

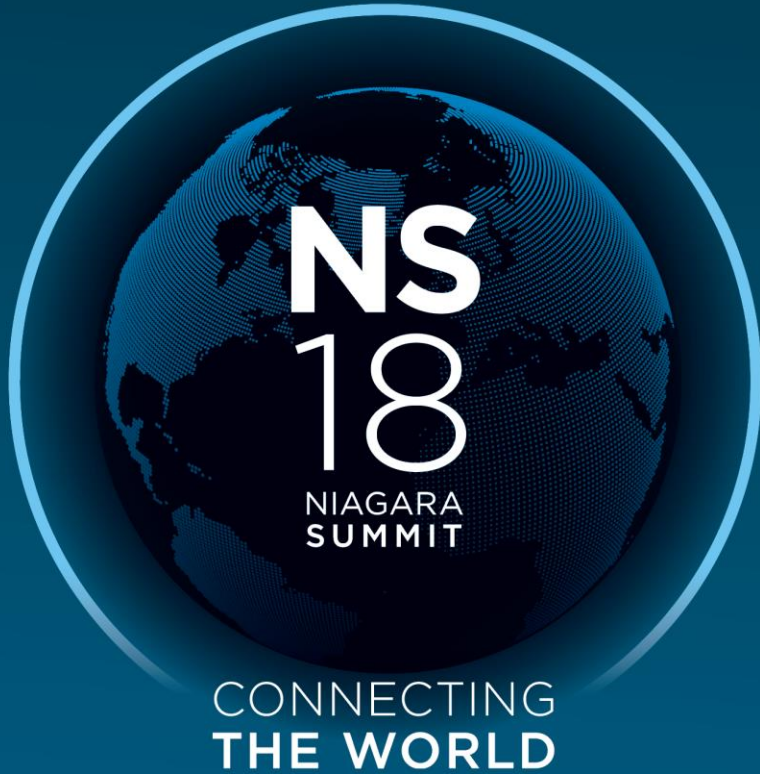


NS

18

**NIAGARA
SUMMIT**

**CONNECTING
THE WORLD**



From the Big Screen to the Small Screen

Andrew Jackson

Agenda

Responsive
Views

New Widgets
and Views

Enhancements
to Virtuals

Customization

Menu + Pane Management

New responsive behaviors for HTML5 user profile

Strategy for Mobile Views

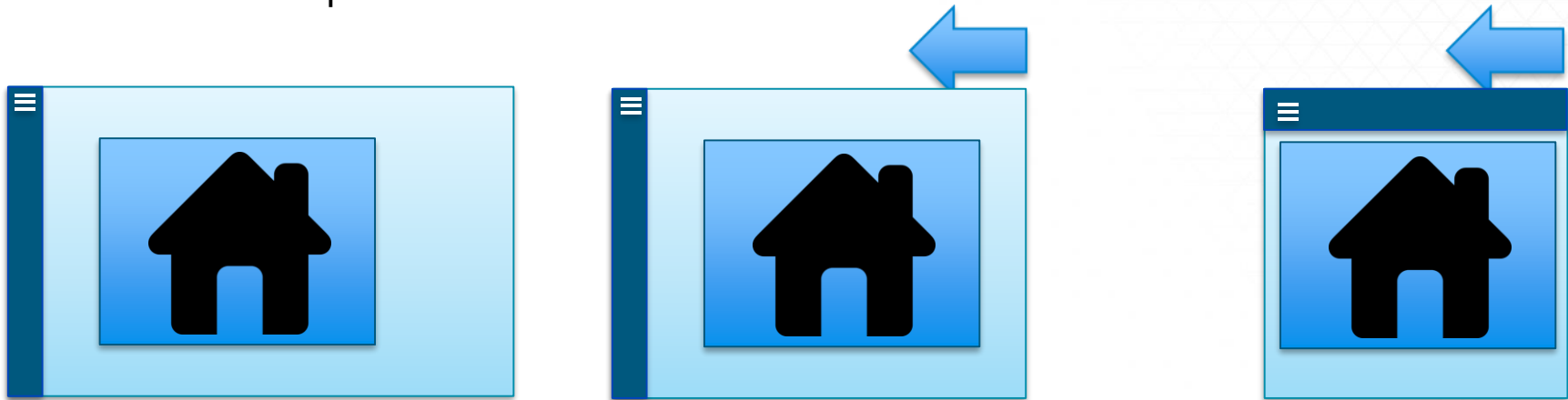
- Mobile profile launched with AX 3.7, enhanced with AX 3.8
- Desktop profile for Niagara 4 moves focus to HTML5 as default
 - Move away from JAVA plugin
- Niagara 4 journey – now good HTML5 support for operator experience
- Niagara 4.6 introduces several mobile friendly responsive features
 - Mobile now supported by default with HTML5 profile
 - Removes need to engineer separate views for Mobile profile
 - One profile now supported From the Big Screen to the Small Screen

