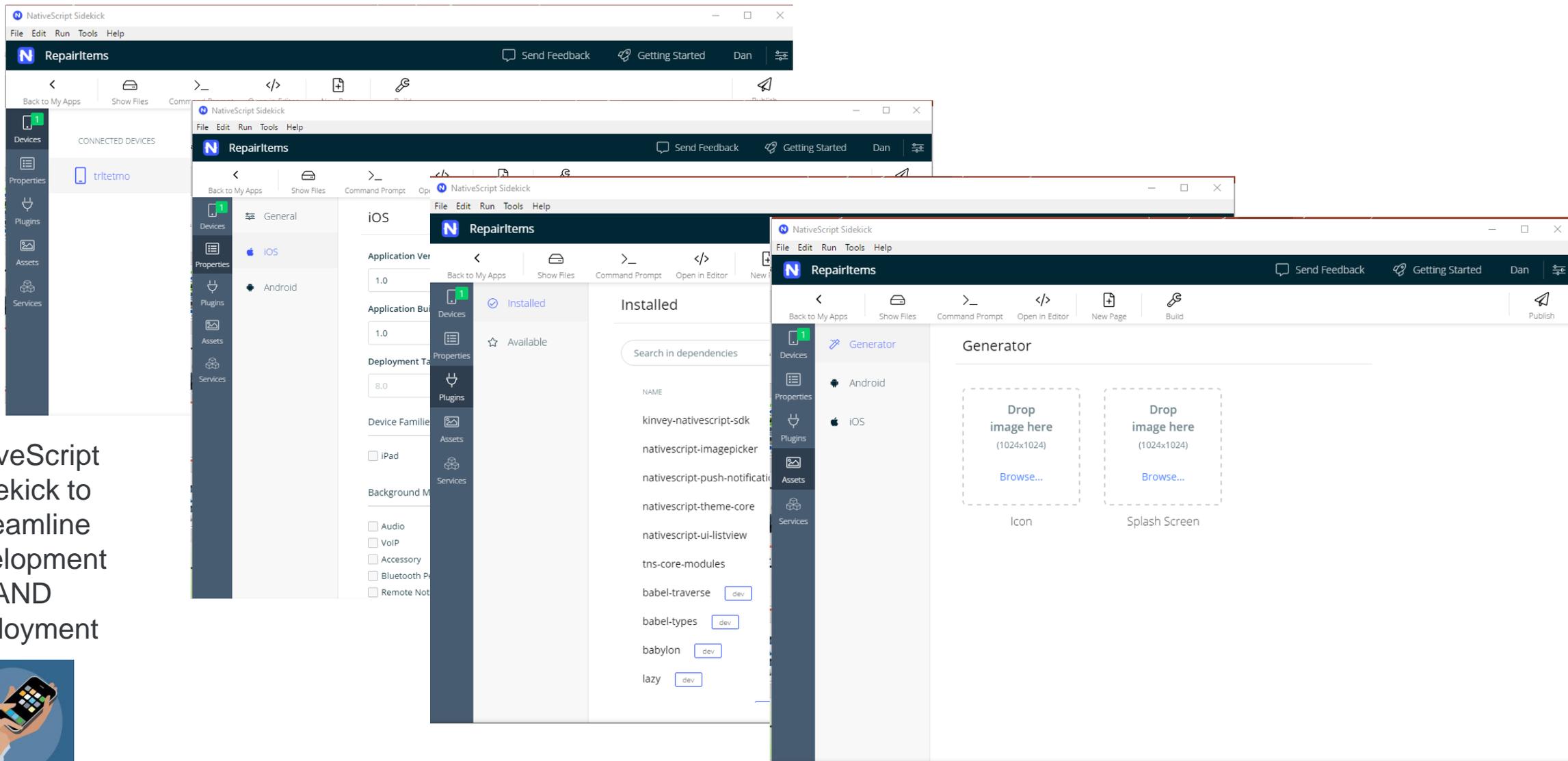


Mobile App Deployment – What is the Challenge?

- App Store deployment – must have a Mac
- Settings for App in Store
- Icons and App Store Images



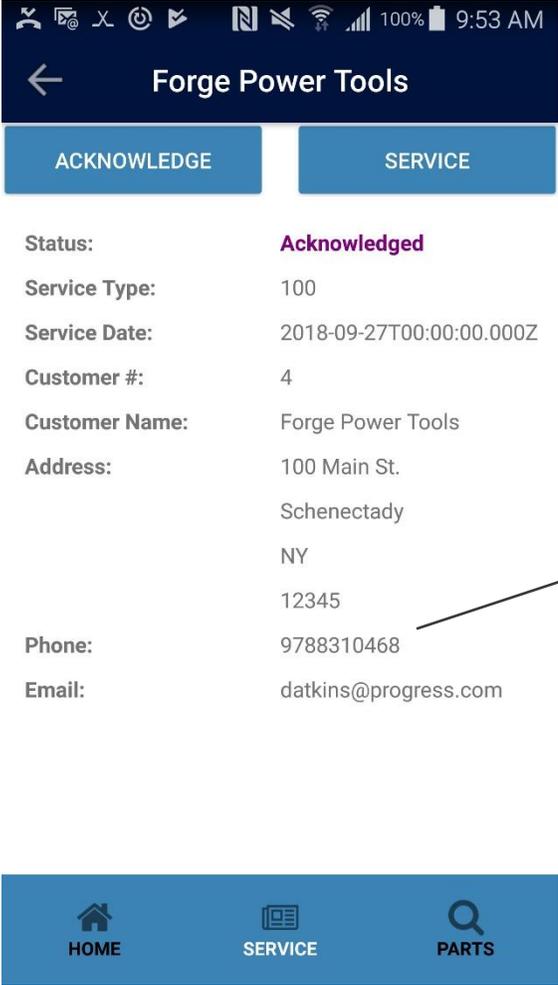
Mobile App Deployment – What is the Answer? NATIVESCRIPT SIDEKICK!



