

# Improving Jobsite Transparency Using Custom Reports and BIM 360 Field APIs

Ryan Moret

Field Solution Manager, McCarthy Building Companies

@McCarthyBuild

# McCarthy Building Companies



# Class summary

Learn how to leverage BIM 360 Field APIs to improve reporting for your projects.



# Key learning objectives

At the end of this class, you will be able to:

- Learn about BIM 360 Field API Services
- Understand how BIM 360 API Services can be used to create custom applications specific for your firm
- Understand how the equipment module can be used to track the health and progress of our jobsites.

# Who or what is an API?

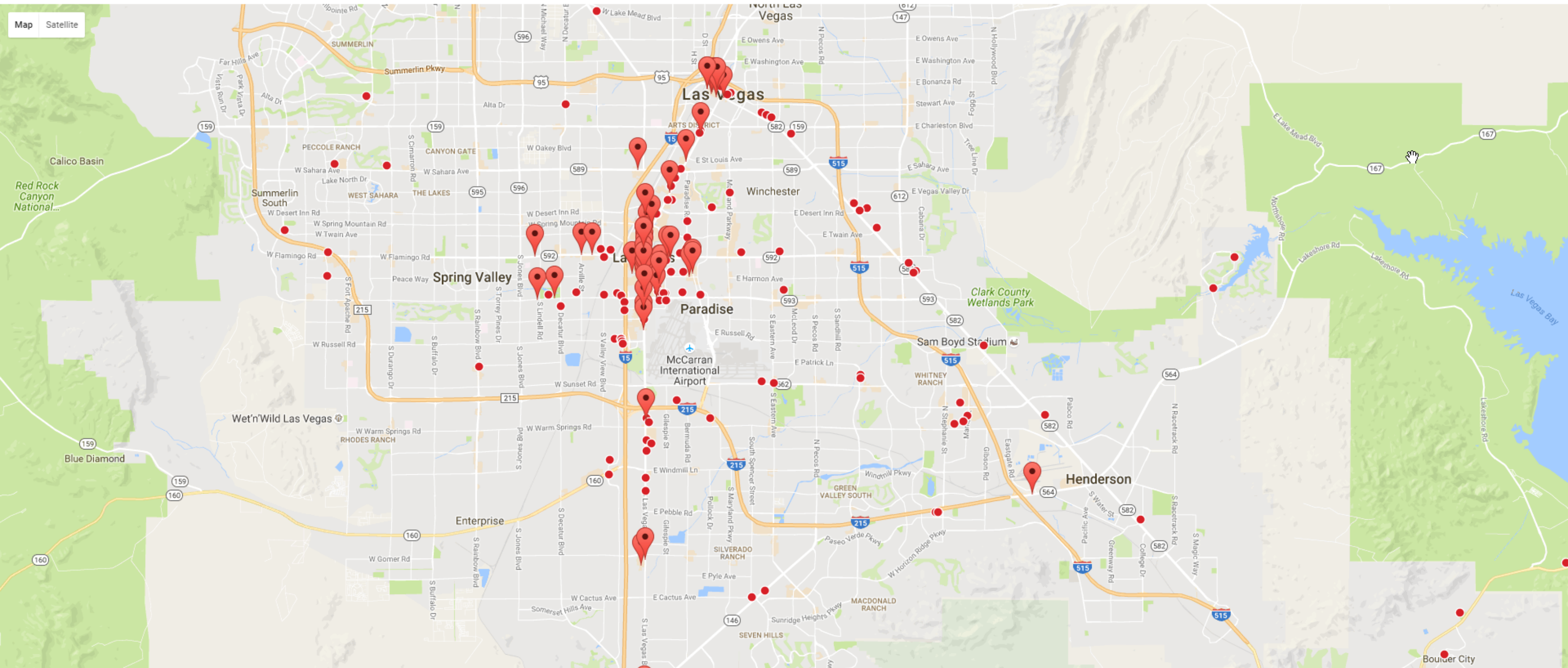


# Application Programming Interface

Set of routines, protocols, and tools for building software applications. An API specifies how software components should interact and APIs are used when programming graphical user interface (GUI) components. A good API makes it easier to develop a program by providing all the building blocks. A programmer then puts the blocks together.

# APIs in Action

## Hotels in Las Vegas (and vicinity)

[Close Map](#)