Legacy Mobile Profile

- Enhancements with Niagara 4.6
 - Will use same alarm console views as HTML5 profile
 - Gains additional support for HxPx media
- Beyond Niagara 4.6
 - Mobile Profile not planned to be developed further
 - HTML5 profile is now mobile friendly by default

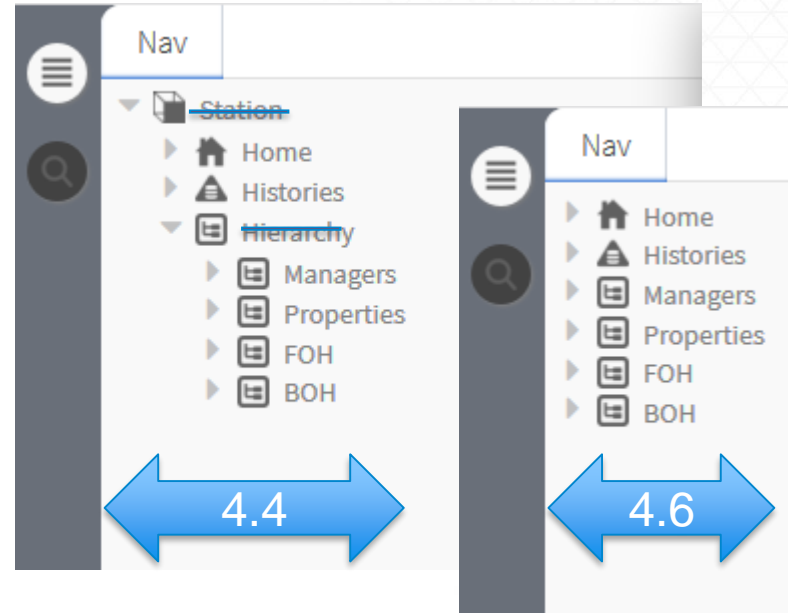
Responsive Menu Placement in HTML5 Profile

- Menu moves from left side to top when browser narrows
 - More space for content



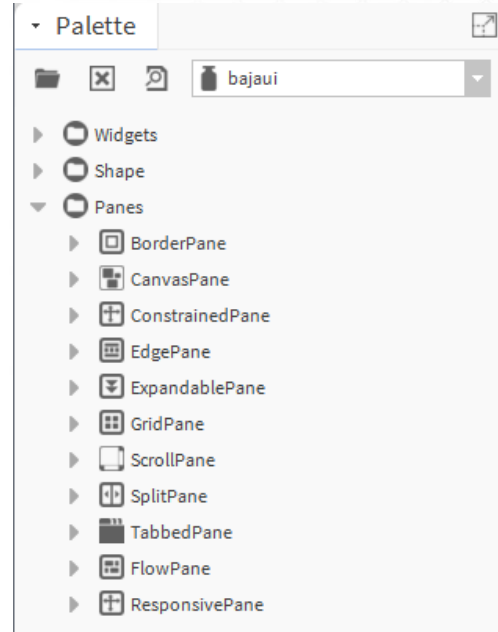
Navigation Menu in HTML5 Profile

- Station and Hierarchy root nodes
 - No longer shown
 - Do not have views of their own
- More space for browser content
 - Improves appearance
 - Less clutter
 - More suitable for operators
- Great for Mobile



