Niagara 4 Tagging & Templating
Agenda

• Tags and relationships: An overview
• What tags are and how to use them
• Getting the most from the search, tag dictionaries and navigation features
• Templates: Device modeling and deployment
• Live demo
• Q&A
Semantic data model

• Add meaningful identifiers, or tags, to each piece of data

• Search for data, or evaluate data based on pre-defined tags

• Identify relationships between complimentary data
Information tags

Chilled water system

- Equipment
- Chiller
- Centrifugal

- Chilled Water Supply Temperature Sensor
- Chilled Water Supply Flow Sensor
- Chilled Water Return Temperature Sensor
Geographic location tags

- State
- City
- Campus
- Building
- Floor

Chilled water system
Key features:
Search, dictionary and navigation
Search

Easily list all equipment including current status by searching “Tag Name” and “Equipment”

<table>
<thead>
<tr>
<th>Tag Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHU-1</td>
<td>Off (ok) @ 16</td>
</tr>
<tr>
<td>AHU-2</td>
<td>On (ok) @ 16</td>
</tr>
<tr>
<td>pumpChlr2</td>
<td>Off (ok) @ 16</td>
</tr>
<tr>
<td>pumpChlr1</td>
<td>On (ok) @ 16</td>
</tr>
<tr>
<td>BoilerSimulation</td>
<td>Program</td>
</tr>
<tr>
<td>loopPump2</td>
<td>Off (ok) @ 16</td>
</tr>
<tr>
<td>Chiller2</td>
<td>Off (ok) @ 16</td>
</tr>
<tr>
<td>Chiller1</td>
<td>On (ok) @ 16</td>
</tr>
</tbody>
</table>
Tag dictionary

Pre-defined dictionary provides standard naming convention
## Haystack dictionary

<table>
<thead>
<tr>
<th>Display Name</th>
<th>Value</th>
<th>Commands</th>
</tr>
</thead>
<tbody>
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<td>absorption</td>
<td>Marker</td>
<td></td>
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<tr>
<td>ahu</td>
<td>Marker</td>
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<td>air</td>
<td>Marker</td>
<td></td>
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<td>airCooled</td>
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<td>area</td>
<td>Double</td>
<td></td>
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<tr>
<td>coldDeck</td>
<td>Marker</td>
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</tr>
</tbody>
</table>

- Open source initiative to streamline working with data from the Internet of Things
- Standardize semantic data models and web services
- Goal: make it easier to unlock value of “big data” in multiple applications
Relationships: Parent and child definitions

1

AHU-1

AHU-2

AHU-5

2

AHU-6

AHU-7

AHU-10
Relationships: Parent and child definitions

**Diagram:**

1. ahuRef
   - VAV-1
   - VAV-2
   - VAV-20

2. ahuRef
   - VAV-21
   - VAV-22
   - VAV-40
Navigation

User navigation easily defined based on AHU to VAV relationships
Templates:
Device modeling and deployment
Template concept: cut and paste

With Niagara AX, you can copy and save a device, then paste it in when needed.
Template design

Provides flexibility to incorporate many configuration steps into a template:

- External links
- Relationship
- Property setup
- Graphics
Device deployment

1. Use Niagara Device Discovery
2. Select the device to add
3. Choose the template to use
Device configuration

During device deployment, the user receives instructions to assist with configuration parameters.
Live demo

• Individual tag dictionaries
• Applying or editing tags
• Searching for devices and their properties
• Deploying devices with templates
• Template designs
• Q&A
Thank You!

Rick Weisensale
Senior Product Marketing Specialist

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