NativeScript
Sidekick to
Streamline
Development
AND
Deployment



NativeScript - Native Device Functionality



← Forge Power Tools

ACKNOWLEDGE SERVICE

Status: **Acknowledged**

Service Type: 100

Service Date: 2018-09-27T00:00:00.000Z

Customer #: 4

Customer Name: Forge Power Tools

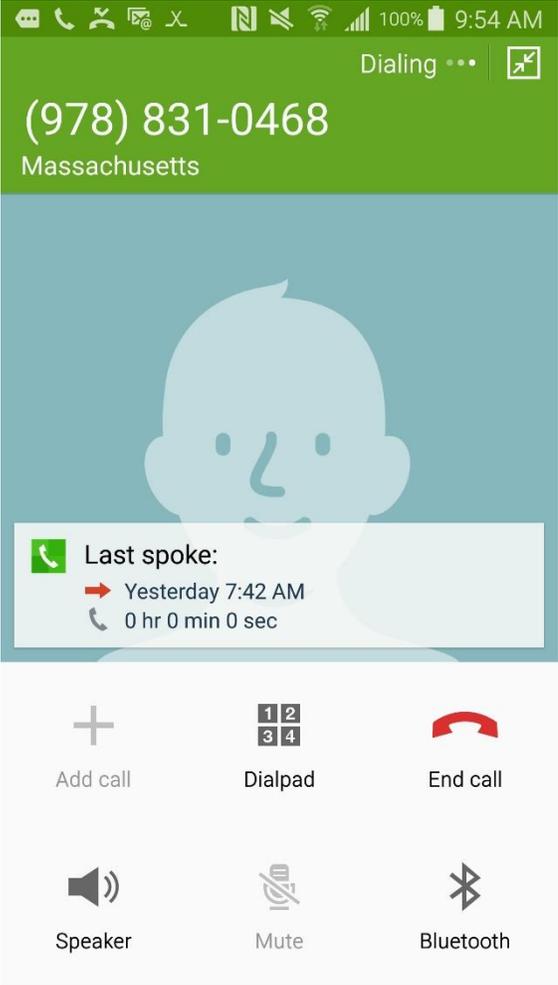
Address: 100 Main St.
Schenectady
NY
12345

Phone: 9788310468

Email: datkins@progress.com

HOME SERVICE PARTS

Call Customer



Dialing ...

(978) 831-0468
Massachusetts

Last spoke:
→ Yesterday 7:42 AM
0 hr 0 min 0 sec

+ Add call

1 2
3 4 Dialpad

End call

Speaker

Mute

Bluetooth



NativeScript - Native Device Functionality

Forge Power Tools

ACKNOWLEDGE SERVICE

Status: **Acknowledged**

Service Type: 100

Service Date: 2018-09-27T00:00:00.000Z

Customer #: 4

Customer Name: Forge Power Tools

Address: 100 Main St.
Schenectady
NY
12345

Phone: 9788310468

Email: datkins@progress.com

HOME SERVICE PARTS

To datkins@progress.com

Subject Message from DigiServ Technician

Hello, this is your DigiServ Technician. I would like to talk to you about scheduling your appointment |

Sent from my T-Mobile 4G LTE Device

Sent . with >

1 2 3 4 5 6 7 8 9 0

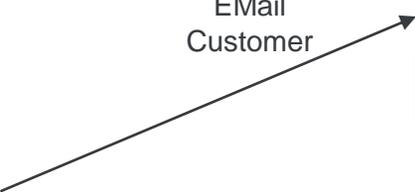
q w e r t y u i o p

a s d f g h j k l

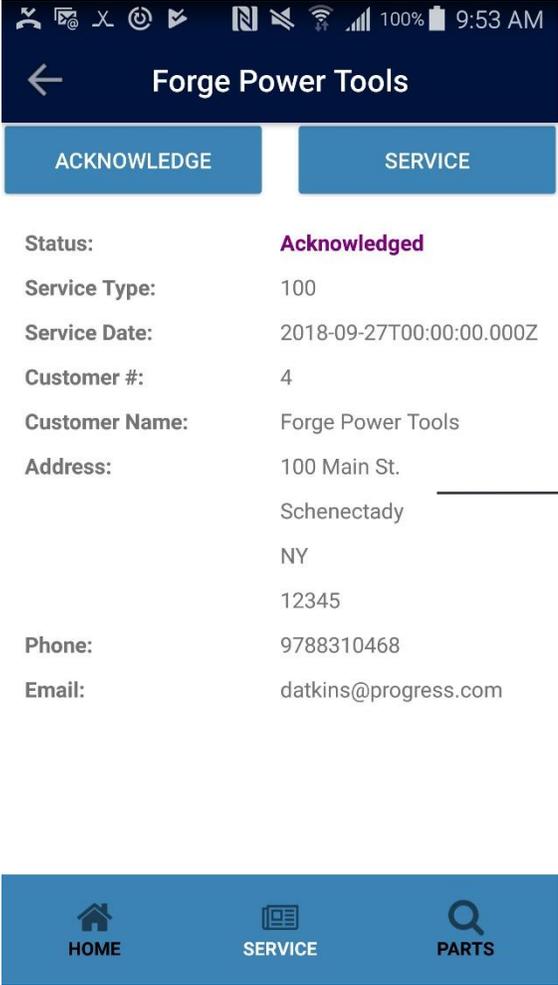
↑ z x c v b n m ↵

Sym , English(US) ↵

E-Mail Customer



NativeScript - Native Device Functionality



The screenshot shows a mobile application interface for 'Forge Power Tools'. At the top, there is a dark blue header with a back arrow and the title 'Forge Power Tools'. Below the header are two buttons: 'ACKNOWLEDGE' and 'SERVICE'. The main content area displays service details in a list format:

- Status: **Acknowledged**
- Service Type: 100
- Service Date: 2018-09-27T00:00:00.000Z
- Customer #: 4
- Customer Name: Forge Power Tools
- Address: 100 Main St.
Schenectady
NY
12345
- Phone: 9788310468
- Email: datkins@progress.com

At the bottom, there is a dark blue navigation bar with three icons and labels: 'HOME' (house icon), 'SERVICE' (list icon), and 'PARTS' (magnifying glass icon).

