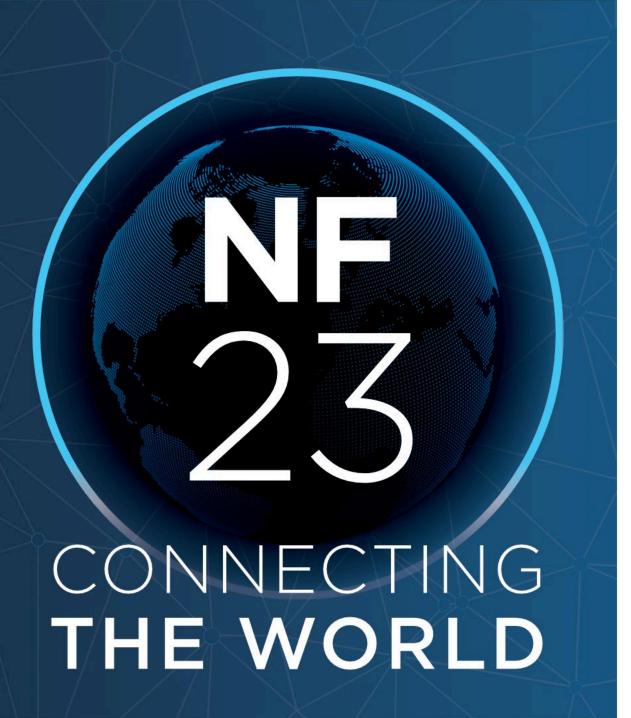
## CONNECTING THE WORLD





## Scaling Tips and Tricks

Tony Hardwick Tridium



## Scaling up

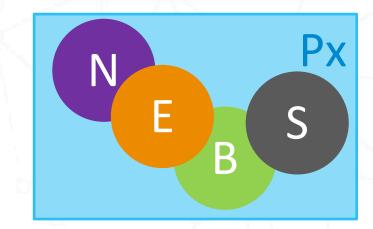
#### Introduction

**NF** 23





## Single controller setup









## Becomes multi-controller





## Plus Supervisor

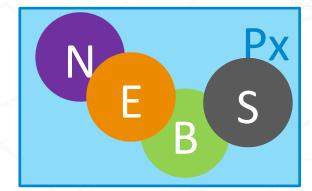


## Px Graphics





## Options for Px



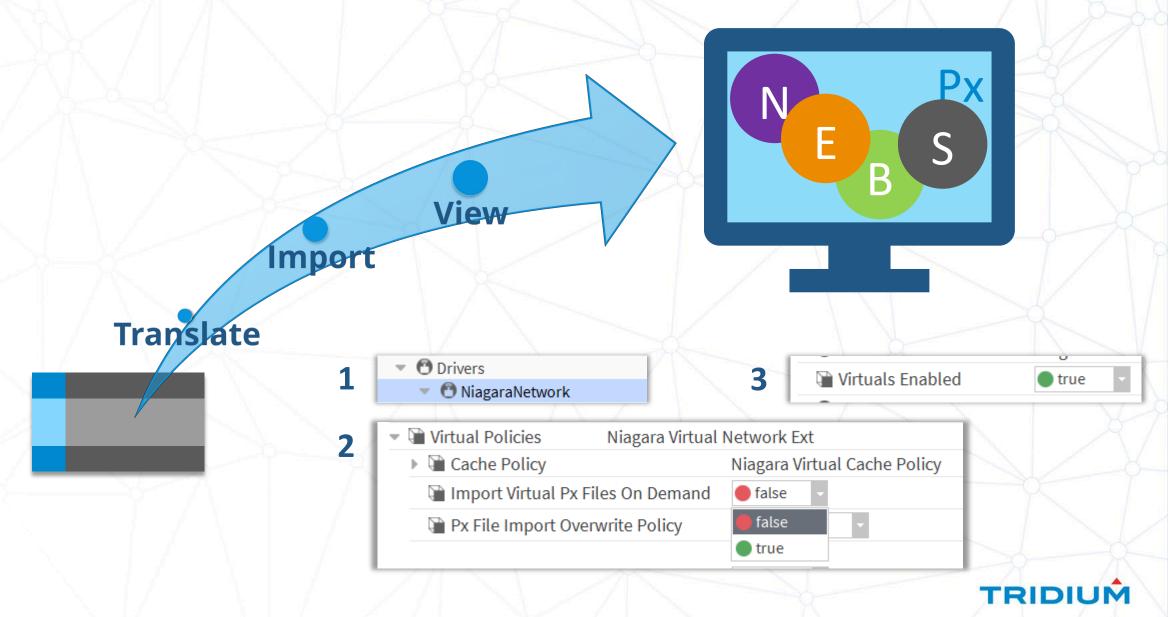
- Virtual Px On Demand
  - Efficient
  - Relies on machine-to-machine permissions
- Creating graphics on Supervisor
  - Better management of permissions
  - Requires prior planning





## **Virtual Px on Demand**

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### Metadata

## Tags for hierarchies and templates and graphics and stuff





## Metadata

- Supervisor:
  - System Database!
- Best practices
  - Tag 'em up
  - SmartTags





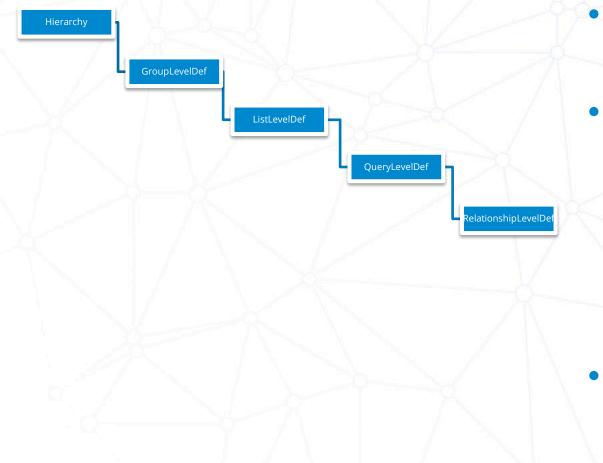
## System Database

- Quick and easy setup
- Leverage existing metadata structures





## **Existing Hierarchies from Subordinate**



**NF** 23

#### Copy the Hierarchy into Supervisor

• Change scope:

🕶 🖻 Hierarchy	H	Hierarch	y		
🗎 Query Cor	ntext		$\gg$	•	
🗎 Status			{ok}	ł	
📔 Fault Cau	se				
🔻 隌 Scope			Hiera	rchy S	Scope Cont
🔻 隌 Station	Hierard	chy Scop	e		
🗎 Scoj	be Ord	statio		:	

Profit



## Smart Tags

#### • Way easier than you think

- 0	Tag Rules	Tag Rule List	
-	🗎 BooleanFilte	rRule BooleanFilterRule	
	<ul> <li>Condition</li> </ul>	Boolean Filter	
	🗎 Filter	n:point and n:name like '[Tt]emp.*'	
	👻 🖸 Tag List	Tag Info List	
	🕨 🥔 temp	Marker	

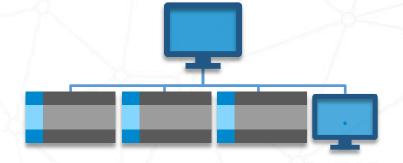
• = go find points whose name is something like e.g. 'temperature'

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• Put a temp tag on them



## Provisioning



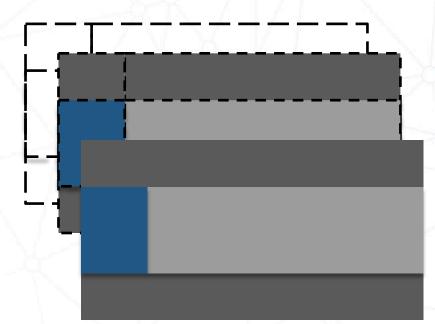
- Manage your stations:
  - Install software
  - Change values
  - Manage Templates
  - Certificates
  - Single-sign-on (SSO) config
  - Do the robot







## Templates



- Updatable
- Reusable
- Provisionable





## CONNECTING THE WORLD



# CONNECTING THE WORLD

## System Database

*Curtis McKerlie Tridium* 



## What is System Database?

The purpose of the System Database is to allow you to run queries against your entire Niagara system (Supervisor and those stations connected to it).



This allows your searches and hierarchies to span the entire system.





## What is System Database



JACE stations will not have a System Database, but their information may be indexed and placed in the Supervisor's System Database.

Once entities are stored in the SystemDb, they can be queried by services, for example HierarchyService and SearchService, and other processes.