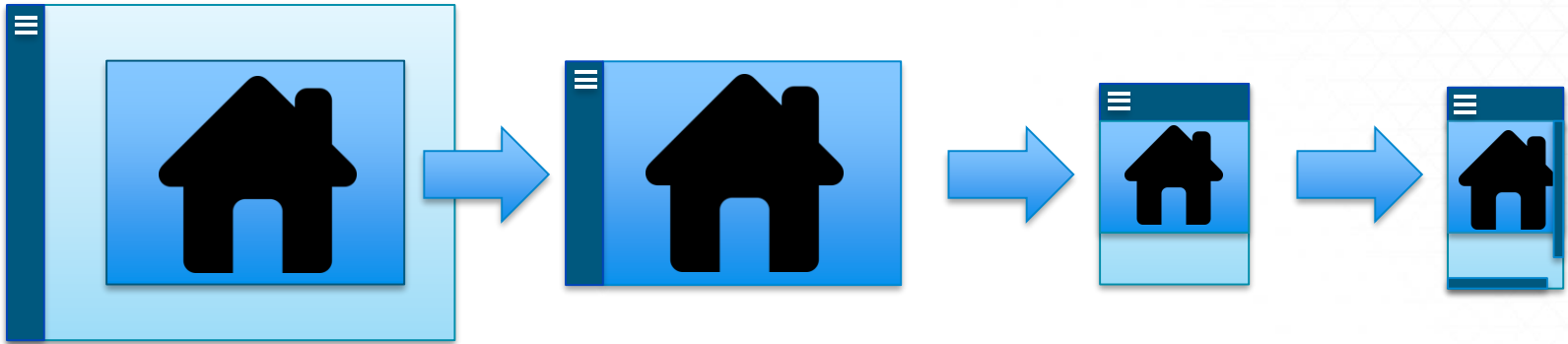
Px Panes - What Are They?

- Panes divide up areas of Px views
- Manage layout and behaviour
- Default for new Px View is
 - Scroll Pane root
 - Canvas Pane child of Scroll Pane
 - Positional control
 - Can include Widgets
 - Can include PxInclude px files
 - Great for fixed size views



Pane Enhancements – Canvas Pane

- Canvas Pane now has min and max scaling
 - Controls how small/large Fit Ratio will scale when browser resized or mobile
 - Limits scaling too small (tiny text) or too large (bloated)



Pane Enhancements – Canvas Pane

- Canvas Pane Settings
 - Default 0.5 and 1.0 for min and max scale factor
 - Default scaling Fit Ratio allows scaling when browser resized or mobile
- Canvas Pane increased default size – trend for higher resolution

CanvasPane

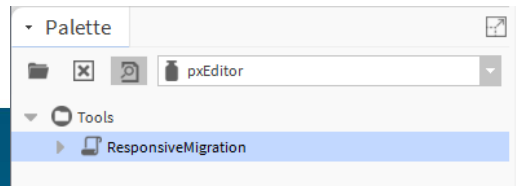
Canvas Pane

| | | |
|----------------|--------------|-----|
| background | (default) | ▼ |
| enabled | true | ▼ |
| halign | Center | ▼ |
| layer | | ▼ |
| maxScaleFactor | 1.00 | |
| minScaleFactor | 0.50 | |
| scale | Fit Ratio | ▼ |
| valign | Center | ▼ |
| viewSize | 1000.0,800.0 | ... |
| visible | true | ▼ |