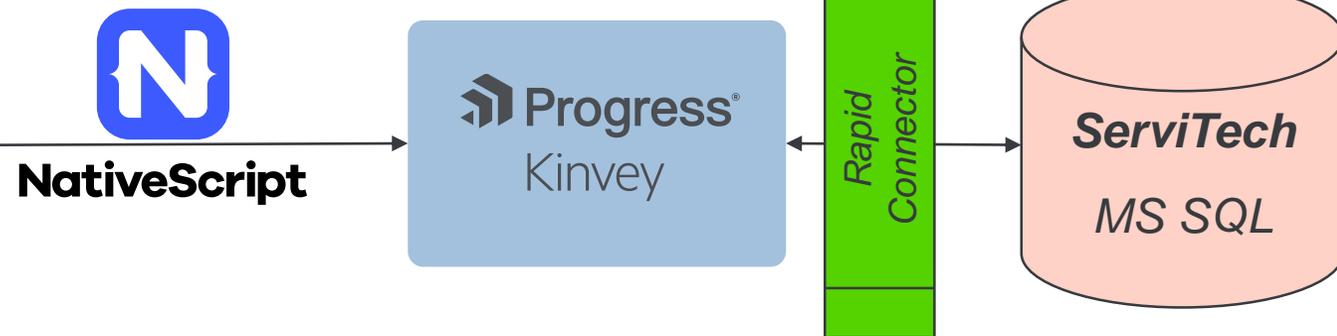
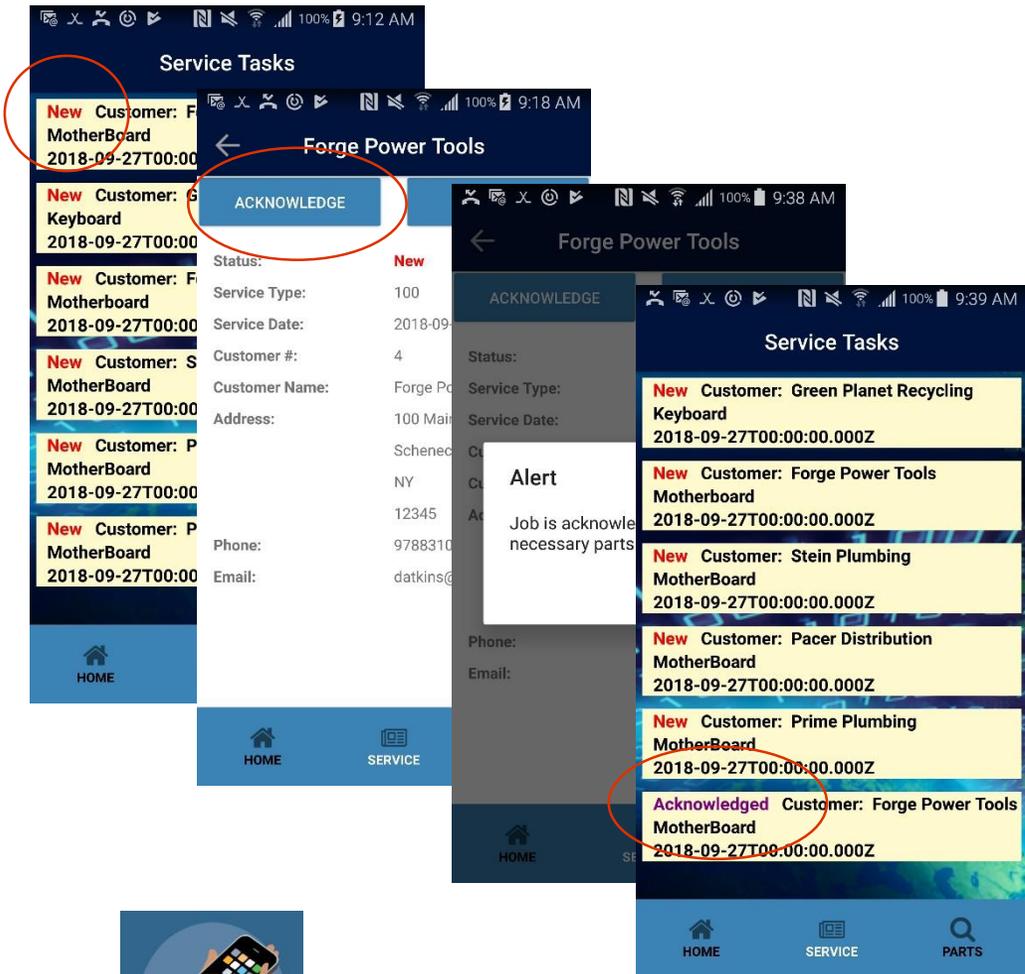
Driving
Directions



The screenshot shows a mobile map application interface. At the top, there is a search bar with the text '100 Main St., Schen...' and a microphone icon. Below the search bar is a map showing a street grid with a red location pin. The map includes labels for streets like Crane St, Main St, Pearl St, and Vermont Av, and landmarks like Faith Deliverance Tabernacle and New Day Christian Empowerment Center. At the bottom, there is a white information card for 'Main St' with the address 'Schenectady, NY 12303' and three buttons: 'Directions', 'Share', and 'Save'.



Demo Step 2a: WHAT YOU SAW: Native Mobile App and mBaaS



Native mobile apps with / x

Secure | https://www.nativescript.org

Apps Dan ToRead InnovTour Google Progress Arcade Salesforce Office 365 Booking Travel Workday Xactly Progress Arcade Office 365 Other bookmarks

Just released: Get The NativeScript Book V2 for Free: [481 Pages](#). [17 Chapters](#). [Pure Awesomeness](#).

NativeScript Framework ▾ Developers ▾ Tools ▾ Support ▾ Enterprise ▾ Blogs 🔍 **Get Started**

