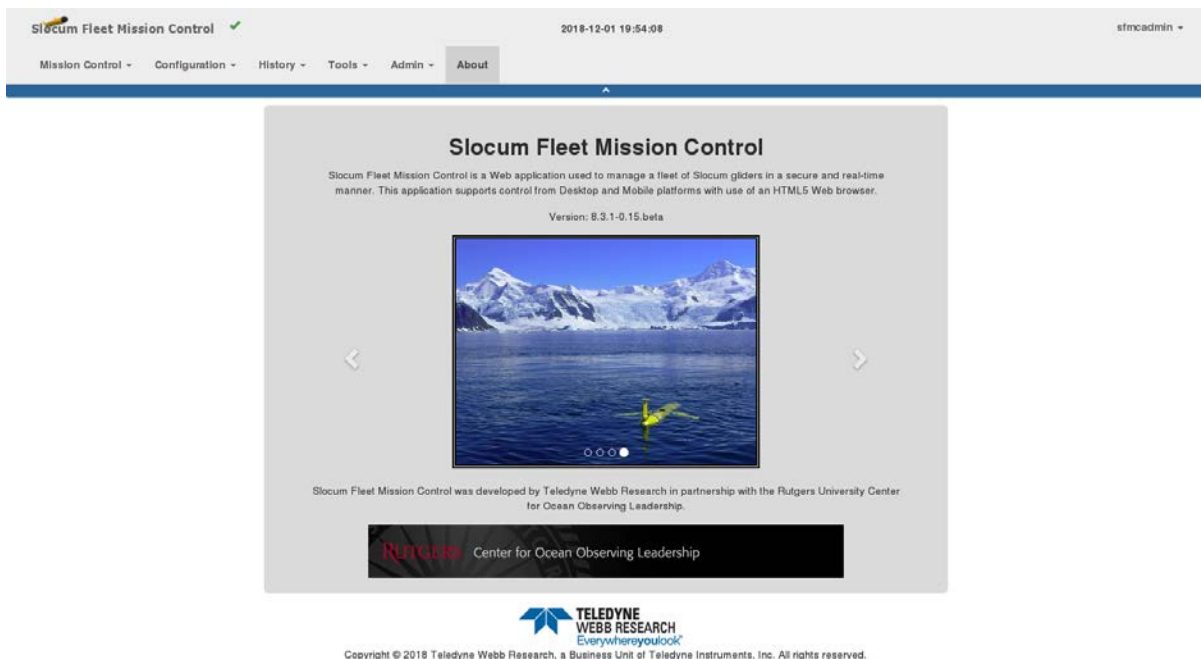


Slocum Fleet Mission Control

User Manual

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Table of Contents

Table of Contents.....	iii
List of Figures.....	xi
Preface	xx
Cautions and Notes	xx
Documentation Changes.....	xx
Customer Service	xx

SECTION 1: Introduction 1-1

SECTION 2: SFMC Basics 2-1

2.1	Slocum Fleet Mission Control Screen Layout.....	2-1
2.1.1	Menu Bar	2-2
2.1.2	<User Account> Menu	2-4
2.1.3	Page Area.....	2-4
2.2	Glider Deployments.....	2-4
2.3	User Accounts.....	2-5
2.3.1	Roles	2-7
2.3.2	Groups	2-8
2.3.3	Projects.....	2-8
2.4	Viewing the SFMC Version Number	2-9
2.5	Updating the User Profile.....	2-9
2.6	Changing the User Password.....	2-10
2.7	Checking the System Status	2-11
2.8	Common Questions about SFMC	2-13
2.8.1	Why Create Additional User Accounts?	2-13
2.8.2	Why Create Additional Groups?.....	2-14
2.8.3	Why Register a Glider?	2-14
2.8.4	How is an Active Glider Deployment Created?	2-14
2.8.5	Why Recover a Glider Deployment?	2-14
2.8.6	Why Archive a Glider Deployment?	2-14
2.8.7	Why Create Projects?	2-15

SECTION 3: Getting Started 3-1

3.1	Installing SFMC	3-1
3.2	Starting and Logging in to SFMC	3-1
3.3	Exiting from and Logging out of SFMC	3-2
3.4	Importing Glider Data from another Dock Server.....	3-2

SECTION 4: Setting up SFMC..... 4-1

4.1	Creating and Managing Groups and User Accounts	4-1
4.1.1	Creating a Group	4-1
4.1.2	Deleting a Group.....	4-2
4.1.3	Creating a User Account	4-3
4.1.4	Modifying a User Account	4-5
4.1.5	Resetting a User Account Password	4-6
4.1.6	Deleting a User Account	4-7
4.2	Registering and Managing Gliders	4-8
4.2.1	Viewing Registered Gliders.....	4-8
4.2.2	Viewing a Glider Configuration	4-9
4.2.3	Configuring a Glider.....	4-10
4.2.4	Registering a Glider	4-10
4.2.5	Transferring a Registered Glider to Another Group.....	4-11
4.3	Creating and Managing Projects	4-12
4.3.1	Viewing Projects	4-13
4.3.2	Creating a Project	4-14
4.3.3	Editing a Project.....	4-15
4.3.4	Deleting a Project	4-16

SECTION 5: The Dashboard..... 5-1

5.1	Dashboard Layout	5-1
5.1.1	Map Events Panel	5-1
5.1.2	Deployments Panel.....	5-6
5.1.3	Comms Plot Panel.....	5-8
5.2	Filtering the Deployments to Watch by Groups and Projects	5-8

SECTION 6: Using Glider Terminal 6-1

6.1	Opening Glider Terminal	6-1
6.2	Glider Terminal Page	6-3
6.2.1	Terminal for Glider Panel	6-3
6.2.2	Recent Commands Submitted Panel.....	6-4
6.2.3	Mission Details Panel.....	6-4
6.2.4	File Transfers Panel.....	6-5
6.2.5	Files Area	6-5
6.2.6	Other Gliders Area.....	6-7
6.2.7	Other Glider Terminal Page Functions	6-7
6.3	Controlling Scripts	6-7
6.3.1	Assigning and Un-assigning Scripts	6-8
6.3.2	Pausing and Resuming Scripts.....	6-8
6.4	Uploading, Viewing, Saving, and Deleting Files	6-9
6.4.1	Viewing and Saving From-Glider Files	6-9
6.4.2	Uploading, Viewing, Saving, and Deleting To-Glider Files.....	6-10
6.4.3	Uploading, Viewing, Saving, and Deleting To-Science Files	6-11
6.4.4	Viewing and Saving Logs Files	6-12
6.4.5	Viewing and Saving Archive Files.....	6-13

SECTION 7: Managing Dock Server Scripts 7-1

7.1	The Dock Server Scripts Page	7-1
7.1.1	Factory Scripts Panel	7-1
7.1.2	User Scripts Panel	7-1
7.1.3	User Scripts Drop Zone Panel	7-3
7.1.4	Default Scripts Assignments Panel	7-3
7.2	Transferring a User Script File to SFMC.....	7-3
7.3	Assigning a Default Script.....	7-3
7.4	Deleting a User Script.....	7-4

SECTION 8: Managing Mission Plans 8-1

8.1	Managing a Waypoint Plan	8-2
8.1.1	Viewing a Waypoint Plan.....	8-2
8.1.2	Creating a Waypoint Plan.....	8-4

8.1.3	Editing a Waypoint Plan	8-9
8.1.4	Cloning a Waypoint Plan	8-12
8.1.5	Deleting a Waypoint Plan	8-13
8.2	Managing a Surface Plan	8-15
8.2.1	Viewing a Surface Plan	8-15
8.2.2	Creating a Surface Plan.....	8-16
8.2.3	Editing a Surface Plan	8-21
8.2.4	Cloning a Surface Plan	8-22
8.2.5	Deleting a Surface Plan.....	8-23
8.3	Managing a Yo Plan	8-25
8.3.1	Viewing a Yo Plan	8-25
8.3.2	Creating a Yo Plan.....	8-27
8.3.3	Editing a Yo Plan	8-29
8.3.4	Cloning a Yo Plan	8-30
8.3.5	Deleting a Yo Plan	8-32
8.4	Managing a Sampling Plan	8-33
8.4.1	Viewing a Sampling Plan.....	8-33
8.4.2	Creating a Sampling Plan.....	8-35
8.4.3	Editing a Sampling Plan	8-38
8.4.4	Cloning a Sampling Plan	8-40
8.4.5	Deleting a Sampling Plan	8-41
8.5	Managing a Mission Sensor Plan.....	8-42
8.5.1	Viewing a Mission Sensor Plan	8-42
8.5.2	Creating a Mission Sensor Plan	8-44
8.5.3	Editing a Mission Sensor Plan.....	8-47
8.5.4	Cloning a Mission Sensor Plan.....	8-48
8.5.5	Deleting a Mission Sensor Plan	8-49
8.6	Managing an Abort Plan.....	8-51
8.6.1	Viewing an Abort Plan	8-51
8.6.2	Creating an Abort Plan	8-52
8.6.3	Editing an Abort Plan	8-54
8.6.4	Cloning an Abort Plan	8-55
8.6.5	Deleting an Abort Plan.....	8-56

8.7	Managing a Data Transmission Plan	8-58
8.7.1	Viewing a Data Transmission Plan.....	8-58
8.7.2	Creating a Data Transmission Plan	8-59
8.7.3	Editing a Data Transmission Plan	8-62
8.7.4	Cloning a Data Transmission Plan	8-64
8.7.5	Deleting a Data Transmission Plan	8-65
8.8	Managing a Mission Plan.....	8-66
8.8.1	Viewing a Mission Plan	8-67
8.8.2	Creating a Mission Plan	8-68
8.8.3	Editing a Mission Plan.....	8-77
8.8.4	Cloning a Mission Plan.....	8-78
8.8.5	Deleting a Mission Plan	8-79

SECTION 9: Managing Active Deployments 9-1

9.1	Viewing Active Glider Deployments.....	9-1
9.2	Active Deployment Detail Page.....	9-2
9.2.1	Selecting the Panels to View	9-3
9.2.2	Summary Panel.....	9-3
9.2.3	Map Events Panel	9-6
9.2.4	Surfacings Panel.....	9-6
9.2.5	Surface Sensor Values Panel.....	9-9
9.3	Assigning and Un-Assigning an Active Glider Deployment to a Project	9-11
9.4	Deleting an Active Glider Deployment.....	9-13
9.5	Configuring the Maximum Hours Between Call-ins	9-14
9.6	Assigning a Mission Plan to an Active Deployment	9-15
9.7	Using Data Visualizer for an Active Deployment	9-17
9.7.1	Opening Data Visualizer for an Active Deployment	9-18
9.7.2	Data Visualizations Page for an Active Deployment	9-19
9.7.3	Graph	9-19
9.7.4	Data Files Panel	9-19
9.7.5	Sensor Data File and Cache File Drop Zone Panel.....	9-21
9.7.6	Data Files Unable to Process Panel	9-21
9.7.7	Viewing Data by Plot Name	9-21
9.7.8	Viewing Data by Sensor Selections.....	9-22

9.7.9	Setting the Vertical Axis Minimum and Maximum Values.....	9-23
9.7.10	Exporting Plots.....	9-24
9.7.11	Importing a Missing Cache File.....	9-24
9.8	Importing Sensor Types.....	9-25
9.9	Exporting Map Events	9-26
9.10	Exporting Surface Sensor Data	9-27
9.11	Exporting Glider Commands	9-28

SECTION 10: Managing Archived Deployments..... 10-1

10.1	Viewing Archived Deployments	10-1
10.2	Archived Deployment Detail Page	10-2
10.2.1	Summary Panel.....	10-4
10.2.2	Map Events Panel	10-4
10.2.3	Surfacings Panel.....	10-7
10.2.4	Surface Sensor Values Panel.....	10-9
10.3	Archiving an Active Deployment	10-11
10.4	Deleting an Archived Deployment	10-12
10.5	Using Data Visualizer for an Archived Deployment	10-13
10.5.1	Opening Data Visualizer for an Archived Deployment.....	10-14
10.5.2	Data Visualizations Page for an Archived Deployment	10-14
10.6	Creating and Downloading a Compressed Tar Archive File for an Archived Deployment.....	10-15

SECTION 11: Managing Surface Sensor Thresholds 11-1

11.1	Viewing the Surface Sensor Threshold Settings.....	11-1
11.2	Setting the Surface Sensor Thresholds.....	11-3

SECTION 12: Managing Log Notes..... 12-1

12.1	Viewing Log Notes	12-1
12.1.1	Viewing the Log Notes for an Active Deployment	12-1
12.1.2	Viewing the Log Notes for an Archived Deployment	12-1
12.2	Creating a Log Note	12-2
12.3	Editing a Log Note	12-3
12.4	Deleting a Log Note	12-4

SECTION 13: Managing User Settings..... 13-1

13.1	Managing Map Settings.....	13-1
13.1.1	Viewing the Map Settings.....	13-1
13.1.2	Creating Map Settings	13-3
13.1.3	Editing a Map Setting	13-4
13.1.4	Exporting the User Configured Map Settings.....	13-6
13.1.5	Importing User Configured Map Settings.....	13-6
13.1.6	Deleting a Map Setting	13-7
13.1.7	Sharing a Map Setting	13-8
13.1.8	Creating a KMZ Access Token and Downloading a KMZ File.....	13-10
13.2	Managing Audio Settings	13-11
13.2.1	Viewing the Audio Settings.....	13-11
13.2.2	Creating a Glider Specific Audio Setting.....	13-13
13.2.3	Editing a Glider Specific Audio Setting	13-14
13.2.4	Deleting a Glider Specific Audio Setting.....	13-15
13.2.5	Editing a Group Specific Audio Setting	13-15
13.2.6	Enabling or Disabling an Audio Setting	13-17
13.2.7	Playing an Audio Setting.....	13-17
13.3	Managing Glider Event Subscriptions	13-17
13.3.1	Selecting Glider Event Subscriptions	13-17
13.3.2	Editing Glider Event Subscriptions	13-20
13.3.3	Deleting Glider Event Subscriptions	13-21
13.4	Managing User Sensor Plot Types.....	13-22
13.4.1	Viewing a User Sensor Plot Type	13-23
13.4.2	Creating a User Sensor Plot Type	13-23
13.4.3	Editing a User Sensor Plot Type.....	13-26
13.4.4	Deleting a User Sensor Plot Type	13-27
13.4.5	Sharing a User Sensor Plot Type.....	13-28

SECTION 14: Viewing the Event Timeline 14-1

14.1	Viewing the Event Timeline.....	14-1
14.1.1	Viewing the Event Timeline for an Active Deployment	14-1
14.1.2	Viewing the Event Timeline for an Archived Deployment	14-1
14.2	Event Timeline for Active and Archived Deployment Pages.....	14-3

SECTION 15: Administrative Functions 15-1

15.1	Viewing Reports	15-1
15.1.1	Viewing the Group Membership Report	15-1
15.1.2	Viewing the Logged-In Users Report	15-2
15.1.3	Viewing the Glider Event Subscriptions Report	15-2
15.1.4	Viewing the User's Last Login Report	15-5
15.1.5	Viewing the User Access Report	15-6
15.2	Managing Administrator Messages	15-8
15.2.1	Viewing Administrator Messages	15-8
15.2.2	Creating an Administrator Message	15-9
15.2.3	Editing an Administrator Message	15-9
15.2.4	Deleting an Administrator Message	15-10

SECTION 16: Tools 16-1

16.1	Sensor Data File Tool	16-1
16.1.1	Creating a Sensor Data Folder	16-1
16.1.2	Adding Files to a Sensor Data Folder	16-3
16.1.3	Parsing Sensor Data File Data	16-4
16.1.4	Viewing Sensor File Data as ASCII Files	16-5
16.1.5	Viewing Sensor File Data as Plots on a Graph	16-6
16.1.6	Deleting a Sensor Data Folder	16-9
16.1.7	Deleting a Sensor Data File	16-9

APPENDIX A: SFMC Dock Server Folders A-1

APPENDIX B: Importing Glider Data B-1

APPENDIX C: Viewing Glider Data on a Smartphone or Tablet C-1

List of Figures

Figure 2-1 Slocum Fleet Mission Control Screen—Open to the Dashboard	2-1
Figure 2-2 User Account Overall Organizational Structure	2-6
Figure 2-3 About Page.....	2-9
Figure 2-4 Update Profile Form Panel	2-10
Figure 2-5 Change Password Form Panel	2-10
Figure 2-6 System Status Page.....	2-12
Figure 3-1 Login Form Panel	3-1
Figure 3-2 The Dashboard when Logging in to SFMC.....	3-2
Figure 4-1 Create Group Page—Create Group Form Panel.....	4-2
Figure 4-2 Groups Page.....	4-2
Figure 4-3 Delete Group Dialog Box	4-3
Figure 4-4 Create User Page—Create User Form Panel	4-4
Figure 4-5 Users Page	4-5
Figure 4-6 Users Page—Modify User Form Panel	4-6
Figure 4-7 Delete User Dialog Box	4-7
Figure 4-8 Gliders Page	4-8
Figure 4-9 Glider Configuration Page	4-10
Figure 4-10 Register Glider Page—Register Glider Form Panel	4-11
Figure 4-11 Gliders Page—Transfer Glider Form Panel.....	4-12
Figure 4-12 Projects Page	4-13
Figure 4-13 Create Project Page—Create Project Form Panel.....	4-14
Figure 4-14 Projects Page—Modify Project Form Panel	4-15
Figure 4-15 Delete Project Dialog Box	4-16
Figure 5-1 Dashboard.....	5-2
Figure 5-2 Dashboard—Specific Deployment Selected for Display on the Map.....	5-3
Figure 5-3 Map Events Panel	5-4
Figure 5-4 Deployments Panel.....	5-7
Figure 5-5 Comms Plot Panel.....	5-9

Figure 5-6 Dashboard Content Filter Dialog Box	5-10
Figure 6-1 Glider Terminal Access Page.....	6-1
Figure 6-2 Glider Terminal Page	6-2
Figure 6-3 Script Selection for Glider <Glider Name> Dialog Box	6-8
Figure 6-4 From-Glider Files for Glider <Glider Name> Dialog Box.....	6-9
Figure 6-5 To-Glider Files for Glider <Glider Name> Dialog Box	6-10
Figure 6-6 To-Science Files for Glider <Glider Name> Dialog Box.....	6-11
Figure 6-7 Logs Files for Glider <Glider Name> Dialog Box	6-12
Figure 6-8 Archive Files for Glider <Glider Name> Dialog Box	6-13
Figure 7-1 Dock Server Scripts Page	7-2
Figure 7-2 Delete User Script Dialog Box.....	7-4
Figure 8-1 Waypoint Plans Page—Waypoint Plans	8-2
Figure 8-2 Waypoint Plan Panel—Waypoint Plan Details and Map.....	8-3
Figure 8-3 Waypoint Plan Panel—Map.....	8-4
Figure 8-4 Create Waypoint Plan Panel	8-5
Figure 8-5 Create Waypoint Plan Panel—Waypoint Plan Name Entered	8-5
Figure 8-6 Waypoint Plan Panel.....	8-6
Figure 8-7 Waypoint Plan Panel—Initial Waypoint Region	8-7
Figure 8-8 Waypoint Plan Panel—Waypoint Locations.....	8-8
Figure 8-9 Waypoint Plan Panel—New Initial Waypoint Location Selected	8-8
Figure 8-10 Waypoint Plan Panel—Waypoint Plan to be Edited	8-10
Figure 8-11 Waypoint Plan Panel—Drag Handles Added for Editing	8-10
Figure 8-12 Waypoint Plan Panel—Moved Waypoint.....	8-11
Figure 8-13 Waypoint Plan Panel—Added Waypoint.....	8-11
Figure 8-14 Waypoint Plan Panel—Edited and Saved Waypoint Plan	8-12
Figure 8-15 Waypoint Plans Page—Waypoint Plan Available for Deletion.....	8-14
Figure 8-16 Delete Waypoint Plan Dialog Box.....	8-14
Figure 8-17 Surface Plans Page—Surface Plans.....	8-15
Figure 8-18 Surface Plan Details Panel	8-16
Figure 8-19 Create Surface Plan Panel.....	8-17

Figure 8-20	Create Surface Plan Panel—Surface Plan Name Entered.....	8-17
Figure 8-21	Surface Plan Panel	8-18
Figure 8-22	Hit Waypoint Rule Form Dialog Box	8-19
Figure 8-23	Every So Many Seconds After Mission Start Rule Form Dialog Box	8-19
Figure 8-24	At UTC Time Rule Form Dialog Box	8-20
Figure 8-25	Surface Plan Panel—after Adding Surface Plan Rule Options.....	8-20
Figure 8-26	Surface Plan Panel—Surface Plan to be Edited	8-22
Figure 8-27	Surface Plans Page—Surface Plan Available for Deletion	8-24
Figure 8-28	Delete Surface Plan Dialog Box	8-24
Figure 8-29	Yo Plans Page—Yo Plans.....	8-25
Figure 8-30	Yo Plan Details Panel	8-26
Figure 8-31	Create Yo Plan Panel.....	8-28
Figure 8-32	Create Yo Plan Panel—Yo Plan Name Entered.....	8-28
Figure 8-33	Yo Plan Panel—after Saving the Yo Plan Name and Group.....	8-29
Figure 8-34	Yo Plan Panel—Yo Plan to be Edited	8-31
Figure 8-35	Yo Plans Page—Yo Plan Available for Deletion	8-32
Figure 8-36	Delete Yo Plan Dialog Box.....	8-33
Figure 8-37	Sampling Plans Page—Sampling Plans	8-34
Figure 8-38	Sampling Plan Details Panel.....	8-34
Figure 8-39	Create Sampling Plan Panel.....	8-36
Figure 8-40	Create Sampling Plan Panel—Sampling Plan Name Entered	8-36
Figure 8-41	Sampling Plan Panel.....	8-36
Figure 8-42	Create Sampling Rule Dialog Box—for All Sensors.....	8-37
Figure 8-43	Create Sampling Rule Dialog Box—for a Specific Sensor	8-37
Figure 8-44	Sampling Plan Panel—Sampling Plan to be Edited	8-39
Figure 8-45	Sampling Plans Page—Sampling Plan Available for Deletion.....	8-41
Figure 8-46	Delete Sampling Plan Dialog Box.....	8-42
Figure 8-47	Mission Sensor Plans Page—Mission Sensor Plans.....	8-43
Figure 8-48	Mission Sensor Plan Details Panel.....	8-43
Figure 8-49	Create Mission Sensor Plan Panel	8-45

Figure 8-50	Create Mission Sensor Plan Panel—Mission Sensor Plan Name Entered	8-45
Figure 8-51	Mission Sensor Plan Panel	8-46
Figure 8-52	Mission Sensor Plan Panel—Mission Sensor Plan to be Edited	8-48
Figure 8-53	Mission Sensor Plans Page—Mission Sensor Plan Available for Deletion	8-50
Figure 8-54	Delete Mission Sensor Plan Dialog Box	8-50
Figure 8-55	Abort Plans Page—Abort Plans	8-51
Figure 8-56	Abort Plan Details Panel	8-52
Figure 8-57	Create Abort Plan Panel	8-53
Figure 8-58	Create Abort Plan Panel—Abort Plan Name Entered	8-53
Figure 8-59	Abort Plan Panel	8-54
Figure 8-60	Abort Plan Panel—Abort Plan to be Edited.....	8-55
Figure 8-61	Abort Plans Page—Abort Plan Available for Deletion.....	8-57
Figure 8-62	Delete Abort Plan Dialog Box	8-57
Figure 8-63	Data Transmission Plans Page—Data Transmission Plans	8-58
Figure 8-64	Data Transmission Plan Details Panel.....	8-59
Figure 8-65	Create Data Transmission Plan Panel.....	8-60
Figure 8-66	Create Data Transmission Plan Panel—Data Transmission Plan Name Entered	8-61
Figure 8-67	Data Transmission Plan Panel.....	8-61
Figure 8-68	Create Data Transmission Rule Dialog Box.....	8-61
Figure 8-69	Data Transmission Plan Panel—Data Transmission Plan to be Edited.....	8-63
Figure 8-70	Data Transmission Plans Page—Data Transmission Plan Available for Deletion.....	8-65
Figure 8-71	Delete Data Transmission Plan Dialog Box.....	8-66
Figure 8-72	Mission Plans Page—Mission Plans.....	8-67
Figure 8-73	Waypoint Tab	8-68
Figure 8-74	Create Mission Plan Panel	8-68
Figure 8-75	Create Mission Plan Panel—Mission Plan Name Entered.....	8-69
Figure 8-76	Waypoint Tab—Waypoint Plan Panel	8-69
Figure 8-77	Waypoint Plan Panel—Waypoint Plan Assigned.....	8-70
Figure 8-78	Surface Tab—Surface Plan Panel.....	8-70
Figure 8-79	Surface Plan Panel—Surface Plan Assigned	8-71

Figure 8-80 Yo Tab—Yo Plan Panel.....	8-71
Figure 8-81 Yo Plan Panel—Yo Plan Assigned	8-72
Figure 8-82 Sampling Tab—Sampling Plan Panel	8-73
Figure 8-83 Sampling Plan Panel—Sampling Plan Assigned.....	8-73
Figure 8-84 Mission Sensor Tab—Mission Sensor Plan Panel	8-74
Figure 8-85 Mission Sensor Plan Panel—Mission Sensor Plan Assigned.....	8-74
Figure 8-86 Abort Tab—Abort Plan Panel	8-75
Figure 8-87 Abort Plan Panel—Abort Plan Assigned	8-75
Figure 8-88 Data Transmission Tab—Data Transmission Plan Panel	8-76
Figure 8-89 Data Transmission Plan Panel—Data Transmission Plan Assigned.....	8-76
Figure 8-90 Mission Plan to be Edited or Cloned—Opened to the Waypoint Tab	8-78
Figure 8-91 Mission Plans Page—Mission Plans Available for Deletion.....	8-80
Figure 8-92 Delete Mission Plan Dialog Box	8-80
Figure 9-1 Active Deployments Page	9-2
Figure 9-2 Active Deployment Detail Page	9-4
Figure 9-3 Summary Panel—Active Deployment	9-5
Figure 9-4 Map Events Panel—Active Deployment.....	9-7
Figure 9-5 Surfacings Panel—Active Deployment	9-8
Figure 9-6 Surface Sensor Values Panel—Active Deployment	9-10
Figure 9-7 Edit Deployment Project Association Dialog Box	9-12
Figure 9-8 Delete Deployment Dialog Box.....	9-13
Figure 9-9 Configure Max Hours Between Call-Ins Dialog Box.....	9-14
Figure 9-10 Mission Plan Panel.....	9-16
Figure 9-11 Mission Plan Panel—All Mission Plan Parts are Valid	9-16
Figure 9-12 Generate Mission Files Form Dialog Box—All Files Selected	9-17
Figure 9-13 Mission Plan Panel—All Specified Mission Files Generated	9-18
Figure 9-14 Data Visualizations Page—Active Deployment	9-20
Figure 9-15 Sensor Selections Form Dialog Box	9-22
Figure 9-16 Configure Y <dimension> Axis Range Dialog Box	9-24
Figure 9-17 Cache Files Page	9-25

Figure 9-18 Sensor Types Page	9-25
Figure 9-19 Export Map Events to KMZ Dialog Box	9-26
Figure 9-20 Export Surface Sensor Data Dialog Box	9-28
Figure 9-21 Export Glider Commands Dialog Box.....	9-29
Figure 10-1 Archived Deployments Page.....	10-2
Figure 10-2 Archived Deployment Detail Page.....	10-3
Figure 10-3 Summary Panel—Archived Deployment	10-5
Figure 10-4 Map Events Panel—Archived Deployment	10-6
Figure 10-5 Surfacing Panel—Archived Deployment.....	10-8
Figure 10-6 Surface Sensor Values Panel—Archived Deployment.....	10-10
Figure 10-7 Active Deployments Page	10-12
Figure 10-8 Archive Deployment Dialog Box	10-12
Figure 10-9 Delete Deployment Dialog Box.....	10-13
Figure 10-10 Data Visualizations Page—Archived Deployment	10-14
Figure 11-1 Surface Sensor Threshold Settings Page	11-1
Figure 11-2 Surface Sensor Threshold Page—Glider Selection Drop-Down List.....	11-2
Figure 11-3 Surface Sensor Threshold Page—Group Selection Drop-Down List	11-2
Figure 11-4 Surface Sensor Threshold Page—Glider Threshold Settings Displayed	11-2
Figure 11-5 Surface Sensor Threshold Page—Group Threshold Settings Displayed.....	11-3
Figure 11-6 Set Surface Sensor Threshold Setting Page	11-3
Figure 11-7 Set Surface Sensor Threshold Page—Glider Selection Drop-Down List.....	11-4
Figure 11-8 Set Surface Sensor Threshold Page—Group Selection Drop-Down List	11-4
Figure 11-9 Set Surface Sensor Threshold Page—Glider Threshold Settings Displayed	11-4
Figure 11-10 Surface Sensor Threshold Page—Group Threshold Settings Displayed.....	11-5
Figure 11-11 Sensor Threshold Settings Form Dialog Box.....	11-5
Figure 12-1 Log Notes for Active Deployments Page	12-2
Figure 12-2 Log Notes for Archived Deployments Page	12-2
Figure 12-3 Log Note Form Dialog Box—Creating a Log Note	12-3
Figure 12-4 Log Note Form Dialog Box—Editing a Log Note	12-3
Figure 12-5 Delete Log Note Form Dialog Box.....	12-4

Figure 13-1 Map Settings Page	13-1
Figure 13-2 Create Map Tile Layer Setting Form Panel	13-3
Figure 13-3 Create WMS Layer Setting Form Panel	13-4
Figure 13-4 Edit Map Tile Layer Setting Form Panel	13-5
Figure 13-5 Edit WMS Layer Setting Form Panel	13-5
Figure 13-6 Delete Map Tile Layer Setting Dialog Box	13-7
Figure 13-7 Delete WMS Layer Setting Dialog Box	13-8
Figure 13-8 Share Map Tile Setting Form Panel	13-9
Figure 13-9 Share WMS Layer Setting Form Panel	13-9
Figure 13-10 KMZ Access and Active Deployment KMZ Download Panels	13-11
Figure 13-11 Audio Settings Page	13-12
Figure 13-12 Create Glider Specific Audio Setting Form Panel	13-13
Figure 13-13 Create Glider Specific Audio Setting Form Panel—Browse Custom Audio File	13-14
Figure 13-14 Edit Glider Specific Audio Setting Form Panel	13-15
Figure 13-15 Edit Glider Specific Audio Setting Form Panel—Browse Custom Audio File	13-15
Figure 13-16 Edit Group Specific Audio Setting Form Panel	13-16
Figure 13-17 Edit Group Specific Audio Setting Form Panel—Browse Custom Audio File	13-16
Figure 13-18 User Glider Event Subscriptions Page—Registered Gliders Listed	13-18
Figure 13-19 Subscriptions for Glider <Selected Glider> Panel	13-18
Figure 13-20 Configure Glider Event Subscriptions Dialog Box	13-19
Figure 13-21 Configure Glider Event Subscriptions Dialog Box—Create New Subscription	13-19
Figure 13-22 Subscriptions for Glider <Selected Glider> Panel—Current Glider Subscriptions Listed	13-20
Figure 13-23 Configure Glider Event Subscriptions Dialog Box—Current Glider Subscriptions Listed	13-21
Figure 13-24 Configure Glider Event Subscriptions Dialog Box—Current Glider Subscriptions Listed	13-22
Figure 13-25 User Sensor Plot Types Panel—Plot Types Listed	13-23
Figure 13-26 Details for User Sensor Plot Type <Plot Name> Panel	13-23
Figure 13-27 User Sensor Plot Types Panel	13-24
Figure 13-28 Create User Sensor Plot Type Panel	13-24

Figure 13-29	Create User Sensor Plot Type Panel—User Sensor Plot Type Name Entered.....	13-25
Figure 13-30	Edit User Sensor Plot Type <Plot Name> Panel.....	13-25
Figure 13-31	Create Sensor Plot Setting Dialog Box.....	13-25
Figure 13-32	Edit User Sensor Plot Type <Plot Name> Panel—Enabled Sensor Plot Setting Added	13-26
Figure 13-33	Edit User Sensor Plot Type <Plot Name> Panel—User Defined Plot to be Edited	13-26
Figure 13-34	Delete User Defined Plot Dialog Box	13-27
Figure 13-35	Share User Sensor Plot Type <Plot Name> Panel.....	13-28
Figure 14-1	Event Timeline for Active Deployments Page	14-2
Figure 14-2	Event Timeline for Archived Deployments Page	14-2
Figure 15-1	Admin Reports Page	15-1
Figure 15-2	Group Membership Report Page—Please Select a Group Drop-Down List.....	15-2
Figure 15-3	Logged-In Users Report Page	15-2
Figure 15-4	Group Membership Report Page—Users, Gliders, Scripts, Mission Plans, and Mission Plan Parts Panels	15-3
Figure 15-5	Glider Event Subscriptions Report Page.....	15-4
Figure 15-6	Glider Event Subscriptions Report Page—Please Select a Glider Drop-Down List	15-4
Figure 15-7	Glider Event Subscriptions Report Page—Please Select a User Drop-Down List.....	15-4
Figure 15-8	Glider Event Subscriptions Report Page—Subscriptions for Glider <Glider Name> Panel.....	15-5
Figure 15-9	Glider Event Subscriptions Report Page— Subscriptions for User <User Name> Panel.....	15-5
Figure 15-10	Users Last Login Report Page	15-6
Figure 15-11	User Access Report Page—Please Select a User Drop-Down List	15-6
Figure 15-12	User Access Report—Gliders, Scripts, Mission Plans, and Mission Plan Parts Panels.....	15-7
Figure 15-13	Fleet Mission Control Screen—Administrator Messages Icon	15-8
Figure 15-14	System Status Page, Top—Displayed Administrator Messages	15-8
Figure 15-15	Administrator Messages Displayed above Login Form Panel	15-8
Figure 15-16	Admin Message Management Page.....	15-9
Figure 15-17	Create Admin Message Form Dialog Box	15-9

Figure 15-18 Admin Message Management Page—Current Messages Listed	15-10
Figure 15-19 Modify Admin Message Form Dialog Box	15-10
Figure 15-20 Delete Admin Message Dialog Box.....	15-11
Figure 16-1 SDF Tool Page	16-1
Figure 16-2 Existing Folders Panel	16-2
Figure 16-3 Create New SDF Folder Form Dialog Box	16-2
Figure 16-4 Create New SDF Folder Form Dialog Box—Folder Name Entered	16-2
Figure 16-5 Existing Folders Panel—Folder Added.....	16-3
Figure 16-6 SDF Tool Page—Existing Sensor Data Files Panel.....	16-3
Figure 16-7 Existing Sensor Data Files Panel—Files Added	16-4
Figure 16-8 Existing Sensor Data Files Panel—Selected Files Parsed.....	16-5
Figure 16-9 Applicable Files Panel	16-6
Figure 16-10 Sensor Selections Form Dialog Box	16-6
Figure 16-11 Sensor Selections Form Dialog Box—Drop-Down Lists	16-7
Figure 16-12 Sensor Selections Form Dialog Box—Sensors, Plot Types and Colors Selected.....	16-7
Figure 16-13 Data Visualizations Plot	16-8
Figure 16-14 Configure Y <dimension> Axis Range Dialog Box	16-8
Figure C-1 Dashboard as Displayed on a Tablet	C-2
Figure C-2 Glider Terminal Access Page as Displayed on a Tablet	C-3
Figure C-3 Dashboard as Displayed on a Smartphone	C-4
Figure C-4 Glider Terminal Access Page as Displayed on a Smartphone.....	C-5

Preface

Teledyne Webb Research Slocum Fleet Mission Control (SFMC) is a collection of software services that enables tracking of Teledyne Webb Research Slocum gliders, displaying their reported data and creating mission plans for them using a standard HTML5 supported Web browser.

Cautions and Notes

Where applicable, warnings, cautions and notes are provided in this manual as follows:



CAUTION Identifies a potential hazard that could be damaging to equipment or could result in the loss of data.



NOTE Recommendations or general information that is particular to the material being presented or a referral to another part of this manual or to another manual.

Documentation Changes

Teledyne Webb Research reserves the right to make changes to SFMC at any time without incurring any obligation to modify previously delivered versions. In addition, while considerable effort has been made to ensure that the information in this manual is accurate and complete, Teledyne Webb Research assumes no liability for any errors or omissions.

Customer Service

We welcome your comments and suggestions for improving our products and documentation as well as developing better ways of serving you. Should you require service or support for SFMC, contact Teledyne Webb Research customer service using any of the following means:

Site URL: <http://www.teledynemarine.com/webb-research/support>

Mail: 49 Edgerton Drive
North Falmouth, MA 02556

Telephone: (508) 563-1000

SECTION 1: Introduction

Teledyne Webb Slocum Fleet Mission Control (SFMC) is a software suite that is used to communicate with and manage the deployments of Teledyne Webb Research Slocum gliders deployed worldwide. SFMC communicates with the gliders over an Iridium satellite telephone link. Or for local, short range deployments, a FreeWave RF link can be used for communications.

SFMC provides a Web user interface that enables users who are logged in to perform tasks in accordance with the user's assigned role, where a role defines specific user privileges. Depending on a user's assigned role, the tasks that can be performed with SFMC include the following:

- Create and view user accounts and groups and assign roles.
- Monitor system status.
- Register gliders.
- Create and view projects.
- View reports.
- View glider reported data as plots on a graph.
- View and manage active glider deployments.
- View and manage archived glider deployments.
- Create mission plans for the gliders.
- Exchange files with gliders and assign and run scripts.
- Configure surface sensor threshold settings for alerts.
- Create and view log notes.
- Create and view map settings.
- Configure glider event subscriptions for specific events.
- View glider events.



NOTE Only users who have completed a Slocum Glider training course should use SFMC to communicate with gliders.

SECTION 2: SFMC Basics

This section describes the Slocum Fleet Mission Control screen and its menus and introduces the concept of user accounts and their associated groups, roles and projects along with both active and archived glider deployments. In addition, instructions are provided on how to view the SFMC version number, update the user profile, change the password of the currently logged in user account, and view the system status. At the end of this section are some common questions and their answers regarding the use of SFMC.

2.1 Slocum Fleet Mission Control Screen Layout

The Slocum Fleet Mission Control screen, which is shown in Figure 2-1, is composed of the Menu bar, the *<User Account>* menu and the Page area. In Figure 2-1 the open page is the Dashboard as it appears after you have started SFMC and logged in. Logging in to SFMC makes available all of the items on the Menu bar up to that allowed for the privilege level of the user account. For instructions on how to start and log in to SFMC, refer to “SECTION 3: Getting Started.”

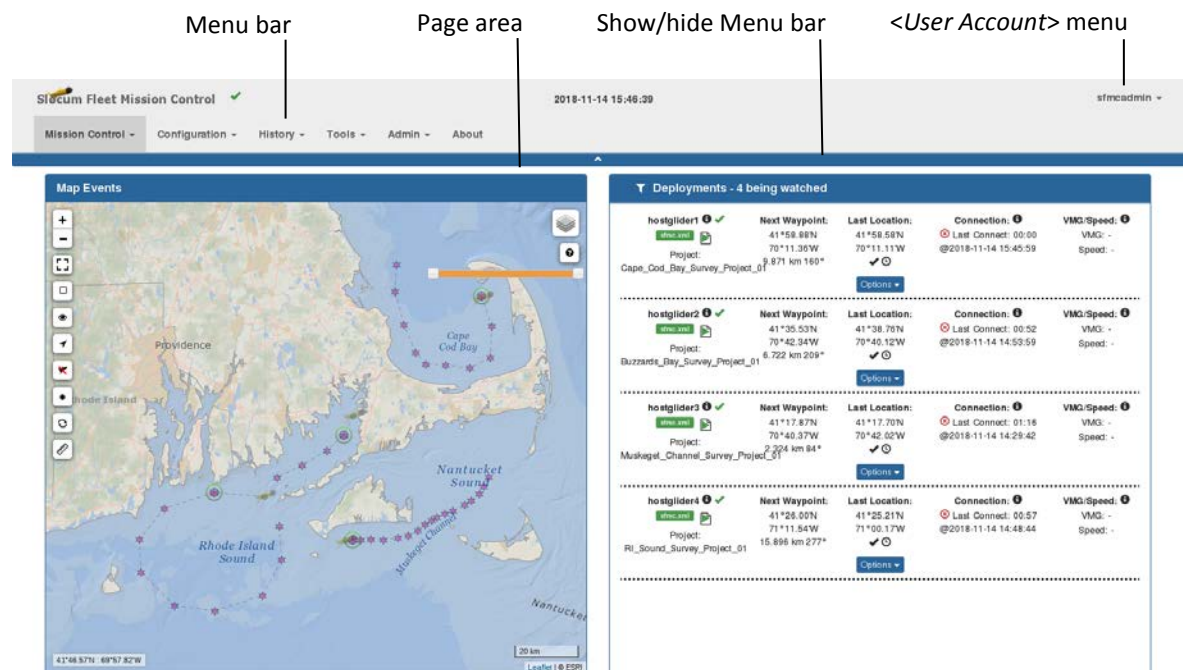


Figure 2-1 Slocum Fleet Mission Control Screen—Open to the Dashboard

The Menu bar can be hidden if shown or shown if hidden by clicking the **Show/hide Menu bar** button just above the Page area. Hiding the Menu bar exposes more of the Page area on the screen.

2.1.1 Menu Bar

The Menu bar is composed of pull-down menus containing items that provide access to all of the features of SFMC. The actual number of menus shown on the Menu bar depends on the user account that is logged in. For information on user accounts and their associated groups, projects and roles, refer to “User Accounts” on page 2-5. The Menu bar also displays the Slocum Fleet Mission Control application name and the Coordinated Universal Time (UTC) date and time. An icon next to the name indicates the status of the SFMC application services, which are the Dock Server, the Data Server and the ActiveMQ, and whether enough disk space is available. When the icon is a green check mark, all the services are running and there is enough disk space. When a red "X" icon is displayed instead, one or more of the services are not running or there is not enough disk space, or both. In addition, if a brown triangle icon is displayed, an Administrator message has been posted. Clicking the icon displays the message. To open a menu from the Menu bar, click its name. To choose an item from an open menu, click the item. The SFMC menus and their items are the following:

Home. The *Home* menu enables the logging in to SFMC. It is opened automatically when starting SFMC.

Mission Control. The *Mission Control* menu includes four items:

- *Dashboard*
- *Active Deployments*
- *Recovered Deployments*
- *Glider Terminal Access*

Dashboard displays a list of watched active glider deployments and a map which enables monitoring of the current and recent progress of the gliders. From the Dashboard, details about each deployment, such as the date and time of the deployment, the distance traveled by the glider, the connect and disconnect times of the glider, and other information can be easily viewed. In addition, the Dashboard includes buttons that enable access to many of the features of SFMC.

Active Deployments displays a list of active glider deployments, gliders that are active and currently deployed.

Recovered Deployments displays a list of recovered glider deployments, gliders that have been recovered and are no longer active.

Glider Terminal Access opens Glider Terminal which enables the sending of commands to gliders, the uploading of files to and the downloading of files from gliders, and the selecting and running of scripts.

Configuration. The *Configuration* menu includes eight items:

- *Gliders Menu*
- *Projects Menu*
- *Sensor Thresholds Menu*
- *Mission Planning Menu*
- *Scripts*
- *Cache Files*
- *Sensor Types*
- *System Status*

Gliders Menu enables the viewing, the registering, the backing up, and the transferring of gliders. A glider is registered by naming it and assigning it to a group. When transferring a glider, it is transferred from one group to another.

Projects Menu enables the viewing, the creating, the editing, and the deleting of projects. A project is created by naming it and associating it with a group. Optionally, a project description can also be entered.

Sensor Thresholds Menu enables the viewing and the setting of the surface sensor thresholds.

Mission Planning Menu enables the creating, the viewing, the editing, the cloning, and the deleting of mission plans, each of which is composed of a waypoint plan, a surface plan, a yo plan, a sampling plan, a mission sensor plan, an abort plan, and a data transmission plan.

Scripts enables the viewing and the assigning of factory, default and user generated scripts.

Cache Files enables the viewing and transferring of cache files.

Sensor Types enables importing of a masterdata file containing all of the current sensor types.

System Status enables the viewing of system status.

History. The *History* menu enables the viewing and deleting of archived glider deployments.

Tools. The *Tools* menu provides access to the Sensor Data File Tool.

Admin. The *Admin* menu includes four items:

- *User Administration Menu*
- *Group Administration Menu*
- *Reports*
- *Admin Message Management*

User Administration Menu enables the viewing, the creating, the modifying, and the deleting of user accounts as well as the resetting of passwords.

Group Administration Menu enables the viewing, creating and deleting of groups.

Reports enables the viewing of the association of users, gliders and groups, logged in users, and glider event subscriptions.

Admin Message Management enables the creation of public messages.

2.1.2 <User Account> Menu

The <User Account> menu, the displayed name of which is that of the logged in user account, enables the performance of user specific tasks in SFMC, including logging in and out of SFMC, updating the user profile, changing the user password, configuring the map and audio settings, reading the glider event subscriptions, managing the sensor plot types, and generating a KMZ access token that is associated with your user account.

2.1.3 Page Area

The Page area displays the various pages provided by SFMC.

2.2 Glider Deployments

There are three types of glider deployments: active, recovered and archived. An active glider deployment consists of the current deployment details for a glider. An active glider deployment record is created when a glider first connects to the SFMC Dock Server. A recovered glider deployment is an active deployment that has been recovered. It is no longer active and will not be displayed on the Dashboard. Only one active or recovered deployment can exist for a glider. An archived glider deployment is a set of historical deployment details for a glider and is created when a user archives an active or recovered deployment. Archiving an active or recovered deployment captures the data associated with the glider's deployment into a consolidated historical record. There can be many archived deployments for a glider.

2.3 User Accounts

SFMC uses both user accounts and a login feature to control access to glider deployments and data. Any number of user accounts can be created. When creating a user account it must be assigned either as an Administrator account or as a user account with one or more group/role associations, where for every group membership there is one and only one assigned role. An Administrator account enables access to all SFMC functions, including creating, editing, and deleting user accounts and groups. When first installed, SFMC includes one user account, an Administrator account named "sfmcadmin." The overall organizational structure of a user account is illustrated in Figure 2-2.

An Administrator account can be used to do the following:

- View, create, edit and delete user accounts, assign their roles and group associations and reset their passwords.
- View, create and delete groups.
- Specify what groups a user account with the Group Level Administrator role is allowed to administrate.
- View, create, edit, and delete projects and assign any one or more active glider deployments to them.
- View, delete and archive all active glider deployments, and view and delete archived glider deployments.
- View, create, clone, and delete mission plans.
- View, create and assign scripts.
- View registered gliders and register, backup and transfer gliders.
- View and transfer cache files.
- View and configure surface sensor threshold settings for all gliders.
- View, create, edit, and delete map settings.
- View administration reports and create public messages.
- View system status.

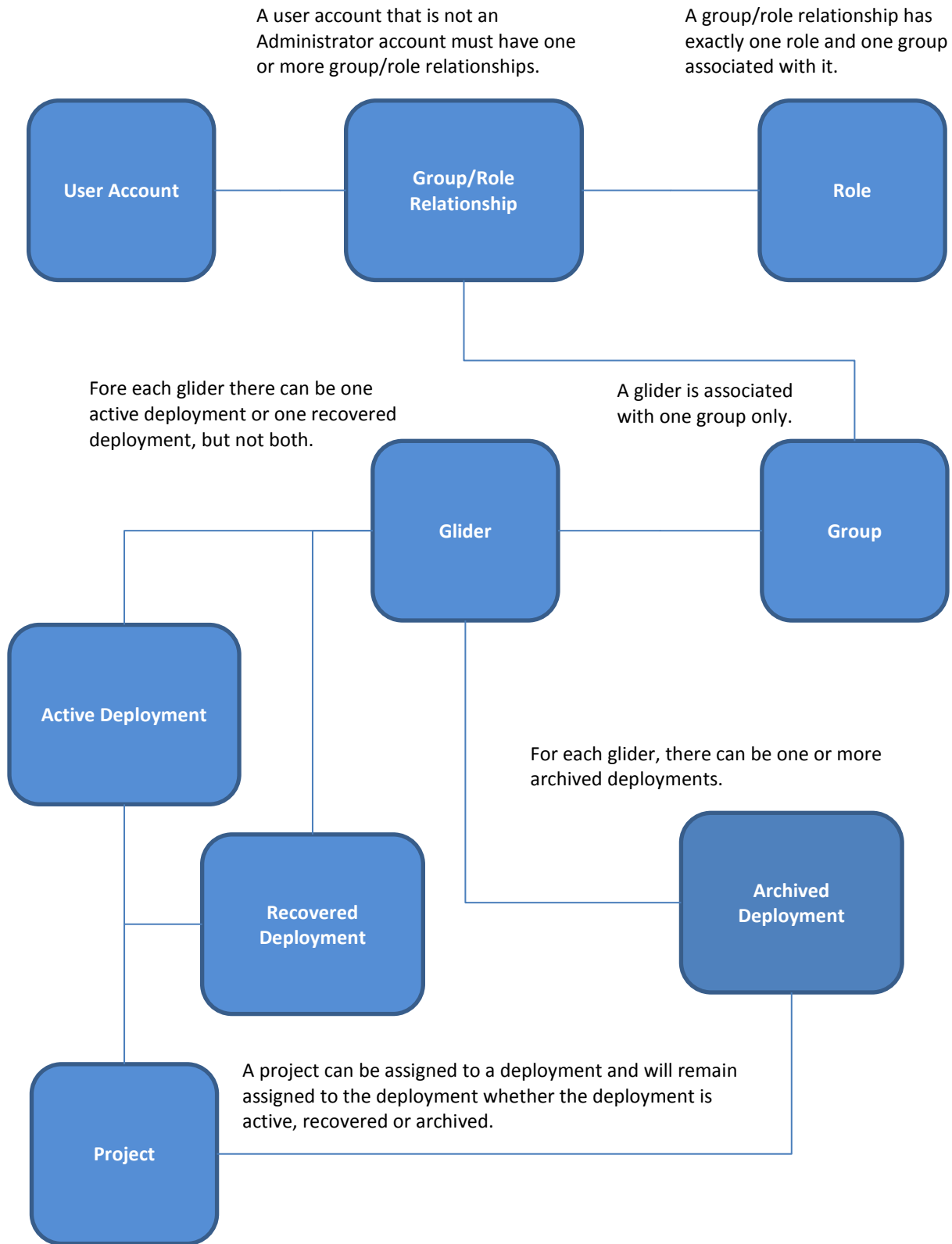


Figure 2-2 User Account Overall Organizational Structure

2.3.1 Roles

There are three role types: Group Level Administrator, Glider Pilot and Viewer. A Group Level Administrator role is associated with the greatest number of privileges; a Viewer role is associated with the least number of privileges.

Group Level Administrator. The Group Level Administrator role is associated with privileges below that of an Administrator account but above that of the Glider Pilot role. Except for the management of groups, the transfer of gliders, the viewing of administration reports, and the creation of public messages, a user account with a Group Level Administrator role carries the same privileges as that of an Administrator account but *only* for the allowed groups. A user account with a Group Level Administrator role can be used to do the following for the allowed groups:

- View, create, edit and delete user accounts, assign their roles and group associations and reset their passwords.
- View, create, edit, and delete projects and assign any one or more active glider deployments to them.
- View, delete and archive active glider deployments, and view and delete recovered and archived glider deployments.
- View, create, clone, and delete mission plans.
- View, create and assign scripts.
- View registered gliders and register and backup gliders.
- View and transfer cache files.
- View and Configure surface sensor threshold settings for all gliders.
- View, create, edit, and delete map settings.
- View system status.

Glider Pilot. The Glider Pilot role is associated with privileges below that of the Group Level Administrator role but above that of the Viewer role and *only* for the allowed groups. A user account with a Glider Pilot role can be used to do the following for the allowed groups:

- View projects.
- View registered gliders.
- View and transfer cache files.
- View active, recovered and archived glider deployments.
- View, create, clone, and delete mission plans.

- View, create and assign scripts.
- View surface sensor threshold settings.
- View, create, edit, and delete map settings.
- View system status.

Viewer. The Viewer role is associated with privileges below that of the Glider Pilot role and *only* for the allowed groups. A user account with a Viewer role can be used to do the following for the allowed groups:

- View projects.
- View registered gliders.
- View cache files.
- View active, recovered and archived glider deployments.
- View mission plans.
- View scripts.
- View surface sensor threshold settings.
- View, create, edit, and delete map settings.
- View system status.

2.3.2 Groups

A group provides access to all deployments and gliders that are associated with the group. With a user account and a membership in one or more groups, a user can do anything allowed within the privilege level of the assigned role for the user account but for *only* those groups for which the user is a member. When first installed, SFMC includes one group named "default." This group cannot be deleted.

2.3.3 Projects

SFMC enables any one or more active glider deployments to be associated with an event or geographical location by creating a project for the deployments. A project is created by naming it and assigning it to the group that is associated with the deployments. For example, an event could be a hurricane. Gliders could be deployed to collect data from the hurricane, and these deployments could be assigned to a project named "hurricane." Although only active deployments can be assigned to a project, once an active deployment is made an archived deployment, the project remains associated with it.

2.4 Viewing the SFMC Version Number

To view the SFMC version number and other information about SFMC, open the *About* menu. The About page opens as shown in Figure 2-3.

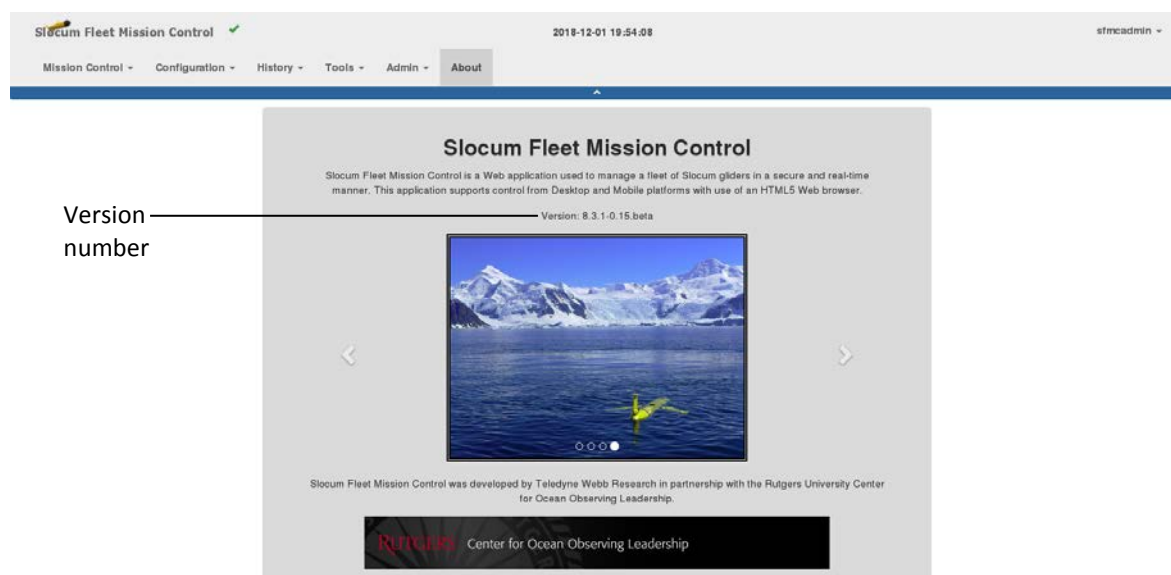


Figure 2-3 About Page

2.5 Updating the User Profile

The profile of the currently logged in user can be updated at any time. The profile is composed of the first and last names and the e-mail address of the user.

To update the user profile:

1. From the <User Account> menu, choose *Update Profile*.
The Update Profile Form panel opens as shown in Figure 2-4.
2. If required, edit the first and last names in the **First Name** and **Last Name** text boxes.
3. If required, edit the e-mail address in the **Email** and **Repeat Email** text boxes.
4. Click **Save**.

The user profile is updated.

The screenshot shows the 'Update Profile Form' panel within the Slocum Fleet Mission Control application. The header bar includes the application name, a status indicator, the current date and time (2016-07-05 17:55:14 Z), and the user name (sfmcadmin). Below the header is a navigation menu with options: Mission Control, Configuration, History, Tools, Admin, and About. The form itself has a blue title bar and contains four text input fields: 'First Name*' (containing 'sfmc'), 'Last Name*' (containing 'admin'), 'Email*' (containing 'sfmcadmin@email.com'), and 'Repeat Email*' (containing 'sfmcadmin@email.com'). A 'Save' button is located at the bottom right of the form.

Figure 2-4 Update Profile Form Panel

2.6 Changing the User Password

The password of the currently logged in user can be changed at any time.

To change the user password:

1. From the <User Account> menu, choose *Change Password*.

The Change Password Form panel opens as shown in Figure 2-5.

The screenshot shows the 'Change Password Form' panel within the Slocum Fleet Mission Control application. The header bar is identical to the previous figure, showing the application name, status, date/time (2016-07-05 19:08:02 Z), and user name (sfmcadmin). The navigation menu is also the same. The form has a blue title bar and contains three text input fields: 'Current Password*', 'New Password*', and 'Repeat New Password*'. A 'Save' button is located at the bottom right of the form.

Figure 2-5 Change Password Form Panel

2. Enter the current password in the **Current Password** text box.
3. Enter the new password in the **New Password** text box. The password must be 10–12 characters long and must include one or more lower case, upper case, numerical, and special characters.
4. Re-enter the new password in the **Repeat New Password** text box.

5. Click **Save**.

The password is changed, and all the text boxes are cleared enabling changing of the password again if desired.

2.7 Checking the System Status

To check the system status, choose *System Status* from the *Configuration* menu. The System Status page opens as shown in Figure 2-6. To update the System Status page while it is open, press F5.

The System Status page includes the following information:

Service Name. The name of the installed applications, which are Dock Server, Data Server and ActiveMQ.

Service Status. The status of the installed applications. If the application is running, the indication is "Online" with a green background. If the application is not running for any reason, the indication is "Offline" with a red background.

Service Control. Enables starting, stopping and restarting the Dock Server service, the Data Server service and the ActiveMQ service. Click **Start** to start the service if it is not running. Click **Stop** to stop the service if it is running. "Offline" with a red background will be indicated for the **Service Status**. Click **Restart** to restart the service if it is running. A user account with the Administrator role is required to perform these functions.

Disk path. The path to the var disk partition which contains data. The amount of data is expected to shrink and grow and therefore should be monitored.

Size. The total amount of space in gigabytes of the var disk partition.

Used. The amount of space in gigabytes that is currently being used in the var disk partition.

Available. The amount of space in gigabytes that is currently available in the var disk partition.

Percent Used. The percent of the total space of the var disk partition that is currently being used. The indicator has a green background when the percent used is safe and a red background if the percent used is high enough to be of concern

Group Name. Visible only when the Data Server service is running. The group that is associated with the Data Server, where there is one Data Server per group.

Date Time of Last Update. Visible only when the Data Server service is running. The date and time at which the Data Server last completed an action for the group.

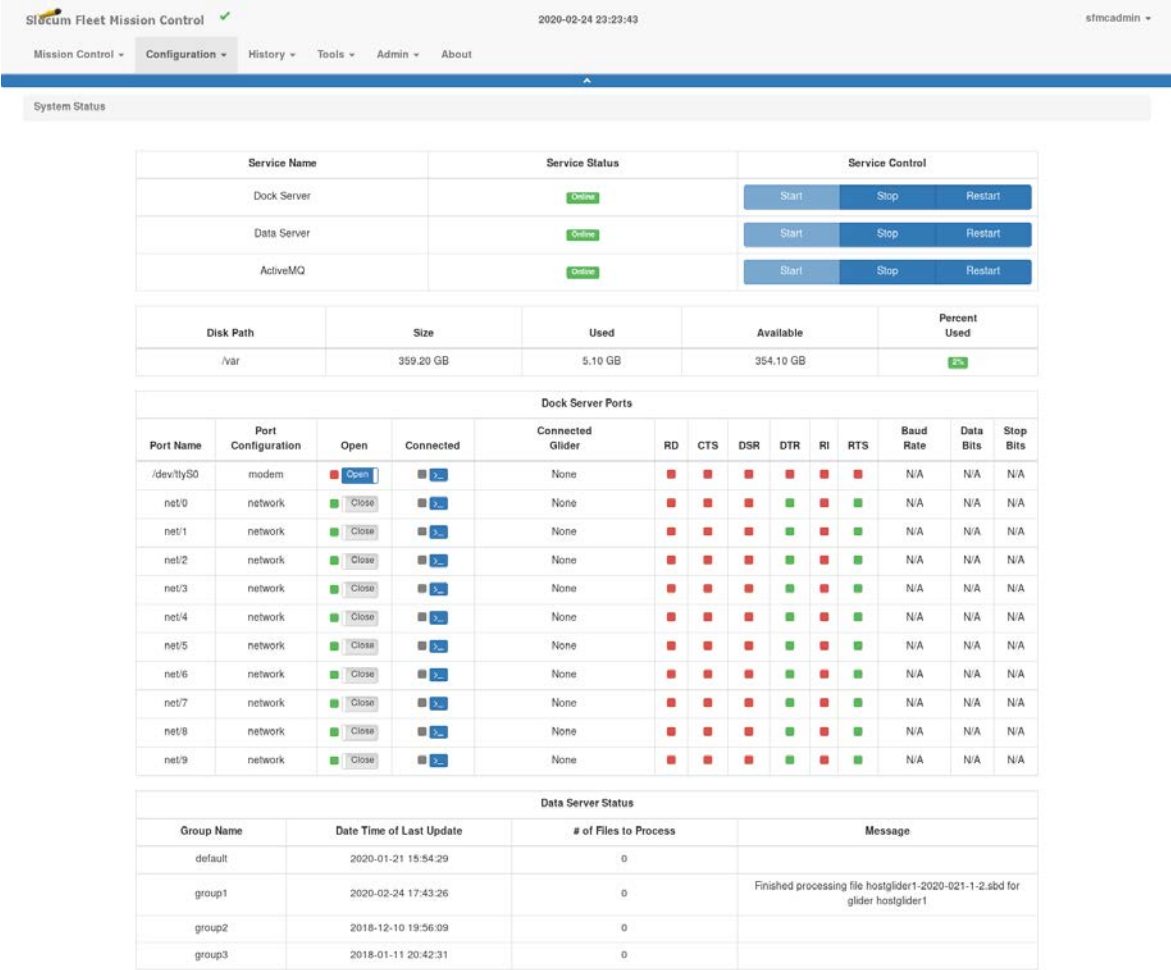


Figure 2-6 System Status Page

of Files to Process. Visible only when the Data Server service is running. The number of files the Data Server is to process.

Message. Visible only when the Data Server service is running. The last file the Data Server processed or the file currently being processed.

Port Name. The name for the specific device port.

Port Configuration. The configuration of the port: direct, modem, freewave, or network.

Open. Indicates whether the port is open or closed and enables opening or closing the port. Green indicates that the port is open; red indicates that the port is closed. With a user account with the Administrator role, the port can be opened if closed by clicking **Open**, or closed if open by clicking **Close**.

Connected. Indicates whether a glider is connected to the port. Green indicates that a glider is connected. The associated button provides access to Glider Terminal for that port.

Connected Glider. The name of the connected glider if it has identified itself. If no glider is connected, "None" is displayed instead. A user account with the Administrator role is required to view this information.

RD. Received Data. Indicates whether data are being received over the port. Green indicates that data are being received; red indicates that no data are being received.

CTS. Clear to Send. Indicates whether the port is ready to accept data. Green indicates that it is ready to accept data; red indicates that it is not ready to accept data.

DSR. Data Set Ready. Indicates whether the port is ready for commands to be sent. Green indicates that it is ready; red indicates that it is not ready.

DTR. Data Terminal Ready. Indicates whether the port is ready to receive, initiate or continue a call. Green indicates that it is ready; red indicates that it is not ready.

RI. Ring Indicator. Indicates whether the port has detected an incoming ring signal on the line. Green indicates that it has; red indicates that it has not.

RTS. Request to Send. Indicates whether the port is ready to transmit data. Green indicates that it is ready; red indicates that it is not ready.

Baud Rate. The configured baud rate for the port in bits per second. Applies only if the port is configured for direct, modem or freewave.

Data Bits. The number of data bits for the data portion of the bits sent or received over the port. Applies only if the port is configured for direct, modem or freewave.

Stop Bits. The number of bits expected to be sent or received after the data bits. Applies only if the port is configured for direct, modem or freewave.

2.8 Common Questions about SFMC

Below are answers to some common questions about SFMC.

2.8.1 Why Create Additional User Accounts?

If the plan is to have a single person manage all gliders and their deployments, the "sfmcadmin" user account is sufficient. However, if the plan is to employ more than one person to manage gliders and their deployments, creating user accounts for each individual is recommended.

2.8.2 Why Create Additional Groups?

If the plan is to manage gliders for different organizations where each organization might be a different customer, creating a group for each organization is recommended. Gliders can then be assigned to each group. For example, if you deploy gliders for multiple universities doing research, you can create a separate group for each university. Then you can assign gliders to each group. You can also assign specific users to each group so that they can only access those gliders and their deployment records and data. If the plan does not involve managing gliders for different organizations, using only the "default" group is sufficient, and creating additional groups is not necessary.

2.8.3 Why Register a Glider?

The first time a glider connects to the SFMC Dock Server, the glider will be automatically registered and assigned to the "default" group. However, the glider can be transferred to any other group at any time. If a glider has not connected, it can be registered by naming it and assigning it to any group.

2.8.4 How is an Active Glider Deployment Created?

SFMC creates an active deployment record for a glider when it first connects to the SFMC Dock Server. In addition, if the active deployment for a glider is archived, the next time the glider connects to the SFMC Dock Server, a new active deployment record will be created. Only one active deployment can exist for a glider.

2.8.5 Why Recover a Glider Deployment?

When recovering a deployed glider, it should also be "recovered" in SFMC. After an active glider deployment is marked as recovered, new location details for the glider deployment will no longer be captured and displayed on any map views. Additionally, SFMC will retain all of the glider files and no longer display the deployment on the Dashboard as the deployment is no longer active. Using the recover deployment feature still allows you to view all of the glider files generated from the deployment.

2.8.6 Why Archive a Glider Deployment?

The Dashboard displays active glider deployments associated with the groups for which the logged in user is a member. If active deployments are never archived, the Dashboard could become filled with too many of them. An active deployment should be archived when the goal for a given active deployment has been met and the glider has been recovered. At the time of archival, a compressed tar archive file can be created containing the contents of the glider folders. The glider folders will then be cleared for the next active deployment.

2.8.7 Why Create Projects?

One or more active glider deployments can be assigned to a project. If the desire is to deploy one or more gliders to a specific location over a period of time for a specific purpose, creating a project for that purpose is recommended. The Dashboard can filter the active deployments by project to enable the viewing of the deployments for one or more specific projects. In addition, when an active deployment is archived, the project association remains attached to it making it useful when there is a desire to examine the archived deployments for a given project.

SECTION 3: Getting Started

This section provides instructions on how to install SFMC and how to start and exit from SFMC. In addition, a reference on how to import glider data from another Dock Server is provided.

3.1 Installing SFMC

SFMC runs on the CentOS/RHEL 7.x platforms. A 2.0-GHz or faster PC with 8 cores, a minimum of 8 GB of RAM, and a 500-GB or greater capacity hard drive is required, along with an Ethernet or WIFI connection. In addition, access to the Internet is required to download maps and layers provided by remote Web Map Services. Refer to the *SFMC Installation Guide* for detailed instructions on how to install SFMC. A 1920 x 1080 resolution monitor is recommended for Web browser viewing.

3.2 Starting and Logging in to SFMC

To start and log in to SFMC:

1. Double-click the Local SFMC Web Access icon on the desktop.

The Slocum Fleet Mission Control screen opens to the Login Form panel on the Home page as shown in Figure 3-1:

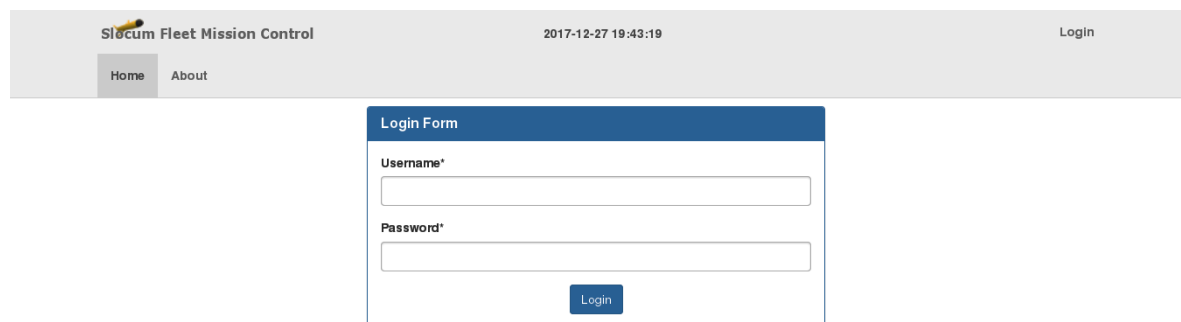
The screenshot shows the Slocum Fleet Mission Control web interface. At the top, there is a header bar with the text "Slocum Fleet Mission Control" on the left, a timestamp "2017-12-27 19:43:19" in the center, and a "Login" link on the right. Below the header, there are two navigation tabs: "Home" (which is active) and "About". In the center of the page, there is a "Login Form" panel. This panel has a blue header with the text "Login Form". Below the header, there are two text input fields: "Username*" and "Password*". Each field has a small asterisk indicating it is required. Below the "Password*" field, there is a blue "Login" button.

Figure 3-1 Login Form Panel

2. Enter the username in the **Username** text box and the password in the **Password** text box.

3. Click **Login**.

The Login Form panel closes, and the Dashboard opens as shown in Figure 3-2:

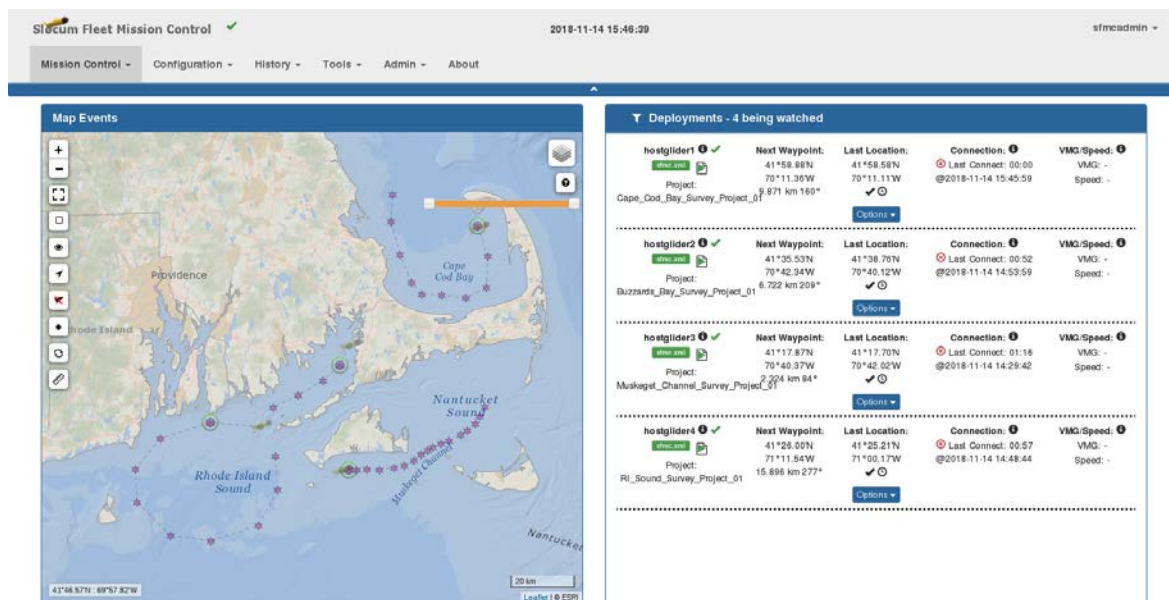


Figure 3-2 The Dashboard when Logging in to SFMC

3.3 Exiting from and Logging out of SFMC

To exit from and log out of SFMC, click the close button of the Web browser.



NOTE To log out of SFMC without exiting, click the <username> drop-down list in the upper right corner of the Home page and choose Logout.

3.4 Importing Glider Data from another Dock Server

SFMC provides the ability to import glider data from another Dock Server. For instructions on how to import the data, refer to APPENDIX B: “Importing Glider Data.”

SECTION 4: Setting up SFMC

Setting up SFMC encompasses the creation of groups and user accounts, the registering of gliders, and optionally, the creation of projects and the assigning of active glider deployments to them as follows:

- Create one or more groups or use the default group.
- Create one or more user accounts, make each a member of one or more groups with one assigned role for each, and optionally restrict for any one or more groups the glider or gliders that can be accessed.
- Register one or more gliders and assign each of them to a group.
- Create one or more projects for each group (optional).
- Assign one or more active glider deployments to each project (optional).

Once created, groups can be deleted, user accounts and projects can be modified or deleted, and registered gliders can be transferred to other groups.

4.1 Creating and Managing Groups and User Accounts

A user account other than an Administrator account must be assigned to at least one group, and each glider must be assigned to one and only one group. Creating a user account requires assigning a name and a password to the account along with at least one group and an associated role. If only the default group is to be used, no groups need to be created when creating a user account.

4.1.1 Creating a Group

To create a group:

1. Log in to a user account as an Administrator.
2. From the *Admin* menu, select *Group Administration Menu*, and then choose *Create Group*.

The Create Group page opens as shown in Figure 4-1.

3. On the Create Group Form panel, enter the group name in the **Group Name** text box. The group name must begin with a lowercase alpha character followed by at least 2 but no more than 15 lowercase alpha or numeric characters.
4. Click **Create**.

The group is created, and the Create Group Form panel is cleared enabling another group to be created if desired.

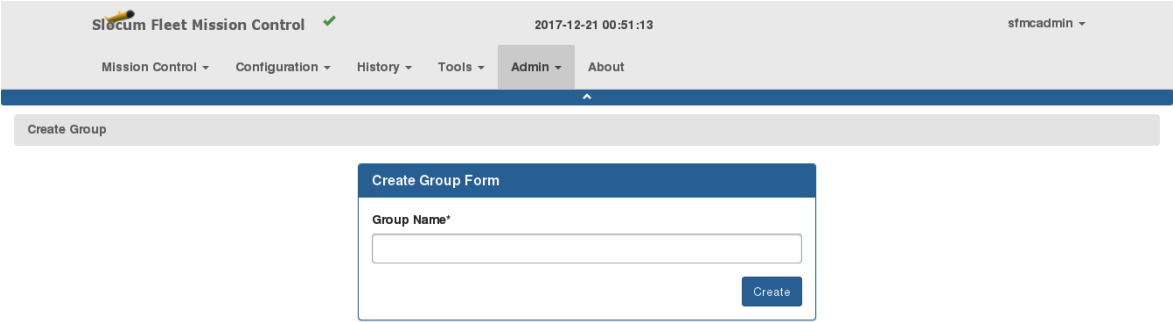


Figure 4-1 Create Group Page—Create Group Form Panel

4.1.2 Deleting a Group

To delete a group:

- 1. Log in to a user account as an Administrator.
- 2. From the *Admin* menu, select *Group Administration Menu* and then choose *Groups*.

The Groups page opens as shown in Figure 4-2.