OK Cancel

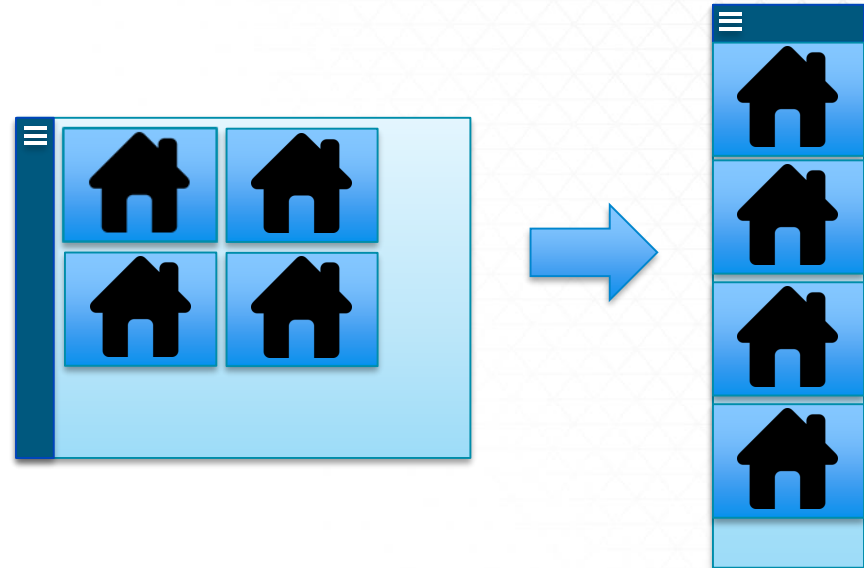
Canvas Pane Compatibility

- Niagara 4.4 new views
 - Canvas pane default scaling is None
- Niagara 4.6 new views
 - Canvas pane default scaling is Fit Ratio with max 1.0 and min 0.5 scaling
- Upgrading to 4.6
 - Canvas pane scaling set to None – compatible
 - Option to enable scaling and set max/min ratios
 - Canvas pane scaling set to Fit Ratio – will need setting max/min ratios
 - Program object tool available to bulk update Px files



Pane Enhancements – Flow Pane

- Flow Pane acts as grid with variable columns
 - Controls how many columns when browser width resized
- Typically used instead of Canvas Pane for flexible view
- Fluid content can be PxIncludes, or individual widgets



Flow Pane Settings

- Designed to be direct child of Scroll Pane or Edge Pane
- Flow Pane acts as grid with variable columns
 - Controls number of columns when browser width resized
 - Content may scroll if parent is Scroll Pane
- Alignment, gap and background settings

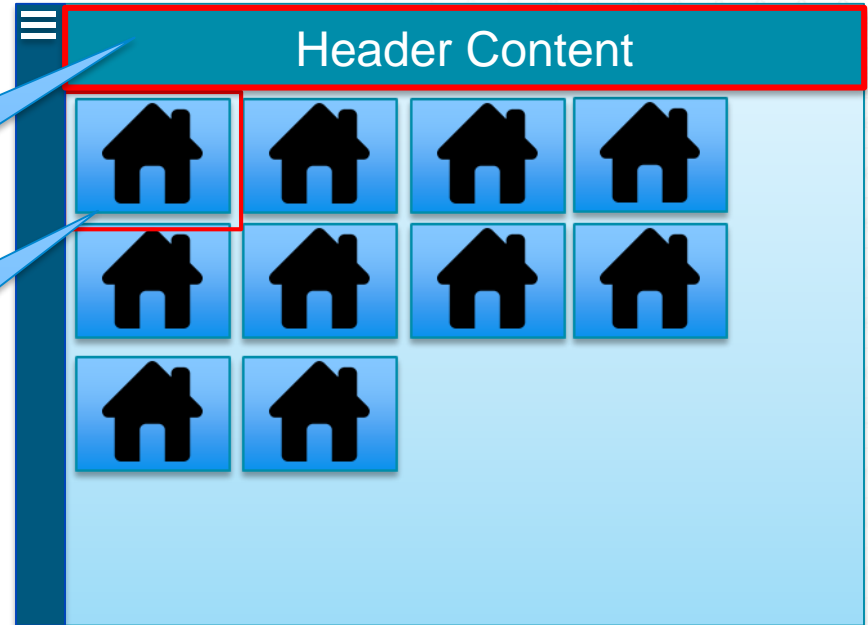
| Property | Value |
|------------|-----------|
| align | Fill |
| background | (default) |
| enabled | true |
| hgap | 4 |
| layer | |
| rowAlign | Center |
| vgap | 4 |
| visible | true |

Pane Enhancements – Responsive Pane

- Designed to add control to elements within Flow Pane
 - Can limit behaviour of elements
 - Can force new row