# BIM 360 API Services

# BIM 360 Field APIs

mobile_api	POST /api/get_equipment	POST /fieldapi/admin/v1/users	POST
POST /api/login	POST /api/customizable_categories	POST /fieldapi/admin/v1/custom_field_create	/fieldapi/companies/v1/remove_from_projects
POST /api/logout	POST /api/equipment	POST /fieldapi/admin/v1/custom_field_destroy	api/v1/daily_updates
POST /api/projects	POST /api/get_tasks	POST /fieldapi/admin/v1/filters	GET /api/v1/projects/:project_id/daily_updates
POST /api/user_prefs	POST /api/get_task_templates	issues_api	GET
POST /api/project	POST /api/tasks	GET /fieldapi/issues/v1	/api/v1/projects/:project_id/daily_updates/:id
POST /api/templates	library_api	POST /fieldapi/issues/v1/types	POST /api/v1/projects/:project_id/daily_updates
POST /api/areas	POST /api/library/publish	POST /fieldapi/issues/v1/create_type	PUT
POST /api/companies	POST /api/library/all_files	POST /fieldapi/issues/v1/destroy_type	/api/v1/projects/:project_id/daily_updates/:id
POST /api/contacts	GET /api/library/all_filtered_files	POST /fieldapi/issues/v1/enable_standard_field	DELETE
POST /api/spec_refs	POST /api/library/all_folders	POST /fieldapi/issues/v1/disable_standard_field	/api/v1/projects/:project_id/daily_updates/:id
POST /api/priorities	POST /api/library/delete/:id/:rev	POST /fieldapi/issues/v1/fields	api/v1/equipment_changes
POST /api/checklist_status	POST /api/library/delete_files	POST /fieldapi/issues/v1/root_causes	GET
POST /api/issue_types	POST /api/library/folder/add	POST /fieldapi/issues/v1/retrieve	/api/v1/projects/:project_id/equipment_change
POST /api/issue_filters	POST /api/library/folder/move	GET /fieldapi/issues/v1/list	s
POST /api/custom_fields	POST /api/library/folder/delete	POST /fieldapi/issues/v1/create	GET
POST /api/vela_fields	GET /api/library/folders	POST /fieldapi/issues/v1/update	/api/v1/projects/:project_id/equipment_change
POST /api/get_voided_issues	POST /api/library/file/:id/:type/:rev/:page	POST /fieldapi/issues/v1/search	s/:equipment_id
POST /api/get_issues	POST /api/library/rename/:id	POST /fieldapi/issues/v1/destroy	api/v1/issue_changes
POST /api/get_object_issues	POST /api/library/move/:id	POST /fieldapi/issues/v1/comment	GET /api/v1/projects/:project_id/issue_changes
POST /api/signatures	project_export_api	fieldapi/checklists/v1/checklists_api	GET
POST /api/attachments	GET api/latest_project_export/:project_id	GET /fieldapi/checklists/v1	/api/v1/projects/:project_id/issue_changes/:issu
POST /api/document_references	GET api/project_export_status/:project_id	GET /fieldapi/checklists/v1/:id	e_id
POST /api/binary_data	admin_api	fieldapi/companies/v1/companies_api	api/v1/admin/account_users
POST /api/get_checklists	admin_api overview	GET /fieldapi/companies/v1	/admin/v1/accounts/:account_id/users/change_
POST /api/checklists	POST /fieldapi/admin/v1/ping	GET /fieldapi/companies/v1/:id	status
POST /api/get_checklist_headers	POST /fieldapi/admin/v1/project_names	POST /fieldapi/companies/v1	
POST /api/get_current_date	POST /fieldapi/admin/v1/locations	PUT /fieldapi/companies/v1/:id	
POST /api/get_categories	POST /fieldapi/admin/v1/companies	POST /fieldapi/companies/v1/add_to_projects	

# An example of using BIM 360 API

## *Get Issues*

**Request:** [https://bim360field.autodesk.com/api/get\\_issues](https://bim360field.autodesk.com/api/get_issues)

## **Response:**

```
1 {
2   {
3     "issue_id": "028f0c01-eb80-41af-8244-e4913ca6424f",
4     "identifier": "000036",
5     "description": "Fix door frame",
6     "status": "Closed",
7     "issue_type": "Punch List : Owner Punch List",
8     "priority": "Medium",
9     "spec_ref": "",
10    "due_date": "2015-03-27 00:00:00 +0000",
11    "tags": null,
12    "full_description": null,
13    "void": false,
14    "location_detail": "",
15    "source_id": "a1a20ec3-728d-49dd-9486-8913ac42ed69",
16    "source_type": "Equipment",
17    "parent_source_id": "a1a20ec3-728d-49dd-9486-8913ac42ed69",
18    "parent_source_type": "Equipment",
19    "created_by": "sheryl.yang@autodesk.com",
20    "creator_company_id": "632c287d-09de-4e32-9f3d-8e28b6bbf2a0",
21    "company_id": "632c287d-09de-4e32-9f3d-8e28b6bbf2a0",
22    "area_id": "8fd2d53e-4c70-4db4-8466-e0f6d868c2dc",
23    "created_at": "2015-03-20 10:43:40 -0400",
24    "updated_at": "2015-09-24 20:44:11 -0400",
25    "backcharge": false,
26    "backcharge_cost": null,
27    "clarification_needed": false,
28    "quantity": null,
29    "unit": null,
30    "crew": null
```