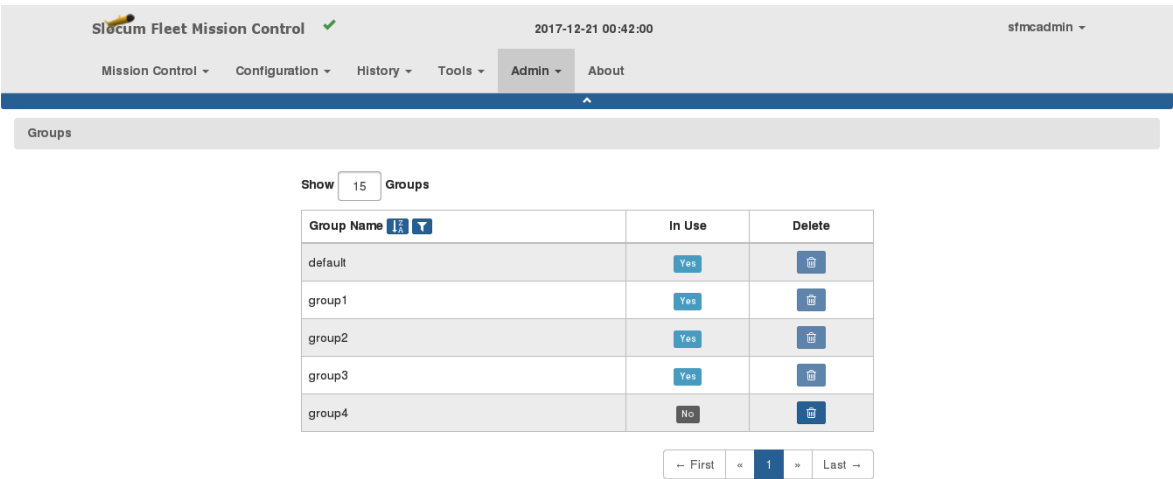


Figure 4-2 Groups Page

Only those groups that are not in use can be deleted. The default group is always in use and can never be deleted. To display more groups on a single page, select the number of them to display from the **Show Groups** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

- 3. Click the **Delete** button for the group that you want to delete.

The Delete Group dialog box opens as shown in Figure 4-3.

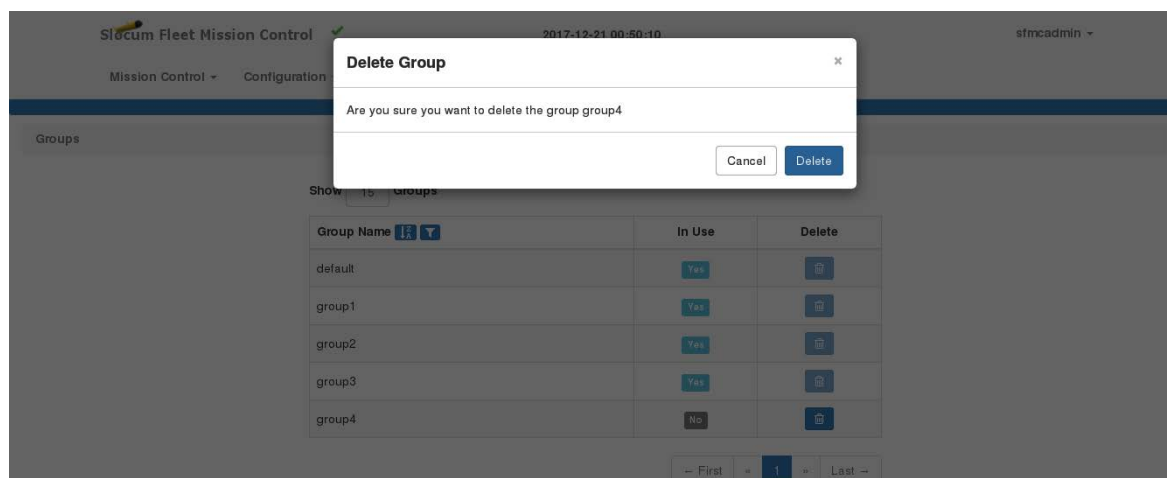


Figure 4-3 Delete Group Dialog Box

4. Click **Delete**.

The group is deleted, and the Delete Group dialog box closes.

4.1.3 Creating a User Account

When creating a user account for the Glider Pilot or Viewer role, you can optionally restrict for each assigned group the glider or gliders that can be accessed. As an Administrator, all gliders can be accessed. For the Group Administrator role, all gliders can be accessed for the allowed groups.

To create a user account:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role.
2. From the *Admin* menu, select *User Administration Menu*, and then choose *Create User*.

The Create User page opens as shown in Figure 4-4.

3. On the Create User Form panel, enter the username for the user account in the **Username** text box. The username must begin with a lowercase alpha character followed by at least 2 but no more than 15 lowercase alpha or numeric characters.
4. Enter the first and last name of the user in the **First Name** and **Last Name** text boxes.
5. Enter the e-mail address of the user in the **Email** text box. The user password will be e-mailed to this address.

The screenshot shows the 'Create User' page in the Slocum Fleet Mission Control application. The page has a header with the application name, a date/time stamp, and a user name. Below the header is a navigation bar with links to Mission Control, Configuration, History, Tools, Admin, and About. The 'Create User' page is displayed, featuring a 'Create User Form' panel. The form includes input fields for Username, First Name, Last Name, and Email. There is a checkbox labeled 'Administrator'. Below this is a table with two columns: 'Group' and 'Role'. Each column has a dropdown menu with the text '-- select an option --'. There is also a checkbox labeled 'Activated' and a 'Create' button at the bottom right of the form.

Figure 4-4 Create User Page—Create User Form Panel

6. To make the user an Administrator, select the **Administrator** check box, and then go directly to Step 11, otherwise continue with Step 7.
7. Select a group for which this user account is to be a member of from the **Group** drop-down list.
8. Select the role for the selected group from the **Role** drop-down list.
9. For the Glider Pilot and View roles only, if access to only specific gliders is to be allowed, select the **Restrict Access to Specific Gliders** check box, and then select the glider or gliders from the **Restricted Glider Access** drop-down list. This check box and drop-down list is shown only if the Glider Pilot or View role is selected. To select more than one glider, hold down the Ctrl key while clicking them one at a time.
10. If desired, repeat Steps 7 through 9 for one or more additional group/role associations.
11. Select the **Activated** check box to activate the user account.
12. Click **Create**.

The user account is created, and the Create User Form panel is cleared enabling another user account to be created if desired.

4.1.4 Modifying a User Account

To modify a user account:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role.
2. From the *Admin* menu, select *User Administration Menu*, and then choose *Users*.

The Users page opens as shown in Figure 4-5. To display more users on a single page, select the number of them to display from the **Show Users** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Username	Email	Admin	Groups	Role	Reset Password	Modify	Delete
user1	jdoe1@teledyne.cim	No	default group1 group3	Glider Pilot Glider Pilot Viewer			
user2	jdoe2@email.com	No	default group1 group2	Group Level Admin Group Level Admin Group Level Admin			
user3	jdoe3@email.com	No	default group2	Glider Pilot Glider Pilot			
user4	jdoe4@email.com	No	default group1 group2 group3	Glider Pilot Glider Pilot Glider Pilot Glider Pilot			

Figure 4-5 Users Page

3. If desired, filter the list by username, e-mail, administrators, groups, or roles or any combination of these items by clicking the associated filter icon, and sort the list by username by clicking the sort icon.
4. Click the **Modify** button for the user account that you want to modify.
The Modify User Form panel opens as shown in Figure 4-6.
5. On the Modify User Form panel, make the required changes, and then click **Save**.
The user account is modified.

Slocum Fleet Mission Control 2020-03-09 22:25:34 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Users / user1

Modify User Form

Username*
user1

First Name*
John

Last Name*
Doeone

Email*
jdoe1@foledyne.cim

☐ Administrator

	Group	Role
	default	Glider Pilot
	group3	Viewer
	group1	Glider Pilot

☒ Restrict Access to Specific Gliders

Restricted Glider Access*

hostglider1
hostglider3
hostglider4
unknown

☒ Activated

Save

Figure 4-6 Users Page—Modify User Form Panel

4.1.5 Resetting a User Account Password

To reset a user account password:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role.
2. From the *Admin* menu, select *User Administration Menu*, and then choose *Users*.

The Users page opens as shown in Figure 4-5 on page 4-5. To display more users on a single page, select the number of them to display from the **Show Users** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by username, e-mail, administrators, groups, or roles or any combination of these items by clicking the associated filter icon, and sort the list by username by clicking the sort icon.
4. Click the **Reset Password** button for the user account for which you want to reset the password.

A new randomly selected password is e-mailed to the user.

4.1.6 Deleting a User Account

To delete a user account:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role.
2. From the *Admin* menu, select *User Administration Menu*, and then choose *Users*.

The Users page opens as shown in Figure 4-5 on page 4-5. To display more users on a single page, select the number of them to display from the **Show Users** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by username, e-mail, administrators, groups, or roles or any combination of these items by clicking the associated filter icon, and sort the list by username by clicking the sort icon.
4. Click the **Delete** button for the user account that you want to delete.

The Delete User dialog box opens as shown in Figure 4-7.

5. Click **Delete**.

The user account is deleted, and the Delete User dialog box closes.

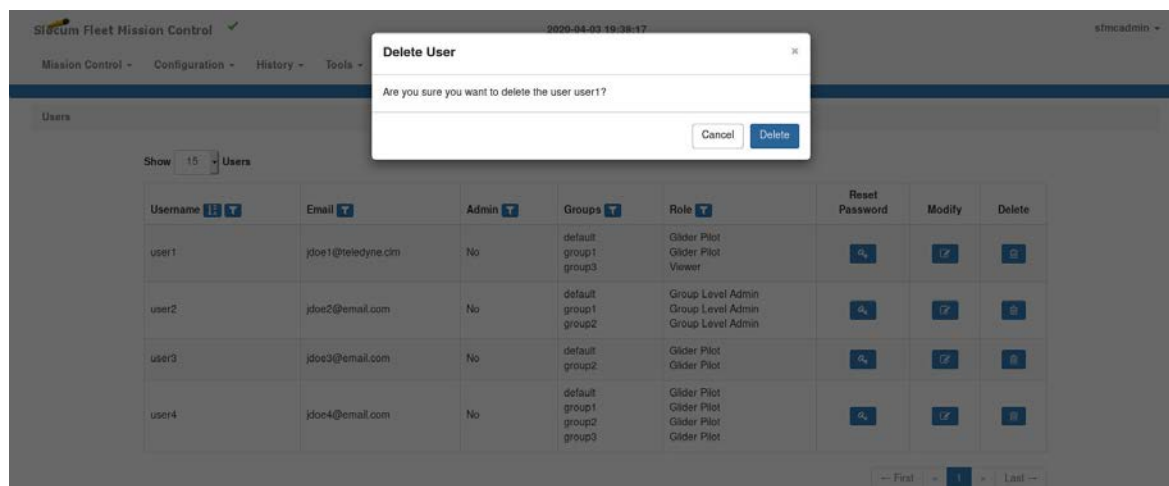


Figure 4-7 Delete User Dialog Box

4.2 Registering and Managing Gliders

All gliders must be registered in SFMC. A glider is registered by naming it and assigning it to one and only one group. Any number of gliders can be assigned to the same group. When an unregistered glider connects, SFMC automatically registers the glider by entering its name and assigning it to the default group. Registered gliders can be viewed and transferred to another group.

4.2.1 Viewing Registered Gliders

To view registered gliders:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator all the registered gliders can be viewed. For the Group Level Administrator, Glider Pilot and Viewer roles, only the gliders assigned to the allowed groups can be viewed.
2. From the *Configuration* menu, select *Gliders Menu*, and then choose *Gliders*.

The Gliders page opens as shown in Figure 4-8. To update the page while it is open, press F5. To display more gliders on a single page, select the number of them to display from the **Show Gliders** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by gliders, groups or both by clicking the associated filter icon, and sort the list by glider by clicking the sort icon.

Silexum Fleet Mission Control

2018-11-14 18:14:26

sfmcadmin

Mission Control

Configuration

History

Tools

Admin

About

Gliders

Please note that this page does not update in real-time.

Show

15

Gliders

Glider	Connection Status	Associated Group	# Deployments	Total Distance Traveled (in km)	View Glider Configuration	Terminal	Transfer
hostglider1		group1	4	102.903			
hostglider2		group2	1	0.125			
hostglider3		default	2	94.837			
hostglider4		default	3	22.115			

First

1

Last

Figure 4-8 Gliders Page

The Gliders page includes the following information:

Glider. The name of the glider.

Connection Status. Connected gliders are shown with a green check mark icon. Gliders that are not connected are shown with a red "X" icon.

Associated Group. The group that is associated with the glider. There can be only one group.

Deployments. The total number of deployments for the glider. For a newly registered glider, it is 0.

Total Distance Traveled (in km). The total distance in kilometers the glider has traveled during all of its deployments

4.2.2 Viewing a Glider Configuration

The installed devices, sensor settings, enabled proglers, and imported configuration files of a glider can be viewed.

To view a glider configuration:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator the glider configuration of all the gliders can be viewed. For the Group Level Administrator, Glider Pilot and Viewer roles, only the glider configuration of the gliders assigned to the allowed groups can be viewed.

2. From the *Configuration* menu, select *Gliders Menu*, and then choose *Gliders*.

The Gliders page opens as shown in Figure 4-8 on page 4-8. To update the page while it is open, press F5. To display more gliders on a single page, select the number of them to display from the **Show Gliders** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by gliders, groups or both by clicking the associated filter icon, and sort the list by glider by clicking the sort icon.
4. Click the **View Glider Configuration** for the glider for which you want to view the glider configuration.

The Glider Configuration page for the glider opens as shown in Figure 4-9.

5. To view the glider configuration for a different glider, select the glider from the drop-down list at the top of the Glider Configuration page.

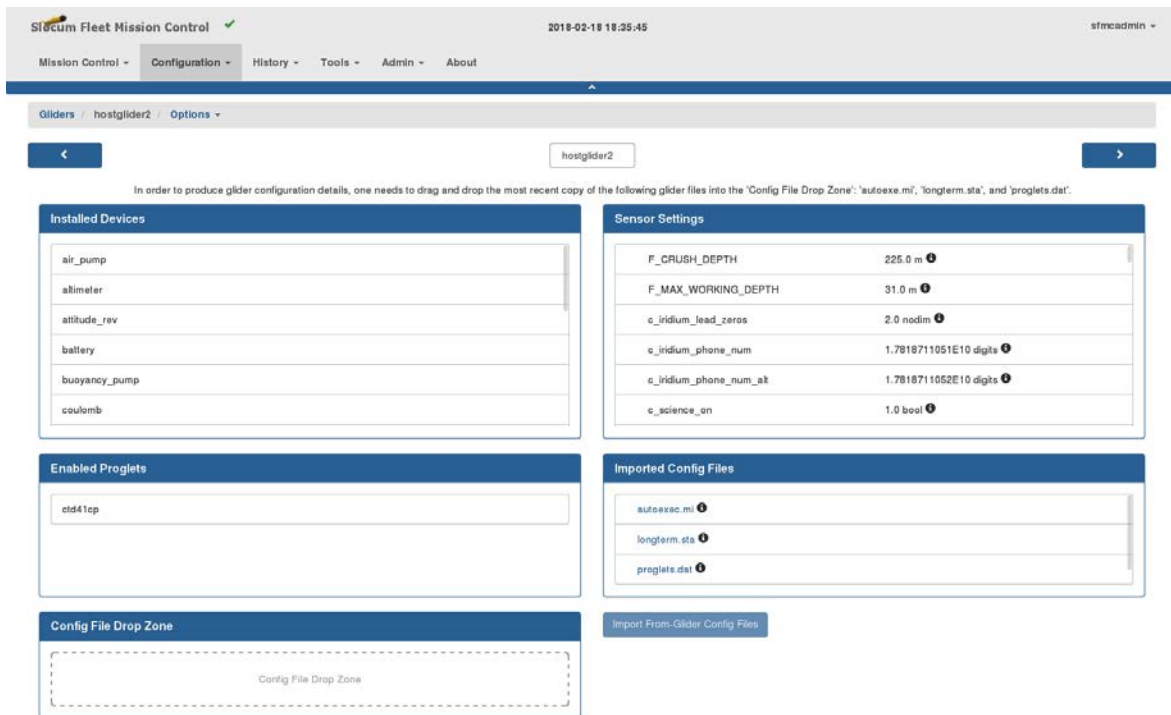


Figure 4-9 Glider Configuration Page

4.2.3 Configuring a Glider

A glider should be configured before a mission plan can be created for it. To configure a glider, first refer to “Viewing a Glider Configuration” on page 4-9 and open the Glider Configuration page for the glider. Then either drag and drop the autoexec.mi, longterm.sta and proglers.dat files for the glider one at a time into the **Config File Drop Zone** on the Glider Configuration page, or transfer those files from the glider to the dockserver, then with one or more of the files in the glider's From-Glider folder, click the **Import From-Glider Config Files** button. With the glider configured, the installed devices, sensor settings and enabled proglers will be displayed on the Installed Devices, Sensor Settings and Enabled Proglers panels, respectively.

4.2.4 Registering a Glider

To register a glider:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, the glider to be registered must be assigned to an allowed group.

2. From the *Configuration* menu, select *Gliders Menu*, and then choose *Register Glider*.

The Register Glider Page opens as shown in Figure 4-10.

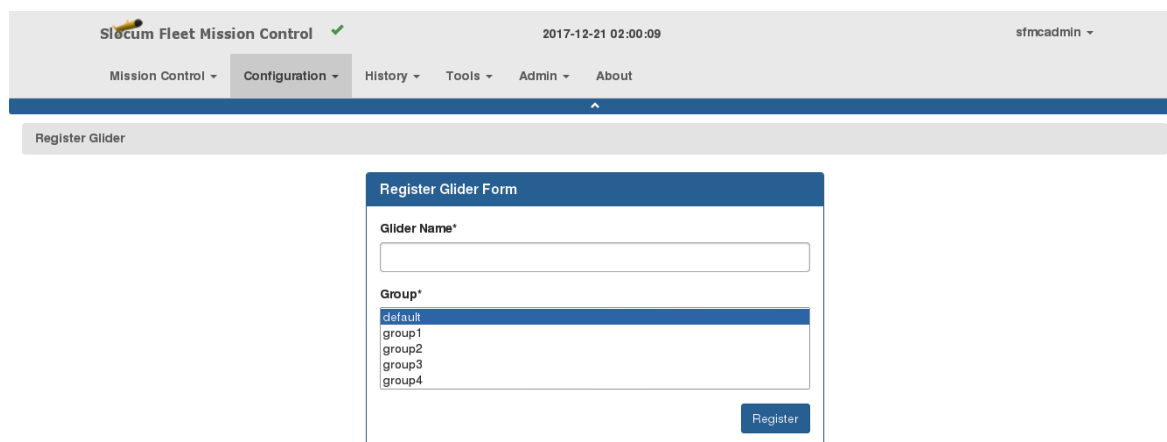
The screenshot shows the 'Register Glider' page within the 'Slalom Fleet Mission Control' application. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, showing 'Register Glider' as the selected option. The main content area displays the 'Register Glider Form' panel. This panel has a title bar 'Register Glider Form' and two input fields: 'Glider Name*' with a text box and 'Group*' with a dropdown menu. The dropdown menu is open, showing options: 'default', 'group1', 'group2', 'group3', and 'group4'. A 'Register' button is located at the bottom right of the form panel.

Figure 4-10 Register Glider Page—Register Glider Form Panel

3. On the Register Glider Form panel, enter the name of the glider in the **Glider Name** text box.
4. Select the group to which the glider is to be assigned from the **Group** drop-down list. Only one group can be selected.
5. Click **Register**.

The glider is registered.

4.2.5 Transferring a Registered Glider to Another Group

A registered glider can be transferred from the group it is currently associated with to any other group. This function can be used when, for example, it is desired to transfer the glider out of the default group, which is the group that the glider is assigned to if it is automatically registered by SFMC. Gliders that are connected cannot be transferred.

To transfer a registered glider to another group:

1. Log in to a user account as an Administrator.
2. From the *Configuration* menu, select *Gliders Menu*, and then choose *Gliders*.

The Gliders page opens as shown in Figure 4-8 on page 4-8. To update the page while it is open, press F5. To display more gliders on a single page, select the number of them to display from the **Show Gliders** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by gliders, groups or both by clicking the associated filter icon, and sort the list by glider by clicking the sort icon.
4. Click the **Transfer** button for the glider that you want to transfer. Only gliders that are not connected can be selected.

The Transfer Glider Form panel opens as shown in Figure 4-11.

The screenshot shows the Slocum Fleet Mission Control web interface. At the top, there is a header bar with the application name, a status indicator, the current date and time (2017-12-21 02:00:49), and the user name (sfmcadmin). Below the header is a navigation menu with options: Mission Control, Configuration (selected), History, Tools, Admin, and About. The main content area shows a breadcrumb trail: Gliders / hostglider3. The 'Transfer Glider Form' panel is open, displaying three input fields: 'Glider Name*' with the value 'hostglider3', 'Current Group*' with the value 'default', and 'New Group*'. The 'New Group*' field is a drop-down menu showing a list of options: group1, group2, group3, and group4. A 'Transfer' button is located at the bottom right of the form.

Figure 4-11 Gliders Page—Transfer Glider Form Panel

5. On the Transfer Glider Form panel, select the group to which the glider is to be transferred from the **New Group** drop-down list. Only one group can be selected.
6. Click **Transfer**.

The glider is transferred.

4.3 Creating and Managing Projects

Creating projects is optional. A project is created by naming it and assigning it to one and only one group, but any number of projects can be assigned to the same group. A description for the project can also be optionally entered. Created projects can be viewed, edited and deleted. In addition, one or more active deployments can be assigned to a project. To be able to assign an active deployment to a project, the registered glider and the project must be assigned to the same group. For instructions on how to assign an active deployment to a project or to remove it from a project if it is assigned to it, refer to “Assigning and Un-Assigning an Active Glider Deployment to a Project” on page 9-11.

4.3.1 Viewing Projects

To view projects:

1. Log in to a user account as an Administrator or to a user account with any role.
2. From the *Configuration* menu, select *Projects Menu*, and then choose *Projects*.

The Projects page opens as shown in Figure 4-12. To display more projects on a single page, select the number of them to display from the **Show Projects** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Name	Description	Associated Group	Original Author	Date Time Created	Last Edited By	Date Time Last Modification	Edit	Delete
Buzzards_Bay_Survey		group3	sfmcadmin	2017-12-27 20:03	sfmcadmin	2017-12-28 17:53		
Cape_Cod_Bay_Survey		group1	sfmcadmin	2016-12-08 18:27	sfmcadmin	2017-12-28 17:53		
Nantucket_Sound_Survey		default	sfmcadmin	2016-12-09 14:54	sfmcadmin	2017-12-28 17:54		
Rhode_Island_Sound_Survey		group2	sfmcadmin	2017-12-27 20:00	sfmcadmin	2017-12-28 17:54		

Figure 4-12 Projects Page

3. If desired, filter the list by projects, groups or both by clicking the associated filter icon, and sort the list by projects by clicking the sort icon.

The Projects page includes the following information:

Name. The name of the project.

Description. The description of the project if a description was entered for it.

Associated Group. The group with which the project is associated. There can be only one group.

Original Author. The user account that was used to create the project.

Date Time Created. The date and time the project was created.

Last Edited By. The user account that was used to last edit the project.

Date Time Last Modification. The date and time the project was last edited.

4.3.2 Creating a Project

To create a project:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, projects can be created only for the allowed groups.
2. From the *Configuration* menu, select *Projects Menu*, and then choose *Create Project*.

The Create Project page opens as shown in Figure 4-13.

The screenshot shows the 'Create Project Form' panel within the Slocum Fleet Mission Control application. The top navigation bar includes the application name, a date/time stamp (2017-12-21 15:30:45), and a user dropdown (sfmcadmin). The main menu has 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, showing 'Create Project' as a sub-option. The 'Create Project Form' panel itself contains three input fields: 'Project Name*' (a single-line text box), 'Project Description' (a multi-line text box), and 'Group*' (a drop-down list with options: default, group1, group2, group3, group4). A 'Create' button is located at the bottom right of the form panel.

Figure 4-13 Create Project Page—Create Project Form Panel

3. On the Create Project Form panel, enter the name of the project in the **Project Name** text box.
4. If desired, enter a project description in the **Project Description** text box.
5. Select the group to which this project is to be assigned from the **Group** drop-down list. Only one group can be selected.
6. Click **Create**.

The project is created, and the Create Project Form panel is cleared enabling another project to be created.

4.3.3 Editing a Project

To edit a project:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, projects can be edited only for the allowed groups.
2. From the *Configuration* menu, select *Projects Menu*, and then choose *Projects*.

The Projects page opens as shown in Figure 4-12 on page 4-13. To display more projects on a single page, select the number of them to display from the **Show Projects** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by projects, groups or both by clicking the associated filter icon, and sort the list by projects by clicking the sort icon.
4. Click the **Edit** button for the for the project that you want to edit.

The Modify Project Form panel opens as shown in Figure 4-14.

The screenshot shows the 'Modify Project Form' panel within the 'Slocum Fleet Mission Control' application. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, showing 'Projects' and 'Cape_Cod_Bay'. The 'Modify Project Form' panel contains the following fields:

- Project Name***: A text input field containing 'Cape_Cod_Bay'.
- Project Description**: A text input field.
- Group***: A dropdown menu with the following options: 'default', 'group1', 'group2', 'group3', and 'group4'. The 'default' option is currently selected.
- Save**: A blue button at the bottom right of the panel.

Figure 4-14 Projects Page—Modify Project Form Panel

5. On the Modify Project Form panel, make the required changes, and then click **Save**.
The project is edited.

4.3.4 Deleting a Project

To delete a project:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, projects can be deleted only for the allowed groups.
2. From the *Configuration* menu, select *Projects Menu*, and then choose *Projects*.

The Projects page opens as shown in Figure 4-12 on page 4-13. To display more projects on a single page, select the number of them to display from the **Show Projects** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by projects, groups or both by clicking the associated filter icon, and sort the list by projects by clicking the sort icon.
4. Click the **Delete** button for the project that you want to delete.

The Delete Project dialog box opens as shown in Figure 4-15.

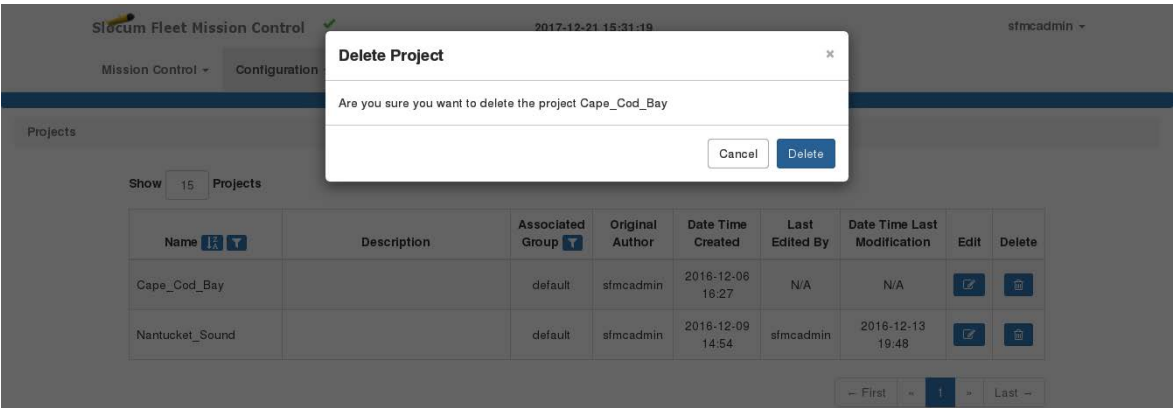


Figure 4-15 Delete Project Dialog Box

5. Click **Delete**.

The project is deleted, and the Delete Project dialog box closes.

SECTION 5: The Dashboard

The Dashboard provides a convenient means of tracking and monitoring active glider deployments on a single page.

5.1 Dashboard Layout

The Dashboard, which is shown in Figure 5-1, includes a Map Events panel, a Deployments panel and a Comms Plot panel. To open the Dashboard, choose *Dashboard* from the *Mission Control* menu. The Map Events panel includes a map and an overlay on which are displayed, for each of the watched deployments, the historical and intended glider tracks, the planned and acquired waypoints, the glider surfacings, and optionally at each surfacing, the glider surface drift positions and the depth averaged current vectors. The watched deployments are listed on the Deployments panel which provides detailed information about the last location, the next waypoint, the connection status, and the speed of the glider for each deployment. Icons on the Map Events panel and on the Deployments panel provide additional information when resting the pointer over them. To zoom into and display a specific deployment on the map, select it from the Deployments panel as shown in Figure 5-2. The Comms Plot panel displays the glider connections timeline for the watched deployments along with access to additional information about the connection and the associated glider dialog for it.

5.1.1 Map Events Panel

The Map Events panel is shown in Figure 5-3. It is composed of a map tile layer which can be any one of a number of types, including charts, road and street maps, satellite imagery, and others. Optionally, one or more WMS (Web Map Service) layers can be displayed, including weather maps, wind maps, wave height maps, and others. The map tile and WMS layers can be chosen directly from the map once the map layer settings are created as described in “Creating Map Settings” on page 13-3. Once created, these settings can be viewed, edited and deleted. To move around the map, click and drag from anywhere inside it.

The Map Events panel provides the following buttons and displays:

Zoom in. Zooms in on the map.

Zoom out. Zooms out of the map.

View fullscreen. Expands the map to fill the computer screen. Press Esc to return the map to its original size.

Map
Events
panel

Deployments
panel

Comms
Plot panel

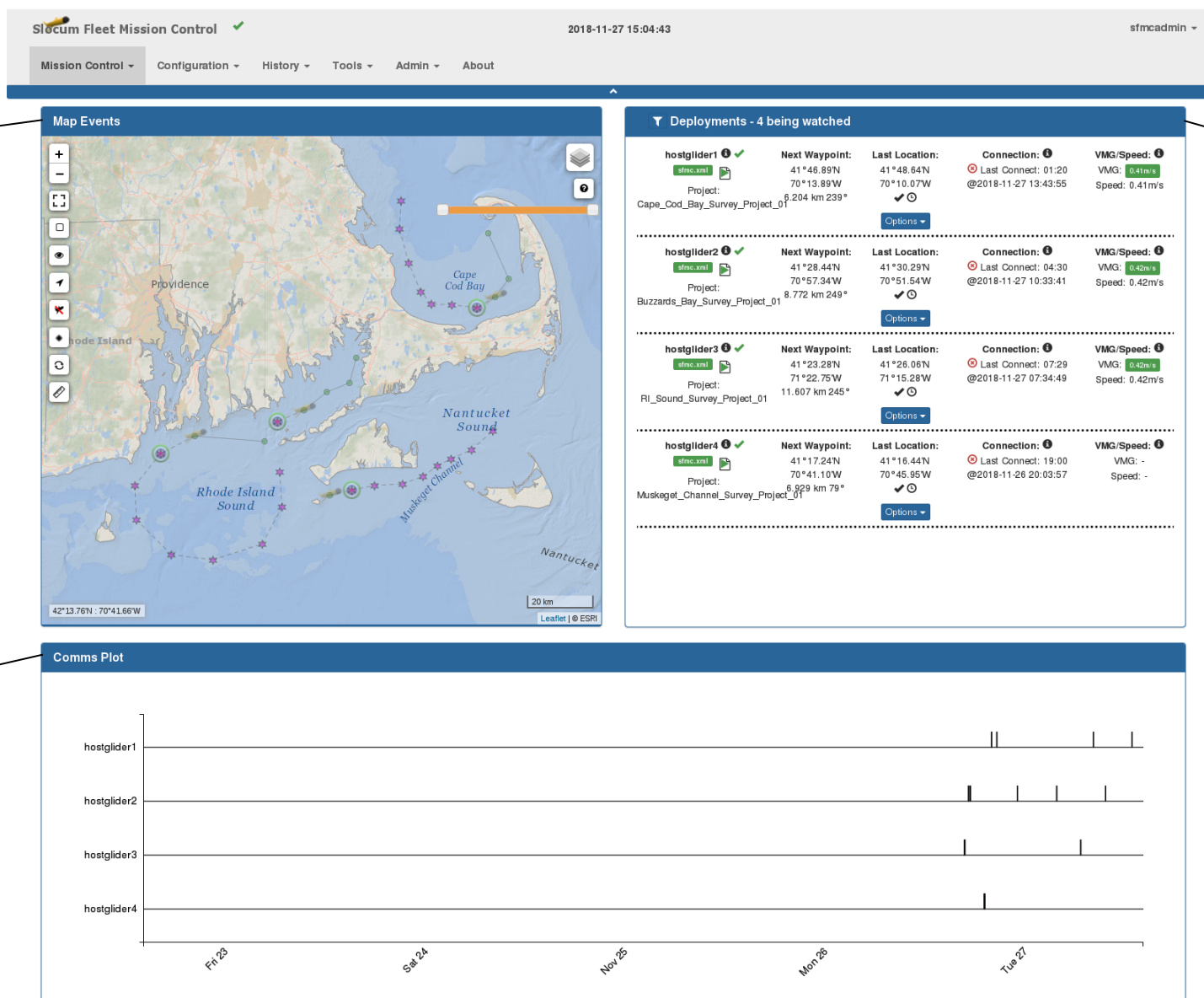
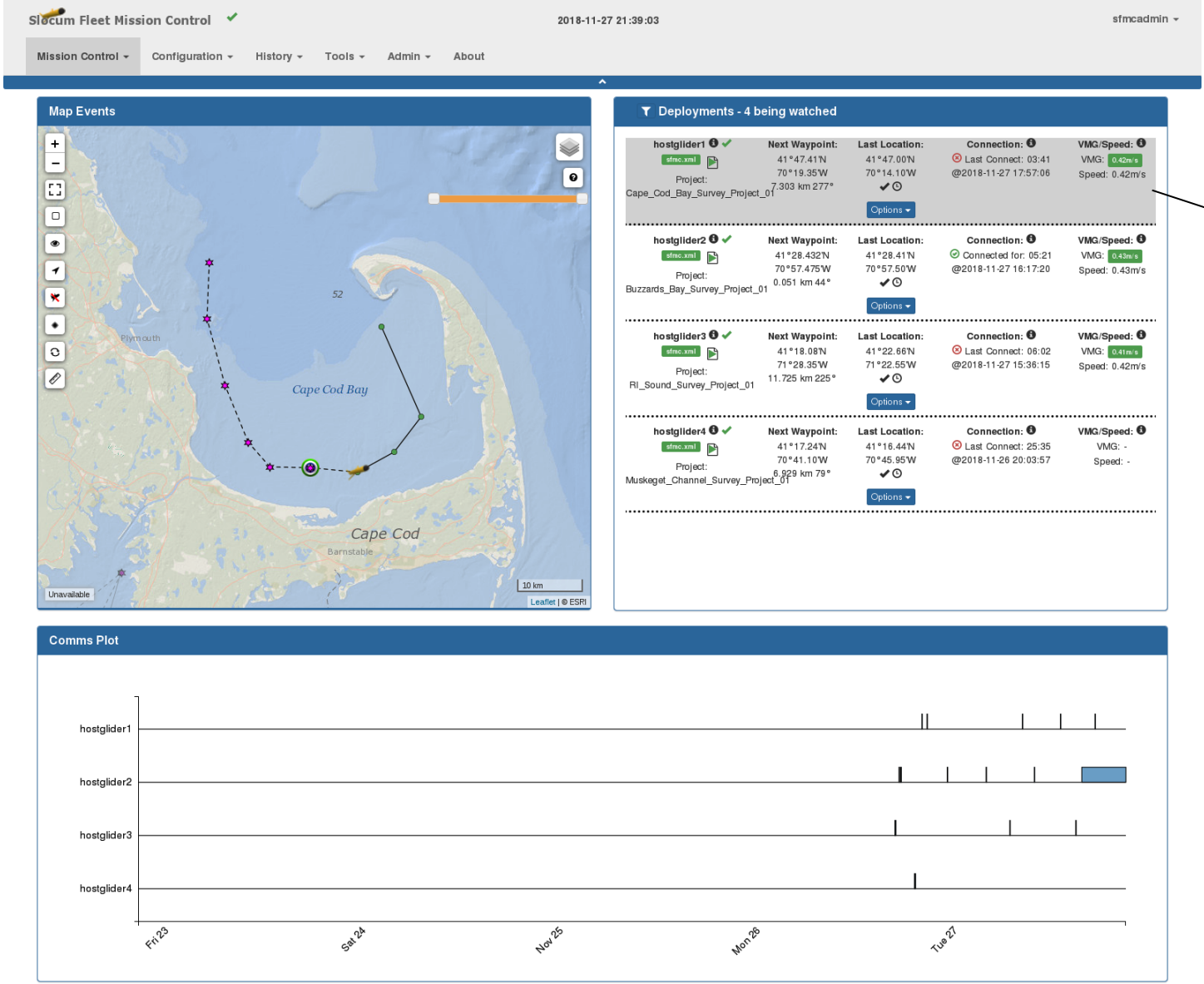


Figure 5-1 Dashboard



Deployment selected for display on the map

Figure 5-2 Dashboard—Specific Deployment Selected for Display on the Map

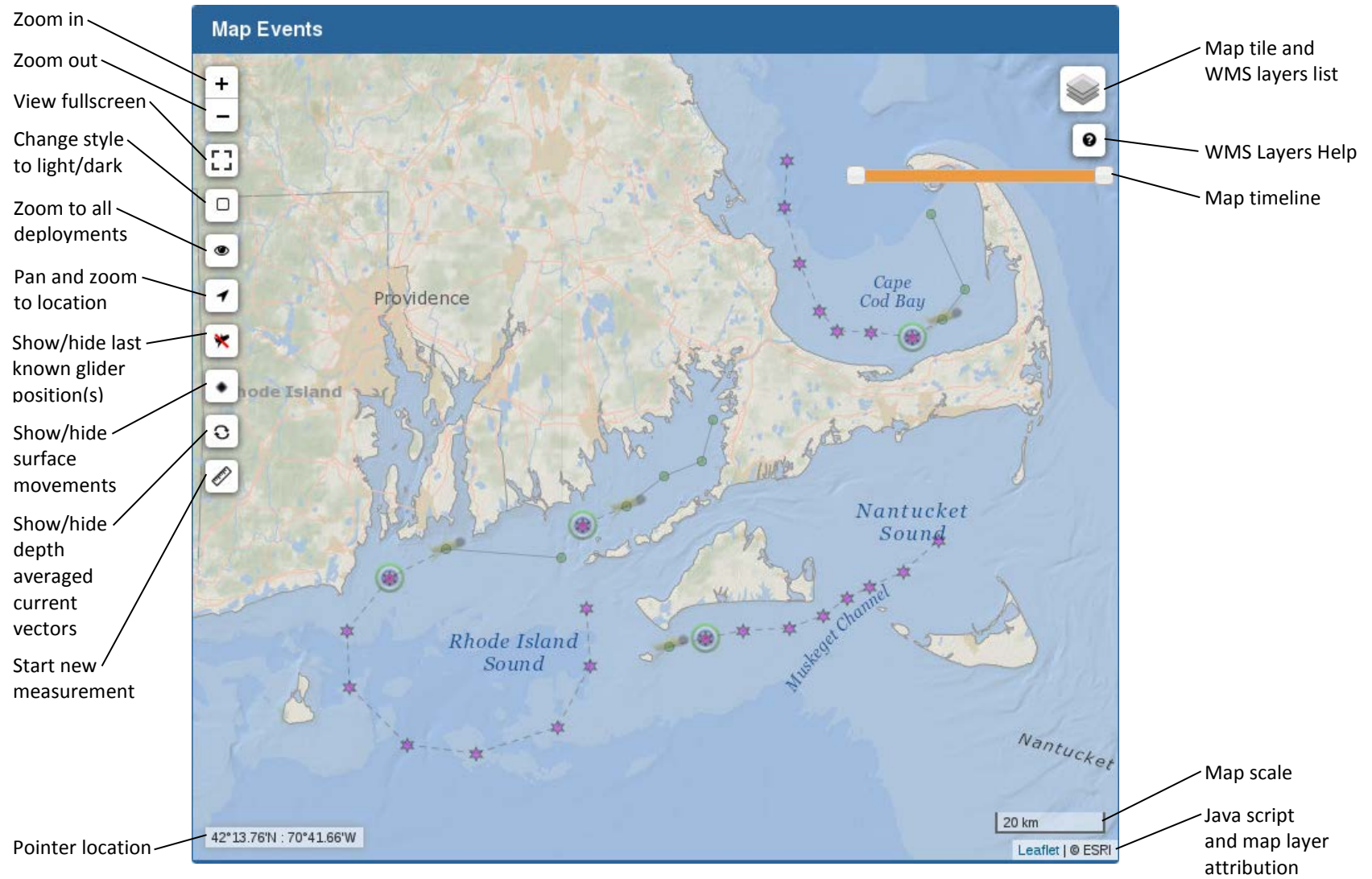


Figure 5-3 Map Events Panel

Change style to light/dark. Changes the displayed glider track and the surface drift positions from light to dark or from dark to light. The button has a black square to indicate that they will change from light to dark. It has a white square to indicate that they will change from dark to light

Zoom to all deployments. Zooms in or out as needed to capture all of the watched deployments.

Pan and zoom to location. Pans and zooms to a specific location as specified by an entered latitude and longitude in the Pan to Coordinates Form dialog box.

Show/hide last known glider positions(s). Hides the last known glider position by hiding the glider icon. If there is more than one position shown, they are all hidden. This feature is useful when a glider icon is directly over a target or surfacing icon, for it allows the pointer to be rested over the target or surfacing icon, enabling the display of the target or surfacing information.

Show/hide surface movements. Shows surface positions due to surface drift and is especially useful for tracking a glider during deployment and recovery.

Show/hide depth averaged current vectors. Shows averaged currents as vectors on the map. The vectors are displayed as red lines for each surfacing. When resting the pointer over a vector, current speed and direction information is displayed.

Start new measurement. Enables the measurement of distance in kilometers on the map by clicking at the start point and double-clicking at the end point.

Pointer location. Displays the latitude and longitude in degrees and decimal minutes of the location of the pointer on the map.

Map tile and WMS layers list. Displays a list of map tile and WMS layers. One map tile layer must be selected; one or more WMS layers can also be selected.

WMS Layers help. Displays the legends for the selected WMS layers.

Map timeline. A slider that contains right and left scroll boxes. Sliding the left scroll box to the right hides the earliest surfacings. Sliding the right scroll box to the left hides the latest surfacings. Sliding both scroll boxes together zooms in on any group of contiguous surfacings. The date and time are displayed under the scroll boxes, corresponding to the earliest and latest times for the left and right scroll boxes.

Map scale. The map scale as indicated by the length of the box and the displayed range in meters. The length of the box and the displayed range varies with the zoom level.

Java script and map layer attribution. Credits the sources for the java script and the map layers.

On the map and for all watched deployments, the following icons and line types can be displayed:

Glider icon. Indicates the last known glider surface position.

Target icon. Indicates the next waypoint the glider is to go to.

Star icon. Indicates a waypoint other than the next waypoint the glider is to go to.

Solid yellow circle icon. Indicates a glider surface position other than at a waypoint or an abort.

Solid green circle icon. Indicates a glider surface position at a waypoint.

Solid red circle icon. Indicates a glider surface position as a result of an abort.

Solid black/white diamond icon. Indicates a glider surface position as a result of surface drift. The black or white setting is in accordance with the **Change style to light/dark** button on the Map Events panel.

Solid black/white line. Indicates the historical track of the glider. The black or white setting is in accordance with the **Change style to light/dark** button on the Map Events panel.

Dashed black/white line. Indicates the intended glider track. The black or white setting is in accordance with the **Change style to light/dark** button on the Map Events panel.

Solid red line. Indicates current vectors when selected with the **Show depth averaged current vectors** button on the Map Events panel.

5.1.2 Deployments Panel

Deployments being watched are displayed on the Deployments panel on the Dashboard as shown in Figure 5-4. For each deployment listed, some of the more frequently monitored details about the deployment are provided along with the glider connection status and the project that the deployment is associated with, if any. In addition, resting the pointer over any of the icons provides additional information about the deployment. Clicking inside an entry in the list will highlight it and zoom in to that deployment on the map. The Deployments panel includes the following information:

Next Waypoint. The coordinates of the waypoint in latitude and longitude degrees and decimal minutes that the glider is to go to next. The range to the waypoint in kilometers and the bearing in degrees are also displayed.

Last Location. The last known surface location of the glider in latitude and longitude degrees and decimal minutes.



Figure 5-4 Deployments Panel

Connection. The date in year, month and day and the time of day in hours, minutes and seconds the glider connected and the elapsed time hours and minutes from when it connected, or the date in year, month and day the glider disconnected and the elapsed time in hours and minutes from when it disconnected.

VMG/Speed. The VMG (velocity made good), which is the velocity of the glider relative to its next waypoint based on its range and bearing as determined from its last two surfacings and its speed in meters per second.

In addition, the Deployments panel enables filtering of the deployments to watch by groups and projects, and for each deployment provides access to the *Options* menu specific for that deployment.

5.1.3 Comms Plot Panel

The glider connections timeline is displayed as a graph on the Comms Plot panel on the Dashboard as shown in Figure 5-5. Connections are indicated as bars for each deployment. Resting the pointer over a bar provides more information about the connection. Clicking a bar provides access to the glider dialog for that connection. The dialog can be viewed and saved. The horizontal scale of the graph can be set in the Dashboard Content Filter box as described in “Filtering the Deployments to Watch by Groups and Project” below.

5.2 Filtering the Deployments to Watch by Groups and Projects

The deployments on the Map and Deployment panels can be filtered, displaying only those deployments associated with one or more specific groups or a specific combination of groups and projects. In addition, you can select the number of the most recent days over which to display the surfacings on the map which also sets the scale of the timeline on the horizontal scale of the Comms Plot panel.

To filter the watched deployments by groups and projects:

1. Click the filter icon on the Deployments panel.

The Dashboard Content Filter dialog box opens as shown in Figure 5-6 on page 5-10.

2. Select the group or groups for which the deployments you wish to view are associated from the **Selected Group(s)** drop-down list. To select more than one group, hold down the Ctrl key while clicking them one at a time.

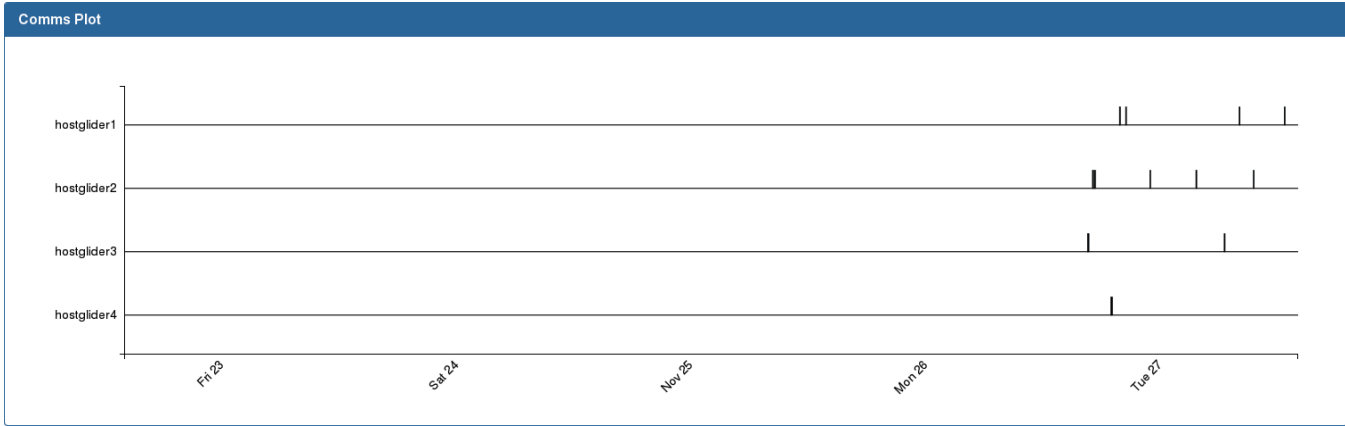


Figure 5-5 Comms Plot Panel

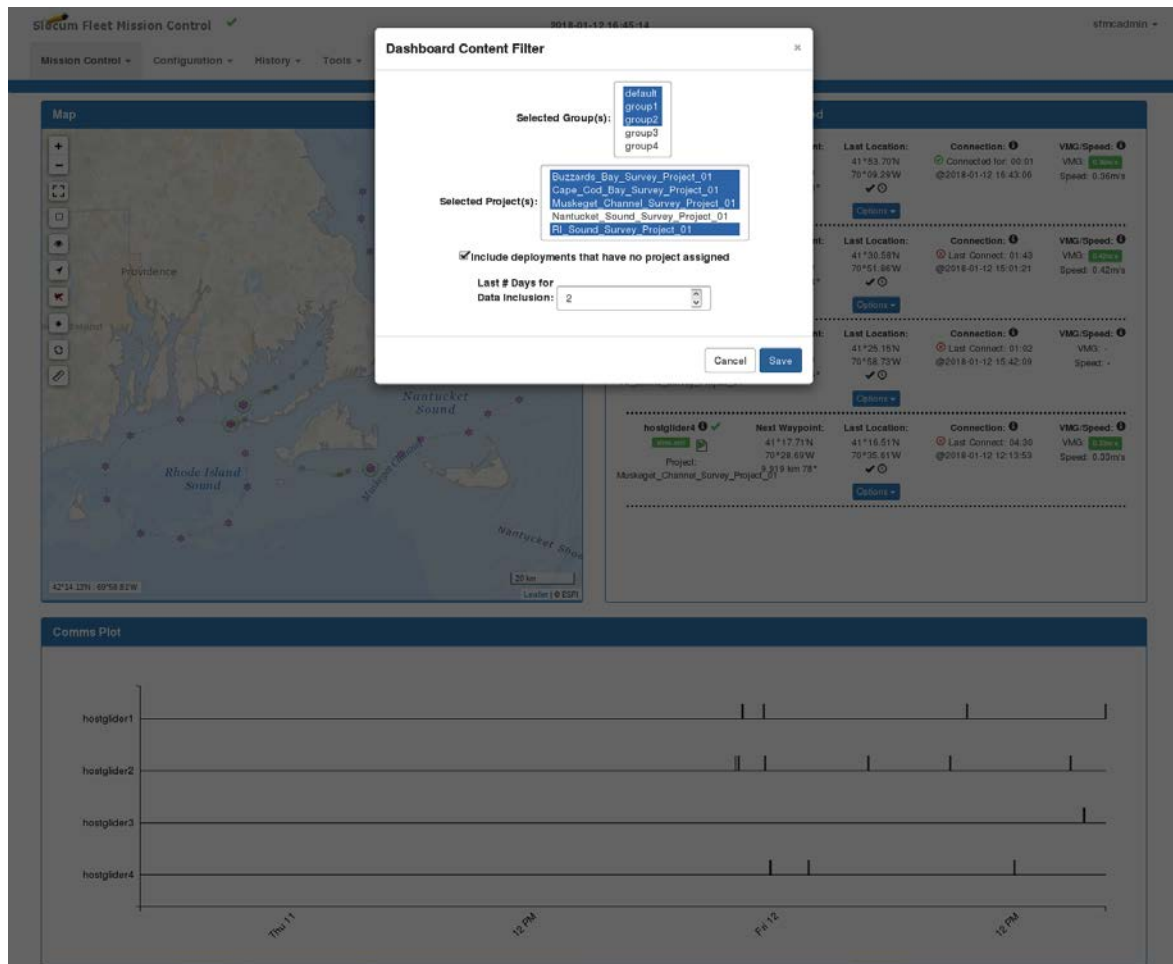


Figure 5-6 Dashboard Content Filter Dialog Box

3. Select the project or projects for which the deployments you wish to view are associated from the **Selected Project(s)** drop-down list. To select more than one project, hold down the Ctrl key while clicking them one at a time. To include deployments with no projects assigned, select the **Include deployments that have no project assigned** check box.
4. Select the number of the most recent days over which to display the surfacings on the map and set the scale of the horizontal timeline on the Comms Plot panel by entering the number of days in the **Last # Days for Data Inclusion** text box. Displayed surfacings prior to this time will be removed from the map.
5. Click **Save**.

The Dashboard Content Filter dialog box closes and the selected deployments are displayed.

SECTION 6: Using Glider Terminal

The SFMC Glider Terminal provides a convenient means for users to access their Teledyne Webb Research Slocum gliders to send commands, to upload and download files, and to select and run scripts.

6.1 Opening Glider Terminal

To open Glider Terminal:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator all the gliders can be accessed. For the Group Level Administrator or Glider Pilot role, only the gliders associated with the allowed groups can be accessed.
2. From the *Mission Control* menu, choose *Glider Terminal Access*.

The Glider Terminal Access page opens as shown in Figure 6-1. The Glider Terminal Access page lists all of the registered gliders. Those gliders that are connected are listed on the Connected Gliders panel, and those that are disconnected are listed on the Disconnected Gliders panel. An icon on the page next to each glider name indicates whether it has an assigned script running.

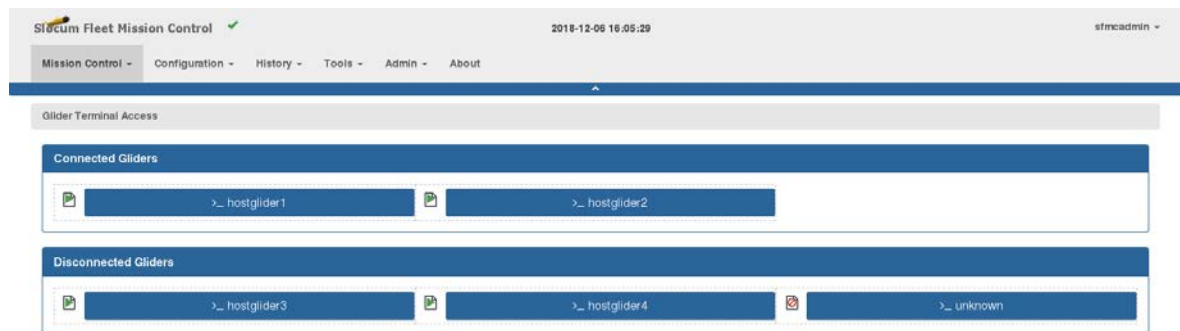


Figure 6-1 Glider Terminal Access Page

3. Click the name of glider that you want access.

Glider Terminal opens to the Glider Terminal page as shown in Figure 6-2. All Glider Terminal functions are performed from this page.

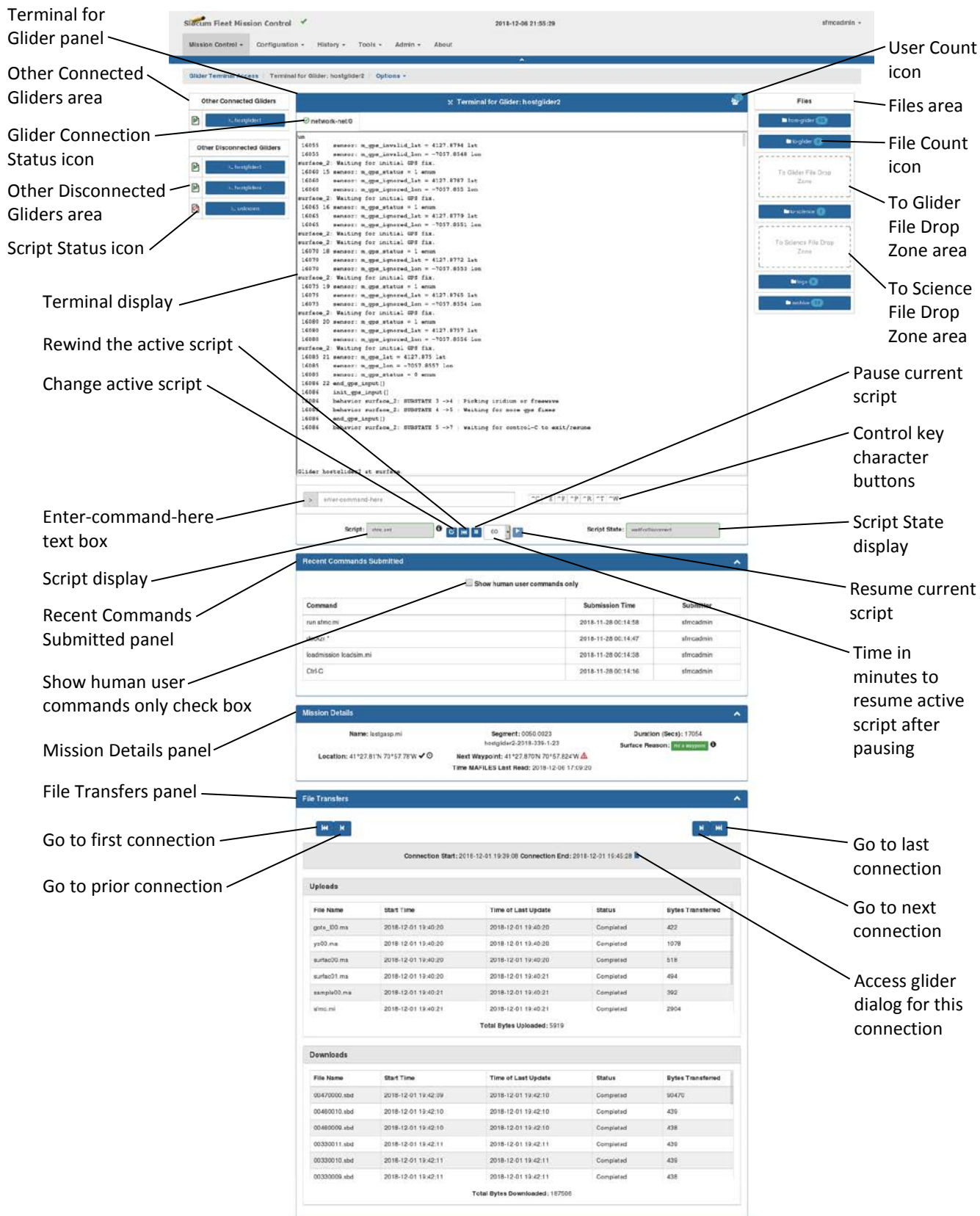


Figure 6-2 Glider Terminal Page

6.2 Glider Terminal Page

The Glider Terminal page includes four panels: a Terminal for Glider panel, a Recent Commands Submitted panel, a Mission Details panel, and a File Transfers panel. The Terminal for Glider panel displays the communications dialog between the glider and SFMC and provides the means to send commands to the glider. The Recent Commands Submitted panel lists some or all of the commands that have been sent to the glider from Glider Terminal. The Mission Details panel displays the mission name, segment and duration; the last known glider location; the location of the waypoint the glider is to go to next; and the reason for the last surfacing. The File Transfers panel displays what files have been uploaded to the glider and downloaded from the glider, and it enables saving of the log file associated with each connection. The Glider Terminal page also includes the Files area, the Other Connected Gliders area and the Other Disconnected Gliders area. The Files area enables the viewing and transferring of files to and from the glider and the viewing and saving of logs and archive files. The Other Connected Gliders and Other Disconnected Gliders areas enable the selection of a different glider for an active deployment.

6.2.1 Terminal for Glider Panel

The Terminal for Glider panel displays all communications dialog for the selected glider in Terminal displays that are on tabs, one tab for each network port the glider has connected to since the Terminal for Glider panel was opened. The tab name is the network port name, and clicking the tab name opens the tab. Only one tab can be open at a time. An icon next to each tab name indicates whether the glider is currently connected to that port. When the icon is a green check mark, the glider is connected. When a red "X" icon is displayed instead, the glider is no longer connected to that port. On the right side of the Terminal for Glider panel title bar is a User Count icon. The displayed number indicates how many user accounts have Glider Terminal open for the selected glider. Resting the pointer over the icon displays which user accounts.



NOTE Pressing F5 refreshes the Glider Terminal page by removing all the tabs except the one associated with the network port the glider is currently connected to, if any.

A glider can be connected to only one network port at a time. Should the glider connect to a different network port, a new tab will open with a new Terminal display.

Commands can be sent to a connected glider by entering them in the **enter-command-here** text box at the bottom of a tab. Frequently used commands can be entered by clicking the control key character buttons to the right of the text box. For information on these commands and the other available commands, refer to the “Dock Server User Guide.”

6.2.2 Recent Commands Submitted Panel

The Recent Commands Submitted panel displays a list of up to ten of the last commands sent to the glider upon opening the Glider Terminal page. Once opened, any new commands sent to the glider will be prepended to the list. The commands are those sent from all user accounts that are open to the Glider Terminal page for the glider. The Recent Commands Submitted panel includes the following information:

Command. The commands that have been sent to the glider.

Submission Time. The date and time the commands were sent.

Submitter. The user account from which the commands were sent.

To display *only* the commands issued by the user to the glider, select the **Show human user commands only** check box. Clear the check box to display these commands *plus* the commands issued to the glider by the dockserver using dockserver scripts.

6.2.3 Mission Details Panel

The Mission Details panel displays the following:

Name. The name of the mission.

Location. The latitude and longitude in degrees and decimal minutes of the last known glider location.

Segment. The mission segment short name and long name. The short name is in xxxx.yyyy format, where "xxxx" is the mission number and "yyyy" is the mission segment. The long name is composed of the glider name followed by the year of the mission start, the day of the year of the mission start, the n-1th mission of the day, and the n-1th segment of the mission.

Next Waypoint. The coordinates of the waypoint, in latitude and longitude degrees and decimal minutes, that the glider *was* to go to next, or *is* to go to next if it is the most recent surfacing.

Duration. The time in seconds since the mission began.

Surface Reason. The reason for the surfacing. A green banner is shown when the glider surfaced because it hit a waypoint. A red banner is shown if the mission was aborted for some reason. A yellow banner is shown for other reasons.

6.2.4 File Transfers Panel

The File Transfers panel displays the following for each connection:

File Name. The name of the file, including the extension.

Start Time. The date and time of the start of the file transfer.

Time of Last Update. The date and time in yyyy-mm-dd hh:mm:ss format at which the file being uploaded or downloaded was last updated or at which the upload or download was completed. Once completed the date and time will no longer change.

Status. The status of the file transfer, which can be Started, In Progress, Incomplete, Completed, or Cancelled.

Bytes Transferred. The bytes transferred for the file.

Total Bytes Uploaded. The total number of bytes that have been transferred to the glider from SFMC.

Total Bytes Downloaded. The total number of bytes that have been transferred from the glider to SFMC.

To display the transferred files for the next or previous connection, click the **Go to next connection** or **Go to prior connection** button, respectively. To display the transferred files for the first connection or the last connection, click the **Go to first connection** or **Go to last connection** button, respectively.

In addition to the files transferred, the File Transfer panel enables saving of the communications log file for the connection. To save the log file, click the **Access glider dialog for this connection** button and save the file. The name is automatically generated, and the extension is .log.

6.2.5 Files Area

The Files area includes the following buttons and drop zones for accessing and transferring files to and from the glider:

From-Glider. Clicking **from-glider** provides access to the files in the From-Glider folder. A File Count icon indicates how many files are in the folder. These files have been downloaded from the glider to SFMC while the glider was connected, either as a result of running a script, such as the factory script sfmc.xml, or by sending a file transfer command to the glider. The files can include .sbd, .dbd, .mbd, .ini, .dat, .mlg, and other files depending on what files were actually downloaded. None of the files can be deleted, but they are removed when the active deployment for the glider is archived.

To-Glider. Clicking **to-glider** provides access to the files in the To-Glider folder. A File Count icon indicates how many files are in the folder. These files will be uploaded to the glider from SFMC while the glider is connected, either as a result of running a script, such as the factory script `sfmc.xml`, or by sending a file transfer command to the glider. The files determine the glider behavior and can be created directly by a user or created automatically by SFMC from a mission plan. The files can include `.ma`, `.mi`, `.cfg`, and other files. User created files to be uploaded must first be transferred to SFMC by dragging and dropping them into the **To Glider File Drop Zone**. Any file that has not been uploaded to the glider can be deleted. Once uploaded, the files are moved to the Archive folder as Archive files.

To Glider File Drop Zone. Dragging and dropping a file into the **To Glider File Drop Zone** transfers the file to SFMC and enables the file to be uploaded to the glider from SFMC either as a result of running a script, such as the factory script `sfmc.xml`, or when sending a file transfer command to the glider.

To-Science. Clicking **to-science** provides access to the files in the To-Science folder. A File Count icon indicates how many files are in the folder. These files will be uploaded to the glider from SFMC when sending a file transfer command. The files determine the glider science processing behavior and can include `.ini`, `.dat` and other files. The files to be uploaded must first be transferred to SFMC by dragging and dropping them into the **To Science File Drop Zone**. Any file that has not been uploaded to the glider can be deleted. Once uploaded, the files are moved to the Archive folder as Archive files.

To Science File Drop Zone. Dragging and dropping a file into the **To Science File Drop Zone** transfers the file to SFMC and enables the file to be uploaded to the glider from SFMC when sending a file transfer command to the glider.

Logs. Clicking **Logs** provides access to the files in the Logs folder. A File Count icon indicates how many files are in the folder. These files contain all the communications dialogs between the glider and SFMC for all the glider connections. None of the files can be deleted, but they are removed when the active deployment for the glider is archived.

Archive. Clicking **Archive** provides access to the files in the Archive Folder. A File Count icon indicates how many files are in the folder. These files have been uploaded to the glider as a result of an "-archive" option, such as when uploading To-Glider files. None of the files can be deleted, but they are removed when the active deployment for the glider is archived.

6.2.6 Other Gliders Area

The Other Gliders area enables access to a different glider while open to the Glider Terminal page. To access a different glider, click its name. The list of gliders includes all the registered and unknown gliders whether they are connected to SFMC or not. However, the currently selected glider is not included. Glider Connection Status and Script Status icons next to each glider name indicate whether the glider is connected to SFMC and whether it has an assigned script running. Additional information is provided when resting the pointer over these icons.

6.2.7 Other Glider Terminal Page Functions

Buttons on the Glider Terminal page enable activation of additional Glider Terminal functions, and displays provide information on any running script.

The Glider Terminal page provides the following buttons and displays:

Script. Displays the currently selected script if any. An icon next to the display indicates whether it is a factory or a user script when resting the pointer over it.

Change active script. Opens the Script Selection for Glider <Glider Name> dialog box which enables the selection of a script or the selection of a different script for the glider. The dialog box also enables the selection of no script.

Rewind the active script. Rewinds the active script.

Pause current script. Pauses the current script if it is running. The button is available only when the script is running.

Time in minutes to resume active script after pausing. The time in minutes after which the active script will resume if it was paused. Select the time from the drop-down list.

Resume current script. Resumes the running of the current script if it has been paused. The button is available only when the script has been paused.

Script State. Displays the current state of the running script.

6.3 Controlling Scripts

From the Glider Terminal page, scripts can be assigned and automatically run, un-assigned and automatically stopped, paused, and resumed. For instructions on how to manage scripts, refer to “SECTION 7: Managing Dock Server Scripts.”

6.3.1 Assigning and Un-assigning Scripts

To assign and un-assign scripts:

1. Click the **Change active script** button.
2. The Script Selection for Glider <Glider Name> dialog box opens as shown in Figure 6-3.



Figure 6-3 Script Selection for Glider <Glider Name> Dialog Box

3. Do one of the following:
 - Click the script that you want to assign. The script will be highlighted.
 - Click the highlighted script to un-assign it. The script will be unhighlighted.
4. Click **Save**.

If a script was assigned, its name will be displayed in the **Script** display, and it will automatically run. In addition, the state of the script will be displayed in the **Script State** display. If a script was un-assigned, the **Script** and **Script State** displays will be cleared, and the script will automatically stop if it was running.

6.3.2 Pausing and Resuming Scripts

To pause a running script, click the **Pause current script** button. Pausing a running script is recommended to establish full control of a glider's output and what commands are sent to the glider. To resume a paused script, click the **Resume current script** button or wait for the time to expire as selected by the **Time in minutes to resume active script after pausing** setting.

6.4 Uploading, Viewing, Saving, and Deleting Files

By accessing the folders in the Files area of the Glider Terminal page, files that have been downloaded from the glider to SFMC can be viewed and saved, and files to be uploaded from SFMC to the glider when the glider connects can be selected. Files to be uploaded can also be viewed, saved and deleted.

6.4.1 Viewing and Saving From-Glider Files

From-Glider files that have been downloaded from the glider to SFMC can be viewed and saved. The files to be saved can be selected one at a time, in specific groups or all at once.

To view and save From-Glider files:

1. Click **from-glider** in the Files area of the Glider Terminal page.

The From-Glider Files for Glider <Glider Name> dialog box opens as shown in Figure 6-4.

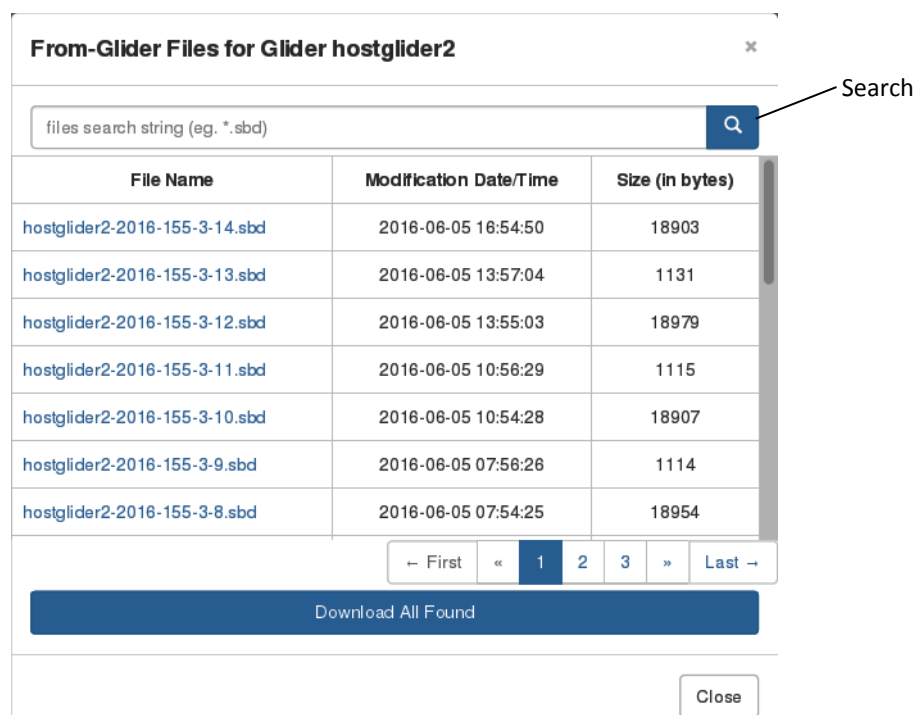


Figure 6-4 From-Glider Files for Glider <Glider Name> Dialog Box

2. If desired, filter the From-Glider files to view or save by entering the characters common to each file name in the text box and an asterisk (*) for each single or a group of contiguous uncommon characters, and then click the **Search** button.

3. Do one of the following:
- Click the file that you want to view, and then open the file.
 - Click the file that you want to save, and then save the file.
 - Click **Download All Found** and save all the files.

6.4.2 Uploading, Viewing, Saving, and Deleting To-Glider Files

To-Glider files to be uploaded from SFMC to the glider when the glider connects must be added to the To-Glider folder. The files can be added with any user account that is open to the Glider Terminal page and has access to the glider. To add the files to the To-Glider folder, drag and drop the files into the **To Glider File Drop Zone**. Once in the folder, any file can be viewed, saved or deleted if it has not been uploaded to the glider.

To view, save, and delete To-Glider files:

1. Click **to-glider** in the Files area of the Glider Terminal page.
The To-Glider Files for Glider <Glider Name> dialog box opens as shown in Figure 6-5.
2. If desired, filter the To-Glider files to view, save or delete by entering the characters common to each file name in the test box and an asterisk (*) for each single or a group of contiguous uncommon characters, and then click the **Search** button.

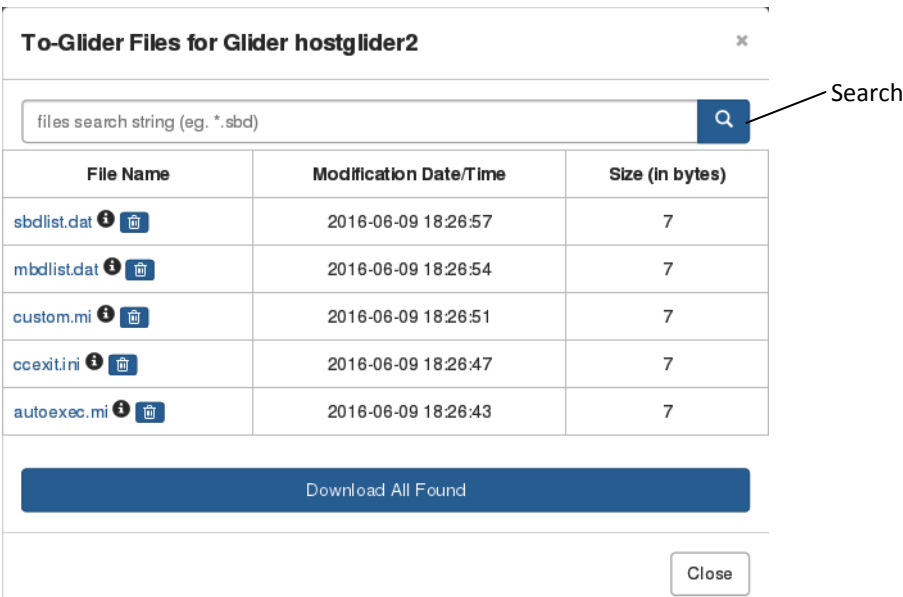


Figure 6-5 To-Glider Files for Glider <Glider Name> Dialog Box

3. Do one of the following:

- Click the file that you want to view, and then open the file.
- Click the file that you want to save, and then save the file.
- Click **Download All Found** and save all the files.
- Click the **Delete** button of any files that you want to delete.

6.4.3 Uploading, Viewing, Saving, and Deleting To-Science Files

To-Science Files to be uploaded from SFMC to the glider when the glider connects must be added to the To-Science folder. The files can be added with any user account that is open to the Glider Terminal page and has access to the glider. To add the files to the To-Science folder, drag and drop the files into the **To Science File Drop Zone**. Once in the folder, any file can be viewed, saved or deleted from the folder if it has not been uploaded to the glider.

To view, save, and delete To-Science files:

1. Click **to-science** in the Files area of the Glider Terminal page.

The To-Science Files for Glider <Glider Name> dialog box opens as shown in Figure 6-6.

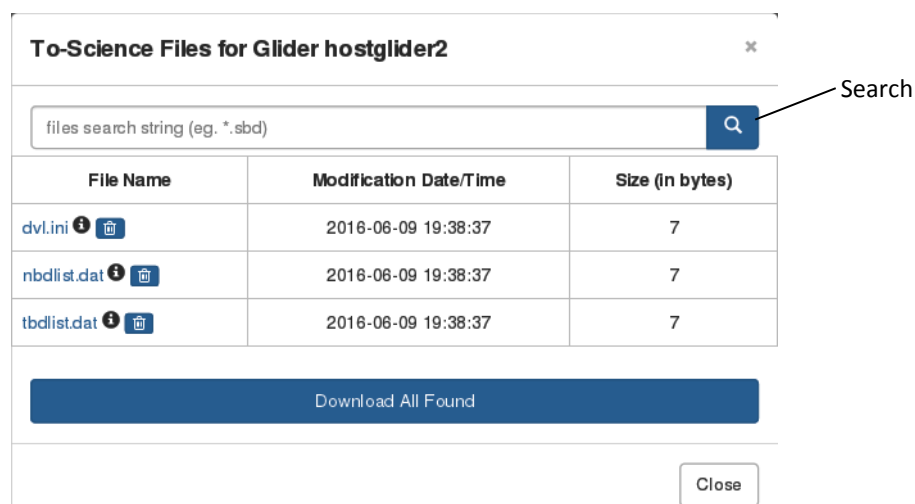


Figure 6-6 To-Science Files for Glider <Glider Name> Dialog Box

2. If desired, filter the To-Science files to view, save or delete by entering the characters common to each file name in the test box and an asterisk (*) for each single or a group of contiguous uncommon characters, and then click the **Search** button.