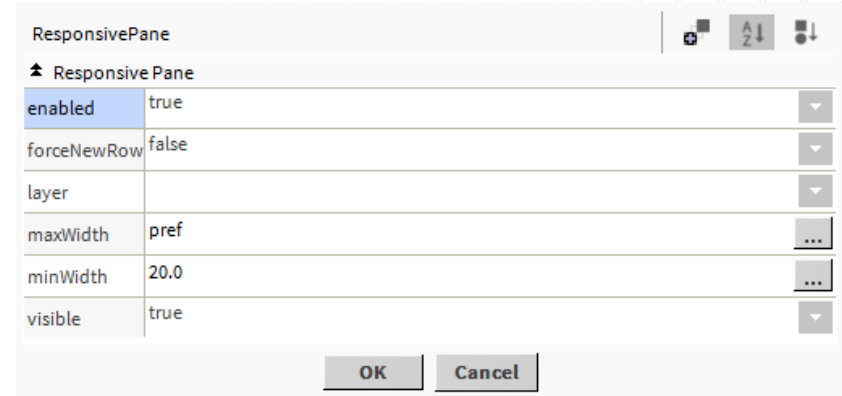
Header content inside Responsive Pane to force 100% width

Element inside Responsive Pane to force new row



Responsive Pane Settings

- Designed to be direct child of Flow Pane
 - Can force new row
 - Manages scaling of content based on available width (not height)
 - MaxWidth
 - Pref – allow content to control
 - 100% - take all of available width
 - MinWidth
 - Abs or % - min scaling limit



The image shows a settings dialog box for a 'ResponsivePane'. The dialog has a title bar with the text 'ResponsivePane' and three icons on the right: a square, a magnifying glass, and a downward arrow. Below the title bar is a tree view showing 'Responsive Pane' expanded. The main area contains a table of settings:

| | | |
|-------------|-------|-----|
| enabled | true | ▼ |
| forceNewRow | false | ▼ |
| layer | | ▼ |
| maxWidth | pref | ... |
| minWidth | 20.0 | ... |
| visible | true | ▼ |

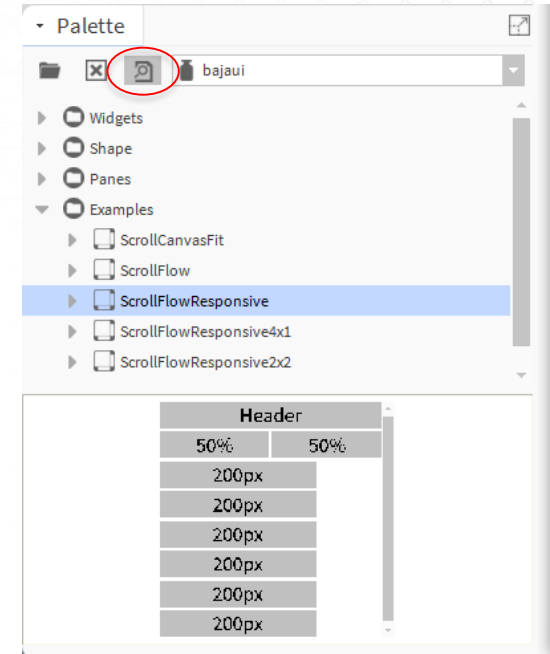
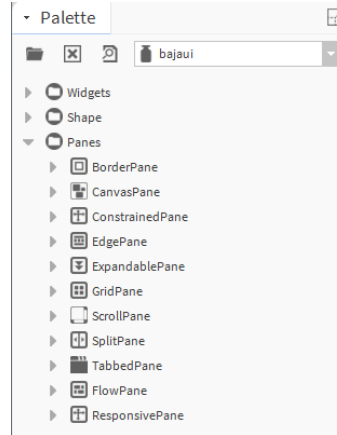
At the bottom of the dialog are two buttons: 'OK' and 'Cancel'.