Create native iOS and Android apps with JavaScript

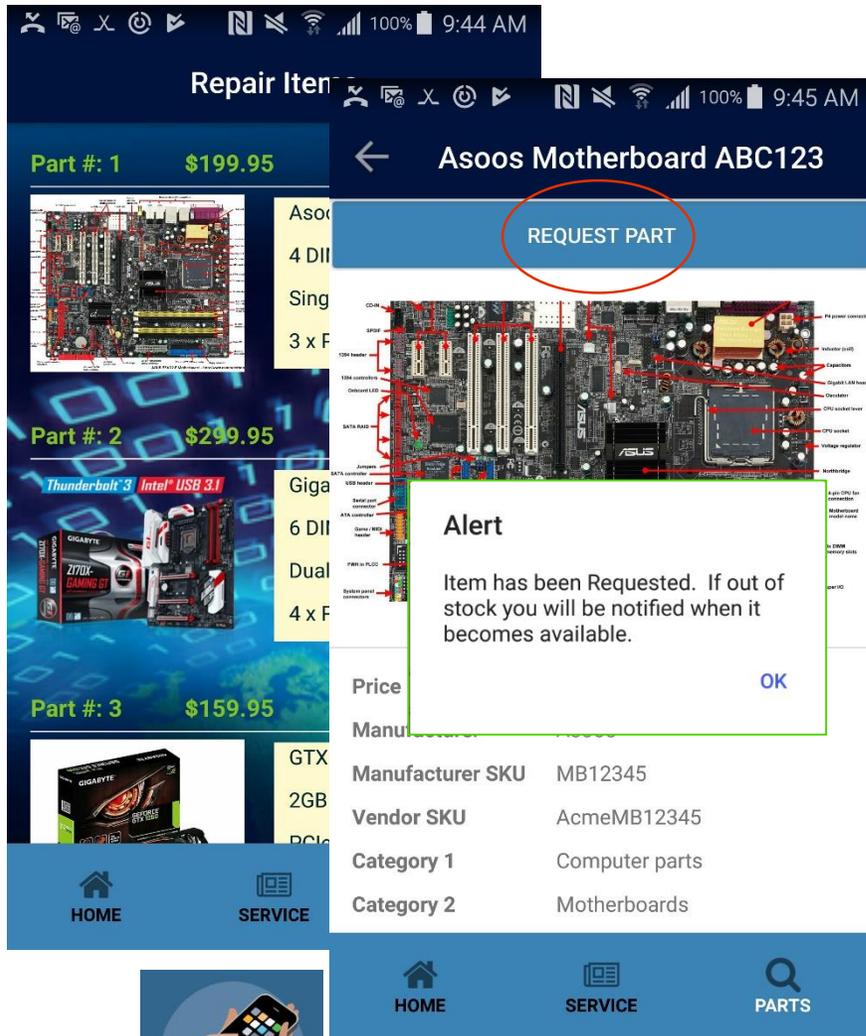
Open source framework for building truly native mobile apps with **Angular**, **Vue.js**, **TypeScript**, or **JavaScript**.

Get Started ▶ **Why NativeScript?**

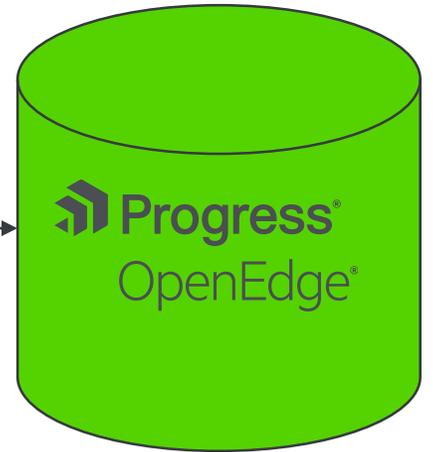
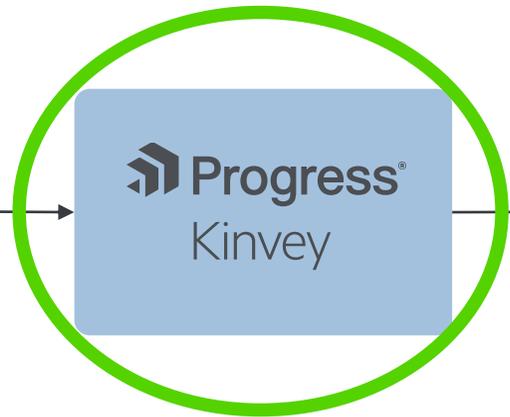
Build Native Mobile Apps Your Way



Demo Step 2b: WHAT DID YOU SEE: Native Mobile App and mBaaS




NativeScript



Kinvey Cloud Service Accelerators

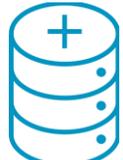
Leverage more than 20 integrated, configurable and secure serverless cloud services to reduce development, integration, maintenance and operations costs.



End-to-End Encryption



Node.js PaaS



Data & File Storage



Data Connector



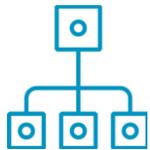
Data Sync



Cloud Caching



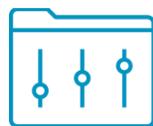
Push, email, SMS



Systems of Record



Live Service



Configuration Settings



Access Controls



Data Orchestration



Operational Intelligence



Auto-Scaling



Backend as a Service - OpenEdge Data

DB Details SQL Results SQL History

Columns	Indexes	Primary Key	Foreign Key	Preview	Row Count	Privileges	Partition Key	OpenEdge Table	OpenEdge Columns	OpenEdge Indexes
ItemNum	ItemName	Manufacturer	ManufacturerSKU	VendorSKU	Price	OnHand	Category1	Category2	Detail1	
1	Asoos Motherboard ABC123	Asoos	MB12345	AcmeMB12345	199.95	127	Computer parts	Motherboards	4 DIMM slots - max RAM 640	
2	GigaBite Motherboard XYZ007	GigaBite	MB987	AcmeMB55555	299.95	127	Computer parts	Motherboards	6 DIMM slots - max RAM 960	
3	GTX 1050	GoFarce	GTX1050	GTX1050	159.95	12	Computer parts	Video Cards	2GB GDDR5	
4	Intellimouse	Mirco Soft	HDQ-0001	Classic Intellimouse	39.99	20	Computer parts	Input Device	USB 2.0	
5	Sculpt Comfort Keyboard	Mirco Soft	L3V-0001	Sculpt Comfort	79.99	20	Computer parts	Input Device	USB 2.0	



Backend as a Service - Data Connectivity

The screenshot shows the Progress Kinvey App configuration interface. The top navigation bar includes the Progress Kinvey logo, 'Apps', 'Service Catalog', 'Learn', and 'Support'. The left sidebar shows the app name 'InnovTourDemos' in 'Development' mode, with a menu for 'Collections' and other settings like 'Dashboard', 'IDENTITY', 'DATA', and 'BUSINESS LOGIC'. The main content area is titled 'Collections / ItemData / Settings' and features a 'Data Source' section with options: 'Use Kinvey Data Store', 'Use a Data Service', 'Cloud Caching', 'Permissions', 'Export', 'Import', 'Modify', and 'Column Preferences'. The 'Use a Data Service' option is selected and highlighted with a green bar, showing 'ItemDataJSDOSvc' with 'Service Object: IT Item' and a green 'Active' status. Below this, a search bar 'Filter service objects...' is followed by a table of available services. The table has columns for 'Name / Type', 'Description', and 'Service Objects'. One service, 'ItemDataJSDOSvc' (ProgressData), is listed with the description 'RapidData Progress Data Service to pull ITItem' and 'Service Object: IT Item'. This service entry is circled in green. The table also shows '1 Services available for this app' and a '1' with a gear icon in the 'Service Objects' column.