3. Do one of the following:

- Click the file that you want to view, and then open the file.
- Click the file that you want to save, and then save the file.
- Click **Download All Found** and save all the files.
- Click the **Delete** button of any files that you want to delete.

6.4.4 Viewing and Saving Logs Files

Logs files that have been downloaded from the glider to SFMC can be viewed and saved if the active deployments for them have not been archived. The files to be saved can be selected one at a time, in specific groups or all at once.

To view and save Logs files:

1. Click **logs** in the Files area of the Glider Terminal page.

The Logs Files for Glider <Glider Name> dialog box opens as shown in Figure 6-7.

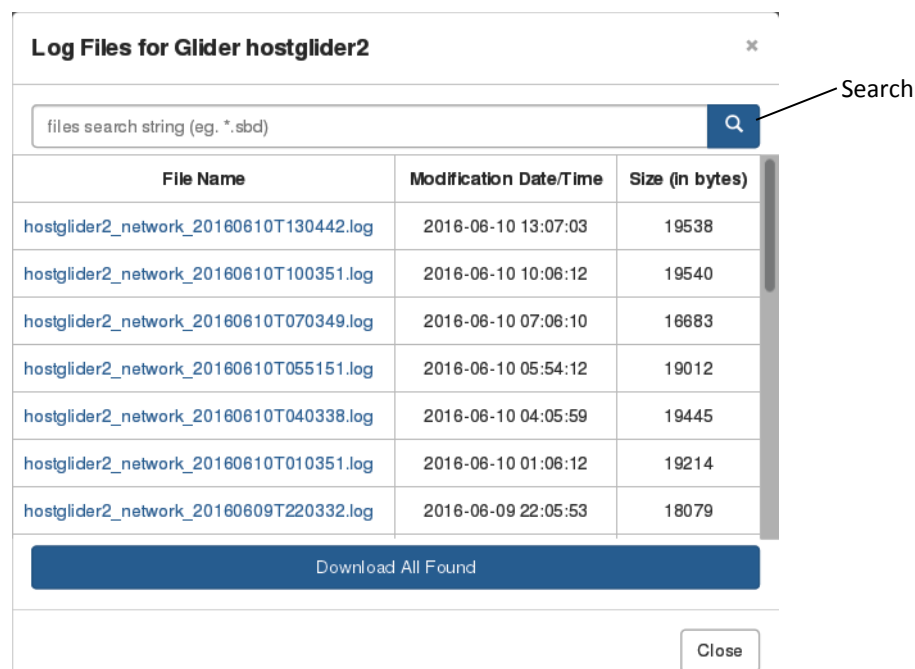


Figure 6-7 Logs Files for Glider <Glider Name> Dialog Box

2. If desired, filter the Logs files to view or save by entering the characters common to each file name in the test box and an asterisk (*) for each single or a group of contiguous uncommon characters, and then click the **Search** button.

3. Do one of the following:

- Click the file that you want to view, and then open the file.
- Click the file that you want to save, and then save the file.
- Click **Download All Found** and save all the files.

6.4.5 Viewing and Saving Archive Files

Archive files that have been downloaded from the glider to SFMC can be viewed and saved if the active deployments for them have not been archived. The files to be saved can be selected one at a time, in specific groups or all at once.

To view and save Archive files:

1. Click **archive** in the Files area of the Glider Terminal page.

The Archive Files for Glider <Glider Name> dialog box opens as shown in Figure 6-8.

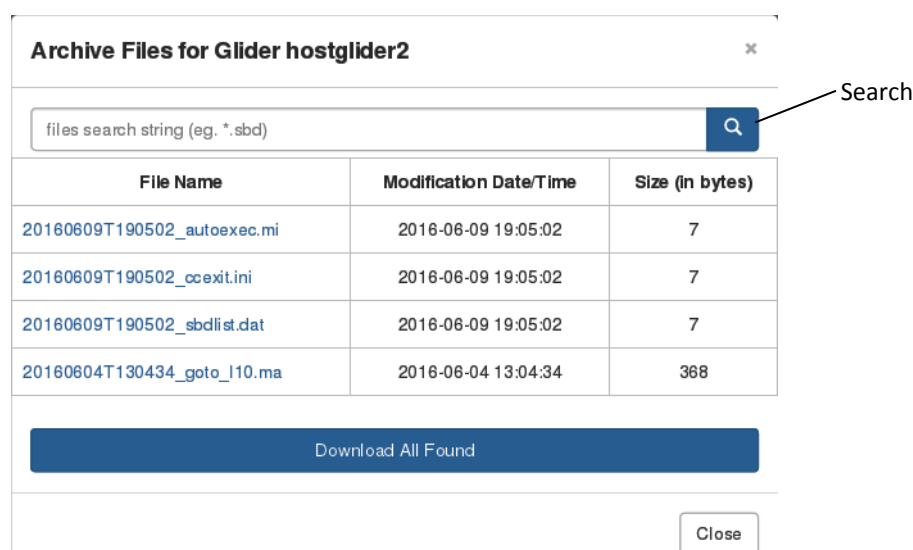


Figure 6-8 Archive Files for Glider <Glider Name> Dialog Box

2. If desired, filter the Archive files to view or save by entering the characters common to each file name in the test box and an asterisk (*) for each single or a group of contiguous uncommon characters, and then click the **Search** button.
3. Do one of the following:
 - Click the file that you want to view, and then open the file.
 - Click the file that you want to save, and then save the file.
 - Click **Download All Found** and save all the files.

SECTION 7: Managing Dock Server Scripts

SFMC includes a number of factory scripts of which any one at a time can be assigned to an active glider deployment. Or instead of a factory script, you can assign a user generated script. In the latter case the glider must be in an allowed group for the user account. You can also view, edit and delete any user script for the glider.



NOTE For instructions on how to assign and automatically run, un-assign and automatically stop, pause, and resume scripts, refer to “Controlling Scripts” on page 6-7 .

7.1 The Dock Server Scripts Page

Scripts are managed from the Dock Server Scripts page which is shown in Figure 7-1. To open the Dock Server Scripts page, select *Scripts* from the *Configuration* menu. The Dock Server Scripts page includes four panels: the Factory Scripts panel which lists all of the available factory scripts; the User Scripts panel which lists all of the available user scripts for each allowed group; the User Scripts Drop Zone panel which enables the transferring of user scripts to SFMC; and the Default Scripts Assignments panel which enables the automatic assignment of a default script for a newly registered glider.

7.1.1 Factory Scripts Panel

The Factory Scripts panel provides a list of all the available factory scripts. Clicking any of these scripts enables you to view the script. However, you cannot change or delete a factory script. The Factory Scripts panel also indicates for each script whether it is in use.

7.1.2 User Scripts Panel

The User Scripts panel provides a list of all the available user scripts for each allowed group. Clicking any of these scripts enables you to view the script, and when viewing the script, you can edit and save it or edit and save it as another user script. The User Scripts panel also indicates for each script whether it is in use. You can delete any script that is not in use. Scripts are added to the User Scripts panel by dragging and dropping the script file into the drop zone for the group on the User Scripts Drop Zone panel.

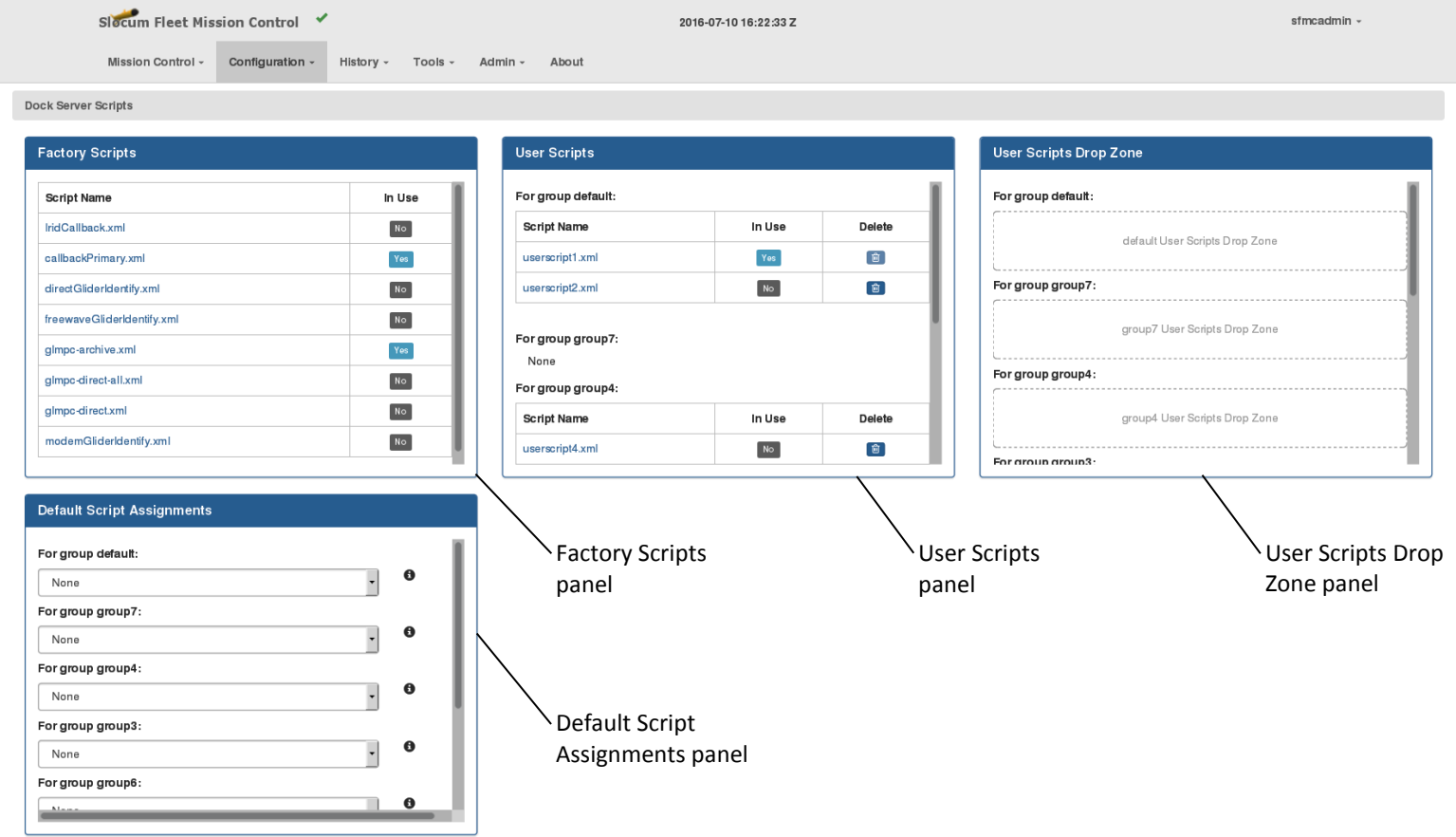


Figure 7-1 Dock Server Scripts Page

7.1.3 User Scripts Drop Zone Panel

The User Scripts Drop Zone panel enables transferring of user script files to the list of available user scripts for each allowed group on the User Scripts panel. To transfer a file, drag and drop it into the drop zone for the group.

7.1.4 Default Scripts Assignments Panel

The Default Scripts Assignments panel provides drop down lists of all the available scripts, both factory and user, for each allowed group. For each group you can select a script that will automatically be assigned and run when a glider is registered to that group by the user. If an unregistered glider connects, it will automatically be registered to the default group. In this case the script selected, if any, for the default group will be assigned and run. For any of the allowed groups, you can select *None* for no script.

7.2 Transferring a User Script File to SFMC

To transfer a user script file to SFMC:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, script files can be transferred only to the allowed groups.
2. Drag and drop the script file into the drop zone for the group on the User Scripts Drop Zone panel.

The script will be displayed for the group on the User Scripts panel.

7.3 Assigning a Default Script

A default script is automatically assigned to a glider when it first connects and is registered. However, a different default script can assigned.

To assign a default script:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only the scripts for the allowed groups can be assigned.
2. From the drop-down list for the group on the Default Script Assignments panel, select the factory or user script.

7.4 Deleting a User Script

Any user script that is not being used can be deleted.

To delete a user script:

- 1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, script files can be deleted only for the allowed groups.
- 2. Click the **Delete** button for the script on the User Scripts panel.

The Delete User Script dialog box opens as shown in Figure 7-2.

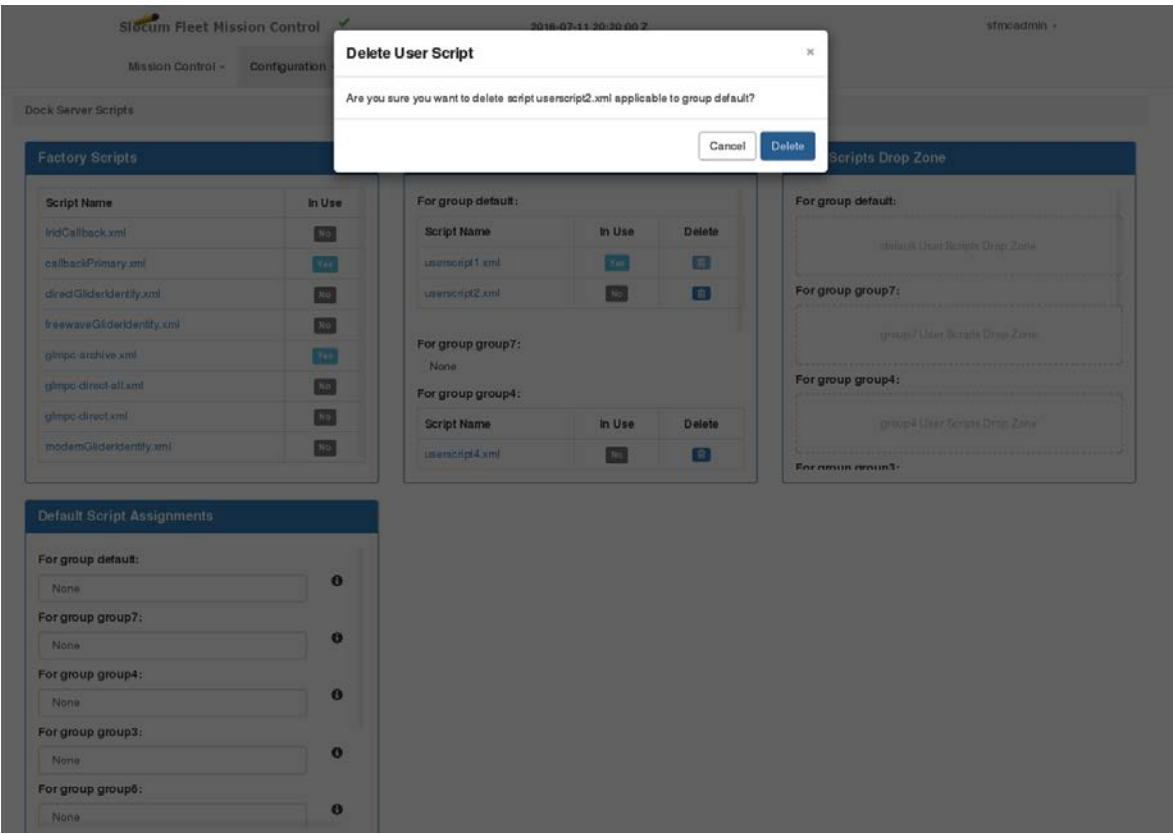


Figure 7-2 Delete User Script Dialog Box

- 3. Click **Delete**.

The user script is deleted, and the Delete User Script dialog box closes.

SECTION 8: Managing Mission Plans

A mission plan is composed of the following seven mission plan parts:

Waypoint plan. A waypoint plan is a list of waypoints that determine a glider's intended track.

Surface plan. A surface plan is a list of permanently enabled rules plus one or more optionally enabled, priority ordered rules that together dictate the conditions for when a glider is to surface.

Yo plan. A yo plan determines the dive and climb behavior of the glider, including the number of dive and climb cycles, or "yos," the dive and climb target depths, the dive and climb angles, the dive target altitude, and either the dive and climb buoyancy pump volumes or the speed control.

Sampling plan. A sampling plan determines which sensors on the glider are to be sampled versus time or depth; when they are to be sampled, such as when diving, hovering, climbing, or at the surface, or a combination of any two or more of these states; during which yos or half yos they are to be sampled; the time between samples; and the maximum and minimum depths at which to sample.

Mission Sensor plan. A mission sensor plan configures the header sensors on the glider, such as power modes, minimum altimeter depth, and flight and science transmit header options.

Abort plan. An abort plan specifies at what battery voltage below which the mission will abort.

Data Transmission plan. A data transmission plan determines what sensor data are saved in .sbd and .tbd files, which are the recommended files to transmit during the surfacings. If enabled, the sfmc.xml script will request these files at the surfacings. A data transmission plan allows you to specify when the data to be transmitted are collected, such as when diving, hovering, climbing, or at the surface, or a combination of any two or more of these states; at what intervals the data to be transmitted are collected; and during which yos or half yos the data to be transmitted are collected.

Each mission plan part is created for a specific group and therefore can only be assigned to those gliders in that group. Mission plan parts can be viewed, edited, cloned, and deleted. Once a set of seven mission plan parts are created for the same group, one or more mission plans can be completed for that group as described in "Managing a Mission Plan" on page 8-66. When installed, SFMC provides the stock mission plan "SFMC Stock Ashumet" which can be cloned and renamed as a basis for a new mission plan.

8.1 Managing a Waypoint Plan

Waypoint plans can be viewed, created, edited, cloned, and deleted.

8.1.1 Viewing a Waypoint Plan

To view a waypoint plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, waypoint plans can be viewed only for the allowed groups. For an Administrator, waypoint plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Waypoint Plans Menu*, and then choose *Waypoint Plans*.

The Waypoint Plans page opens as shown in Figure 8-1. To display more waypoint plans on a single page, select the number of them to display from the **Show Waypoint Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by waypoint plan name, groups or both by clicking the associated filter icon, and sort the list by waypoint plan name by clicking the sort icon.

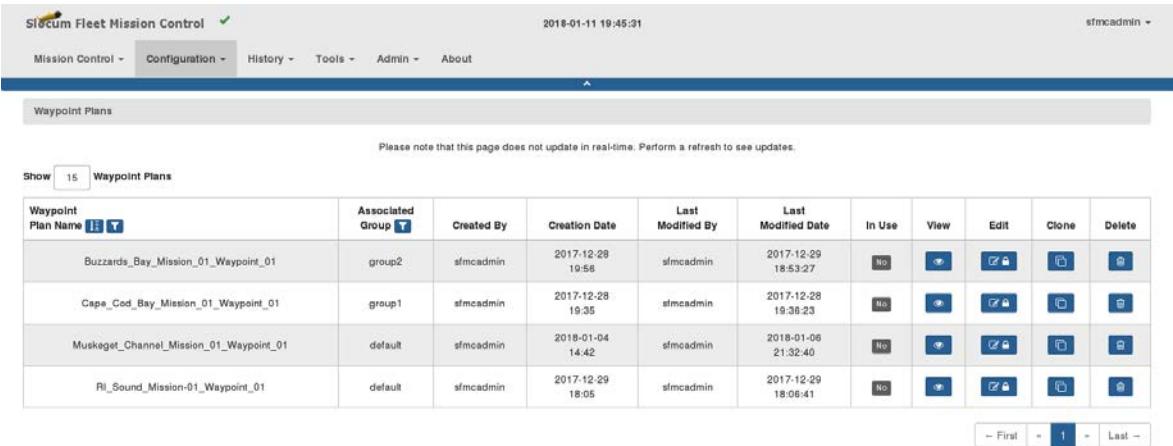


Figure 8-1 Waypoint Plans Page—Waypoint Plans

4. Click the **View** button for the waypoint plan that you want to view.

The Waypoint Plan panel opens where the waypoint plan details along with the waypoint latitude and longitude coordinates and the waypoint locations on the map are displayed as shown in Figure 8-2.

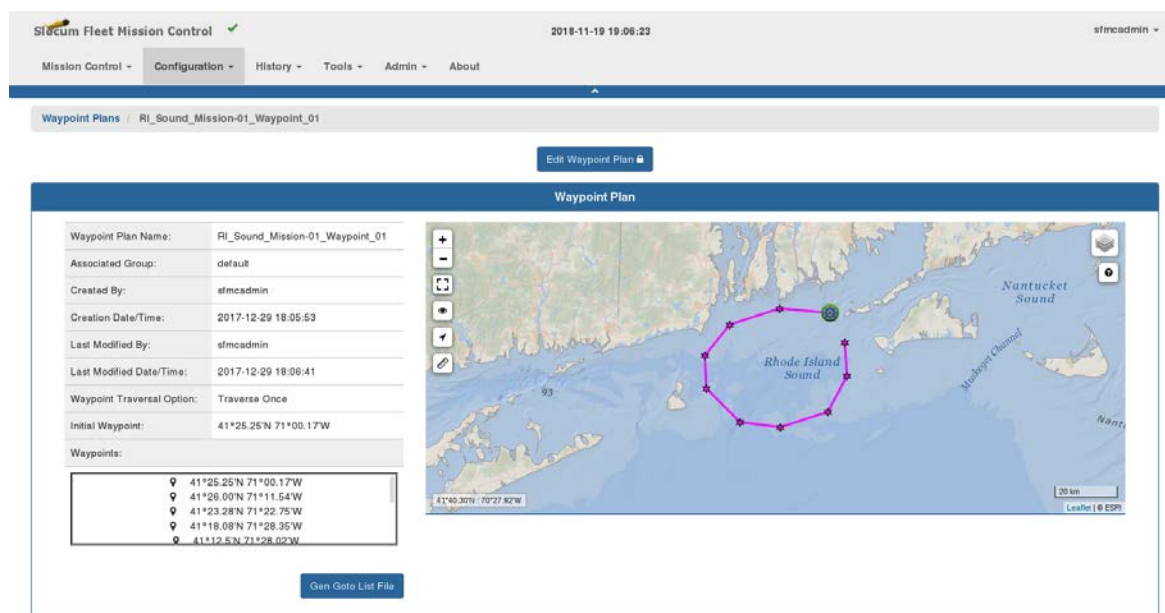


Figure 8-2 Waypoint Plan Panel—Waypoint Plan Details and Map

The Waypoint Plan panel includes the following information:

Waypoint Plan Name. The name of the waypoint plan.

Associated Group. The group associated with the waypoint plan. The waypoint plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the waypoint plan.

Creation Date/Time. The date and time the waypoint plan was created.

Last Modified By. The user account that was last used to edit the waypoint plan. "N/A" indicates that the waypoint plan has never been edited.

Last Modified Date/Time. The date and time the waypoint plan was last edited. "N/A" indicates that the waypoint plan has never been edited.

Waypoint Traversal Option. Displays whether the glider is to traverse the waypoints in the specified order only once or to traverse the waypoints in a continuous loop.

Initial waypoint. The latitude and longitude of the location of the first waypoint.

Waypoints. The latitude and longitude of the locations of all the waypoints.



NOTE If you would like to generate a goto list file from the waypoint plan without generating a full mission plan, you can click the **Gen Goto List File** button on the Waypoint Plan panel to open the Gen Goto List File dialog box and enter a two-digit mission number that will be made a part of the goto list file name. For example, goto10.ma, where the mission number is "10."

8.1.2 Creating a Waypoint Plan

A waypoint plan is created on the Waypoint Plan panel of the Waypoint Plans page which is shown in Figure 8-6 on page 8-6. The Waypoint Plan panel is composed of a form for entering the waypoint parameters and a map which is the same map as that provided on the Dashboard.

The following buttons on the map on the Waypoint Plans page, where the map is shown in Figure 8-3, are specific to waypoint planning only:

Create a multiple point waypoint plan. Enables the creation of a waypoint plan containing multiple waypoints.

Create a single point waypoint plan. Enables the creation of a waypoint plan containing only one waypoint.

Edit waypoints. Enables the editing of the displayed waypoint plan.

Remove waypoint plan. Enables the deletion of the displayed waypoint plan.

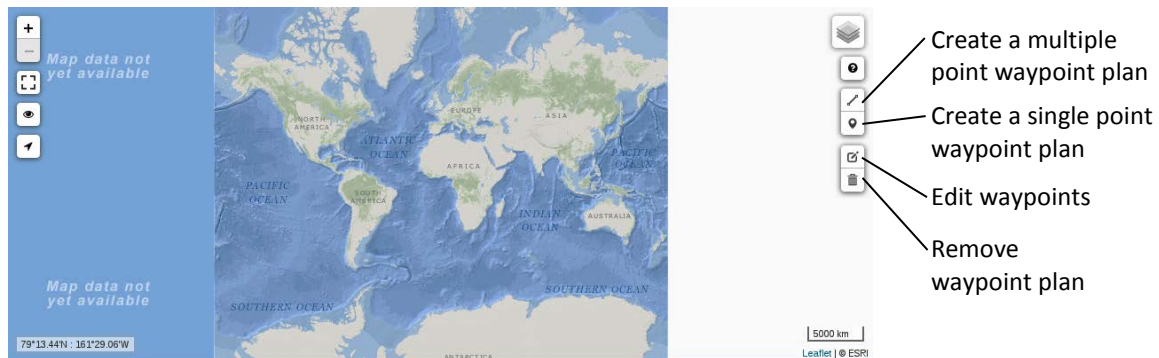


Figure 8-3 Waypoint Plan Panel—Map



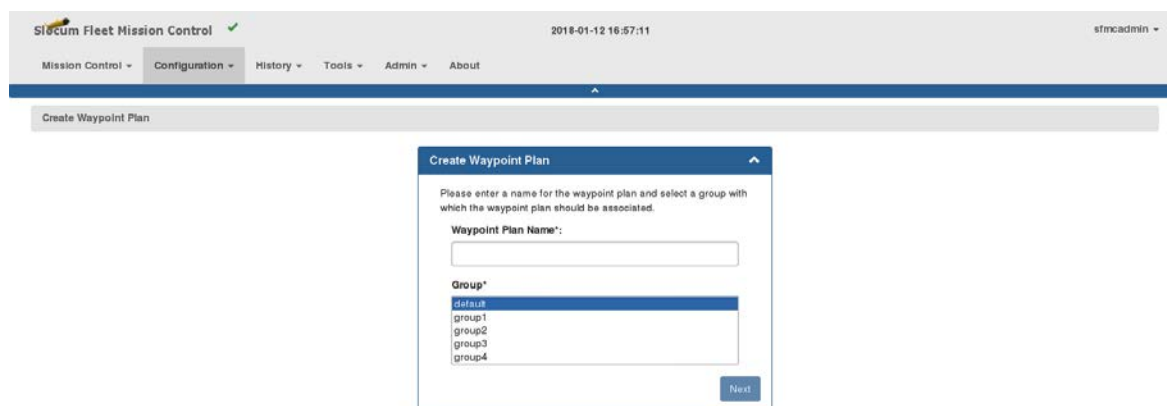
NOTE For a description of the other buttons and the displays on the Map Events panel, refer to “Map Events Panel” on page 5-1.

To create a waypoint plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, waypoint plans can be created only for the allowed groups. For an Administrator, waypoint plans can be created for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Waypoint Plans Menu*, and then choose *Create Waypoint Plan*.

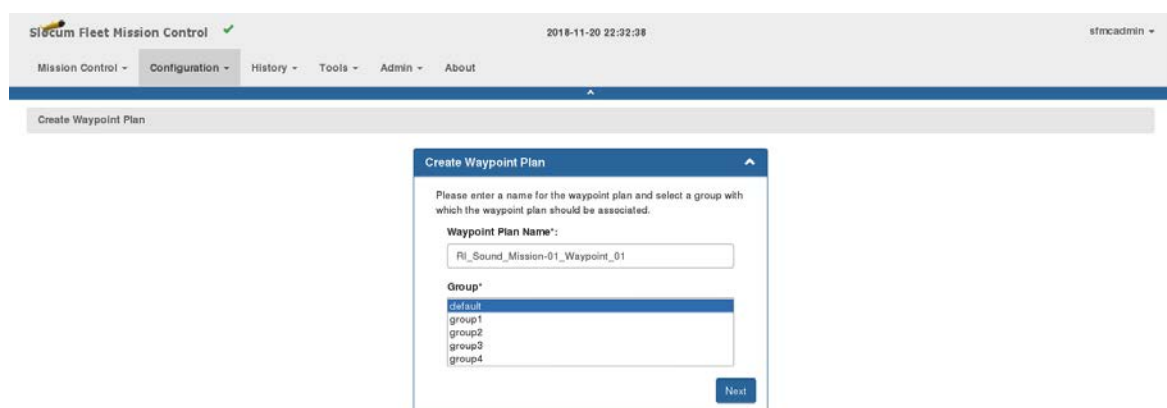
The Create Waypoint Plan panel opens as shown in Figure 8-4.



The screenshot shows the Silexum Fleet Mission Control interface. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, and the 'Create Waypoint Plan' option is selected. The main panel displays the 'Create Waypoint Plan' dialog box. It contains a text input field for 'Waypoint Plan Name*' and a dropdown menu for 'Group*'. The 'Group*' dropdown is open, showing options: 'default', 'group1', 'group2', 'group3', and 'group4'. A 'Next' button is located at the bottom right of the dialog box.

Figure 8-4 Create Waypoint Plan Panel

3. In the Create Waypoint Plan panel, enter a unique name for the waypoint plan in the **Waypoint Plan Name** text box as shown in Figure 8-5. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.



The screenshot shows the Silexum Fleet Mission Control interface. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, and the 'Create Waypoint Plan' option is selected. The main panel displays the 'Create Waypoint Plan' dialog box. The 'Waypoint Plan Name*' text box now contains the text 'Rt_Sound_Mission-01_Waypoint_01'. The 'Group*' dropdown menu is still open, showing the same options: 'default', 'group1', 'group2', 'group3', and 'group4'. A 'Next' button is located at the bottom right of the dialog box.

Figure 8-5 Create Waypoint Plan Panel—Waypoint Plan Name Entered

4. Select the group to associate with the waypoint plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.
5. Click **Next**.

The Waypoint Plan panel opens as shown in Figure 8-6.

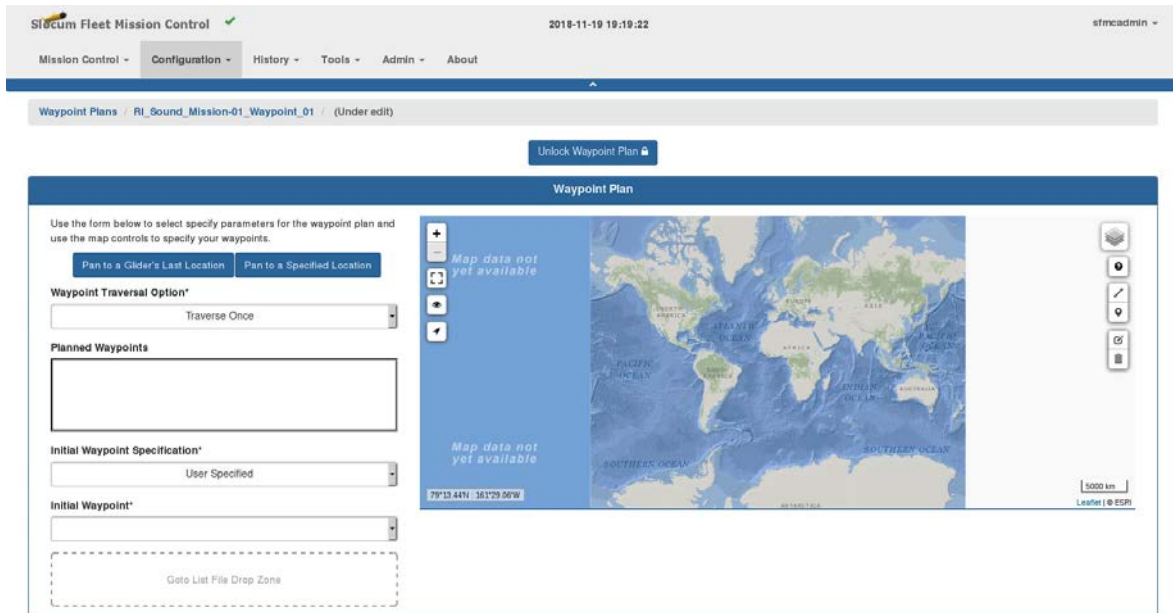


Figure 8-6 Waypoint Plan Panel

6. If desired, do one of the following:

- Click **Pan to a Specified Location** to pan to a specific location on the map. The Pan to Coordinates Form dialog box opens. Enter the latitude and longitude in degrees and decimal minutes of the location to which to pan in the Latitude (DDM) and Longitude (DDM) text boxes, and then click **Submit**. The map will pan to that location.
- Click **Pan to Glider's Last Location** to pan to the last known location of the glider of an active deployment, enabling you to create a new waypoint plan for the deployment. The glider must be in the same group associated with the waypoint plan. The Select Glider for Location Form dialog box opens. Select the glider associated with the active deployment from the drop-down list, and then click **Apply**. The map will pan to the last known location of that glider.

7. Alternately click the Zoom in/Zoom out button and click and drag on the map to go to the initial waypoint region as shown in Figure 8-7.



NOTE If a *goto_l10.ma* file is available for the desired waypoint plan, you can drag and drop the file into the **Goto List File Drop Zone** on the Waypoint Plan panel, and then go directly to Step 9.

8. For a waypoint plan containing multiple waypoints, click the Create a multiple point waypoint plan button on the map, then click the location of the initial waypoint on the map followed by the locations of every other waypoint.

The screenshot shows the 'Waypoint Plan' panel in the Slocum Fleet Mission Control software. The interface includes a top navigation bar with 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The main panel is titled 'Waypoint Plan' and contains a map of Nantucket Sound and surrounding areas. To the left of the map is a form for configuring waypoints. The form includes a 'Waypoint Traversal Option' dropdown set to 'Traverse Once', a 'Planned Waypoints' list, an 'Initial Waypoint Specification' dropdown set to 'User Specified', and an 'Initial Waypoint' text box. A 'Goto List File Drop Zone' is also visible at the bottom of the form.

Figure 8-7 Waypoint Plan Panel—Initial Waypoint Region

Double-click the last one to finish. For a single point waypoint plan, click the **Create a single point waypoint plan** button, then click in the map at the waypoint location.

The initial waypoint location in latitude and longitude degrees and decimal minutes is displayed in the **Initial Waypoint** text box as shown in Figure 8-8, and all the waypoint locations are listed in the **Planned Waypoints** drop-down list. The initial waypoint location is displayed on the map as a target icon, and the others, as star icons.

9. From the **Waypoint Traversal Option** drop-down list, select *Traverse Once* to instruct glider to traverse the waypoints only once in the specified order, or *Loop Forever* to instruct the glider to traverse the waypoints in a continuous loop.
10. From the **Initial Waypoint Specification** drop-down list, select *User Specified* to specify that the glider is to go to the operator specified initial waypoint; select *Closest* to specify that the glider is to go to the closest waypoint first when deployed; or select *One After Last Achieved* to specify that if a waypoint in the list is the one that the glider last achieved, then the glider is go to the next planned waypoint.

The waypoint plan is automatically saved.

11. If desired, click inside the **Initial Waypoint** text box to open a drop-down list, and then select a different initial waypoint location. This drop-down list is only available when *User Specified* is selected from the **Initial Waypoint Specification** drop-down list.

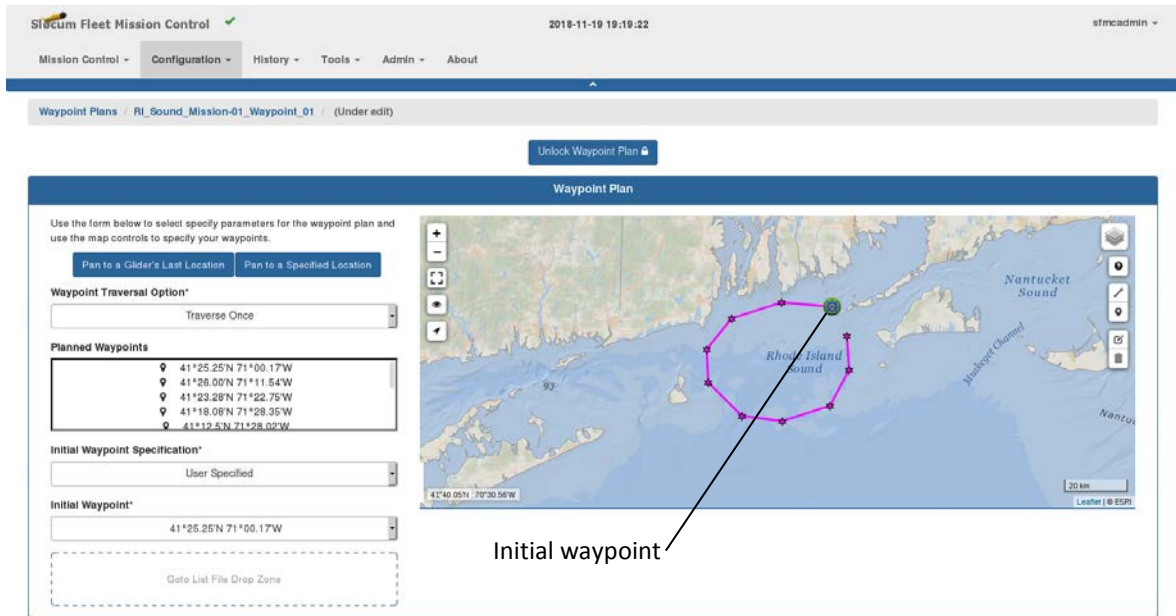


Figure 8-8 Waypoint Plan Panel—Waypoint Locations

The new initial waypoint location is displayed on the map as shown in Figure 8-9, and the waypoint plan is automatically saved.

12. If desired, click **Unlock Waypoint Plan**.

The waypoint plan is unlocked, and the Waypoint Plan panel displays the edited waypoint plan details. You can also click **Edit Waypoint Plan** and make and save additional edits.

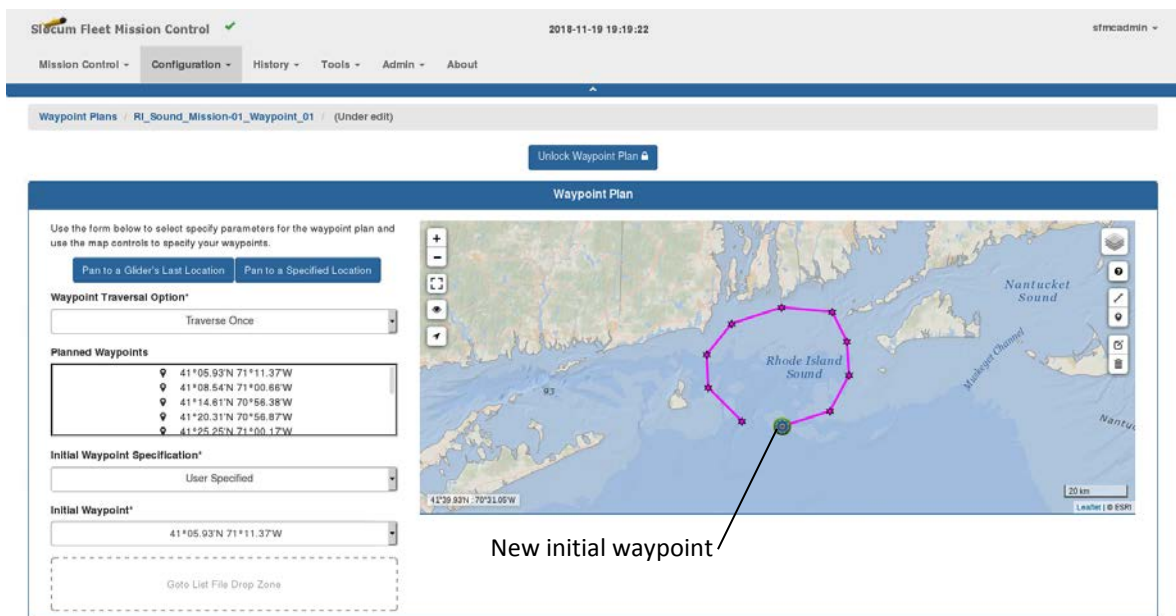


Figure 8-9 Waypoint Plan Panel—New Initial Waypoint Location Selected

8.1.3 Editing a Waypoint Plan

Once saved, a waypoint plan can be edited at any time to include moving, adding and deleting waypoints. You can begin editing a waypoint plan directly from the Waypoint Plans page or when viewing the waypoint plan as described in “Viewing a Waypoint Plan” on page 8-2. While editing a waypoint plan, it is locked to all other user accounts until the editing is completed. However, a locked waypoint plan can be cloned as described in “Cloning a Waypoint Plan” on page 8-12, and then edited. If the waypoint plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited waypoint plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a waypoint plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, waypoint plans can be edited only for the allowed groups. For an Administrator, waypoint plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Waypoint Plans Menu*, and then choose *Waypoint Plans*.

The Waypoint Plans page opens as shown in Figure 8-1 on page 8-2. To display more waypoint plans on a single page, select the number of them to display from the **Show Waypoint Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by waypoint plan name, groups or both by clicking the associated filter icon, and sort the list by waypoint plan name by clicking the sort icon.
4. Click the **Edit** button for the waypoint plan that you want to edit, or click the **View** button for it to view the waypoint plan first, and then click the **Edit Waypoint Plan** button just above the Waypoint Plan panel.

The Waypoint Plans page opens to the Waypoint Plan panel of the waypoint plan to be edited as shown Figure 8-10. The waypoint plan also becomes locked for editing by any other user account.

5. Click the **Edit waypoints** button on the right side of the map.

The lines connecting the waypoints become dashed. In addition, white drag handles mark the waypoint locations, and clear drag handles mark the center of the path between each waypoint location as shown in Figure 8-11.

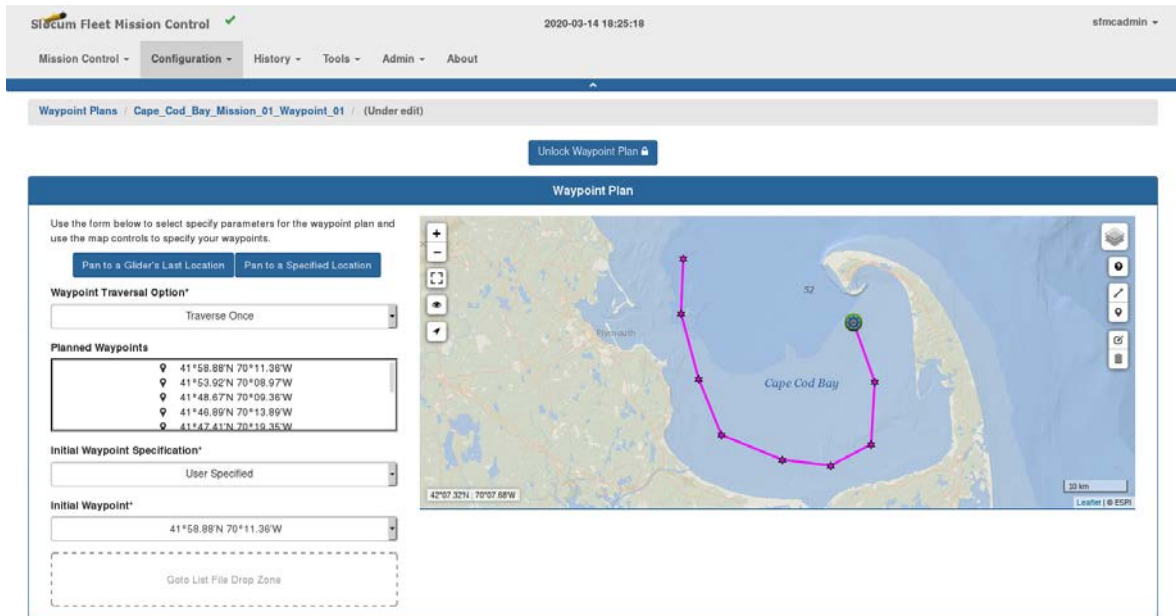


Figure 8-10 Waypoint Plan Panel—Waypoint Plan to be Edited

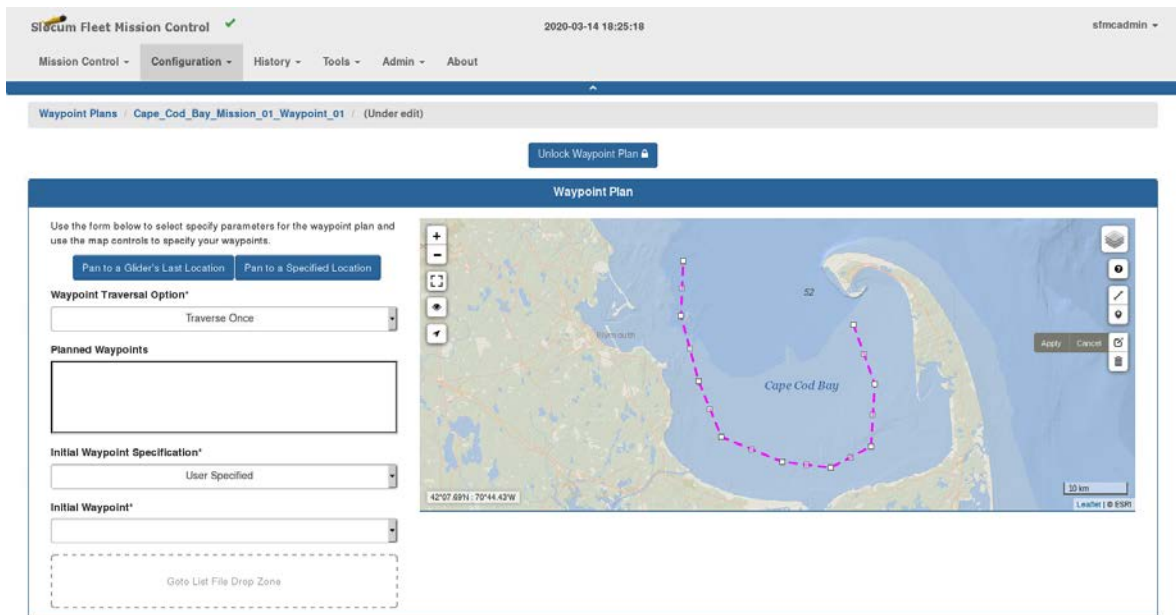


Figure 8-11 Waypoint Plan Panel—Drag Handles Added for Editing

6. Do any one or more of the following:

- To move a waypoint, click and drag its white drag handle to the new location as shown in Figure 8-12.

- To add a waypoint, click and drag a clear center drag handle to the waypoint location as shown in Figure 8-13. The drag handle turns into a waypoint and two new drag handles are added.
- To remove a waypoint, just click it's white drag handle.

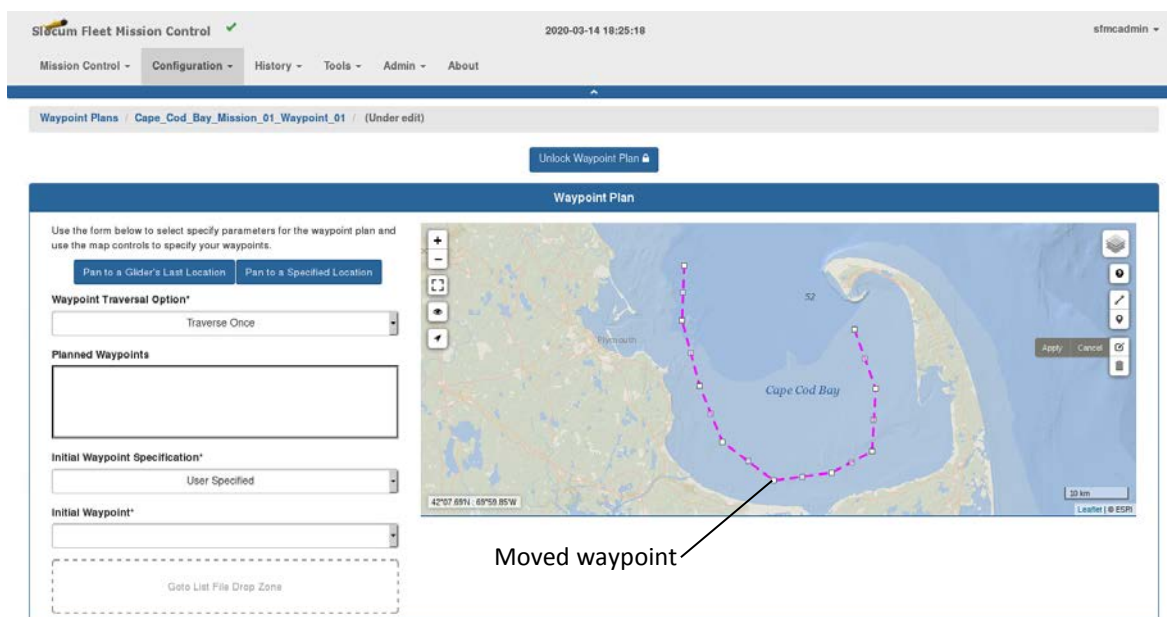


Figure 8-12 Waypoint Plan Panel—Moved Waypoint

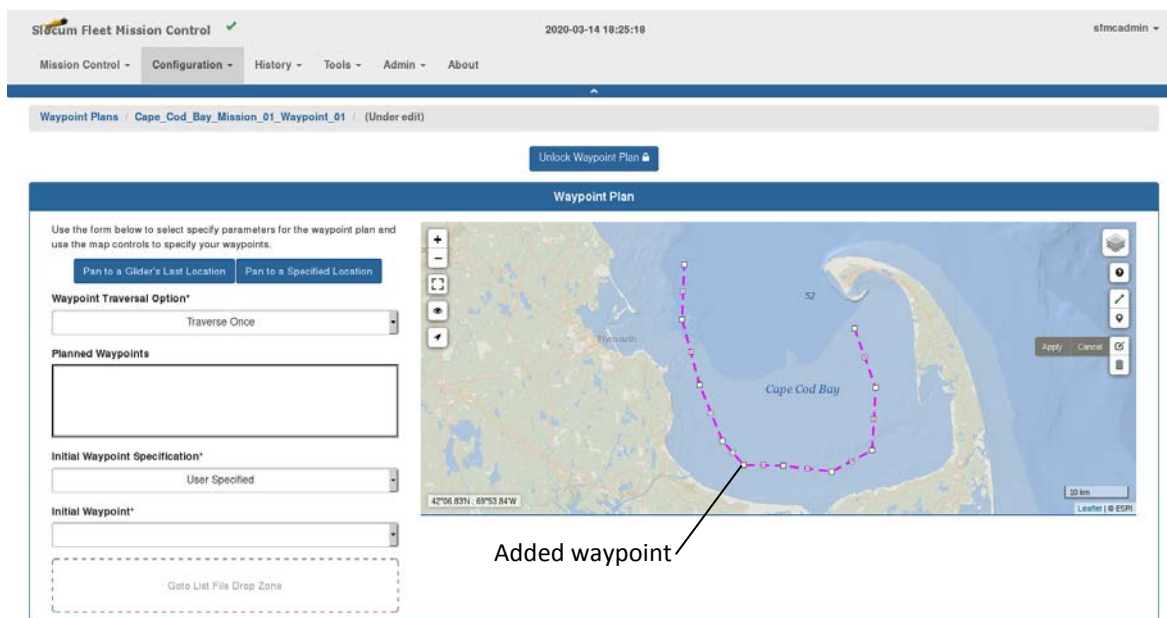


Figure 8-13 Waypoint Plan Panel—Added Waypoint

- Click **Apply** next to the **Edit waypoints** button on the map to save the edits. Clicking **Cancel** cancels all the changes.

The lines connecting the waypoints become solid again as shown in Figure 8-14.

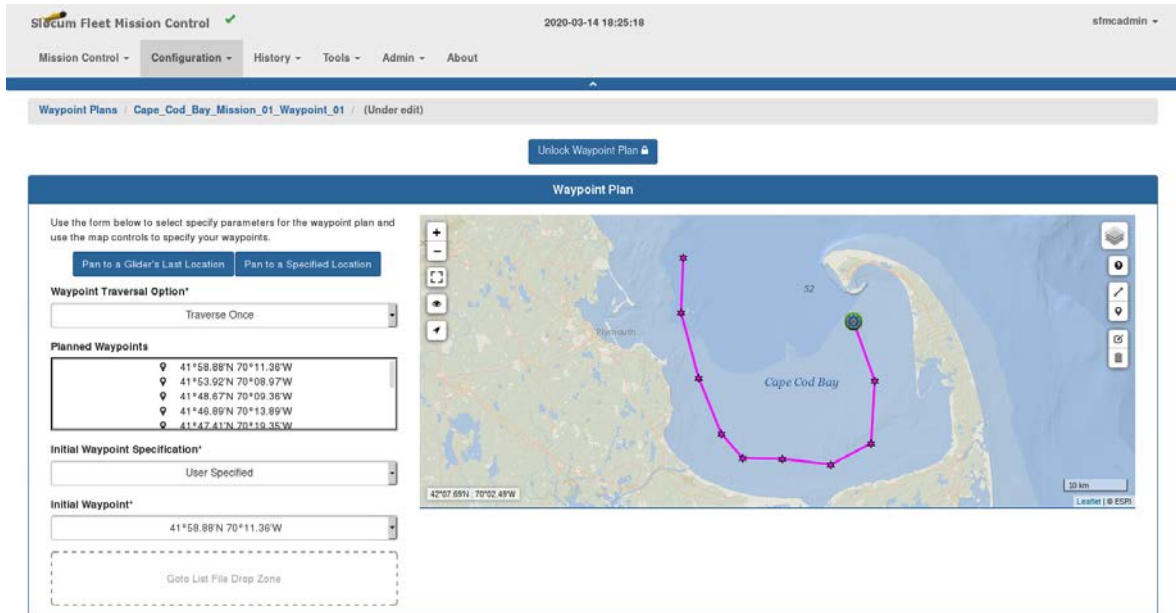


Figure 8-14 Waypoint Plan Panel—Edited and Saved Waypoint Plan

- If desired, make any other changes.
The waypoint plan is automatically saved.

- If desired, click **Unlock Waypoint Plan**.

The waypoint plan is unlocked, and the Waypoint Plan panel displays the edited waypoint plan details. You can also click **Edit Waypoint Plan** and make and save additional edits.

8.1.4 Cloning a Waypoint Plan

A waypoint plan can be cloned. Cloning provides an efficient means to create one or more similar waypoint plans from the original one which can then be edited.

To clone a waypoint plan:

- Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, waypoint plans can be cloned only for the allowed groups. For an Administrator, waypoint plans can be cloned for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Waypoint Plans Menu*, and then choose *Waypoint Plans*.

The Waypoint Plans page opens as shown in Figure 8-1 on page 8-2. To display more waypoint plans on a single page, select the number of them to display from the **Show Waypoint plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by waypoint plan name, groups or both by clicking the associated filter icon, and sort the list by waypoint plan name by clicking the sort icon.

4. Click the **Clone** button for the waypoint plan that you want to clone.

The Clone Waypoint Plan dialog box opens.

5. Enter a name for the waypoint plan in the **Waypoint plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Waypoint Plans page opens to the Waypoint Plan panel of the waypoint plan to be cloned.

6. If desired, make any required changes.

7. If desired, click **Unlock Waypoint Plan**.

The waypoint plan is unlocked, and the Waypoint Plan panel displays the edited waypoint plan details. You can also click **Edit Waypoint Plan** and make and save additional edits.

8.1.5 Deleting a Waypoint Plan

To be able to delete a waypoint plan, it must not be in use.

To delete a waypoint plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, waypoint plans can be deleted only for the allowed groups. For an Administrator, waypoint plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Waypoint Plans Menu*, and then choose *Waypoint Plans*.

The Waypoint Plans page opens as shown in Figure 8-15. To display more waypoint plans on a single page, select the number of them to display from the **Show Waypoint Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Slocum Fleet Mission Control 2018-01-15 17:05:35 sfmcadmin

Mission Control Configuration History Tools Admin About

Waypoint Plans

Please note that this page does not update in real-time. Perform a refresh to see updates.

Show 15 Waypoint Plans

Waypoint Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Waypoint_01	group2	sfmcadmin	2017-12-28 19:56	sfmcadmin	2017-12-29 18:53:27	Yes				
Cape_Cod_Bay_Mission_01_Waypoint_01	group1	sfmcadmin	2017-12-28 19:35	sfmcadmin	2018-01-14 20:40:11	Yes				
Muskeget_Channel_Mission_01_Waypoint_01	default	sfmcadmin	2018-01-04 14:42	sfmcadmin	2018-01-14 00:32:07	Yes				
Nantucket_Sound_Mission_01_Waypoint_01	default	sfmcadmin	2018-01-12 19:04	sfmcadmin	2018-01-12 19:34:21	No				
Ri_Sound_Mission_01_Waypoint_01	default	sfmcadmin	2017-12-29 18:05	sfmcadmin	2017-12-29 18:08:41	Yes				

First 1 Last

Figure 8-15 Waypoint Plans Page—Waypoint Plan Available for Deletion

3. If desired, filter the list by waypoint plan name, groups or both by clicking the associated filter icon, and sort the list by waypoint plan name by clicking the sort icon.
4. Click the **Delete** button for the waypoint plan that you want to delete. This button is available only for waypoint plans that are not in use.

The Delete Waypoint Plan dialog box opens as shown in Figure 8-16.

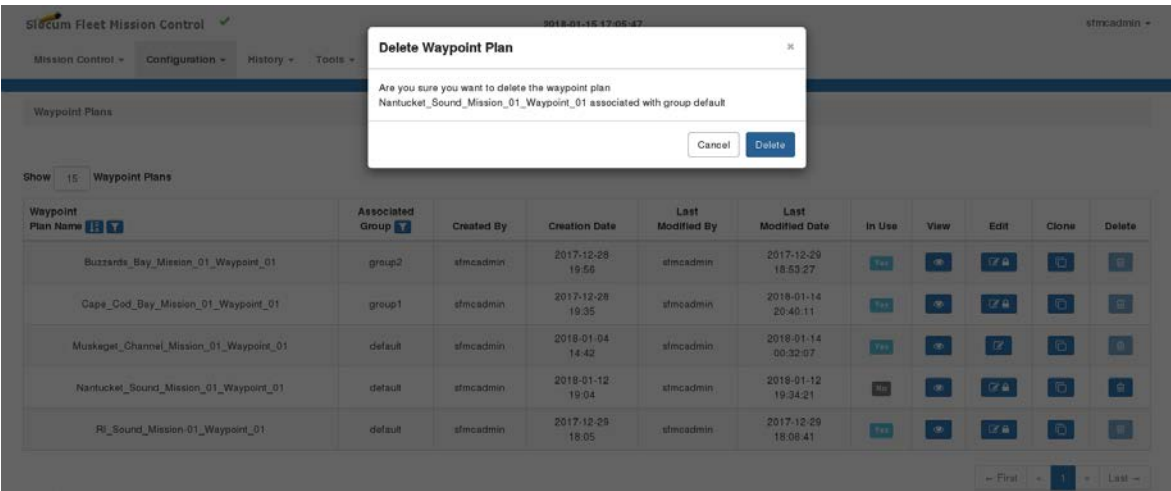


Figure 8-16 Delete Waypoint Plan Dialog Box

5. Click **Delete**.

The waypoint plan is deleted, and the Delete Waypoint Plan dialog box closes.

8.2 Managing a Surface Plan

Surface plans can be viewed, created, edited, cloned, and deleted.

8.2.1 Viewing a Surface Plan

To view a surface plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, surface plans can be viewed only for the allowed groups. For an Administrator, surface plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Surface Plans Menu*, and then choose *Surface Plans*.

The Surface Plans page opens as shown in Figure 8-17. To display more surface plans on a single page, select the number of them to display from the **Show Surface Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by surface plan name, groups or both by clicking the associated filter icon, and sort the list by surface plan name by clicking the sort icon.

Surface Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Surface_01	group2	sfmadmin	2017-12-28 20:05	sfmadmin	2018-01-07 17:58:04	Yes				
Cape_Cod_Bay_Mission-01_Surface-1	group1	sfmadmin	2017-12-28 19:42	sfmadmin	2018-01-04 15:43:40	Yes				
Muskeget_Channel_Mission_01_Surface_01	default	sfmadmin	2018-01-04 14:44	sfmadmin	2018-01-07 00:32:25	Yes				
RI_Sound_Mission-01_Surface_01	default	sfmadmin	2017-12-29 18:07	sfmadmin	2018-01-07 17:32:33	Yes				

Figure 8-17 Surface Plans Page—Surface Plans

4. Click the **View** button for the surface plan that you want to view.

The Surface Plan Details panel opens where the surface plan details are displayed as shown in Figure 8-18.

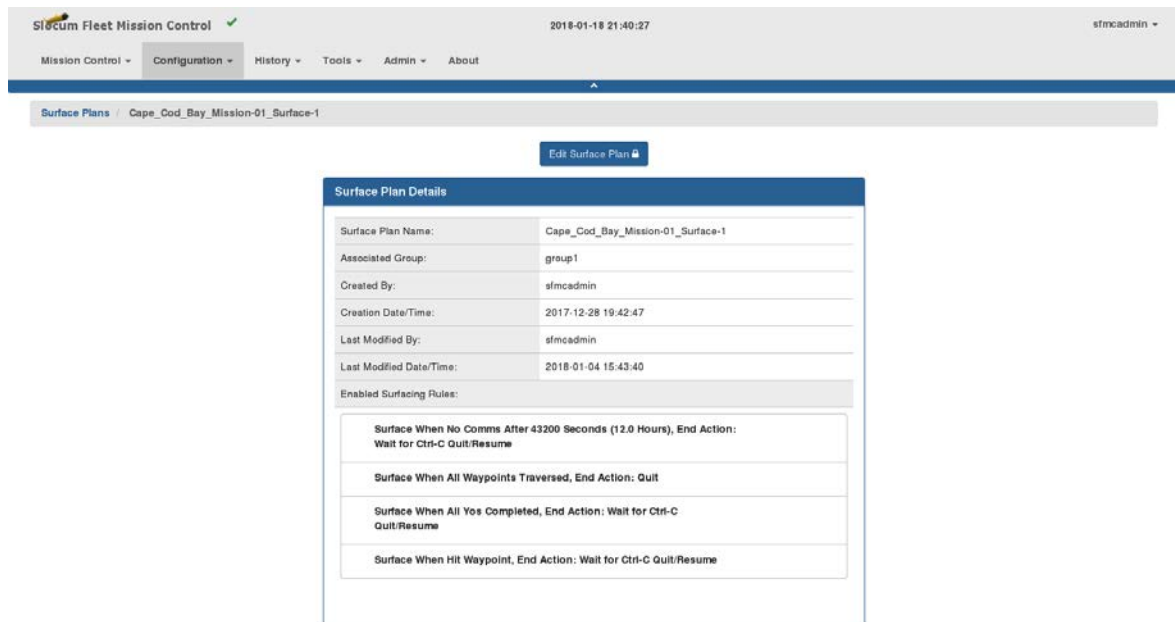


Figure 8-18 Surface Plan Details Panel

The Surface Plan Details panel includes the following information:

Surface Plan Name. The name of the surface plan.

Associated Group. The group associated with the surface plan. The surface plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the surface plan.

Creation Date/Time. The date and time the surface plan was created.

Last Modified By. The user account that was last used to edit the surface plan. "N/A" indicates that the surface plan has never been edited.

Last Modified Date/Time. The date and time the surface plan was last edited. "N/A" indicates that the surface plan has never been edited.

Enabled Surfacing Rules. Displays a list of enabled surface plan rules.

8.2.2 Creating a Surface Plan

A surface plan is created on the Surface Plan panel of the Surface Plans page which is shown in Figure 8-21 on page 8-18. The Surface Plan panel is composed of a Surface Plan Rule Options area on the left, which provides a list of optional surface plan rules that can be enabled, and an Enabled Surface Plan Rules area on the right, which provides a list of enabled surface plan rules.

To create a surface plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, surface plans can be edited only for the allowed groups. For an Administrator, surface plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Surface Plans Menu*, and then choose *Create Surface Plan*.

The Create Surface Plan panel opens as shown in Figure 8-19.

The screenshot shows the 'Create Surface Plan' panel within the 'Slacum Fleet Mission Control' application. The panel has a title bar with an upward arrow. Below the title bar, there is a message: 'Please enter a name for the surface plan and select a group with which the surface plan should be associated.' This is followed by two input fields: 'Surface Plan Name:' and 'Group:'. The 'Surface Plan Name' field is empty. The 'Group' field is a dropdown menu with 'default' selected, and other options listed are 'group1', 'group2', 'group3', and 'group4'. A 'Next' button is located at the bottom right of the panel. The background shows the application's navigation menu with 'Configuration' selected, and the user 'stmcadmin' is logged in.

Figure 8-19 Create Surface Plan Panel

3. In the Create Surface Plan panel, enter a unique name for the surface plan in the **Surface Plan Name** text box as shown in Figure 8-20. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.

This screenshot is similar to Figure 8-19, but the 'Surface Plan Name' field now contains the text 'Nantucket_Sound_Mission_01_Surface_01'. The 'Group' dropdown remains set to 'default'. The 'Next' button is still present at the bottom right. The application header and navigation menu are consistent with the previous figure.

Figure 8-20 Create Surface Plan Panel—Surface Plan Name Entered

4. Select the group to associate with the surface plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.
5. Click **Next**.

The Surface Plan panel opens as shown in Figure 8-21.

Figure 8-21 Surface Plan Panel

6. If desired, in the Surface Plan Rule Options area of the Surface Plan panel, select one or more optional surface plan rules by first clicking the **Add this surface rule** button as follows:
 - Select **Surface When Hit Waypoint** to have the glider surface when it hits a waypoint. The Hit Waypoint Rule Form dialog box opens as shown in Figure 8-22. Select the rule from the **End Action** drop-down list.
 - Select **Surface Every So Many Seconds After Mission Start** to have the glider surface every fixed number of seconds after the start of the mission. The Every So Many Seconds After Mission Start Rule Form dialog box opens as shown in Figure 8-23. Enter or select the time in seconds in the **Number of Seconds** spin box. Select the rule from the **End Action** drop-down list.
 - Select **Surface at UTC Time** to have the glider surface at a specific date and UTC time. The At UTC Time Rule Form dialog box opens as shown in Figure 8-24 on page 8-20. Enter the date and the UTC time in the **UTC Time** text box in yyyy-mm-dd hh:mm format, or enter just the time and then click the calendar icon to the right of the text box and select the date. Select the rule from the **End Action** drop-down list.

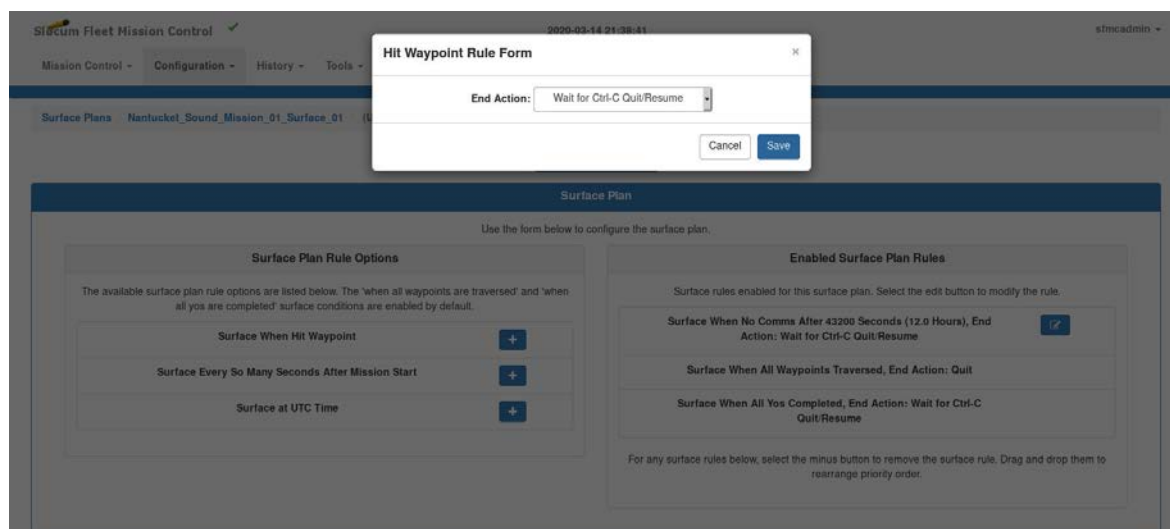


Figure 8-22 Hit Waypoint Rule Form Dialog Box

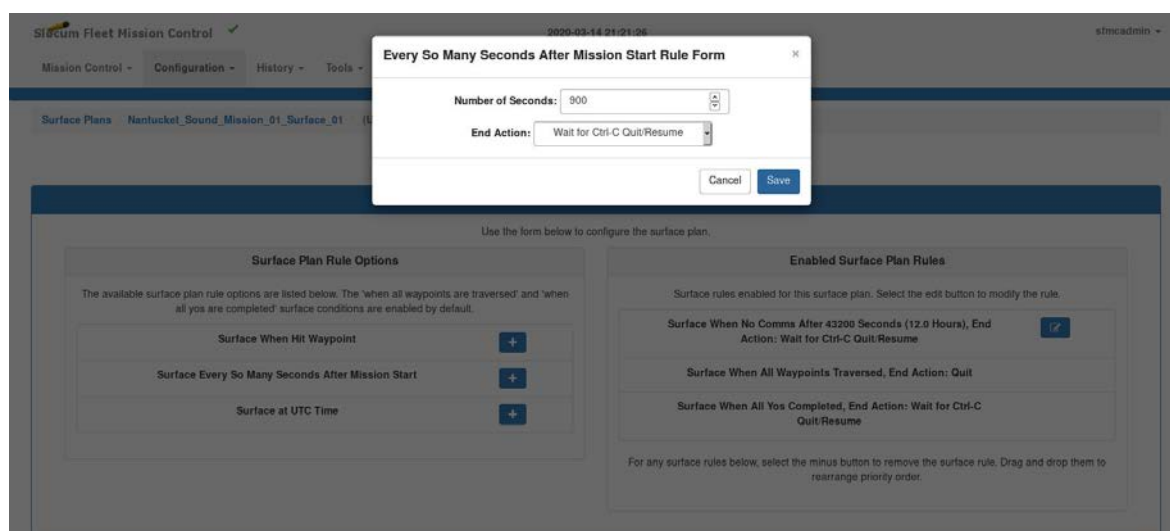


Figure 8-23 Every So Many Seconds After Mission Start Rule Form Dialog Box

Then, if applicable, choose one of the following from the **End Action** drop-down list for each, and then click **Save**:

- *Wait for Ctrl-C Quit/Resume* to require the operator to enter Ctrl-C to end the mission or to do nothing to have the glider continue the mission.
- *Quit* to have the glider quit the mission.

All the saved optional selections are listed in the Enabled Surface Plan Rules area as shown in Figure 8-25 where they can be edited or removed.

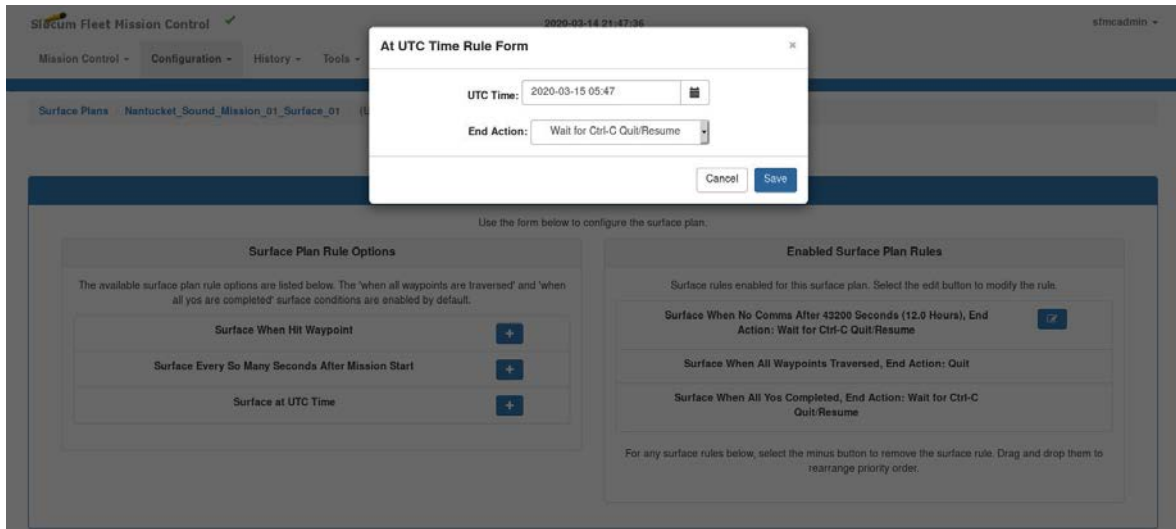


Figure 8-24 At UTC Time Rule Form Dialog Box

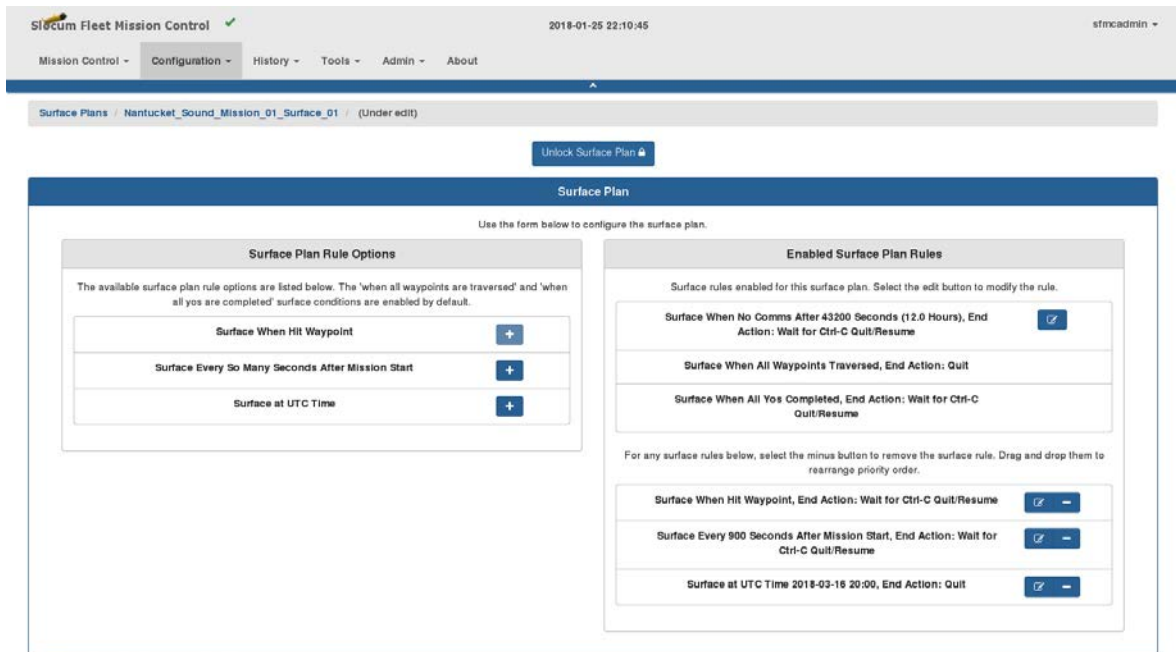


Figure 8-25 Surface Plan Panel—after Adding Surface Plan Rule Options

7. If desired, and if more than one optional surface plan rule is selected, drag and drop the selections, one at a time, to order them such that the priority is top down.