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## The Concept

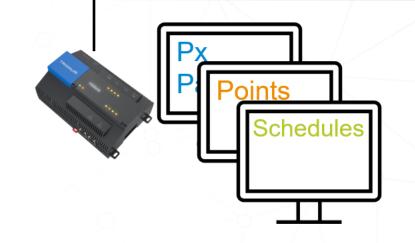
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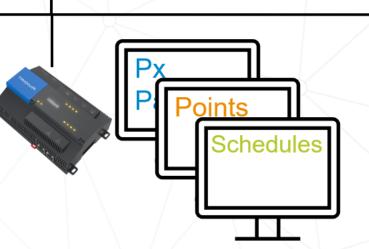


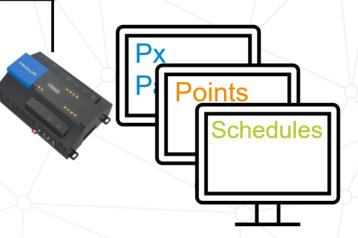
## The Concept

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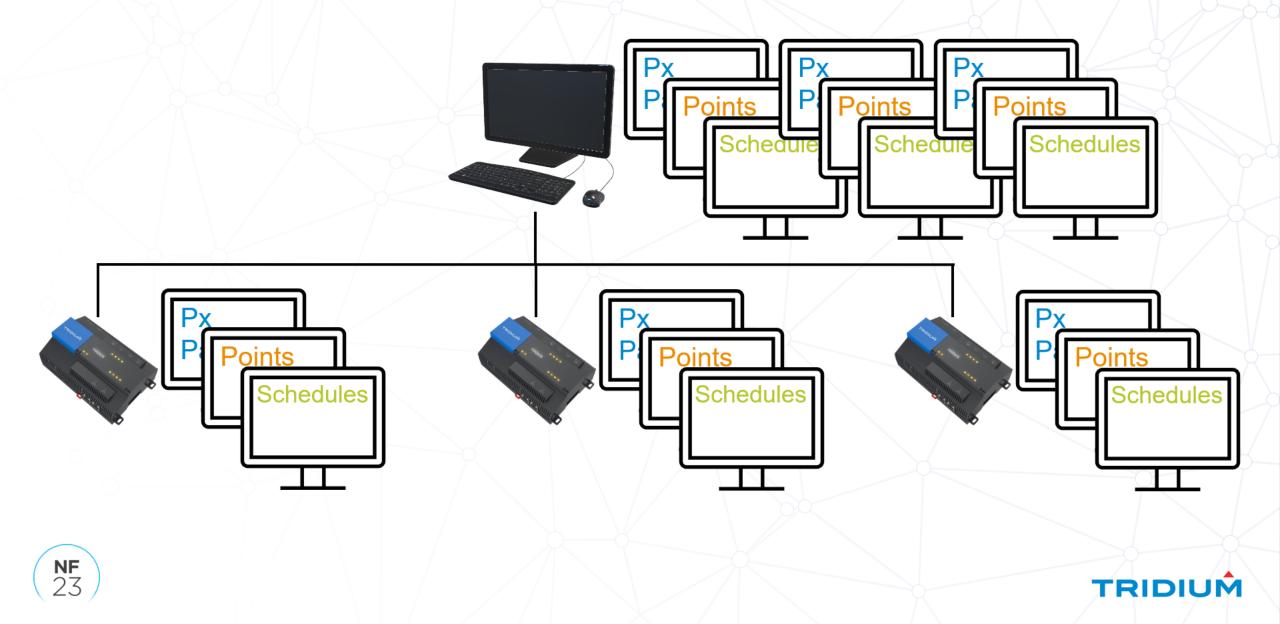
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## The Concept





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<ul> <li>NiagaraNetwork</li> <li>ProvisioningNwExt</li> </ul>		Station Name	Sche	eme	Address	Version	Host Model	
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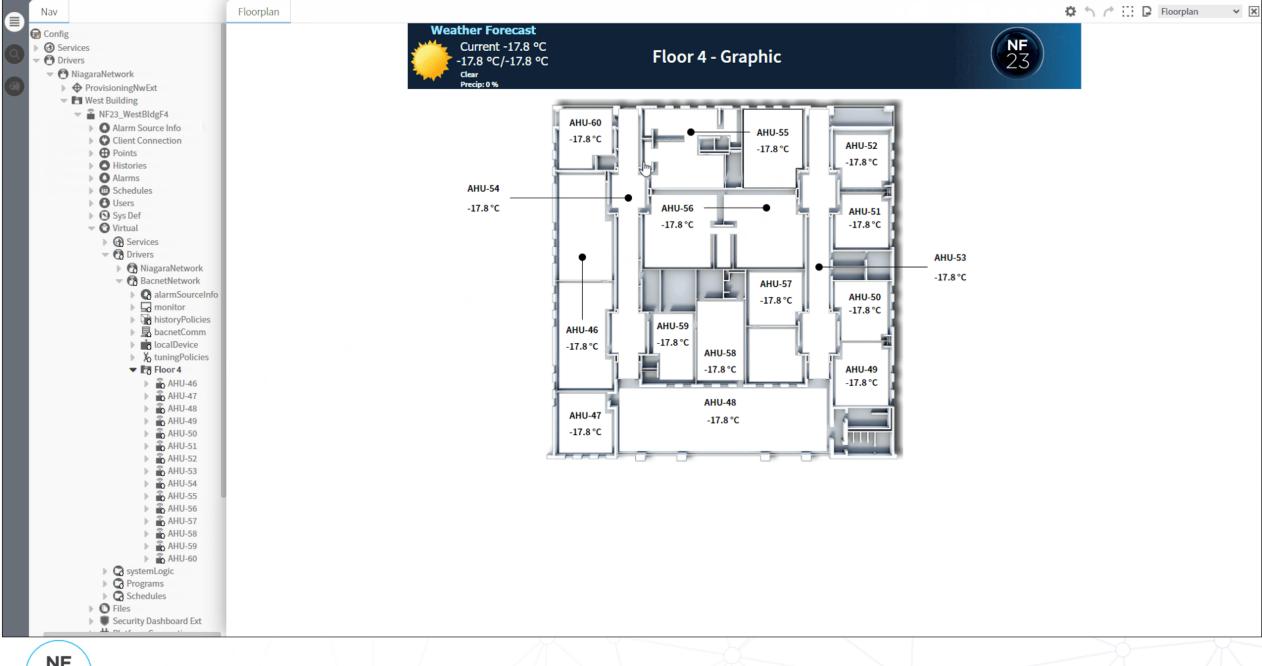
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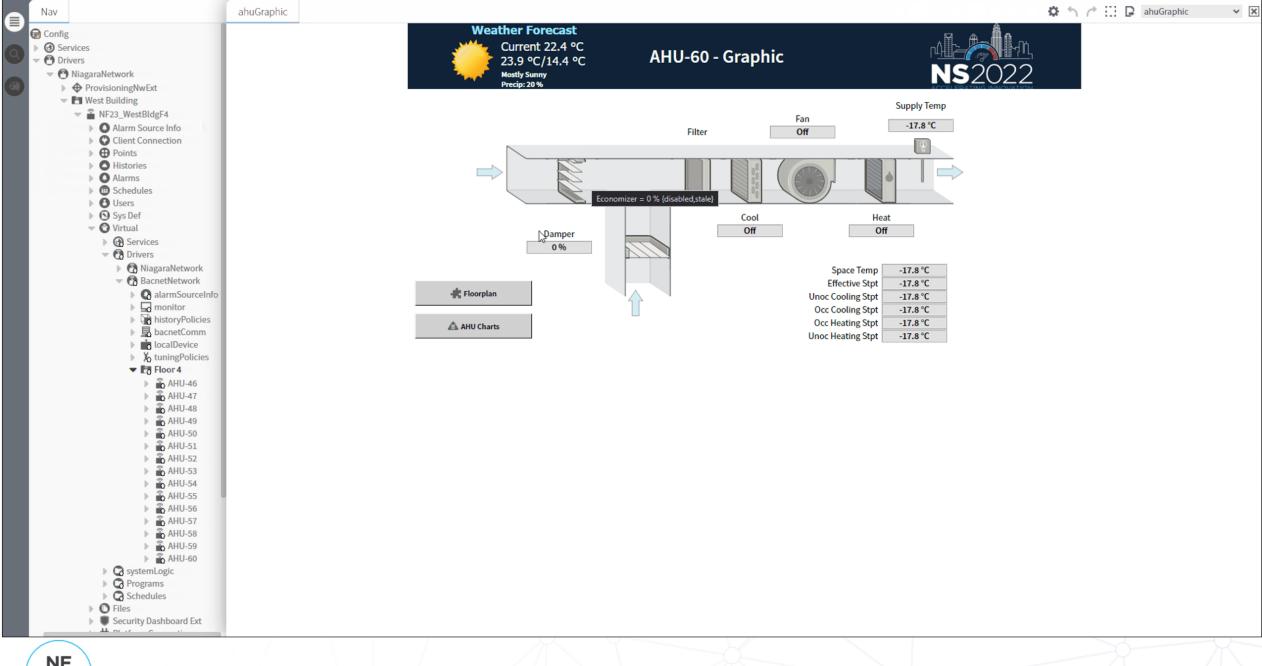