Name / Type	Description	Service Objects
ItemDataJSDOSvc ProgressData	RapidData Progress Data Service to pull ITItem Service Object: IT Item	1



Backend as a Service - Data Connectivity

Progress Kinvey **Apps** Service Catalog

InnovTourDemos Development

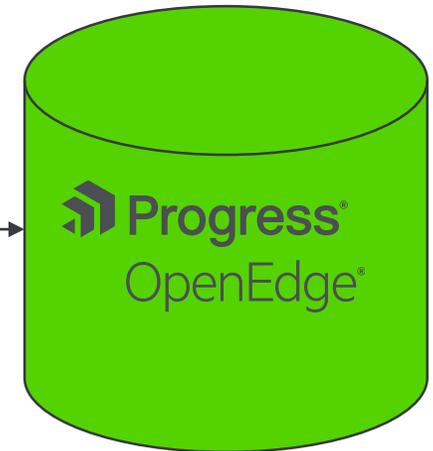
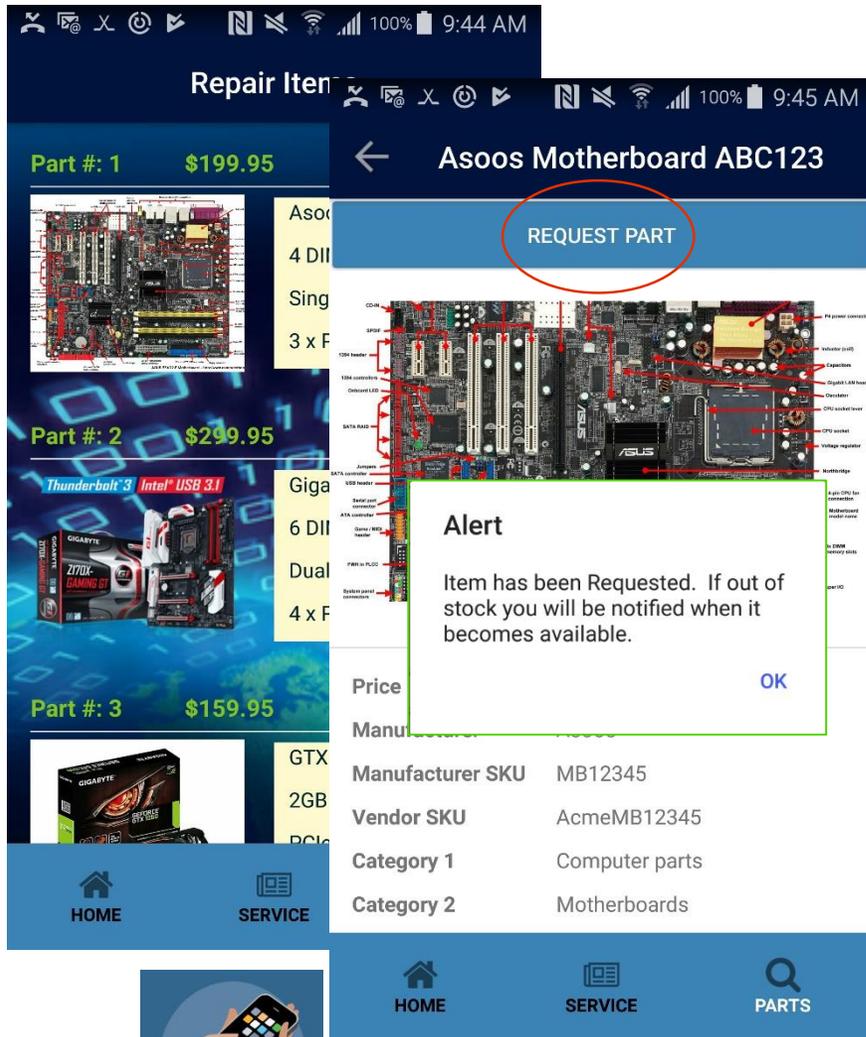
Collections / ItemData

Filter collections... Adv. 1-5 of 5 ItemData

<input type="checkbox"/>	_id	_acl	_kmd	ItemName	Price	OnHand	Category1	Category2
<input type="checkbox"/>	1	{}	{"ect": "2018- "Asoos Motherboard ABC123"		199.95	0	"Computer parts"	"Motherboards"
<input type="checkbox"/>	2	{}	{"ect": "2018- "GigaBite Motherboard XYZ007"		299.95	127	"Computer parts"	"Motherboards"
<input type="checkbox"/>	3	{}	{"ect": "2018- "GTX 1050"		159.95	12	"Computer parts"	"Video Cards"
<input type="checkbox"/>	4	{}	{"ect": "2018- "Intellimouse"		39.99	20	"Computer parts"	"Input Device"
<input type="checkbox"/>	5	{}	{"ect": "2018- "Sculpt Comfort Keyboard"		79.99	20	"Computer parts"	"Input Device"



Demo Step 2b: WHAT YOU SAW: Native Mobile App and mBaaS



Demo Step 3: WHAT DID YOU SEE: Responsive Web and Push Notifications

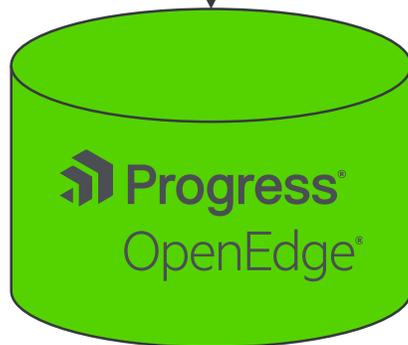
Items

ItemName	Price	OnHand
Asoos Motherboard ABC123	199.95	6
GigaBite Motherboard XYZ007	299.95	127
GTX 1050	159.95	12
Intellimouse	39.99	20
Sculpt Comfort Keyboard	79.99	20