The surface plan is automatically saved.

8. If desired, click **Unlock Surface Plan**.

The surface plan is unlocked, and the Surface Plan Details panel displays the surface plan details.

8.2.3 Editing a Surface Plan

Once saved, a surface plan can be edited at any time to include modifying, adding, and deleting the surface plan rules. You can begin editing a surface plan directly from the Surface Plans page or when viewing the surface plan as described in “Viewing a Surface Plan” on page 8-15. While editing a surface plan, it is locked to all other user accounts until the editing is completed. However, the surface plan can be cloned as described in “Cloning a Surface Plan” on page 8-22, and then edited. If the surface plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited surface plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a surface plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, surface plans can be edited only for the allowed groups. For an Administrator, surface plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Surface Plans Menu*, and then choose *Surface Plans*.

The Surface Plans page opens as shown in Figure 8-17 on page 8-15. To display more surface plans on a single page, select the number of them to display from the **Show Surface Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by surface plan name, groups or both by clicking the associated filter icon, and sort the list by surface plan name by clicking the sort icon.
4. Click the **Edit** button for the surface plan that you want to edit, or click the **View** button for it to view the surface plan first, and then click the **Edit Surface Plan** button just above the Surface Plan panel.

The Surface Plans page opens to the Surface Plan panel of the surface plan to be edited as shown Figure 8-26. The surface plan also becomes locked for editing by any other user account.

5. In the Enabled Surface Plan Rules area of the Surface Plan panel, click the **Modify the settings for this surface rule** button for each surface plan rule that you want to edit and make the changes. To remove a surface plan rule, click the **Remove this surface rule** button for it, and then click **Delete** in the Delete Surface Plan Rule

The screenshot shows the Siscum Fleet Mission Control web application. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The current page is 'Surface Plans / Nantucket_Sound_Mission_01_Surface_01 / (Under edit)'. A 'Unlock Surface Plan' button is visible. The main panel, titled 'Surface Plan', contains two sections: 'Surface Plan Rule Options' and 'Enabled Surface Plan Rules'. The 'Surface Plan Rule Options' section lists three available rules: 'Surface When Hit Waypoint', 'Surface Every So Many Seconds After Mission Start', and 'Surface at UTC Time', each with an 'Add' button. The 'Enabled Surface Plan Rules' section shows three rules already added to the plan, each with an 'Edit' button. The rules are: 'Surface When No Comms After 43200 Seconds (12.0 Hours), End Action: Wait for Ctrl-C Quit/Resume', 'Surface When All Waypoints Traversed, End Action: Quit', and 'Surface When All Yos Completed, End Action: Wait for Ctrl-C Quit/Resume'. Below these, there is a section for removing rules, showing three rules with 'Remove' buttons: 'Surface When Hit Waypoint, End Action: Wait for Ctrl-C Quit/Resume', 'Surface Every 900 Seconds After Mission Start, End Action: Wait for Ctrl-C Quit/Resume', and 'Surface at UTC Time 2020-03-15 06:32, End Action: Wait for Ctrl-C Quit/Resume'.

Figure 8-26 Surface Plan Panel—Surface Plan to be Edited

Form dialog box. To change the priority of a surface plan rule, drag and drop it up or down in the list. To add a surface plan rule, click the **Add this surface rule** button for the rule in the Surface Plan Rule Options area of the Surface Plan panel.

The surface plan is automatically saved.

6. If desired, click **Unlock Surface Plan.**

The surface plan is unlocked, and the Surface Plan panel displays the edited surface plan details. You can also click **Edit Surface Plan** and make and save additional edits.

8.2.4 Cloning a Surface Plan

A surface plan can be cloned. Cloning provides an efficient means to create one or more similar surface plans from the original one which can then be edited.

To clone a surface plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, surface plans can be cloned only for the allowed groups. For an Administrator, surface plans can be cloned for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Surface Plans Menu*, and then choose *Surface Plans*.

The Surface Plans page opens as shown in Figure 8-17 on page 8-15. To display more surface plans on a single page, select the number of them to display from the **Show Surface Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by surface plan name, groups or both by clicking the associated filter icon, and sort the list by surface plan name by clicking the sort icon.
4. Click the **Clone** button for the surface plan that you want to clone.

The Clone Surface Plan dialog box opens.

5. Enter a name for the surface plan in the **Surface Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Surface Plans page opens to the Surface Plan panel of the surface plan to be cloned.

6. If desired, make any required changes.

The surface plan is automatically saved.

7. If desired, click **Unlock Surface Plan**.

The surface plan is unlocked, and the Surface Plan Details panel displays the edited surface plan details. You can also click **Edit Surface Plan** and make and save additional edits.

8.2.5 Deleting a Surface Plan

To be able to delete a surface plan, it must not be in use.

To delete a surface plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, surface plans can be deleted only for the allowed groups. For an Administrator, waypoint plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Surface Plans Menu*, and then choose *Surface Plans*.

The Surface Plans page opens as shown in Figure 8-27. To display more surface plans on a single page, select the number of them to display from the **Show Surface Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

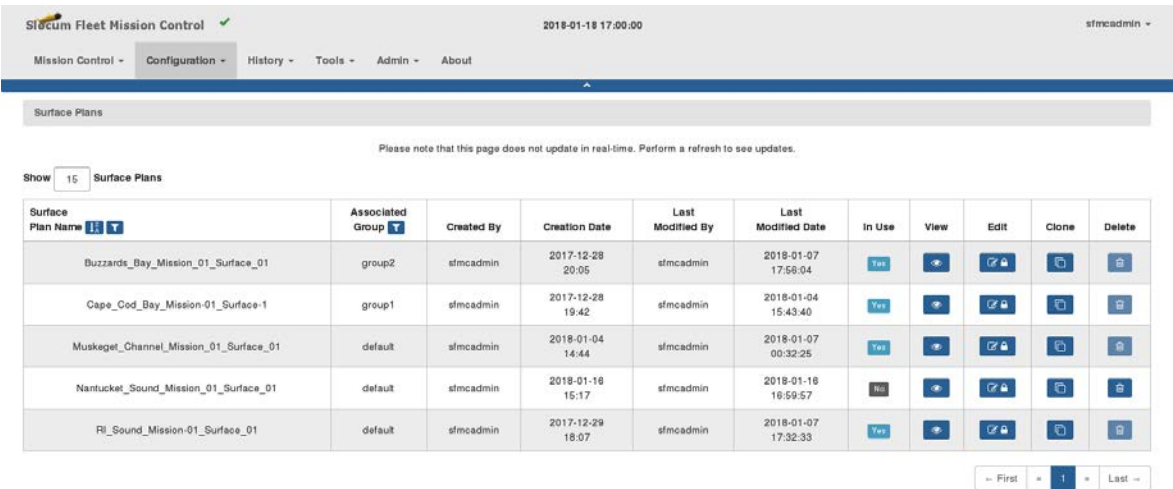


Figure 8-27 Surface Plans Page—Surface Plan Available for Deletion

3. If desired, filter the list by surface plan name, groups or both by clicking the associated filter icon, and sort the list by surface plan name by clicking the sort icon.
4. Click the **Delete** button for the surface plan that you want to delete. This button is available only for surface plans that are not in use.

The Delete Surface Plan dialog box opens as shown in Figure 8-28.

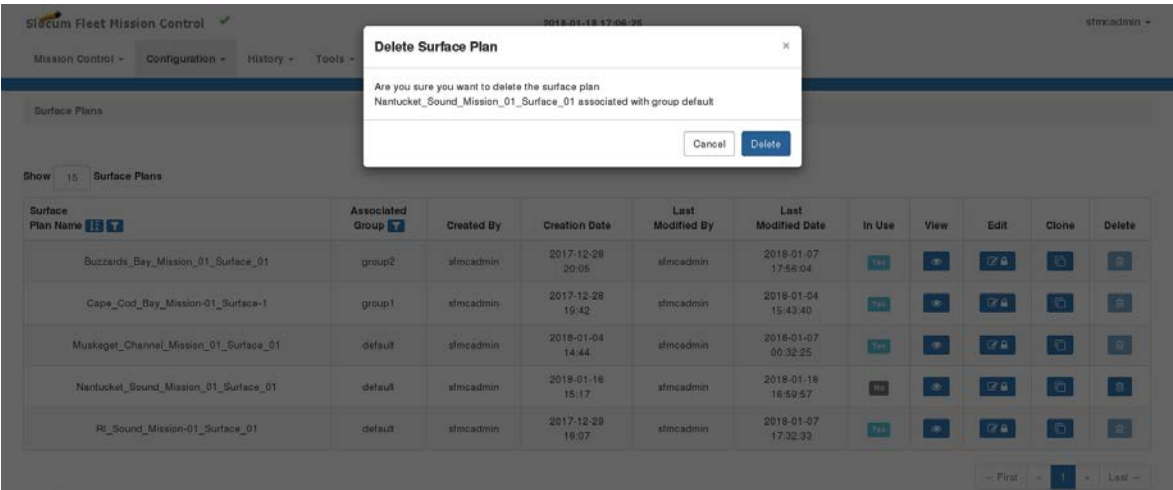


Figure 8-28 Delete Surface Plan Dialog Box

5. Click **Delete**.

The surface plan is deleted, and the Delete Surface Plan dialog box closes.

8.3 Managing a Yo Plan

Yo plans can be viewed, created, edited, cloned, and deleted.

8.3.1 Viewing a Yo Plan

To view a yo plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, yo plans can be viewed only for the allowed groups. For an Administrator, yo plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Yo Plans Menu*, and then choose *Yo Plans*.

The Yo Plans page opens as shown in Figure 8-29. To display more yo plans on a single page, select the number of them to display from the **Show Yo Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by yo plan name, groups or both by clicking the associated filter icon, and sort the list by yo plan name by clicking the sort icon.

Yo Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Yo_01	group2	sfmcadmin	2017-12-28 20:08	N/A	N/A	Yes				
Cape_Cod_Bay_Mission_01_Yo_01	group1	sfmcadmin	2017-12-28 19:48	N/A	N/A	Yes				
Muskeget_Channel_Mission_01_Yo_01	default	sfmcadmin	2018-01-04 14:47	sfmcadmin	2018-01-05 16:22:13	Yes				
RI_Sound_Mission_01_Yo_01	default	sfmcadmin	2017-12-29 18:08	sfmcadmin	2018-01-06 23:41:21	Yes				

Figure 8-29 Yo Plans Page—Yo Plans

4. Click the **View** button for the yo plan that you want to view.

The Yo Plan Details panel opens where the yo plan details are displayed as shown in Figure 8-30.

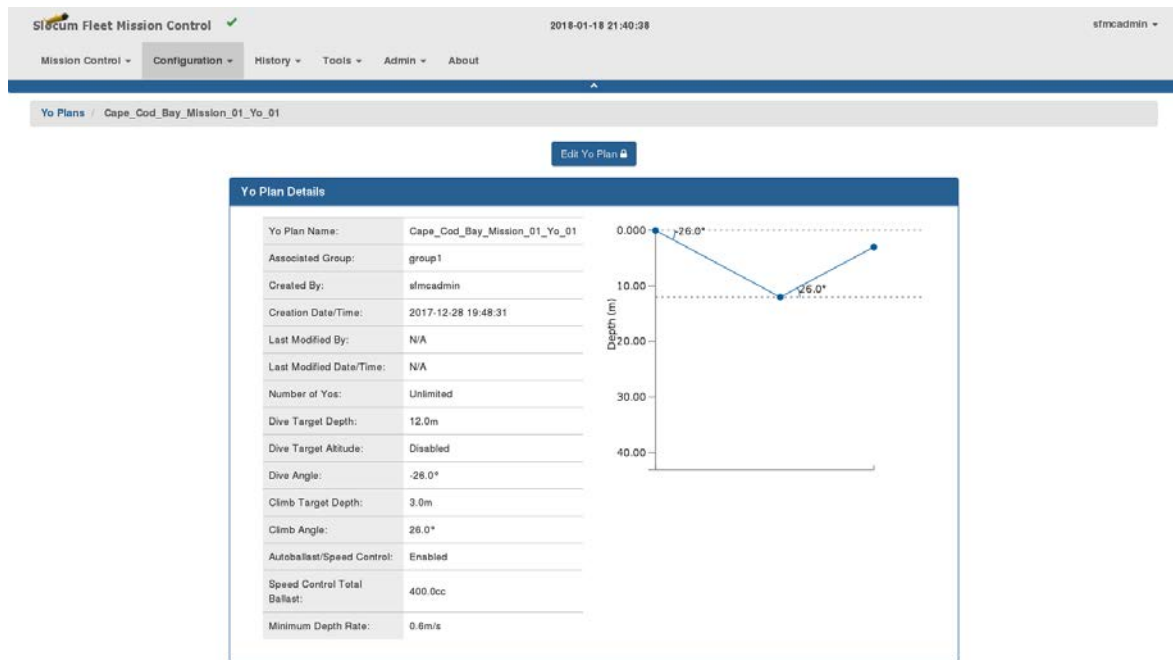


Figure 8-30 Yo Plan Details Panel

The Yo Plan Details panel includes the following information:

Yo Plan Name. The name of the yo plan.

Associated Group. The group associated with the yo plan. The yo plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the yo plan.

Creation Date/Time. The date and time the yo plan was created.

Last Modified By. The user account that was last used to edit the yo plan. "N/A" indicates that the yo plan has never been edited.

Last Modified Date/Time. The date and time the yo plan was last edited. "N/A" indicates that the yo plan has never been edited.

Number of Yos. The number of yos the glider is to run.

Dive Target Depth. The depth in meters to which the glider is to dive.

Dive Target Altitude. The altitude in meters to which the glider is to dive.

Dive Angle. The angle in degrees relative to the surface that the glider is to dive.

Climb Target Depth. The depth in meters to which the glider is to climb.

Climb Angle. The angle in degrees relative to the horizontal that the glider is to climb.

Autoballast/Speed Control. When enabled, the buoyancy pump volume is automatically controlled to minimize the volume used, thereby reducing energy consumption while maintaining a minimum vertical speed. When disabled, the buoyancy pump volume is specified directly with the **Speed Control Total Ballast** setting, and the vertical speed with the **Minimum Depth Rate** setting.

Speed Control Total Ballast. The amount to which to reduce the buoyancy pump volume in cc of the glider when **Autoballast/Speed Control** is enabled.

Minimum Depth Rate. The slowest vertical speed in meters per second allowed while attempting to reduce the volume specified by the **Speed Control Total Ballast** setting when **Autoballast/Speed Control** is enabled.

Dive Buoyancy Pump Volume. The dive buoyancy pump volume in cc of the glider when **Autoballast/Speed Control** is not enabled.

Climb Buoyancy Pump Volume. The dive buoyancy pump volume in cc of the glider when **Autoballast/Speed Control** is not enabled.

8.3.2 Creating a Yo Plan

A yo plan is created on the Yo Plan panel of the Yo Plans page which is shown in Figure 8-33 on page 8-29. The Yo Plan panel is composed of a form for entering the yo plan parameters and a graphic which depicts the descent and ascent angles of the glider in accordance with the entered parameter values.

To create a yo plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, yo plans can be created only for the allowed groups. For an Administrator, yo plans can be created for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Yo Plans Menu*, and then choose *Create Yo Plan*.

The Create Yo Plan panel opens as shown in Figure 8-31.

3. In the Create Yo Plan panel, enter a unique name for the yo plan in the **Yo Plan Name** text box as shown in Figure 8-32. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.
4. Select the group to associate with the yo plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.

Figure 8-31 Create Yo Plan Panel

Figure 8-32 Create Yo Plan Panel—Yo Plan Name Entered

5. Click **Next**.

The Yo Plan panel opens as shown in Figure 8-33.

6. In the Yo Plan panel make the settings in accordance with those described in “Viewing a Yo Plan” on page 8-25.

To enter a fixed number of yos, clear the **Unlimited Yos** check box and enter or select the setting in the **# Yos** spin box. For an unlimited number of yos, select the check box.

To enter a dive target altitude, select the **Include Dive Target Altitude** check box and enter or select the setting in the **Dive Target Altitude** spin box. Otherwise leave the check box cleared.

To disable autoballast, clear the **Autoballast Speed Control** check box and enter or select the dive and climb buoyancy pump settings in the **Dive Buoyancy Pump**

The screenshot shows the 'Yo Plan' configuration panel in the Sflocum Fleet Mission Control interface. The panel is titled 'Yo Plan' and includes a 'Unlock Yo Plan' button at the top. Below the title, there is a section for configuring the yo plan, which includes several input fields and checkboxes. The graph on the right shows a V-shaped profile with a minimum depth of 12.00m at 26.0 seconds. The input fields are as follows:

Parameter	Value
Unlimited Yo	☒
Dive Target Depth (m)	12
Dive Angle (degrees)	-26
Climb Target Depth (m)	3
Climb Angle (degrees)	26
Include Dive Target Altitude	☐
Autoballast Speed Control	☒
Speed Control Total Ballast (cc)	400
Minimum Depth Rate (m/s)	0.6

The graph on the right shows a V-shaped profile with a minimum depth of 12.00m at 26.0 seconds. The y-axis is labeled 'Depth (m)' and ranges from 0.00 to 40.00. The x-axis is labeled 'Time (s)' and ranges from 0.00 to 30.00. The graph shows a dive from 0.00m to 12.00m at 26.0 seconds, followed by a climb to 3.00m at 30.00 seconds.

Figure 8-33 Yo Plan Panel—after Saving the Yo Plan Name and Group

Volume and **Climb Buoyancy Pump Volume** spin boxes. Otherwise leave the check box selected and enter or select the buoyancy pump volume in the **Speed Control Total Ballast** spin box and the vertical speed in the **Minimum Depth Rate** spin box.

7. Click **Save**.

The yo plan is saved.

8. If desired, click **Unlock Yo Plan**.

The yo plan is unlocked, and the Yo Plan Details panel displays the yo plan details.

8.3.3 Editing a Yo Plan

Once saved, a yo plan can be edited at any time to include modifying, adding, and deleting the yo plan parameters. You can begin editing a yo plan directly from the Yo Plans page or when viewing the yo plan as described in “Viewing a Yo Plan” on page 8-25. While editing a yo plan, it is locked to all other user accounts until the editing is completed. However, the yo plan can be cloned as described in “Cloning a Yo Plan” on page 8-30, and then edited. If the yo plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited yo plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a yo plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, yo plans can be edited only for the allowed groups. As an Administrator, yo plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Yo Plans Menu*, and then choose *Yo Plans*.

The Yo Plans page opens as shown in Figure 8-29 on page 8-25 . To display more yo plans on a single page, select the number of them to display from the **Show Yo Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by yo plan name, groups or both by clicking the associated filter icon, and sort the list by yo plan name by clicking the sort icon.
4. Click the **Edit** button for the yo plan that you want to edit, or click the **View** button for it to view the yo plan first, and then click the **Edit Yo Plan** button just above the Yo Plan panel.

The Yo Plans page opens to the Yo Plan panel of the yo plan to be edited as shown Figure 8-34. The yo plan also becomes locked for editing by any other user account.

5. Make the required changes, and then click **Save**.

The yo plan is saved.

6. If desired, click **Unlock Yo Plan**.

The yo plan is unlocked, and the Yo Plan panel displays the edited yo plan details. You can also click **Edit Yo Plan** and make and save additional edits.

8.3.4 Cloning a Yo Plan

A yo plan can be cloned. Cloning provides an efficient means to create one or more similar yo plans from the original one which can then be edited.

To clone a yo plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, yo plans can be cloned only for the allowed groups. For an Administrator, waypoint plans can be cloned for any group.

Slacum Fleet Mission Control 2018-01-19 18:21:13 sfmcadmin

Mission Control Configuration History Tools Admin About

Yo Plans / Nantucket_Sound_Mission_01_Yo_01 (Under edit)

Unlock Yo Plan

Yo Plan

Use the form below to configure the yo plan.

☒ Unlimited Yo

Dive Target Depth (m): 12

Dive Angle (degrees): -26

Climb Target Depth (m): 3

Climb Angle (degrees): 26

☐ Include Dive Target Altitude

☒ Autoballast Speed Control

Speed Control Total Ballast (cc): 400

Minimum Depth Rate (m/s): 0.6

Save

Graph: Depth (m) vs. Time (s). The graph shows a V-shaped profile starting at 0.00m, diving to a target depth of 12.00m at an angle of -26.0°, and then climbing back to the surface at an angle of 26.0°.

Figure 8-34 Yo Plan Panel—Yo Plan to be Edited

- From the *Configuration* menu select *Mission Planning Menu*, select *Yo Plans Menu*, and then choose *Yo Plans*.

The Yo Plans page opens as shown in Figure 8-29 on page 8-25 . To display more yo plans on a single page, select the number of them to display from the **Show Yo Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

- If desired, filter the list by yo plan name, groups or both by clicking the associated filter icon, and sort the list by yo plan name by clicking the sort icon.
- Click the **Clone** button for the yo plan that you want to clone.

The Clone Yo Plan dialog box opens.

- Enter a name for the yo plan in the **Yo Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Yo Plans page opens to the Yo Plan panel of the yo plan to be cloned.

- If desired, make any required changes, and then click **Save**.

The yo plan is saved.

- If desired, click **Unlock Yo Plan**.

The yo plan is unlocked, and the Yo Plan panel displays the edited yo plan details. You can also click **Edit Yo Plan** and make and save additional edits.

8.3.5 Deleting a Yo Plan

To be able to delete a yo plan, it must not be in use.

To delete a yo plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, yo plans can be deleted only for the allowed groups. For an Administrator, yo plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Yo Plans Menu*, and then choose *Yo Plans*.

The Yo Plans page opens as shown in Figure 8-35. To display more yo plans on a single page, select the number of them to display from the **Show Yo Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Yo Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Yo_01	group2	sfmcadmin	2017-12-28 20:08	N/A	N/A	Yes				
Cape_Cod_Bay_Mission_01_Yo_01	group1	sfmcadmin	2017-12-28 19:48	N/A	N/A	Yes				
Muskeget_Channel_Mission_01_Yo_01	default	sfmcadmin	2019-01-04 14:47	sfmcadmin	2019-01-05 16:22:13	Yes				
Nantucket_Sound_Mission_01_Yo_01	default	sfmcadmin	2018-01-19 18:21	N/A	N/A	No				
RI_Sound_Mission-01_Yo_01	default	sfmcadmin	2017-12-29 18:08	sfmcadmin	2018-01-08 23:41:21	Yes				

Figure 8-35 Yo Plans Page—Yo Plan Available for Deletion

3. If desired, filter the list by yo plan name, groups or both by clicking the associated filter icon, and sort the list by yo plan name by clicking the sort icon.
4. Click the **Delete** button for the yo plan that you want to delete. This button is available only for yo plans that are not in use.

The Delete Yo Plan dialog box opens as shown in Figure 8-36.

5. Click **Delete**.

The yo plan is deleted, and the Delete Yo Plan dialog box closes.

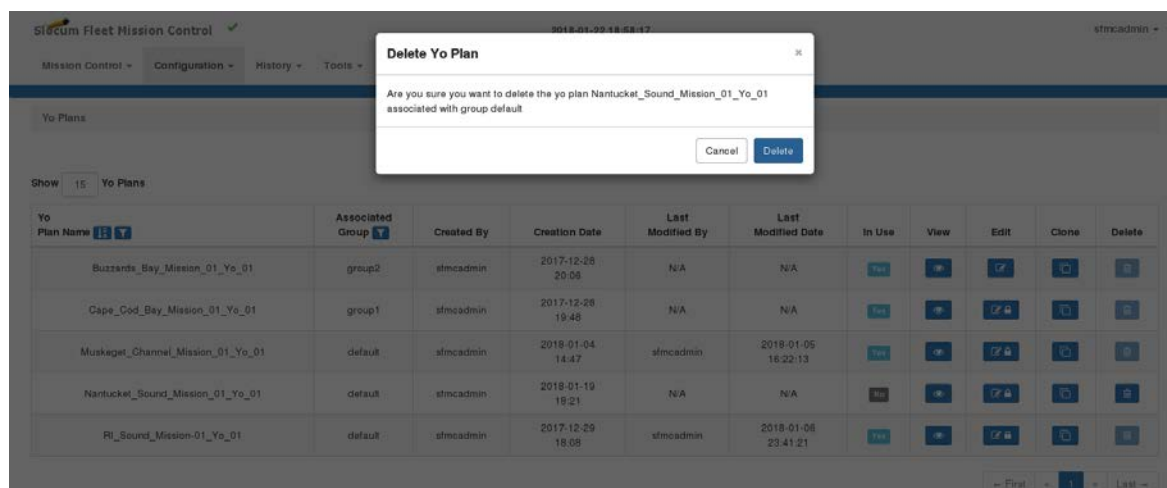


Figure 8-36 Delete Yo Plan Dialog Box

8.4 Managing a Sampling Plan

Sampling plans can be viewed, created, edited, cloned, and deleted.

8.4.1 Viewing a Sampling Plan

To view a sampling plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, sampling plans can be viewed only for the allowed groups. For an Administrator, sampling plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Sampling Plans Menu*, and then choose *Sampling Plans*.

The Sampling Plans page opens as shown in Figure 8-37. To display more sampling plans on a single page, select the number of them to display from the **Show Sampling Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by sampling plan name, groups or both by clicking the associated filter icon, and sort the list by sampling plan name by clicking the sort icon.

Sampling Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Sampling_01	group2	sfmcadmin	2017-12-28 20:08	sfmcadmin	2018-01-07 22:47:19	Yes				
Cape_Cod_Bay_Mission_01_Sampling_01	group1	sfmcadmin	2017-12-28 19:44	sfmcadmin	2017-12-29 17:26:29	Yes				
Muskeget_Channel_Mission_01_Sampling_01	default	sfmcadmin	2018-01-04 14:49	sfmcadmin	2018-01-04 15:09:17	Yes				
RI_Sound_Mission-01_Sampling_01	default	sfmcadmin	2017-12-29 18:09	sfmcadmin	2018-01-07 21:59:10	Yes				

Figure 8-37 Sampling Plans Page—Sampling Plans

4. Click the **View** button for the sampling plan that you want to view.

The Sampling Plan Details panel opens where the sampling plan details are displayed as shown in Figure 8-38.

Sampling Plan Details

Sampling Plan Name: Cape_Cod_Bay_Mission_01_Sampling_01

Associated Group: group1

Created By: sfmcadmin

Creation Date/Time: 2017-12-28 19:44:22

Last Modified By: sfmcadmin

Last Modified Date/Time: 2018-01-22 22:38:50

Enabled Sampling Rules:

Sensor Specific Sampling Rule

Sampling Sensor: AD2CP
Intersample Option: Time
Max Depth: 2000.0m
Nth Yo to Sample: 1
Intersample Time: 0s
Skip First Yo: No
Min Depth: -5.0m
States:

Sensor Specific Sampling Rule

Sampling Sensor: CTD41CP2
Intersample Option: Time
Max Depth: 2000.0m
Nth Yo to Sample: 1
Intersample Time: 0s
Skip First Yo: No
Min Depth: -5.0m
States:

Sensor Specific Sampling Rule

Sampling Sensor: DVL
Intersample Option: Time
Max Depth: 2000.0m
Nth Yo to Sample: 1
Intersample Time: 0s
Skip First Yo: No
Min Depth: -5.0m
States:

Figure 8-38 Sampling Plan Details Panel

The Sampling Plan Details panel includes the following information:

Sampling Plan Name. The name of the sampling plan.

Associated Group. The group associated with the sampling plan. The sampling plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the sampling plan.

Creation Date/Time. The date and time the sampling plan was created.

Last Modified By. The user account that was last used to edit the sampling plan. "N/A" indicates that the sampling plan has never been edited.

Last Modified Date/Time. The date and time the sampling plan was last edited. "N/A" indicates that the sampling plan has never been edited.

Enabled Sampling Rules. Displays a list of enabled sampling rules.

8.4.2 Creating a Sampling Plan

A sampling plan is created on the Sampling Plan panel of the Sampling Plans page which is shown in Figure 8-41 on page 8-36. The Sampling Plan panel is composed of a Sampling Plan Rule Creation area on the left, which provides a choice between creating the same sampling plan rule for all the sensors or creating a separate sampling plan rule for specific sensors, and an Enabled Sampling Plan Rules area on the right, which provides a list of enabled sampling plan rules.

To create a sampling plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, sampling plans can be created only for the allowed groups. For an Administrator, sampling plans can be created for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Sampling Plans Menu*, and then choose *Create Sampling Plan*.

The Create Sampling Plan panel opens as shown in Figure 8-39.

3. In the Create Sampling Plan panel, enter a unique name for the sampling plan in the **Sampling Plan Name** text box as shown in Figure 8-40. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.
4. Select the group to associate with the sampling plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.

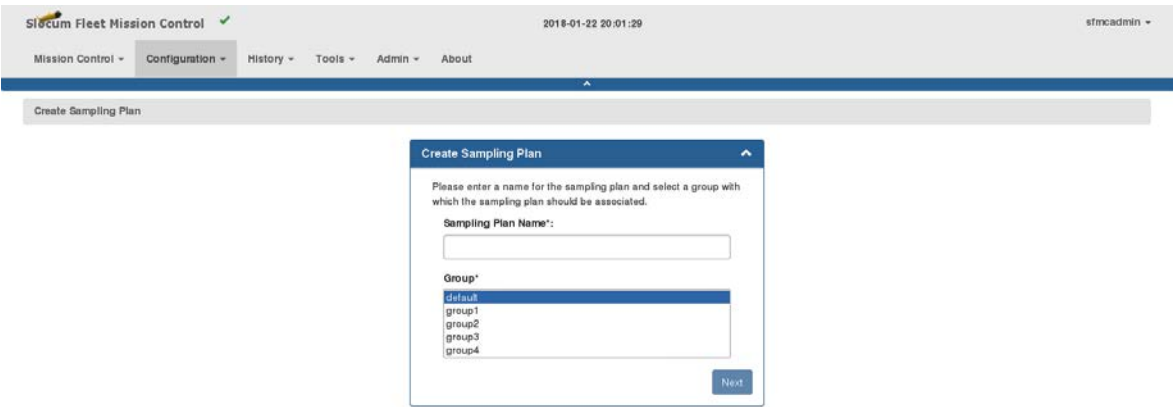


Figure 8-39 Create Sampling Plan Panel

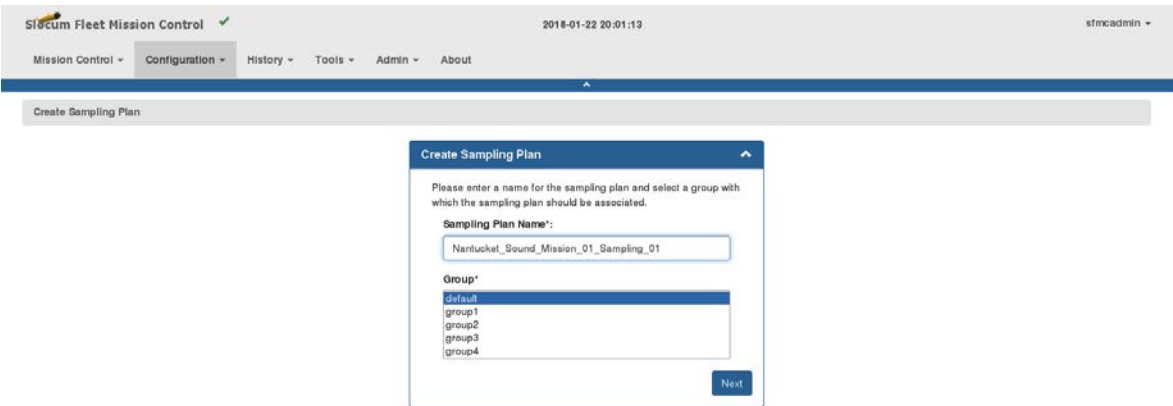


Figure 8-40 Create Sampling Plan Panel—Sampling Plan Name Entered

5. Click **Next**.

The Sampling Plan panel opens as shown in Figure 8-41.

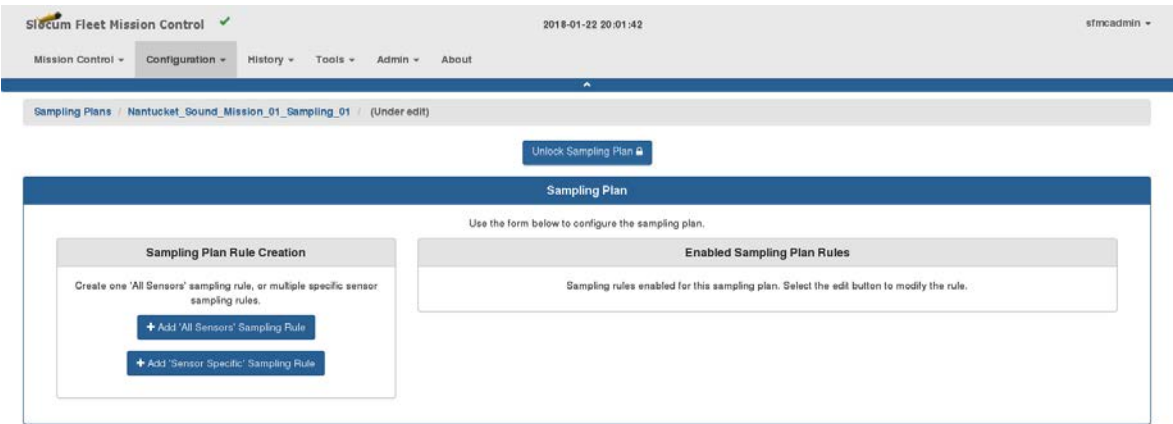


Figure 8-41 Sampling Plan Panel

6. From the Sampling Plan Rule Creation area of the Sampling Plan panel, do one of the following:
 - Click **Add All Sensors Sampling Rule** to add the same sampling rule for all the sensors. The Create Sampling Rule dialog box opens as shown in Figure 8-42.
 - Click **Add Sensor Specific Sampling Rule** to add a sampling rule for a specific sensor. The Create Sampling Rule dialog box opens as shown in Figure 8-43.

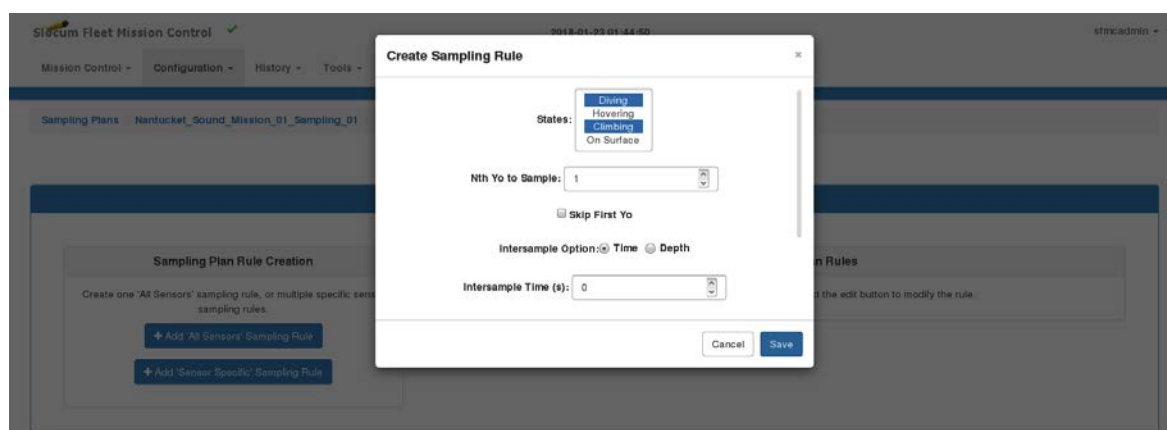


Figure 8-42 Create Sampling Rule Dialog Box—for All Sensors

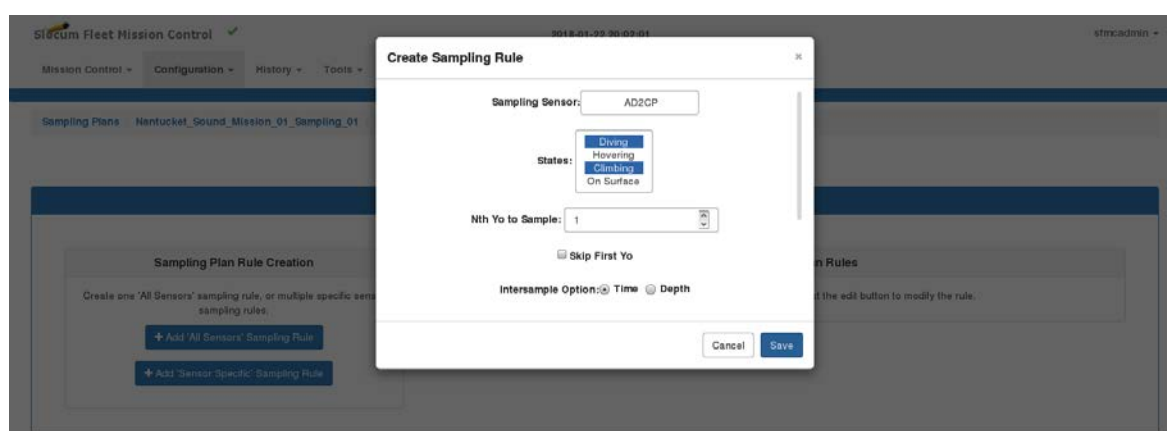


Figure 8-43 Create Sampling Rule Dialog Box—for a Specific Sensor

7. For the sensor specific sampling rule choice only, select the sensor for sampling from the **Sampling Sensor** drop-down list.
8. Select the state or states during which to sample from the **States** drop-down list. To select more than one state, hold down the Ctrl key while clicking them one at a time.
9. Enter or select the yo during which to sample from the **Nth Yo to Sample** spin box. For an entry of “1,” sampling will be performed during every yo; for an entry of “2,” during every second yo; for an entry of “3,” during every third, etc.

10. If desired select the **Skip First Yo** check box to not sample during the first yo.
11. Do one of the following:
 - Select the **Time** option for the **Intersample Option** to sample based on time, and then enter or select the time in seconds in the **Intersample Time** spin box.
 - Select the **Depth** option for the **Intersample Option** to sample based on depth and then enter or select the depth in meters in the **Intersample Depth** spin box.
12. Enter or select the minimum depth in meters at which to sample in the **Min Depth** spin box.
13. Enter or select the maximum depth in meters at which to sample in the **Max Depth** spin box.
14. Click **Save**.
The sampling plan is saved.
15. If desired, click **Unlock Sampling Plan**.
The sampling plan is unlocked, and the Sampling Plan Details panel displays the sampling plan details.

8.4.3 Editing a Sampling Plan

Once saved, a sampling plan can be edited at any time to include modifying, adding, and deleting the sampling plan parameters. You can begin editing a sampling plan directly from the Sampling Plans page or when viewing the sampling plan as described in “Viewing a Sampling Plan” on page 8-33. While editing a sampling plan, it is locked to all other user accounts until the editing is completed. However, the sampling plan can be cloned as described in “Cloning a Sampling Plan” on page 8-40, and then edited. If the sampling plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited sampling plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a sampling plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, sampling plans can be edited only for the allowed groups. For an Administrator, sampling plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Sampling Plans Menu*, and then choose *Sampling Plans*.

The Sampling Plans page opens as shown in Figure 8-37 on page 8-34 . To display more sampling plans on a single page, select the number of them to display from the **Show Sampling Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by sampling plan name, groups or both by clicking the associated filter icon, and sort the list by sampling plan name by clicking the sort icon.
4. Click the **Edit** button for the sampling plan that you want to edit, or click the **View** button for it to view the sampling plan first, and then click the **Edit Sampling Plan** button just above the Sampling Plan panel.

The Sampling Plans page opens to the Sampling Plan panel of the sampling plan to be edited as shown Figure 8-44. The sampling plan also becomes locked for editing by any other user account.

The screenshot shows the Slocum Fleet Mission Control web application. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The main content area is titled 'Sampling Plans' and shows the selected plan 'Nantucket_Sound_Mission_01_Sampling_01' in an '(Under edit)' state. A 'Unlock Sampling Plan' button is visible. The 'Sampling Plan' panel is divided into two main sections: 'Sampling Plan Rule Creation' on the left and 'Enabled Sampling Plan Rules' on the right. The 'Rule Creation' section has buttons to 'Add All Sensors Sampling Rule' and 'Add Sensor Specific Sampling Rule'. The 'Enabled Rules' section contains a table of three rules, each with fields for 'Sampling Sensor', 'Nth Yo to Sample', 'Intersample Time', 'Max Depth', 'Skip First Yo', and 'Min Depth', along with 'States' (Diving, Climbing) and edit/delete buttons.

Enabled Sampling Plan Rules						
Sampling rules enabled for this sampling plan. Select the edit button to modify the rule.						
Sensor Specific Sampling Rule						
Sampling Sensor: AD2CP	Nth Yo to Sample: 1	Skip First Yo: No				
Intersample Option: Time	Intersample Time: 0s	Min Depth: -5.0m				
Max Depth: 2000.0m	States: Diving Climbing					
Sensor Specific Sampling Rule						
Sampling Sensor: CTD41CP2	Nth Yo to Sample: 1	Skip First Yo: No				
Intersample Option: Time	Intersample Time: 0s	Min Depth: -5.0m				
Max Depth: 2000.0m	States: Diving Climbing					
Sensor Specific Sampling Rule						
Sampling Sensor: DVL	Nth Yo to Sample: 1	Skip First Yo: No				
Intersample Option: Time	Intersample Time: 0s	Min Depth: -5.0m				
Max Depth: 2000.0m	States: Diving Climbing					

Figure 8-44 Sampling Plan Panel—Sampling Plan to be Edited

5. In the Enabled Sampling Plan Rules area of the Sampling Plan panel, click the **Modify the settings for this sampling rule** button for each sampling plan rule that you want to edit and make the changes. To remove a sampling plan rule, click the **Remove this sampling rule** button for it, and then click **Delete** in the Delete Sampling Plan Rule Form dialog box. To add a sampling plan rule, click the **Add All Sensors Sampling Rule** button or the **Add Sensor Specific Sampling Rule** button, whichever one is available, in the Sampling Plan Rule Creation area of the Sampling Plan panel.

The sampling plan is automatically saved.

6. If desired, click **Unlock Sampling Plan**.

The sampling plan is unlocked, and the Sampling Plan Details panel displays the edited sampling plan details. You can also click **Edit Sampling Plan** and make and save additional edits.

8.4.4 Cloning a Sampling Plan

A sampling plan can be cloned. Cloning provides an efficient means to create one or more similar sampling plans from the original one which can then be edited.

To clone a sampling plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, sampling plans can be cloned only for the allowed groups. For an Administrator, sampling plans can be cloned for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Sampling Plans Menu*, and then choose *Sampling Plans*.

The Sampling Plans page opens as shown in Figure 8-37 on page 8-34 . To display more sampling plans on a single page, select the number of them to display from the **Show Sampling Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by sampling plan name, groups or both by clicking the associated filter icon, and sort the list by sampling plan name by clicking the sort icon.
4. Click the **Clone** button for the sampling plan that you want to clone.

The Clone Sampling Plan dialog box opens.

5. Enter a name for the sampling plan in the **Sampling Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Sampling Plans page opens to the Sampling Plan panel of the sampling plan to be cloned.

6. If desired, make any required changes.

The sampling plan is automatically saved.

7. If desired, click **Unlock Sampling Plan**.

The sampling plan is unlocked, and the Sampling Plan Details panel displays the edited sampling plan details. You can also click **Edit Sampling Plan** and make and save additional edits.

8.4.5 Deleting a Sampling Plan

To be able to delete a sampling plan, it must not be in use.

To delete a sampling plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, sampling plans can be deleted only for the allowed groups. For an Administrator, sampling plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Sampling Plans Menu*, and then choose *Sampling Plans*.

The Sampling Plans page opens as shown in Figure 8-45. To display more sampling plans on a single page, select the number of them to display from the **Show Sampling Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Sampling Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Sampling_01	group2	stmadmin	2017-12-28 20:08	stmadmin	2018-01-07 22:47:19	Yes				
Cape_Cod_Bay_Mission_01_Sampling_01	group1	stmadmin	2017-12-28 19:44	stmadmin	2018-01-22 22:38:50	Yes				
Muskeget_Channel_Mission_01_Sampling_01	default	stmadmin	2018-01-04 14:49	stmadmin	2018-01-04 15:09:17	Yes				
Nantucket_Sound_Mission_01_Sampling_01	default	stmadmin	2018-01-22 20:01	stmadmin	2018-01-23 01:44:08	No				
RI_Sound_Mission-01_Sampling_01	default	stmadmin	2017-12-29 18:09	stmadmin	2018-01-07 21:59:10	Yes				

Figure 8-45 Sampling Plans Page—Sampling Plan Available for Deletion

3. If desired, filter the list by sampling plan name, groups or both by clicking the associated filter icon, and sort the list by sampling plan name by clicking the sort icon.
4. Click the **Delete** button for the sampling plan that you want to delete. This button is available only for sampling plans that are not in use.

The Delete Sampling Plan dialog box opens as shown in Figure 8-46.

5. Click **Delete**.

The sampling plan is deleted, and the Delete Sampling Plan dialog box closes.

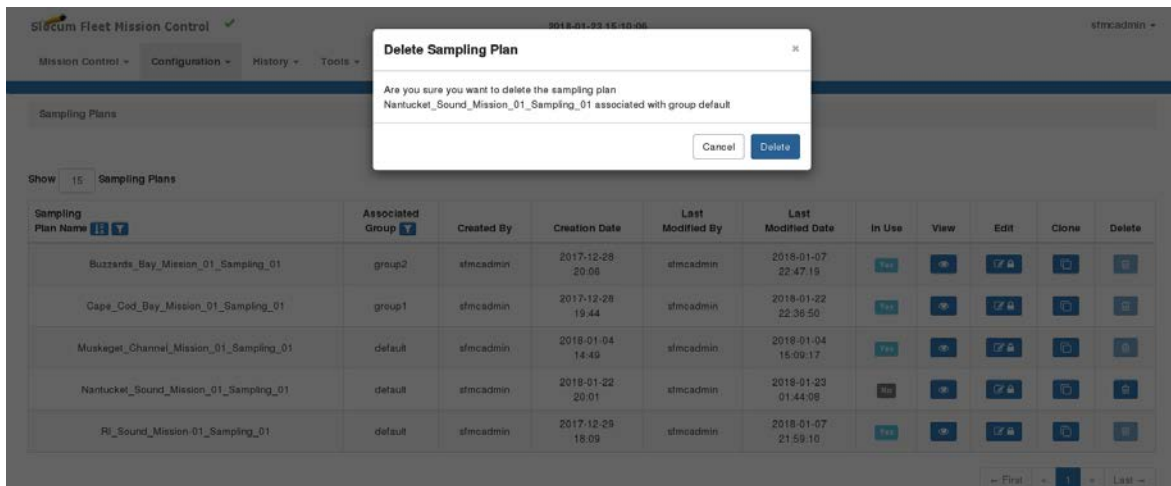


Figure 8-46 Delete Sampling Plan Dialog Box

8.5 Managing a Mission Sensor Plan

Mission sensor plans can be viewed, created, edited, cloned, and deleted.

8.5.1 Viewing a Mission Sensor Plan

To view a mission sensor plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator or Glider Pilot role, mission sensor plans can be viewed only for the allowed groups. For an Administrator, mission sensor plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Sensor Plans Menu*, and then choose *Mission Sensor Plans*.

The Mission Sensor Plans page opens as shown in Figure 8-47. To display more mission sensor plans on a single page, select the number of them to display from the **Show Mission Sensor Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission sensor plan name, groups or both by clicking the associated filter icon, and sort the list by mission sensor plan name by clicking the sort icon.
4. Click the **View** button for the mission sensor plan that you want to view.

The Mission Sensor Plan Details panel opens where the mission sensor plan details are displayed as shown in Figure 8-48.

Slocum Fleet Mission Control 2018-01-23 15:21:04 sfmcadmin

Mission Control Configuration History Tools Admin About

Mission Sensor Plans

Please note that this page does not update in real-time. Perform a refresh to see updates.

Show 15 Mission Sensor Plans

Mission Sensor Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Mission_Sensor_01	group2	sfmcadmin	2017-12-28 20:08	N/A	N/A	Yes				
Cape_Cod_Bay_Mission_01_Mission_Sensor_01	group1	sfmcadmin	2017-12-28 19:45	N/A	N/A	Yes				
Muskeget_Channel_Mission_01_Sensor_01	default	sfmcadmin	2018-01-04 14:50	N/A	N/A	Yes				
RI_Sound_Mission_01_Mission_Sensor_01	default	sfmcadmin	2017-12-29 18:09	N/A	N/A	Yes				

First 1 Last

Figure 8-47 Mission Sensor Plans Page—Mission Sensor Plans

Slocum Fleet Mission Control 2018-01-23 15:24:19 sfmcadmin

Mission Control Configuration History Tools Admin About

Mission Sensor Plans / Cape_Cod_Bay_Mission_01_Mission_Sensor_01

Edit Mission Sensor Plan

Mission Sensor Plan Details

Mission Sensor Plan Name:	Cape_Cod_Bay_Mission_01_Mission_Sensor_01
Associated Group:	group1
Created By:	sfmcadmin
Creation Date/Time:	2017-12-28 19:45:34
Last Modified By:	N/A
Last Modified Date/Time:	N/A
Flight Low Power Mode:	Enabled
Flight Low Power Mode Cycle Time:	60 secs/cycle
Power Down Science When Not Sampling:	Yes
# Seconds Prior to Inflection for Powering up Science:	30
Use Current Correction:	Enabled
Min Altimeter Depth:	2.0
Flight Transmit Sensor Header Option:	Transmit On Initial Mission Segment Only
Science Transmit Sensor Header Option:	Transmit On Initial Mission Segment Only

Figure 8-48 Mission Sensor Plan Details Panel

The Mission Sensor Plan Details panel includes the following information:

Mission Sensor Plan Name. The name of the mission sensor plan.

Associated Group. The group associated with the mission sensor plan. The mission sensor plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the mission sensor plan.

Creation Date/Time. The date and time the mission sensor plan was created.

Last Modified By. The user account that was last used to edit the mission sensor plan. "N/A" indicates that the mission sensor plan has never been edited.

Last Modified Date/Time. The date and time the mission sensor plan was last edited. "N/A" indicates that the mission sensor plan has never been edited.

Flight Low Power Mode. When enabled, the glider will go into low power mode for the period specified by the **Flight Low Power Mode Cycle Time** setting when not performing any operations. When not enabled, the glider will never go into low power mode.

Flight Low Power Mode Cycle Time. When **Flight Low Power Mode** is enabled, the number of seconds during which the glider will remain in low power mode when not performing any operations.

Power Down Science When Not Sampling. When selected, sensor power is switched off when the sensors are not being sampled and switched on in accordance with the **# Seconds Prior to Inflection for Powering up Science** setting. When cleared, the sensor power is on at all times.

Seconds Prior to Inflection for Powering up Science. When **Power Down Science When Not Sampling** is enabled, the time in seconds prior to ending a dive and starting a climb at which to power up the sensors.

Use Current Correction. When enabled, the glider will include the depth averaged current vectors when navigating and steering. When not enabled, the glider will not include these parameters when navigating and steering.

Min Altimeter Depth. When diving, the minimum water depth in meters before enabling the altimeter.

Flight Transmit Sensor Header Option. Indicates if and when flight data headers are transmitted.

Science Transmit Sensor Header Option. Indicates if and when science data headers are transmitted.

8.5.2 Creating a Mission Sensor Plan

A mission sensor plan is created on the Mission Sensor Plan panel of the Mission Sensor Plans page which is shown in Figure 8-51 on page 8-46. The Mission Sensor Plan panel is composed of a form for entering the mission sensor plan parameters.

To create a mission sensor plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission sensor plans can be edited only for the allowed groups. For an Administrator, mission sensor plans can be edited for any group
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Sensor Plans Menu*, and then choose *Create Mission Sensor Plan*.

The Create Mission Sensor Plan panel opens as shown in Figure 8-49.

Figure 8-49 Create Mission Sensor Plan Panel

3. In the Create Mission Sensor Plan panel, enter a unique name for the mission sensor plan in the **Mission Sensor Plan Name** text box as shown in Figure 8-50. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.

Figure 8-50 Create Mission Sensor Plan Panel—Mission Sensor Plan Name Entered

4. Select the group to associate with the mission sensor plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.

5. Click **Next**.

The Mission Sensor Plan panel opens as shown in Figure 8-51.

The screenshot shows the 'Mission Sensor Plan' panel in the Slocum Fleet Mission Control interface. The panel is titled 'Mission Sensor Plan' and contains several configuration options. A 'Unlock Mission Sensor Plan' button is at the top. The form includes checkboxes for 'Flight Low Power Mode Enabled', 'Power Down Science When Not Sampling', and 'Use Current Connection'. It also features input fields for 'Flight Low Power Mode Cycle Time (secs/cycle)' (set to 60), '# Seconds Prior to Infection for Powering up Science' (set to 30), and 'Min Altimeter Depth (m)' (set to 2). Two dropdown menus for 'Flight Transmit Sensor Header Option*' and 'Science Transmit Sensor Header Option*' both show 'Transmit On Initial Mission Segment Only'. A 'Save' button is at the bottom right.

Figure 8-51 Mission Sensor Plan Panel

6. In the Mission Sensor Plan panel make the settings in accordance with those described in “Viewing a Mission Sensor Plan” on page 8-42.

To enable flight low power mode, select the **Flight Low Power Mode** check box. To disable flight low power mode, clear the check box.

To power down the sensors when not sampling them, select the **Power Down Science When Not Sampling** check box. To keep the sensors powered on at all times, clear the check box.

To use the depth averaged current vectors when navigating and steering, select the **Use Current Connection** check box. Clear the check box to not use them.

7. For both the **Flight Transmit Sensor Header Option** and the **Science Transmit Sensor Header Option** drop-down lists, do one of the following:

- Select *Transmit On Initial Mission Segment Only* to transmit flight/science sensor header data files during the glider’s first mission segment only.
- Select *Always Transmit* to transmit flight/science sensor header data files during all mission segments.
- Select *Transmit If Glider Has Never Sent It* to transmit flight/science sensor header data files during a mission segment if they have not been transmitted.

- Select *Never Transmit On Initial Mission Segment Only* to never transmit flight/science sensor header data.

8. Click **Save**.

The mission sensor plan is saved.

9. If desired, click **Unlock Mission Sensor Plan**.

The mission sensor plan is unlocked, and the Mission Sensor Plan Details panel displays the mission sensor plan details.

8.5.3 Editing a Mission Sensor Plan

Once saved, a mission sensor plan can be edited at any time to include modifying, adding, and deleting the mission sensor plan parameters. You can begin editing a mission sensor plan directly from the Mission Sensor Plans page or when viewing the mission sensor plan as described in “Viewing a Mission Sensor Plan” on page 8-42. While editing a mission sensor plan, it is locked to all other user accounts until the editing is completed. However, the mission sensor plan can be cloned as described in “Cloning a Mission Sensor Plan” on page 8-48, and then edited. If the mission sensor plan is associated with an active deployment, the mission sensor plan for the deployment must be processed and the mission files regenerated for the edited mission sensor plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a mission sensor plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission sensor plans can be edited only for the allowed groups. For an Administrator, mission sensor plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Sensor Plans Menu*, and then choose *Mission Sensor Plans*.

The Mission Sensor Plans page opens as shown in Figure 8-47 on page 8-43 . To display more mission sensor plans on a single page, select the number of them to display from the **Show Mission Sensor Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission sensor plan name, groups or both by clicking the associated filter icon, and sort the list by mission sensor plan name by clicking the sort icon.

- Click the **Edit** button for the mission sensor plan that you want to edit, or click the **View** button for it to view the mission sensor plan first, and then click the **Edit Mission Sensor Plan** button just above the Mission Sensor Plan panel.

The Mission Sensor Plans page opens to the Mission Sensor Plan panel of the mission sensor plan to be edited as shown Figure 8-52. The mission sensor plan also becomes locked for editing by any other user account.

Figure 8-52 Mission Sensor Plan Panel—Mission Sensor Plan to be Edited

- Make the required changes, and then click **Save**.

The mission sensor plan is saved.

- If desired, click **Unlock Mission Sensor Plan**.

The Mission Sensor Plan Details panel displays the edited sampling plan details, and the mission sensor plan is unlocked. You can also click **Edit Mission Sensor Plan** and make and save additional edits.

8.5.4 Cloning a Mission Sensor Plan

A mission sensor plan can be cloned. Cloning provides an efficient means to create one or more similar mission sensor plans from the original one which can then be edited.

To clone a mission sensor plan:

- Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission sensor plans can be cloned only for the allowed groups. For an Administrator, mission sensor plans can be cloned for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Sensor Plans Menu*, and then choose *Mission Sensor Plans*.

The Mission Sensor Plans page opens as shown in Figure 8-47 on page 8-43. To display more mission sensor plans on a single page, select the number of them to display from the **Show Mission Sensor Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission sensor plan name, groups or both by clicking the associated filter icon, and sort the list by mission sensor plan name by clicking the sort icon.
4. Click the **Clone** button for the mission sensor plan that you want to clone.

The Clone Mission Sensor Plan dialog box opens.

5. Enter a name for the mission sensor plan in the **Mission Sensor Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Mission Sensor Plans page opens to the Mission Sensor Plan panel of the mission sensor plan to be cloned.

6. If desired, make any required changes, and then click **Save**.

The mission sensor plan is saved.

7. If desired, click **Unlock Mission Sensor Plan**.

The Mission Sensor Plan Details panel displays the edited mission sensor plan details, and the mission sensor plan is unlocked.

8.5.5 Deleting a Mission Sensor Plan

To be able to delete a mission sensor plan, it must not be in use.

To delete a mission sensor plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission sensor plans can be deleted only for the allowed groups. For an Administrator, mission sensor plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Sensor Plans Menu*, and then choose *Mission Sensor Plans*.

The Mission Sensor Plans page opens as shown in Figure 8-53. To display more mission sensor plans on a single page, select the number of them to display from the **Show Mission Sensor Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

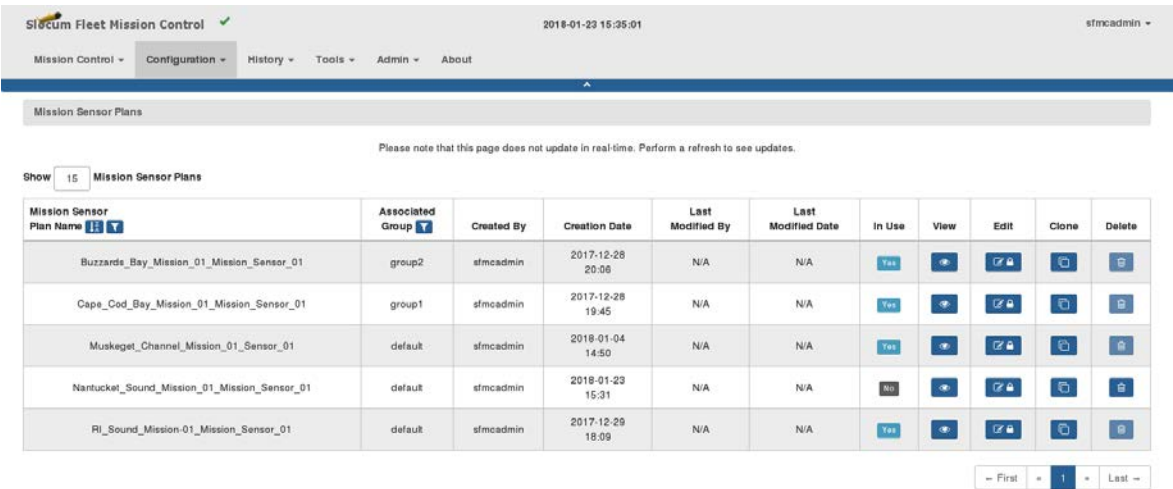


Figure 8-53 Mission Sensor Plans Page—Mission Sensor Plan Available for Deletion

3. If desired, filter the list by mission sensor plan name, groups or both by clicking the associated filter icon, and sort the list by mission sensor plan name by clicking the sort icon.
4. Click the **Delete** button for the mission sensor plan that you want to delete. This button is available only for mission sensor plans that are not in use.

The Delete Mission Sensor Plan dialog box opens as shown in Figure 8-54.

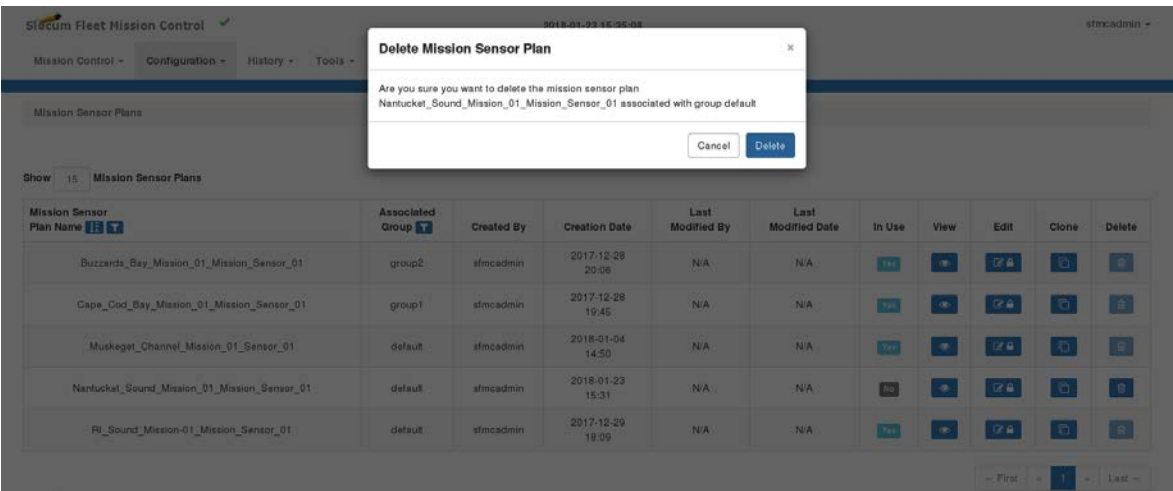


Figure 8-54 Delete Mission Sensor Plan Dialog Box

5. Click **Delete**.

The mission sensor plan is deleted, and the Delete Mission Sensor Plan dialog box closes.

8.6 Managing an Abort Plan

Abort plans can be viewed, created, edited, cloned, and deleted.

8.6.1 Viewing an Abort Plan

To view an abort plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, abort plans can be viewed only for the allowed groups. For an Administrator, abort plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Abort Plans Menu*, and then choose *Abort Plans*.

The Abort Plans page opens as shown in Figure 8-55. To display more abort plans on a single page, select the number of them to display from the Show **Abort Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by abort plan name, groups or both by clicking the associated filter icon, and sort the list by abort plan name by clicking the sort icon.

Abort Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Abort_01	group2	sfmcadmin	2017-12-28 20:10	sfmcadmin	2017-12-28 20:10:46	Yes				
Cape_Cod_Bay_Mission_01_Abort_01	group1	sfmcadmin	2017-12-28 19:46	sfmcadmin	2017-12-28 19:46:24	Yes				
Muskeget_Channel_Mission_01_Abort_01	default	sfmcadmin	2018-01-04 14:52	sfmcadmin	2018-01-04 14:52:33	Yes				
RI_Sound_Mission-01_Abort_01	default	sfmcadmin	2017-12-29 18:10	sfmcadmin	2017-12-29 18:10:33	Yes				

Figure 8-55 Abort Plans Page—Abort Plans

4. Click the **View** button for the abort plan that you want to view.

The Abort Plan Details panel opens where the abort plan details are displayed as shown in Figure 8-56.

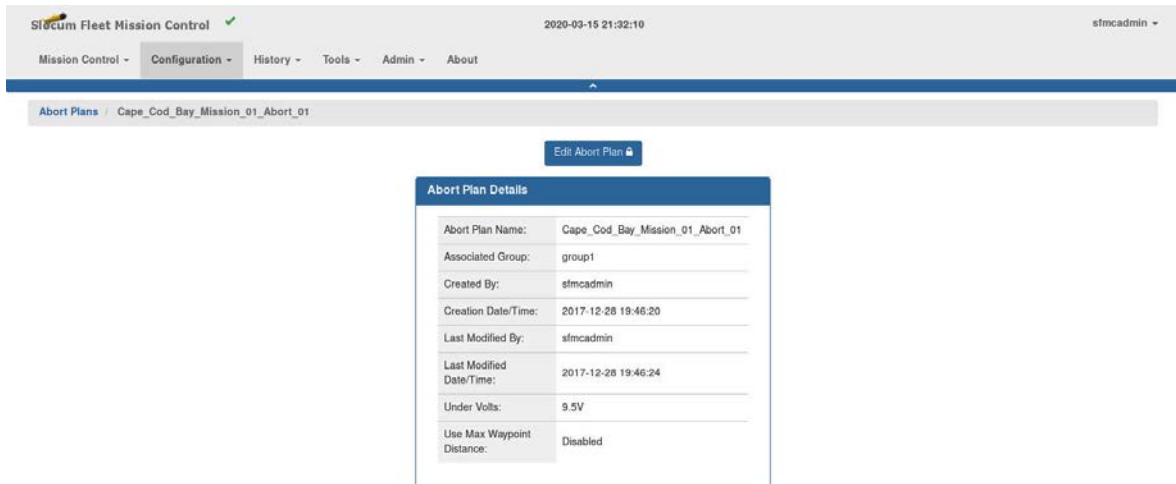


Figure 8-56 Abort Plan Details Panel

The Abort Plan Details panel includes the following information:

Abort Plan Name. The name of the abort plan.

Associated Group. The group associated with the abort plan. The abort plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the abort plan.

Creation Date/Time. The date and time the abort plan was created.

Last Modified By. The user account that was last used to edit the abort plan. "N/A" indicates that the abort plan has never been edited.

Last Modified Date/Time. The date and time the abort plan was last edited. "N/A" indicates that the abort plan has never been edited.

Under Volts. The battery voltage in volts under which will cause the mission to abort.

Use Max Waypoint Distance. The maximum distance between any two consecutive waypoints, which if exceeded, the mission will be aborted.

8.6.2 Creating an Abort Plan

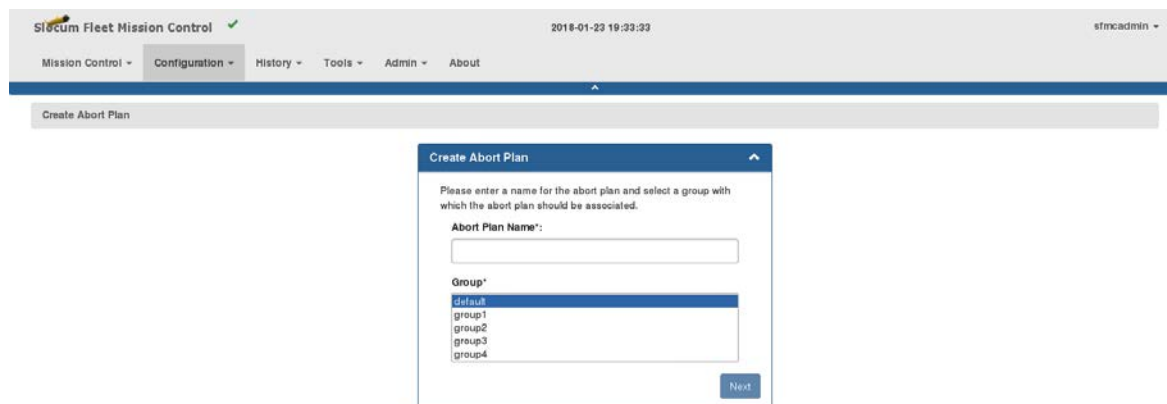
An abort plan is created on the Abort Plan panel of the Abort Plans page which is shown in Figure 8-59 on page 8-54. The Abort Plan panel is composed of a single spin box for entering or selecting the abort plan parameter setting.

To create an abort plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, abort plans can be created only for the allowed groups. For an Administrator, abort plans can be created for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Abort Plans Menu*, and then choose *Create Abort Plan*.

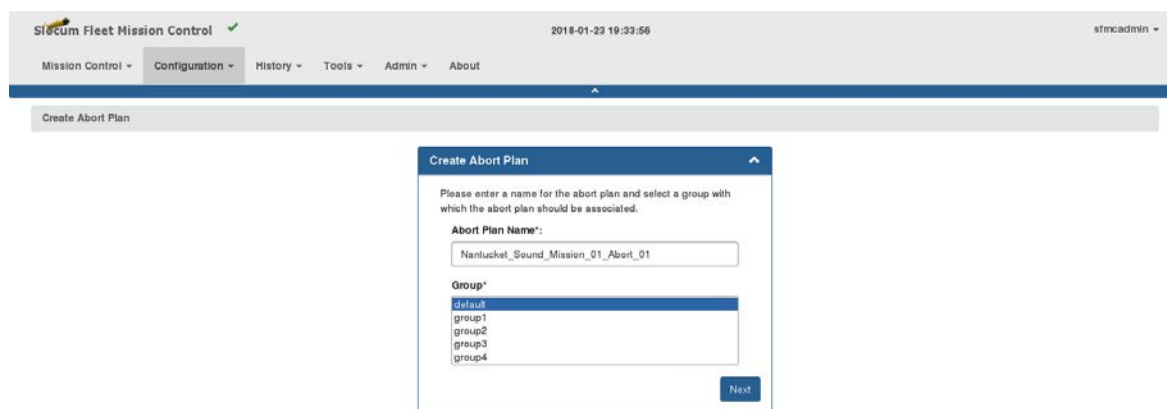
The Create Abort Plan panel opens as shown in Figure 8-57.



The screenshot shows the Slocum Fleet Mission Control interface. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, showing 'Create Abort Plan'. The main panel displays the 'Create Abort Plan' dialog box. It contains a text input field for 'Abort Plan Name' and a dropdown menu for 'Group'. The 'Group' dropdown is currently set to 'default'. A 'Next' button is visible at the bottom right of the dialog box.

Figure 8-57 Create Abort Plan Panel

3. In the Create Abort Plan panel, enter a unique name for the abort plan in the **Abort Plan Name** text box as shown in Figure 8-58. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.



The screenshot shows the Slocum Fleet Mission Control interface. The top navigation bar includes 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' menu is expanded, showing 'Create Abort Plan'. The main panel displays the 'Create Abort Plan' dialog box. The 'Abort Plan Name' text box now contains the text 'Nantucket_Sound_Mission_01_Abort_01'. The 'Group' dropdown is still set to 'default'. A 'Next' button is visible at the bottom right of the dialog box.

Figure 8-58 Create Abort Plan Panel—Abort Plan Name Entered

4. Select the group to associate with the abort plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.
5. Click **Next**.

The Abort Plan panel opens as shown in Figure 8-59.

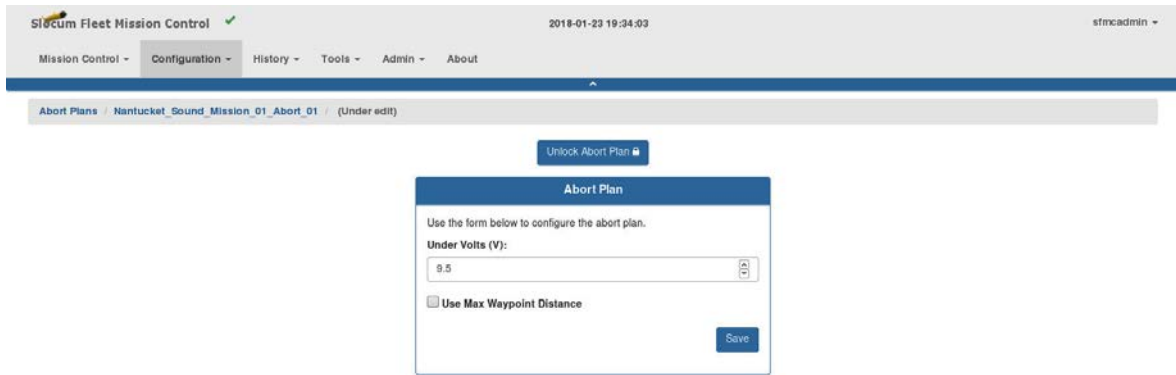


Figure 8-59 Abort Plan Panel

6. In the Abort Plan panel select or enter the battery voltage in volts under which to abort the mission in the **Under Volts** text box.
7. If desired, select the **Use Max Waypoint Distance** check box, and then select or enter the maximum distance between two consecutive waypoints in meters over which, if exceeded, the mission is to be aborted.
8. Click **Save**.

The abort plan is saved.

9. If desired, click **Unlock Abort Plan**.

The abort plan is unlocked, and the Abort Plan Details panel displays the abort plan details.

8.6.3 Editing an Abort Plan

Once saved, an abort plan can be edited at any time by modifying the abort plan parameter. You can begin editing an abort plan directly from the Abort Plans page or when viewing the abort plan as described in “Viewing an Abort Plan” on page 8-51. While editing an abort plan, it is locked to all other user accounts until the editing is completed. However, the abort plan can be cloned as described in “Cloning an Abort Plan” on page 8-55, and then edited. If the abort plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited abort plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit an abort plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot

role, abort plans can be edited only for the allowed groups. For an Administrator, abort plans can be edited for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Abort Plans Menu*, and then choose *Abort Plans*.

The Abort Plans page opens as shown in Figure 8-55 on page 8-51. To display more abort plans on a single page, select the number of them to display from the **Show Abort Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by abort plan name, groups or both by clicking the associated filter icon, and sort the list by abort plan name by clicking the sort icon.
4. Click the **Edit** button for the abort plan that you want to edit, or click the **View** button for it to view the abort plan first, and then click the **Edit Abort Plan** button just above the Abort Plan panel.

The Abort Plans page opens to the Abort Plan panel of the abort plan to be edited as shown Figure 8-60. The abort plan also becomes locked for editing by any other user account.

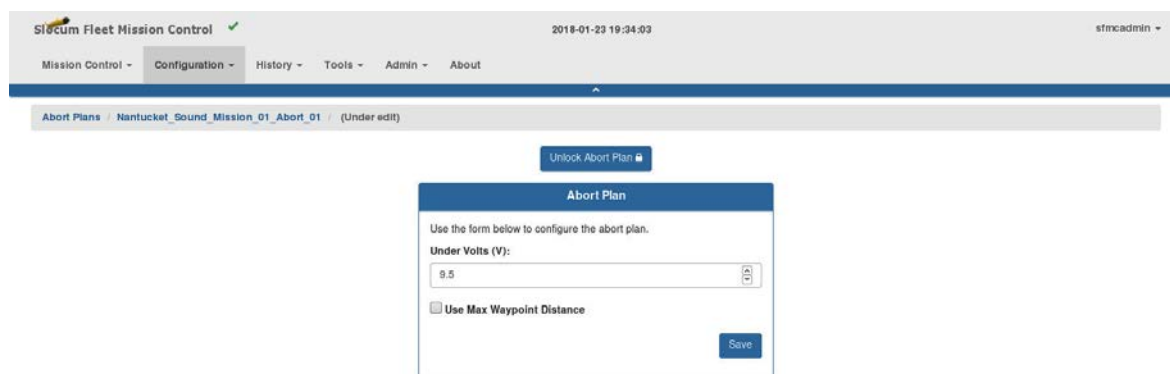
The screenshot shows the Slocum Fleet Mission Control web interface. At the top, there's a header bar with the application name, a status indicator, a timestamp (2018-01-23 19:34:03), and a user name (sfmcadmin). Below the header is a navigation menu with options: Mission Control, Configuration, History, Tools, Admin, and About. The main content area shows the 'Abort Plans' section for 'Nantucket_Sound_Mission_01_Abort_01' in 'Under edit' mode. A modal window titled 'Abort Plan' is open, containing the text 'Use the form below to configure the abort plan.' and a form with a 'Under Volts (V):' input field set to 9.5, a 'Use Max Waypoint Distance' checkbox, and a 'Save' button. Above the modal is a 'Unlock Abort Plan' button.

