



NS2024

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API UPDATES & HIDDEN GEMS

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CORE UPDATES

Niagara 4.13 & Niagara 4.14



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nspace **ALARM HYPERLINKS (4.13)**

- Hyperlink directly to alarm source as virtual in subordinate station
- No additional login needed
- NiagaraNetwork → Virtual Policies → Convert Alarm Hyperlinks To Virtual Form

▼ Alarm Data		
	Hyperlink ORD	ip:walrussanctuary.com fox:1913 station: slot:/WalrusMonitor
	Message Text	Walrus has breached containment



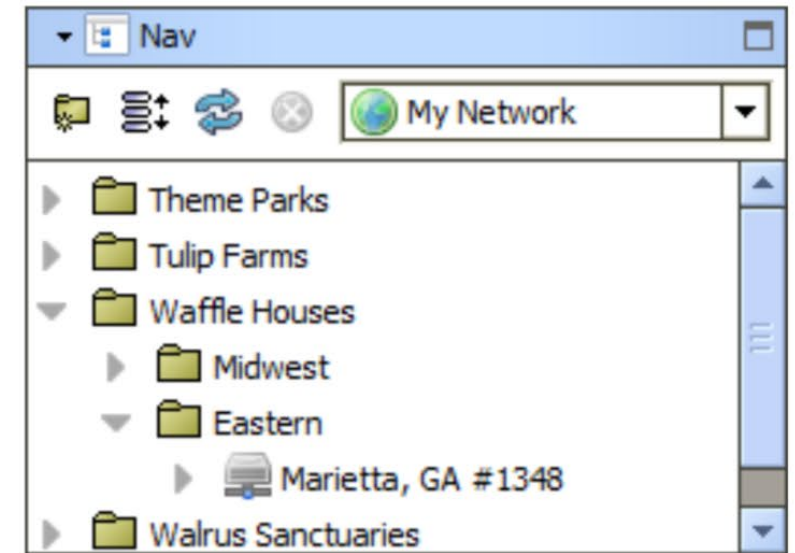
▼ Alarm Data		
	Hyperlink ORD	nspace:walrusSanctuary slot:/WalrusMonitor
	Message Text	Walrus has breached containment



NAV FOLDER HOST ORGANIZATION (4.13)

Hosts can be organized into Nav Folders in Workbench Nav Tree

- New class: BNavFolder used to group BHosts
- New **nav** ORD Scheme:
 - `nav:folder/folder/HostABC`





COMPONENT HANDLES IN TEMPLATES (4.13)

- Installed / upgraded templates keep existing component handles
- Links / relations preserved



GRADLE 7.3 (4.13)

Dependency declaration changes:

Gradle 4

```
compile(project("..."))  
runtime(project("..."))  
niagaraModuleTestCompile(  
    project("..."))
```

→

→

→

Gradle 7

```
api(project("..."))  
runtimeOnly(project("..."))  
moduleTestImplementation(  
    project("..."))
```



GRADLE 7.3 (CONT.)

Adds **niagara-module.xml** to manage runtime profiles

environment.gradle and **vendor.gradle** are no longer needed

Easier signing profile support - no longer need to use **keytool**



GRADLE 7.3 (CONT.)

New Module Wizard enhancements

- Creates your project shell with needed build files
- To migrate: run, then copy your source files
 - (src/, srcTest/, lexicon, permissions, etc.)
- (**grunt-niagara** also updated for **-ux** modules)



GRADLE 7.6 (4.14)

Just two changes in `settings.gradle.kts`:

```
val gradlePluginVersion: String = "7.3.40"  
val settingsPluginVersion: String = "7.3.0"
```

to:

```
val gradlePluginVersion: String = "7.6.17"  
val settingsPluginVersion: String = "7.6.3"
```

BISecurityDashboardItemProvider (4.14)

Hooks to disable a security dashboard section:

- **boolean isItemProviderEnabled()**
- **SecurityDashboardItem
getDisabledSecurityDashboardItem(Context cx)**
- **String getItemProviderName(Context cx)**

Syslog, Web Service, HTTP Headers sections now disable-able

Not TAG RULE (4.14)

- Negates a smart tag rule

▼ Tag Rules	Tag Rule List
▼  IsNonWalrusMammal	IsNonWalrusMammal
▼  Condition	And
▶  IsMammal	Is wrus:Mammal
▼  IsNotWalrus	Not
▶  IsWalrus	Is wrus:Walrus