1 - 5 of 5 items

ItemNum	1	Category2	Motherboards
ItemName	Asoos Motherboard ABC123	Detail1	4 DIMM slots - max RAM 64GB
Manufacturer	Asoos	Detail2	Single AM5 CPU Socket
ManufacturerSKU	MB12345	Detail3	3 x PCI Express 3.0 x16
VendorSKU	AcmeMB12345	ImageURL	https://storage.googleapis.com/31e8c02f51974f61a60ed39-4aa9-a0eb-683e11deb664/motherboard.jpg
Price	199.95	Weight	1.1
OnHand	6	MinQty	5
Category1	Computer parts		

Rest Service Layer



(Push notification)

SM N910T

10:45 AM

← Asoos Motherboard AB... Request

Alert

Asoos Motherboard is now in stock! Shipping now, will arrive tomorrow before 10:00

OK

Vendor SKU	AcmeMB12345
Category 1	Computer parts
Category 2	Motherboards
Detail 1	4 DIMM slots - max RAM 64GB
Detail 2	Single AM\$ CPU Socket
Weight (lbs)	1.1
On Hand	6



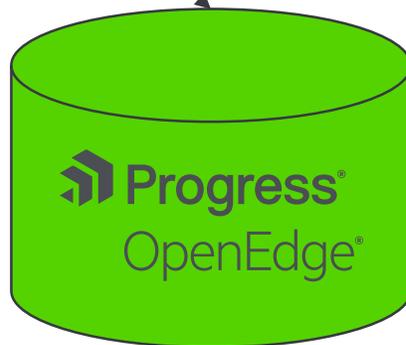
Demo Step 3: WHAT DID YOU SEE: Responsive Web and Push Notifications

The screenshot shows a web application interface. On the left, there is a table titled 'Items' with columns 'ItemName', 'Price', and 'OnHand'. The first row is highlighted in green. On the right, there is a detailed view of an item, 'Asos Motherboard ABC123', with various attributes like 'ItemNum', 'Manufacturer', 'Price', and 'OnHand'. A large green oval highlights the entire application window.

ItemName	Price	OnHand
Asos Motherboard ABC123	199.95	6
GigaBite Motherboard XYZ007	299.95	127
GTX 1050	159.95	12
Intellimouse	39.99	20
Sculpt Comfort Keyboard	79.99	20

ItemNum	1	Category2	Motherboards
ItemName	Asos Motherboard ABC123	Detail1	4 DIMM slots - max RAM 64GB
Manufacturer	Asos	Detail2	Single AM5 CPU Socket
ManufacturerSKU	MB12345	Detail3	3 x PCI Express 3.0 x16
VendorSKU	AcmeMB12345	ImageURL	https://storage.googleapis.com/31e8c02f51974f61a60ed39-4aa9-a0eb-683e11deb664/motherboard.jpg
Price	199.95	Weight	1.1
OnHand	6	MinQty	5
Category1	Computer parts		

Rest Service Layer



(Push notification)

The screenshot shows a mobile application interface. At the top, there is a status bar with the time '10:45 AM' and battery level '100%'. Below that, there is a navigation bar with a back arrow and the text 'Asos Motherboard AB... Request'. The main content area shows a detailed view of the motherboard, with various components highlighted in red. An alert dialog box is overlaid on the screen, displaying the text: 'Alert: Asos Motherboard is now in stock! Shipping now, will arrive tomorrow before 10:00'. Below the alert, there is an 'OK' button. At the bottom, there is a list of attributes for the motherboard, including 'Vendor SKU', 'Category 1', 'Category 2', 'Detail 1', 'Detail 2', 'Weight (lbs)', and 'On Hand'.

Alert

Asos Motherboard is now in stock! Shipping now, will arrive tomorrow before 10:00

OK

Vendor SKU	AcmeMB12345
Category 1	Computer parts
Category 2	Motherboards
Detail 1	4 DIMM slots - max RAM 64GB
Detail 2	Single AM\$ CPU Socket
Weight (lbs)	1.1
On Hand	6



Web Development – What is the Challenge?

- Many Tools and Technologies to Choose From
- Connectivity to Multiple Data Sources
- Standard Development Framework

The screenshot displays a web application interface for managing customers. The browser window shows the URL `localhost:4200/#!/module/module-1/customer-dg`. The application header includes a logo placeholder labeled "YOUR LOGO". The main content area is titled "Customers" and features a table with the following data:

CustNum	Name	State	SalesRep	
1	Lift Tours-ABC	New Hampshire	Donna Swindall	X Delete
2	Urpon Frisbee-LFM	Florida	Kari Iso-Kauppinen	X Delete
3	Hoops No. 42	Georgia	Harry Munvig	X Delete
4	Go Fishing Ltd 4	Connecticut		X Delete
5	Match Point Tennis 4	Massachusetts	Donna Swindall	X Delete
6	Fanatical Athletes-d1	Alabama	Smith , Spike Louise	X Delete
7	Aerobics valine Ky-dd		Pitt , Dirk K.	X Delete
8	Game Set Match	Alabama	Robert Roller	X Delete
9	Pihtiputaan Pyora		Pitt , Dirk K.	X Delete
10	Just Joggers Limited		Smith , Spike Louise	X Delete

Below the table, there are navigation controls including a "1" button and a "1 - 10 of 20 items" indicator.



Web Development – What is the Answer? Kendo UI Builder!

- Graphical Development based on current standards
- Built-in OpenEdge, REST and OData data source integration
- Model-based code generation to simplify customization

The screenshot displays the Progress Kendo UI Builder interface. The top navigation bar shows the application path: Progress Kendo UI Builder > MyDashboard > Customers. Below the navigation bar is a toolbar with buttons for Save, Revert, Generate, Start, Open in browser, and Build, along with a 100% zoom level. The interface is divided into three main sections: VIEWS, COMPONENTS, and a central design canvas.

The VIEWS section on the left includes a search bar and a list of views, with 'Sales' selected. The COMPONENTS section also includes a search bar and a list of chart types: Area Charts, Bar Charts, Donut Charts, Line Charts, and Pie Charts.