Figure 8-60 Abort Plan Panel—Abort Plan to be Edited

5. Make the required changes, and then click **Save**.

The abort plan is saved.

6. If desired, click **Unlock Abort Plan**.

The Abort Plan Details panel displays the edited abort plan details, and the abort plan is unlocked. You can also click **Edit Abort Plan** and make and save additional edits.

8.6.4 Cloning an Abort Plan

A abort plan can be cloned. Cloning provides an efficient means to create one or more similar abort plans from the original one which can then be edited.

To clone an abort plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, abort plans can be cloned only for the allowed groups. For an Administrator, abort plans can be cloned for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Abort Plans Menu*, and then choose *Abort Plans*.

The Abort Plans page opens as shown in Figure 8-55 on page 8-51. To display more abort plans on a single page, select the number of them to display from the **Show Abort Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by abort plan name, groups or both by clicking the associated filter icon, and sort the list by abort plan name by clicking the sort icon.
4. Click the **Clone** button for the abort plan that you want to clone.

The Clone Abort Plan dialog box opens.

5. Enter a name for the abort plan in the **Abort Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Abort Plans page opens to the Abort Plan panel of the abort plan to be cloned.

6. If desired, make any required changes, and then click **Save**.

The abort plan is saved.

7. If desired, click **Unlock Abort Plan**.

The Abort Plan Details panel displays the edited abort plan details, and the mission sensor plan is unlocked.

8.6.5 Deleting an Abort Plan

To be able to delete an abort plan, it must not be in use.

To delete an abort plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, abort plans can be deleted only for the allowed groups. For an Administrator, abort plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Abort Plans Menu*, and then choose *Abort Plans*.

The Abort Plans page opens as shown in Figure 8-61. To display more abort plans on a single page, select the number of them to display from the **Show Abort Plans**

drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by abort plan name, groups or both by clicking the associated filter icon, and sort the list by abort plan name by clicking the sort icon.

Please note that this page does not update in real-time. Perform a refresh to see updates.

Show 15 Abort Plans

Abort Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Abort_01	group2	sfmcadmin	2017-12-28 20:10	sfmcadmin	2017-12-28 20:10:48	Yes				
Cape_Cod_Bay_Mission_01_Abort_01	group1	sfmcadmin	2017-12-28 19:46	sfmcadmin	2017-12-28 19:46:24	Yes				
Muskeget_Channel_Mission_01_Abort_01	default	sfmcadmin	2018-01-04 14:52	sfmcadmin	2018-01-04 14:52:33	Yes				
Nantucket_Sound_Mission_01_Abort_01	default	sfmcadmin	2018-01-23 19:35	sfmcadmin	2018-01-23 19:35:35	No				
RI_Sound_Mission-01_Abort_01	default	sfmcadmin	2017-12-29 18:10	sfmcadmin	2017-12-29 18:10:33	Yes				

First 1 Last

Figure 8-61 Abort Plans Page—Abort Plan Available for Deletion

4. Click the **Delete** button for the abort plan that you want to delete. This button is available only for abort plans that are not in use.

The Delete Abort Plan dialog box opens as shown in Figure 8-62.

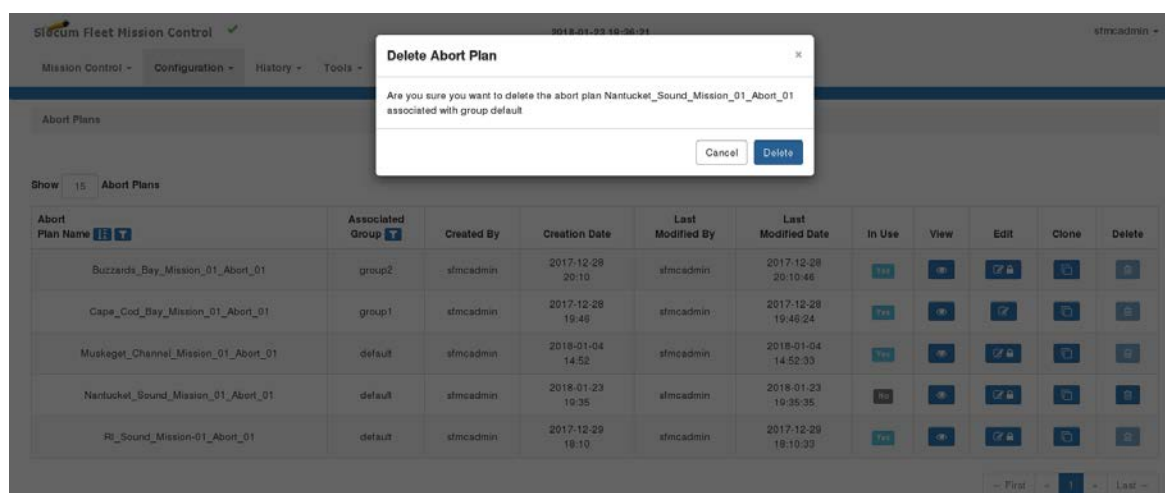


Figure 8-62 Delete Abort Plan Dialog Box

5. Click **Delete**.

The abort plan is deleted, and the Delete Abort Plan dialog box closes.

8.7 Managing a Data Transmission Plan

Data transmission plans can be viewed, created, edited, cloned, and deleted.

8.7.1 Viewing a Data Transmission Plan

To view a data transmission plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, data transmission plans can be viewed only for the allowed groups. For an Administrator, data transmission plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Data Transmission Plans Menu*, and then choose *Data Transmission Plans*.

The Data Transmission Plans page opens as shown in Figure 8-63. To display more data transmission plans on a single page, select the number of them to display from the **Show Data Transmission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by data transmission plan name, groups or both by clicking the associated filter icon, and sort the list by data transmission plan name by clicking the sort icon.

Data Transmission Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Data_Transmission_01	group2	sfmcadmin	2017-12-28 20:13	sfmcadmin	2018-01-07 23:05:09	Yes				
Cape_Cod_Bay_Mission_01_Data_Transmission_01	group1	sfmcadmin	2017-12-28 19:46	N/A	N/A	Yes				
Muskeget_Channel_Mission_01_Data_Transmission_01	default	sfmcadmin	2018-01-04 14:53	N/A	N/A	Yes				
RI_Sound_Mission-01_Data_Transmission_01	default	sfmcadmin	2017-12-29 18:13	N/A	N/A	Yes				

Figure 8-63 Data Transmission Plans Page—Data Transmission Plans

4. Click the **View** button for the data transmission plan that you want to view.

The Data Transmission Plan Details panel opens where the data transmission plan details are displayed as shown in Figure 8-64.

The screenshot shows the 'Data Transmission Plan Details' panel for the plan 'Nantucket_Sound_Mission_01_Data_Transmission_01'. The panel includes a header with the application name 'Slocum Fleet Mission Control', a timestamp '2018-01-24 21:09:55', and a user 'sfmcadmin'. Below the header is a navigation bar with tabs: 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The 'Configuration' tab is active, showing 'Data Transmission Plans' and the specific plan name. A button 'Edit Data Transmission Plan' is visible. The main content area is titled 'Data Transmission Plan Details' and contains a table with the following information:

Data Transmission Plan Name:	Nantucket_Sound_Mission_01_Data_Transmission_01	
Associated Group:	default	
Created By:	sfmcadmin	
Creation Date/Time:	2018-01-23 19:43:27	
Last Modified By:	sfmcadmin	
Last Modified Date/Time:	2018-01-23 19:45:21	
Enabled Data Transmission Rules:		
Sensor: c_delta_bpump_ballast	Interval: 0s	# of Half Yrs: ALL
Nth Yo to Sample: 1	States: Cycling Climbing	
Sensor: m_depth	Interval: 0s	# of Half Yrs: ALL
Nth Yo to Sample: 1	States: Cycling Climbing	
Sensor: m_depth_rate	Interval: 0s	# of Half Yrs: ALL
Nth Yo to Sample: 1	States: Cycling Climbing	
Sensor: sol_array_pitch1	Interval: 0s	# of Half Yrs: ALL
Nth Yo to Sample: 1	States: Cycling Climbing	

Figure 8-64 Data Transmission Plan Details Panel

The Data Transmission Plan Details panel includes the following information:

Data Transmission Plan Name. The name of the data transmission plan.

Associated Group. The group associated with the data transmission plan. The data transmission plan can be assigned and deployed for only those gliders in the group.

Created By. The user account that was used to create the data transmission plan.

Creation Date/Time. The date and time the data transmission plan was created.

Last Modified By. The user account that was last used to edit the data transmission plan. "N/A" indicates that the data transmission plan has never been edited.

Last Modified Date/Time. The date and time the data transmission plan was last edited. "N/A" indicates that the data transmission plan has never been edited.

Enabled Data Transmission Rules. Displays a list of enabled data transmission rules.

8.7.2 Creating a Data Transmission Plan

A data transmission plan is created on the Data Transmission Plan panel of the Data Transmission Plans page which is shown in Figure 8-67 on page 8-61. The Data Transmission Plan panel is composed of a Data Transmission Plan Rule Creation area on the left, which enables creating a separate data transmission plan rule for specific sensors, and an Enabled Data Transmission Plan Rules area on the right, which provides a list of enabled data transmission plan rules. The data transmission plan applies to each

mission segment, where a segment is typically during which the glider is diving and climbing or is at the surface.

To create a data transmission plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, data transmission plans can be created only for the allowed groups. For an Administrator, data transmission plans can be created for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Data Transmission Plans Menu*, and then choose *Create Data Transmission Plan*.

The Create Data Transmission Plan panel opens as shown in Figure 8-65.

Figure 8-65 Create Data Transmission Plan Panel

3. In the Create Data Transmission Plan panel, enter a unique name for the data transmission plan in the **Data Transmission Plan Name** text box as shown in Figure 8-66. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.
4. Select the group to associate with the data transmission plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.
5. Click **Next**.

The Data Transmission Plan panel opens as shown in Figure 8-67.

6. From the Data Transmission Plan Rule Creation area of the Data Transmission Plan panel, click **Add New Data Transmission Rule** to add a data transmission rule. The Create Data Transmission Rule dialog box opens as shown in Figure 8-68.

Slocum Fleet Mission Control 2018-01-23 19:41:38 stmcadmin

Mission Control Configuration History Tools Admin About

Create Data Transmission Plan

Create Data Transmission Plan

Please enter a name for the data transmission plan and select a group with which the data transmission plan should be associated.

Data Transmission Plan Name*:
Nantucket_Sound_Mission_01_Data_Transmission_01

Group*
default
group1
group2
group3
group4

Next

Figure 8-66 Create Data Transmission Plan Panel—Data Transmission Plan Name Entered

Slocum Fleet Mission Control 2018-01-23 19:41:45 stmcadmin

Mission Control Configuration History Tools Admin About

Data Transmission Plans Nantucket_Sound_Mission_01_Data_Transmission_01 (Under edit)

Unlock Data Transmission Plan

Data Transmission Plan

Use the form below to configure the data transmission plan.

Data Transmission Plan Rule Creation

Enabled Data Transmission Plan Rules

Use the form below to configure the data transmission plan.

Data transmission rules enabled for this data transmission plan. Select the edit button to modify the rule.

Figure 8-67 Data Transmission Plan Panel

Slocum Fleet Mission Control 2018-01-23 19:41:54 stmcadmin

Mission Control Configuration History Tools

Data Transmission Plans Nantucket_Sound_Mission_01_Data_Transmission_01

Create Data Transmission Rule

Sensor Type Name:

States:
Diving
Hovering
Climbup
On Surface

Interval: 0

Collect on All Half Yos

Nth Yo to Sample: 1

Cancel Save

Figure 8-68 Create Data Transmission Rule Dialog Box

7. Enter the sensor name in the **Sensor Type Name** text box. Or enter just the first two characters of the sensor name. A list of sensors beginning with these characters will be displayed. If the sensor you are looking for is not in the list, continue entering the characters for it until it does. Then select the sensor from this list.

8. Select the state or states during which to sample from the **States** drop-down list. To select more than one state, hold down the Ctrl key while clicking them one at a time.
9. Enter or select the interval in seconds between samples in the **Interval** spin box.
10. Select the **Collect on All Half Yos** check box to transmit data for every half yo. Clear the check box to transmit data for a specific number of yos during each mission segment and enter or select the number of yos in the **# of Half Yos** spin box that opens.
11. If the **Collect on All Half Yos** check box is selected, enter or select the yos during which to sample from the **Nth Yo to Sample** spin box. For an entry of "1," data transmission will be performed during every yo; for an entry of "2," during every second yo; for an entry of "3," during every third, etc., of a mission segment. If the **Collect on All Half Yos** check box is cleared, the total number of yos is limited by the **# of Half Yos** setting for each mission segment.
12. Click **Save**.
The data transmission plan is saved.
13. If desired, click **Unlock Data Transmission Plan**.
The data transmission plan is unlocked, and the Data Transmission Plan Details panel displays the data transmission plan details.

8.7.3 Editing a Data Transmission Plan

Once saved, a data transmission plan can be edited at any time to include modifying, adding, and deleting the data transmission plan parameters. You can begin editing a data transmission plan directly from the Data Transmission Plans page or when viewing the data transmission plan as described in "Viewing a Data Transmission Plan" on page 8-58. While editing a data transmission plan, it is locked to all other user accounts until the editing is completed. However, the data transmission plan can be cloned as described in "Cloning a Data Transmission Plan" on page 8-64, and then edited. If the data transmission plan is associated with an active deployment, the mission plan for the deployment must be processed and the mission files regenerated for the edited data transmission plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to "Assigning a Mission Plan to an Active Deployment" on page 9-15.

To edit a data transmission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot

role, data transmission plans can be edited only for the allowed groups. For an Administrator, data transmission plans can be edited for any group.

2. From the *Configuration* menu select *Mission Planning Menu*, select *Data Transmission Plans Menu*, and then choose *Data Transmission Plans*.

The Data Transmission Plans page opens as shown in Figure 8-63 on page 8-58. To display more data transmission plans on a single page, select the number of them to display from the **Show Data Transmission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by data transmission plan name, groups or both by clicking the associated filter icon, and sort the list by data transmission plan name by clicking the sort icon.
4. Click the **Edit** button for the data transmission plan that you want to edit, or click the **View** button for it to view the data transmission plan first, and then click the **Edit Data Transmission Plan** button just above the Data Transmission Plan panel.

The Data Transmission Plans page opens to the Data Transmission Plan panel of the data transmission plan to be edited as shown Figure 8-69. The data transmission plan also becomes locked for editing by any other user account.

Silexum Fleet Mission Control 2018-01-24 21:13:28 stmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Data Transmission Plans Nantucket_Sound_Mission_01_Data_Transmission_01 (Under edit)

Unlock Data Transmission Plan

Data Transmission Plan

Use the form below to configure the data transmission plan.

Data Transmission Plan Rule Creation

+ Add New Data Transmission Rule

Enabled Data Transmission Plan Rules

Data transmission rules enabled for this data transmission plan. Select the edit button to modify the rule.

Sensor	Interval	States	# of Half Yrs
Sensor: c_delta_bpump_ballast Nth Yo to Sample: 1	Interval: 0s	States: Diving Climbing	# of Half Yrs: ALL
Sensor: m_depth Nth Yo to Sample: 1	Interval: 0s	States: Diving Climbing	# of Half Yrs: ALL
Sensor: m_depth_rate Nth Yo to Sample: 1	Interval: 0s	States: Diving Climbing	# of Half Yrs: ALL
Sensor: sol_array_pitch1 Nth Yo to Sample: 1	Interval: 0s	States: Diving Climbing	# of Half Yrs: ALL

Figure 8-69 Data Transmission Plan Panel—Data Transmission Plan to be Edited

5. In the Enabled Data Transmission Plan Rules area of the Data Transmission Plan panel, click the **Modify the settings for this data transmission rule** button for each data transmission plan rule that you want to edit and make the changes. To remove

a data transmission plan rule, click the **Remove this data transmission rule** button for it, and then click **Delete** in the Delete Data Transmission Plan Rule Form dialog box. To add a data transmission plan rule, click the **Add New Data Transmission Rule** button in the Data Transmission Plan Rule Creation area of the Data Transmission Plan panel.

6. If desired, make any required changes, and then click **Save**.

The mission data transmission plan is saved.

7. If desired, click **Unlock Data Transmission Plan**.

The Data Transmission Plan Details panel displays the edited data transmission plan details, and the data transmission plan is unlocked. You can also click **Edit Data Transmission Plan** and make and save additional edits.

8.7.4 Cloning a Data Transmission Plan

A data transmission plan can be cloned. Cloning provides an efficient means to create one or more similar data transmission plans from the original one which can then be edited.

To clone a data transmission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, data transmission plans can be cloned only for the allowed groups. For an Administrator, data transmission plans can be cloned for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Data Transmission Plans Menu*, and then choose *Data Transmission Plans*.

The Data Transmission Plans page opens as shown in Figure 8-63 on page 8-58. To display more data transmission plans on a single page, select the number of them to display from the **Show Data Transmission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by data transmission plan name, groups or both by clicking the associated filter icon, and sort the list by data transmission plan name by clicking the sort icon.
4. Click the **Clone** button for the data transmission plan that you want to clone.

The Clone Data Transmission Plan dialog box opens.

5. Enter a name for the data transmission plan in the **Data Transmission Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.

The Data Transmission Plans page opens to the Data Transmission Plan panel of the data transmission plan to be cloned.

6. If desired, make any required changes, and then click **Save**.

The data transmission plan is saved.

7. If desired, click **Unlock Data Transmission Plan**.

The Data Transmission Plan Details panel displays the edited data transmission plan details, and the data transmission plan is unlocked.

8.7.5 Deleting a Data Transmission Plan

To be able to delete a data transmission plan, it must not be in use.

To delete a data transmission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, data transmission plans can be deleted only for the allowed groups. For an Administrator, data transmission plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Data Transmission Plans Menu*, and then choose *Data Transmission Plans*.

The Data Transmission Plans page opens as shown in Figure 8-70. To display more data transmission plans on a single page, select the number of them to display from the **Show Data Transmission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

Data Transmission Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01_Data_Transmission_01	group2	sfmcadmin	2017-12-28 20:13	sfmcadmin	2018-01-07 23:05:09	Yes				
Cape_Cod_Bay_Mission_01_Data_Transmission_01	group1	sfmcadmin	2017-12-28 19:46	N/A	N/A	Yes				
Muskeget_Channel_Mission_01_Data_Transmission_01	default	sfmcadmin	2018-01-04 14:53	N/A	N/A	Yes				
Nantucket_Sound_Mission_01_Data_Transmission_01	default	sfmcadmin	2018-01-23 19:43	sfmcadmin	2018-01-23 19:45:21	No				
Ri_Sound_Mission-01_Data_Transmission_01	default	sfmcadmin	2017-12-29 18:13	N/A	N/A	Yes				

Figure 8-70 Data Transmission Plans Page—Data Transmission Plan Available for Deletion

3. If desired, filter the list by data transmission plan name, groups or both by clicking the associated filter icon, and sort the list by data transmission plan name by clicking the sort icon.
4. Click the **Delete** button for the data transmission plan that you want to delete. This button is available only for data transmission plans that are not in use.

The Delete Data Transmission Plan dialog box opens as shown in Figure 8-71.

5. Click **Delete**.

The data transmission plan is deleted, and the Delete Data Transmission Plan dialog box closes.

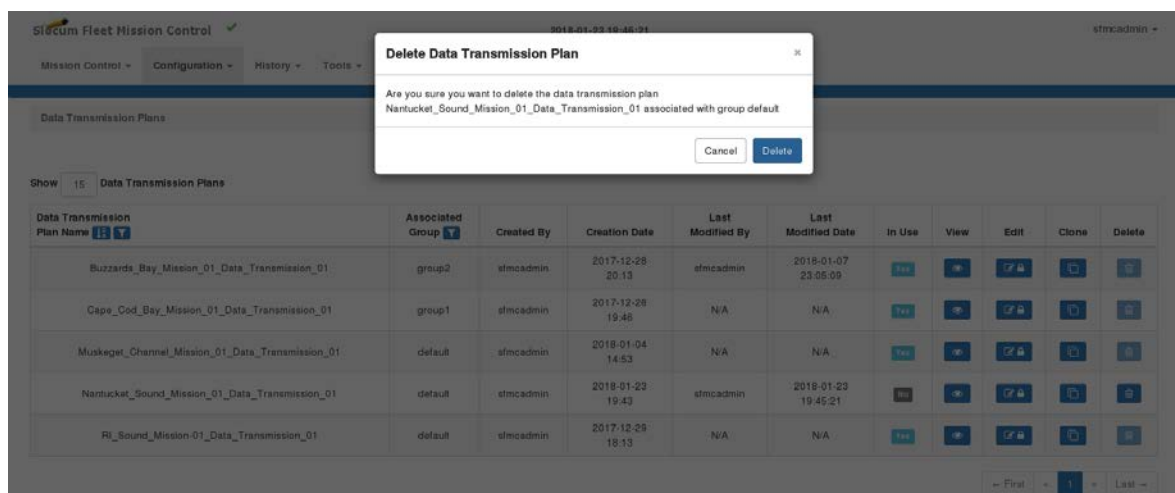


Figure 8-71 Delete Data Transmission Plan Dialog Box

8.8 Managing a Mission Plan

When all of the mission plan parts have been created, one or more mission plans can be created for a specific group and therefore will apply only to those gliders in that group. Once created, mission plans can be viewed, assigned to active deployments, edited, and cloned for any one or more gliders in the group. They can also be deleted. Once assigned, to an active deployment, a mission plan is automatically uploaded to the glider when the glider connects. A mission plan can only be created after the seven mission plan parts have been created. In addition, the following must be true:

- There must be an active deployment for the associated glider, whether it is currently connected or not.
- The associated glider must have been configured.
- All seven of the mission plan parts must be in the same group.
- The glider must be in the same group as the mission plan parts.

8.8.1 Viewing a Mission Plan

Viewing a mission plan encompasses viewing its individual mission plan parts.

To view a mission plan:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot or Viewer role, mission plans can be viewed only for the allowed groups. For an Administrator, mission plans can be viewed for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Plans Menu*, and then choose *Mission Plans*.

The Mission Plans page opens as shown in Figure 8-72. To display more mission plans on a single page, select the number of them to display from the **Show Mission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission plan name, groups or both by clicking the associated filter icon, and sort the list by mission plan name by clicking the sort icon.

Mission Plan Name	Associated Group	Created By	Creation Date	Last Modified By	Last Modified Date	In Use	View	Edit	Clone	Delete
Buzzards_Bay_Mission_01	group2	sfmcadmin	2017-12-28 21:07	sfmcadmin	2017-12-28 21:08:12	No				
Cape_Cod_Bay_Mission_01	group1	sfmcadmin	2017-12-28 19:41	sfmcadmin	2017-12-28 19:49:47	No				
Muskeget_Channel_Mission_01	default	sfmcadmin	2018-01-04 14:40	sfmcadmin	2018-01-04 14:54:35	No				
Nantucket_Sound_Mission_01	default	sfmcadmin	2018-01-29 19:38	sfmcadmin	2018-01-29 19:38:55	Yes				
RI_Sound_Mission_01	default	sfmcadmin	2018-01-02 19:20	sfmcadmin	2018-01-06 23:17:44	No				

Figure 8-72 Mission Plans Page—Mission Plans

4. Click the **View** button for the mission plan that you want to view.

The *Waypoint* tab opens as shown in Figure 8-73. A different tab could open depending on which tab was opened last.

5. To view the other mission plan parts, click their associated tabs.

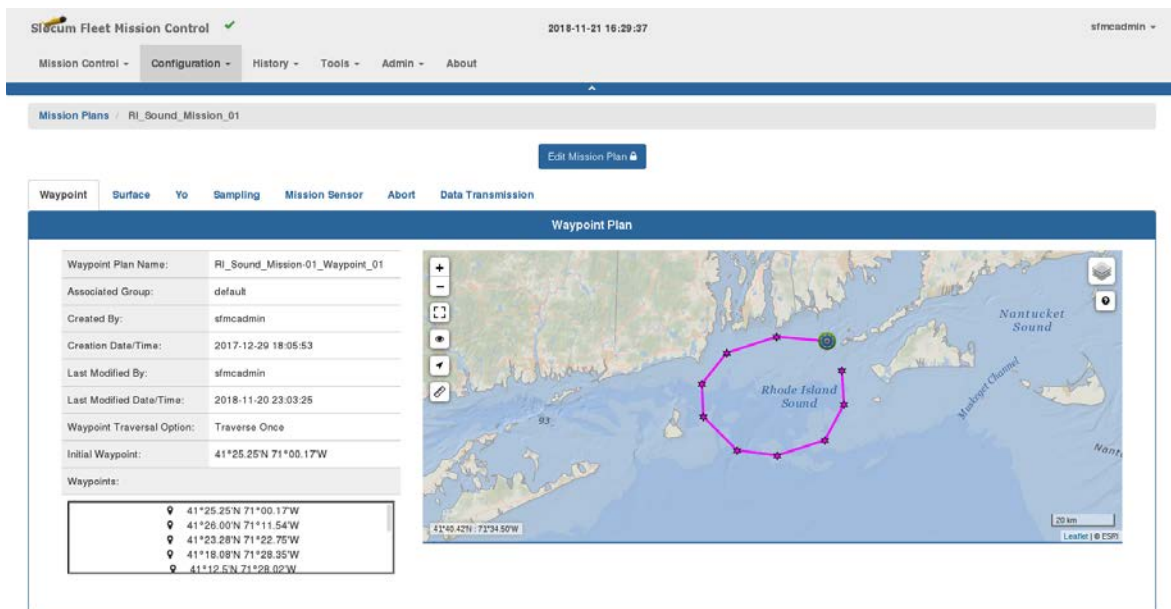


Figure 8-73 Waypoint Tab

8.8.2 Creating a Mission Plan

To create a mission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission plans can be created only for the allowed groups. For an Administrator, mission plans can be created for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Plans Menu*, and then choose *Create Mission Plan*.

The Create Mission Plan panel opens as shown in Figure 8-74.

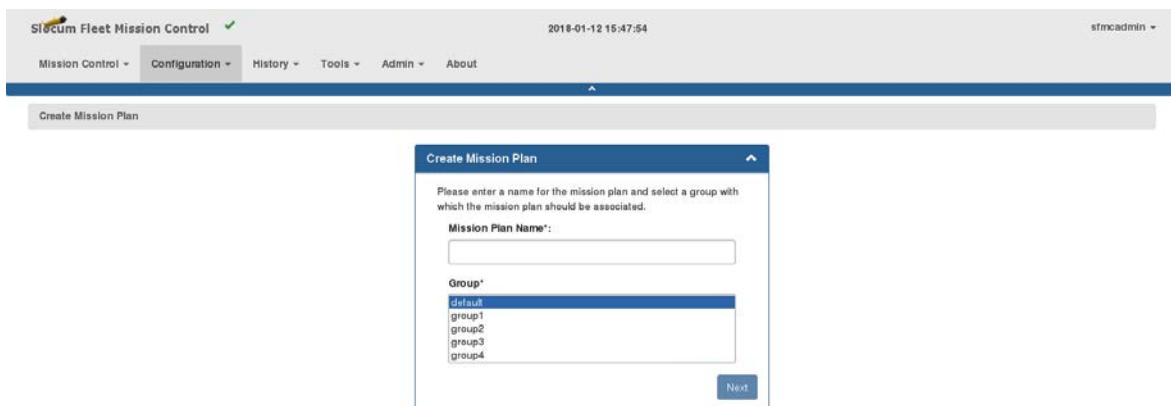


Figure 8-74 Create Mission Plan Panel

3. In the Create Mission Plan panel, enter a unique name for the mission plan in the **Mission Plan Name** text box as shown in Figure 8-75. The name must begin with an alpha character followed by at least 4 but no more than 49 alphanumeric or special characters.

The screenshot shows the 'Create Mission Plan' dialog box. It has a title bar 'Create Mission Plan' with a close button. Below the title bar, it says 'Please enter a name for the mission plan and select a group with which the mission plan should be associated.' There are two input fields: 'Mission Plan Name:' with the value 'Nantucket_Sound_Mission_01' and 'Group:' with a dropdown menu showing 'default' (selected), 'group1', 'group2', 'group3', and 'group4'. A 'Next' button is located at the bottom right of the dialog.

Figure 8-75 Create Mission Plan Panel—Mission Plan Name Entered

4. Select the group to associate with the mission plan from the **Group** drop-down list. This drop-down list will only be shown if the user account is associated with more than one group.
5. Click **Next**.

The *Waypoint* tab opens to the Waypoint Plan panel as shown in Figure 8-76.

The screenshot shows the 'Waypoint Plan' panel. It has a title bar 'Waypoint Plan' with a close button. Below the title bar, there is a 'Waypoint Plan Name:' text box and a 'Create New Waypoint Plan' button. Below these, there is a map area. The map area has a 'Map data not yet available' message and a scale bar (5000 km). The map area also includes a 'Leaflet | © ESRI' attribution. The map area is divided into two sections: a left section with a 'Map data not yet available' message and a right section with a map of the world.

Figure 8-76 Waypoint Tab—Waypoint Plan Panel

6. From the **Waypoint Plan Name** drop-down list, select the waypoint plan to assign to the mission plan as shown in Figure 8-77. Only those waypoint plans for the selected group are available.

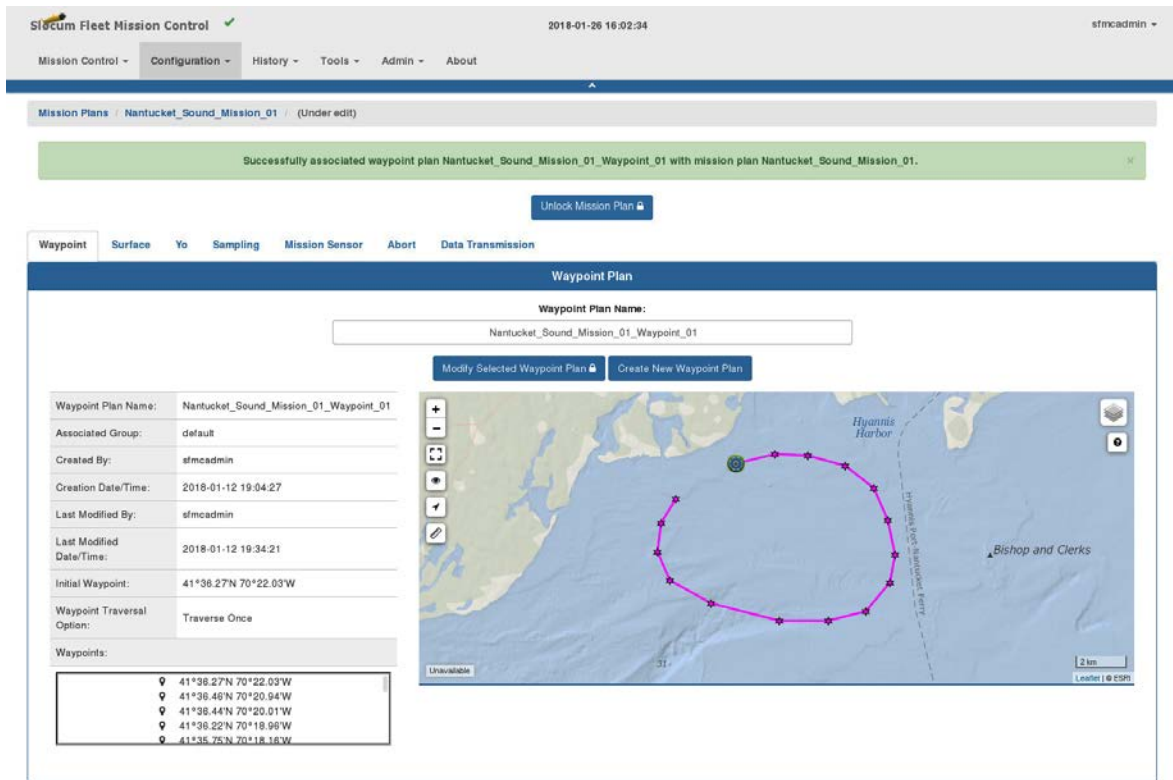


Figure 8-77 Waypoint Plan Panel—Waypoint Plan Assigned

7. Click the *Surface* tab.

The *Surface* tab opens to the Surface Plan panel as shown in Figure 8-78.

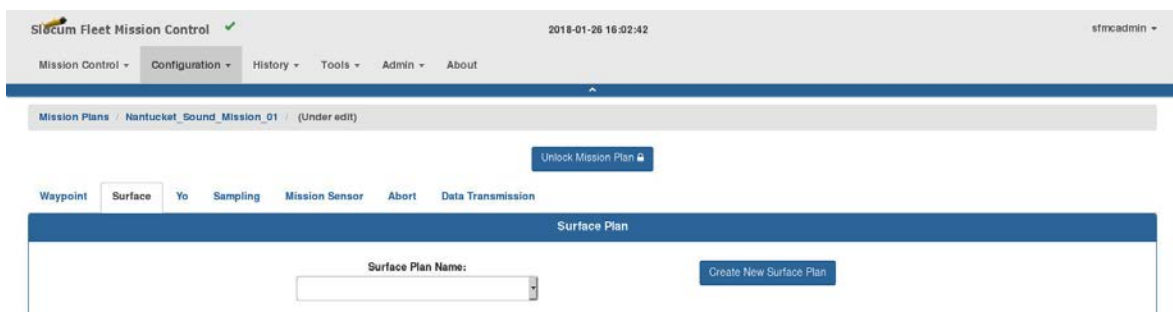


Figure 8-78 Surface Tab—Surface Plan Panel

- From the **Surface Plan Name** drop-down list, select the surface plan to assign to the mission plan as shown in Figure 8-79. Only those surface plans for the selected group are available.

Slocum Fleet Mission Control 2018-01-26 16:02:50 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Mission Plans / Nantucket_Sound_Mission_01 / (Under edit)

Successfully associated surface plan Nantucket_Sound_Mission_01_Surface_01 with mission plan Nantucket_Sound_Mission_01.

Unlock Mission Plan

Waypoint Surface Yo Sampling Mission Sensor Abort Data Transmission

Surface Plan

Surface Plan Name: Nantucket_Sound_Mission_01_Surface_01

Modify Selected Surface Plan Create New Surface Plan

Surface Plan Name:	Nantucket_Sound_Mission_01_Surface_01
Associated Group:	default
Created By:	sfmcadmin
Creation Date/Time:	2018-01-16 15:17:59
Last Modified By:	sfmcadmin
Last Modified Date/Time:	2018-01-25 22:10:09
Enabled Surfacing Rules:	
Surface When No Comms After 43200 Seconds (12.0 Hours), End Action: Wait for Ctrl-C Quit/Resume	
Surface When All Waypoints Traversed, End Action: Quit	
Surface When All Yos Completed, End Action: Wait for Ctrl-C Quit/Resume	
Surface When Hit Waypoint, End Action: Wait for Ctrl-C Quit/Resume	
Surface Every 900 Seconds After Mission Start, End Action: Wait for Ctrl-C Quit/Resume	
Surface at UTC Time 2018-03-16 20:00, End Action: Quit	

Figure 8-79 Surface Plan Panel—Surface Plan Assigned

- Click the *Yo* tab.

The *Yo* tab opens to the Yo Plan panel as shown in Figure 8-80.

Slocum Fleet Mission Control 2018-01-26 16:03:12 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Mission Plans / Nantucket_Sound_Mission_01 / (Under edit)

Unlock Mission Plan

Waypoint Surface Yo Sampling Mission Sensor Abort Data Transmission

Yo Plan

Yo Plan Name: [Dropdown Menu]

Create New Yo Plan

Figure 8-80 Yo Tab—Yo Plan Panel

10. From the **Yo Plan Name** drop-down list, select the yo plan to assign to the mission plan as shown in Figure 8-81. Only those yo plans for the selected group are available.

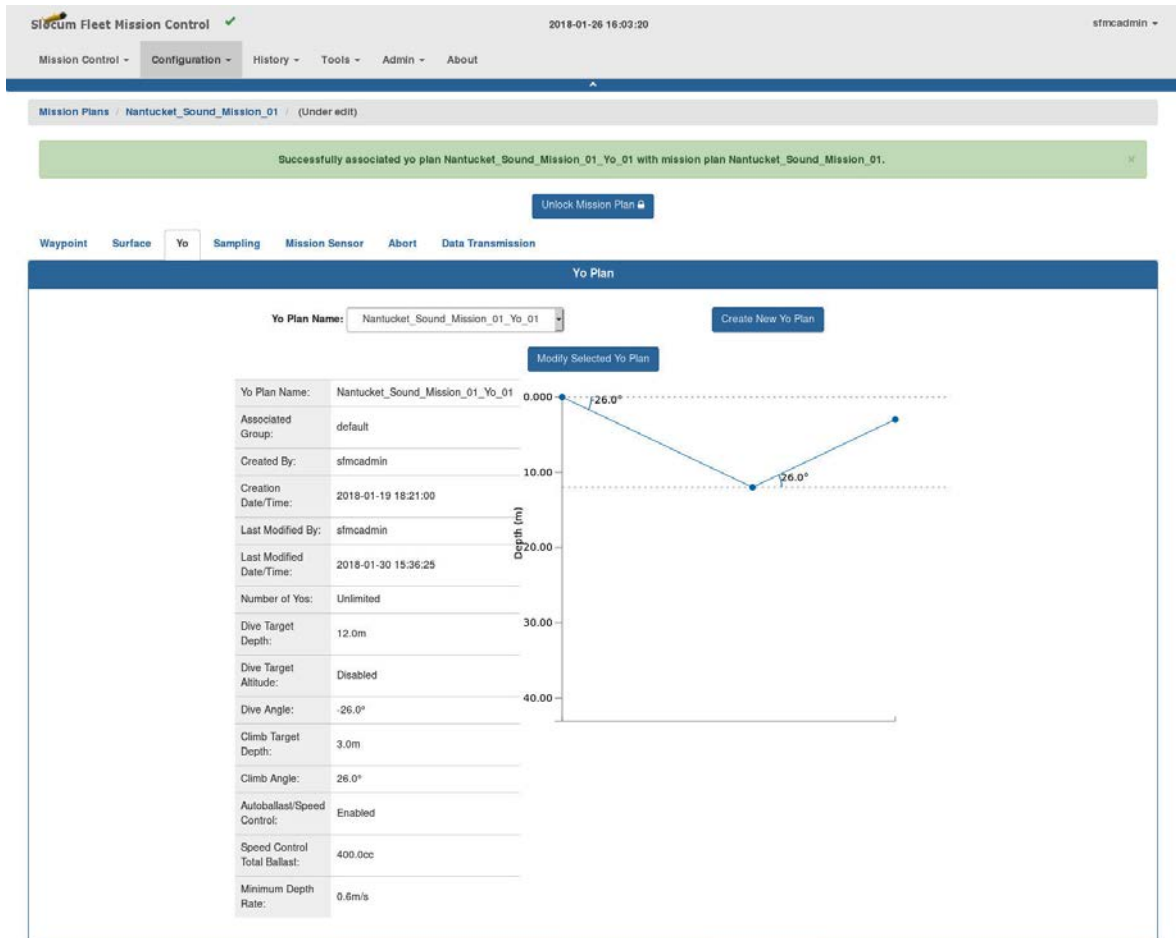


Figure 8-81 Yo Plan Panel—Yo Plan Assigned

11. Click the *Sampling* tab.

The *Sampling* tab opens to the Sampling Plan panel as shown in Figure 8-82.

12. From the **Sampling Plan Name** drop-down list, select the sampling plan to assign to the mission plan as shown in Figure 8-83. Only those sampling plans for the selected group are available.

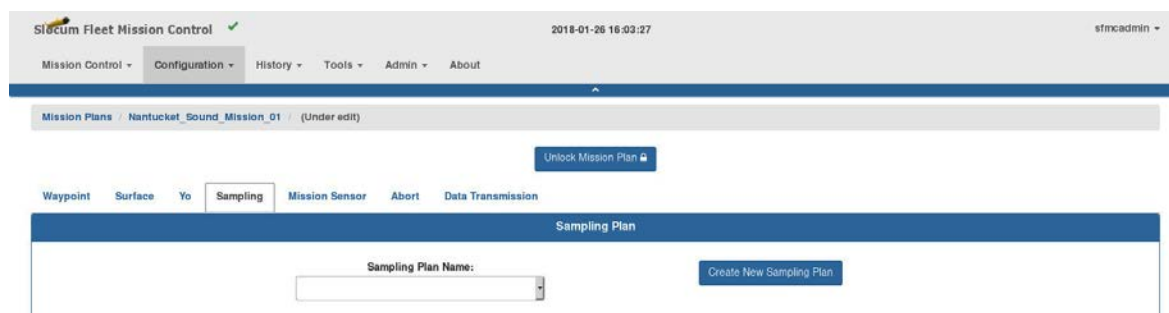


Figure 8-82 Sampling Tab—Sampling Plan Panel

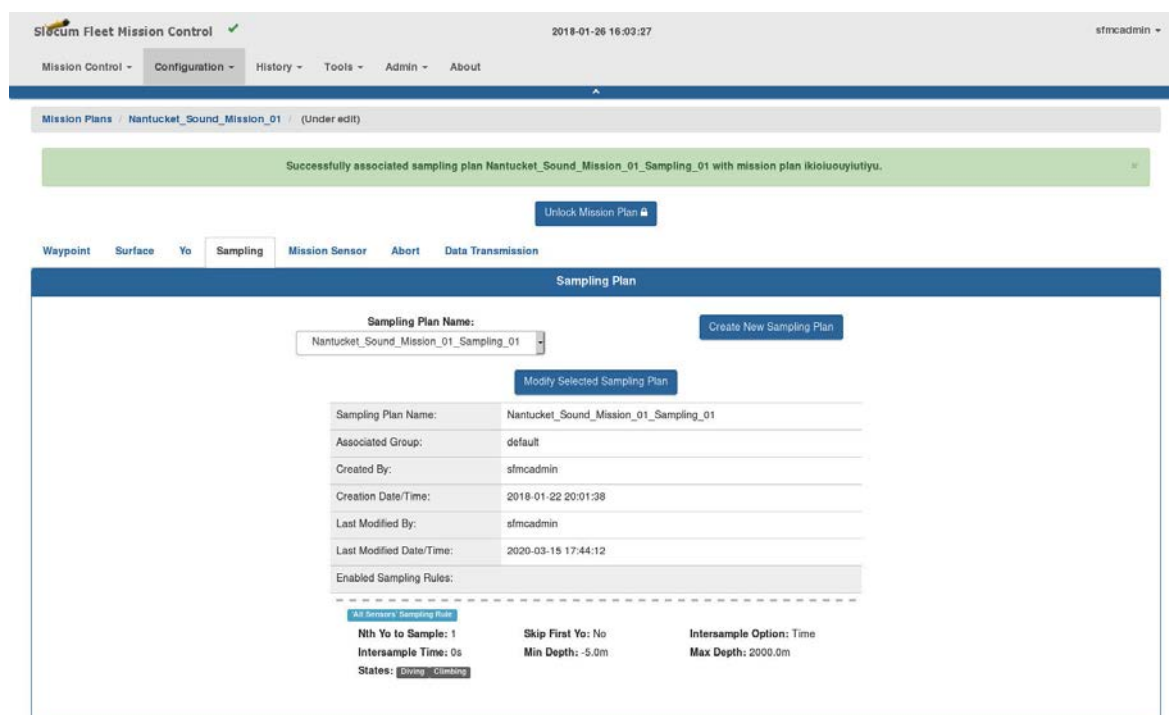


Figure 8-83 Sampling Plan Panel—Sampling Plan Assigned

13. Click the *Mission Sensor* tab.

The *Mission Sensor* tab opens to the Mission Sensor Plan panel as shown in Figure 8-84.

14. From the **Mission Sensor Plan Name** drop-down list, select the mission sensor plan to assign to the mission plan as shown in Figure 8-85. Only those mission sensor plans for the selected group are available.

Slocum Fleet Mission Control 2018-01-26 16:03:39 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Mission Plans / Nantucket_Sound_Mission_01 / (Under edit)

Unlock Mission Plan

Waypoint Surface Yo Sampling **Mission Sensor** Abort Data Transmission

Mission Sensor Plan

Mission Sensor Plan Name: Create New Mission Sensor Plan

Figure 8-84 Mission Sensor Tab—Mission Sensor Plan Panel

Slocum Fleet Mission Control 2018-01-26 16:03:49 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Mission Plans / Nantucket_Sound_Mission_01 / (Under edit)

Successfully associated mission sensor plan Nantucket_Sound_Mission_01_Mission_Sensor_01 with mission plan Nantucket_Sound_Mission_01.

Unlock Mission Plan

Waypoint Surface Yo Sampling **Mission Sensor** Abort Data Transmission

Mission Sensor Plan

Mission Sensor Plan Name: Create New Mission Sensor Plan

Nantucket_Sound_Mission_01_Mission_Sensor_01

Modify Selected Mission Sensor Plan

Mission Sensor Plan Name:	Nantucket_Sound_Mission_01_Mission_Sensor_01
Associated Group:	default
Created By:	sfmcadmin
Creation Date/Time:	2018-01-23 15:31:58
Last Modified By:	sfmcadmin
Last Modified Date/Time:	2018-01-30 17:07:21
Flight Low Power Mode:	Enabled
Flight Low Power Mode Cycle Time:	60 secs/cycle
Power Down Science When Not Sampling:	Yes
# Seconds Prior to Infection for Powering up Science:	30
Use Current Correction:	Enabled
Min Altimeter Depth:	2.0m
Flight Transmit Sensor Header Option:	Transmit On Initial Mission Segment Only
Science Transmit Sensor Header Option:	Transmit On Initial Mission Segment Only

Figure 8-85 Mission Sensor Plan Panel—Mission Sensor Plan Assigned

15. Click the *Abort* tab.

The *Abort* tab opens to the Abort Plan panel as shown in Figure 8-86.

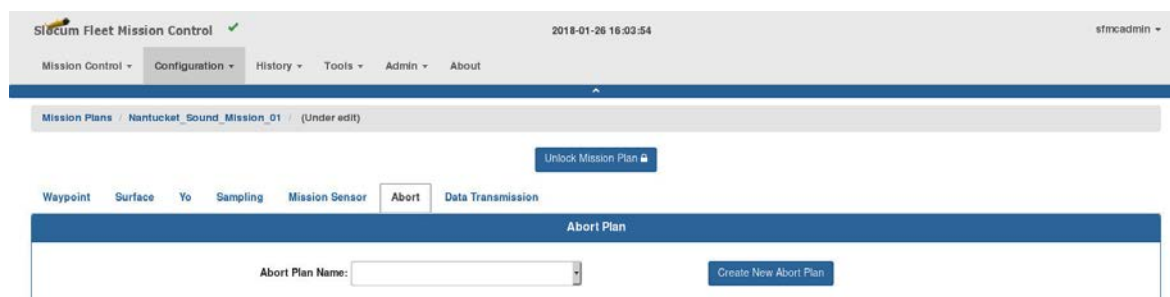


Figure 8-86 Abort Tab—Abort Plan Panel

16. From the **Abort Plan Name** drop-down list, select the abort plan to assign to the mission plan as shown in Figure 8-87. Only those abort plans for the selected group are available.

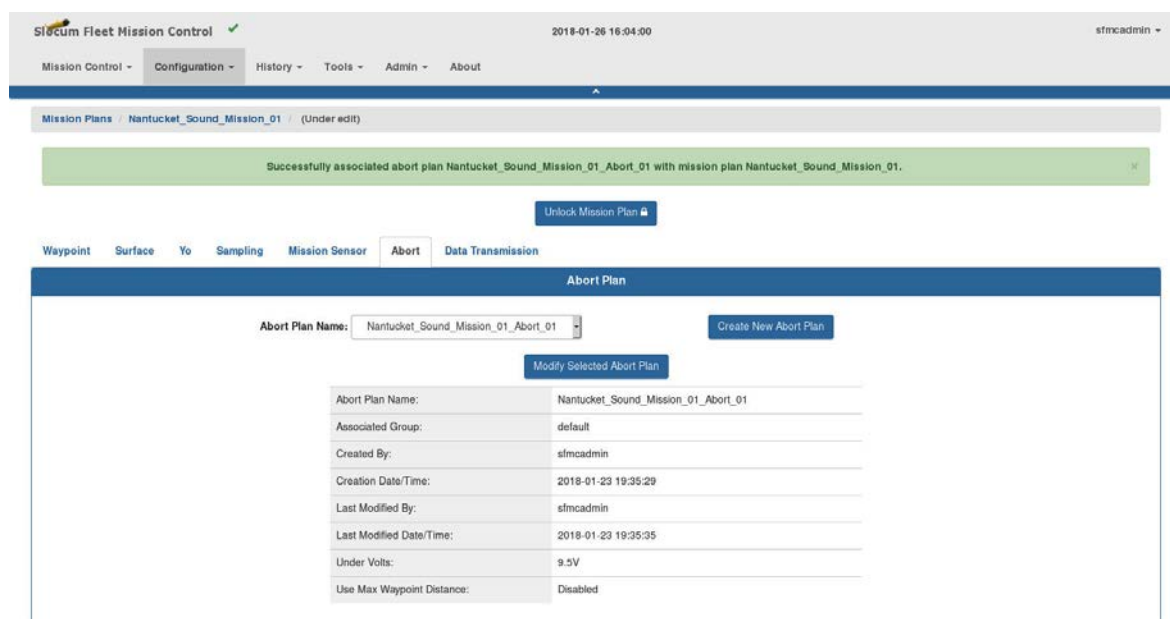


Figure 8-87 Abort Plan Panel—Abort Plan Assigned

17. Click the *Data Transmission* tab.

The *Data Transmission* tab opens to the Data Transmission Plan panel as shown in Figure 8-88.

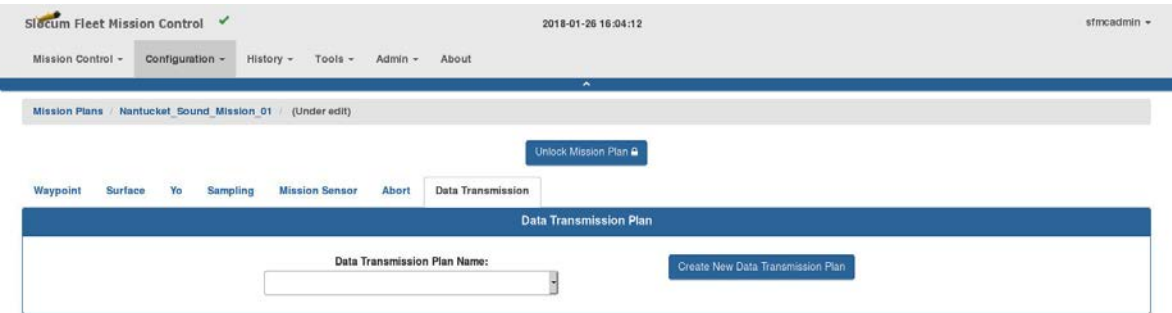


Figure 8-88 Data Transmission Tab—Data Transmission Plan Panel

18. From the **Data Transmission Plan Name** drop-down list, select the data transmission plan to assign to the mission plan as shown in Figure 8-89. Only those data transmission plans for the selected group are available.

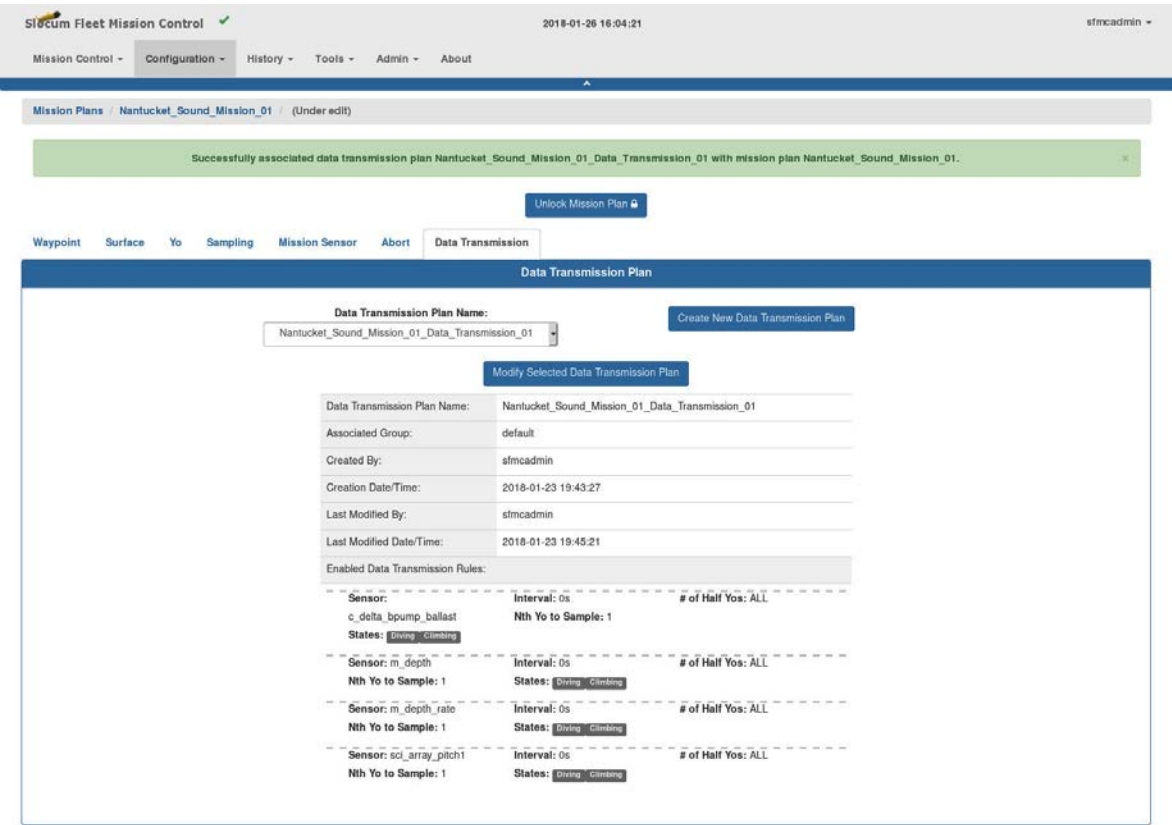


Figure 8-89 Data Transmission Plan Panel—Data Transmission Plan Assigned

8.8.3 Editing a Mission Plan

Once saved, a mission plan can be edited at any time to include changing the mission plan parts selections. You can begin editing a mission plan directly from the Mission Plans page or when viewing the mission plan as described in “Viewing a Mission Plan” on page 8-67. While editing a mission plan, it is locked to all other user accounts until the editing is completed. However, the mission plan can be cloned as described in “Cloning a Mission Plan” on page 8-78, and then edited. If the mission plan is associated with an active deployment, it must be processed and the mission files regenerated for the edited mission plan to be uploaded to the glider when it next connects and if the script sfmc.xml is enabled. For instructions on how to process a mission plan and generate the files, refer to “Assigning a Mission Plan to an Active Deployment” on page 9-15.

To edit a mission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission plans can be edited only for the allowed groups. For an Administrator, mission plans can be edited for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Plans Menu*, and then choose *Mission Plans*.

The Mission Plans page opens as shown in Figure 8-72 on page 8-67. To display more mission plans on a single page, select the number of them to display from the **Show Mission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission plan name, groups or both by clicking the associated filter icon, and sort the list by mission plan name by clicking the sort icon.
4. Click the **Edit** button for the mission plan that you want to edit, or click the **View** button for it to view the mission plan first, and then click the **Edit Mission Plan** button at the top of the Mission Plans page.

The Mission Plans page opens to the *Waypoint* tab of Waypoint Plan panel of the mission plan to be edited as shown Figure 8-90, or if a different tab was selected in a previous edit, this tab will open instead. The mission plan also becomes locked for editing by any other user account.

5. If desired, select a different waypoint plan. You can instead create a new one by clicking **Create New Waypoint Plan**.
6. Repeat for any other mission plan part by first selecting the appropriate tab.

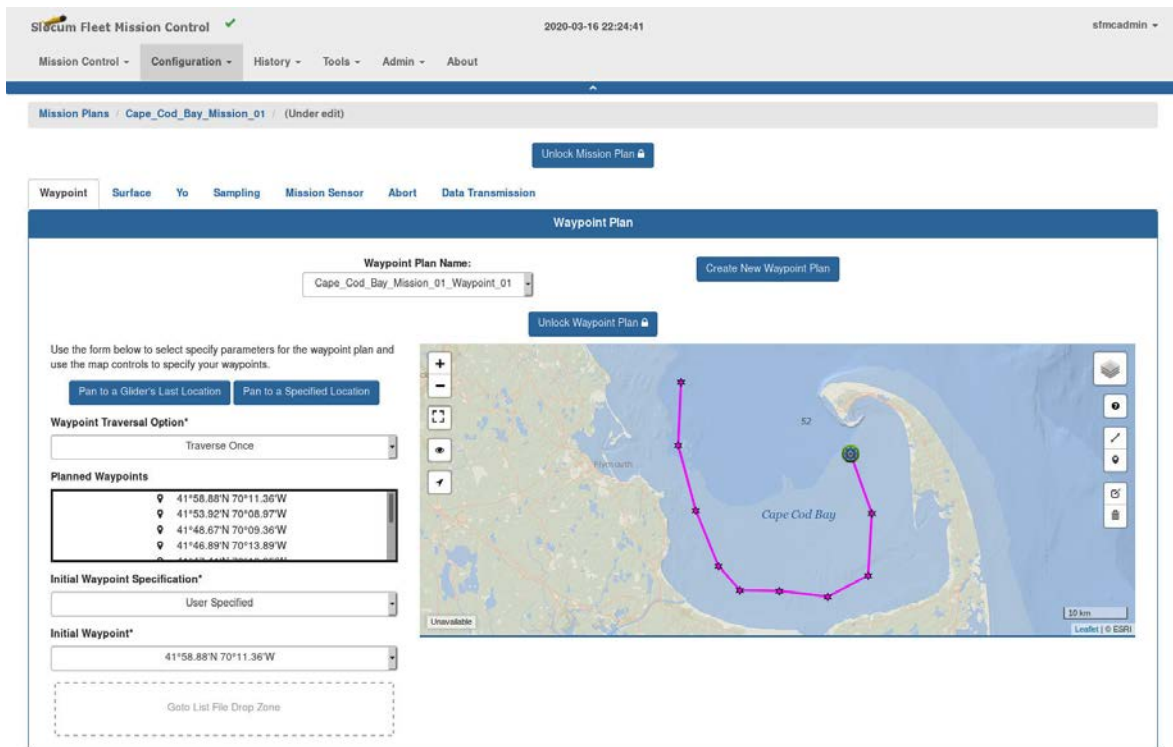


Figure 8-90 Mission Plan to be Edited or Cloned—Opened to the Waypoint Tab

7. If desired, click **Unlock Mission Plan.**

The Mission Plans page displays the details for the mission plan part last selected, and the mission plan is unlocked.

8.8.4 Cloning a Mission Plan

A mission plan can be cloned. Cloning provides an efficient means to create one or more similar mission plans from the original one which can then be edited.

To clone a mission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission plans can be cloned only for the allowed groups. For an Administrator, mission plans can be cloned for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Plans Menu*, and then choose *Mission Plans*.

The Mission Plans page opens as shown in Figure 8-72 on page 8-67. To display more mission plans on a single page, select the number of them to display from the **Show Mission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission plan name, groups or both by clicking the associated filter icon, and sort the list by mission plan name by clicking the sort icon.
4. Click the **Clone** button for the mission plan that you want to clone.
The Clone Mission Plan dialog box opens.
5. Enter a name for the mission plan in the **Mission Plan Name** text box, select the group from the **Group** drop-down list, and then click **Clone**.
The Mission Plans page opens.
6. If desired, make any required changes by selecting one or more tabs and selecting a different plan for each. For any tab you can edit the plan part or create a new one.
The mission plan is automatically saved.
7. If desired, click **Unlock Mission Plan**.
The Mission Plans page displays the details for the mission plan part last selected, and the mission plan is unlocked.

8.8.5 Deleting a Mission Plan

To be able to delete a mission plan, it must not be in use.

To delete a mission plan:

1. Log in to a user account as an Administrator or to a user account with a Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, mission plans can be deleted only for the allowed groups. For an Administrator, mission plans can be deleted for any group.
2. From the *Configuration* menu select *Mission Planning Menu*, select *Mission Plans Menu*, and then choose *Mission Plans*.

The Mission Plans page opens as shown in Figure 8-91. To display more mission plans on a single page, select the number of them to display from the **Show Mission Plans** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, filter the list by mission plan name, groups or both by clicking the associated filter icon, and sort the list by mission plan name by clicking the sort icon.
4. Click the **Delete** button for the mission plan that you want to delete. This button is available only for mission plans that are not in use.

The Delete Mission Plan dialog box opens as shown in Figure 8-92.

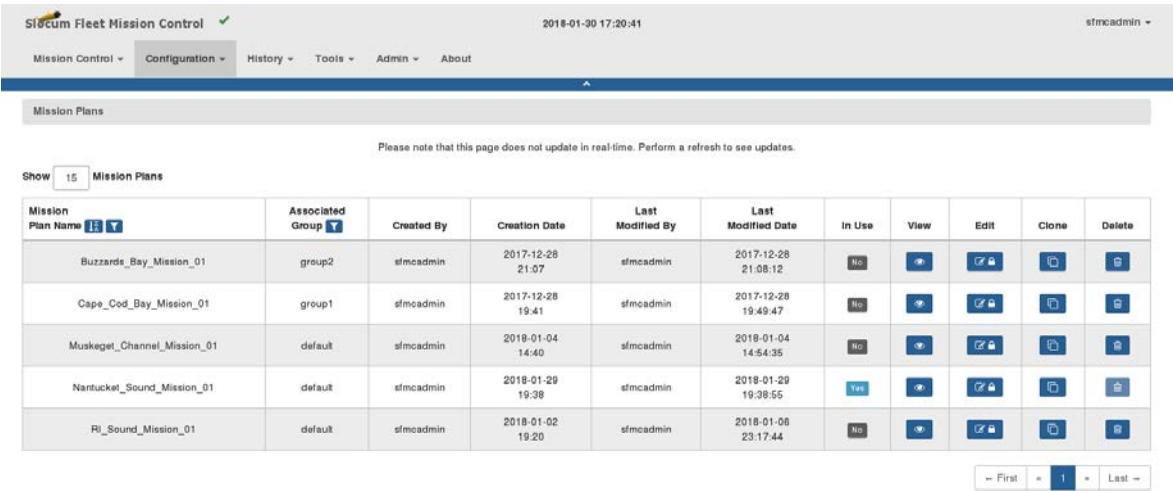


Figure 8-91 Mission Plans Page—Mission Plans Available for Deletion

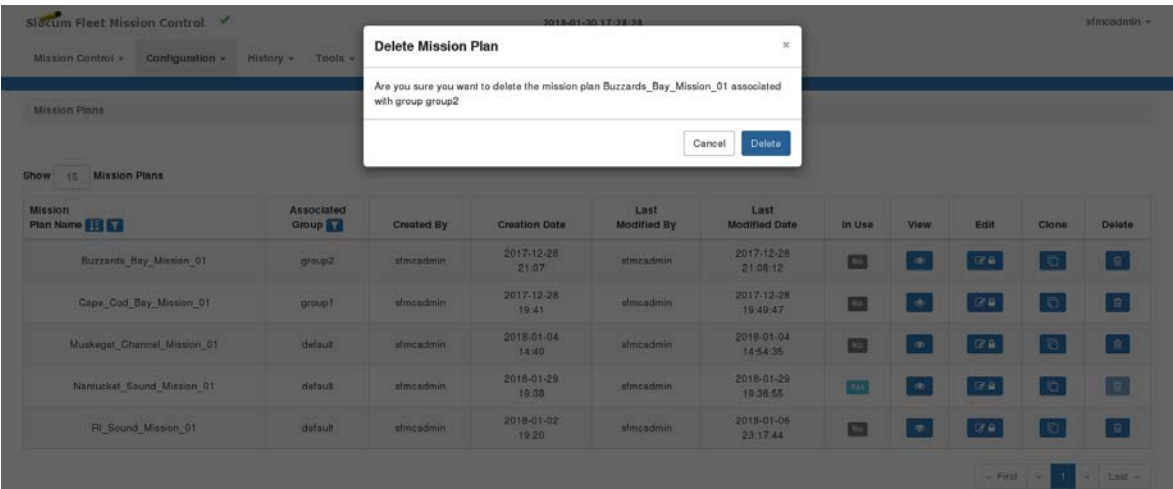


Figure 8-92 Delete Mission Plan Dialog Box

5. Click **Delete**.

The mission plan is deleted, and the Delete Mission Plan dialog box closes.

SECTION 9: Managing Active Deployments

An active glider deployment is created when a glider first connects to the Dock Server. It remains an active deployment until it is archived. Only one active deployment can currently exist for a glider. Once an active deployment is created, you can assign it to a project, assign a mission plan to it, and view the glider's reported data.

9.1 Viewing Active Glider Deployments

To view active glider deployments:

1. Log in to a user account as an Administrator or to a user account with any role. For the Group Level Administrator, Glider Pilot and Viewer roles, active deployments can be viewed only for the allowed groups. For an Administrator, active deployment plans can be viewed for any group.
2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.
4. Click the Deployment Name for the active deployment that you want to view.

Detailed information about the active deployment, including a map, is displayed on the Active Deployment Detail page as shown in Figure 9-2 on page 9-4. For detailed information about the Active Deployment Detail page, refer to "Active Deployment Detail Page" on page 9-2.

The Active Deployments page includes the following information:

Deployment Name. The name of the active deployment.

Glider. The name of the glider.

Associated group. The group that is associated with the glider. There can be only one group.

Project. The project that the glider is associated with, if any. There can be only one project.

Slocum Fleet Mission Control

2020-03-26 20:56:33

sfmcadmin

Mission Control

Configuration

History

Tools

Admin

About

Active Deployments

Please note that this page does not update in real-time. Perform a refresh to see updates.

Show 15 Active Deployments

Deployment Name	Glider	Associated Group	Project	Deployed	Connection Status	Location	Days Deployed	Distance (km)
hostglider1-2020-01-22T18:34	hostglider1	group1	Cape_Cod_Bay_Survey_Project_01	2020-01-22 18:34	Disconnected 1 mins	41°58.73'N 70°11.39'W	64	27.939
hostglider2-2020-03-25T21:38	hostglider2	group2	Buzzards_Bay_Survey_Project_01	2020-03-25 21:38	Connected	41°27.57'N 70°57.99'W	< 1	0.431
hostglider3-2020-03-26T18:27	hostglider3	default	Rt_Sound_Survey_Project_01	2020-03-26 18:27	Disconnected 2 hrs 27 mins	Not yet known	< 1	0.000
hostglider4-2020-03-26T20:12	hostglider4	default	Muskeget_Channel_Survey_Project_01	2020-03-26 20:12	Disconnected 40 mins	41°26.77'N 70°10.99'W	< 1	0.000

-- First

1

Last --

Figure 9-1 Active Deployments Page

- Deployed.** The date and time of the start of the active deployment
- Connection Status.** The status of the glider connection to the Dock Server. If the glider is connected, the indication is "Connected" with a green background. If the glider is not connected, the indication is "Disconnected" with a red background. The elapsed time since the glider disconnected is also displayed.
- Location.** The latitude and longitude in degrees, minutes and seconds of the current location of the glider.
- Days deployed.** The number of days the glider has been deployed.
- Distance (km).** The distance in kilometers the glider has traveled during this deployment.



NOTE Resting the pointer over an icon on the Active Deployments page will display additional information about the deployment.

9.2 Active Deployment Detail Page

Detailed information, both current and historical, can be viewed for any of the active deployments on the Active Deployment Detail page which is shown in Figure 9-2. To open this page, refer to Viewing Active Glider Deployments” on page 9-1. The Active Deployment Detail page includes four panels: a Summary panel which provides the most current information about the deployment; a Map Events panel which includes the same map as that provided on the Dashboard; a Surfacing panel which displays information about each surface event; and a Surface Sensor Values panel which displays the surface

sensor data reported by the glider at each surfacing. You can customize the Active Deployment Detail Page to display any one or more of these panels. Shortcuts to these panels are provided at the top and bottom of the Active Deployment Detail page. You can also select a different glider for which to view the Active Deployment Detail page from the drop-down list above the shortcuts at the top. In addition, resting the pointer over any of the icons provides additional information about the deployment.

9.2.1 Selecting the Panels to View

To select which panels to view on the Active Deployment Detail page, choose *Customize Active Deployment Details* from the *Options* menu, select the panels from the Active Deployment Details Customization dialog box, and then click **Apply**. The Summary Panel is always displayed and therefore is not available to select.

9.2.2 Summary Panel

The current information pertaining to the deployment is provided on the Summary panel as shown in Figure 9-3 on page 9-5.

The Summary panel includes the following information:

Glider. The name of the glider.

Time Connected/Disconnected. The time in hours and minutes since the glider connected if it is connected, or the time in hours and minutes since it disconnected if it is not connected.

Deployed. The date in year, month and day and the time of day in hours and minutes that the glider first connected for this deployment.

Last Location. The last known surface location of the glider in latitude and longitude degrees and decimal minutes.

Reported Next Waypoint. The coordinates of the reported next waypoint, in latitude and longitude degrees and decimal minutes, that the glider is to go to next.

Range and Bearing. The range to the next waypoint in kilometers and the bearing in degrees.

Total Distance. The total distance in kilometers that the glider has traveled since its deployment. The total distance will continue to accrue until the deployment is archived, regardless how many times the glider may have been recovered from the water.

Mission. The mission file associated with the current mission.

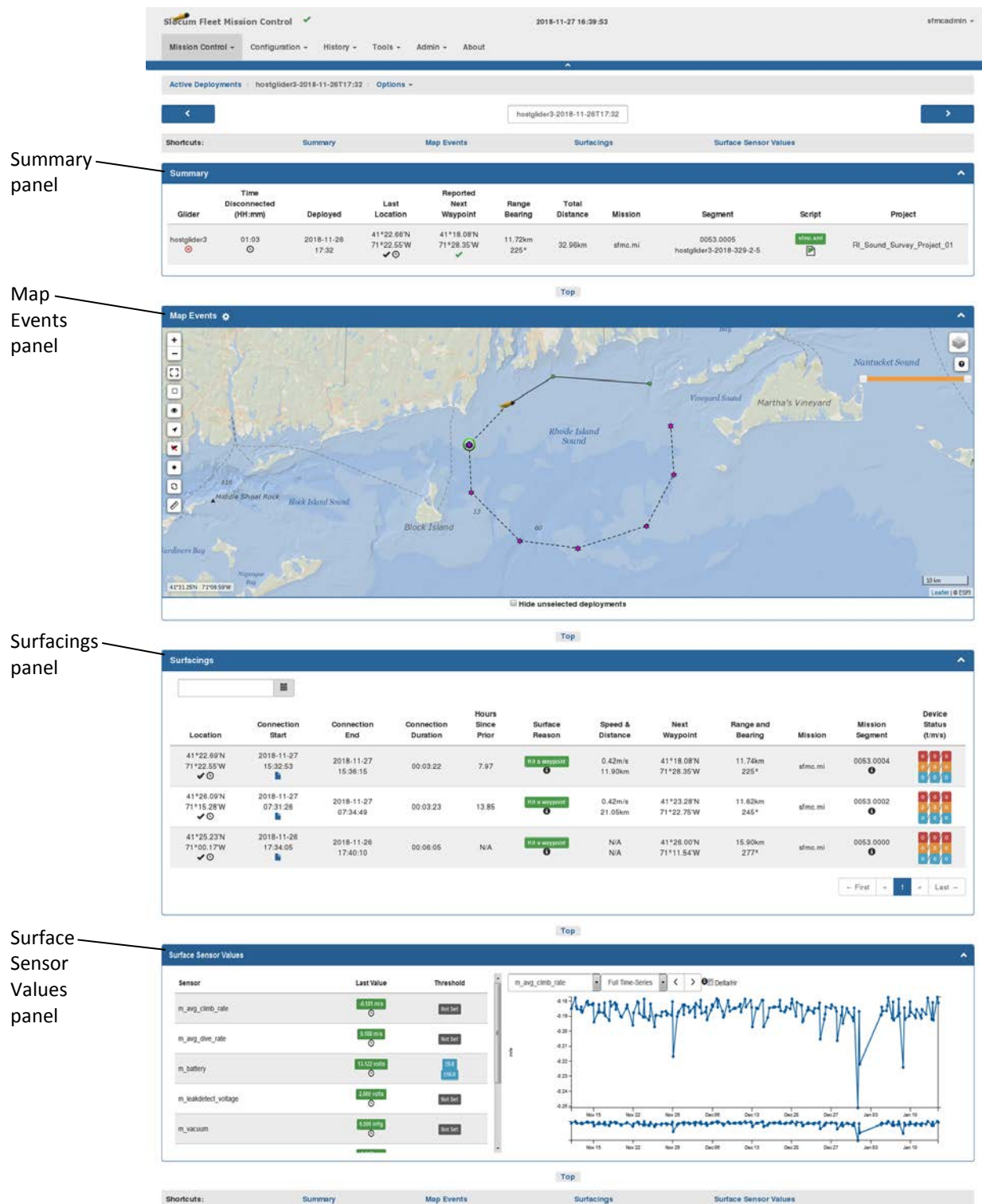


Figure 9-2 Active Deployment Detail Page

Summary										
Glider	Time Disconnected (HH:mm)	Deployed	Last Location	Reported Next Waypoint	Range Bearing	Total Distance	Mission	Segment	Script	Project
hostglider3 	01:03 	2018-11-26 17:32	41°22.66'N 71°22.55'W  	41°18.08'N 71°28.35'W 	11.72km 225°	32.96km	sfmc.mi	0053.0005 hostglider3-2018-329-2-5	 sfmc.xml 	RI_Sound_Survey_Project_01

Figure 9-3 Summary Panel—Active Deployment

Segment. The mission segment associated with the current mission in xxxx.yyyy format, where "xxxx" is the mission number and "yyyy" is the mission segment.

Script. The script that is currently running, if any.

Project. The project association for the deployment, if any. "N/A" indicates that the deployment is not associated with a project. For instructions on how to create a project, refer to “Creating a Project” on page 4-14.

9.2.3 Map Events Panel

The Map Events panel, which is shown in Figure 9-4, provides the same map as that on the Dashboard. The map also includes the same buttons and displays. Immediately below the map is the **Hide Unselected Deployments** check box. Select this check box to show only the selected deployment. All the other deployments are hidden when this box is checked. For information about the map, refer to “SECTION 5: The Dashboard.” In addition, clicking the **Change active deployment map events setting** button on the Map Events panel title bar opens the Configure Active Deployment Last X Days Map Events Setting dialog box in which you can enter or select the last number of days over which to view the map events in the **Last X Days** spin box.

9.2.4 Surfacing Panel

Information pertaining to the glider surfacings is provided on the Surfacing panel which is shown in Figure 9-5 on page 9-8 with the most recent surfacing listed first. A text box in the upper left of the panel enables selecting a specific day to view the surfacings. You can click the calendar icon to the right of the text box to select the date or enter the date directly in mm/dd/yy format. Clearing the text box selects all the days. When clearing the text box, click outside the box after clearing it. Up to five surface events are listed on a page. To display the next, the previous or a specific page, select it from the page scroller.