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	<ul> <li>West Building</li> <li>NF23_WestBldgF4</li> </ul>	📔 Import Virtual Px Files On Demand	true		
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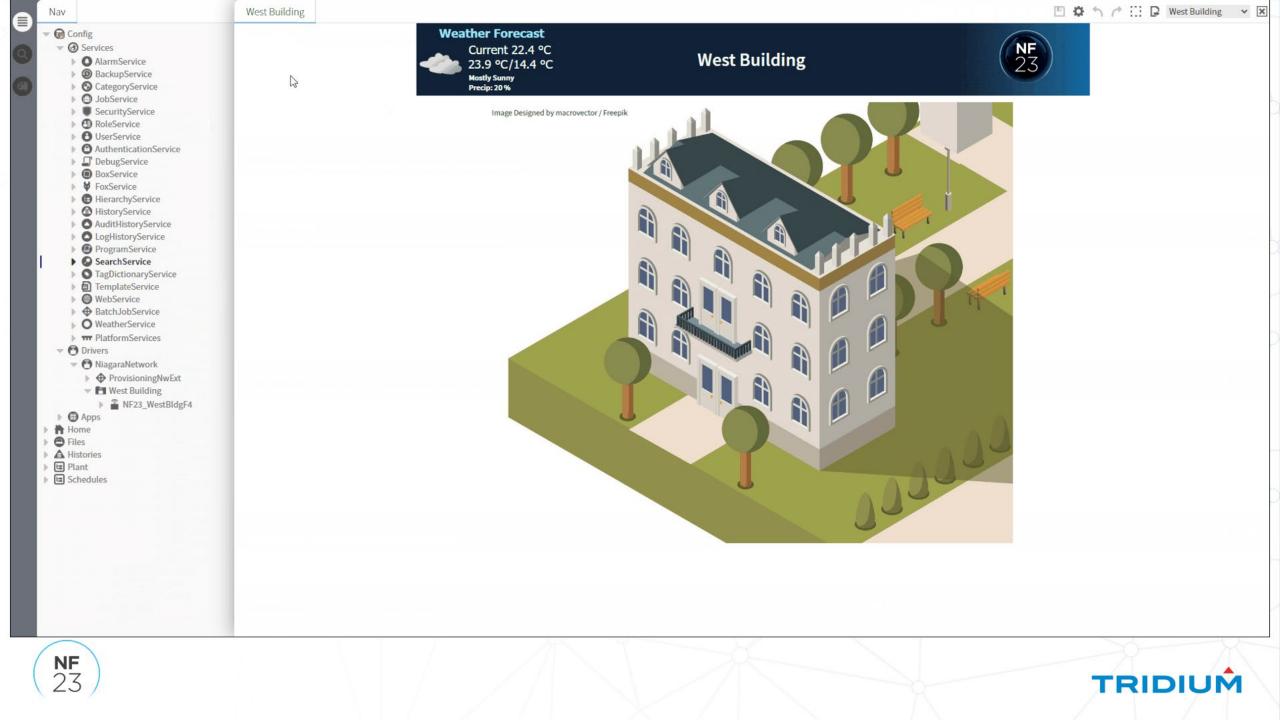






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SecurityService     GROUPS RoleService     UserService	Expiry station: slot: /Services/SecurityService/certificates/newcollegesupervisor/expiry	<b>0.0</b> {fault}		• ~
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F23_WestBldgF4     Apps     Home	forecastHigh station: slot:/Services/WeatherService/WeatherReport/forecastHigh	23.9 °C {ok} @ def		e ~.
General Content of Content o	Subtract station:;lslot:/Services/WeatherService/WeatherReport/Subtract	22.4 °C {ok}		· ~.
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<ul> <li>AuditHistoryService</li> <li>LogHistoryService</li> <li>ProgramService</li> <li>SearchService</li> <li>TagDictionaryService</li> <li>TemplateService</li> <li>WebService</li> <li>BatchJobService</li> <li>WeatherService</li> <li>TemplatformServices</li> <li>Drivers</li> </ul>			
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<ul> <li>BackupService</li> <li>CategoryService</li> </ul>	Status	{ok}		
<ul> <li>JobService</li> <li>SecurityService</li> </ul>	Fault Cause			
RoleService     UserService	Enabled	true ●		
O AuthenticationService     DebugService	Hierarchy Timeout	0 h 0 m 45	s	
BoxService	🔻 🖽 Plant	Hierarchy	0	
Generation      Generation	Query Context		ø	
G HistoryService     AuditHistoryService	Status	{ok}		
<ul> <li>CogHistoryService</li> <li>ProgramService</li> </ul>	Fault Cause			
<ul> <li>SearchService</li> <li>TagDictionaryService</li> </ul>	The Scope	Hierarchy Scope Container		
TemplateService     WebService	SystemDb	Hierarchy Scope		
BatchJobService     WeatherService	Scope Ord	sys: I	× #	
▶ <b>Ⅲ</b> PlatformServices	🕨 🔗 Tags	Hierarchy Tags		
<ul> <li>Drivers</li> <li>NiagaraNetwork</li> </ul>	Cache Status	Not Cached 🗸 🗸		
<ul> <li>ProvisioningNwExt</li> <li>West Building</li> </ul>	Cache Creation Time	null BST		
File NF23_WestBldgF4	Cache On Station Started	false		
<ul> <li>Home</li> <li>Files</li> <li>Histories</li> <li>Plant</li> <li>Schedules</li> </ul>	🕨 🛏 buildings	Query Level Def: b:Building		
	🕨 🛏 floors	Query Level Def: b:Floor and I	b:BuildingId = {buildingId}	
	🕨 🛏 equip	Relation Level Def: in: hs:site	Ref; filter: hs:equip	
	🕨 🛏 points	Relation Level Def: in: hs:equi	pRef	
	Schedules	Hierarchy	0	





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9	Drivers	Display Name	Value	Commands	
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	Files     A Histories	BackupService	Backup Service		D'
	B Plant     Schedules	CategoryService	Category Service	0	
		JobService	Job Service		
		SecurityService	Security Service	0	/
		RoleService	Role Service		
		UserService	User Service		
		AuthenticationService	Authentication Service		
		DebugService	Log Configuration		
		BoxService	Box Service		
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	Schedule	ProgramService	Program Service	0	
		SearchService	Search Service	. 0	
		TagDictionaryService	Tag Dictionary Service	0	
		E TemplateService	Template Service	0	
		WebService	Web Service	0	
		BatchJobService	Batch Job Service		
		▶ <b>O</b> WeatherService	Weather Service	0	-
		PlatformServices	Platform Service Container	0	





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	Files     A Histories	BackupService	Backup Service		
	Plant     Schedules	CategoryService	Category Service	0	
	- Generaties	▶   JobService	Job Service		
		SecurityService	Security Service	0	
		RoleService	Role Service		
		B UserService	User Service		
		AuthenticationService	Authentication Service		
		DebugService	Log Configuration		
		BoxService	Box Service Enter the	desired palette name, or select from the dropdown.	
		▶ ₩ FoxService	Fox Service niagar	aSystemIndex	
	Palette 🕑 🗵	FierarchyService	Hierarchy Service		
	) 🥥 alarm	FistoryService	History Service	OK Cancel	
	▶ ③ baja ▶ ③ control	AuditHistoryService	Audit History Service		
	<ul> <li>D history</li> <li>D kitControl</li> </ul>	LogHistoryService	Log History Service	0	
	Schedule	▶      ProgramService	Program Service	0	
		SearchService	Search Service	# O	
		TagDictionaryService	Tag Dictionary Service	0	
		EmplateService	Template Service	0	
		🕨 🔘 WebService	Web Service	0	
		BatchJobService	Batch Job Service		
		▶ <b>O</b> WeatherService	Weather Service	0	
		PlatformServices	Platform Service Container	0	





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	<ul> <li>Files</li> <li>A Histories</li> </ul>		BackupService	Backup Service	
	<ul> <li>Image: Plant</li> <li>Image: Image: Plant</li> <li>Image: Image: Plant</li> <li>Image: Plant</li></ul>		CategoryService	Category Service	0
	Golicatics		JobService	Job Service	
			SecurityService	Security Service	0
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			O UserService	User Service	
			O AuthenticationService	Authentication Service	
			🕨 🖨 DebugService	Log Configuration	
			BoxService	Box Service	Name
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	) 🥥 alarm		G HistoryService	History Service	OK Cancel
	▶ ③ baja ▶ ③ control		AuditHistoryService	Audit History Service	
	<ul> <li>⑦ history</li> <li>⑦ kitControl</li> </ul>		CogHistoryService	Log History Service	0
	<ul> <li>iagaraSystemIndex</li> <li>Typical configuration</li> </ul>		ProgramService	Program Service	
	SystemDbService		SearchService	Search Service	# O
	<ul> <li>Unconfigured components</li> <li>Individual components</li> </ul>		TagDictionaryService	Tag Dictionary Service	0
	Schedule		EmplateService	Template Service	0
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El Plant     Schedules	CategoryService	Category Service	0	
/ 2	JobService	Job Service		
	SecurityService	Security Service	0	
	RoleService	Role Service		
	UserService	User Service		
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	PlatformServices	Platform Service Container	0	
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	<ul> <li>Config</li> <li>Services</li> </ul>			$\searrow$	O Actions & Topics
0	Drivers	Display Name	Value	Commands	
	Apps     Home	🗎 Status	{fault}		
	Files     A Histories	📔 Fault Cause	Please make a System Database Type Selection		
	<ul> <li>Hereit Plant</li> <li>Hereit Schedules</li> </ul>	Enabled	true		
		▶ 🖵 Health	Fail [null]		
		Alarm Source Info	Alarm Source Info		
		▶	System Db Ping Monitor	0	
		System Database Type Selection	orientSystemDb > OrientSystemDb > ③		
		System Database	Inactive System Db	0	-
		B SystemIndexService	System Index Service	0	
	Palette  Palette Palette  Palette Palett				
(	<b>NF</b> 23				TRIDIUM