# Using BIM 360 APIs for Your Needs

# Tablets in Construction



# Custom Reports

	A	B	
1	B3F ID	Name	Type
2	2007979c-c03a-11e3-1HCRA	1HCRA	Panel
3	0f8ca2fc-ff1c-442e-b1HDPA	1HDPA	Panel
4	8e0a264b-b2a4-48b51HDPCR	1HDPCR	Panel
5	3efdac50-bee1-40be1HDPCRA	1HDPCRA	Panel
6	413a352f-5566-49d21HDPEQ	1HDPEQ	Panel
7	46b32189-67c7-40a91HDPLS	1HDPLS	Panel
8	20db09ef-c03a-11e3-1HEQA	1HEQA	Panel
9	20db09f3-c03a-11e3-1HLSA	1HLSA	Panel
10	20db09f9-c03a-11e3-1HM	1HM	Panel
11	20db09fe-c03a-11e3-1LA	1LA	Panel
12	20db0a03-c03a-11e3-1LB	1LB	Panel
13	20db0a08-c03a-11e3-1LC	1LC	Panel
14	20db0a0e-c03a-11e3-1LCRA	1LCRA	Panel
15	20db0a14-c03a-11e3-1LCRB	1LCRB	Panel
16	20db0a19-c03a-11e3-1LCRC	1LCRC	Panel
17	20db0a1d-c03a-11e3-1LCRM	1LCRM	Panel
18	20db0a22-c03a-11e3-1LCRN	1LCRN	Panel
19	20db0a26-c03a-11e3-1LCRP	1LCRP	Panel
20	20db0a2b-c03a-11e3-1LCRPR1	1LCRPR1	Panel
21	20db0a2f-c03a-11e3-1LCRPR2	1LCRPR2	Panel
22	872a23f6-b5a4-4c481LDPA	1LDPA	Panel
23	1d176c5c-06ef-4b3d1LDPCRA	1LDPCRA	Panel
24	f3aba029-59a7-477b1LDPCRM	1LDPCRM	Panel
25	9d0fe195-f951-465f-91LDPM	1LDPM	Panel
26	20db0a46-c03a-11e3-1LEQA	1LEQA	Panel
27	20db0a4b-c03a-11e3-1LLSA	1LLSA	Panel
28	20db0a4f-c03a-11e3-1LM	1LM	Panel
29	20db0a54-c03a-11e3-1LN	1LN	Panel
30	2194bf95-c03a-11e3-1LP	1LP	Panel
31	2194bf9f-c03a-11e3-81LQ	1LQ	Panel
32	234c7512-c03a-11e3-1TA	1TA	Transf
33	234c7529-c03a-11e3-1TCRA	1TCRA	Transf
34	234c752e-c03a-11e3-1TCRM	1TCRM	Transf
35	234c751d-c03a-11e3-1TEQA	1TEQA	Transf
36	234c7523-c03a-11e3-1TLA	1TLA	Transf
37	234c7518-c03a-11e3-1TM	1TM	Transf
38	1bb81a5d-c623-4c58-2HDPCRM	2HDPCRM	Panel
39	a3e1868c-3daa-44db2HDPM	2HDPM	Panel
40	2194bfad-c03a-11e3-2LA	2LA	Panel
41	2194bfb2-c03a-11e3-2LB	2LB	Panel
42	2194bfb6-c03a-11e3-2LC	2LC	Panel
43	2194bfb8-c03a-11e3-2LCRA	2LCRA	Panel
44	2194bfbf-c03a-11e3-2LCRB	2LCRB	Panel
45	2194bfc4-c03a-11e3-2LCRC	2LCRC	Panel
46	2194bfc9-c03a-11e3-2LCRM	2LCRM	Panel
47	2194bfcf-c03a-11e3-2LCRN	2LCRN	Panel
48	2194bfd3-c03a-11e3-2LCRP	2LCRP	Panel
49	2194bfd8-c03a-11e3-2LCRQ	2LCRQ	Panel
50	9ba0147f-a585-4d5d-2LDPA	2LDPA	Panel
51	2bd9552d-5da4-4a4e2LDPCRA	2LDPCRA	Panel
52	4435a502-854c-40d62LDPCRM	2LDPCRM	Panel
53	54187c4e-a15b-41ab-2LDPM	2LDPM	Panel

Equipment Table Export

002049.000 - UTMB Victory Lake Equipment Checklist Summary			
Checklist Type	Checklist	Status:	Type:
AC-1 - Mechanical 1.350		Operation Testing -	Air Comp
Commissioning	FT-Compressed Air Pump System		
Commissioning	PFC-Air Compressor		
AC-1 - Receiving 1.704		Status: Delivered	Type: Air Curta
Commissioning	FT-Air Curtain		
Commissioning	PFC-Air Curtain		
AC-2 - Linen 1.702		Status: Delivered	Type: Air Curta
Commissioning	FT-Air Curtain		
Commissioning	PFC-Air Curtain		
AC-3 - Trash 1.700		Status: Delivered	Type: Air Curta
Commissioning	FT-Air Curtain		
Commissioning	PFC-Air Curtain		
AHU-1E - Mechanical 1.350		Status: Ready for FT Demonstration	Type: Air Hand
Commissioning	FT-Typical AHU		
Commissioning	IST-AHU-1E		
Commissioning	PFC-Typical AHU (Excluding AHU-3D)		
AHU-1F - Mechanical 1.350		Status: Ready for FT	Type: Air Hand
Commissioning	FT-Typical AHU		

Equipment Table Export

Equip Checklist Summary Export

=VLOOKUP(\$A7,'Equipment Table Export'!\$L\$2:\$AE\$616,2,FALSE)