Pane Tips

- Static pages – use Scroll Pane root with Canvas Pane child (as default)
- Responsive pages – use Scroll Pane root with Flow Pane child
- Can use child Responsive panes for more control of Flow pane contents
 - Manage scaling behaviour, force new row
- Can use parent Constrained pane of Flow pane to limit width/height
- Web Widget has preferred size (gauge, chart, custom)
 - Most other widgets do not have own preferred size
 - Can add Constrained pane to limit scaling
 - Can add Responsive pane to manage width – using % is useful

Pane Tips

- Check out the new panes in BajaUi palette
- Select preview to see examples



Summary – Responsive Enhancements

- HTML5 Profile gains responsive menu placement
- Canvas Pane new Min and Max scaling properties
- Flow Pane allows responsive flow of widgets in flexible grid
- Responsive Pane can manage scaling of widgets in Flow Pane

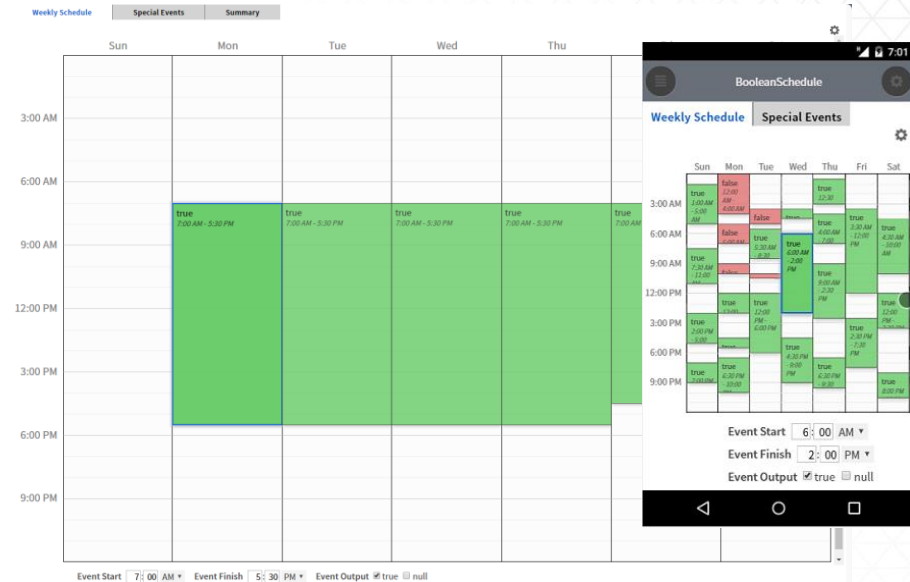
- Improved capability of Px views to scale from Mobile to Desktop screens
 - All in the same profile !
 - Mobile supported by default

New Widgets and Views

Schedule, Alarm Console, Role Manager, Reporting Grids

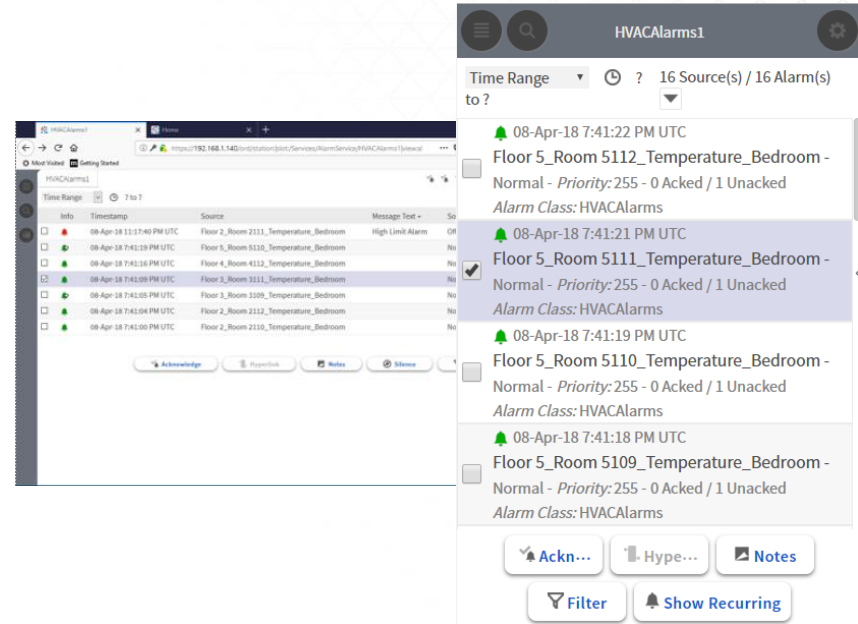
New Schedule Views

- Full HTML5
- Can be used smaller or larger
- Better Use of Screen Space
- Responsive – scales to fit space
- Responsive – details expand
- Works well mobile and big screen
- Dashboardable
- Virtual support – direct editing of remote schedules