	Nav	LocalSystemIndexer		🛄 🔿 🐨 🗶 💽 🚩 🖪 🖬 🎁 📩 🖓 Property Sheet 🗸 💌
0	- G Config			O Actions & Topics 📓 Slot Details
0	Gervices     Orivers	Display Name	Value	Commands
0	Apps     Home	Status	{disabled}	
	Files     A Histories	State	Idle 🖌	
	<ul> <li>Image: Plant</li> <li>Image: Schedules</li> </ul>	🗎 Enabled	false	
		Execution Time	2:00 AM {Sun Mon Tue Wed Thu Fri Sat}	0
		Last Attempt	null BST	
		Last Success	station: slot:/Drivers/NiagaraNetwork neql:b:Building	
		Last Failure	station: slot:/Drivers/NiagaraNetwork neql:b:Building	/
		🚡 Fault Cause		Add  Remove  Move Up
	Palette 🕑 🗵	Alarm On Failure		Move Down
	▶ 🗇 alarm ▶ 🗇 baja	Alarm Source Info		
Green      Green	<ul> <li>Control</li> <li>Inistory</li> <li>IniagaraSystemIndex</li> <li>Typical configuration</li> <li>SystemDbService</li> </ul>	🗃 Default Index Queries	OK Cancel	)river:NiagaraEdgeLiteStation
	OUnconfigured components     OIndividual components     Osciedule		station: slot:/ bql:select * from schedule:AbstractSchedule stop station: slot:/ neql:n:hasPxView	
		🕥 Use Default Index Queries	true (Merge with Custom)	
		Custom Index Queries		
(	<b>NF</b> 23			TRIDIUM

Nav		LocalSystemIndexer		凹 🔿 🏵 🗶 🗉 🚩 🖪 🛅 👭 🏠 🥐 🔛 🕞 Property Sheet 🗸
Config				O Actions & Topics
Drivers		Display Name	Value	Commands
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Files     A Histories		State	Idle 🗸 🔓	
<ul> <li>E Plant</li> <li>E Schedules</li> </ul>		Enabled	true 🔵	
		Execution Time	2:00 AM {Sun Mon Tue Wed Thu Fri Sat}	0
		🗎 Last Attempt	null BST	
		Last Success	null BST	
		🗎 Last Failure	null BST	
Palette	Fault Cause	🗎 Fault Cause		
alarm	$\odot$ $\times$	🗎 Alarm On Failure	true 🔵	
🕨 🗔 baja		Alarm Source Info	Alarm Source Info	
<ul> <li>Control</li> <li>Istory</li> <li>Isto</li></ul>		🗎 Default Index Queries	station: slot:/ bql:{asComponent} station: slot:/ bql:select * from driver:DeviceNetwork where type != niaga station: slot:/ bql:select * from driver:DeviceFolder where type != niagaraDriv station: slot:/ bql:select * from driver:PointFolder where type != niagara station: slot:/ bql:select * from driver:PointFolder where type != niagar station: slot:/ bql:select * from control:ControlPoint where proxyExt.ty station: slot:/ bql:select * from schedule:AbstractSchedule stop station: slot:/ neql:n:hasPxView	araDriver:NiagaraStationFolder er:NiagaraStation and type != niagaraDriver:NiagaraEdgeLiteStation raDriver:NiagaraPointFolder
		🗎 Use Default Index Queries	true (Merge with Custom)	
		Custom Index Queries	station: slot:/Drivers/NiagaraNetwork neql:b:Building	



Nav	SystemDbService		n 🥂 💠 🗭 Property Sheet 🗸 🗙
<ul> <li>SearchService</li> <li>TagDictionaryService</li> <li>TemplateService</li> <li>WebService</li> <li>BatchJobService</li> <li>WeatherService</li> </ul>			O Actions & Topics 🗎 Slot Details
	Enabled	true 🔵	
	🐨 🖬 Global Niagara Network Indexer	Niagara Network System Indexer O	
<ul> <li>m PlatformServices</li> <li>SystemDbService</li> </ul>	🖬 Status	{ok}	
Alarm Source Info	State	Idle 👻	
<ul> <li>Monitor</li> <li>System Database</li> </ul>	🖬 Enabled	true 🜑	
<ul> <li>SystemIndexService</li> <li>Retry Trigger</li> </ul>	Execution Time	2:00 AM {Sun Mon Tue Wed Thu Fri Sat}	
<ul> <li>LocalSystemIndexer</li> <li>MiagaraNetworkSystemIndex</li> </ul>	🗎 Last Attempt	null BST	
Drivers     Apps	Last Success	null BST	
Home	🗎 Last Failure	null EST	
Palette	Fault Cause		
▶ 😨 alarm ▶ 😨 baja	🗎 Alarm On Failure	true 🔍	
<ul> <li>Image: Second se</li></ul>	Alarm Source Info	Alarm Source Info	
	🗎 Default Index Queries	<pre>station: slot:/ bql:{asComponent} station: slot:/ bql:select * from driver:DeviceNetwork where type != niagaraDriver:NiagaraNetwork station: slot:/ bql:select * from driver:DeviceFolder where type != niagaraDriver:NiagaraStationFolder station: slot:/ bql:select * from driver:Device where type != niagaraDriver:NiagaraStation and type != niagaraDriver:NiagaraEdgeLiteStation station: slot:/ bql:select * from driver:PointFolder where type != niagaraDriver:NiagaraPointFolder station: slot:/ bql:select * from driver:PointFolder where type != niagaraDriver:NiagaraPointFolder station: slot:/ bql:select * from control:ControlPoint where proxyExt.type != niagaraDriver:NiagaraProxyExt station: slot:/ bql:select * from schedule:AbstractSchedule stop station: slot:/ neql:n:hasPxView</pre>	
	🗎 Use Default Index Queries	true (Merge with Custom)	
	Custom Index Queries		
	Global Index Timeout	2 h 0 m 0 s	
	Include Reachable Stations	false	
$\frown$			~

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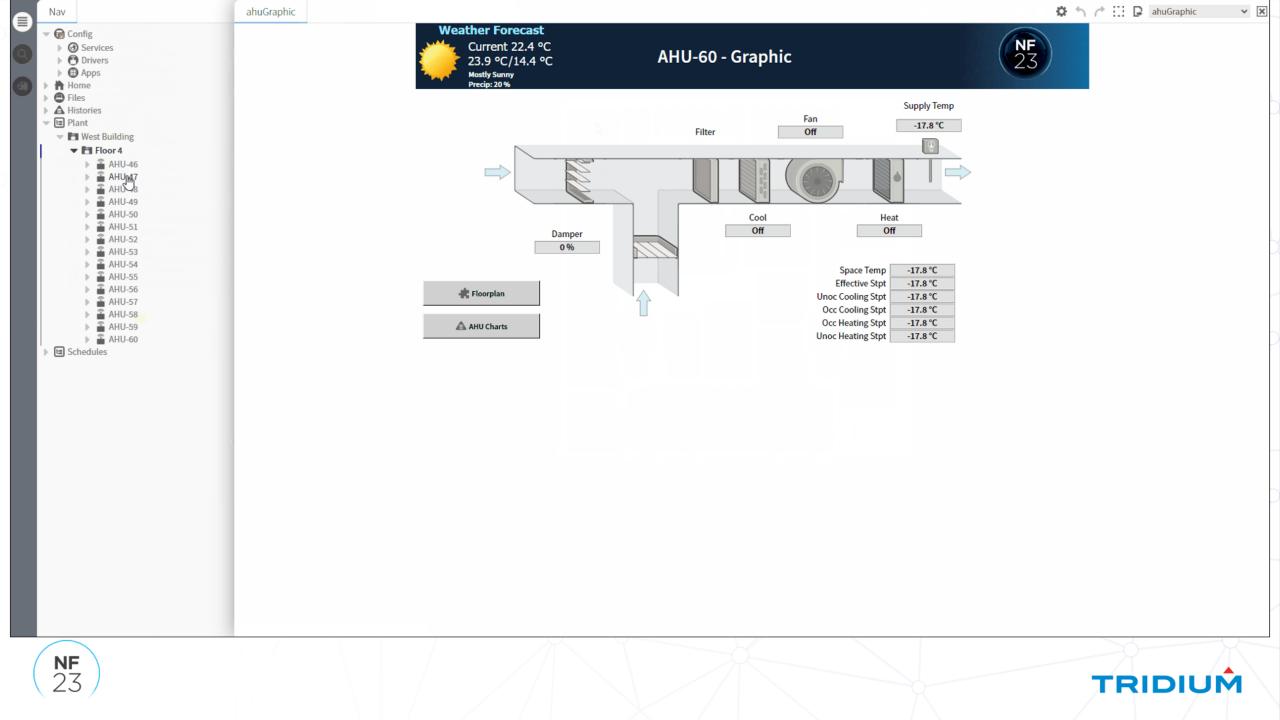
Nav	SystemDbService	Views 🕨				🔛 🕞 Property Sheet 🗸 🗙
SearchService     TagDictionaryService		Show on Wire Sheet			C	Actions & Topics 📄 Slot Details
▶ 🙆 TemplateService	Fault Cause	Actions Im	Execute Retry Failed Indexes			
<ul> <li>WebService</li> <li>BatchJobService</li> <li>WeatherService</li> </ul>	Enabled	Edit Tags	unde			
WeatherService     The PlatformServices	Max Concurrent Index		50 [5 - max]			
<ul> <li>▼ SystemDbService</li> <li>▶ O Alarm Source Info</li> </ul>	Max Concurrent Index	Сору	1 [1 - max]			
Monitor	Retry Trigger	Paste Paste Special	1 hour {Sun Mon Tue Wed Thu Fri Sat}	0		
v 🗊 SystemIndexService	LocalSystemIndexer	Duplicate Delete	Local System Indexer	0		
<ul> <li>Retry Trigger</li> <li>LocalSystemIndexer</li> </ul>	NiagaraNetworkSystem	Link Mark	Niagara Network System Index Source			
NiagaraNetworkSystemInde     Orivers	Status	Link From				
Apps	Fault Cause	Link To				
Home  Files  Histories	Enabled	Relation Mark Relate From	•			
🕨 🖽 Plant	🔝 🗔 Global Niagara Netv	Relate To	ara Network System Indexer	0		
Griedules	Status	Rename Set Display Name				
Palette 🕑 🗵	🖬 State	Reorder	· · ·			
) 🕃 alarm	Enabled	Composite				
<ul> <li>Daja</li> <li>Control</li> </ul>	Execution Time	Export 2.0074	M {Sun Mon Tue Wed Thu Fri Sat}		0	
Ø history     Ø kitControl	🗎 Last Attempt	null E	3ST			
iagaraSystemIndex     Schedule	Last Success	null E	3ST			
- U schedule	🗎 Last Failure	null E	3ST			
	🗎 Fault Cause					
	🗎 Alarm On Failure	true				
	► O Alarm Source Info	o Alarm	Source Info			
		statio	n: slot:/ bql:{asComponent} n: slot:/ bql:select * from driver:DeviceNetwork w n: slot:/ bql:select * from driver:DeviceFolder whe	vhere type != niagaraDriver:NiagaraNetwor ere type != niagaraDriver:NiagaraStationFo	k Ider	