UNIT TEST API: BTestNgStation (4.14)

```
@NiagaraType
@Test
public class BMyComponentTest extends BTestNgStation
{
    public void myComponentDoesXInARunningStation()
    {
        BMyComponent myComponent = new BMyComponent();
        stationHandler.getStation().add("MyComponent", myComponent);
        ...
    }
}
```



CONFIGURING THE TEST STATION

```
@Override
protected void configureTestStation(
    BStation station,
    String stationName,
    int webPort,
    int foxPort
)
    throws Exception
{
    super.configureTestStation(station, stationName, webPort, foxPort);
    station.getServices().add("TagDictionaryService",
                              new BTagDictionaryService());
    ...
}
```



TESTING USER PERMISSIONS

```
@Test(expectedExceptions = PermissionException.class)
public void throwsIfUserDoesNotHaveAdminReadPermissions()
    throws Exception
{
    userPermissionsScenario(
        withOrd("station:|slot:/MyComponent").onlyInCategory(3),
        withPermissions("rwi").onCategory(3)
    )
    .actAsUser((user) -> {
        doRpc("station:|slot:/MyComponent", user);
    });
}
```

UI UPDATES

Niagara 4.13 & Niagara 4.14



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UI CHANGELOG

- Notable UI API changes
- But not *too* notable

BACK/FORWARD MOUSE BUTTONS IN WORKBENCH (4.14)

- Back/Forward are mouse buttons 4/5
- Added to **BMouseEvent**

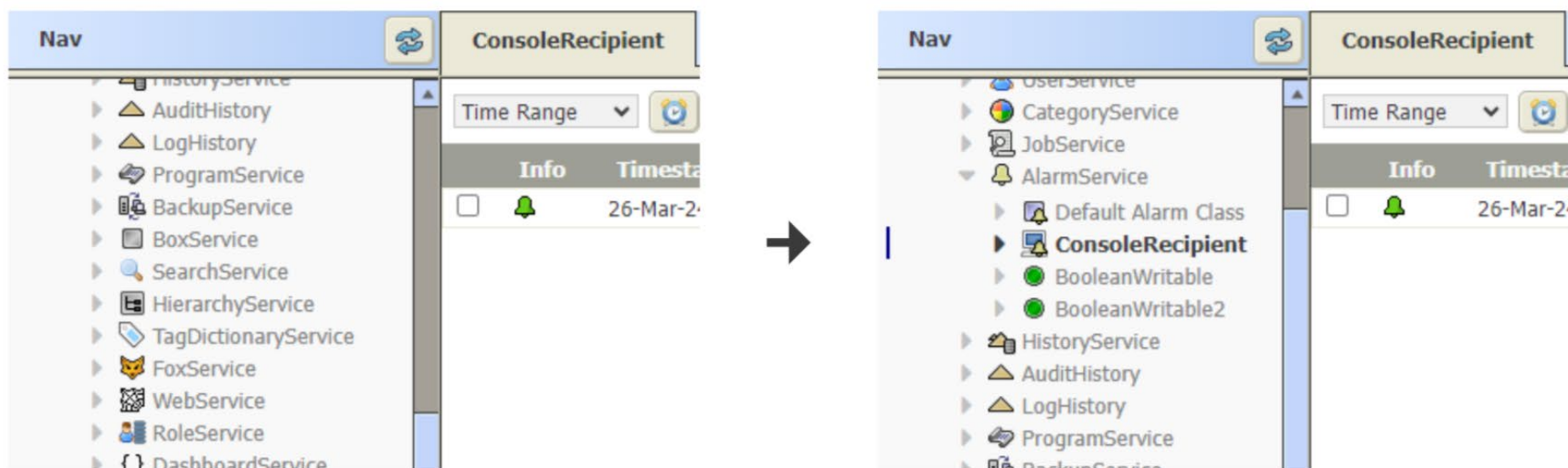


BIWebResource (4.13)

- Auto-resolve dependency tree
- **css!** imports no longer needed
- Add **BICssResource** deps to your **BJsBuild** instead