Equipment Name	Name	Type	Description	Location Path	Submittals Approved	Delivered	PFC Complete	Ready to Start	Startup Complete	Operation Testing - CM/Subs	Operation Testing - Consultant	Ready for FT Demonstration	FT Complete	Cx Complete	# PFC	# FT	# IST
CHWP-3 - Mechanical 1.350	CHWP-3	HVAC Pump	Mechanical 1.350	Level 1-02			100%						100%	0%	2	1	1
CHWP-3 VFD - Mechanical 1.350	CHWP-3 VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
CHWP-4 - Mechanical 1.350	CHWP-4	HVAC Pump	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
CHWP-4 VFD - Mechanical 1.350	CHWP-4 VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
HWP-1 - Mechanical 1.350	HWP-1	HVAC Pump	Mechanical 1.350	Level 1-02			100%						100%	0%	2	1	1
HWP-1 VFD - Mechanical 1.350	HWP-1 VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
HWP-2 - Mechanical 1.350	HWP-2	HVAC Pump	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
HWP-2 VFD - Mechanical 1.350	HWP-2 VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%	0%	1	1	1
AHU-1E - Mechanical 1.350	AHU-1E	Air Handling Unit	Mechanical 1.350	Level 1-02			100%						100%	83%	1	1	1
AHU-1E VFD - Mechanical 1.350	AHU-1E VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%		1	1	
Ductwork 1E - PFC-Ductwork for equip	Ductwork 1E	Ductwork	PFC-Ductwork for equipment Duct	Level 1			100%						100%		1	1	
RA-1E-01 - Venturi Valve for equipme	RA-1E-01	VAV Box	Venturi Valve for equipment RA-1E	Level 1-04			100%						100%		1	1	
RA-1E-02 - Venturi Valve for equipme	RA-1E-02	VAV Box	Venturi Valve for equipment RA-1E	Level 1-04			100%						100%		1	1	
RA-1E-03 - Venturi Valve for equipme	RA-1E-03	VAV Box	Venturi Valve for equipment RA-1E	Level 1-04			100%						100%		1	1	
RA-1E-04 - Venturi Valve for equipme	RA-1E-04	VAV Box	Venturi Valve for equipment RA-1E	Level 1-04			100%						100%		1	1	
SA-1E-01 - DATA 1.322A Venturi Valv	SA-1E-01	VAV Box	DATA 1.322A Venturi Valve w/ Hw R	Level 1-02			100%						100%		1	1	
SA-1E-02 - Corridor 1.3B	SA-1E-02	VAV Box	Corridor 1.3B	Level 1-04			100%						100%		1	1	
SA-1E-03 - Corridor 1.8D	SA-1E-03	VAV Box	Corridor 1.8D	Level 1-03			100%						100%		1	1	
SA-1E-04 - Corridor 1.8D	SA-1E-04	VAV Box	Corridor 1.8D	Level 1-03			100%						100%		1	1	
SA-1E-05 - Isolation Post Op 1.312E	SA-1E-05	VAV Box	Isolation Post Op 1.312E	Level 1-02			100%						100%		1	1	
GE-1E-05 - Isolation Post Op 1.312E	GE-1E-05	VAV Box	Isolation Post Op 1.312E	Level 1-02			100%						100%		1	1	
VV-1E-01 - VAV Terminal Unit w/ Hw R	VV-1E-01	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-02 - VAV Terminal Unit w/ Hw R	VV-1E-02	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-03 - VAV Terminal Unit w/ Hw R	VV-1E-03	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-04 - VAV Terminal Unit w/ Hw R	VV-1E-04	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-05 - VAV Terminal Unit w/ Hw R	VV-1E-05	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-06 - VAV Terminal Unit w/ Hw R	VV-1E-06	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-07 - VAV Terminal Unit w/ Hw R	VV-1E-07	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-08 - VAV Terminal Unit w/ Hw R	VV-1E-08	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-09 - VAV Terminal Unit w/ Hw R	VV-1E-09	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-10 - VAV Terminal Unit w/ Hw R	VV-1E-10	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-11 - VAV Terminal Unit w/ Hw R	VV-1E-11	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-12 - VAV Terminal Unit w/ Hw R	VV-1E-12	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-13 - VAV Terminal Unit w/ Hw R	VV-1E-13	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-14 - VAV Terminal Unit w/ Hw R	VV-1E-14	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-15 - VAV Terminal Unit w/ Hw R	VV-1E-15	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1E-16 - VAV Terminal Unit w/ Hw R	VV-1E-16	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-04			100%						100%		1	1	
VV-1E-17 - VAV Terminal Unit w/ Hw R	VV-1E-17	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-04			100%						100%		1	1	
VV-1E-18 - VAV Terminal Unit w/ Hw R	VV-1E-18	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-04			100%						100%		1	1	
VV-1E-19 - VAV Terminal Unit w/ Hw R	VV-1E-19	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-04			100%						100%		1	1	
VV-1E-20 - VAV Terminal Unit - Coolin	VV-1E-20	VAV Box	VAV Terminal Unit - Cooling Only V	Level 1-02			100%						100%		1	1	
VV-1E-21 - VAV Terminal Unit - Coolin	VV-1E-21	VAV Box	VAV Terminal Unit - Cooling Only V	Level 1-02			100%						100%		1	1	
AHU-1F - Mechanical 1.350	AHU-1F	Air Handling Unit	Mechanical 1.350	Level 1-02			100%						100%	84%	1	1	1
AHU-1F VFD - Mechanical 1.350	AHU-1F VFD	VFD	Mechanical 1.350	Level 1-02			100%						100%		1	1	
Ductwork 1F - PFC-Ductwork for equip	Ductwork 1F	Ductwork	PFC-Ductwork for equipment Duct	Level 1			100%						100%		1	1	
VV-1F-01 - VAV Terminal Unit w/ Hw R	VV-1F-01	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1F-02 - VAV Terminal Unit w/ Hw R	VV-1F-02	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1F-03 - VAV Terminal Unit w/ Hw R	VV-1F-03	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	
VV-1F-04 - VAV Terminal Unit w/ Hw R	VV-1F-04	VAV Box	VAV Terminal Unit w/ Hw Reheat V	Level 1-02			100%						100%		1	1	