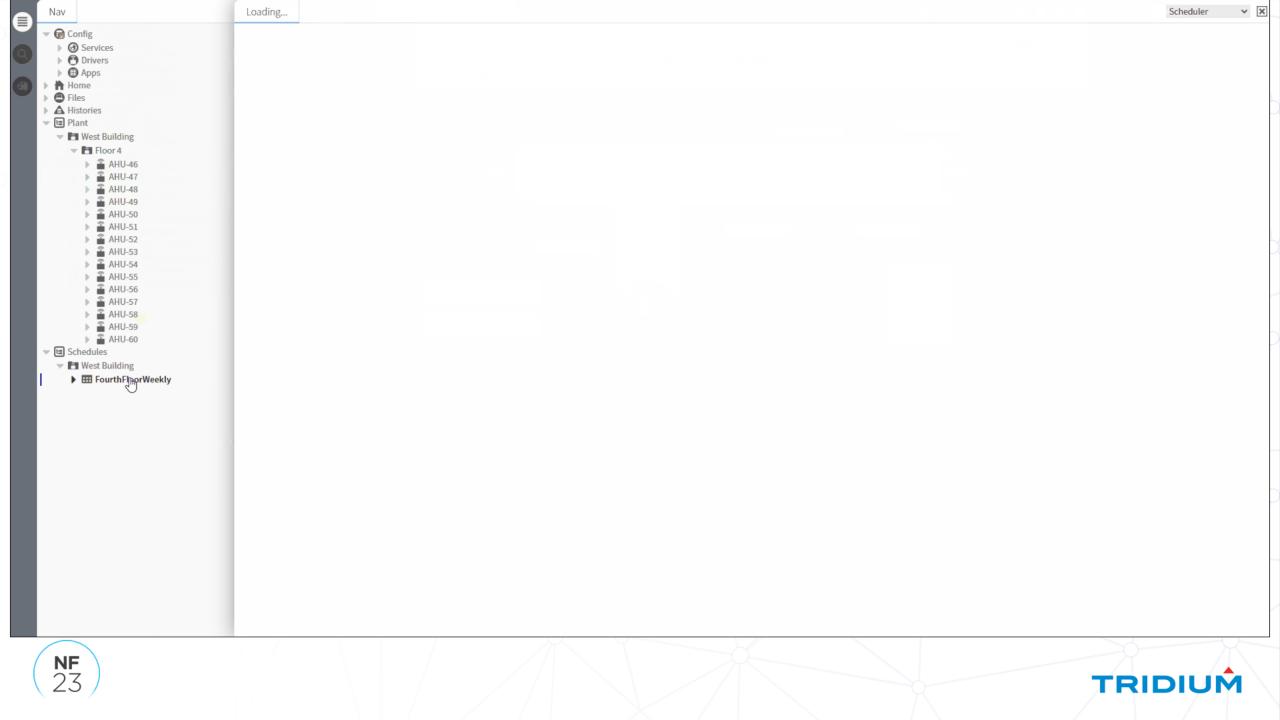


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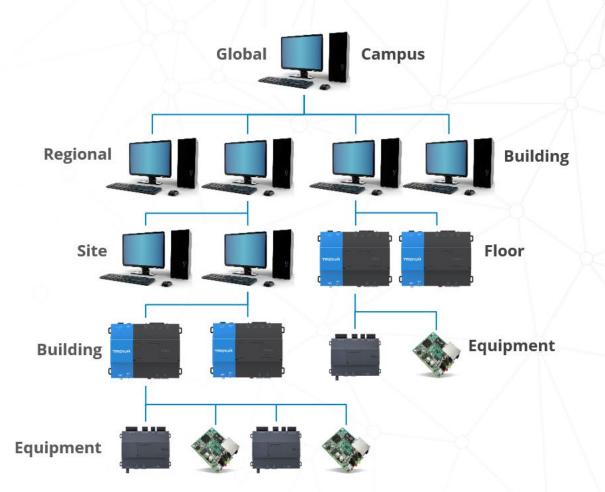
### The Multi-tiered System Database

#### Available with 4.13





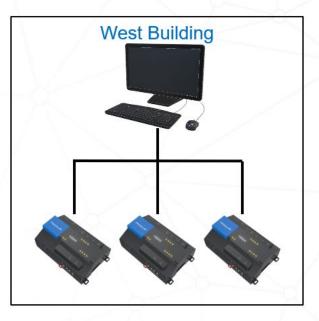
### The New Multi-tiered System Database



- Niagara System Architecture
   Flexes to Any Layout
- Query Entire Niagara System
   From A Single Database Location
- Expedite UI Configuration Through Hierarchies and Virtual Px Views



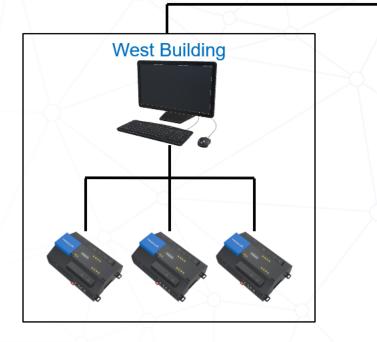
# Why Multi-Tiered?