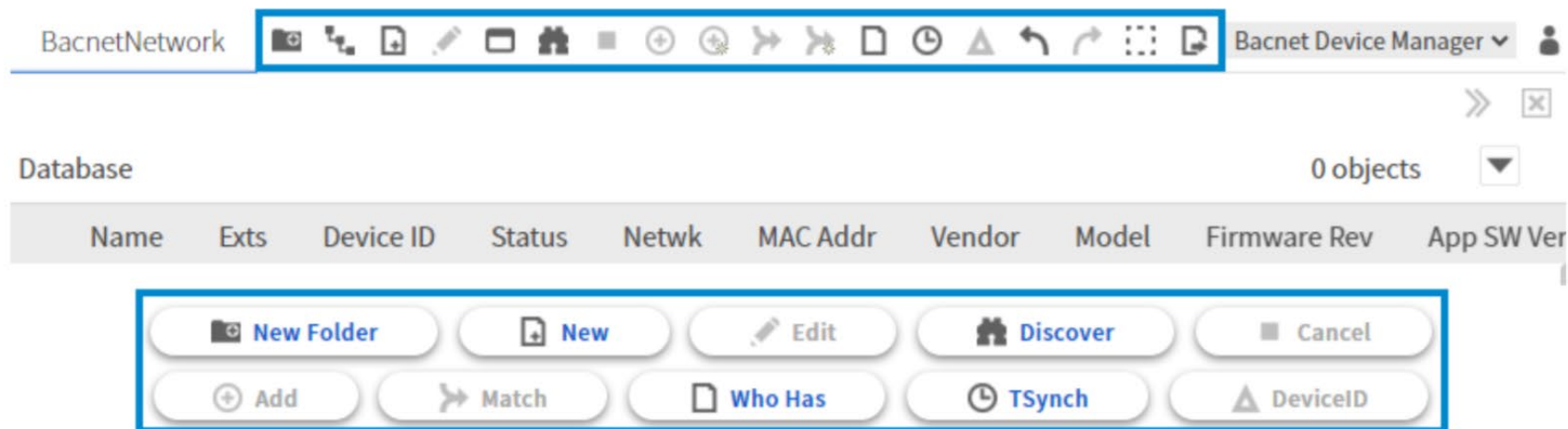
SYNC NAV TREE IN BROWSER (4.14)





MANAGER API CHANGES (4.14)

- **makeCommands ()** and **MgrCommand.flags**: more control over Commands
- I18N improvements





UxJobStepFactory (4.14)

- Provisioning jobs in browser
- Java: **BIUxJobStepFactory**
- JS: **UxJobStepFactory**

Provisioning steps to run	
☐	Add Station User (walrusWrangler, admin = false)
☐	Set Property Job Step on: Target "NEQL = type="wrus:WalrusMonitor"", Property Name = "defaultBivalve", Value = "scallop", Add
+ ↑ ↓ - 🔍	
Stations to include in the job	
☒	walrusSanctuary
+ ↑ ↓ -	
⚡ Run Now 🔄 Refresh	



BAJAScript WIDGET PROPERTIES (4.14)

```
// old:
properties: {
  myEnum: { value: 'oyster', typeSpec: 'wrus:BivalveEnum' }
}

// new:
properties: {
  myEnum: baja.$('wrus:BivalveEnum', 'oyster')
}
```

Run



BAJAScript BLOCKLIST REMOVED (4.14)

```
return component.set({  
  slot: 'myPassword',  
  value: baja.$('baja:Password', '$uP3r$3cR3t')  
})  
  .catch((err) => {  
    // fails if not over HTTPS  
  });
```

Run



UXMODEL.JSX (4.14)

```
1 / @jsx UxModel.jsx /
2 return spandrel(
3   <SplitPane properties={{
4     orientation: baja.$('bajau:Orientation', 'vertical')
5   }}>
6     <PropertySheet name="widget1" value={ramp} />
7     <BorderPane name="widget2" properties={{
8       border: baja.$('bajau:Border', '10 solid blue')
9     }}>
10       <Label name="content" properties={{ text: 'Hi Summit
11     </BorderPane>
12 </SplitPane>
13 ):
```

Facets

units=null
inf,max=+i

Proxy Ext

Hi Summit!

WHERE TO FIND DOCS

Cameras ready?



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- Workbench Help API Search:
 - **BNavScheme**
 - **BNiagaraVirtualNetworkExt**
 - **BTestNgStation**
 - **javax.baja.security.dashboard**
- Doc Developer:
 - Gradle Updates: Development Tools → Build
- Doc Tagging:
 - Tagging Reference → Components → Smart Tags

- Workbench Help API Search:
 - **BIWebResource**
 - **BIUxJobStepFactory**
 - **BMouseEvent**
- Doc Developer → User Interface → Open Web Technologies:
 - BajaScript
 - bajaux → Tutorials
 - Managers
 - UI Changelog

THANKS!

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