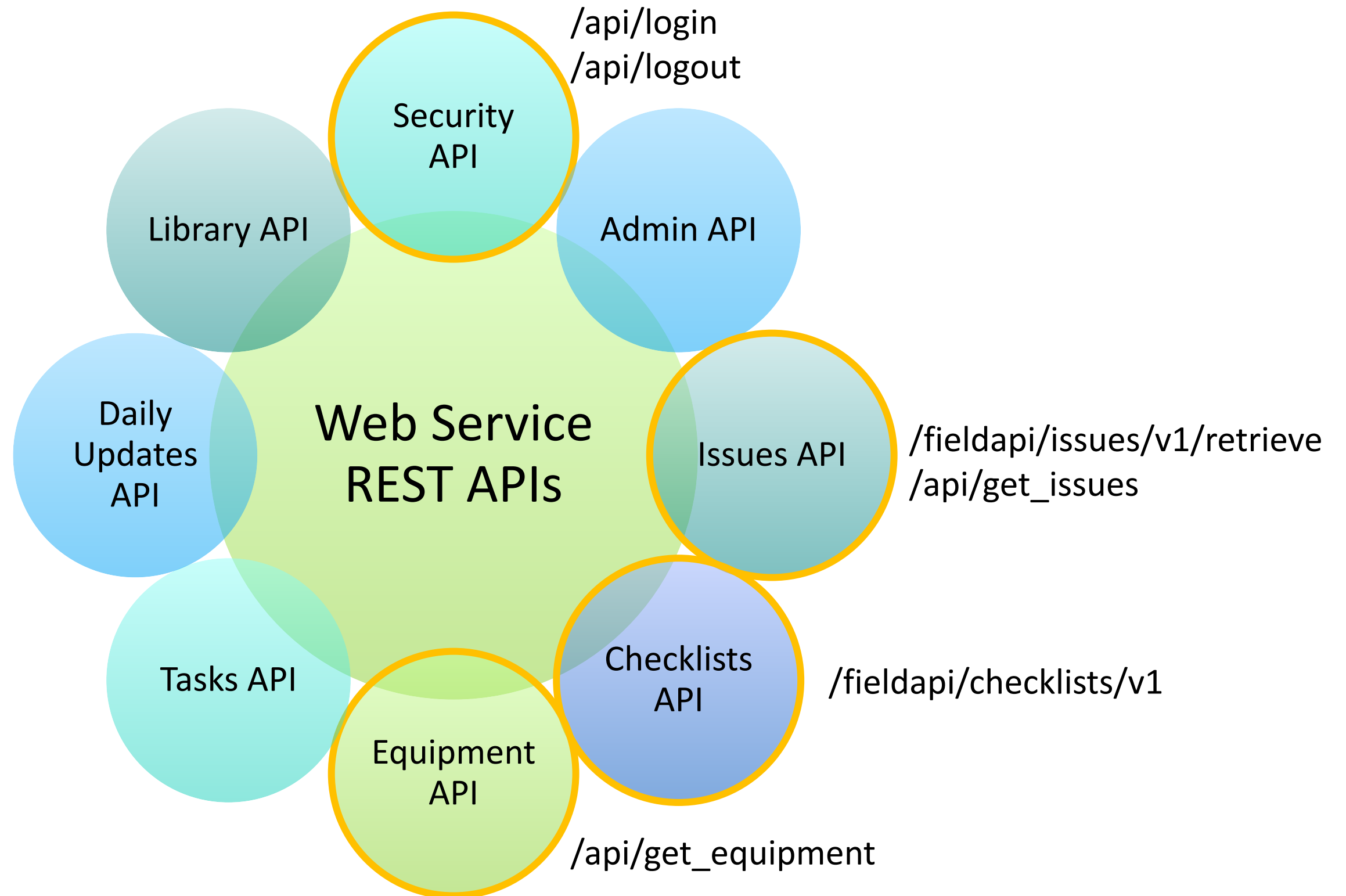
Page 1



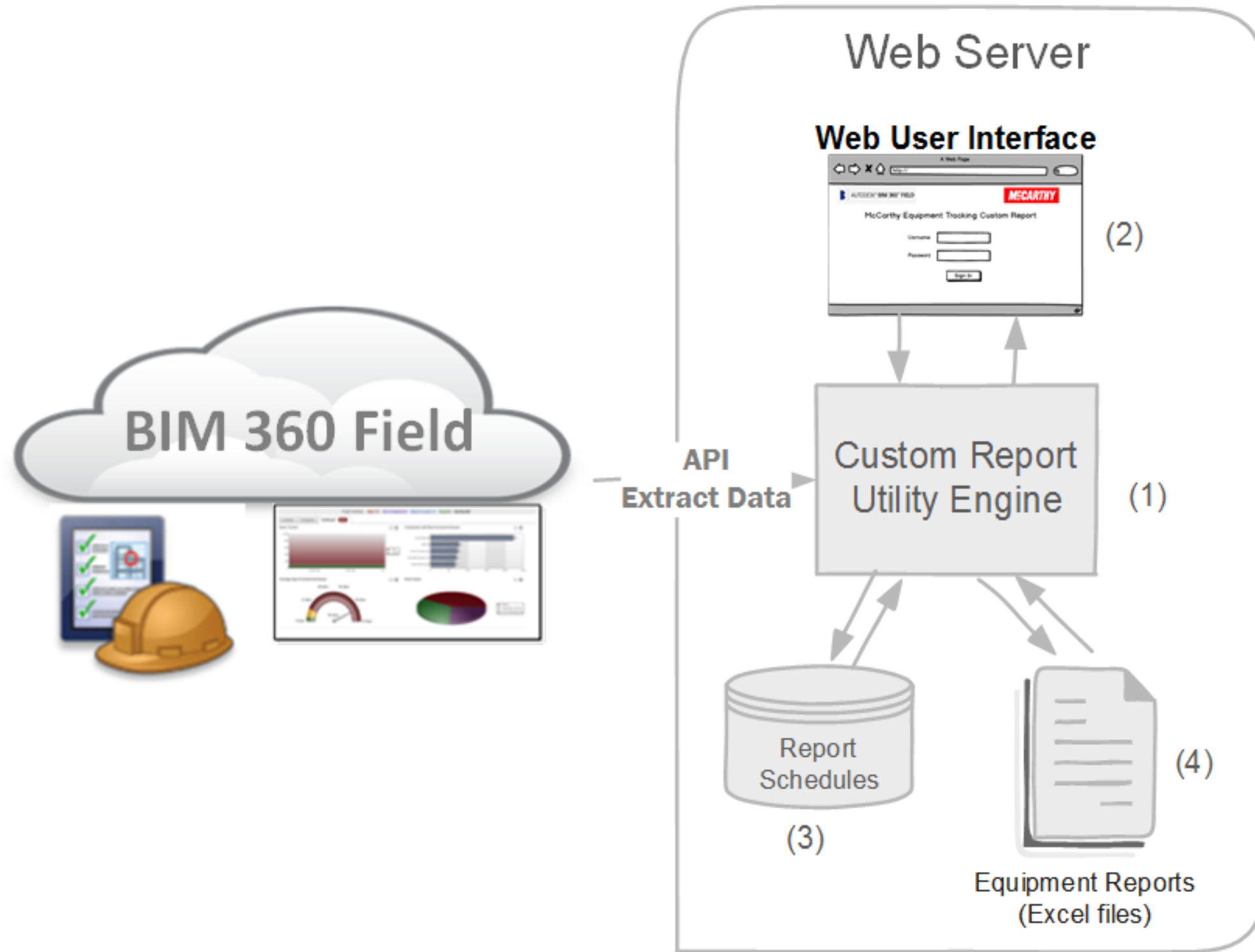
# Automated Reporting

Active Standard Properties						Active Custom Properties									Checklists						Issues			Overall Com	
Equipment Name	Type	Description	Location Path	Submittals Approved	Delivered	01 - Connection Complete	02 - Power Ready	03 - Special Inspector 1	04 - Punchlist Complete	05 - Locks Changed	06 - Final Cleaned	07 - Temporary On Date	08 - Custom Property 2	09 - Custom Property 3	01 - Linked Checklist		02 - Linked Checklist		03 - Linked Checklist		Checklist Summary	# of Issues	# of Open Issues		% Open Issues
															# Checklists	Avg % Complet	# Checklists	Avg % Complete	# Checklists	Avg % Complete					
SF-4	AHU Fan	Mezzanine	Level 4-03	No	Yes	No	No	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
SF-5	AHU Fan	Mezzanine	Level 1	No	Yes	No	Yes	No					Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-1	AHU Fan	Mechanical RM	Level 1	No	No	No	Yes	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-2	AHU Fan	Mezzanine	Level 1	Yes	No	No	Yes	No					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-3A	AHU Fan	Mezzanine	Level 2	No	Yes	Yes	Yes	Yes					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-3B	AHU Fan	Mezzanine	Level 2	Yes	No	No	No	No					Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-4	AHU Fan	Mezzanine	Level 3	No	No	No	No	Yes					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
RF-5	AHU Fan	Mezzanine	Level 1	Yes	No	No	No	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-1	Cooling Coil		Level 3	No	No	No	Yes	No					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-2	Cooling Coil		Level 2	No	Yes	Yes	Yes	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-3A	Cooling Coil		Level 1	No	No	No	Yes	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-3B	Cooling Coil		Level 1-03	Yes	No	Yes	Yes	No					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-4	Cooling Coil		Level 1-03	Yes	Yes	No	Yes	No					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
CC-5	Cooling Coil		Level 4-01	No	No	Yes	Yes	No					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
PHC-1	Heating Coil		Level 2-03	Yes	Yes	No	Yes	No					No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