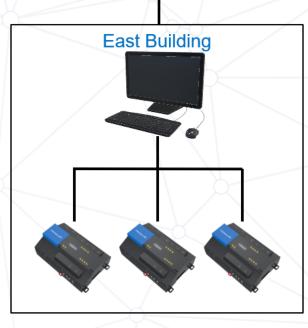




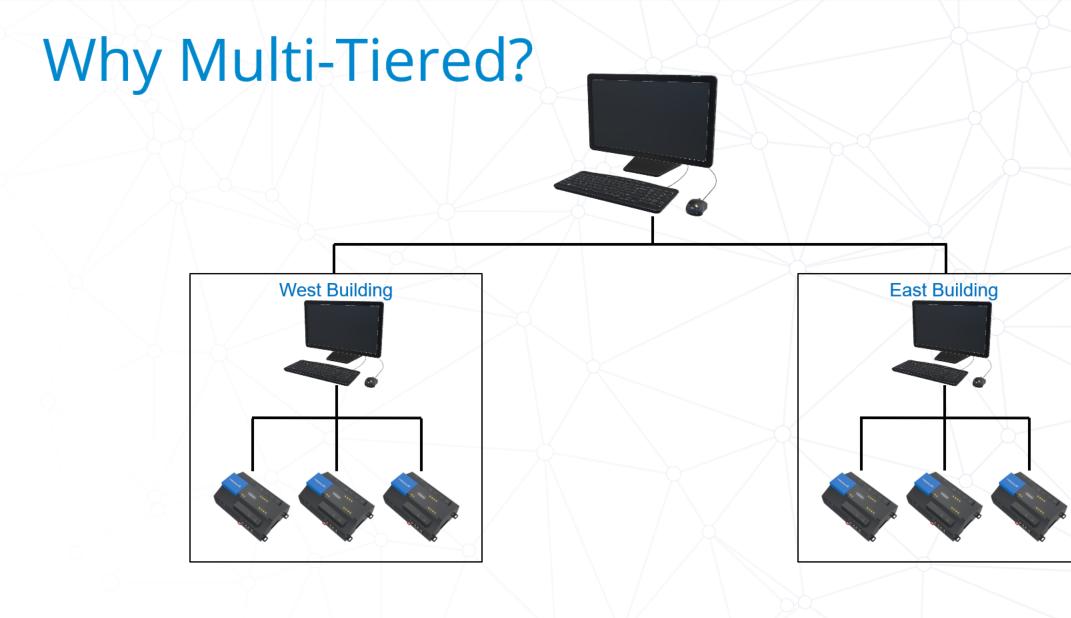


## Why Multi-Tiered?



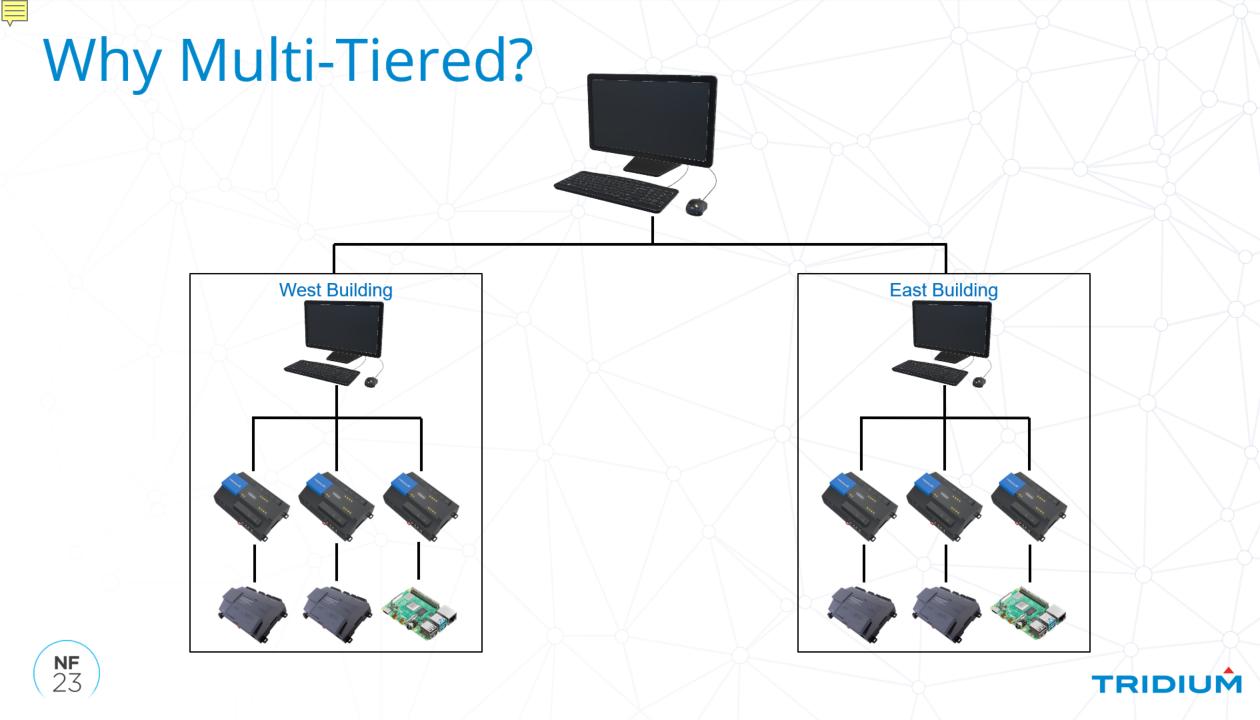












## Demo Set-Up





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G Config Da	atabase									2 objects
G Services     O Drivers	Name	Exts	Address	Host Model	Version	Status	Health	Server Conn	Virtuals Enabled	Platform Sta
► ⑦ NiagaraNetwork	NF23_WestBldgSupervisor	0000000	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true	{fault,down
O Home     Home	NF23_EastBldgSupervisor	0000000	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:58 AM BST]	Connected	true	{fault,down
A Histories Plant Schedules										

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C 10.10.20.10:444/ord	l/station:%7Cslot:/Driv	vers/NiagaraNetwork/Building1%7	'Cview:niagaraDriver:NiagaraS	tationUxManager						ළ 1	8 🖈 🗖 🌔
Nav	West	Building						IC 4. 🕞 💉	□ # = ↔ ≫	∎ ∿ / 88 ₽	Station Manager
G Config	Databa	ase									2 objects
Files		Name	Exts	Address	Host Model	Version	Status	Health	Server Conn	Virtuals Enabled	Platform
A Histories	ĩ	NF23_WestBldgF4	000000	ip:10.10.20.91	TITAN	4.13.0.158	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true	{fault,dov
E Schedules	2	NF23_Campusupervisor	0	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true	{fault,dov
			New Folder 🛛 🖬 Ne	w 🖉 Edit	📩 Disco	ver 📄	Cancel	🛞 Add 🛛 >> Matcl	h Certific	cate Manager	

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C 10.10.20.10:446/ord/statio	ion:%7Cslot:/Drivers/NiagaraNetwork/Building2%	67Cview:niagaraDriver:NiagaraSt	ationUxManager						Ê.	🔄 🗯 🗖 🌔
Nav	East Building						E 4 🗼 🖉	□ # = ⊙ ≫	1⊪ ∿ ∂ ⊞ ₽	Station Manager
G Config	Database									2 objects
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<ul> <li>MiagaraNetwork</li> <li>Apps</li> </ul>	MF23 EastBldgF3	<b>+++</b> +++++++++++++++++++++++++++++++++	ip:10.10.20.92	TITAN	4.13.0.158	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true	{fault,dow
Home Files	NF23_CampusSupervisor	<b>+ • • • • • •</b> • • • •	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true	{fault,dow
Histories Plant Schedules										
0.00.10.445/	iagaraNetwork/Building2/NF23_EastBldgF3	New Folder 📃 💽 Nev	v 🔵 🧹 🥒 Edit	📩 📩 Disco	/er 🔵 🖉 🔳	Cancel	Add 🔪 🕁 Match	Certific	ate Manager	

e 🗙 👫 W	Vest Building X 👫 East Building	× 🏭 NiagaraNetwork	× 🂒	NiagaraNetwork	× 🏭 Niag	araNetwork	× 🏭 NiagaraNetwork	×   +	✓ - 0
C 10.10.20.91/ord/station:	:%7Cslot:/Drivers/NiagaraNetwork%7Cview:niagaraDr	iver:NiagaraStationUxManager						ප්	* * 🗖
v	NiagaraNetwork						🔤 🍡 🖬 🖉 🗖 🇰 = 💮	▶ <b>1</b> 5 ぐ 日	Station Manag
Config	Database								2 objects
<ul> <li>Services</li> <li>Drivers</li> </ul>	Name	Exts	Address	Host Model	Version	Status	Health	Server Conn	Virtuals Ena
<ul> <li>NiagaraNetwork</li> <li>BacnetNetwork</li> </ul>	NF23_WestBldgSupervisor	$\oplus \bigcirc \bigcirc \oplus \bigcirc \bigcirc$	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:58 AM BST]	Not connected	true
O systemLogic O Programs	WestPackagedChiller	$\oplus \bigcirc \bigcirc \oplus \bigcirc \bigcirc$	ip:10.10.20.95	EDGE10	4.10.5.14	{ok}	Ok [05-May-23 9:59 AM BST]	Not connected	true
<ul> <li>Schedules</li> <li>Home</li> <li>Files</li> <li>Histories</li> <li>Building 1</li> <li>Haystack</li> </ul>									
0.91/ord/station:%7Cslot/Drivers/Niag		ew Folder 💽 New		A Discover	Cancel	( Add	Match II. C	ertificate Manager	

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C 10.10.20.92/ord/station:	n:%7Cslot:/Drivers/NiagaraNetwork%7Cview:niag	gara Driver: Niagara Station Ux Manager		<b></b>				E	2 🖈 🛊 🗖
٩V	NiagaraNetwork						🔤 🍾 🖬 🖉 🗖 🏦 = 🤅	)≻∎ <i>\ / E</i>	Station Manag
Config	Database								2 objects
Drivers	Name	Exts	Address	Host Model	Version	Status	Health	Server Conn	Virtuals Ena
<ul> <li>MiagaraNetwork</li> <li>BacnetNetwork</li> </ul>	NF23_EastBldgSupervise	or 🕀 🖸 🖨 🖨 🕲 🛈	ip:10.10.20.10	Workstation	4.13.0.158	{ok}	Ok [05-May-23 9:58 AM BST]	Not connected	true
<ul> <li>systemLogic</li> <li>Programs</li> </ul>	EastPackagedChiller	<b>00000</b>	ip:10.10.20.96	EDGE10	4.10.5.14	{ok}	Ok [05-May-23 9:58 AM BST]	Not connected	true
Schedules		New Folder	Edit	t Discover →	Cancel	bbA 🕙	Match	certificate Manager	