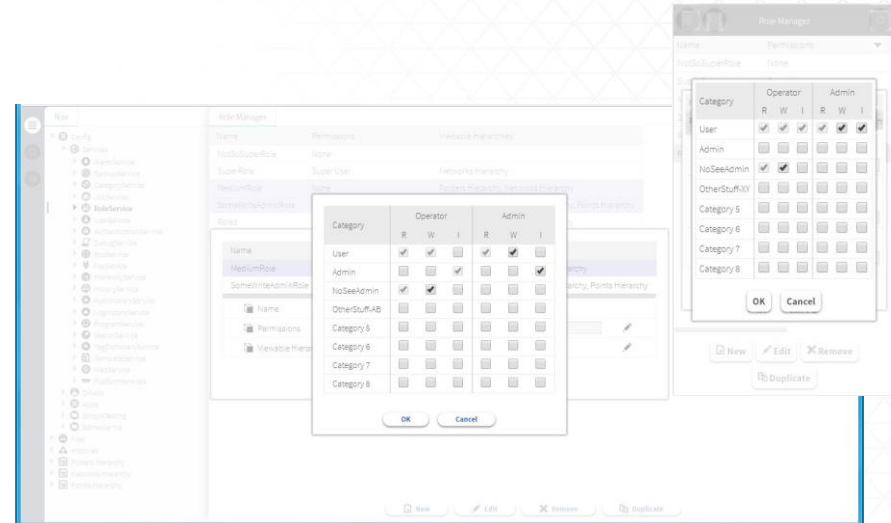
New Alarm Console View

- Full HTML5
- Live alarm update
- Can be used smaller or larger
- Better Use of Screen Space
- Responsive – scales to fit space
- Responsive – details expand
- Works well for mobile and big screen



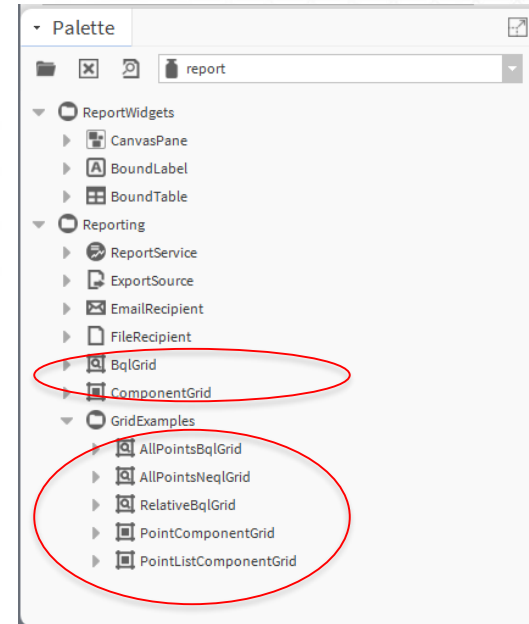
New Role Manager View

- Full HTML5
- Can be used smaller or larger
- Works well for mobile and big screen



New Reporting Grid Views

- Full HTML5
- Responsive – support mobile
- Can use in Dashboard Pane
- Exporting improved
- NEQL and BQL queries
- Examples in palette



Operator View Refresh

- Not just a makeover
- Responsive to browser size
- Live alarm updates
- Schedules and Report Grids can use dashboard pane as well as Charts
- Grids now support NEQL and BQL queries
- PDF Exports enhanced, better pagination
- Role manager fills gap in operator HTML support.
- Engineering views also updated (BACnet manager, Job service)

Virtual Story

Interesting News

Story of Virtual ORDs

- Supervisor Niagara Network Proxy Points access JACE data
- Real proxy points
 - Required if Supervisor station has logic or monitoring
 - Can be used for visualisation – ORDs resolve to supervisor station components
- Virtual proxy points
 - Can be used for visualisation (only)
 - Station is lighter as it has no components configured in station (don't persist)
 - Get created on the fly and subscribe when Px view needs them
 - Only defined in Px files