The Surfacing panel includes the following information:

Location. The surface location of the glider in latitude and longitude degrees and decimal minutes.

Connection Start. The date in year, month and day and the time of day in hours, minutes and seconds at which the glider connected for this surfacing.

Connection End. The date in year, month and day and the time of day in hours, minutes and seconds since the glider disconnected, or if it is still connected, "Not yet ended" is displayed.

Connection Duration. The time in hours and minutes since the glider connected if it is still connected, or the time in hours, minutes and seconds that it was connected if it has disconnected.

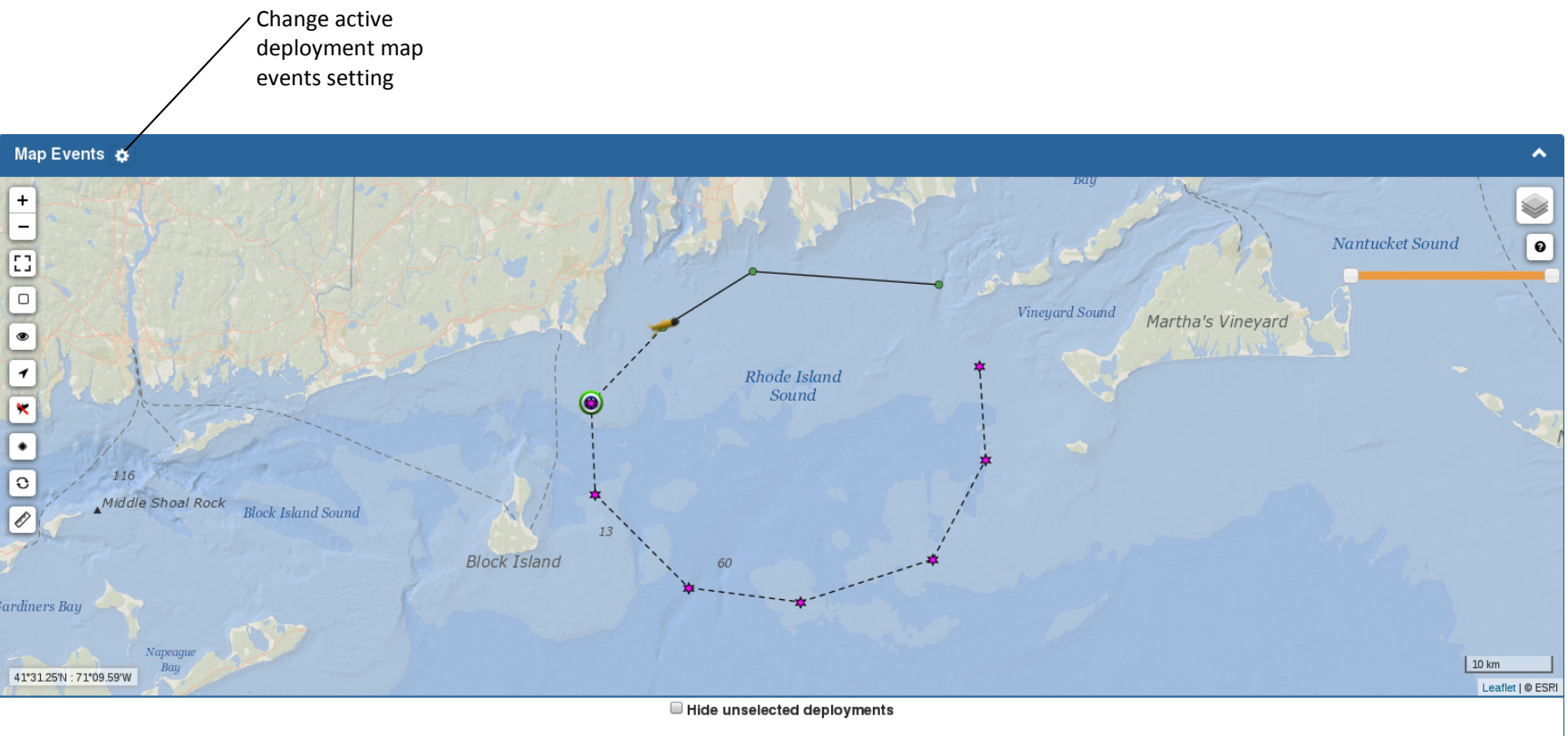


Figure 9-4 Map Events Panel—Active Deployment

Surfacings											
Location	Connection Start	Connection End	Connection Duration	Hours Since Prior	Surface Reason	Speed & Distance	Next Waypoint	Range and Bearing	Mission	Mission Segment	Device Status (t/m/s)
41°22.69'N 71°22.55'W ✓🕒	2018-11-27 15:32:53 📄	2018-11-27 15:36:15	00:03:22	7.97	Hit a waypoint i	0.42m/s 11.90km	41°18.08'N 71°28.35'W	11.74km 225°	sfmc.mi	0053.0004 i	000 000 000
41°26.09'N 71°15.28'W ✓🕒	2018-11-27 07:31:26 📄	2018-11-27 07:34:49	00:03:23	13.85	Hit a waypoint i	0.42m/s 21.05km	41°23.28'N 71°22.75'W	11.62km 245°	sfmc.mi	0053.0002 i	000 000 000
41°25.23'N 71°00.17'W ✓🕒	2018-11-26 17:34:05 📄	2018-11-26 17:40:10	00:06:05	N/A	Hit a waypoint i	N/A N/A	41°26.00'N 71°11.54'W	15.90km 277°	sfmc.mi	0053.0000 i	000 000 000
← First « 1 » Last →											

Figure 9-5 Surfacings Panel—Active Deployment

Hours Since Prior. The time in hours and decimal minutes since the last surfacing.

Surface Reason. The reason for the surfacing. A green banner is shown when the glider surfaced because it hit a waypoint. A red banner is shown if the mission was aborted for some reason. A yellow banner is shown for other reasons.

Speed & Distance. The speed of the glider in meters per second and the distance in kilometers the glider has traveled between the last surfacing to the current surfacing.

Next Waypoint. The coordinates of the waypoint in latitude and longitude degrees and decimal minutes that the glider *was* to go to next, or *is* to go to next if it is the most recent surfacing.

Range and Bearing. The range to the waypoint in kilometers and the bearing in degrees that the glider *was* to go to, or *is* to go to if it is the most recent surfacing.

Mission. The mission file associated with the surfacing.

Mission Segment. The mission segment associated with the surfacing in xxxx.yyyy format, where "xxxx" is the mission number and "yyyy" is the mission segment.

Device Status (t/m/s). Indicates the total (t), mission (m) and mission segment (s) errors, warning and oddities detected by the glider for this deployment, where the red indicators are the errors, the yellow indicators are the warnings, and the blue indicators are the oddities.

9.2.5 Surface Sensor Values Panel

Each glider is factory configured to report selected sensor data at each surfacing. The data for these sensors are referred to as surface sensor data. The surface sensor data for all the factory configured sensors on the glider, one at a time, can be viewed on the Surface Sensor Values panel for the most recent surfacing in a list and for all the surfacings as a graphical plot. The Surface Sensor Values panel is shown in Figure 9-6. This panel also indicates whether any thresholds have been exceeded for the sensors for the most recent surfacing. For instructions on how to view and set the thresholds for the included sensors, refer to "SECTION 11: Managing Surface Sensor Thresholds." The sensor data are reported by the glider at each surfacing. The configured sensors are listed on the left side of the Surface Sensor Values panel. If there are more sensors that can be displayed at once, a scroll box will be visible which can be dragged up or down to display more sensors.

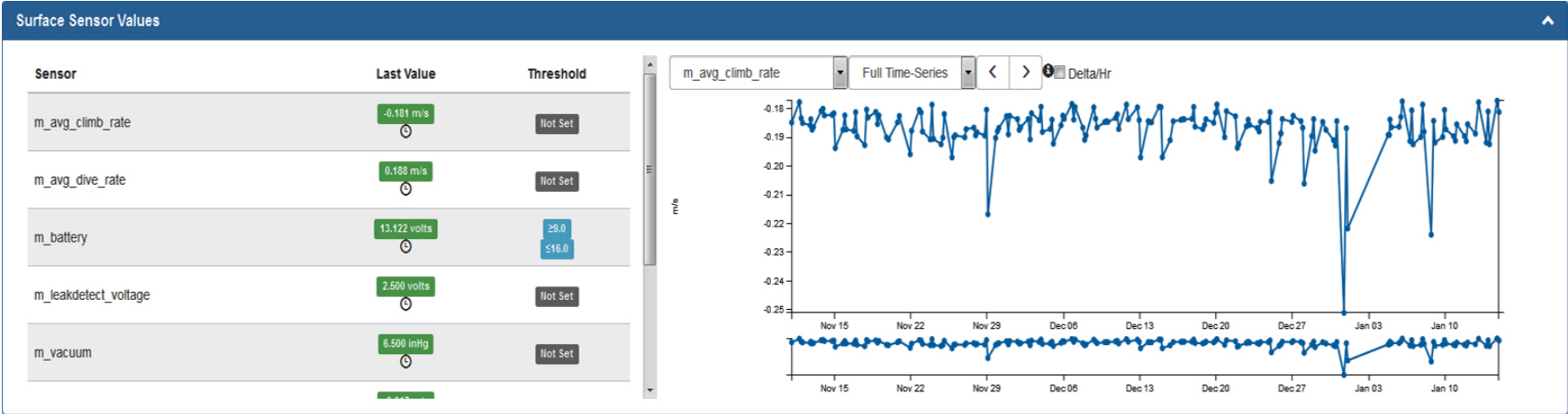


Figure 9-6 Surface Sensor Values Panel—Active Deployment

The listed information for the configured sensors includes the following:

Sensor. The sensor name.

Last Value. The value of the sensor output last reported by the glider. A red banner is displayed if the sensor threshold is exceeded, otherwise the banner is green.

Threshold. The minimum and maximum thresholds set for the sensor, if any. If no threshold is set, a "Not Set" indication is displayed with a black banner, otherwise the banner is blue.

The surface sensor data reported by the glider for each surfacing are automatically stored and can be viewed as a plot on a time series graph. The graph is on the right side of the Surface Sensor Values panel. Select the sensor data to plot from the drop-down list to the left and above the graph, and select the time over which to plot the data from drop-down list just above the graph. You can also quickly scroll through the sensor data to plot by clicking the left or right arrows. In addition, under the graph is a second graph with a compressed vertical axis. Clicking on the plot on this graph and dragging to the right or to the left will create a zoom box which contracts or expands the horizontal axis of the main graph in accordance with the box width, thus zooming in or out of the plot. Clicking inside this box and dragging it to the right or to the left will pan the horizontal axis of the main graph. The units shown to the left of the main graph always remain fixed, but the horizontal scale and units adjust automatically in accordance with the zoom level. To return the main graph to its original state, click anywhere inside the lower graph. Selecting the **Delta/Hr** check box provides a second plot on the main graph in red that indicates the value change per hour. The scale units for this plot are to the right of the graph.

9.3 Assigning and Un-Assigning an Active Glider Deployment to a Project

To be able to assign an active glider deployment to a project, the registered glider and the project must be assigned to the same group.

To assign and un-assign an active glider deployment to a project:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only active deployments for the allowed groups can be assigned or un-assigned.

2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1 on page 9-2. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.

4. Click the deployment name for the active deployment that you want to assign or un-assign to a project.

The Active Deployment Detail page opens as shown in Figure 9-2 on page 9-4.

5. From the *Options* menu, choose *Configure Project Assignment*.

The Edit Deployment Project Association dialog box opens as shown in Figure 9-7.

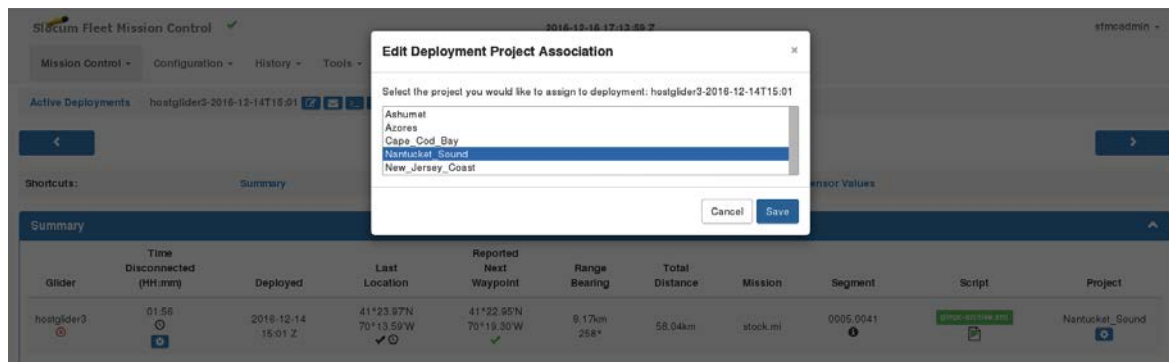


Figure 9-7 Edit Deployment Project Association Dialog Box

6. Do one of the following:

- Click the project that you want to assign. The project will be highlighted. If another project was highlighted, it will be unhighlighted.
- Click the highlighted project to unassign it. The project will be unhighlighted.

7. Click **Save**.

The project name is displayed in the **Project** column on the Active Deployment Detail page. If the project was un-assigned, "N/A" will be displayed instead.

9.4 Deleting an Active Glider Deployment

To delete an active glider deployment:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only active deployments for the allowed groups can be deleted.
2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1 on page 9-2. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.
4. Click the deployment name for the active deployment that you want to delete.

The Active Deployment Detail page opens.

5. From the *Options* menu, choose *Delete Deployment*.

The Delete Deployment dialog box opens as shown in Figure 9-8.

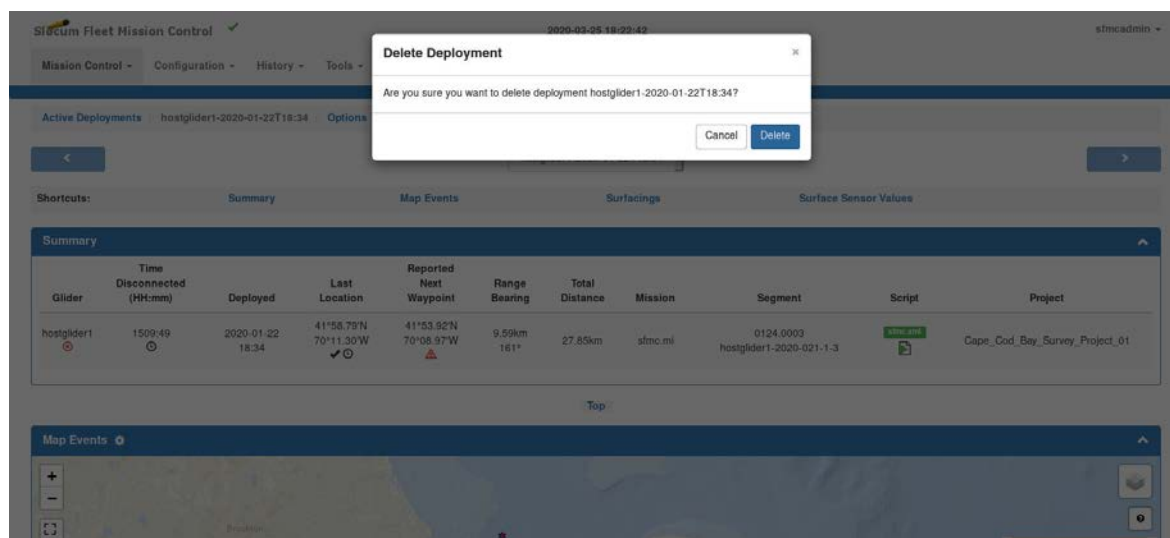


Figure 9-8 Delete Deployment Dialog Box

6. Click **Delete**.

The active deployment is deleted, and the Delete Deployment dialog box closes.

9.5 Configuring the Maximum Hours Between Call-ins

You can configure the maximum time in hours between which a glider is expected to connect to the SFMC Dock Server. If the glider does not connect during one of these periods, an alert is provided and a “Glider Missed Last Call-In” notification is sent to all the e-mail addresses that are subscribed to this subscription type. For instructions on how to configure glider event subscriptions, refer to “Managing Glider Event Subscriptions” on page 13-17. For the alert to appear, the active deployment must be listed on the Deployments panel on the Dashboard.

To configure the maximum hours between call-ins:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only active deployments for the allowed groups can be assigned or un-assigned.
2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1 on page 9-2. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. Click the deployment name for the active deployment for which you want to configure the maximum hours between call-ins.

The Active Deployment Detail page opens as shown in Figure 9-2 on page 9-4.

4. From the *Options* menu choose *Configure Last Call-in Alert Setting*.

The Configure Max Hours Between Call-Ins dialog box opens as shown in Figure 9-9.

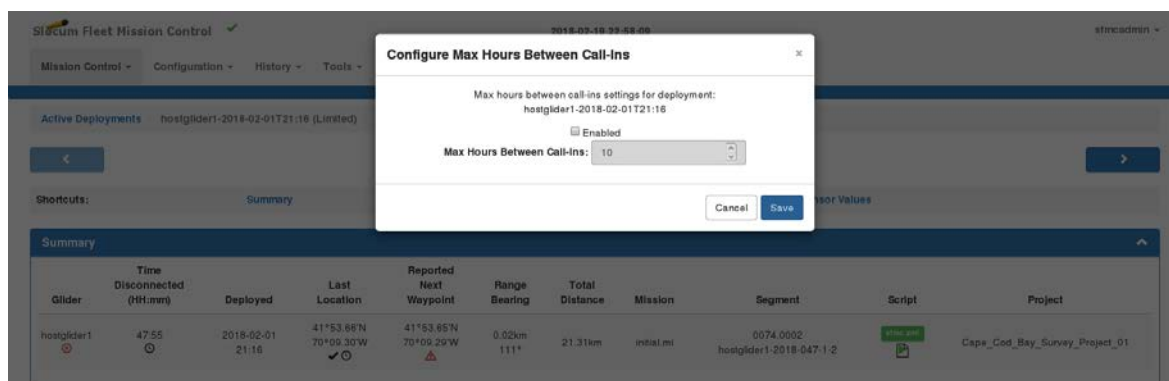


Figure 9-9 Configure Max Hours Between Call-Ins Dialog Box

5. Select the **Enabled** check box, and then enter or select the number of hours in the **Max Hours Between Call-Ins** spin box.

6. Click **Save**.

The configure the maximum hours between call-ins setting is saved, and the Configure Max Hours Between Call-Ins dialog box closes.

9.6 Assigning a Mission Plan to an Active Deployment

Before a mission plan can be assigned to a deployment, the mission plan must have been created and the glider must have been configured. For instructions on how to create a mission plan, refer to “SECTION 8: Managing Mission Plans.”

To select and process a mission plan and assign it to a deployment:

1. Do one of the following:

- From the *Mission Control* menu select *Dashboard*, select the *Options* menu for the active deployment, and then choose *Access Mission Plan*.
- From the *Mission Control* menu select *Active Deployments*, click the deployment name, and then from the *Options* menu choose *Access Mission Plan*.
- From the *Mission Control* menu select *Glider Terminal Access*, select the associated glider, and then from the *Options* menu, choose *Access Mission Plan*.

The Mission Plan panel opens as shown in Figure 9-10.

2. Select a mission plan from the **Selected Mission Plan** drop-down list. Only those mission plans for the selected group are available. To modify the selected mission plan, click **Modify Selected Mission Plan** and make the changes. Or to create an entirely new mission plan, click **Create New Mission Plan** and create it. Then to return to the Mission Plan panel, press F5 and select the plan.
3. Click **glider configuration** and verify that the glider is configured correctly.
4. Click **Process**.

All the mission plan parts should be valid as shown in Figure 9-11.

5. Do one of the following:

- Keep the default mission name and number shown in the **Mission File Name** and **File Number** text boxes.
- Enter the mission name and number in the **Mission File Name** and **File Number** text boxes.
- Click **New Mission File Name** to open the New Mission File dialog box, enter the mission file name and number in the **Mission File Name** and **File Number** text boxes, and then click **Apply**.

Sløcum Fleet Mission Control 2018-12-09 23:46:21 sfmcadmin

Mission Control Configuration History Tools Admin About

Active Deployments / hostglider3-2018-12-09T23:45 / Options / Mission Plan

hostglider3-2018-12-09T23:45

Shortcuts: Mission Plan Deployment Summary

Mission Plan

Mission plan updates have been made and are ready to be processed. Ensure glider configuration provided matches what is actual. [Process](#)

Selected Mission Plan: RI_Sound_Mission_01 [Modify Selected Mission Plan](#) [Create New Mission Plan](#)

Waypoint Surface Yo Sampling Mission Sensor Abort Data Transmission

Waypoint Plan - Includes Events from Last 5 Days

Waypoint Plan Name:	RI_Sound_Mission-01_Waypoint_01
Created By:	sfmcadmin
Creation Date/Time:	2017-12-29 18:05:53
Last Modified By:	sfmcadmin
Last Modified Date/Time:	2018-11-20 23:03:25
Waypoint Traversal Option:	Traverse Once
Initial Waypoint:	41°25.25'N 71°00.17'W
Waypoints:	41°25.25'N 71°00.17'W 41°26.00'N 71°11.54'W 41°23.28'N 71°22.75'W 41°18.08'N 71°28.35'W 41°12.53'N 71°28.02'W

Hide unselected deployments

Figure 9-10 Mission Plan Panel

Sløcum Fleet Mission Control 2018-12-09 23:46:40 sfmcadmin

Mission Control Configuration History Tools Admin About

Active Deployments / hostglider3-2018-12-09T23:45 / Options / Mission Processing Results

Shortcuts: Validation Results Mission Plan Deployment Summary

Validation Results

All mission plan parts are valid.

Mission File Name: sfmc File Number: 10 [New Mission File Name](#) [Generate Files](#)

Top

Mission Plan

Waypoint Surface Yo Sampling Mission Sensor Abort Data Transmission

Waypoint Plan - Includes Events from Last 5 Days

Waypoint Plan Name:	RI_Sound_Mission-01_Waypoint_01
Created By:	sfmcadmin
Creation Date/Time:	2017-12-29 18:05:53
Last Modified By:	sfmcadmin
Last Modified Date/Time:	2018-11-20 23:03:25
Waypoint Traversal Option:	Traverse Once
Initial Waypoint:	41°25.25'N 71°00.17'W
Waypoints:	41°25.25'N 71°00.17'W 41°26.00'N 71°11.54'W 41°23.28'N 71°22.75'W 41°18.08'N 71°28.35'W 41°12.53'N 71°28.02'W

Hide unselected deployments

Figure 9-11 Mission Plan Panel—All Mission Plan Parts are Valid

6. Click **Generate Files**.

The Generate Mission Files Form dialog box opens as shown in Figure 9-12.

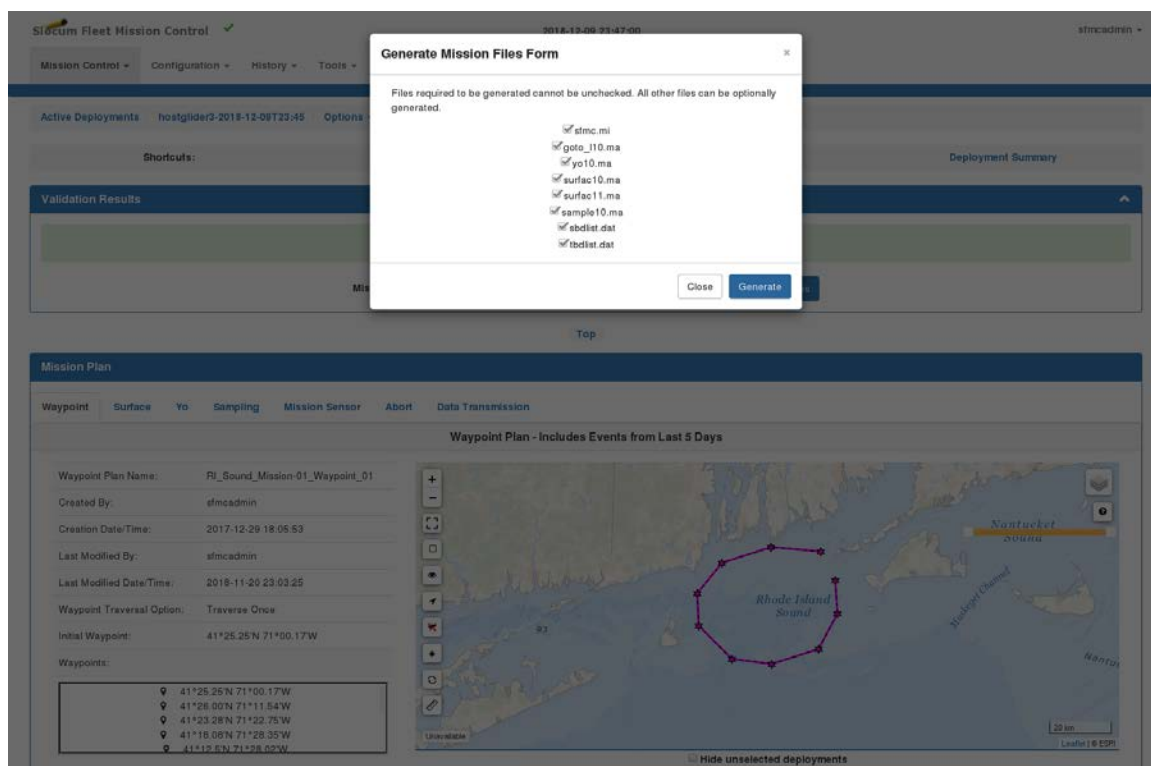


Figure 9-12 Generate Mission Files Form Dialog Box—All Files Selected

7. Select the check boxes of all the mission files to generate. Clear the check boxes for those files to not generate. All the check boxes are selected by default.
8. Click **Generate**.

The mission files are generated as shown in Figure 9-13 and the mission plan is processed. The mission plan will be uploaded to the glider when it next connects if the script sfmc.xml is enabled.

9.7 Using Data Visualizer for an Active Deployment

Data Visualizer for an active deployment enables the viewing of glider reported data as plots on a graph versus the date and time of the samples. The data to view can be selected from a list of plot types or sensor types. For the sensor types, up to five can be selected to view on a single graph. In addition, a graph can include the data from only the last leg of the current mission, the data from a specific number of the last legs of the

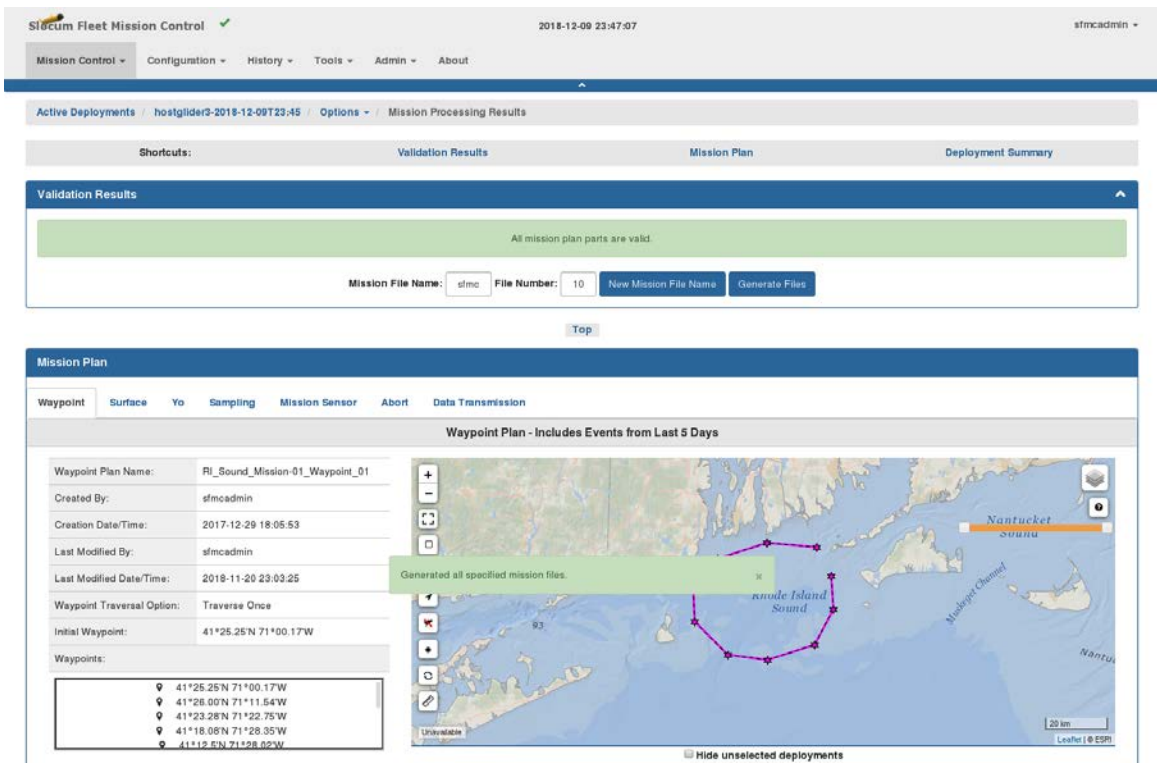


Figure 9-13 Mission Plan Panel—All Specified Mission Files Generated

current mission, the data over a specific date range, the data for all the legs of the current mission, or the data from all the legs of all the missions. Each mission leg is associated with a data file, and Data Visualizer lists all of the data files associated with the mission with the displayed ones highlighted. Data Visualizer also enables the display of missing data as a result of the glider connecting to a different SFMC Dock Server service. When a large amount of data for plotting are requested, such as from all the legs of all the missions, the data are decimated which reduces the amount of data transferred. However, when zooming into smaller sections of a graph of the data, more data are transferred for that selected region.

9.7.1 Opening Data Visualizer for an Active Deployment

Data Visualizer for an active deployment is opened from the *Options* menu which is available on multiple pages in SFMC. To open Data Visualizer for an active deployment, do one of the following:

- From the *Mission Control* menu select *Dashboard*, select the *Options* menu for the active deployment, and then choose *View Data Visualizations*.
- From the *Mission Control* menu select *Active Deployments*, click the deployment name, and then from the *Options* menu choose *View Data Visualizations*.

- From the *Mission Control* menu select *Glider Terminal Access*, select the associated glider, and then from the *Options* menu, choose *View Data Visualizations*.

The Data Visualizations page for the active deployment opens as shown in Figure 9-14.

9.7.2 Data Visualizations Page for an Active Deployment

The Data Visualizations page for an active deployment includes a graph and three panels: a Data Files panel, a Sensor Data File and Cache File Drop Zone panel and a Data Files Unable to Process panel. Also included are drop-down lists for selecting a different active deployment and selecting the time frame of the graph and a spin box for entering or selecting the number of legs of data to display.

9.7.3 Graph

All data are displayed on a graph for which the vertical units are automatically labeled and scaled to fit. Under this graph is a second graph with a compressed vertical axis. Clicking on the plot on this graph and dragging to the right or to the left will create a zoom box which contracts or expands the horizontal axis of the main graph in accordance with the box width, thus zooming in or out of the plot. Clicking inside this box and dragging it to the right or to the left will pan the horizontal axis of the main graph. The horizontal scale and units adjust automatically in accordance with the zoom level. To return the main graph to its original state, click anywhere inside the lower graph. Each plot on the graph is shown in a different color. Color swatches and scale legends below the graph indicate which sensor a color applies to and the total span of the data for the sensor. Clicking a color swatch hides the plot. Clicking it again shows the plot. For line/scatter and scatter plots only, the color swatch displays the symbol that marks each point on the plot. When hovering over a point on the plot, the date and time of the data are displayed along with the source file and the sample value.

9.7.4 Data Files Panel

The Data Files panel provides a list of data files which together contain all of the glider reported data, one file for each leg of the mission. Files for which data are currently being displayed are shown highlighted.

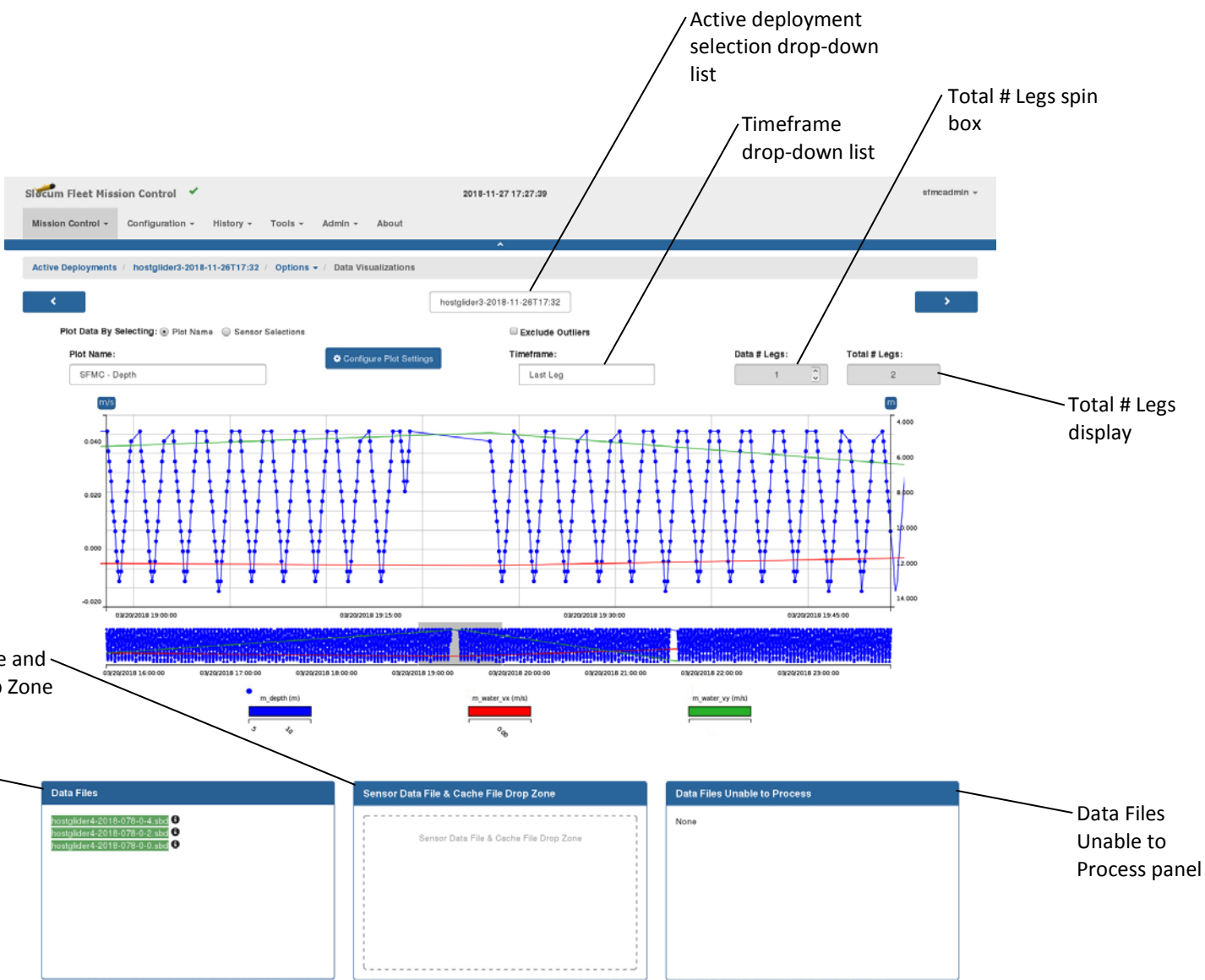


Figure 9-14 Data Visualizations Page—Active Deployment

9.7.5 Sensor Data File and Cache File Drop Zone Panel

The Sensor Data File and Cache File Drop Zone panel provides a **Sensor Data File and Cache File Drop Zone** which enables the addition of files to the list on the panel. These are files that are missing because, for example, the glider connected to a different Dock Server, and the files were downloaded using its SFMC Dock Server service. To add these files they can be dragged and dropped into the **Sensor Data File and Cache File Drop Zone**. A refresh button is provided which when clicked adds the files to the list.

9.7.6 Data Files Unable to Process Panel

The Data Files Unable to Process panel lists those files that SFMC is unable to process because, for example, a required cache file was downloaded to a different Dock Server before connecting to this Dock Server. The missing cache file would result in a displayed warning and a list of files that SFMC is unable to process on the Data Files Unable to Process panel. To import the missing cache file, refer to “Importing a Missing Cache File” on page 9-24.

9.7.7 Viewing Data by Plot Name

Data can be viewed as a line plot, a scatter plot, or both, by selecting a plot name, such as SFMC - CTD, SFMC - Heading, SFMC - Depth, and many others, and selecting the type of plot. Samples that are considered outliers can be automatically excluded in the plot in accordance with a known standard algorithm.

To view data by plot name:

1. Select the **Plot Name** option.

The **Plot Name** drop-down list opens.

2. Select the plot name from the **Plot Name** drop-down list.

3. Click **Configure Plot Settings**.

The Plot Settings Form dialog box opens.

4. Select the type of plot from the **Line/Scatter** drop-down list.

5. Click **Apply**.

6. From the **Timeframe** drop-down list, select one of the following:

- *Last Leg* to display data from the last leg of the current mission.
- *Last N Legs* to display data from a specific number of the last legs of the current mission, and then select the number of legs from the **Data # Legs** spin box. The

total number of legs in the current mission is displayed in the **Total # Legs** text box.

- *Date Range* to display data within a selected start and end date and time range. Click the calendar that appears, and in the Date Range Selection dialog box that opens, enter the start and end dates and times in the **Start Date** and **End Date** text boxes in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text boxes and select the date and times.
 - *Current Mission* to display data from all the legs of all the missions.
 - *Full Time Series* to display data from all the legs of all the missions.
7. If desired, select the **Exclude Outliers** check box to exclude samples that are considered outliers.

9.7.8 Viewing Data by Sensor Selections

Data can be viewed for specific sensors, up to five at a time, and as either a line or a scatter plot, or both. In addition, the selected sensors can be given a plot name and added to the **Plot Name** drop-down list, enabling them to be easily selected as a group. Samples that are considered outliers can be automatically excluded in the plot in accordance with a known standard algorithm.

To view data by sensor selections:

1. Select the **Sensor Selections** option.

The **Configure Sensor Visualizations** button appears.

2. Click **Configure Sensor Visualizations**.

The Sensor Selections Form dialog box opens as shown in Figure 9-15.



Figure 9-15 Sensor Selections Form Dialog Box

3. Click the **Action** button.
The **Sensor Type** drop-down list opens.
4. Select a sensor from the **Sensor Type** drop-down list.
5. Select the plot type from the **Line/Scatter** drop-down list.
6. Select the color from the **Color** drop-down list
7. If desired, repeat Steps 3 through 6 to add another sensor. Up to five sensors can be selected. To delete a sensor, click the **Action** button for it.
8. If desired, select the **Save as Plot Type** check box, and then enter a name for the plot in the **Plot Name** text box to add the sensor selections to the **Plot Name** drop-down list.
9. Click **Apply**.
10. From the **Timeframe** drop-down list, select one of the following:
 - *Last Leg* to display data from the last leg of the current mission.
 - *Last N Legs* to display data from a specific number of the last legs of the current mission, and then enter or select the number of legs from the **Data # Legs** spin box. The total number of legs in the current mission is displayed in the **Total # Legs** text box.
 - *Date Range* to display data within a selected start and end date and time range.
 - *Current Mission* to display data from all the legs of the current mission.
 - *Full Time Series* to display data from all the legs of all the missions.
11. If desired, select the **Exclude Outliers** check box to exclude samples that are considered outliers.

9.7.9 Setting the Vertical Axis Minimum and Maximum Values

A vertical axis dimension button is located at the top of the vertical axis or each vertical axis if more than one sensor was selected. Clicking this button enables the setting of the minimum and maximum values for this axis. Its default setting is the data minimum and maximum values.

To set the vertical axis minimum and maximum values:

1. Click the vertical axis dimension button for the axis that you want to set the minimum and maximum value.

The Configure Y <dimension> Axis Range Dialog Box opens as shown in Figure 9-16.

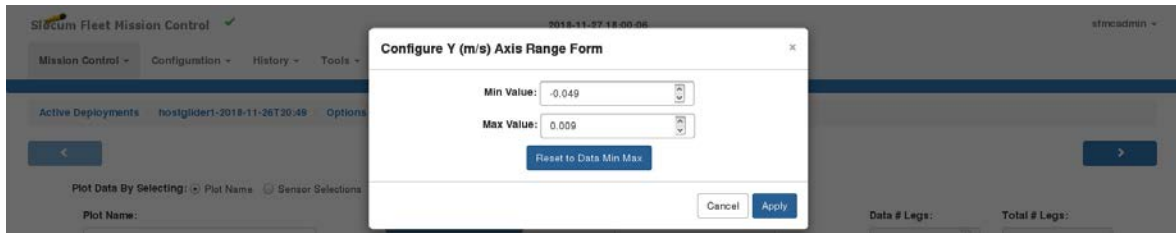


Figure 9-16 Configure Y <dimension> Axis Range Dialog Box

2. Enter or select the minimum value in the **Min Value** spin box and the maximum value in the **Max Value** spin box or click **Reset to Data Min Max** to set the minimum and maximum scale to that of the data minimum and maximum if they were previously changed.
3. Click **Apply**.

The vertical axis minimum and maximum values are set and displayed accordingly.

9.7.10 Exporting Plots

Plots can be exported as PNG and ASCII files from the Data Visualizations page for an active deployment. To export a plot as a PNG file, on the Data Visualizations page choose *Export Plot to PNG* from the *Options* menu, and then click the **Save File** option. To export a plot as an ASCII file, choose *Export Plot Data to Ascii File* from the *Options* menu, and then click the **Save File** option.

9.7.11 Importing a Missing Cache File

If the Data Files Unable to Process panel indicates there are cache files missing, these files can be imported.

To import a missing cache file:

1. Log in to a user account as an Administrator or to a user account with Group Level Administrator or Glider Pilot role. For the Group Level Administrator or Glider Pilot role, missing cache files can be imported only for the allowed groups. For an Administrator, missing cache files can be imported for any group.
2. From the *Configuration* menu select *Cache Files*.

The Cache Files page opens as shown in Figure 9-17.

3. Drag and drop the cache file into the **Cache File Drop Zone** for the associated group.

The cache file is imported.

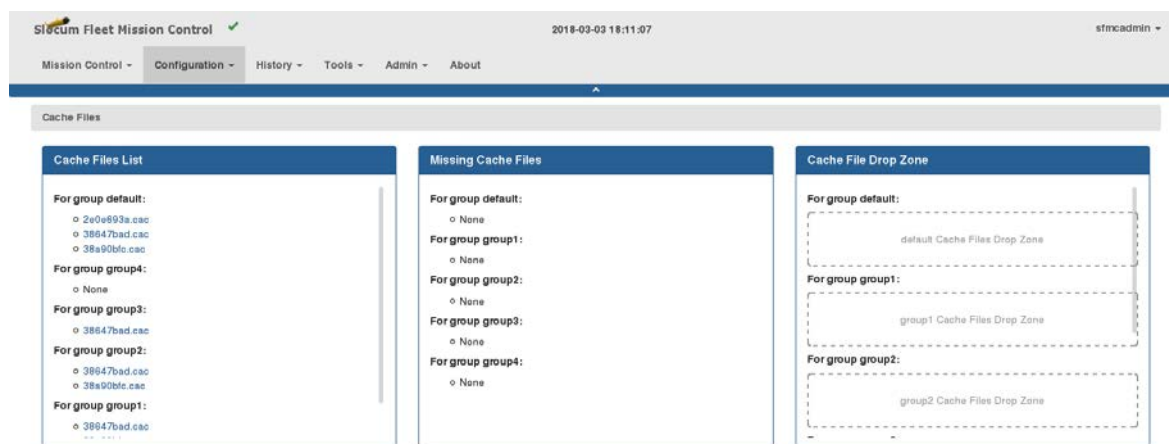


Figure 9-17 Cache Files Page

9.8 Importing Sensor Types

As new sensors are created for the gliders, they are stored in a masterdata file. This file can be imported into SFMC to update and configure the available sensor types. These sensor types can also be searched for and listed by name in SFMC.

To import sensor types:

1. Log in to a user account as an Administrator or to a user account with any role.
2. From the *Configuration* menu, choose *Sensor Types*.

The Sensor Types page opens as shown in Figure 9-18.

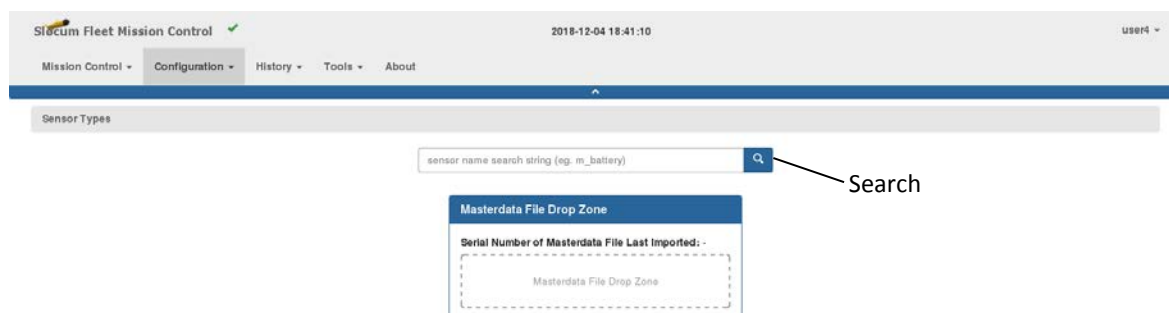


Figure 9-18 Sensor Types Page

3. Select and then drag and drop the masterdata file into the **Masterdata File Drop Zone**.

The serial number of the masterdata file is displayed in the drop zone.

4. To search for and view a list of sensor types, enter the first several characters of the sensor name in the text box above the Masterdata File Drop Zone panel and click **Search** button.

9.9 Exporting Map Events

All the map events of an active deployment between specified dates and times can be exported to a KMZ file which can then be opened in Google Earth or any other program that can display the data from a KMZ file.

To export map events:

1. Log in to a user account as an Administrator or to a user account with any role.
2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1 on page 9-2. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.
4. Click the deployment name for the active deployment for which you want to export the map events.
5. Choose *Export Map Events to KMZ* from the *Options* menu.

The Export Map Events to KMZ Dialog Box opens as shown in Figure 9-19.

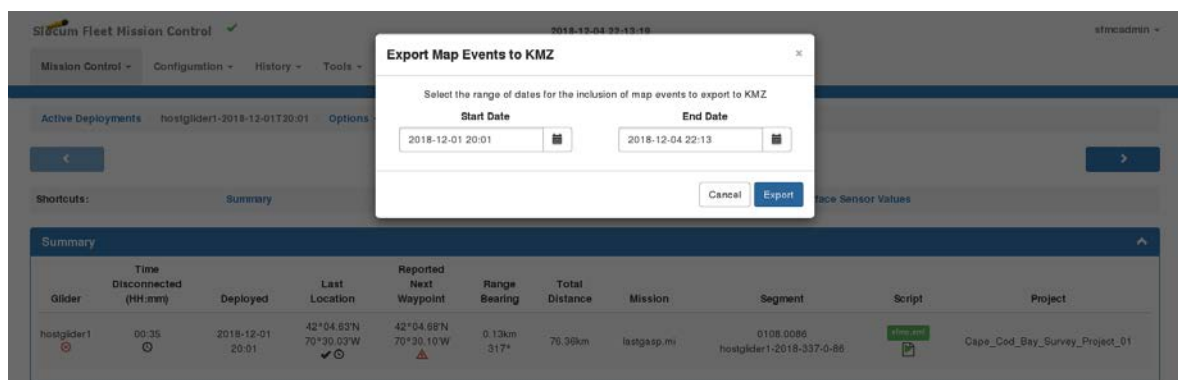


Figure 9-19 Export Map Events to KMZ Dialog Box

6. If a different start date and time than the one shown is desired, enter the start date and time in the **Start Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.
7. If a different end date and time than the one shown is desired, enter the end date and time in the **End Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.
8. Click **Export**.
9. Save the file. The file name is automatically generated, and the extension is .kmz.

9.10 Exporting Surface Sensor Data

All the surface sensor data of an active deployment between specified dates and times can be exported to a CSV file which can then be opened in a text editor.

To export surface sensor data:

1. Log in to a user account as an Administrator or to a user account with any role.
2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 9-1 on page 9-2. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.
3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.
4. Click the deployment name for the active deployment for which you want to export the surface sensor data.
5. Choose *Export Surface Sensor Data* from the *Options* menu.

The Export Surface Sensor Data dialog box opens as shown in Figure 9-20.

6. If a different start date and time than the one shown is desired, enter the start date and time in the **Start Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.
7. If a different end date and time than the one shown is desired, enter the end date and time in the **End Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.

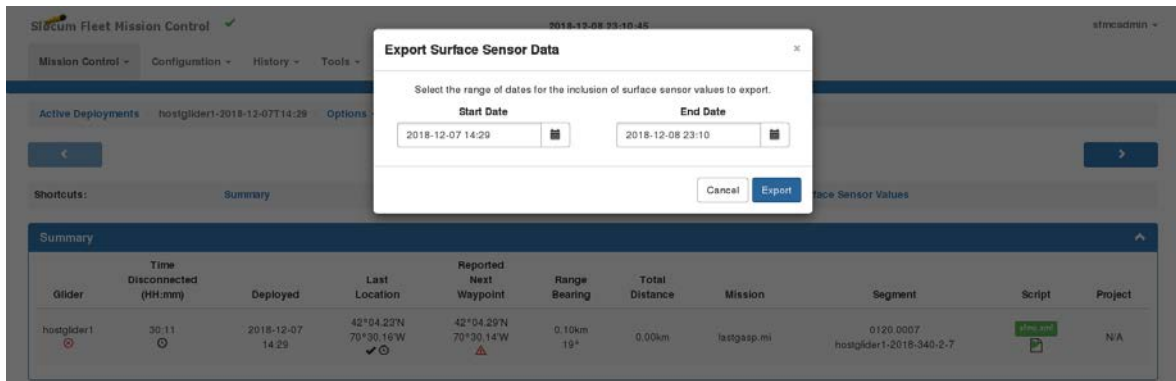


Figure 9-20 Export Surface Sensor Data Dialog Box

8. Click **Export**.
9. Save the file. The file name is automatically generated, and the extension is .csv.

9.11 Exporting Glider Commands

All the glider commands of an active deployment between specified dates and times can be exported to a XLS file which can then be opened in a spreadsheet program.

To export glider commands:

1. Log in to a user account as an Administrator or to a user account with any role.
2. From the *Mission Control* menu, choose *Glider Terminal Access*.
The Glider Terminal Access page opens.
3. Click the name of glider that you want access.
Glider Terminal opens to the Glider Terminal page.
4. From the *Options* menu, choose *Export Glider Commands*.
The Export Glider Commands dialog box opens as shown in Figure 9-21.
5. If a different start date and time than the one shown is desired, enter the start date and time in the **Start Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.
6. If a different end date and time than the one shown is desired, enter the end date and time in the **End Date** text box in yyyy-mm-dd hh:mm format, or click the calendar icon to the right of the text box, select the date and then enter the time.
7. Click **Export**.
8. Save the file. The file name is automatically generated, and the extension is .xls.

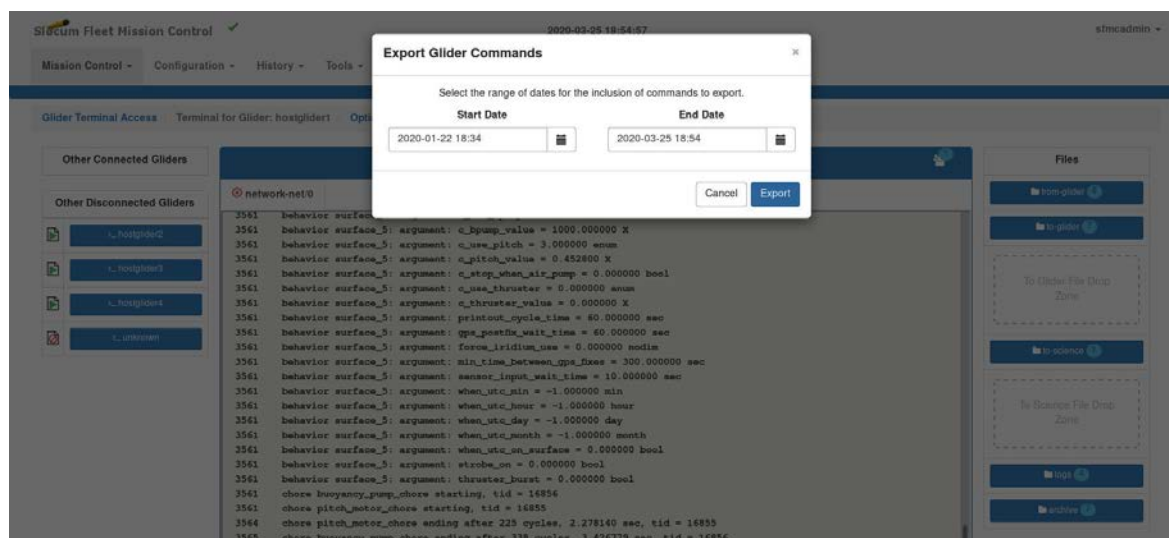


Figure 9-21 Export Glider Commands Dialog Box

SECTION 10: Managing Archived Deployments

An active glider deployment can be archived. This is typically done when the glider is removed from the water, but it can be at any time and for any reason. A glider can have any number of archived deployments, with each having occurred over a different period.

10.1 Viewing Archived Deployments

To view archived deployments:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator all the archived deployments can be viewed. For the Group Level Administrator, Glider Pilot and Viewer roles, only the archived deployments for the allowed groups can be viewed.

2. From the *History* menu, choose *Archived Deployments*.

The Archived Deployments page opens as shown in Figure 10-1. To update the page while it is open, press F5. To display more archived deployments on a single page, select the number of them to display from the **Show Archived Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date or archived date by clicking the deployed or archived sort icon.
4. Click the deployment name for the archived deployment that you want to view.

Detailed information about the archived deployment, including a map, is displayed on the Archived Deployment Detail page as shown in Figure 10-2 on page 10-3. For detailed information about the Archived Deployment Detail page, refer to “Archived Deployment Detail Page” on page 10-2.

The Archived Deployments page includes the following information:

Deployment Name. The name of the archived glider deployment.

Glider. The name of the glider.

Associated Group. The group that is associated with the glider. There can be only one group.

Project. The project that the glider is associated with, if any. There can be only one project.

Deployment Name	Glider	Associated Group	Project	Deployed	Archived	Days Deployed	Distance (km)
hostglider1-2018-11-28T00:09	hostglider1	group1	Cape_Cod_Bay_Survey_Project_01	2018-11-28 00:09	2018-11-29 23:32	1	41.798
hostglider2-2018-11-28T00:12	hostglider2	group2	Buzzards_Bay_Survey_Project_01	2018-11-28 00:12	2018-11-28 21:45	< 1	31.336
hostglider3-2018-11-28T00:15	hostglider3	default	RI_Sound_Survey_Project_01	2018-11-28 00:15	2018-11-29 22:52	1	0.000
hostglider4-2018-11-28T00:19	hostglider4	default	Muskeget_Channel_Survey_Project_01	2018-11-28 00:19	2018-11-29 23:31	1	54.273

Figure 10-1 Archived Deployments Page

- Deployed.** The date and time of the start of the active deployment.
- Archived.** The date and time the deployment was archived.
- Days deployed.** The number of days the glider was deployed.
- Distance (km).** The distance in kilometers the glider traveled during the deployment.

10.2 Archived Deployment Detail Page

Detailed information can be viewed for any of the archived deployments on the Archived Deployment Detail page which is shown in Figure 10-2. To open this page, refer to “Viewing Archived Deployments” on page 10-1. The Archived Deployment Detail page includes four panels: a Summary panel which provides the most current information about the deployment; a Map Events panel which includes the same map as that provided on the Dashboard; a Surfacings panel which displays information about each surface event; and a Surface Sensor Values panel which displays the surface sensor data reported by the glider at each surfacing. Shortcuts to these panels are provided at the top and bottom of the Archived Deployment Detail page. You can also select a different glider for which to view the Archived Deployment Detail page from the drop-down list above the shortcuts at the top. In addition, resting the pointer over any of the icons provides additional information about the deployment.

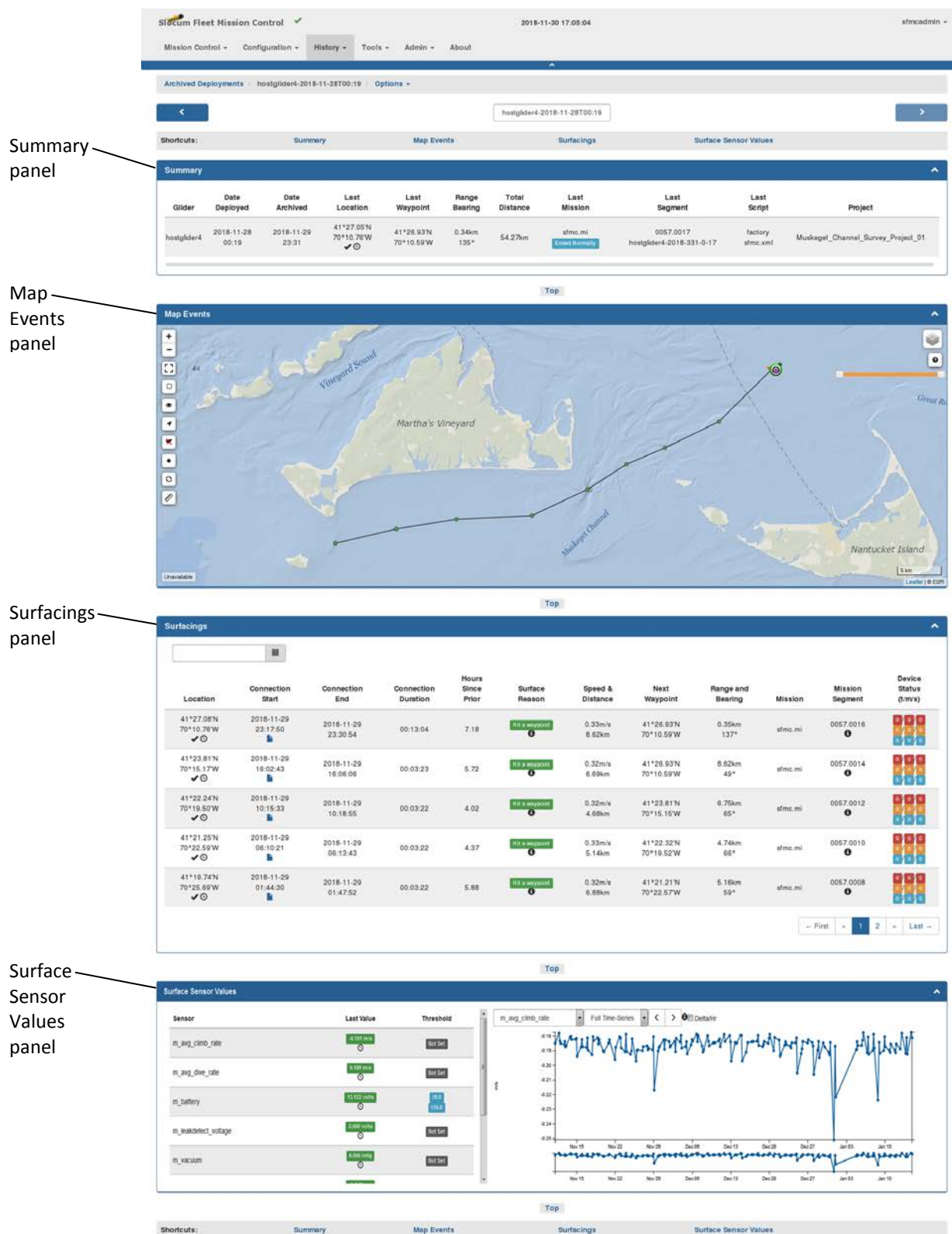


Figure 10-2 Archived Deployment Detail Page

10.2.1 Summary Panel

The recorded information pertaining to the deployment is provided on the Summary panel as shown in Figure 10-3.

The Summary panel includes the following information:

Glider. The name of the glider.

Date Deployed. The date in year, month and day and the time of day in hours and minutes that the glider first connected for this deployment.

Date Archived. The date in year, month and day and the time of day in hours and minutes that the active deployment was archived.

Last Location. The last recorded surface location of the glider in latitude and longitude degrees and decimal minutes.

Last Waypoint. The coordinates of the waypoint, in latitude and longitude degrees and decimal minutes, that the glider went to last.

Range and Bearing. The last recorded range to the next waypoint in kilometers and the bearing in degrees.

Total Distance. The total distance in kilometers that the glider traveled since its deployment.

Last Mission. The mission file associated with the last mission.

Last Segment. The mission segment associated with the last mission in xxxx.yyyy format, where "xxxx" is the mission number and "yyyy" is the mission segment.

Last Script. The script that was run last, if any.

Project. The project that the deployment is associated with if any. "N/A" indicates that the deployment was not associated with a project.

10.2.2 Map Events Panel

The Map Events panel, which is shown in Figure 10-4, provides the same map as that on the Dashboard. The map also includes the same buttons and displays. For information about the map, refer to "SECTION 5: The Dashboard."

Summary										
Glider	Date Deployed	Date Archived	Last Location	Last Waypoint	Range Bearing	Total Distance	Last Mission	Last Segment	Last Script	Project
hostglider4	2018-11-28 00:19	2018-11-29 23:31	41°27.05'N 70°10.76'W ✓🕒	41°26.93'N 70°10.59'W	0.34km 135°	54.27km	sfmc.mi Ended Normally	0057.0017 hostglider4-2018-331-0-17	factory sfmc.xml	Muskeget_Channel_Survey_Project_01

Figure 10-3 Summary Panel—Archived Deployment

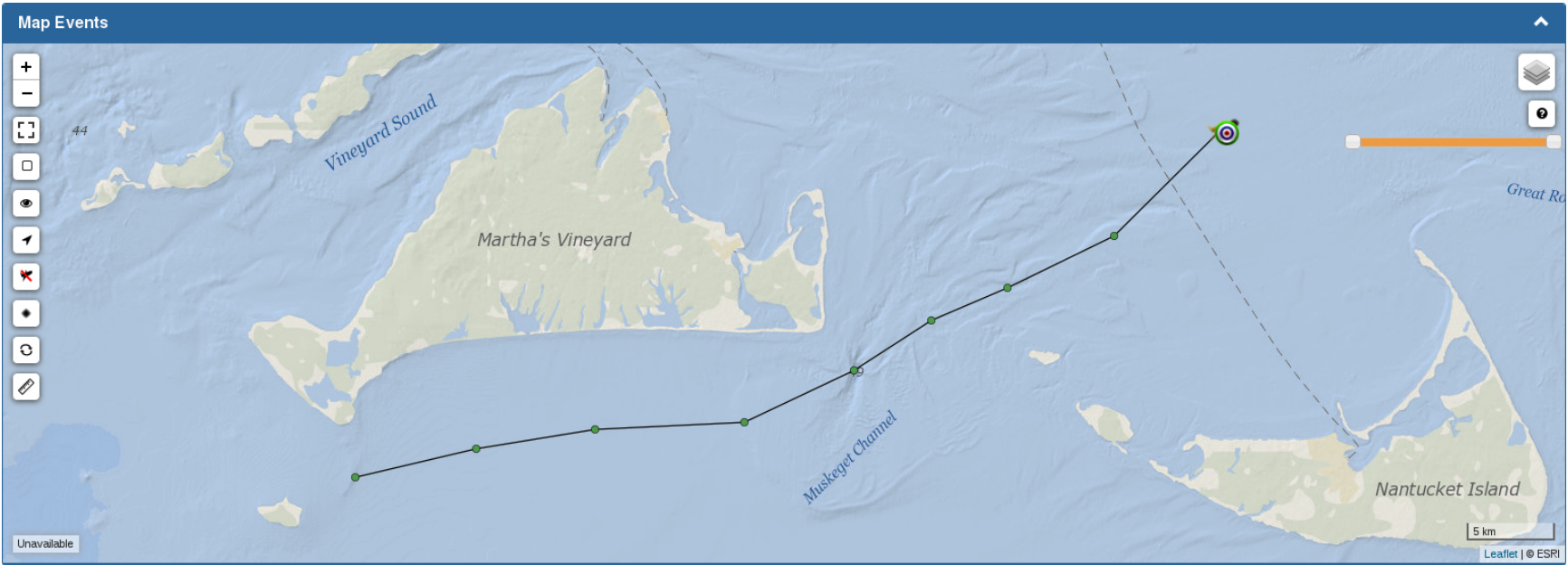


Figure 10-4 Map Events Panel—Archived Deployment

10.2.3 Surfacing Panel

Recorded information pertaining to the glider surfacings is provided on the Surfacing panel, which is shown in Figure 10-5 with the most recent surfacing listed first. A text box in the upper left of the panel enables selecting a specific day to view the surfacings. You can click the calendar icon to the right of the text box to select the date or enter the date directly in mm/dd/yy format. Clearing the text box selects all the days. When clearing the text box, click outside the box after clearing it. Up to five surface events are listed on a page. To display the next, the previous or a specific page, select it from the page scroller.

The Surfacing panel includes the following information:

Location. The surface location of the glider in latitude and longitude degrees and decimal minutes.

Connection Start. The date in year, month and day and the time of day in hours, minutes and seconds at which the glider connected for this surfacing.

Connection End. The date in year, month and day and the time of day in hours, minutes and seconds since the glider disconnected.

Connection Duration. The time in hours, minutes and seconds that the glider was connected.

Hours Since Prior. The time in hours and decimal minutes since the last surfacing.

Surface Reason. The reason for the surfacing. A green banner is shown when the glider surfaced because it hit a waypoint. A red banner is shown if the mission was aborted for some reason. A yellow banner is shown for other reasons.

Speed & Distance. The speed of the glider in meters per second and the distance in kilometers the glider has traveled between the last surfacing to the current surfacing.

Next Waypoint. The coordinates of the waypoint, in latitude and longitude degrees and decimal minutes that the glider was to go to next.

Range and Bearing. The range to the waypoint in kilometers and the bearing in degrees that the glider was to go to next.

Mission. The mission file associated with the surfacing.

Surfacings											
Location	Connection Start	Connection End	Connection Duration	Hours Since Prior	Surface Reason	Speed & Distance	Next Waypoint	Range and Bearing	Mission	Mission Segment	Device Status (t/m/s)
41°27.08'N 70°10.76'W ✓🕒	2018-11-29 23:17:50 📅	2018-11-29 23:30:54	00:13:04	7.18	Hit a waypoint i	0.33m/s 8.62km	41°26.93'N 70°10.59'W	0.35km 137°	sfmc.mi	0057.0016 i	000 000 000
41°23.81'N 70°15.17'W ✓🕒	2018-11-29 16:02:43 📅	2018-11-29 16:06:06	00:03:23	5.72	Hit a waypoint i	0.32m/s 6.69km	41°26.93'N 70°10.59'W	8.62km 49°	sfmc.mi	0057.0014 i	000 000 000
41°22.24'N 70°19.50'W ✓🕒	2018-11-29 10:15:33 📅	2018-11-29 10:18:55	00:03:22	4.02	Hit a waypoint i	0.32m/s 4.68km	41°23.81'N 70°15.15'W	6.75km 65°	sfmc.mi	0057.0012 i	000 000 000
41°21.25'N 70°22.59'W ✓🕒	2018-11-29 06:10:21 📅	2018-11-29 06:13:43	00:03:22	4.37	Hit a waypoint i	0.33m/s 5.14km	41°22.32'N 70°19.52'W	4.74km 66°	sfmc.mi	0057.0010 i	000 000 000
41°19.74'N 70°25.69'W ✓🕒	2018-11-29 01:44:30 📅	2018-11-29 01:47:52	00:03:22	5.88	Hit a waypoint i	0.32m/s 6.88km	41°21.21'N 70°22.57'W	5.16km 59°	sfmc.mi	0057.0008 i	000 000 000
											← First « 1 2 » Last →

Figure 10-5 Surfacings Panel—Archived Deployment

Mission Segment. The mission segment associated with the surfacing in xxxx.yyyy format, where "xxxx" is the mission number and "yyyy" is the mission segment.

Device Status (t/m/s). Indicates the total (t), mission (m) and mission segment (s) errors, warning and oddities detected by the glider for this deployment, where the red indicators are the errors, the yellow indicators are the warnings, and the blue indicators are the oddities.

10.2.4 Surface Sensor Values Panel

Each glider is factory configured to report selected sensor data at each surfacing. The data for these sensors are referred to as surface sensor data. The surface sensor data for all the factory configured sensors on the glider, one at a time, can be viewed on the Surface Sensor Values panel for the most recent surfacing in a list and for all the surfacings as a graphical plot. The Surface Sensor Values panel is shown in Figure 10-6. This panel also indicates whether any thresholds have been exceeded for the sensors for the most recent surfacing. For instructions on how to view and set the thresholds for the included sensors, refer to "SECTION 11: Managing Surface Sensor Thresholds." The sensor data are reported by the glider at each surfacing. The configured sensors are listed on the left side of the Surface Sensor Values panel. If there are more sensors that can be displayed at once, a scroll box will be visible which can be dragged up or down to display more sensors.

The listed information for the configured sensors includes the following:

Sensor. The sensor name.

Last Value. The value of the sensor output last reported by the glider. A red banner is displayed if the sensor threshold was exceeded, otherwise the banner is green.

Threshold. The minimum and maximum thresholds set for the sensor, if any. If no threshold is set, a "Not Set" indication is displayed with a black banner, otherwise the banner is blue.

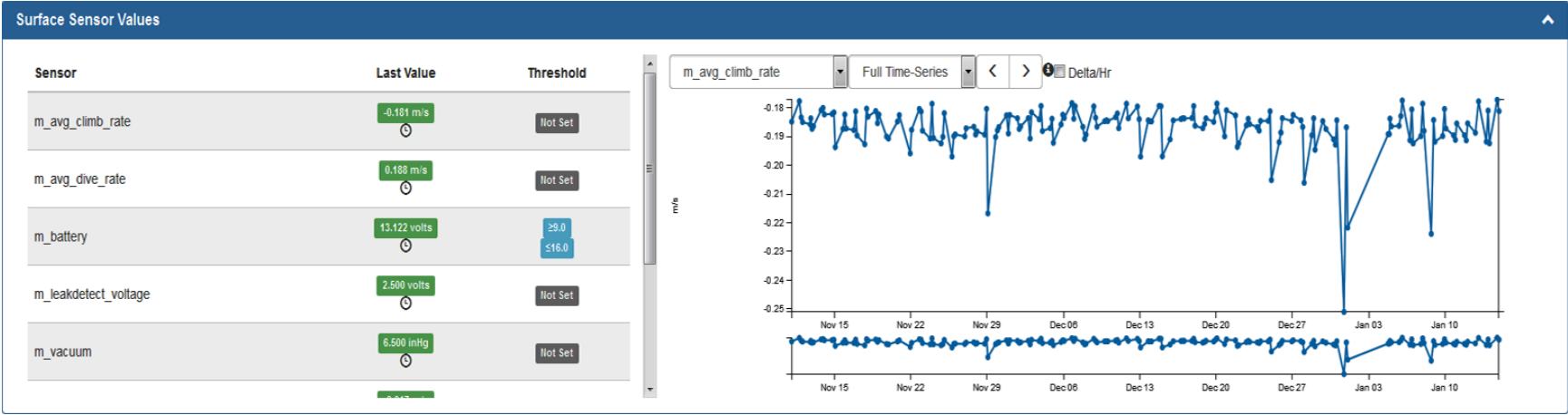


Figure 10-6 Surface Sensor Values Panel—Archived Deployment

The surface sensor data reported by the glider for each surfacing are automatically stored and can be viewed as a plot on a time series graph. The graph is on the right side of the Surface Sensor Values panel. Select the sensor data to plot from the drop-down list to the left and above the graph, and select the time over which to plot the data from drop-down list just above the graph. You can also quickly scroll through the sensor data to plot by clicking the left or right arrows. In addition, under the graph is a second graph with a compressed vertical axis. Clicking on the plot on this graph and dragging to the right or to the left will create a zoom box which contracts or expands the horizontal axis of the main graph in accordance with the box width, thus zooming in or out of the plot. Clicking inside this box and dragging it to the right or to the left will pan the horizontal axis of the main graph. The units shown to the left of the main graph always remain fixed, but the horizontal scale and units adjust automatically in accordance with the zoom level. To return the main graph to its original state, click anywhere inside the lower graph. Selecting the **Delta/Hr** check box provides a second plot on the main graph in red that indicates the value change per hour. The scale units for this plot are to the right of the graph.

10.3 Archiving an Active Deployment

To archive an active deployment:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only active deployments that are assigned to the allowed groups can be archived.

2. From the *Mission Control* menu, choose *Active Deployments*.

The Active Deployments page opens as shown in Figure 10-7. To update the page while it is open, press F5. To display more active deployments on a single page, select the number of them to display from the **Show Active Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date by clicking the deployed sort icon.

4. Click the deployment name for the active deployment that you want to archive.

The Archive Deployment Detail page opens as shown in Figure 10-2 on page 10-3.

5. From the *Options* menu, click *Archive Deployment*.

The Archive Deployment dialog box opens as shown in Figure 10-8.

Slocum Fleet Mission Control 2020-03-26 20:56:33 sfmcadmin

Mission Control Configuration History Tools Admin About

Active Deployments

Please note that this page does not update in real-time. Perform a refresh to see updates.

Show 15 Active Deployments

Deployment Name	Glider	Associated Group	Project	Deployed	Connection Status	Location	Days Deployed	Distance (km)
hostglider1-2020-01-22T18:34	hostglider1	group1	Cape_Cod_Bay_Survey_Project_01	2020-01-22 18:34	Disconnected 1 mins	41°58.73'N 70°11.39'W	64	27.939
hostglider2-2020-03-25T21:38	hostglider2	group2	Buzzards_Bay_Survey_Project_01	2020-03-25 21:38	Connected	41°27.27'N 70°57.99'W	< 1	0.431
hostglider3-2020-03-26T18:27	hostglider3	default	RI_Sound_Survey_Project_01	2020-03-26 18:27	Disconnected 2 hrs 27 mins	Not yet known	< 1	0.000
hostglider4-2020-03-26T20:12	hostglider4	default	Muskeget_Channel_Survey_Project_01	2020-03-26 20:12	Disconnected 40 mins	41°26.77'N 70°10.99'W	< 1	0.000

-- First 1 Last --

Figure 10-7 Active Deployments Page

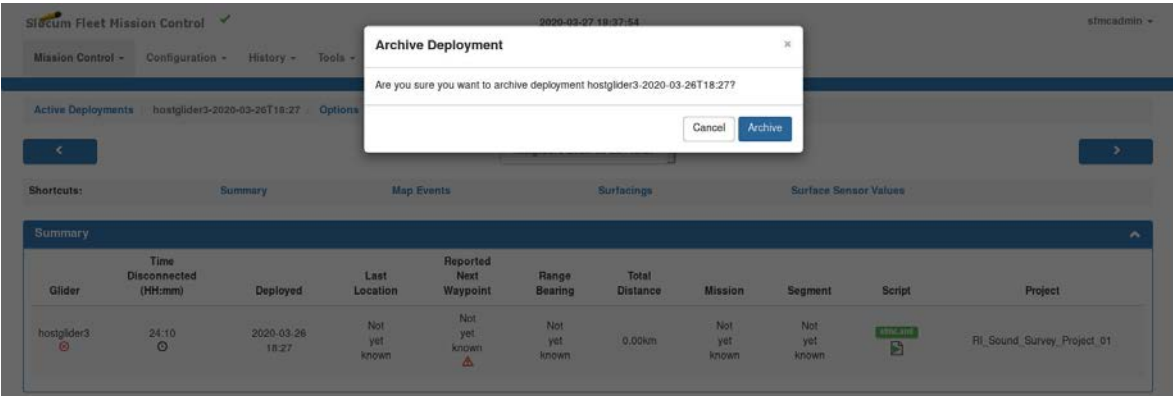


Figure 10-8 Archive Deployment Dialog Box

6. Click **Archive**.

The active deployment is archived, and the Archive Deployment dialog box closes

10.4 Deleting an Archived Deployment

To delete an archived deployment:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only archived deployments that are assigned to the allowed groups can be deleted.