The central design canvas shows a dashboard layout. At the top, there is a table with the following data:

FirstName	LastName	Emails
FirstName0	LastName0	Emails0
FirstName1	LastName1	Emails1
FirstName2	LastName2	Emails2

Below the table is a navigation bar with a green circle containing the number '1'. At the bottom of the canvas, there is a calendar for May 2018. The calendar shows the following dates:

Su	Mo	Tu	We	Th	Fr	Sa
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

To the right of the calendar is a partial view of a donut chart with a legend showing 0.1 and 0.3.



Kendo UI Builder – Standards Based

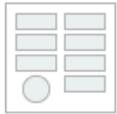


Kendo UI®
by Telerik



Kendo UI Builder – Simplified Data Interfaces

Edit Data Provider



OData



Generic REST



Progress Data

Name ?

ITItem

Service URI ?

http://localhost:8810/ITItem/web/pdo/ITItemSvc

Catalog URI ?

http://localhost:8810/ITItem/static/ITItemSvc.json

Authentication Model ?

Anonymous

Save

Cancel

[Need Help?](#)

Edit Data Source

Name

ITItemBE

Search

ITItemSvc
ITItemBE
ITItemBE

Properties

Label

ItemNum

Editor Type

integer-input

Excluded Fields

Included Fields

ItemNum (Integer)

ItemName (Text)

Manufacturer (Text)

ManufacturerSKU (Text)

VendorSKU (Text)

Price (Number)

OnHand (Integer)

Include All

Exclude All

Client-side Processing

Save

Cancel

[Need Help?](#)



Kendo UI Builder – Simplified Screen Creation

Kendo UI Builder interface showing the configuration for the 'Items' view. The view is titled 'Items' and is described as 'Items Interface for Innovation Tour Demonstration'. The configuration includes a table with columns 'ItemName', 'Price', and 'OnHand', and a grid of 10 items. The 'VIEW PROPERTIES' section includes fields for Title, New Title, Edit Title, Confirm Delete, Data Provider, Data Source, Grid Columns, Form Fields, Edit Mode, Edit Options, Button Labels, and Button Icons.

Kendo UI Builder interface showing the configuration for the 'Items' view. The view is titled 'Items' and is described as 'Items Interface for Innovation Tour Demonstration'. The configuration includes a table with columns 'ItemName', 'Price', and 'OnHand', and a grid of 10 items. The 'VIEW PROPERTIES' section includes fields for Title, New Title, Edit Title, Confirm Delete, Data Provider, Data Source, Grid Columns, Form Fields, Edit Mode, Edit Options, Button Labels, and Button Icons.



Demo Step 3: WHAT YOU SAW: Responsive Web and Push Notifications

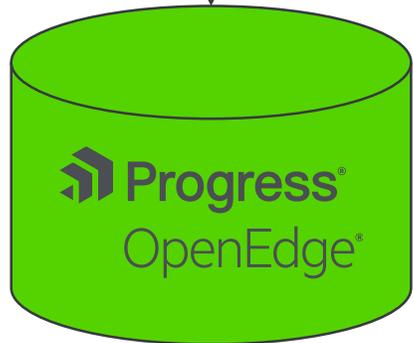
Items

ItemName	Price	OnHand
Asoos Motherboard ABC123	199.95	6
GigaBite Motherboard XYZ007	299.95	127
GTX 1050	159.95	12
Intellimouse	39.99	20
Sculpt Comfort Keyboard	79.99	20

1 - 5 of 5 items

ItemNum	1	Category2	Motherboards
ItemName	Asoos Motherboard ABC123	Detail1	4 DIMM slots - max RAM 64GB
Manufacturer	Asoos	Detail2	Single AM5 CPU Socket
ManufacturerSKU	MB12345	Detail3	3 x PCI Express 3.0 x16
VendorSKU	AcmeMB12345	ImageURL	https://storage.googleapis.com/31e8c02f51974f61a60ed39-4aa9-a0eb-683e11deb664/motherboard.jpg
Price	199.95	Weight	1.1
OnHand	6	MinQty	5
Category1	Computer parts		

Rest Service Layer



(Push notification)