ORD Schemes

- Supervisor proxy point mapped to point in JACE

slot:/Drivers/NiagaraNetwork/JACE1/Points/Room2109/Temperature_Bedroom (in the Supervisor)

slot:/Drivers/BacnetNetwork/Room2109/points/Temperature_Bedroom (in the JACE)

- Virtual proxy point

slot:/Drivers/NiagaraNetwork/JACE1/virtual:|virtual:/Drivers/BacnetNetwork/Room2109/points/Temperature_Bedroom

- New nspace ORD scheme (from 4.4) – global resolution of ORDs

nspace:JACE1|slot:/Drivers/BacnetNetwork/Room2109/points/Temperature_Bedroom

- Also in 4.4

- NEQL over Fox queries, n:station implied tag, performance of virtuals

- New sys ORD scheme (from 4.6 – come to the next talk on supervisors)

- New schemes resolve to virtual ORDs

Well That's All Very Interesting.....

- Yes it is, but and I was saving the best till last
- There is a great story about the power of viewing JACE data using virtuals
- Supervisors can now automatically transfer Px Views from JACE
 - All the data binding ORDs are replaced with Virtual ORDs
[Learn more in the next session]
- Supervisors can visualise and edit JACE schedules with virtual ORDs
- Supervisors can visualise JACE report grids with virtual ORDs
 - Supervisor can now run query in the JACE

Wow!

This is very significant

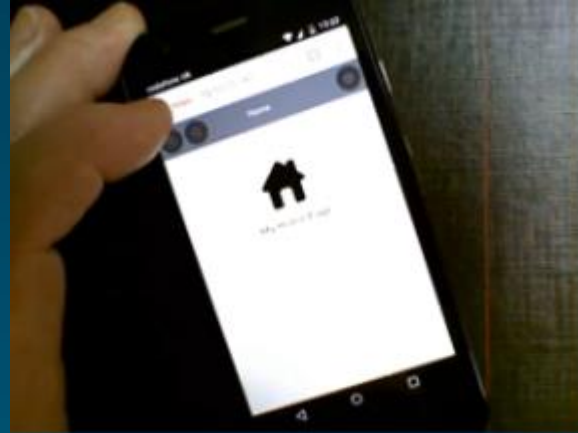
Customisation

Using Web Technology

Web Widget Customisation

- Make your own widget behaviour with custom JavaScript and CSS
- Doc Developer for basic documentation
- Use HandleBars templates
- Use JS libraries – many free

And Finally



Summit Hotel

Energy %

Now



YTD 86.0 MTD 78.0

93.0

Occupancy %

Now



YTD 86.0 MTD 69.0

86.0

Finance Target %

Now



YTD 69.0 MTD 74.0

87.0

Services %

FM Service



F&B 81.0 BOH 75.0

78.0



Weekly Schedule

Special Events

Summary

| | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|----------|-----|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----|
| 3:00 AM | | | | | | | |
| 6:00 AM | | | | | | | |
| 9:00 AM | | true 6:30 AM - 4:30 PM | true 6:30 AM - 4:30 PM | true 6:30 AM - 4:30 PM | true 6:30 AM - 8:30 PM | true 6:30 AM - 4:30 PM | |
| 12:00 PM | | | | | | | |
| 3:00 PM | | | | | | | |
| 6:00 PM | | | | | | | |
| 9:00 PM | | | | | | | |

Time Range ? to ?

2 Source(s) / 14 Alarm(s)

14-Apr-18 10:12:30 PM BST

Loop Supply Temp - Low Alarm - Offnormal - Priority:255 -
1 Acked / 0 Unacked Alarm Class: Default Alarm Class



Enhancements, Enhancements, Enhancements

- Journey to HTML5 for browser views is reaching maturity
 - Operator views no longer need JAVA plugin
 - Primary views now taking advantage of responsive HTML5 capability
 - Expect to retire Mobile Apps
- Much more flexibility to build views that work from Mobile to Big Screen
- Much more capability to build Supervisor views quickly (see next session)
 - Reduce engineering time
- More customisation capability



Thank You

Andrew Jackson



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