2. From the *History* menu, choose *Archived Deployments*.

The Archived Deployments page opens as shown in Figure 10-1 on page 10-2. To update the page while it is open, press F5. To display more archived deployments on a single page, select the number of them to display from the **Show Archived Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date or archived date by clicking the deployed or archived sort icon.
4. Click the deployment name for the archived deployment that you want to delete.

The Archive Deployment Detail page opens as shown in Figure 10-2 on page 10-3.

5. From the *Options* menu, click *Delete Deployment*.

The Delete Deployment dialog box opens as shown in Figure 10-9.

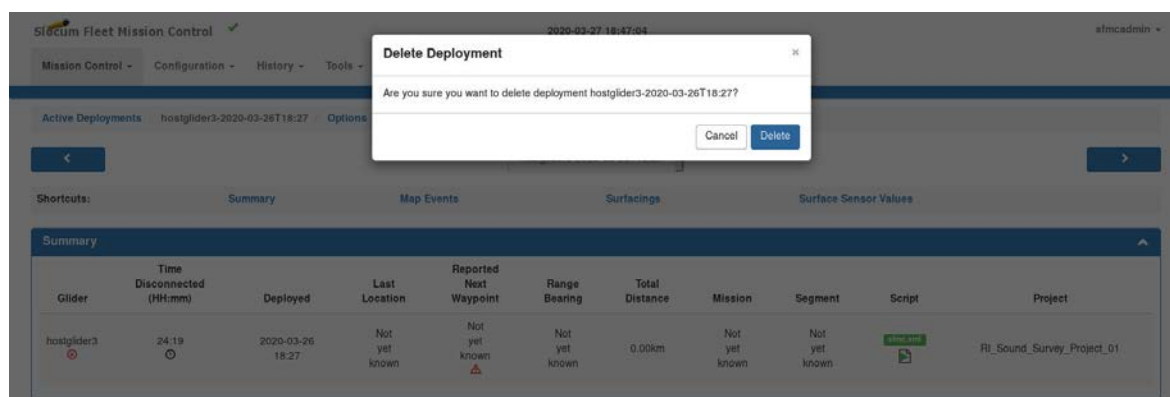


Figure 10-9 Delete Deployment Dialog Box

6. Click **Delete**.

The archived deployment is deleted, and the Delete Deployment dialog box closes.

10.5 Using Data Visualizer for an Archived Deployment

Data Visualizer for an archived deployment enables the viewing of glider reported data as plots on a graph. The data to view are selected from a list of plot types and are displayed for all the missions. When a large amount of data for plotting are requested, such as from all the legs of all the missions, the data are decimated which reduces the amount of data transferred. However, when zooming into smaller sections of a graph of the data, more data are transferred for that selected region.

10.5.1 Opening Data Visualizer for an Archived Deployment

To open Data Visualizer for an archived deployment, choose *Archived Deployments* from the *History* menu, click the deployment name, and then from the *Options* menu on the Archive Deployment Detail page, choose *View Data Visualizations*. The Data Visualizations page for an archived deployment opens as shown in Figure 10-10.

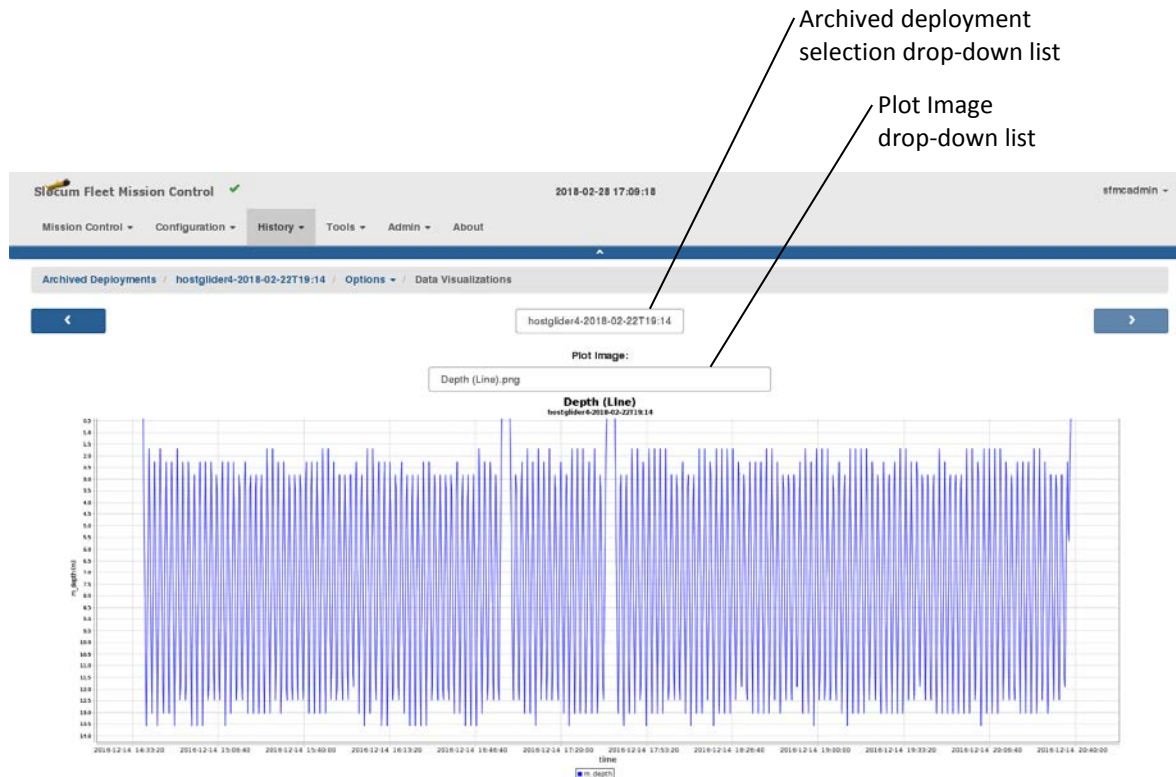


Figure 10-10 Data Visualizations Page—Archived Deployment

10.5.2 Data Visualizations Page for an Archived Deployment

The Data Visualizations page for an archived deployment includes a single graph which enables viewing of glider reported data as plots on the graph versus the date and time of the samples. Also included is a drop-down list for selecting a different archived deployment. All data are displayed on a graph for which both the vertical and horizontal units are automatically labeled and scaled to fit. For plots of data from multiple sensors, each plot on the graph is shown in a different color. A color legend below the graph indicates which sensor a color applies to. To view the data for an archived deployment, select the plot image from the **Plot Image** drop-down list.

10.6 Creating and Downloading a Compressed Tar Archive File for an Archived Deployment

SMFC enables you to generate and download a compressed tar archive file for an archived deployment. This file, a file of extension .tar.gz, contains all of the files for the active deployment that were in the From-Glider, To-Glider, To Science, Logs, and Archive folders prior to archiving, bundled together. It also includes the autoexec.mi, longterm.sta and proglerts.dat files that are in the Configuration folder for the glider. All the folders and files can be individually extracted and viewed.

To create and download compressed tar archive file for an archived deployment:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator a compressed tar archive file for any archived deployment can be created. For the Group Level Administrator, Glider Pilot and Viewer roles, a compressed tar archive file for only the archived deployments for the allowed groups can be created.

2. From the *History* menu, choose *Archived Deployments*.

The Archived Deployments page opens as shown in Figure 10-1 on page 10-2. To update the page while it is open, press F5. To display more archived deployments on a single page, select the number of them to display from the **Show Archived Deployments** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

3. If desired, sort or filter the list by deployment name, glider, groups, or projects by clicking the associated sort or filter icon or sort the list by deployment date or archived date by clicking the deployed or archived sort icon.
4. Click the deployment name for the archived deployment that you want to create and download a compressed tar archive file.

The Archive Deployment Detail page opens as shown in Figure 10-2 on page 10-3.

5. From the *Options* menu choose *Download Glider Folder Archive Tar Ball*.
6. Save the file. The file name is automatically generated by SFMC and is in the format `yyyymmddThhmmss_<glider name>.tar.gz`.

SECTION 11: Managing Surface Sensor Thresholds

SFMC provides visual and audio alerts for an active deployment when a surface sensor threshold is exceeded for a connected glider. To enable an alert to occur, a minimum or a maximum setting, or both, for the threshold must be set. SFMC allows the viewing and setting of the surface sensor thresholds for specific gliders and specific groups. However, the settings for a specific group are not shown when viewing the settings for a glider that is assigned to that group, as the settings for the glider take precedence over that of the group, allowing only those settings to be viewed.

11.1 Viewing the Surface Sensor Threshold Settings

To view the surface sensor threshold settings:

1. Log in to a user account as an Administrator or to a user account with any role. For an Administrator all the surface threshold settings can be viewed. For the Group Level Administrator, Glider Pilot and Viewer roles, only the surface sensor threshold settings for the allowed groups can be viewed.
2. From the *Configuration* menu, select *Sensor Thresholds Menu*, and then choose *View Sensor Threshold Settings*.

The Surface Sensor Threshold Settings page opens as shown in Figure 11-1.

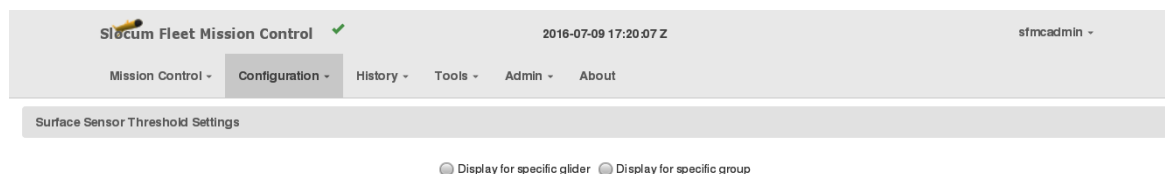


Figure 11-1 Surface Sensor Threshold Settings Page

3. Select **Display for specific glider** to display the surface sensor threshold settings for a specific glider or **Display for specific group** to display the settings for a specific group.

Selecting **Display for specific glider** opens a drop-down list from which to select the glider as shown in Figure 11-2. Selecting **Display for specific group** opens a drop-down list from which to select the group as shown in Figure 11-3.

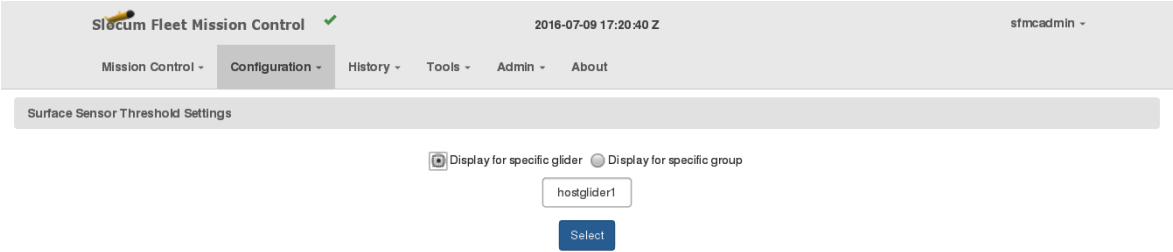


Figure 11-2 Surface Sensor Threshold Page—Glider Selection Drop-Down List

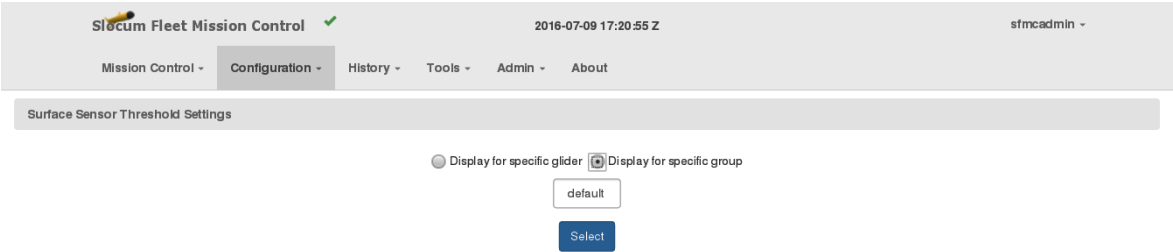


Figure 11-3 Surface Sensor Threshold Page—Group Selection Drop-Down List

4. Select the glider or the group from the drop-down list, and then click **Select**.

The surface sensor threshold settings for the selected glider are displayed as shown in Figure 11-4, or for the selected group as shown in Figure 11-5. To display more settings on a single page, select the number of them to display from the **Show** drop-down list. To display the next, the previous or a specific page, select it from the page scroller.

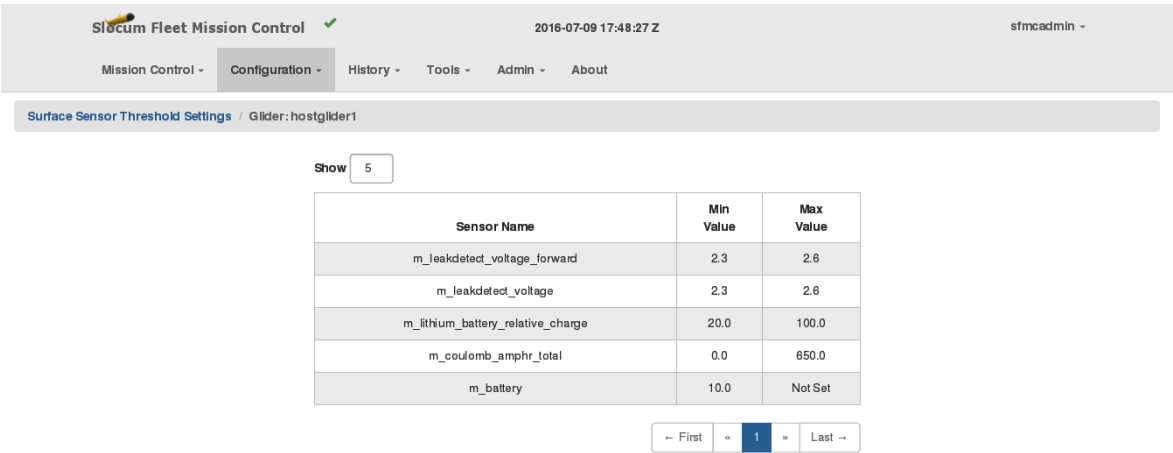


Figure 11-4 Surface Sensor Threshold Page—Glider Threshold Settings Displayed

Sensor Name	Min Value	Max Value
m_coulomb_amphr_total	0.0	650.0
m_leakdetect_voltage	2.3	2.6
m_leakdetect_voltage_forward	2.3	2.6
m_lithium_battery_relative_charge	20.0	100.0
m_battery	9.0	Not Set

Figure 11-5 Surface Sensor Threshold Page—Group Threshold Settings Displayed

11.2 Setting the Surface Sensor Thresholds

To set the surface sensor thresholds:

1. Log in to a user account as an Administrator or to a user account with the Group Level Administrator role. For the Group Level Administrator role, only the surface sensor thresholds for the allowed groups can be set.
2. From the *Configuration* menu, select *Sensor Thresholds Menu*, and then choose *Set Sensor Threshold Settings*.

The Set Surface Sensor Threshold Setting page opens as shown in Figure 11-6.

Figure 11-6 Set Surface Sensor Threshold Setting Page

3. Select **Display for specific glider** to set the surface sensor threshold settings for a specific glider or **Display for specific group** to set the thresholds for a specific group.

Selecting **Display for specific glider** opens a drop-down list from which to select the glider as shown in Figure 11-7. Selecting **Display for specific group** opens a drop-down list from which to select the group as shown in Figure 11-8.

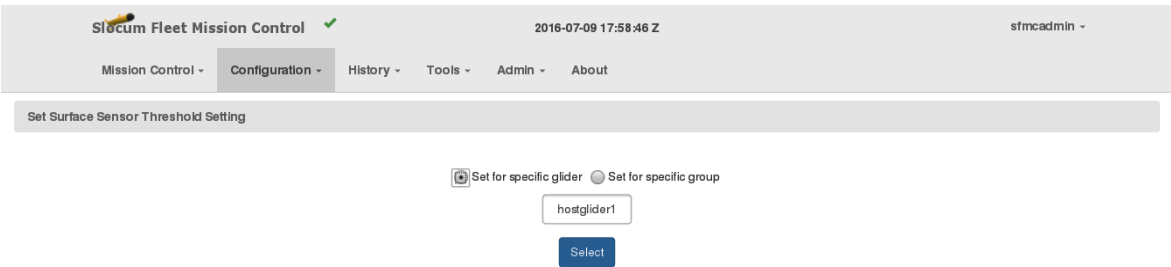


Figure 11-7 Set Surface Sensor Threshold Page—Glider Selection Drop-Down List

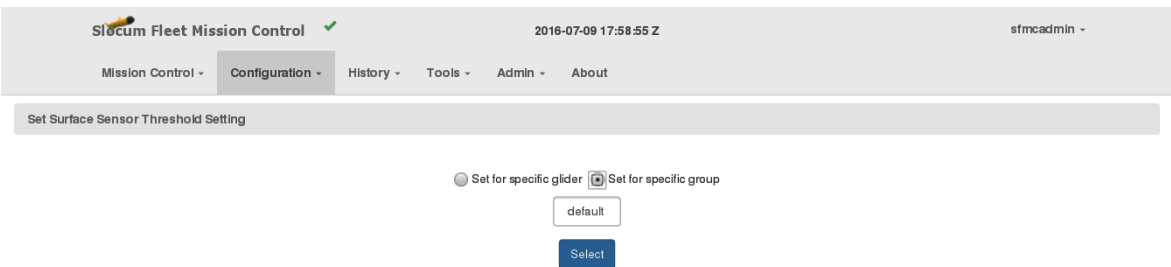


Figure 11-8 Set Surface Sensor Threshold Page—Group Selection Drop-Down List

4. Select the glider or the group from the drop-down list, and then click **Select**.

The available surface sensor threshold settings for the selected glider are displayed as shown in Figure 11-9, or for the selected group as shown in Figure 11-10. To scroll through the settings, click the up or the down arrow or drag the scroll box up or down.

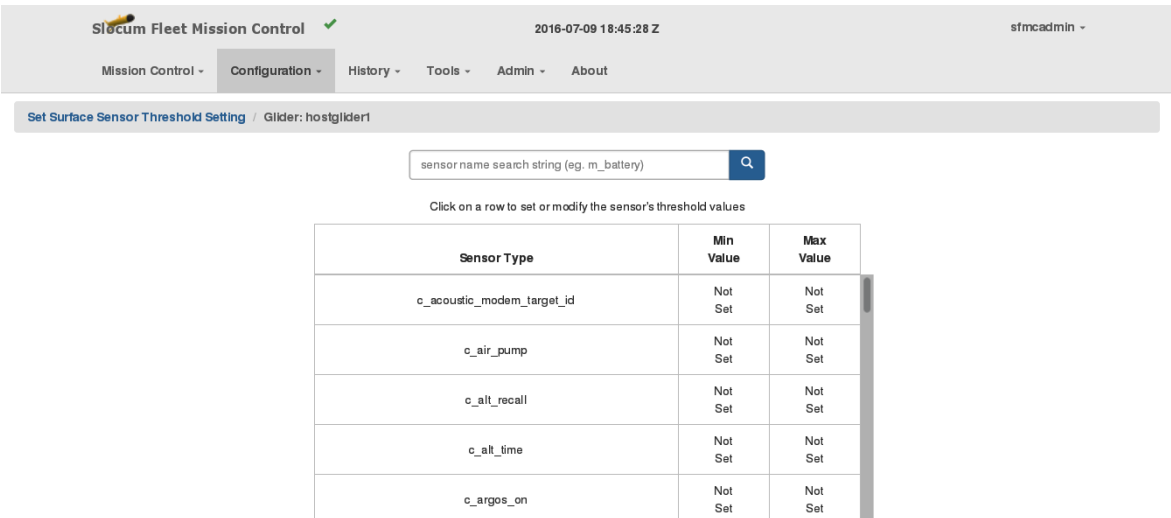
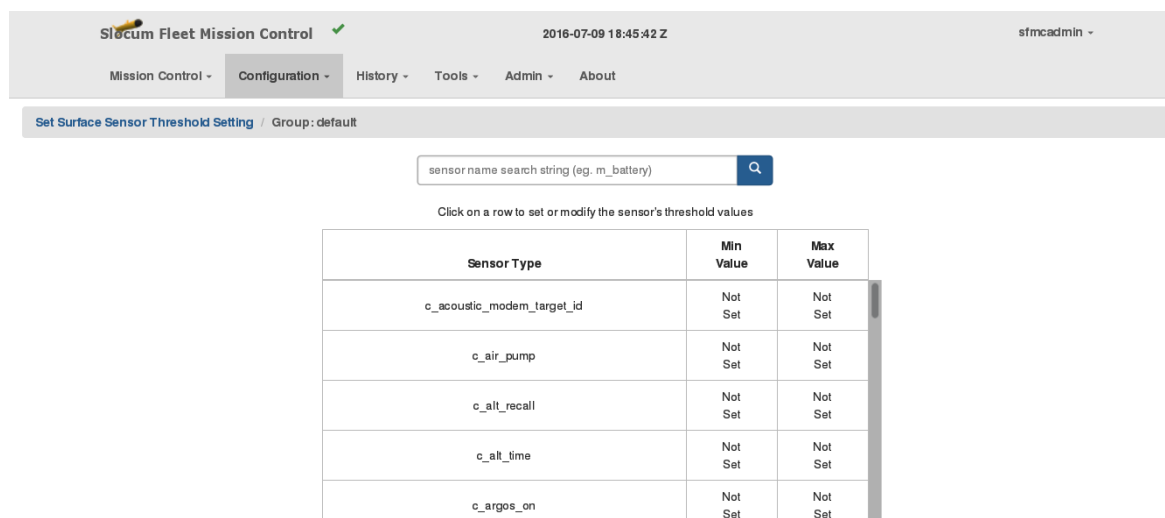


Figure 11-9 Set Surface Sensor Threshold Page—Glider Threshold Settings Displayed



Slacum Fleet Mission Control 2016-07-09 18:45:42 Z sfmadmin

Mission Control Configuration History Tools Admin About

Set Surface Sensor Threshold Setting / Group: default

sensor name search string (eg. m_battery) 🔍

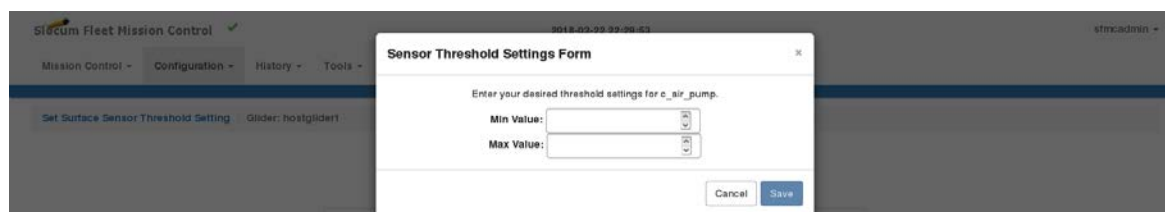
Click on a row to set or modify the sensor's threshold values

Sensor Type	Min Value	Max Value
c_acoustic_modem_target_id	Not Set	Not Set
c_air_pump	Not Set	Not Set
c_alt_recall	Not Set	Not Set
c_alt_time	Not Set	Not Set
c_argos_on	Not Set	Not Set

Figure 11-10 Surface Sensor Threshold Page—Group Threshold Settings Displayed

- Click the sensor type for which to make the threshold setting.

The row is highlighted, and the Sensor Threshold Settings Form dialog box opens as shown in Figure 11-11. The dialog box is the same for both gliders and groups.



Slacum Fleet Mission Control 2016-07-09 18:45:42 Z sfmadmin

Mission Control Configuration History Tools

Set Surface Sensor Threshold Setting / Glider: hostglider1

Sensor Threshold Settings Form

Enter your desired threshold settings for c_air_pump.

Min Value:

Max Value:

Cancel Save

Figure 11-11 Sensor Threshold Settings Form Dialog Box

- Enter the minimum threshold value in the **Min Value** text box and the maximum threshold value in the **Max Value** text box. For some sensors only a minimum or a maximum threshold setting is available.
- Click **Save**.

The threshold setting is saved, and the Sensor Threshold Settings Form dialog box closes.

SECTION 12: Managing Log Notes

SFMC enables the entering, editing and deleting of log notes for any active or archived deployment. The log notes can be entered from the Deployments panel on the Dashboard, from Glider Terminal, from the Active Deployments page, or from the Archived Deployments page. The log notes can be shared between users.

12.1 Viewing Log Notes

There is a separate Log Notes page for an active deployment and for an archived deployment. They are opened separately from the *Options* menu which is available on multiple pages in SFMC.

12.1.1 Viewing the Log Notes for an Active Deployment

To view the log notes for an active deployment, log in to a user account as an Administrator or to a user account with any role and do one of the following:

- From the *Mission Control* menu select *Dashboard*, select the *Options* menu for the active deployment, and then choose *View Log Notes*.
- From the *Mission Control* menu select *Active Deployments*, click the deployment name, and then from the *Options* menu choose *View Log Notes*.
- From the *Mission Control* menu select *Glider Terminal Access*, select the associated glider, and then from the *Options* menu, choose *View Log Notes*.

The Log Notes for Active Deployments page opens as shown in Figure 12-1.

12.1.2 Viewing the Log Notes for an Archived Deployment

To view the log notes for an archived deployment, log in to a user account as an Administrator or to a user account with any role and choose *Archived Deployments* from the *History* menu. Click the deployment name, and then from the *Options* menu choose *View Log Notes*. The Log Notes for Archived Deployments page opens as shown in Figure 12-2.

Creation Date Time	Last Modification	Note	Author	Controls
2018-03-22 20:54:32	N/A	Third log note for hostglider4.	sfmcadmin	
2018-03-22 20:54:14	N/A	Second log note for hostglider4.	sfmcadmin	
2018-03-22 20:53:43	2018-03-22 20:54:48	First log note for hostglider4.	sfmcadmin	

Figure 12-1 Log Notes for Active Deployments Page

Time of Note	Last Modification	Note	Author	Controls
2018-03-22 20:58:42	N/A	Third log note for hostglider1.	sfmcadmin	
2018-03-22 20:56:28	2018-03-22 20:57:28	Second log note for hostglider1.	sfmcadmin	
2018-03-22 20:56:04	N/A	First log note for hostglider1.	sfmcadmin	

Figure 12-2 Log Notes for Archived Deployments Page

12.2 Creating a Log Note

To create a log note:

1. Log in to a user account as an Administrator or to a user account with any role.
2. Do one of the following:
 - From the *Mission Control* menu select *Dashboard*, select the *Options* menu for the active deployment, and then choose *Create Log Note*.
 - From the *Mission Control* menu select *Active Deployments*, click the deployment name, and then from the *Options* menu choose *Create Log Note*.
 - From the *Mission Control* menu select *Glider Terminal Access*, select the associated glider, and then from the *Options* menu choose *Create Log Note*.
 - From the *History* menu select *Archived Deployments*, click the deployment name, and then from the *Options* menu choose *Create Log Note*.

The Log Note Form dialog box opens as shown in Figure 12-3.

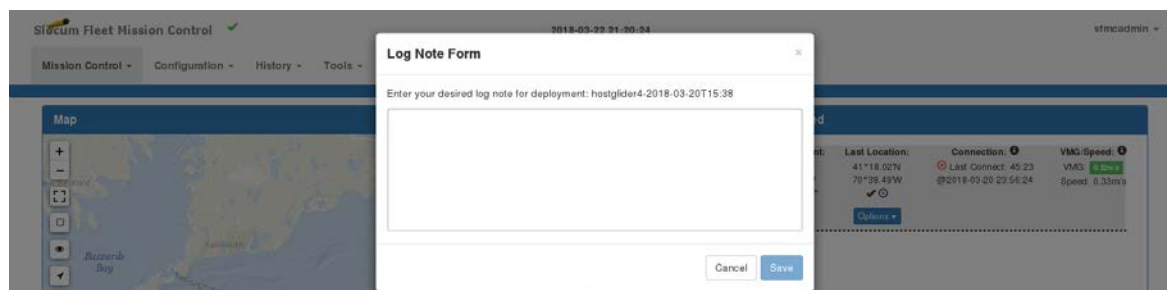


Figure 12-3 Log Note Form Dialog Box—Creating a Log Note

3. Enter the log note in the text box.
4. Click **Save**.

The log note is saved, and the Log Note Form dialog box closes.

12.3 Editing a Log Note

To edit a log note:

1. View the log notes as instructed in “Viewing Log Notes” on page 12-1.
2. Click the **Edit log note** button for the log note to be edited.

The Log Note Form dialog box for editing opens as shown in Figure 12-4.

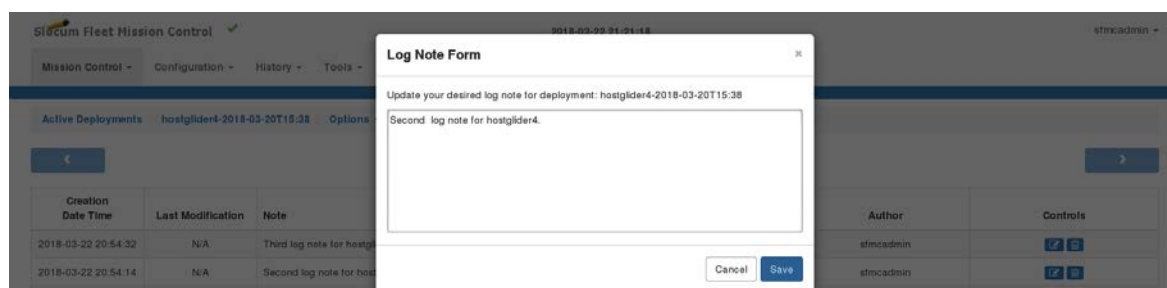


Figure 12-4 Log Note Form Dialog Box—Editing a Log Note

3. Make the required changes in the text box, and then click **Save**.

The changes are saved, and the Log Note Form dialog box for editing closes.

12.4 Deleting a Log Note

To delete a log note:

1. View the log notes as instructed in “Viewing Log Notes” on page 12-1.
2. Click the **Delete log note** button for the log note to be deleted.

The Delete Log Note Form dialog box opens as shown in Figure 12-5.

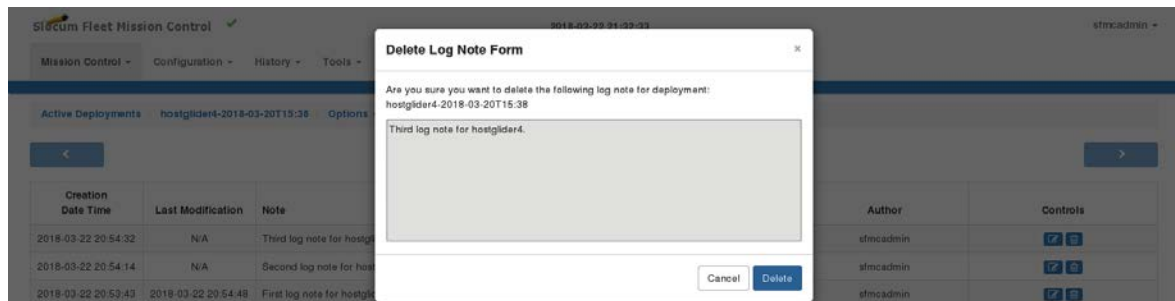


Figure 12-5 Delete Log Note Form Dialog Box

3. Click **Delete**.

The log note is deleted, and the Delete Log Note Form dialog box closes.

SECTION 13: Managing User Settings

The SFMC user settings include map settings, audio settings, glider event subscriptions, and user sensor plot types.

13.1 Managing Map Settings

The map on the Dashboard is composed of a map tile layer, and optionally, one or more WMS layers. These layers are obtained from the SFMC map settings which are created by downloading them to SFMC from sources on the Internet. The map settings are specific to the user account, but they can be shared with other users and groups. Once created, the layers can be made available on the map tile and WMS layers list on the map. The map settings can be viewed, created, edited, exported, imported, deleted, and shared when logged in to a user account as an Administrator or to a user account with any role. A KMZ access token can also be created, and a KMZ file can be downloaded.

13.1.1 Viewing the Map Settings

To view the map settings, choose *Map Settings* from the <User Account> menu. The Map Settings page opens as shown in Figure 13-1.

Map Settings

Map Tile Layer Settings

Name	URL Template	TMS	Attrib.	Use	Edit	Delete	Share
Aroga Ocean Basemap	http://services.arcgisonline.com/ArcGIS/rest/services/Ocean_Basemap/MapServer/tile/{z}/{y}/{x}.png	false	© ESRI	☒			
Arcgisonline Satellite	http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/{z}/{y}/{x}.png	false	© Esri	☒			
Ashumet	/sfmc/static/maps/ashumet/{z}/{x}/{y}.jpg	false	© OpenStreetMap	☒			
NASA Blue Marble	/sfmc/static/maps/world.topo.bathy/{z}/{x}/{y}.png	true	© NASA's Earth Observatory	☒			

Create Map Tile Layer Setting

WMS Layer Settings

Name	URL	Layers	Format	Transpare nt	Opacity	WMS Ver.	Attrib.	Use	Edit	Delete	Share
Significant Wave Height (feet) (+66 hrs)	https://nowcast.noaa.gov/arcgis/services/nowcast/forecast_meteoceanhydro_slc_nfld_signwaveht_offsets/MapServer/WmsServer	5	image/png	true	1.0	1.3.0	© NOAA	☒			

Create WMS Layer Setting

Map Settings Drop Zone

Map Settings Drop Zone

Figure 13-1 Map Settings Page

The Map Settings page provides a list of map tile and WMS layer settings that have been created in SFMC. The map tile layer settings are listed on the Map Tile Layer Settings panel, and the WMS layer settings, on the WMS Layer Settings panel. None or one or more map tile layers can be chosen when viewing the map; a WMS layer is optional, and multiple WMS layers can be chosen. The layers to display are chosen directly from the map tile and WMS layers list on the map.

The Map Tile Layer Settings panel includes the following information:

Name. The name of the map tile layer. The name is listed with others, if any, on the map tile and WMS layers list on the map.

URL Template. The global address of the map tile layer on the World Wide Web.

TMS. The Tile Map Service, where "true" specifies TMS services are to be used and inverses the Y axis numbering on the map tile layer.

Attrib. The attribution, which is the source of the map tile layer. The attribution is also displayed on the map in the lower right corner.

Use. Select to include the map tile layer on the map tile and WMS layers list on the map making it an available choice.

The WMS Layer Settings panel includes the following information:

Name. The name of the WMS layer. The name is listed with others, if any, on the map tile and WMS layers list on the map.

URL. The global address of the WMS layer on the World Wide Web.

Layers. The WMS layer names, each separated by a comma if there is more than one.

Format. The image format of the WMS layer, either JPEG, PNG or SVG.

Transparent. "True" specifies that the WMS service will return images with transparency.

Opacity. The level of translucence for the specific WMS layer.

WMS Ver. The version number of the WMS service.

Attrib. The attribution, which is the source of the WMS layer. The attribution is also displayed on the map in the lower right corner.

Use. Select to include the WMS layer on the map tile and WMS layers list on the map making it an available choice.

To sort the WMS layer settings, drag and drop the entries in the desired order.

13.1.2 Creating Map Settings

To create map settings:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Click **Create Map Tile Layer Setting**.

The Create Map Tile Layer Setting Form panel opens as shown in Figure 13-2.

The screenshot shows the 'Create Map Tile Layer Setting Form' panel within the Slocum Fleet Mission Control application. The panel has a blue header with the title 'Create Map Tile Layer Setting Form'. Below the header, there are four text input fields: 'Map Tile Layer Name*', 'URL Template*', and 'Attribution*'. The 'URL Template*' field contains the placeholder text '© CHANGEME'. To the left of the 'URL Template*' field is a checkbox labeled 'TMS'. A 'Create' button is located at the bottom right of the form. The background shows the application's navigation menu with options like 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The top status bar displays 'Slocum Fleet Mission Control', a green checkmark, the date and time '2016-07-10 22:24:05 Z', and the user 'sfmcadmin'.

Figure 13-2 Create Map Tile Layer Setting Form Panel

3. Enter a name for the map tile layer in the **Map Tile Layer Name** text box.
4. Select the **TMS** check box if it is desired to inverse the Y axis numbering on the map tile layer.
5. Enter the URL for the map tile layer in the **URL Template** text box.
6. Enter the attribution in the **Attribution** text box.
7. Click **Create**.

The map tile layer is created and listed.

8. Click Create **WMS Layer Setting**.

The Create WMS Layer Setting Form panel opens as shown in Figure 13-3.

9. Enter a name for the WMS layer in the **WMS Layer Name** text box.
10. Enter the URL for the WMS layer in the **URL** text box.

The screenshot shows the 'Create WMS Layer Setting Form' panel. At the top, the header bar displays 'Slocum Fleet Mission Control' with a green checkmark, the date '2020-03-30 22:41:47', and the user 'sfmcadmin'. Below the header is a navigation menu with 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The main content area has a breadcrumb trail 'Map Settings / Create WMS Layer Setting'. The form itself is titled 'Create WMS Layer Setting Form' and contains the following fields: 'WMS Layer Name*' (text input), 'URL*' (text input), 'Layers*' (text input), 'Format*' (dropdown menu with 'image/png' selected), a checked 'Transparent' checkbox, 'Opacity:' (slider from 0.0 to 1.0, currently at 1), 'WMS Version*' (text input with '1.3.0'), and 'Attribution*' (text input with '© CHANGEME'). A blue 'Create' button is located at the bottom right of the form.

Figure 13-3 Create WMS Layer Setting Form Panel

11. Enter the layer name or names in the **Layers** text box. If multiple layer names are entered, separate them by commas.
12. Select the image format from the **Format** drop-down list, either JPEG, PNG or SVG.
13. Select the **Transparent** check box if it is desired to return images with transparency.
14. Enter the opacity, from 0.0 to 1.0 in the **Opacity** text box.
15. Enter the version of the WMS service in the **WMS Version** text box.
16. Enter the attribution in the **Attribution** text box.
17. Click **Create**.

The WMS layer is created and listed.

13.1.3 Editing a Map Setting

Any map tile or WMS layer setting that is *not* in use can be edited.

To edit a map setting:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Click the **Edit** button for the map tile or WMS layer setting that you want to edit.

The Edit Map Tile Layer Setting Form panel opens as shown in Figure 13-4 for a map tile layer, or the Edit WMS Layer Setting Form panel opens as shown in Figure 13-5 for a WMS layer.

The screenshot shows the 'Edit Map Tile Layer Setting Form' panel. The form includes the following fields:

- Map Tile Layer Name***: A text input field containing 'Arcgisonline Satellite'.
- TMS**: A checkbox that is checked.
- URL Template***: A text input field containing 'http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/{z}/{y}/{x}.png'.
- Attribution***: A text input field containing '© Esri'.

A 'Save' button is located at the bottom right of the form.

Figure 13-4 Edit Map Tile Layer Setting Form Panel

The screenshot shows the 'Edit WMS Layer Setting Form' panel. The form includes the following fields:

- WMS Layer Name***: A text input field containing 'Significant Wave Height (feet) (+66 hrs)'.
- URL***: A text input field containing 'https://nowcast.noaa.gov/arcgis/services/nowcast/forecast_meteorocanhydro_slc_ndld_signwaveht_offsets/MapServer/WmsServer'.
- Layers***: A text input field containing '5'.
- Format***: A dropdown menu showing 'image/png'.
- Transparent**: A checkbox that is checked.
- Opacity:**: A slider control set to '1'.
- WMS Version***: A text input field containing '1.3.0'.
- Attribution***: A text input field containing '© NOAA'.

A 'Save' button is located at the bottom right of the form.

Figure 13-5 Edit WMS Layer Setting Form Panel

3. On the Edit Map Tile Layer Setting Form panel or the Edit WMS Layer Setting Form panel, make the required changes, and then click **Save**.

The edited map settings are saved.

13.1.4 Exporting the User Configured Map Settings

All of the user configured map settings can be exported by downloading them to a single file, a file of extension .json, where the file name is automatically generated by SFMC. The map settings provided with SFMC cannot be exported. Once saved to this file, the file can be imported by any other computer running SFMC on a different server.

To export the user configured map settings:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Click the **Download map settings** button on the Map Tile Layer Settings panel title bar.
3. Save the file. The file name is automatically generated by SFMC and is in the format <User Account>-map-settings.json.

13.1.5 Importing User Configured Map Settings

User configured map settings can be imported by dragging and dropping one or more files, files of extension .json, that contain map settings that were exported from another computer running SFMC on a different server.

To import user configured map settings:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Drag and drop the map settings file, a file of extension .json, into the **Map Settings Drop zone** on the Map Settings Drop Zone panel.

The map settings are imported and appear on the Map Tile Layer Settings and WMS Layer Settings panels.

13.1.6 Deleting a Map Setting

Any map tile or WMS layer setting that is *not* in use can be deleted.

To delete a map setting:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Click the **Delete** button for the map tile or WMS layer setting that you want to delete.

The Delete Map Tile Layer Setting dialog box opens as shown in Figure 13-6 for a map tile layer, or the Delete WMS Layer Setting dialog box opens as shown in Figure 13-7 for a WMS layer.

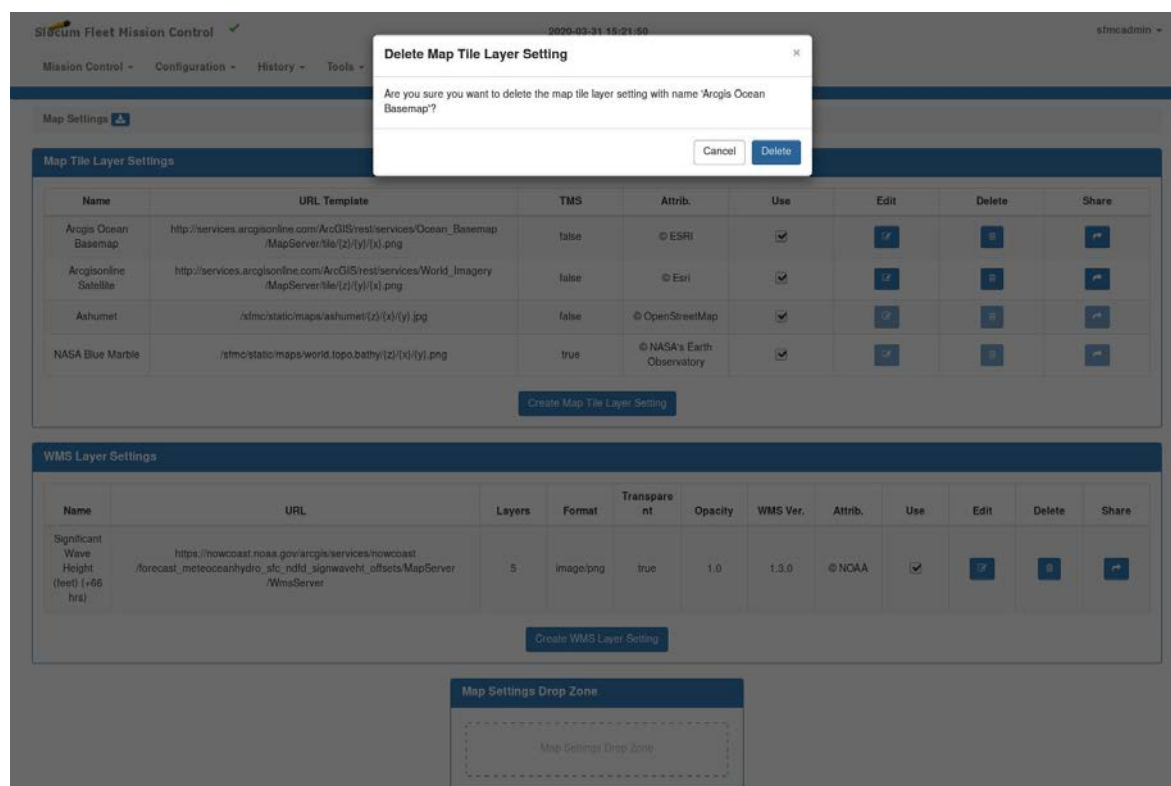


Figure 13-6 Delete Map Tile Layer Setting Dialog Box

3. Click **Delete**.

The map setting is deleted, and the Delete Map Tile Layer Setting or Delete WMS Layer Setting dialog box closes.

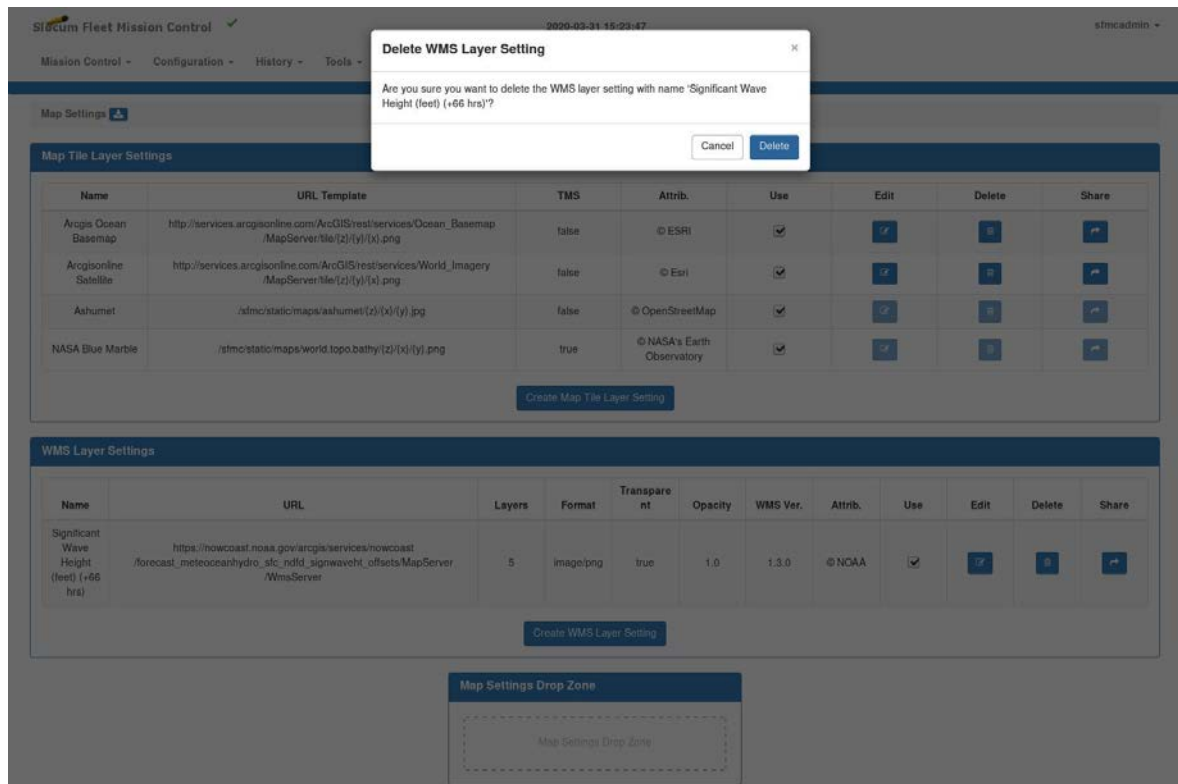


Figure 13-7 Delete WMS Layer Setting Dialog Box

13.1.7 Sharing a Map Setting

Any map tile or WMS layer setting that is *not* in use can be shared.

To share a map setting:

1. From the <User Account> menu, choose *Map Settings*.

The Map Settings page opens as shown in Figure 13-1 on page 13-1.

2. Click the **Share** button for the map tile or WMS layer setting that you want to share.

The Share Map Tile Layer Setting Form panel opens as shown in Figure 13-8 for a map tile layer, or the Share WMS Layer Setting Form panel opens as shown in Figure 13-9 for a WMS layer.

3. Do one or both of the following:

- Select the group or groups with which to share the map setting from the **Groups With Which to Share Map Setting** drop-down list. To select more than group, hold down the Ctrl key while clicking them one at a time. The users with which to share the map setting are selected automatically from the **Users With Which to Share Map Setting** drop-down list.

Slocum Fleet Mission Control 2018-03-19 23:58:06 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Map Settings / Share Map Tile Layer Setting 'Arcgisonline Satellite'

Share Map Tile Layer Setting Form

Map Tile Layer Name
Arcgisonline Satellite

☐ TMS

URL Template
http://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/{z}/{y}/{x}.png

Attribution
© Esri

Groups With Which to Share Map Setting
default
group1
group2
group3
group4

Users With Which to Share Map Setting
user1
user2
user3
user4

Share

Figure 13-8 Share Map Tile Setting Form Panel

Slocum Fleet Mission Control 2020-03-31 15:35:30 sfmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Map Settings / Share WMS Layer Setting 'Significant Wave Height (feet) (+66 hrs)'

Share WMS Layer Setting Form

WMS Layer Name
Significant Wave Height (feet) (+66 hrs)

URL
https://nowcoast.noaa.gov/arcgis/services/nowcoast/forecast_meteorocanhydro_sfc_ndld_signwaveht_offsets/MapServer/WmsServer

Layers
5

Format
image/png

☒ Transparent

Opacity:
1

WMS Version
1.3.0

Attribution
© NOAA

Groups With Which to Share Map Setting
default
group1
group2
group3

Users With Which to Share Map Setting
user1
user2
user3
user4

Share

Figure 13-9 Share WMS Layer Setting Form Panel

- Select the user or users with which to share the map setting from the **Users With Which to Share Map Setting** drop-down list. To select more than one user, hold down the Ctrl key while clicking them one at a time. If all the users in a group are selected, the group will be selected automatically.

4. Click **Share**.

The map setting is shared, and the Share Map Tile Layer Setting Form or Share WMS Layer Setting Form panel closes.

13.1.8 Creating a KMZ Access Token and Downloading a KMZ File

SFMC enables you to generate a KMZ access token that is associated with your user account. With this token you can access the active deployment without having to log in to SFMC by downloading a KMZ file for the deployment and opening it in Google Earth or any other program that can display the data from a KMZ file. The KMZ file using the KMZ access token will poll the SFMC server periodically, unlike exporting all the map events for a specific deployment as described in “Exporting Map Events” on page 9-26.

To create a KMZ Access token and download a KMZ file:

1. From the *<User Account>* menu, choose *KMZ Access*.

The KMZ Access and Active Deployment KMZ Download panels open as shown in Figure 13-10.

2. Click **Generate**.

The KMZ access token is generated and displayed in the **KMZ Access Token** text box. In addition, the date and time it was created is displayed in the **Generation Date Time** text box.

3. Select an active deployment from the **Active Deployments** drop-down list on the Active Deployment KMZ Download panel.

4. Click **Download**, and then choose where to save the file.

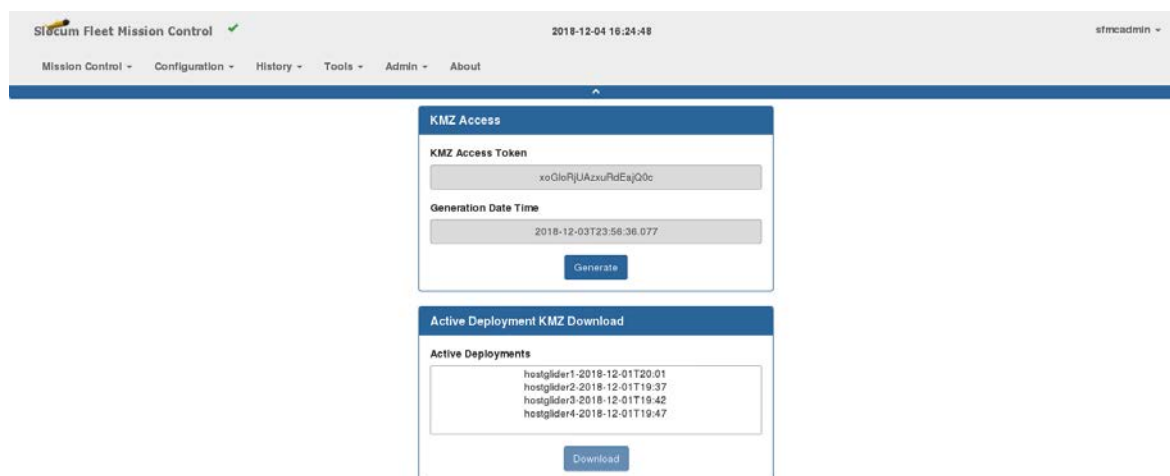


Figure 13-10 KMZ Access and Active Deployment KMZ Download Panels

13.2 Managing Audio Settings

Both glider and group specific audio settings are available. These settings determine which of four separately selectable audio files SFMC will automatically play when one of four types of glider events occur for a specific glider or a specific group: Glider Abort, Glider General Error, Glider Started Last Gasp, and Glider Surface. The audio settings can be viewed, created, edited, deleted, enabled and disabled, and played when logged in to a user account as an Administrator or to a user account with any role.

13.2.1 Viewing the Audio Settings

To view the audio settings, choose *Audio Settings* from the <User Account> menu. The Audio Settings page opens as shown in Figure 13-11.

The Audio Settings page provides a list of the current glider specific and group specific audio settings. Glider specific audio settings are operator selected for specific gliders, and if any have been selected, they are listed on the Glider Specific Audio Settings panel. Group specific audio settings, which are selected by SFMC only, are listed on the Group Specific Audio Settings panel. Custom audio files can be downloaded and any audio file can be manually played in SFMC. Glider specific audio settings can be created, edited, deleted, enabled, and disabled. Group specific audio settings can be edited, enabled and disabled only.



NOTE A group specific setting applies to a specific glider in the group only when there is no glider specific setting for that glider.

Slalom Fleet Mission Control 2018-03-21 20:56:43 stmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Audio Settings

Glider Specific Audio Settings

Glider	Event	Date Time of Creation	Date Time of Last Modification	Enabled	Audio	Edit	Delete
hostglider1	Glider Surface	2018-03-20 16:08:07	N/A	☒			
hostglider2	Glider Surface	2018-03-20 16:11:03	N/A	☒			
hostglider3	Glider Surface	2018-03-21 20:09:12	2018-03-21 20:47:02	☒			
hostglider4	Glider Surface	2018-03-20 16:12:13	N/A	☒			

Create Glider Specific Audio Setting

Group Specific Audio Settings

Group	Event	Date Time of Last Modification	Enabled	Audio	Edit
default	Glider Abort	2018-03-21 19:49:52	☒		
default	Glider General Error	2018-03-21 19:49:48	☒		
default	Glider Started Last Gasp	N/A	☒		
default	Glider Surface	2018-03-21 20:47:41	☒		
group1	Glider Abort	N/A	☒		
group1	Glider General Error	N/A	☒		
group1	Glider Started Last Gasp	N/A	☒		
group1	Glider Surface	N/A	☒		
group2	Glider Abort	2018-03-21 20:48:17	☒		
group2	Glider General Error	2018-03-21 20:48:39	☒		
group2	Glider Started Last Gasp	N/A	☒		
group2	Glider Surface	N/A	☒		
group3	Glider Abort	N/A	☒		
group3	Glider General Error	N/A	☒		
group3	Glider Started Last Gasp	N/A	☒		
group3	Glider Surface	N/A	☒		
group4	Glider Abort	N/A	☒		
group4	Glider General Error	N/A	☒		
group4	Glider Started Last Gasp	N/A	☒		
group4	Glider Surface	N/A	☒		

Figure 13-11 Audio Settings Page

The Glider Specific Audio Settings panel includes the following information:

Glider. The name of the glider.

Event. The event type name, which is Glider Abort, Glider General Error, Glider Started Last Gasp, or Glider Surface.

Date Time of Creation. The date and time the audio setting was created.

Date Time of Last Modification. The date and time the audio setting was last edited.

Enabled. When selected, the automatic audio playback of the sound file is enabled. When cleared, the automatic audio playback is disabled.

The Group Specific Audio Settings panel includes the following information:

Group. The group associated with the audio file.

Event. The event type name, which is Glider Abort, Glider General Error, Glider Started Last Gasp, or Glider Surface.

Date Time of Last Modification. The date and time the audio setting was last edited.

Enabled. When selected, the automatic audio playback of the sound file is enabled. When cleared, the automatic audio playback is disabled.

13.2.2 Creating a Glider Specific Audio Setting

To create a glider specific audio setting:

1. From the <User Account> menu, choose *Audio Settings*.

The Audio Settings page opens as shown in 13-12 on page 13-12.

2. Click **Create Glider Specific Audio Setting**.

The Create Glider Specific Audio Setting Form panel opens as shown in Figure 13-12.

The screenshot shows the 'Create Glider Specific Audio Setting Form' panel within the Slocum Fleet Mission Control application. The panel has a blue header with the title 'Create Glider Specific Audio Setting Form'. Below the header, there are two text input fields: 'Glider*' with the value 'hostglider1' and 'Event Type*' with the value 'Glider Surface'. Below these fields, there is a checked checkbox labeled 'Enabled' and an unchecked checkbox labeled 'Use Custom Audio'. A blue 'Create' button is located at the bottom right of the form. The background shows the application's navigation menu with options like 'Mission Control', 'Configuration', 'History', 'Tools', 'Admin', and 'About'. The top status bar displays 'Slocum Fleet Mission Control', a green checkmark, the date and time '2018-03-20 16:03:53', and the user 'stfmcadmin'.

Figure 13-12 Create Glider Specific Audio Setting Form Panel

3. Select the glider from the **Glider** drop-down list.
4. Select the event type from the **Event Type** drop-down list.
5. Select the **Enabled** check box to enable the audio file. Clear the check box to disable it. The audio file will not automatically play when disabled but can be played manually.

6. If desired, select the **Use Custom Audio** check box to select a different audio file.

The **Browse** button becomes available as shown in Figure 13-13. Click **Browse** and select the audio file. The file must be of the type .wav. When selected, the **Audio** button on the Glider Specific Audio Settings panel turns white.

The screenshot shows the 'Create Glider Specific Audio Setting Form' panel. It has a title bar 'Create Glider Specific Audio Setting Form'. Below it are two text input fields: 'Glider*' with the value 'hostglider1' and 'Event Type*' with the value 'Glider Surface'. There are two checked checkboxes: 'Enabled' and 'Use Custom Audio'. Below these is a section for 'Custom Audio File*' which contains a 'Browse...' button and the text 'No file selected.'. At the bottom right is a 'Create' button.

Figure 13-13 Create Glider Specific Audio Setting Form Panel—Browse Custom Audio File

7. Click **Create**.

The glider specific audio setting is created.

13.2.3 Editing a Glider Specific Audio Setting

To edit a glider specific audio setting:

1. From the <User Account> menu, choose *Audio Settings*.

The Audio Settings page opens as shown in Figure 13-11 on page 13-12.

2. Click the **Edit** button for the glider on the Glider Specific Audio Settings panel.

The Edit Glider Specific Audio Setting Form panel opens as shown in Figure 13-14.

3. If desired, select the **Use Custom Audio** check box to select a different audio file.

The **Browse** button becomes available as shown in Figure 13-15. Click **Browse** and select the audio file. The file must be of the type .wav. When selected, the Audio button on the Glider Specific Audio Settings panel turns white.

4. Make the required changes, and then click **Save**.

The edited glider specific audio setting is saved.

The screenshot shows the 'Edit Glider Specific Audio Setting Form' panel. The form has a title bar 'Edit Glider Specific Audio Setting Form'. Below it, there are two text input fields: 'Glider*' with the value 'hostglider2' and 'Event Type*' with the value 'Glider Surface'. There are two checkboxes: 'Enabled' which is checked, and 'Use Custom Audio' which is unchecked. A 'Save' button is located at the bottom right of the form.

Figure 13-14 Edit Glider Specific Audio Setting Form Panel

This screenshot is similar to Figure 13-14 but with the 'Use Custom Audio' checkbox checked. Below this checkbox, there is a section for 'Custom Audio File*' which includes a 'Browse...' button and the text 'No file selected.' The 'Save' button remains at the bottom right.

Figure 13-15 Edit Glider Specific Audio Setting Form Panel—Browse Custom Audio File

13.2.4 Deleting a Glider Specific Audio Setting

To delete a glider specific audio setting:

1. From the <User Account> menu, choose *Audio Settings*.
The Audio Settings page opens as shown in Figure 13-11 on page 13-12.
2. Click the **Delete** button for the glider on the Glider Specific Audio Settings panel.
3. Click **Delete** in the Delete Glider Specific Audio Event Setting dialog box.
The glider specific audio setting is deleted.

13.2.5 Editing a Group Specific Audio Setting

To edit a group specific audio setting:

1. From the <User Account> menu, choose *Audio Settings*.
The Audio Settings page opens as shown in Figure 13-11 on page 13-12.

- Click the **Edit** button for the glider on the Group Specific Audio Settings panel.

The Edit Group Specific Audio Setting Form panel opens as shown in Figure 13-16.

The screenshot shows the Slocum Fleet Mission Control web application. The top navigation bar includes the application name, a status indicator, the date and time (2018-03-20 16:04:09), and the user name (stfmcadmin). Below the navigation bar, the breadcrumb trail shows 'Audio Settings' and 'Edit Group Specific Audio Setting'. The main content area displays the 'Edit Group Specific Audio Setting' form. The form has a title bar and contains the following fields: 'Group' (a dropdown menu with 'default' selected), 'Event' (a dropdown menu with 'Glider Abort' selected), a checked 'Enabled' checkbox, and an unchecked 'Use Custom Audio' checkbox. A 'Save' button is located at the bottom right of the form.

Figure 13-16 Edit Group Specific Audio Setting Form Panel

- If desired, select the **Use Custom Audio** check box to select a different audio file.

The **Browse** button becomes available as shown in Figure 13-17. Click **Browse** and select the audio file. The file must be of the type .wav. When selected, the Audio button on the Group Specific Audio Settings panel turns white.

This screenshot shows the same 'Edit Group Specific Audio Setting' form as Figure 13-16, but with additional changes. The 'Use Custom Audio' checkbox is now checked. Below this checkbox, a new section titled 'Custom Audio File*' is visible. It contains a 'Browse...' button and the text 'No file selected.' The 'Save' button remains at the bottom right.

Figure 13-17 Edit Group Specific Audio Setting Form Panel—Browse Custom Audio File

- Make the required changes, and then click **Save**.

The edited group specific audio setting is saved.

13.2.6 Enabling or Disabling an Audio Setting

Both glider and group specific audio settings can be enabled or disabled. The audio file will not automatically play when disabled but can be played manually.

To enable or disable an audio setting:

1. From the <User Account> menu, choose *Audio Settings*.

The Audio Settings page opens as shown in Figure 13-11 on page 13-12.

2. Select or clear the **Enable** check box for the glider on the Glider Specific Audio Settings panel or for the group on the Group Specific Audio Settings panel as required.

13.2.7 Playing an Audio Setting

Both glider and group specific audio settings can be played.

To play an audio setting:

1. From the <User Account> menu, choose *Audio Settings*.

The Audio Settings page opens as shown in Figure 13-11 on page 13-12.

2. Click the **Audio** button for the glider on the Glider Specific Audio Settings panel or for the group on the Group Specific Audio Settings panel as required.

13.3 Managing Glider Event Subscriptions

SFMC can provide a notification each time one or more specific types of events occur. Each notification is provided as an e-mail to a specified e-mail address. To send these e-mails, you must configure the glider event subscriptions which requires selecting the events for which notifications will be sent and the associated e-mail address for each. The glider event subscription can be selected, edited and deleted when logged in to a user account as an Administrator or to a user account with any role.

13.3.1 Selecting Glider Event Subscriptions

To select glider event subscriptions:

1. From the <User Account> menu, choose *Glider Event Subscriptions*.

The User Glider Event Subscriptions page opens as shown in Figure 13-18 which lists all of the registered gliders.

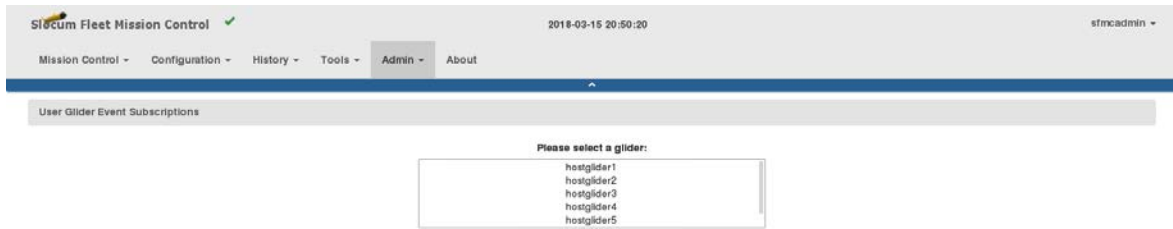


Figure 13-18 User Glider Event Subscriptions Page—Registered Gliders Listed

2. Select the glider from the **Please Select a Glider** drop-down list.

The Subscriptions for Glider <Selected Glider> panel opens as shown in Figure 13-19.

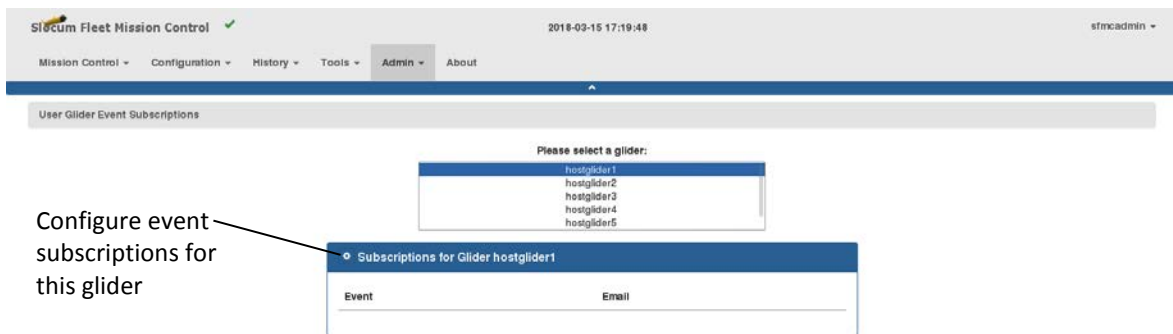


Figure 13-19 Subscriptions for Glider <Selected Glider> Panel

3. Click the **Configure event subscriptions for this glider** button on the Subscriptions for Glider <Selected Glider> panel title bar.

The Configure Glider Event Subscriptions dialog box opens as shown in Figure 13-20.

4. Click the **Create new subscription** button.

A **Subscription Type** drop-down list opens as shown in Figure 13-21 containing a list of subscription types along with an **Email** text box with the currently logged in user account e-mail address automatically entered.

5. Select the subscription type from the **Subscription Type** drop-down list.
6. Enter the e-mail address in the corresponding **Email** text box if different.
7. Repeat Steps 4 through 6 for any additional glider event subscription types.
8. Click **Save**.
9. The glider event subscriptions are saved, and the Configure Glider Event Subscriptions dialog box closes.

Configure Glider Event Subscriptions ×

Select the type of event subscriptions you would like to receive for glider hostglider1

Action	Subscription Type	Email
		

Cancel Save

Figure 13-20 Configure Glider Event Subscriptions Dialog Box

Configure Glider Event Subscriptions ×

Select the type of event subscriptions you would like to receive for glider hostglider1

Action	Subscription Type	Email
	Glider Connect	sfmcadmin@email.com
		

Cancel Save

Figure 13-21 Configure Glider Event Subscriptions Dialog Box—Create New Subscription

13.3.2 Editing Glider Event Subscriptions

To edit glider event subscriptions:

1. From the <User Account> menu, choose *Glider Event Subscriptions*.
2. The User Glider Event Subscriptions page opens as shown in Figure 13-18 on page 13-18 which lists all of the registered gliders.
3. Select the glider from the **Please Select a Glider** drop-down list.

The Subscriptions for Glider <Selected Glider> panel opens as shown in Figure 13-22 with all of the current subscriptions for the glider listed.

4. Click the **Configure event subscriptions for this glider** button on the Subscriptions for Glider <Selected Glider> panel title bar.

The Configure Glider Event Subscriptions dialog box opens as shown in Figure 13-23 with all of the current subscriptions for the glider listed.

5. Select the new subscription type from the **Subscription Type** drop-down list of the subscription type that you want to edit.
6. Enter the e-mail address in the corresponding **Email** text box if different.

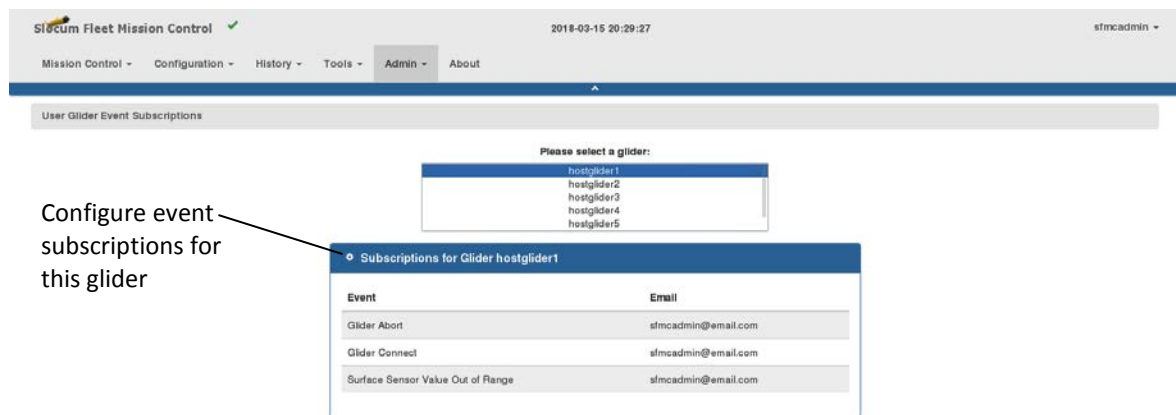


Figure 13-22 Subscriptions for Glider <Selected Glider> Panel—Current Glider Subscriptions Listed

7. Repeat Steps 5 and 6 for any additional glider event subscriptions.
8. Click **Save**.

The glider event subscriptions are saved, and the Configure Glider Event Subscriptions dialog box closes.

Action	Subscription Type	Email
	Glider Abort	sfmcadmin@email.com
	Glider Connect	sfmcadmin@email.com
	Surface Sensor Value Out of Range	sfmcadmin@email.com

Figure 13-23 Configure Glider Event Subscriptions Dialog Box—Current Glider Subscriptions Listed

13.3.3 Deleting Glider Event Subscriptions

To delete glider event subscriptions:

1. From the <User Account> menu, choose *Glider Event Subscriptions*.
2. The User Glider Event Subscriptions page opens as shown in Figure 13-18 on page 13-18 which lists all of the registered gliders.
3. Select the glider from the **Please Select a Glider** drop-down list.

The Subscriptions for Glider <Selected Glider> panel opens as shown in Figure 13-22 on page 13-20 with all of the current subscriptions for the glider listed.

4. Click the **Configure event subscriptions for this glider** button on the Subscriptions for Glider <Selected Glider> panel title bar.

The Configure Glider Event Subscriptions dialog box opens as shown in Figure 13-24 with all of the current subscriptions for the glider listed.

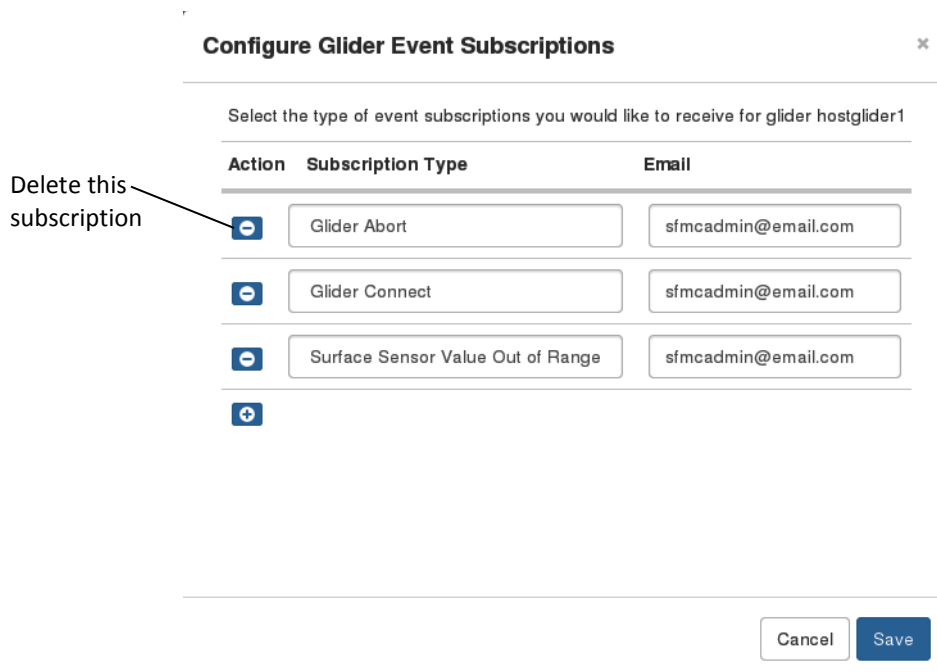


Figure 13-24 Configure Glider Event Subscriptions Dialog Box—Current Glider Subscriptions Listed

5. Click the **Delete this subscription** button for the subscription you want to delete.
The subscription is deleted.
6. Click **Save**.
The glider event subscriptions are saved, and the Configure Glider Event Subscriptions dialog box closes.

13.4 Managing User Sensor Plot Types

Sensor plot types can be created that are specific to the user account from which they were created. They can only be viewed and managed from this user account. The sensor plots are created from the Data Visualization page which is accessible with any user account. For instructions on how to open the Data Visualizations page, refer to “Opening Data Visualizer for an Active Deployment” on page 9-18. Once created, the plot types are listed in the **Plot Name** drop-down list on the Data Visualizations page. For instructions on how to view the data, refer to “Viewing Data by Plot Name” on page 9-21. The user sensor plot types can be viewed, created, edited, deleted, and shared when logged in to a user account as an Administrator or to a user account with any role.

13.4.1 Viewing a User Sensor Plot Type

To view a user sensor plot type:

1. Open the Data Visualizations page for an active deployment.
2. From the *Options* menu choose *Manage User Sensor Plot Types*.

The User Sensor Plot Types panel opens as shown in Figure 13-25.

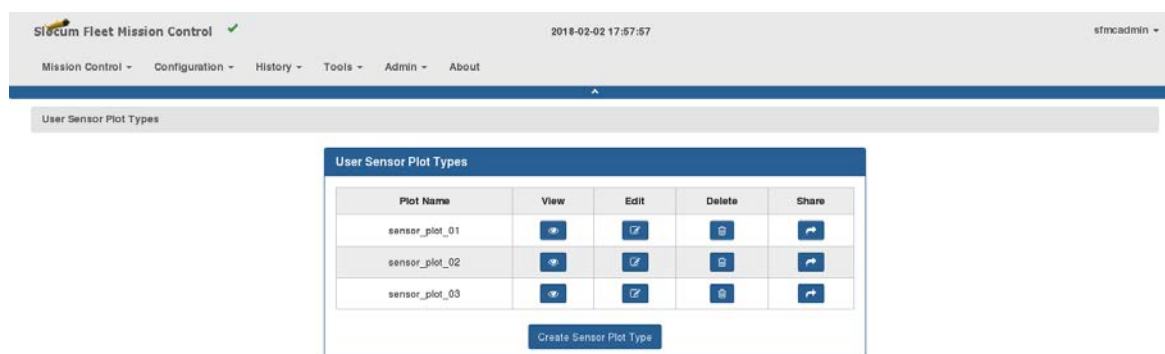


Figure 13-25 User Sensor Plot Types Panel—Plot Types Listed

3. Click the **View** button for the plot type you want to view.

The Details for User Sensor Plot Type <Plot Name> panel opens as shown in Figure 13-26 which lists the sensor names for the plot type and the plot color.