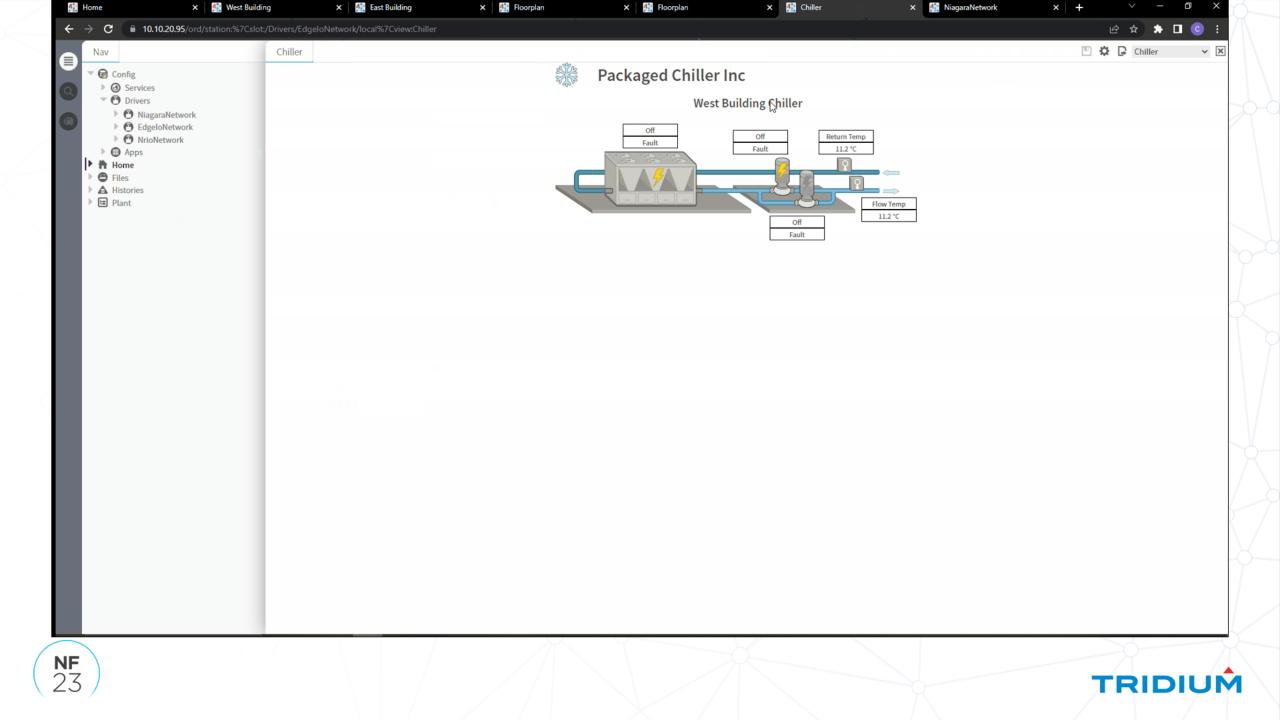
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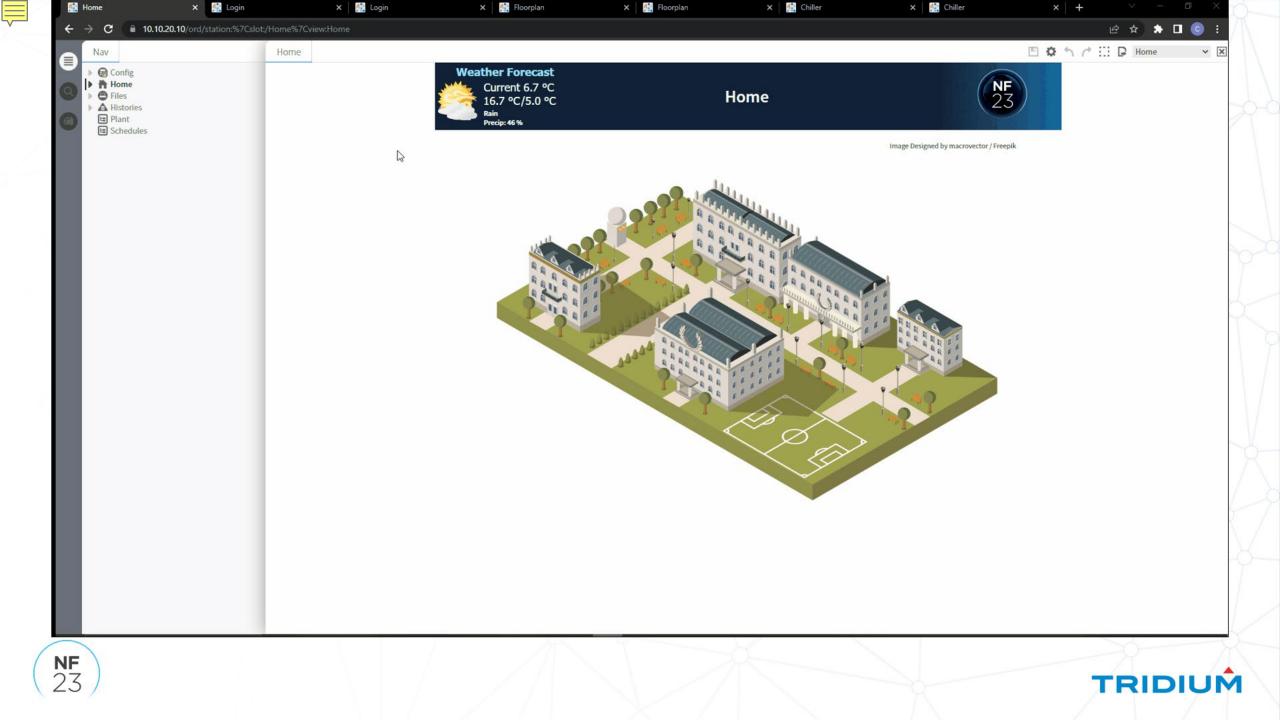
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	Fault Cause			
	🕨 🖵 Health	Ok [05-May-23 8:58 AM UTC]		
Plant	Alarm Source Info	Alarm Source Info		
	Monitor	Ping Monitor	0	
	🕨 🖪 Local Station	WestPackagedChiller [ip:10.10.20.95]f	ox:1911, ip:10.10.20.95 foxs:4911]	
	🕨 🌥 Sys Def Provider	Bog Provider	0	
	X Tuning Policies	Niagara Tuning Policy Map		
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SystemDbService	SearchService	Search Service			
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	O WeatherService	Weather Service	0		
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#### TRIDIUÂ