PHC-5	Heating Coil		Level 4-02	Yes	Yes	Yes	No	No					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 1	Room 1		Level 4-02	No	Yes				Yes	No	Yes		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 2	Room 2		Level 3-02	Yes	No				No	No	No		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 3	Room 3		Level 3-02	Yes	No				No	No	No		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 4	Room 4		Level 3-02	No	No				Yes	No	Yes		Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 5	Room 5		Level 3-02	No	Yes				No	No	Yes		No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 6	Room 6		Level 3-05	Yes	Yes				No	Yes	No		No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 7	Room 7		Level 1-03	Yes	Yes				Yes	No	Yes		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 8	Room 8		Level 1-06	Yes	Yes				No	Yes	Yes		No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 9	Room 9		Building	Yes	No				Yes	Yes	Yes		Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 10	Room 10		Level 1-03	Yes	Yes				Yes	Yes	No		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 11	Room 11		Level 1-03	Yes	Yes				No	Yes	No		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 12	Room 12		Level 1-03	No	Yes				Yes	No	Yes		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 13	Room 13		Level 1-03	Yes	Yes				No	Yes	Yes		Yes	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 14	Room 14		Level 1-04	Yes	No				Yes	No	No		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 15	Room 15		Level 1-04	No	Yes				Yes	Yes	No		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 16	Room 16		Level 1-04	No	No				No	No	Yes		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 17	Room 17		Level 1-04	No	Yes				No	No	Yes		No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
Room 18	Room 18		Level 1-04	No	Yes				Yes	Yes	Yes		No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
ACCU-U-1	Split System Condensing Unit		Level 1-04	Yes	Yes	Yes	No	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
BCU-U-1	Split System Blower Coil		Level 1-02	Yes	No	Yes	No	Yes					No	Yes							#DIV/0!	0	0	#DIV/0!	#DIV/0!
SA-10	Sound Attenuator	ATU Discharge	Level 2-06	No	Yes	No	No	Yes					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
SA-12	Sound Attenuator	ATU Discharge	Level 2-05	Yes	No	Yes	Yes	No					Yes	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
SA-14	Sound Attenuator	ATU Discharge	Level 3-02	No	No	Yes	No	Yes					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!
SA-16	Sound Attenuator	ATU Discharge	Level 4-03	No	Yes	Yes	No	Yes					No	No							#DIV/0!	0	0	#DIV/0!	#DIV/0!