SM N910T

10:45 AM

← Asoos Motherboard AB... Request

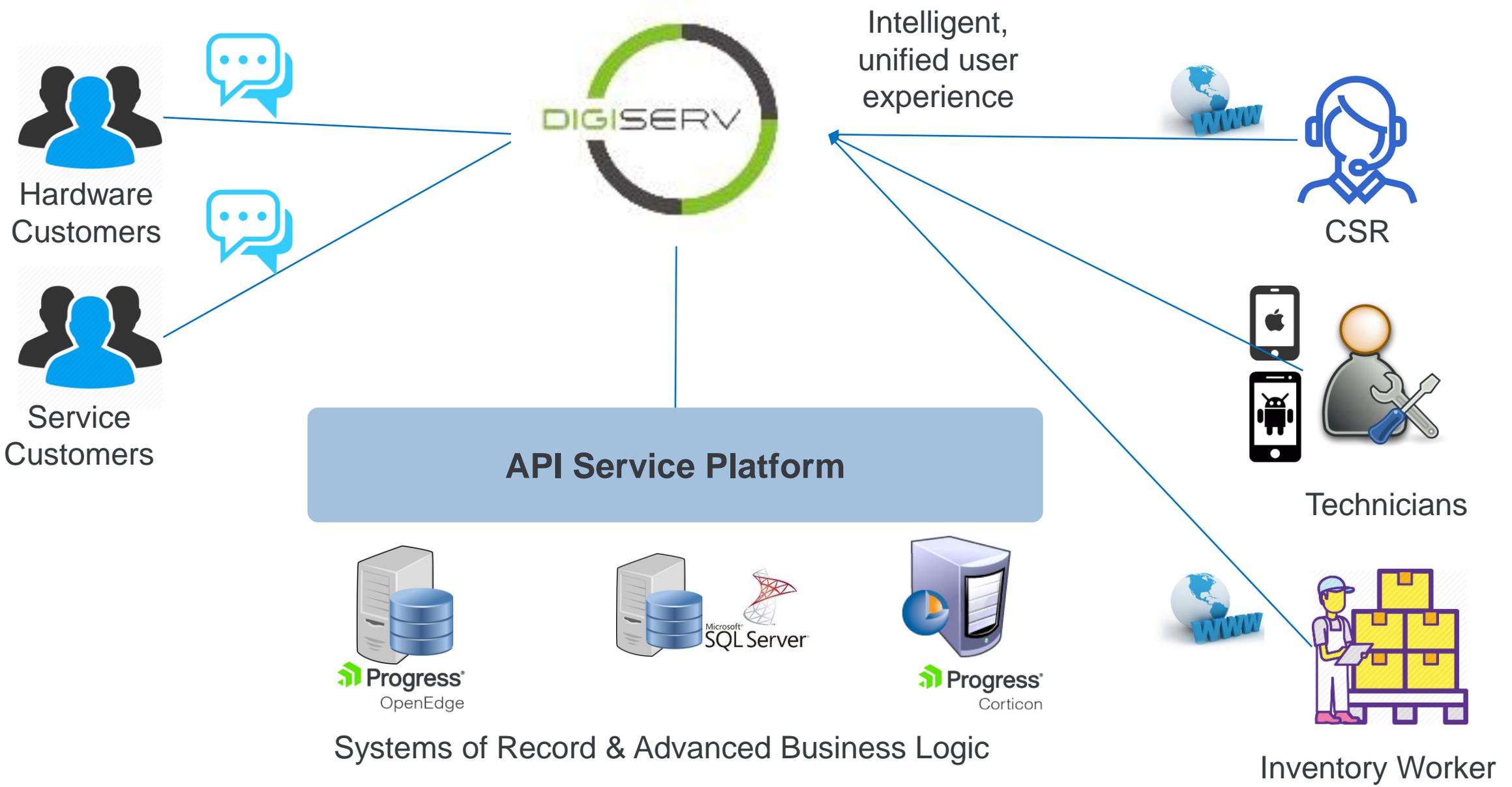
Alert

Asoos Motherboard is now in stock! Shipping now, will arrive tomorrow before 10:00

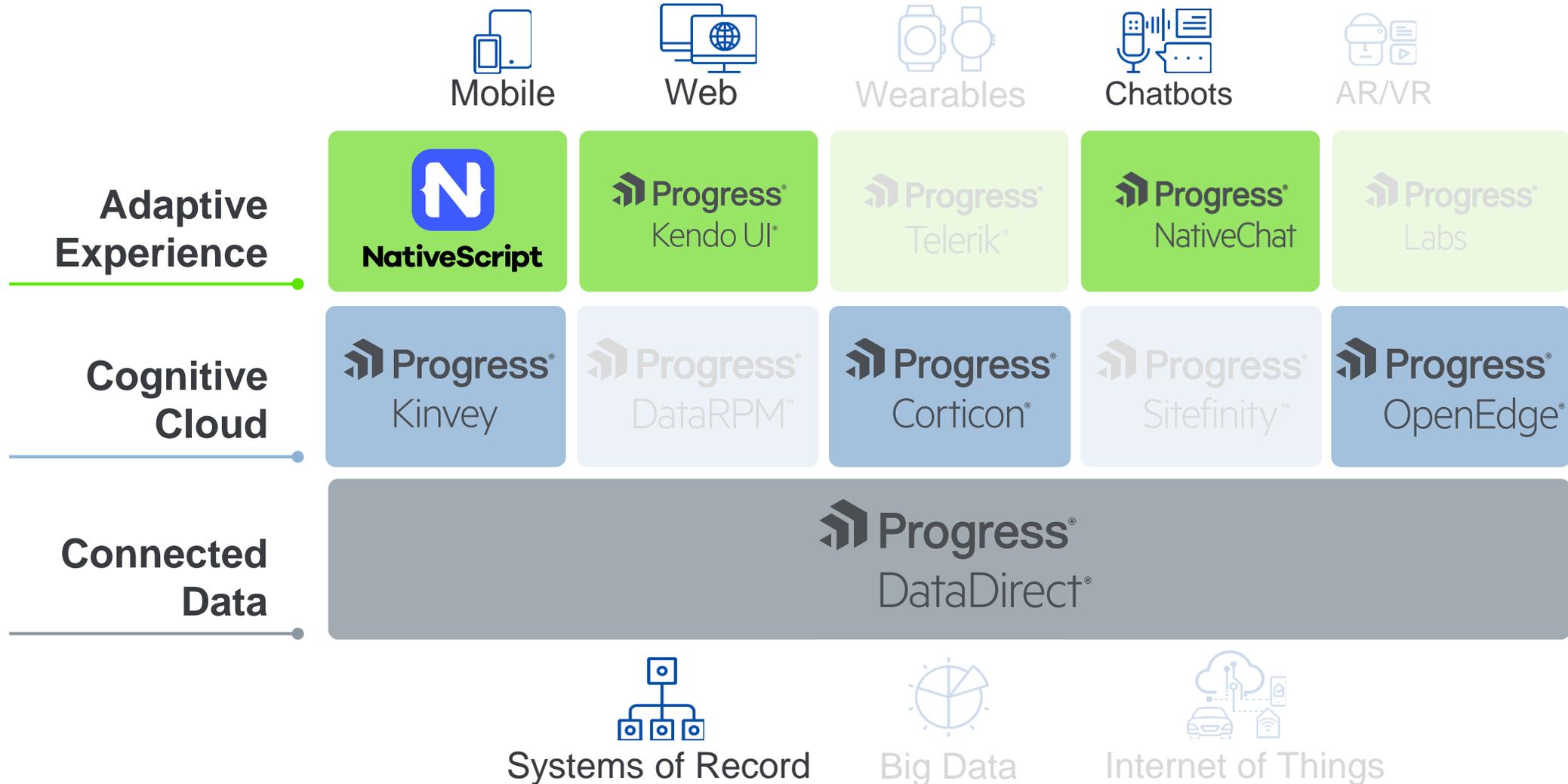
OK

Vendor SKU	AcmeMB12345
Category 1	Computer parts
Category 2	Motherboards
Detail 1	4 DIMM slots - max RAM 64GB
Detail 2	Single AM\$ CPU Socket
Weight (lbs)	1.1
On Hand	6





The Progress *Cognitive-first* Platform





DigiCom + ServiTech = DigiServ

Challenges:

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 - Self-service scheduling through conversational chatbot interface





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 - Kinvey enables '2-speed dev', no-code integrations and SMS/Push...





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- DigiServ wants to expand the diversity of products they service
 - Corticon tech assignment business rules are agile and manageable