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▶ ③ baja ▶ ④ control	Alarm Source Info		
<ul> <li>③ history</li> <li>③ kitControl</li> <li>④ niagaraSystemIndex</li> <li>④ Typical configuration</li> <li>⑤ SystemDbService</li> <li>⑤ Unconfigured components</li> </ul>	🗎 Default Index Queries	OK Cancel	Driver:NiagaraEdgeLiteStation
O Individual components     O schedule		station: slot:/ bql:select * from schedule:AbstractSchedule stop station: slot:/ neql:n:hasPxView	
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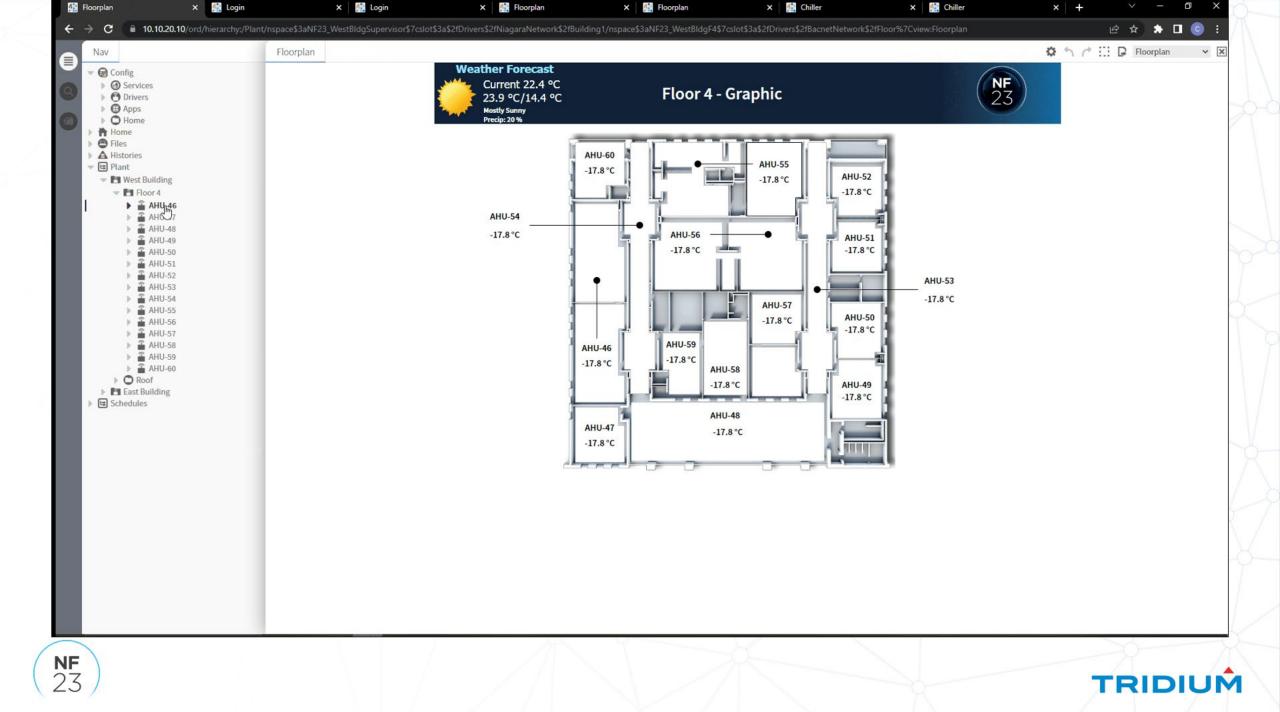
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O Individual components     Schedule	Custom Index Queries					1
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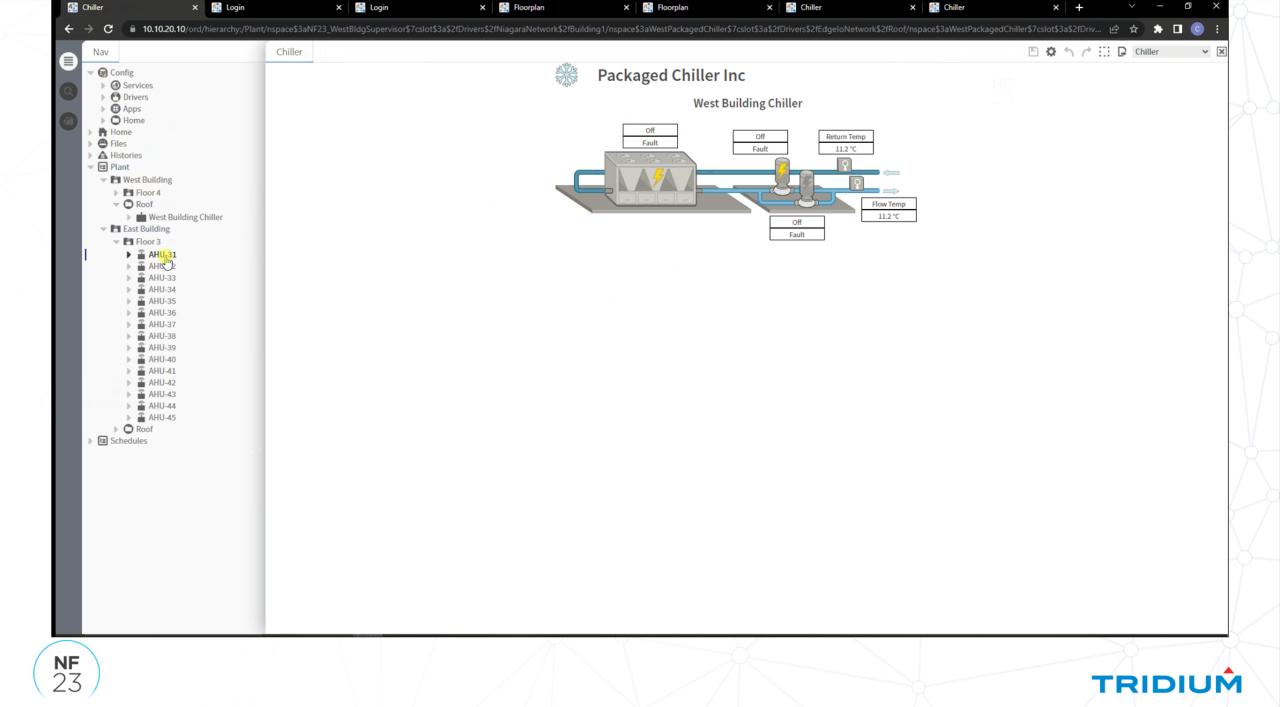
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	🗎 Last Attempt	05-May-23	10:12 AM ~ BST				
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	🚰 Last Failure	null BST					
	📓 Fault Cause						
	🗎 Alarm On Failure	true ●					
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V	FourthFloorWeekly						E 1	C D Scheduler
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O Home Home								
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<ul> <li>West Building</li> <li>Floor 4</li> </ul>								
<ul> <li>Roof</li> <li>iiii West Building Chiller</li> </ul>								
East Building Floor 3	6:00 AM							
- O Roof			Occupied	Occupied	Occupied	Occupied	Occupied	
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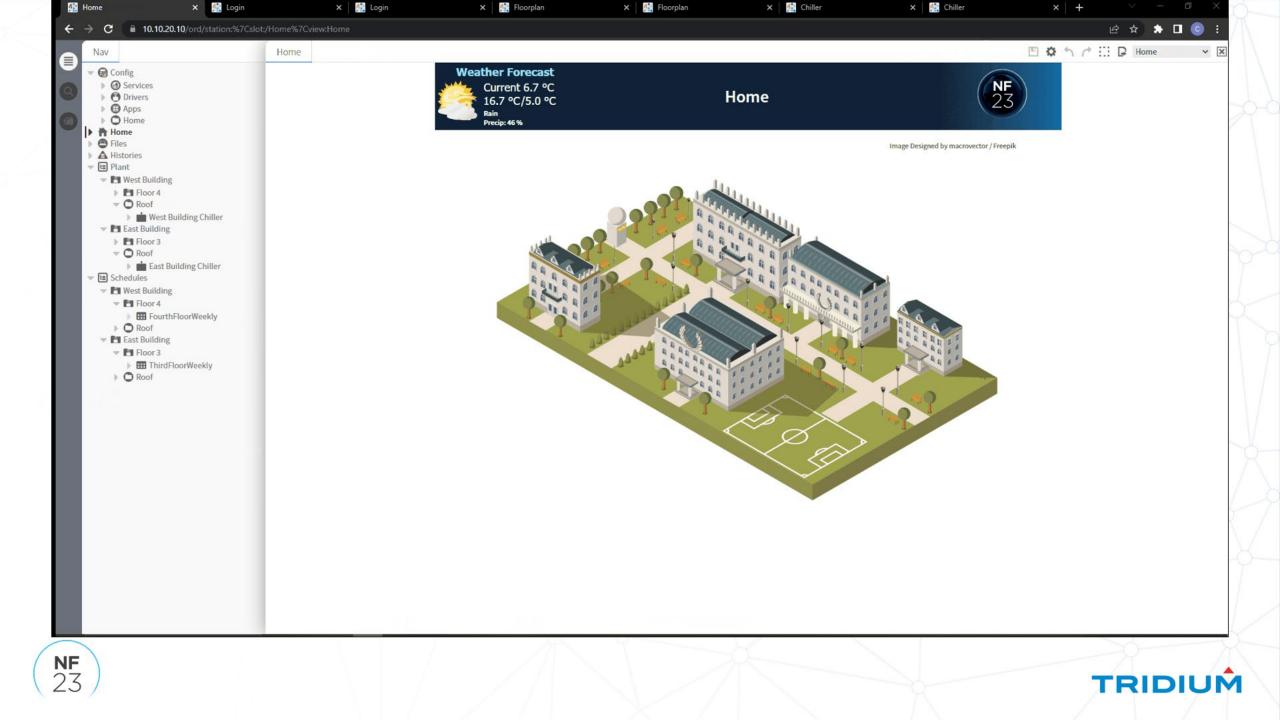




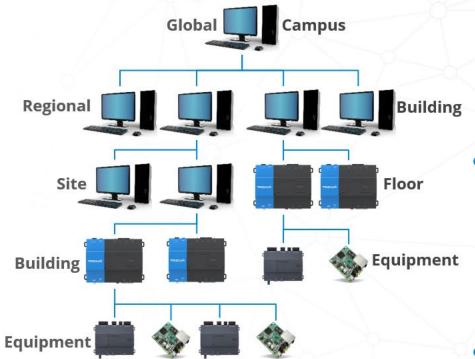
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	ThirdFloorWeekly         Weekly Schedu         3:00 AM         6:00 AM         9:00 AM         12:00 PM         3:00 PM         6:00 PM	ThirdFloorWeekly         Special Eve           Sun         Sun           3:00 AM	Weekly Schedule         Special Events         Summary           Sun         Mon           Sun         Mon           3:00 AM	ThirdFloorWeekly         Special Events         Summary           Sun         Mon         Tue           Sun         Mon         Tue           3:00 AM	ThirdFloorWeekly         Special Events         Summary           Sun         Mon         Tue         Wed           3:00 AM         Image: Summary         Image: Summary         Image: Summary           3:00 AM         Image: Summary         Image: Summary         Image: Summary           6:00 AM         Image: Summary         Image: Summary         Image: Summary           9:00 AM         Image: Summary         Image: Summary         Image: Summary           12:00 PM         Image: Summary         Image: Summary         Image: Summary           3:00 PM         Image: Summary         Image: Summary         Image: Summary           3:00 PM         Image: Summary         Image: Summary         Image: Summary           3:00 PM         Image: Summary         Image: Summary         Image: Summary           6:00 PM         Image: Summary         Image: Summary         Image: Summary	ThirdHoorWeekly         Special Events         Summary           Sun         Mon         Tue         Wed         Thu           3:00 AM         Image: Special Events         Image: Spe	Weekly Schedule         Special Events         Summary           Sun         Mon         Tue         Wed         Thu         Fri           3:00 AM         Image: Special Events         Image: Specia Events         Image: Specia Events







### Summary



- System Database was release with 4.6
  - Allows rapid Supervisor creation/deployment for single Supervisor to multiple stations
- Multi-tiered available with 4.13
  - Allowing even more reach into your Niagara architecture

TRIDIUN

 Included in the standard Supervisor license



### Less engineering time, lower costs, more project wins!





# CONNECTING THE WORLD



# Questions?





# CONNECTING THE WORLD