# BIM 360 Field APIs

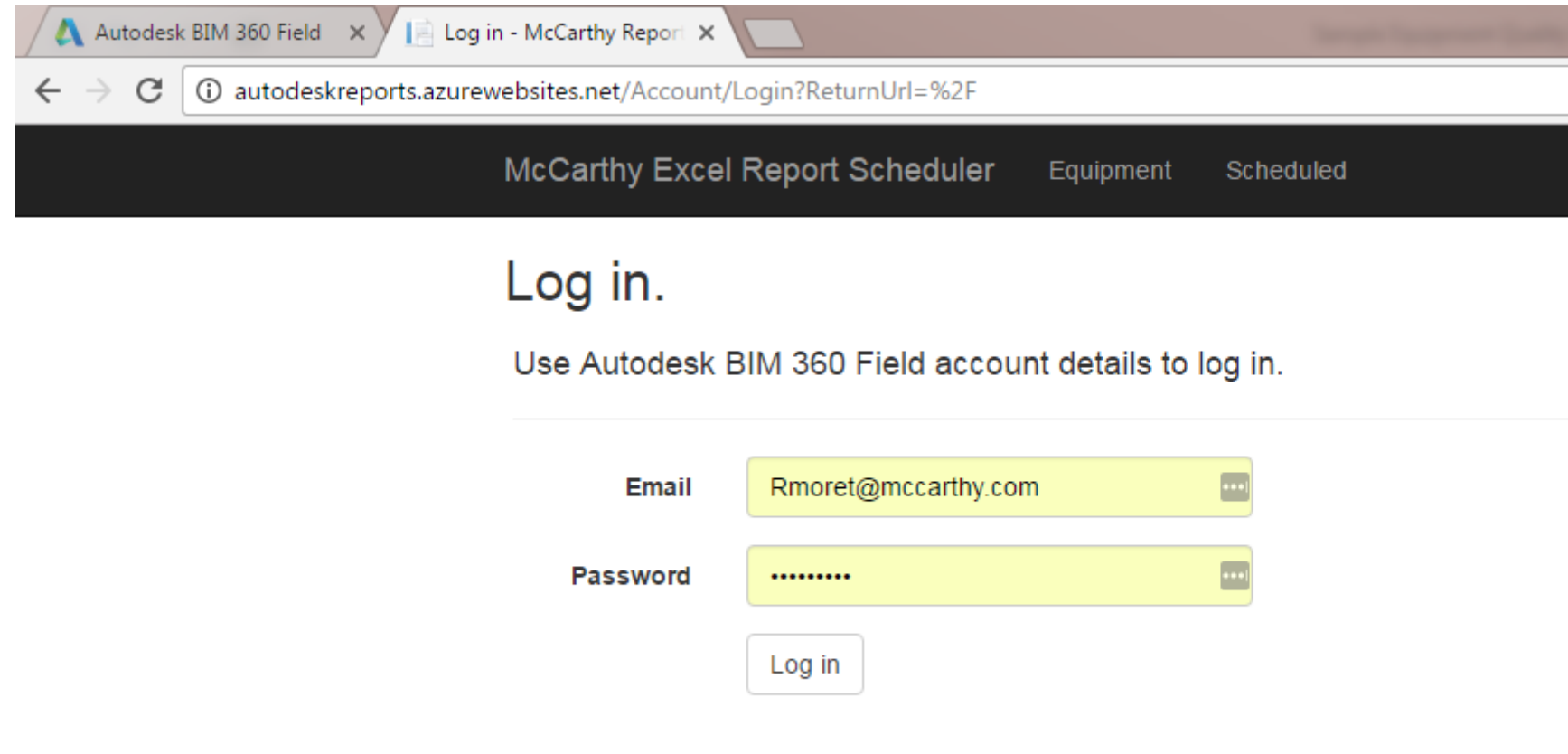


# Solution Architecture



- (1) Custom Report Utility Engine
- (2) Web User Interfaces
- (3) Report Schedule Database
- (4) File Storage Server

# Example of our API Reporting Log



The screenshot shows a web browser window with two tabs: 'Autodesk BIM 360 Field' and 'Log in - McCarthy Report'. The address bar shows the URL 'autodeskreports.azurewebsites.net/Account/Login?ReturnUrl=%2F'. The page has a dark header with the text 'McCarthy Excel Report Scheduler' and two links, 'Equipment' and 'Scheduled'. Below the header, the text 'Log in.' is displayed, followed by the instruction 'Use Autodesk BIM 360 Field account details to log in.' The login form consists of two yellow input fields: 'Email' with the value 'Rmoret@mccarthy.com' and 'Password' with masked characters '.....'. A 'Log in' button is positioned below the password field.

Autodesk BIM 360 Field x Log in - McCarthy Report x

← → ↻ ⓘ autodeskreports.azurewebsites.net/Account/Login?ReturnUrl=%2F

McCarthy Excel Report Scheduler Equipment Scheduled

Log in.

Use Autodesk BIM 360 Field account details to log in.

Email Rmoret@mccarthy.com

Password .....

Log in

# Example of our API Reporting Log

The screenshot shows a web browser window with the URL `autodeskreports.azurewebsites.net`. The page title is "McCarthy Excel Report Scheduler". The user is logged in as `Rmoret@mccarthy.com` and can click "Log off".

## Equipment Filters

**Project**

**Run and Download** **Run and Email** **Save Schedule**

**Report Name**

**Role Filters**

**Include equipment changed between these dates:**

**To**

**Equipment Type**

**Equipment Statusus**

**Location**  ☐ Include Sub-locations?

**Include Checklist Templates**

Refresh Checklist Templates by Selected Equipment Types

☐ Include Attachments URL

**Schedule name**

**Description**

**Run**

**On these days** ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

**Run report at**  (GMT-05:00) Eastern Time (US & Canada)

**Send report to**

**Subject**

**Message**

# Example of our API Reporting Log

The screenshot shows a web browser window with two tabs: 'Autodesk BIM 360 Field' and 'McCarthy Reports'. The address bar shows 'autodeskreports.azurewebsites.net'. The page title is 'McCarthy Excel Report Scheduler'. The navigation bar includes 'Equipment' and 'Scheduled' links, and a user profile 'Rmoret@mccarthy.com' with a 'Log off' link.

## Equipment Filters

**Project** 002049.000 - UTMB Victory Lakes Spe... ▼

**Run and Download** **Run and Email** **Save Schedule**

**Report Name**

**Role Filters** All Equipment ▼

**Include equipment changed between these dates:**

**To**

**Equipment Type**

**Equipment Status**

**Location**  ☐ Include Sub-locations?

**Include Checklist Templates**

**Refresh Checklist Templates by Selected Equipment Types**

☐ Include Attachments URL

**Schedule name**

**Description**

**Run** every week ▼

**On these days** ☐ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

**Run report at** 7:00am ▼ Central Time (US & Canada)

**Send report to**

**Subject**

**Message**

# Using The Equipment Module

- Equipment = Building Elements

Checklists Issues Tasks Attachments Comments History

Link a checklist to this equipment item ▾ + Checklist Edit Link Checklists

Created	Modified	Name	Author	# Issu
		<input type="text"/>	<input type="text"/>	

More Actions ▾

- Import
- Export All
- Export All to Excel
- Export to Building Ops
- Add Library Files
- Link Checklists
- Edit All Items In List
- Customize View

\* = required  
● = COBie-standard property

Profile  
\* Name  
A4314 - CODING SUPERV

Type  
Room Tracking

Description

Location  
A4314 - CODING SUPERV X

Status  
In Progress

01 - Floor Finish  
CPT7

02 - Floor Base  
RB1

03 - N. Finish  
P1

04 - E. Finish  
P11

05 - S. Finish  
P1

06 - W. Finish  
P1

07 - Ceiling Finish  
ACT3

08 - Department  
PATIENT ADMINISTRATION DIVISION (PAD)

# How We Are Using This Information



# How We Are Using This Information

[Back to Equipment](#)

★ = required  
● = COBie-standard property

Profile

★ Name  
Abutment 1, Drilled Shaft 1

● Type  
Drilled Shafts

● Description  
Abutment 1, Drilled Shaft 1

Location  
Abutment 1

Status  
In Progress

Checklists

Issues

Tasks

Attachments

Comments

History

Drilled Shaft Concrete

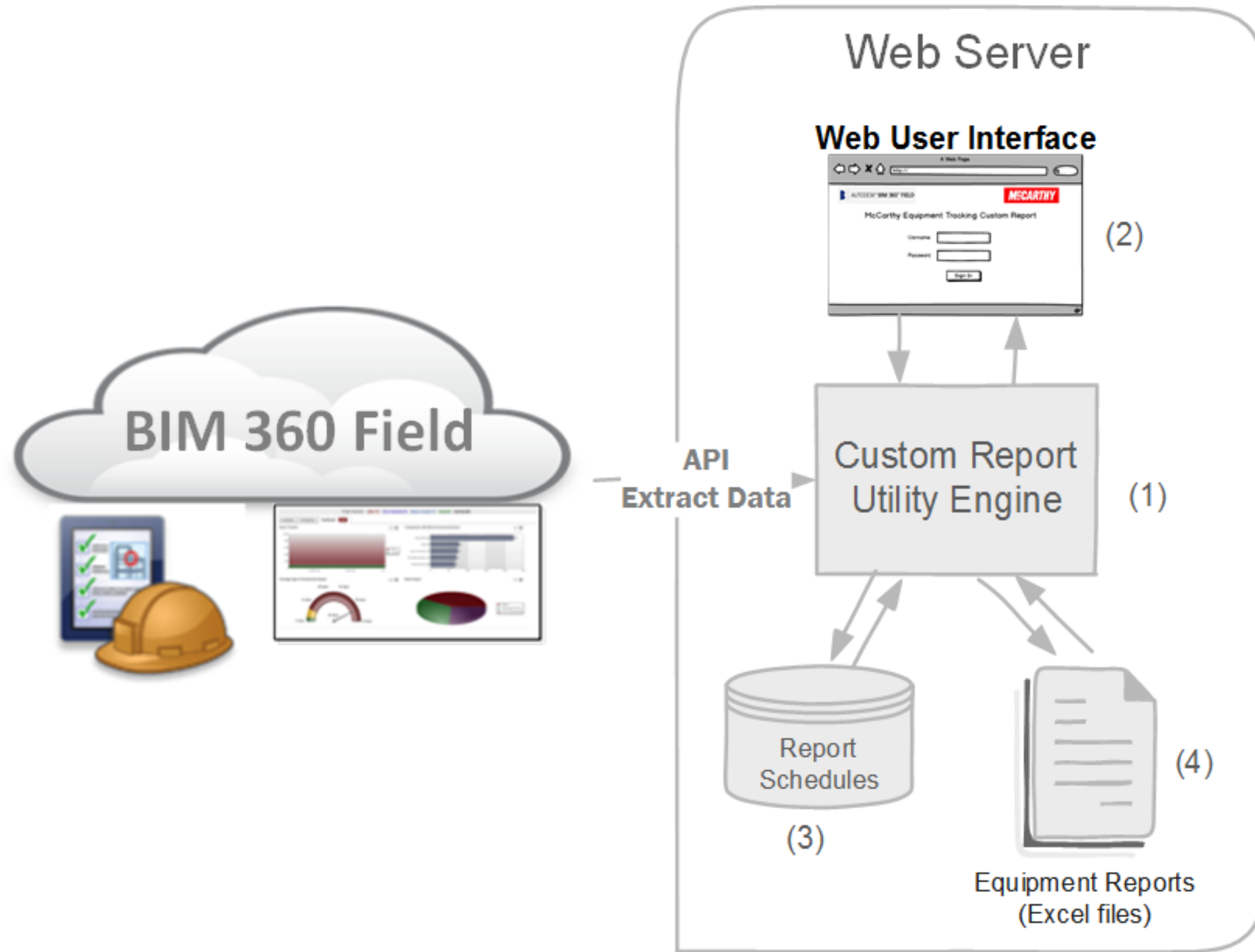
+ Checklist

Edit

Link Checklists

Created	Modified	Name	Author	# Issues	# Open
Feb 26, 2016 7:44 / Feb 29, 2016 10:52		Drilled Shaft Reinforced Steel Cage Inspect	jlopez@mccarthy.com	0	0
Feb 26, 2016 7:44 / Feb 29, 2016 10:52		Drilled Shaft Reinforced Steel Cage Inspect	jlopez@mccarthy.com	0	0
Feb 16, 2016 8:20 / Feb 16, 2016 8:29		Drilled Shaft Reinforced Steel Cage Inspect	avillarreal@mccarthy.com	0	0
Feb 3, 2016 8:40 / Feb 3, 2016 2:21		Drilled Shaft Inspection	rmoret@mccarthy.com	2	0

# Solution Architecture



- (1) Custom Report Utility Engine
- (2) Web User Interfaces
- (3) Report Schedule Database
- (4) File Storage Server

# APIs = Opportunities