Figure 13-26 Details for User Sensor Plot Type <Plot Name> Panel

13.4.2 Creating a User Sensor Plot Type

To create a user sensor plot type:

1. Open the Data Visualizations page for an active deployment.

- From the *Options* menu choose *Manage User Sensor Plot Types*.

The User Sensor Plot Types panel opens as shown in Figure 13-27.

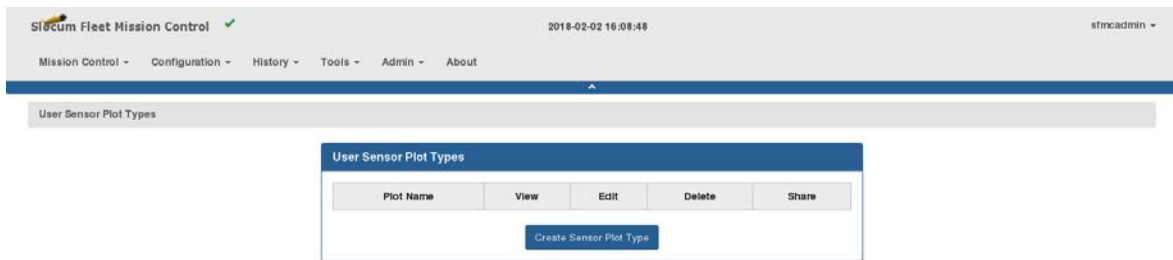


Figure 13-27 User Sensor Plot Types Panel

- Click **Create Sensor Plot Type**.

The Create User Sensor Plot Type panel opens as shown in Figure 13-28.

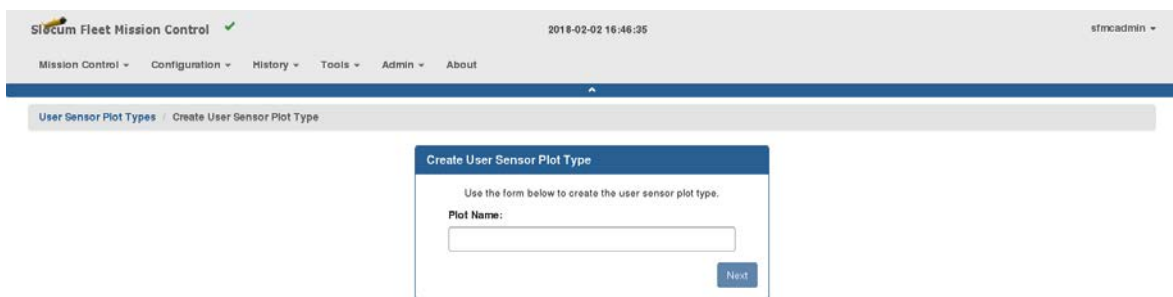


Figure 13-28 Create User Sensor Plot Type Panel

- Enter a name for the user sensor plot type in the **Plot Name** text box as shown in Figure 13-29.

- Click **Next**.

The Edit User Sensor Plot Type <Plot Name> panel opens as shown in Figure 13-30.

- Click **Add New Sensor to Plot**.

The Create Sensor Plot Setting dialog box opens as shown in Figure 13-31.

- Enter the sensor name in the **Sensor Type Name** text box. Or enter just the first two characters of the sensor name. A list of sensors beginning with these characters will be displayed. If the sensor you are looking for is not in the list, continue entering the characters for it until it does. Then select the sensor from this list.

Slocum Fleet Mission Control 2018-02-02 16:10:30 stmcadmin

Mission Control Configuration History Tools Admin About

User Sensor Plot Types / Create User Sensor Plot Type

Create User Sensor Plot Type

Use the form below to create the user sensor plot type.

Plot Name:

Next

Figure 13-29 Create User Sensor Plot Type Panel—User Sensor Plot Type Name Entered

Slocum Fleet Mission Control 2018-02-02 16:10:35 stmcadmin

Mission Control Configuration History Tools Admin About

User Sensor Plot Types / sensor_plot_02 / (Under edit)

Edit User Sensor Plot Type: sensor_plot_02

Use the form below to alter the user sensor plot type.

Sensor Plot Setting Creation

+ Add New Sensor to Plot

Enabled Sensor Plot Settings

Sensor plot settings enabled for this user sensor plot type. Select the edit button to modify the setting.

Figure 13-30 Edit User Sensor Plot Type <Plot Name> Panel

Slocum Fleet Mission Control 2018-02-02 16:11:00 stmcadmin

Mission Control Configuration History Tools

User Sensor Plot Types sensor_plot_02 (Under edit)

Create Sensor Plot Setting

Sensor Type Name:

Color:

Cancel Save

Figure 13-31 Create Sensor Plot Setting Dialog Box

8. Select the color of the plot from the **Color** drop-down list.
9. Click **Save**.

The Edit User Sensor Plot Type <Plot Name> panel opens as shown Figure 13-32.

10. If desired, repeat Steps 6 through 9 to add up to four more sensors.

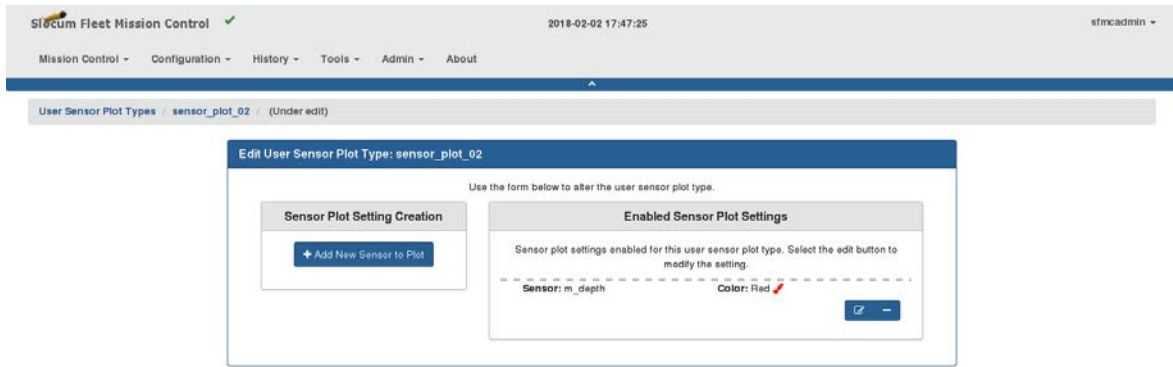


Figure 13-32 Edit User Sensor Plot Type <Plot Name> Panel—Enabled Sensor Plot Setting Added

13.4.3 Editing a User Sensor Plot Type

To edit a user sensor plot type:

1. Open the Data Visualizations page for an active deployment.
2. From the *Options* menu choose *Manage User Sensor Plot Types*.

The User Sensor Plot Types panel opens as shown in Figure 13-25 on page 13-23.

3. Do one of the following:
 - Click the **View** button for the user defined plot that you want to edit, and then click **Edit Plot Type** in the Details for User Sensor Plot Type <Plot Name> panel.
 - Click the **Edit** button for the user defined plot that you want to edit.

The Edit User Sensor Plot Type <Plot Name> panel opens to the user defined plot to be edited as shown in Figure 13-33.

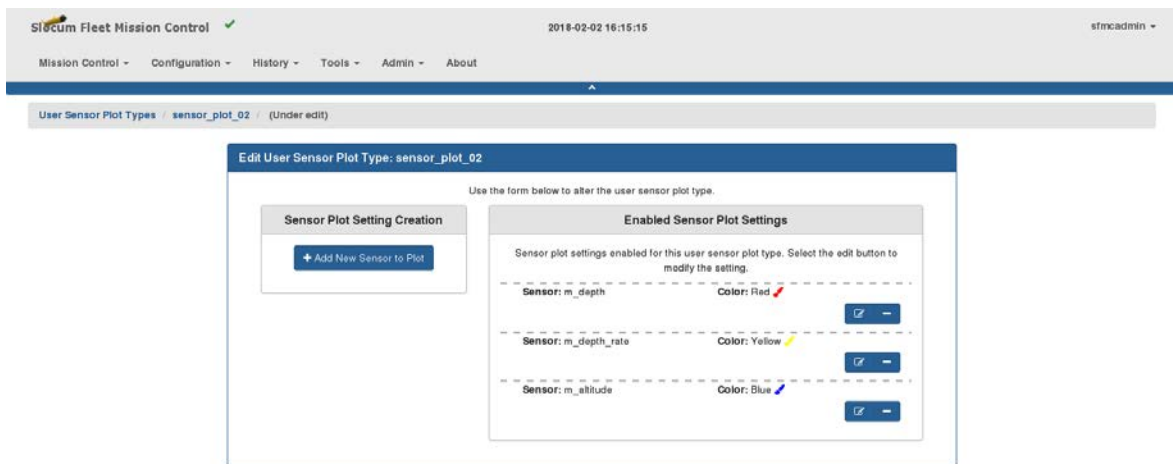


Figure 13-33 Edit User Sensor Plot Type <Plot Name> Panel—User Defined Plot to be Edited

4. In the Enabled Sensor Plot Settings area of the Edit User Sensor Plot Type <Plot Name> panel, click the **Modify the parameters for this sensor plot setting** button for each sensor plot setting that you want to edit and make the changes. To remove a sensor plot setting, click the **Remove this sensor plot setting** button for it, and then click **Delete** in the Delete Sensor Plot Setting Form dialog box. To add a sensor plot setting, click the **Add New Sensor to Plot** button in the Sensor Plot Setting Creation area.

13.4.4 Deleting a User Sensor Plot Type

To delete a user sensor plot type:

1. Open the Data Visualizations page for an active deployment.
2. From the *Options* menu choose *Manage User Sensor Plot Types*.

The User Sensor Plot Types panel opens as shown in Figure 13-25 on page 13-23.

3. Do one of the following:
 - Click the **View** button for the user defined plot that you want to delete, and then click **Delete Plot Type** in the Details for User Sensor Plot Type <Plot Name> panel.
 - Click the **Delete** button for the user defined plot that you want to delete.

The Delete User Defined Plot dialog box opens as shown in Figure 13-34.

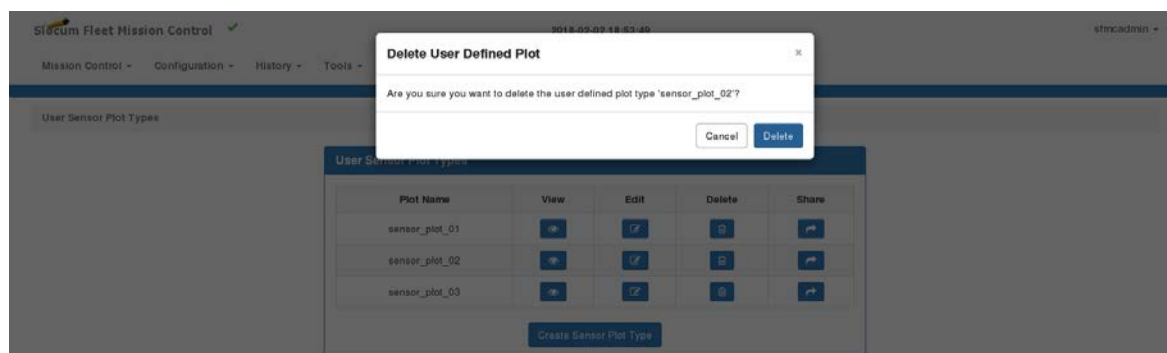


Figure 13-34 Delete User Defined Plot Dialog Box

4. Click **Delete**.

The user defined plot is deleted, and the Delete User Defined Plot dialog box closes.

13.4.5 Sharing a User Sensor Plot Type

To share a user sensor plot type:

1. Open the Data Visualizations page for an active deployment.
2. From the *Options* menu choose *Manage User Sensor Plot Types*.

The User Sensor Plot Types panel opens as shown in Figure 13-25 on page 13-23.

3. Do one of the following:
 - Click the **View** button for the user defined plot that you want to share, and then click **Share Plot Type** in the Details for User Sensor Plot Type <Plot Name> panel.
 - Click the **Share** button for the user defined plot that you want to share.

The Share User Sensor Plot Type <Plot Name> panel opens as shown in Figure 13-35.

The screenshot shows the 'Share User Sensor Plot Type: sensor_plot_02' panel. At the top, there's a header with 'Slocum Fleet Mission Control' and a status indicator. Below the header is a navigation bar with links: Mission Control, Configuration, History, Tools, Admin, and About. The main content area shows the 'Share User Sensor Plot Type: sensor_plot_02' panel. This panel has three main sections: a table for 'Sensor Type Name' and 'Color', a 'Groups With Which to Share User Sensor Plot Type' section with a multi-select dropdown, and a 'Users With Which to Share User Sensor Plot Type' section with a multi-select dropdown. The 'Sensor Type Name' table has three rows: 'm_altitude' with 'Red' color, 'm_depth' with 'Yellow' color, and 'm_depth_rate' with 'Blue' color. The 'Groups' dropdown lists 'default', 'group1', 'group2', 'group3', and 'group4'. The 'Users' dropdown lists 'user1', 'user2', 'user3', and 'user4'. A 'Share' button is located at the bottom right of the panel.

Figure 13-35 Share User Sensor Plot Type <Plot Name> Panel

4. Do one or both of the following:
 - Select the group or groups with which to share the user sensor plot type from the **Groups With Which to Share User Sensor Plot Type** drop-down list. The associated users will be selected automatically. To select more than one group, hold down the Ctrl key while clicking them one at a time.
 - Select the user or users with which to share the user sensor plot type from the **Users With Which to Share User Sensor Plot Type** drop-down list. To select more than one user, hold down the Ctrl key while clicking them one at a time. If all the users in a group are selected, the group will be selected automatically.

5. Click Share.

The user sensor plot type is shared.

SECTION 14: Viewing the Event Timeline

The event timeline enables the viewing of glider events, including those initiated automatically by the glider and manually by the operator. A user account with any role can be used to view the event timeline. For each event the UTC date and time of the event, a short description of the event, the mission segment during which the event occurred, the location of the event if it occurred at the surface, and what user account was used to initiate the event, if applicable, are displayed.

14.1 Viewing the Event Timeline

There is a separate Event Timeline page for an active deployment and for an archived deployment. They are opened separately from the *Options* menu which is available on multiple pages in SFMC.

14.1.1 Viewing the Event Timeline for an Active Deployment

To view the event timeline for an active deployment, log in to a user account as an Administrator or to a user account with any role and do one of the following:

- From the *Mission Control* menu select *Dashboard*, select the *Options* menu for the active deployment, and then choose *View Event Timeline*.
- From the *Mission Control* menu select *Active Deployments*, click the deployment name, and then from the *Options* menu choose *View Event Timeline*.
- From the *Mission Control* menu select *Glider Terminal Access*, select the associated glider, and then from the *Options* menu, choose *View Event Timeline*.

The Event Timeline for Active Deployments page opens as shown in Figure 14-1.

14.1.2 Viewing the Event Timeline for an Archived Deployment

To view the event timeline for an archived deployment, log in to a user account as an Administrator or to a user account with any role and choose *Archived Deployments* from the *History* menu, click the deployment name, and then from the *Options* menu choose *View Event Timeline*. The Event Timeline for Archived Deployments page opens as shown in Figure 14-2.

Slocum Fleet Mission Control		2018-03-22 15:58:51		stfmcadmin	
Mission Control	Configuration	History	Tools	Admin	About
Active Deployments / hostglider4-2018-03-20T15:38 / Options / Event Timeline					
<		hostglider4-2018-03-20T15:38		>	
Date Time	Event	Mission	Location	User	
2018-03-20 23:56:24	Glider disconnected from Dock Server on port net/0	hostglider4-2018-078-0-5	N/A	N/A	
2018-03-20 23:54:04	Glider started mission segment: 0049.0005	hostglider4-2018-078-0-5	N/A	N/A	
2018-03-20 23:53:11	ZModem file download complete. Filename: 00490003.sbd	hostglider4-2018-078-0-4	N/A	N/A	
2018-03-20 23:53:11	ZModem file download complete. Filename: 00490004.sbd	hostglider4-2018-078-0-4	N/A	N/A	
2018-03-20 23:53:03	Glider surfacing, reason: Hit a waypoint	hostglider4-2018-078-0-4	41°18.054'N 70°38.493'W	N/A	
2018-03-20 23:53:03	Glider connected to Dock Server on port net/0	hostglider4-2018-078-0-3	N/A	N/A	
2018-03-20 23:53:03	Glider started mission segment: 0049.0004	hostglider4-2018-078-0-4	N/A	N/A	
2018-03-20 21:38:30	Glider disconnected from Dock Server on port net/0	hostglider4-2018-078-0-3	N/A	N/A	
2018-03-20 21:36:09	Glider started mission segment: 0049.0003	hostglider4-2018-078-0-3	N/A	N/A	
2018-03-20 21:35:17	ZModem file download complete. Filename: 00490001.sbd	hostglider4-2018-078-0-2	N/A	N/A	
2018-03-20 21:35:17	ZModem file download complete. Filename: 00490002.sbd	hostglider4-2018-078-0-2	N/A	N/A	
2018-03-20 21:35:08	Glider surfacing, reason: Hit a waypoint	hostglider4-2018-078-0-2	41°17.616'N 70°40.291'W	N/A	
2018-03-20 21:35:08	Glider connected to Dock Server on port net/0	hostglider4-2018-078-0-1	N/A	N/A	
2018-03-20 21:35:08	Glider started mission segment: 0049.0002	hostglider4-2018-078-0-2	N/A	N/A	
2018-03-20 19:22:35	Glider disconnected from Dock Server on port net/0	hostglider4-2018-078-0-1	N/A	N/A	
2018-03-20 19:20:14	Glider started mission segment: 0049.0001	hostglider4-2018-078-0-1	N/A	N/A	
2018-03-20 19:19:22	ZModem file download complete. Filename: 00480014.sbd	hostglider4-2018-078-0-0	N/A	N/A	
2018-03-20 19:19:22	ZModem file download complete. Filename: 00480013.sbd	hostglider4-2018-078-0-0	N/A	N/A	

Figure 14-1 Event Timeline for Active Deployments Page

Slocum Fleet Mission Control		2018-03-22 16:01:55		stfmcadmin	
Mission Control	Configuration	History	Tools	Admin	About
Archived Deployments / hostglider1-2018-02-20T15:59 / Options / Event Timeline					
<		hostglider1-2018-02-20T15:59		>	
Date Time	Event	Mission	Location	User	
2018-02-28 14:33:32	Glider deployment archive completed	N/A	N/A	N/A	
2018-02-28 14:33:21	Glider deployment archive started	N/A	N/A	N/A	
2018-02-28 14:33:21	Mission plan unassigned from glider deployment. Mission plan name: Cape_Cod_Bay_Mission_01	hostglider1-2018-055-0-185	N/A	N/A	
2018-02-27 00:10:00	Glider started mission segment: 0079.0185	hostglider1-2018-055-0-185	N/A	N/A	
2018-02-26 23:58:24	Glider started mission segment: 0079.0184	hostglider1-2018-055-0-184	N/A	N/A	
2018-02-26 23:44:16	Glider started mission segment: 0079.0183	hostglider1-2018-055-0-183	N/A	N/A	
2018-02-26 23:34:20	Glider started mission segment: 0079.0182	hostglider1-2018-055-0-182	N/A	N/A	
2018-02-26 23:20:27	Glider started mission segment: 0079.0181	hostglider1-2018-055-0-181	N/A	N/A	
2018-02-26 23:08:47	Glider started mission segment: 0079.0180	hostglider1-2018-055-0-180	N/A	N/A	
2018-02-26 22:54:47	Glider started mission segment: 0079.0179	hostglider1-2018-055-0-179	N/A	N/A	
2018-02-26 22:44:51	Glider started mission segment: 0079.0178	hostglider1-2018-055-0-178	N/A	N/A	
2018-02-26 22:30:55	Glider started mission segment: 0079.0177	hostglider1-2018-055-0-177	N/A	N/A	
2018-02-26 22:19:11	Glider started mission segment: 0079.0176	hostglider1-2018-055-0-176	N/A	N/A	
2018-02-26 22:05:11	Glider started mission segment: 0079.0175	hostglider1-2018-055-0-175	N/A	N/A	
2018-02-26 21:53:35	Glider started mission segment: 0079.0174	hostglider1-2018-055-0-174	N/A	N/A	
2018-02-26 21:39:31	Glider started mission segment: 0079.0173	hostglider1-2018-055-0-173	N/A	N/A	
2018-02-26 21:27:51	Glider started mission segment: 0079.0172	hostglider1-2018-055-0-172	N/A	N/A	
2018-02-26 21:13:50	Glider started mission segment: 0079.0171	hostglider1-2018-055-0-171	N/A	N/A	
2018-02-26 21:02:10	Glider started mission segment: 0079.0170	hostglider1-2018-055-0-170	N/A	N/A	

Figure 14-2 Event Timeline for Archived Deployments Page

14.2 Event Timeline for Active and Archived Deployment Pages

Both the Event Timeline for Active Deployments page and the Event Timeline for Archived Deployments page include the following information:

Date Time. The UTC date and time the event occurred.

Event. A short description of the event.

Mission. The mission segment long name which is composed of the glider name followed by the year of the mission start, the day of the year of the mission start, the n-1th mission of the day and the n-1th segment of the mission.

Location. The latitude and longitude in degrees and decimal minutes of the location of the event if it occurred at the surface. "N/A" indicates that the event was not a surface event.

User. The user account that was used to initiate the event if it was initiated by a user. "N/A" indicates that the event was initiated automatically.

Also included on the top of both the Event Timeline for Active Deployments page and the Event Timeline for Archived Deployments page is a drop-down list for selecting a different active or archived deployment.

SECTION 15: Administrative Functions

Administrative functions include viewing reports and managing administrator messages. Reports are composed of group membership, logged-in users, glider event subscriptions, user's last login, and user access. A Group Membership report lists the users, gliders, scripts, mission plans, and mission plan parts and the number of each for specific groups; a Logged-In Users report lists the logged-in users and the number of each; a Glider Event Subscriptions report lists the glider event subscriptions and the associated e-mail addresses for specific gliders or the glider event subscriptions and the associated gliders and e-mail addresses for specific users; a User's Last Login Report lists the date and time of the last login for all current and past users; and a User Access Report lists the gliders, scripts, mission plans, and mission plan parts and the number of each for each group associated with a specific current or past user. The messages can be viewed at any time with any user account and are displayed automatically when starting SFMC. Viewing reports and managing administrator messages can be performed only when logged in to a user account as an Administrator.

15.1 Viewing Reports

All the reports are accessed from the Admin Reports page which is shown in Figure 15-1.

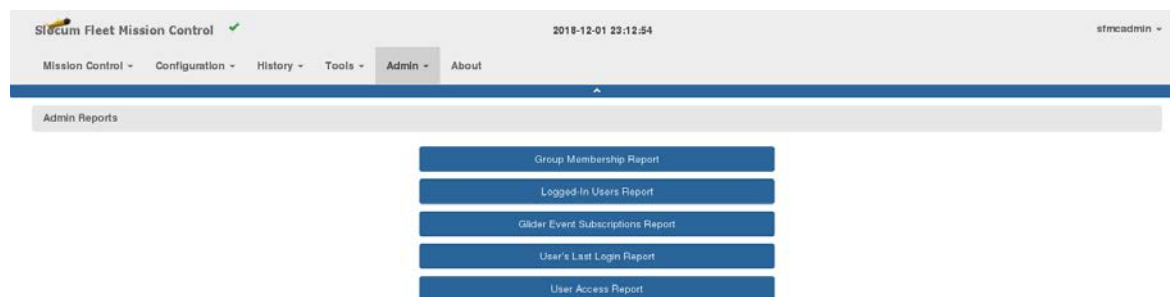


Figure 15-1 Admin Reports Page

15.1.1 Viewing the Group Membership Report

To view the Group Membership report:

1. From the *Admin* menu, choose *Reports*.

The Admin Reports page opens as shown in Figure 15-1 above.

2. Click **Group Membership Report**.

The Group Membership Report page opens as shown in Figure 15-2.

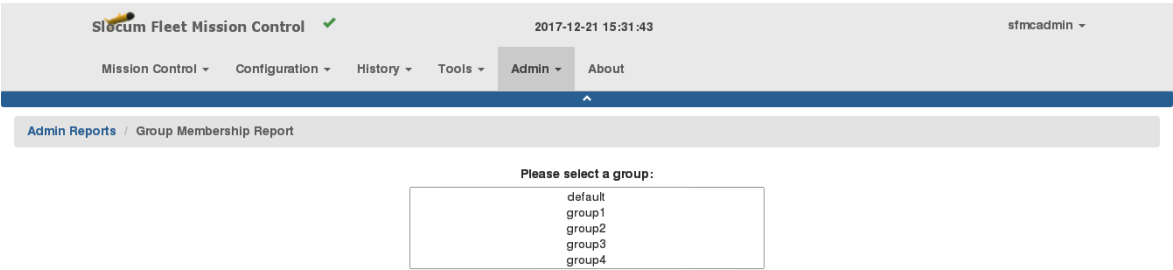


Figure 15-2 Group Membership Report Page—Please Select a Group Drop-Down List

3. From the **Please select a group** drop-down list, select the group for which you want to view the Group Membership report.

The Group Membership Report page opens as shown in Figure 15-4, where the list of associated users and gliders and the number of each for the group are displayed along with the associated scripts and mission plan parts and the number of each.

15.1.2 Viewing the Logged-In Users Report

To view the Logged-In Users report:

1. From the *Admin* menu, choose *Reports*.

The Admin Reports page opens as shown in Figure 15-1 on page 15-1.

2. Click **Logged-In Users Report**.

The Logged-In Users Report page opens as shown in Figure 15-3, where the logged in users are displayed along with the number of them.

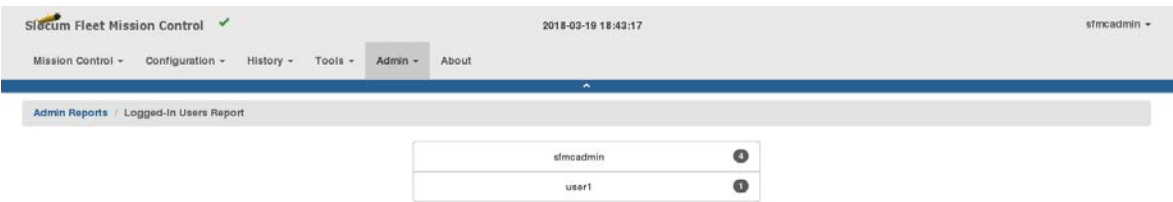


Figure 15-3 Logged-In Users Report Page

15.1.3 Viewing the Glider Event Subscriptions Report

To view the Glider Event Subscriptions report:

1. From the *Admin* menu, choose *Reports*.

The Admin Reports page opens as shown in Figure 15-1 on page 15-1.

Slalom Fleet Mission Control 2019-12-01 22:39:36 sfmadmin

Mission Control - Configuration - History - Tools - Admin - About

Admin Reports - Group Membership Report

Please select a group:

group0
group1
group2
group3
group4

Users 1

sfmadmin
user1
user2
user3
user4

Gliders 1

houghglider3
houghglider4
unknown

Scripts 1

--

Mission Plans 1

Muskeget_Channel_Mission_01
Nantuxet_Sound_Mission_01
RI_Sound_Mission_01

Waypoint Plans 1

Muskeget_Channel_Mission_01_Waypoint_01
Nantuxet_Sound_Mission_01_Waypoint_01
RI_Sound_Mission_01_Waypoint_01

Surface Plans 1

Cloned SFMC Stack
Muskeget_Channel_Mission_01_Surface_01
Nantuxet_Sound_Mission_01_Surface_01
RI_Sound_Mission_01_Surface_01

Yo Plans 1

Muskeget_Channel_Mission_01_Yo_01
Nantuxet_Sound_Mission_01_Yo_01
RI_Sound_Mission_01_Yo_01

Surface Plans 1

Muskeget_Channel_Mission_01_Sampling_01
Nantuxet_Sound_Mission_01_Sampling_01
RI_Sound_Mission_01_Sampling_01

Abort Plans 1

Muskeget_Channel_Mission_01_Abort_01
Nantuxet_Sound_Mission_01_Abort_01
RI_Sound_Mission_01_Abort_01

Mission Sensor Plans 1

Muskeget_Channel_Mission_01_Sensor_01
Nantuxet_Sound_Mission_01_Mission_Sensor_01
RI_Sound_Mission_01_Mission_Sensor_01

Data Transmission Plans 1

Muskeget_Channel_Mission_01_Data_Transmission_01
Nantuxet_Sound_Mission_01_Data_Transmission_01
RI_Sound_Mission_01_Data_Transmission_01

Figure 15-4 Group Membership Report Page—Users, Gliders, Scripts, Mission Plans, and Mission Plan Parts Panels

2. Click **Glider Event Subscriptions Report**.

The Glider Event Subscriptions Report page opens as shown in Figure 15-5.



Figure 15-5 Glider Event Subscriptions Report Page

3. Select **Select a glider** to view the event subscriptions for a specific glider or **Select a user** to view the subscriptions for a specific user.

Selecting **Select a glider** opens the **Please select a glider** drop-down list from which to select the glider as shown in Figure 15-6. Selecting **Select a user** opens the **Please select a user** drop-down list from which to select the user as shown in Figure 15-7.

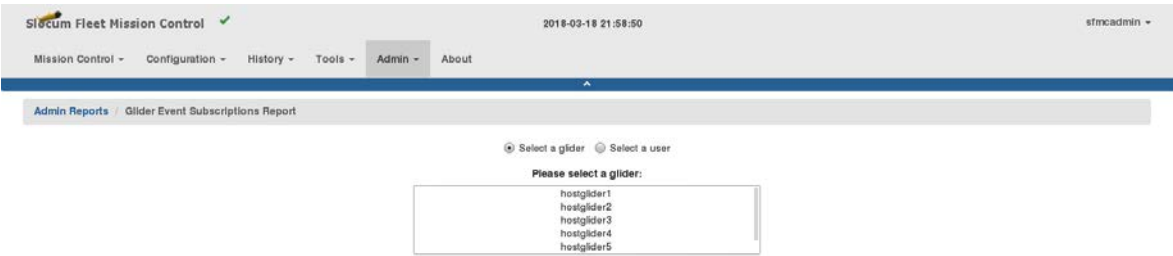


Figure 15-6 Glider Event Subscriptions Report Page—Please Select a Glider Drop-Down List

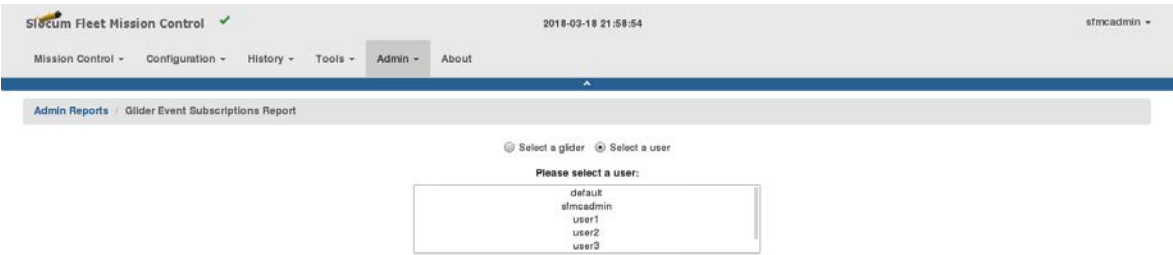


Figure 15-7 Glider Event Subscriptions Report Page—Please Select a User Drop-Down List

4. Select the glider or the user from the drop-down list.

For a selected glider the glider event subscriptions are displayed on the Subscriptions for Glider <Glider Name> panel as shown in Figure 15-8, or for a selected user, the Subscriptions for User <User Name> panel as shown in Figure 15-9.

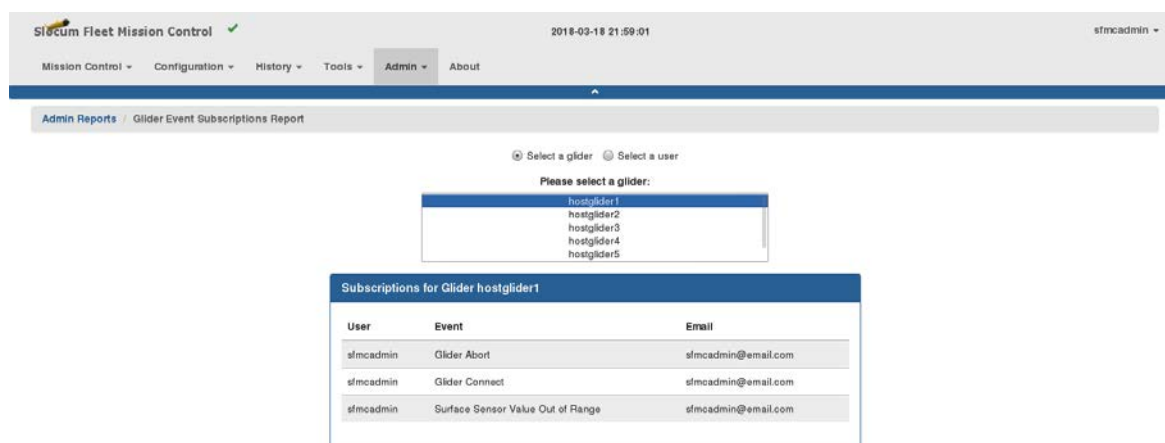


Figure 15-8 Glider Event Subscriptions Report Page—Subscriptions for Glider <Glider Name> Panel

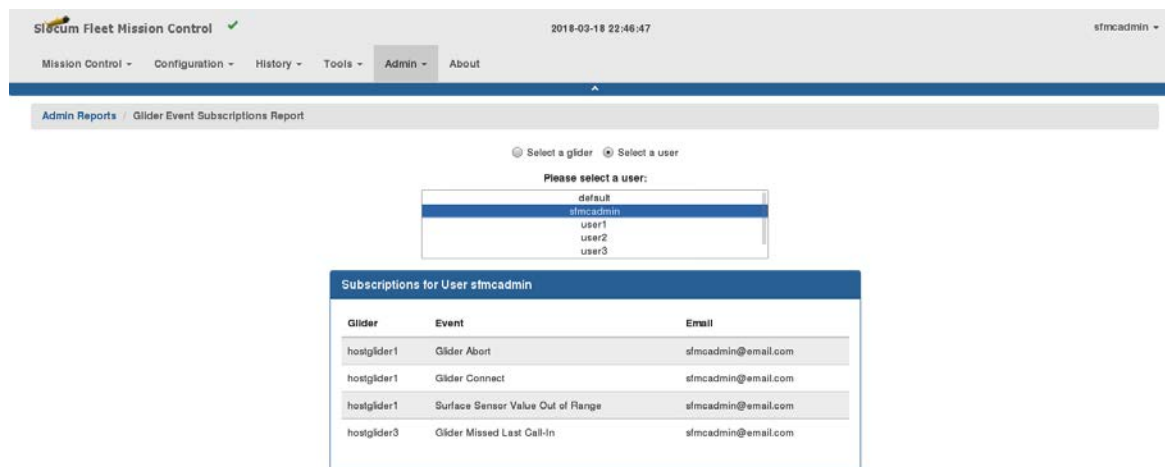


Figure 15-9 Glider Event Subscriptions Report Page— Subscriptions for User <User Name> Panel

15.1.4 Viewing the User's Last Login Report

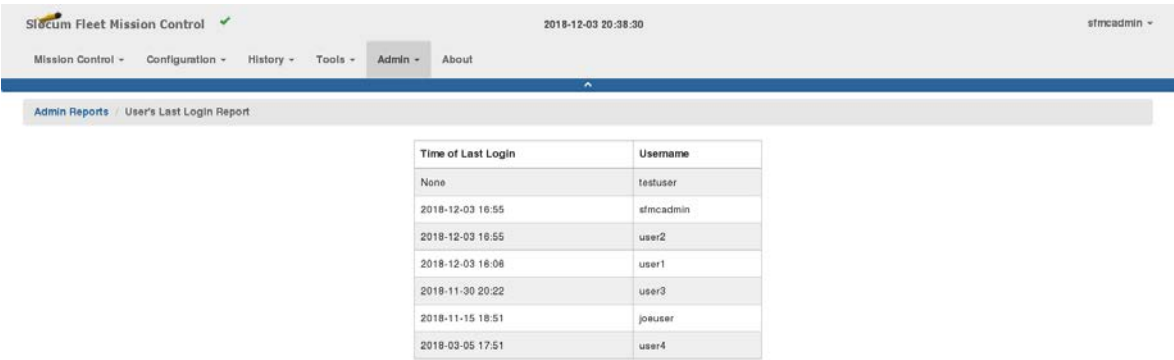
To view the User's Last Login report:

1. From the *Admin* menu, choose *Reports*.

The Admin Reports page opens as shown in Figure 15-1 on page 15-1.

2. Click **User's Last Login Report**.

The User's Last Login Report page opens as shown in Figure 15-10 where the date and time of the last login is displayed for both current and past users.



Time of Last Login	Username
None	testuser
2018-12-03 16:55	sfmcadmin
2018-12-03 16:55	user2
2018-12-03 16:06	user1
2018-11-30 20:22	user3
2018-11-15 18:51	jouuser
2018-03-05 17:51	user4

Figure 15-10 Users Last Login Report Page

15.1.5 Viewing the User Access Report

To view the User Access report:

- 1. From the *Admin* menu, choose *Reports*.

The Admin Reports page opens as shown in Figure 15-1 on page 15-1.

- 2. Click **User Access Report**.

The User Access Report page opens as shown in Figure 15-11.



Please select a user:

- sfmcadmin
- user1
- user2
- user3
- user4

Figure 15-11 User Access Report Page—Please Select a User Drop-Down List

- 3. From the **Please select a user** drop-down list, select the user for which you want to view the User Access report.

The User Access Report page opens as shown in Figure 15-12, where the list of associated gliders and the number of each for each group are displayed, and where only the default group is included, along with the associated scripts and mission plan parts and the number of each.

Stetium Fleet Mission Control 2018-12-03 20:32:11 afmcadmin

Mission Control - Configuration - History - Tools - Admin - About

Admin Reports - User Access Report

Please select a user:

- USER1
- USER2
- USER3
- USER4

Group: default

Gliders 1

hostglider3
hostglider4

Scripts 4

Mission Plans 1

Muskeget_Channel_Mission_01
Nantucket_Sound_Mission_01
RI_Sound_Mission_01

Waypoint Plans 1

Muskeget_Channel_Mission_01_Waypoint_01
Nantucket_Sound_Mission_01_Waypoint_01
RI_Sound_Mission_01_Waypoint_01

Surface Plans 1

Closed GPMC Stack
Muskeget_Channel_Mission_01_Surface_01
Nantucket_Sound_Mission_01_Surface_01
RI_Sound_Mission_01_Surface_01

Yo Plans 1

Muskeget_Channel_Mission_01_Yo_01
Nantucket_Sound_Mission_01_Yo_01
RI_Sound_Mission_01_Yo_01

Surface Plans 1

Muskeget_Channel_Mission_01_Sampling_01
Nantucket_Sound_Mission_01_Sampling_01
RI_Sound_Mission_01_Sampling_01

Abort Plans 1

Muskeget_Channel_Mission_01_Abort_01
Nantucket_Sound_Mission_01_Abort_01
RI_Sound_Mission_01_Abort_01

Mission Sensor Plans 1

Muskeget_Channel_Mission_01_Sensor_01
Nantucket_Sound_Mission_01_Mission_Sensor_01
RI_Sound_Mission_01_Mission_Sensor_01

Data Transmission Plans 1

Muskeget_Channel_Mission_01_Data_Transmission_01
Nantucket_Sound_Mission_01_Data_Transmission_01
RI_Sound_Mission_01_Data_Transmission_01

Figure 15-12 User Access Report—Gliders, Scripts, Mission Plans, and Mission Plan Parts Panels

15.2 Managing Administrator Messages

A user account with the administrator role can be used to post messages for all users to view. These messages can also be created, edited and deleted in SFMC.

15.2.1 Viewing Administrator Messages

When administrator messages are available for viewing, an icon appears above the Menu bar on the Fleet Mission Control screen as shown in Figure 15-13. Clicking this icon opens the System Status page where the messages are displayed at the top as shown in Figure 15-14. Messages that are marked public are displayed automatically above the Login Form panel when starting SFMC as shown in Figure 15-15.



Figure 15-13 Fleet Mission Control Screen—Administrator Messages Icon

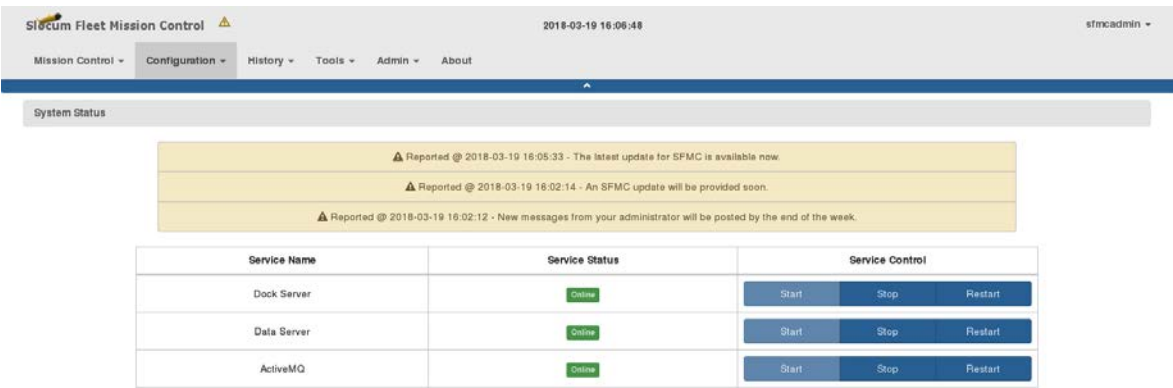


Figure 15-14 System Status Page, Top—Displayed Administrator Messages

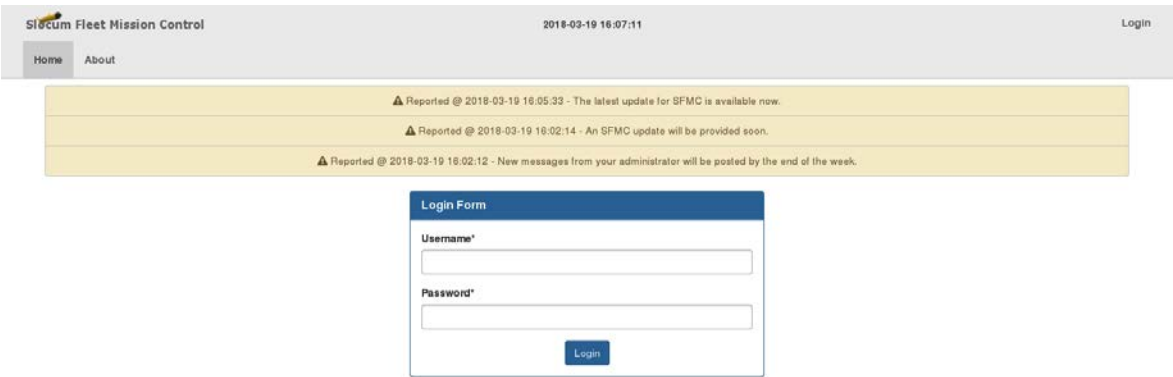


Figure 15-15 Administrator Messages Displayed above Login Form Panel

15.2.2 Creating an Administrator Message

To create an administrator message:

1. From the *Admin* menu, choose *Admin Messages Management*.

The Admin Message Management page opens as shown in Figure 15-16.

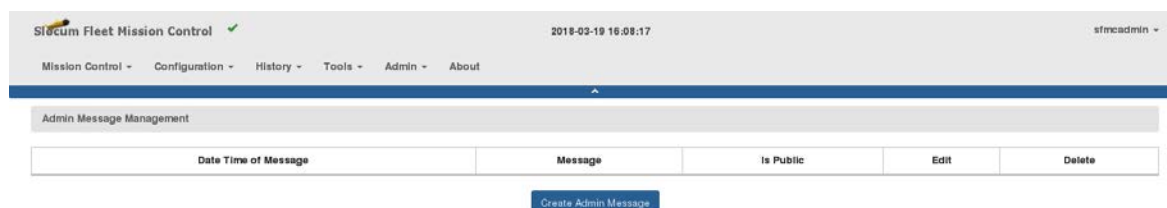


Figure 15-16 Admin Message Management Page

2. Click **Create Admin Message**.

The Create Admin Message Form dialog box opens as shown in Figure 15-17.



Figure 15-17 Create Admin Message Form Dialog Box

3. Enter the message, and to display the message above the Login Form panel when starting SFMC, without logging in to SFMC, select the **Public Message** check box. With this check box cleared, a user must be logged in to view the message as described in “Viewing Administrator Messages” on page 15-8.
4. Click **Save**.

The message is saved.

15.2.3 Editing an Administrator Message

To edit an administrator message:

1. From the *Admin* menu, choose *Admin Messages Management*.

The Admin Message Management page opens with all of the current messages listed as shown in Figure 15-18.

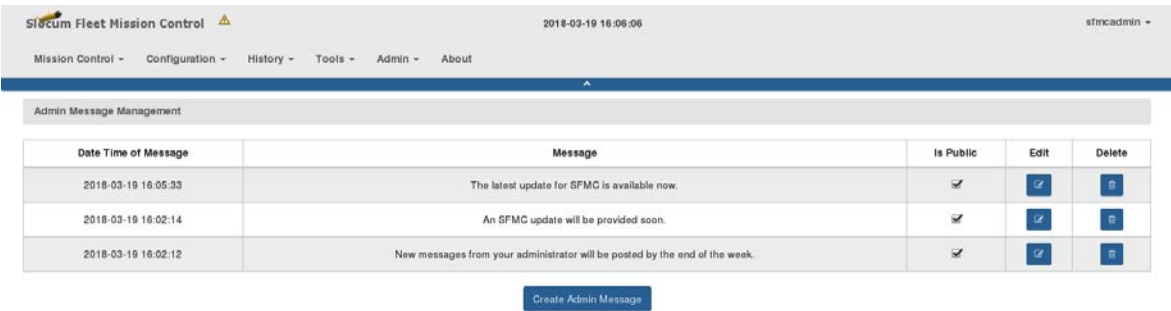


Figure 15-18 Admin Message Management Page—Current Messages Listed

2. Click the **Edit** button for the message that you want to edit.
The Modify Admin Message Form dialog box opens as shown in Figure 15-19.

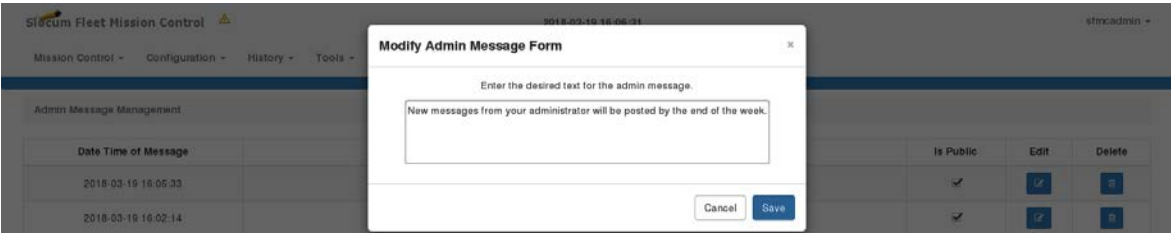


Figure 15-19 Modify Admin Message Form Dialog Box

3. Edit the message as required.
4. Click **Save**.

The message is saved.

15.2.4 Deleting an Administrator Message

To delete an administrator messages:

1. From the *Admin* menu, choose *Admin Messages Management*.
The Admin Message Management page opens with all of the current messages listed as shown in Figure 15-18 above.
2. Click the **Delete** button for the message that you want to delete.
The Delete Admin Message dialog box opens as shown in Figure 15-20.

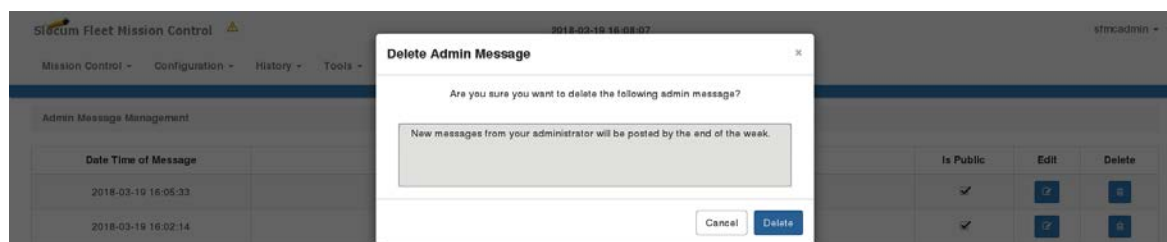


Figure 15-20 Delete Admin Message Dialog Box

3. Click Delete.

The message is deleted.

SECTION 16: Tools

SFMC tools are available on the *Tools* menu. Currently there is one tool available, the Sensor Data File tool.

16.1 Sensor Data File Tool

The Sensor Data File tool enables the saving of sensor data that are not glider or deployment specific in operator created folders. Up to 100 MB of space is provided for each group for this purpose. When saved, the data can be parsed and then viewed as ASCII files or as plots on a graph, up to five sensors on a single plot. The Sensor Data File tool is available when logged in to a user account as an Administrator or to a user account with any role.

16.1.1 Creating a Sensor Data Folder

To create a sensor data folder:

1. From the *Tools* menu, choose *Sensor Data File Tool*.

The SDF Tool page opens as shown in Figure 16-1 where only those groups associated with the user account will be displayed. If the user account is associated only with the default group, the Existing Folders panel opens instead as shown in Figure 16-2.

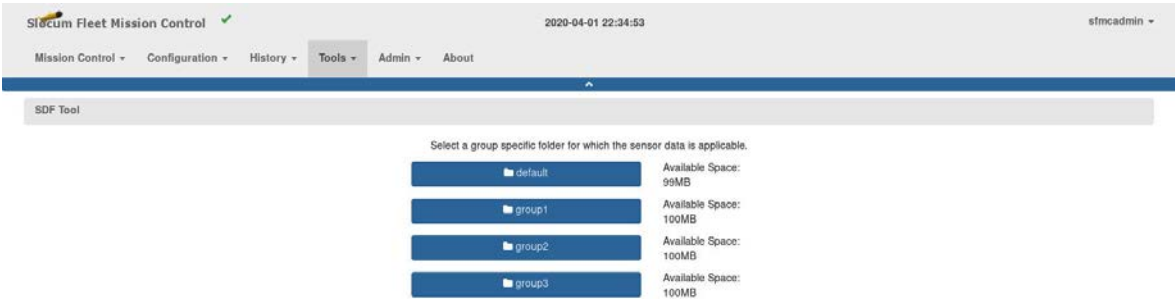


Figure 16-1 SDF Tool Page

2. Select the group for which the sensor data applies.

The Existing Folders panel opens as shown in Figure 16-2.

3. Click **Create New Folder**.

The Create New SDF Folder Form dialog box opens as shown in Figure 16-3.

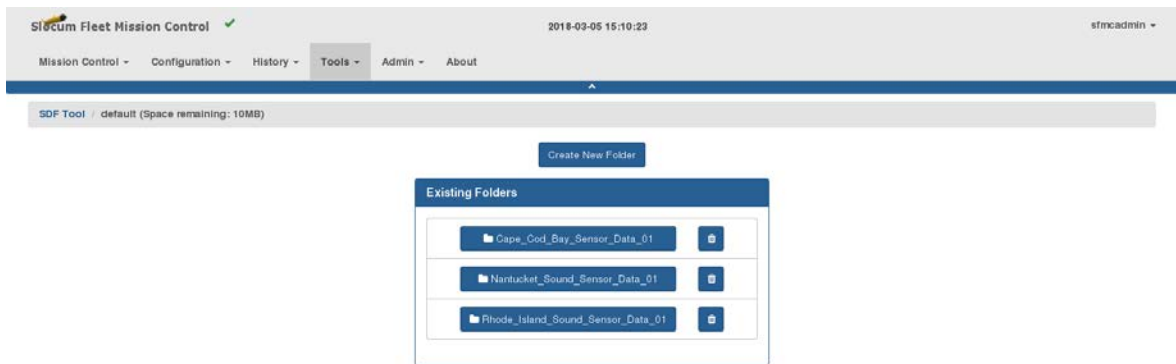


Figure 16-2 Existing Folders Panel



Figure 16-3 Create New SDF Folder Form Dialog Box

4. Enter a name for the folder in the **Folder Name** text box as shown in Figure 16-4, and then click **Submit**.

The folder is added as shown in Figure 16-5.



Figure 16-4 Create New SDF Folder Form Dialog Box—Folder Name Entered

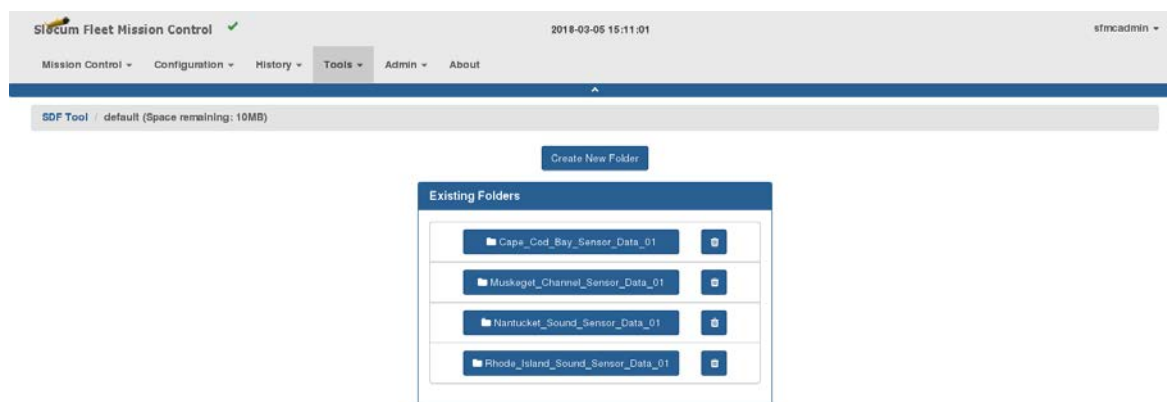


Figure 16-5 Existing Folders Panel—Folder Added

16.1.2 Adding Files to a Sensor Data Folder

To add files to a sensor data folder:

1. From the *Tools* menu, choose *Sensor Data File Tool*.

The SDF Tool page opens as shown in Figure 16-1 on page 16-1 where only those groups associated with the user account will be displayed. If the user account is associated only with the default group, the Existing Folders panel opens instead as shown in Figure 16-2 on page 16-2.

2. Select the group for which the sensor data applies.

The Existing Folders panel opens as shown in Figure 16-2 on page 16-2.

3. Click the folder that you want to add files to.

The Existing Sensor Data Files panel opens as shown in Figure 16-6.



Figure 16-6 SDF Tool Page—Existing Sensor Data Files Panel

4. Drag and drop the files that you want to add to the folder into the **Sensor Data File and Cache File Drop Zone**. Files that can be dragged and dropped are those with extensions .sbd, .tbd, .mbd, .nbd, .dbd, and .ebd, plus cache files, files with extension .cac.

The files appear on the Existing Sensor Data Files panel as shown in Figure 16-7.

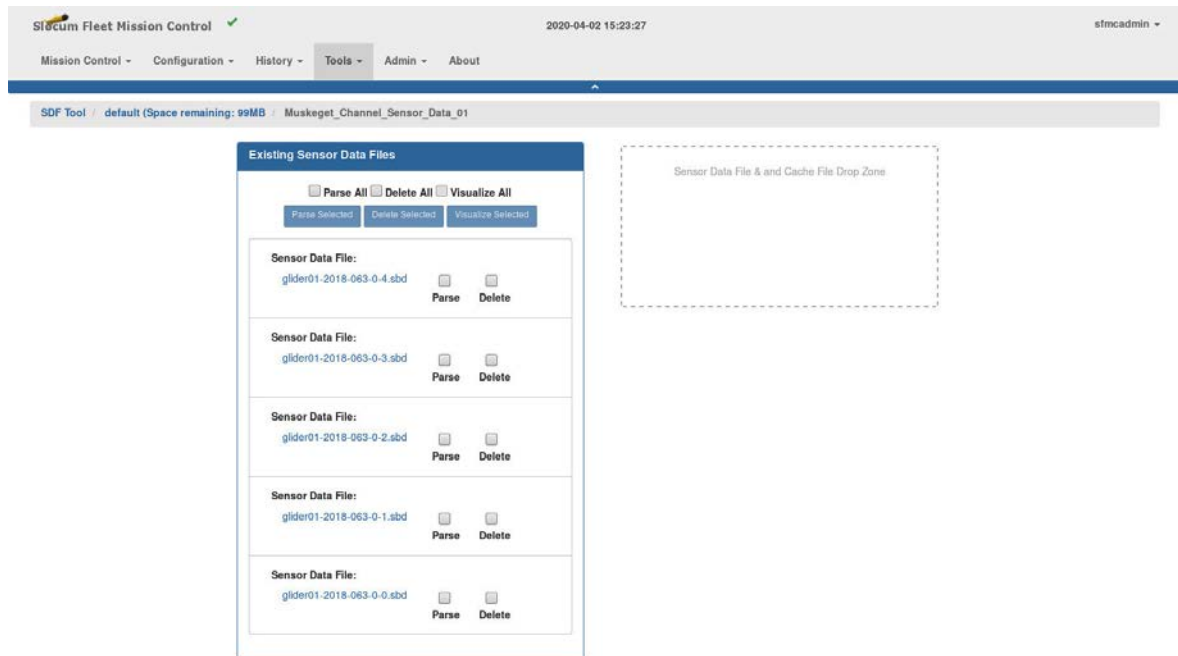


Figure 16-7 Existing Sensor Data Files Panel—Files Added

16.1.3 Parsing Sensor Data File Data

Before you can view the data in a sensor data file, either as ASCII characters or as plots on a graph, the data must first be parsed.

To parse sensor data file data:

1. From the *Tools* menu, choose *Sensor Data File Tool*.

The SDF Tool page opens as shown in Figure 16-1 on page 16-1 where only those groups associated with the user account will be displayed. If the user account is associated only with the default group, the Existing Folders panel opens instead as shown in Figure 16-2 on page 16-2.

2. Select the group for which the sensor data applies.

The Existing Folders panel opens as shown in Figure 16-2 on page 16-2.

3. Click the folder containing the data that you want to parse.

The Existing Sensor Data Files panel opens as shown in Figure 16-7 above.

4. Select the **Parse** check box for each data file that you want to parse or select the **Parse All** check box to parse all the data files, and then click **Parse Selected**.

The sensor data are parsed, and for each parsed sensor data file, the data becomes available for viewing as an ASCII file as shown in Figure 16-8. In addition, the **Visualize** check box appears which enables viewing the data as plots on a graph.



NOTE The sensor data file requires a cache file to parse the data. If the cache file is missing, drag and drop it into the **Sensor Data File and Cache File Drop Zone**.

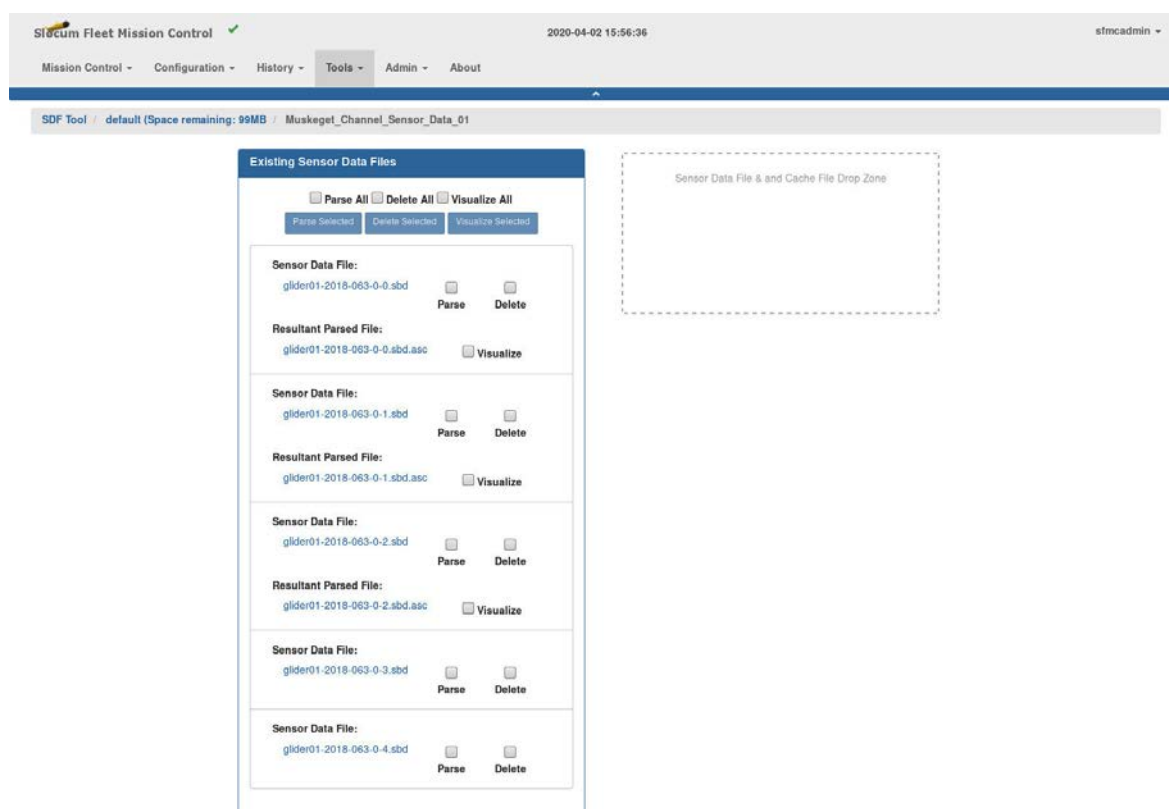


Figure 16-8 Existing Sensor Data Files Panel—Selected Files Parsed

16.1.4 Viewing Sensor File Data as ASCII Files

To view sensor file data as ASCII files:

1. Refer to “Parsing Sensor Data File Data” on page 16-4 and parse each sensor data file that you want to view as an ASCII file.
2. One at a time click the parsed files to save them to the Downloads folder of the Web browser as ASCII files which can be opened and viewed in any text editor.

16.1.5 Viewing Sensor File Data as Plots on a Graph

To view sensor file data as plots on a graph:

1. Refer to “Parsing Sensor Data File Data” on page 16-4 and parse the sensor file data that you want to view as plots on a graph.
2. Select the **Visualize** check box for each data file that you want to view or select the **Visualize All** check box to visualize all the data files, and then click **Visualize Selected**.

The Applicable Files panel opens as shown in Figure 16-9 which lists the selected data files.

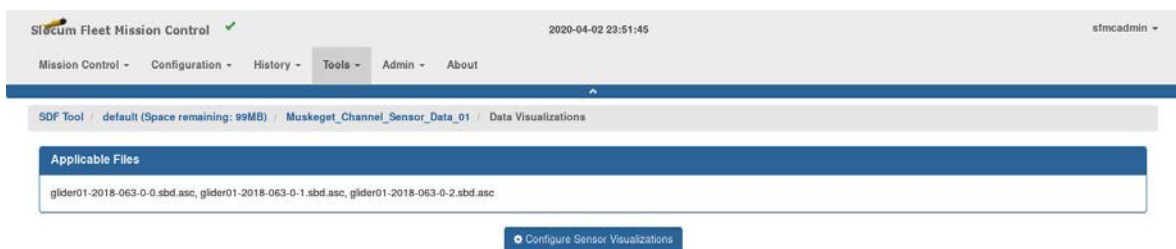


Figure 16-9 Applicable Files Panel

3. Click **Configure Sensor Visualizations**.

The Sensor Selections Form dialog box opens as shown in Figure 16-10.

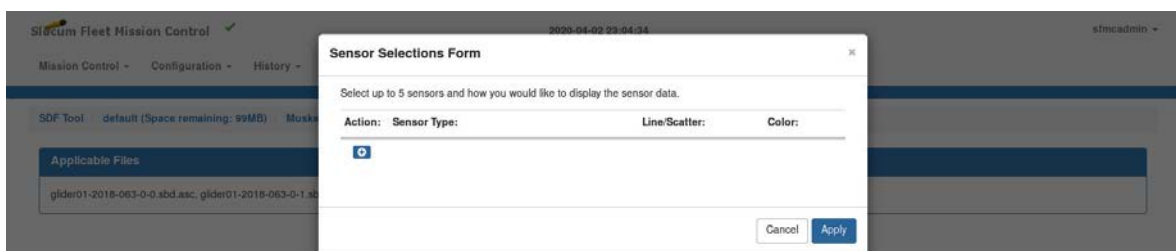


Figure 16-10 Sensor Selections Form Dialog Box

4. Click the **Action** button.

The **Sensor Type**, **Line/Scatter** and **Color** drop-down lists open as shown in Figure 16-11.

5. Select a sensor from the **Sensor Type** drop-down list.
6. Select the plot type from the **Line/Scatter** drop-down list.
7. Select the color from the **Color** drop-down list.

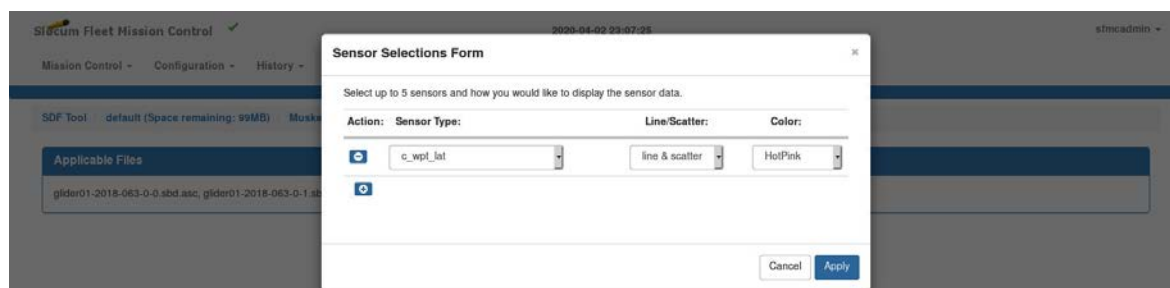


Figure 16-11 Sensor Selections Form Dialog Box—Drop-Down Lists

8. If desired, repeat Steps 5 through 8 to add another sensor. Up to five sensors can be selected. Three are shown selected in Figure 16-12. To delete a sensor, click the **Action** button for it.

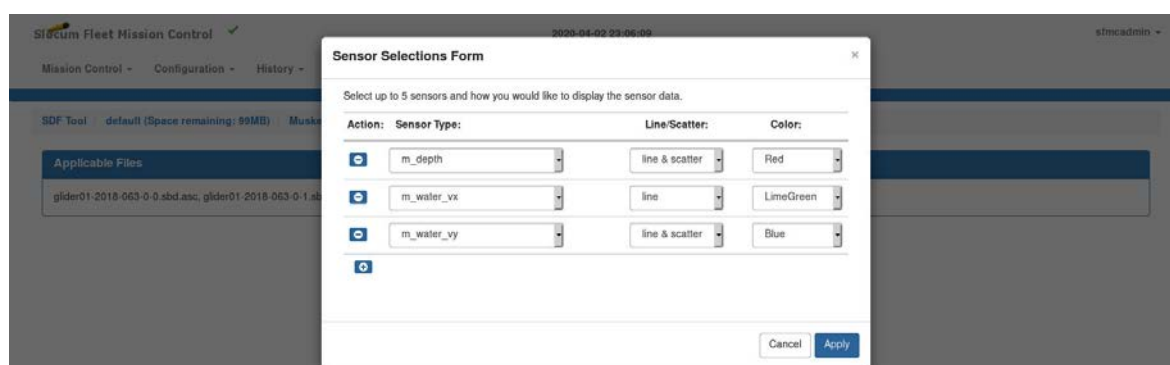


Figure 16-12 Sensor Selections Form Dialog Box—Sensors, Plot Types and Colors Selected

9. Click **Apply**.

The data visualizations plot is displayed as shown in Figure 16-13.

10. If desired, do one or more of the following:
 - Click a color swatch to hide the plot. Click it again to show the plot. For line/scatter and scatter plot types only, the color swatch displays the symbol that marks each point on the plot. Also, when hovering over a point on the plot, the date and time of the data are displayed along with the source file and the sample value. The color swatches also include a scale legend and the total span of the associated plot.

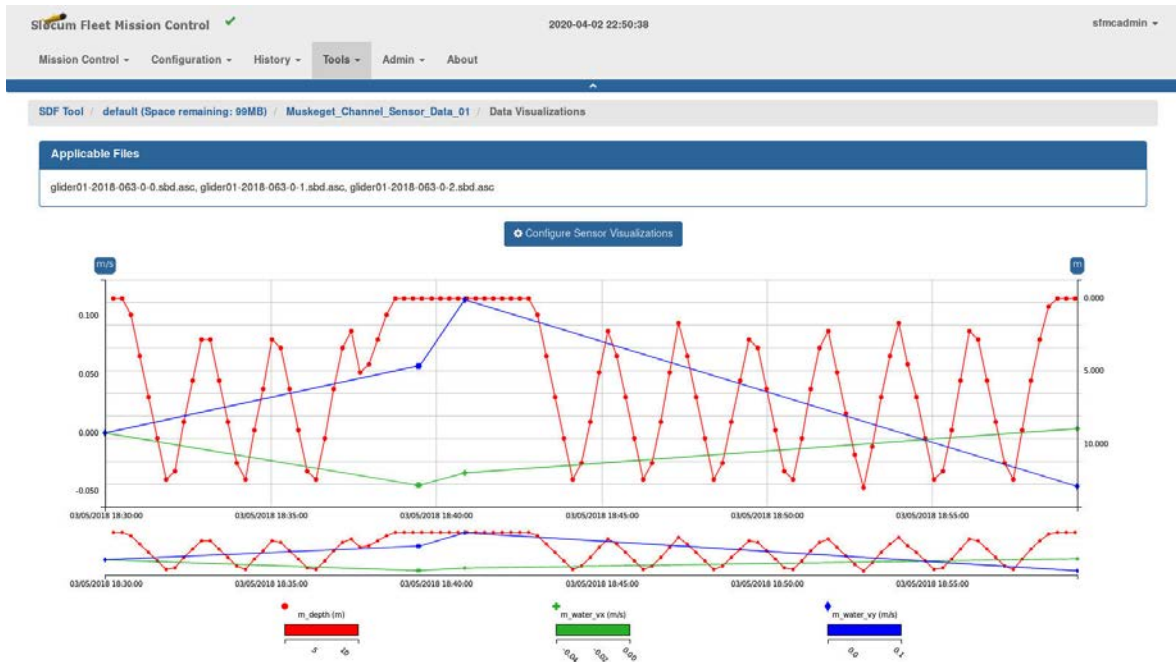


Figure 16-13 Data Visualizations Plot

- Click a vertical axis dimension button to change the minimum and maximum vertical axis values. A button is located at the top of the vertical axis or at the top of each vertical axis if more than one sensor was selected. The Configure Y <dimension> Axis Range Form dialog box opens as shown in Figure 16-14. Enter or select the minimum and maximum vertical axis values in the **Min Value** and **Max Value** spin boxes, or click **Reset to Data Min Max** to set the minimum and maximum scale to that of the data minimum and maximum if the scales were previously changed, and then click **Apply**.



Figure 16-14 Configure Y <dimension> Axis Range Dialog Box

- Click **Configure Sensor Visualizations** to open the Sensor Selections Form dialog box again and change the sensor selections, plot types and colors.

- Click on the plot on the lower graph and drag to the right or to the left to create a zoom box which will contract or expand the horizontal axis of the main graph in accordance with the box width, thus zooming in or out of the plot. The horizontal scale and units will adjust automatically in accordance with the zoom level. Clicking inside the box and dragging it to the left or to the right will pan the horizontal axis of the main graph. To return the graph to its original state, click once inside the lower graph.

16.1.6 Deleting a Sensor Data Folder

To delete a sensor data folder:

1. From the *Tools* menu, choose *Sensor Data File Tool*.

The SDF Tool page opens as shown in Figure 16-1 on page 16-1 where only those groups associated with the user account will be displayed. If the user account is associated only with the default group, the Existing Folders panel opens instead as shown in Figure 16-2 on page 16-2.

2. Select the group for which the sensor data applies.

The Existing Folders panel opens as shown in Figure 16-2 on page 16-2.

3. Click the **Delete** button for the sensor data folder that you want to delete, and then click **Delete** in the Delete SDF Folder Form dialog box.

The folder and all its files are deleted.

16.1.7 Deleting a Sensor Data File

To delete a sensor data file:

1. From the *Tools* menu, choose *Sensor Data File Tool*.

The SDF Tool page opens as shown in Figure 16-1 on page 16-1 where only those groups associated with the user account will be displayed. If the user account is associated only with the default group, the Existing Folders panel opens instead as shown in Figure 16-2 on page 16-2.

2. Select the group for which the sensor data applies.

The Existing Folders panel opens as shown in Figure 16-2 on page 16-2.

3. Click the folder that contains the sensor data file to be deleted.

The Existing Sensor Data Files panel opens as shown in Figure 16-7 on page 16-4.

4. Click the **Delete** check box for each data file that you want to delete or select the **Delete All** check box to delete all the data files, and then click **Delete Selected**.

The sensor data file is deleted.

APPENDIX A: SFMC Dock Server Folders

The folder `/var/opt/gmc` contains one or more group folders, each named `<groupName>` and each representing the group as in the following examples:

```
/var/opt/gmc/default
/var/opt/gmc/group1
/var/opt/gmc/group2
```

In each group folder are the following:

<groupName>.xml	An .xml file. This file should not be modified.
scripts	A folder that can contain Dock Server scripts for the group.
maps	A folder that can contain maps for the group.
gliders	A folder that contains a list of folders for each glider registered in the group.
backups	A folder that contains archives of specific glider folders that have been backed up by users.

The folder `/var/opt/gmc/<groupName>/gliders` contains one or more glider folders, each named `<gliderName>` and each representing the glider as in the following examples:

```
/var/opt/gmc/default/gliders/hostglider1
/var/opt/gmc/group1/gliders/hostglider4
/var/opt/gmc/group2/gliders/hostglider5
```

In each glider folder are the following:

archive	A folder that stores archived files associated with dockzr command executions for the glider.
configuration	A folder that contains mission planner files to be transferred to the glider.
from glider	A folder that contains files transferred from the glider.
logs	A folder that contains Dock Server created log files capturing glider dialog for each communication session with the glider.
to glider	A folder that contains flight files to be sent to the glider.
to science	A folder that contains science files to be sent to the glider.

APPENDIX B: Importing Glider Data

SFMC provides the ability to import glider data from glider dialog files. These files contain the output from and the input to the glider, where the source glider dialog files were obtained from another SFMC Dock Server or from a Teledyne Webb legacy Dock Server. Importing glider data from a legacy Dock Server enables displaying of glider deployments in SFMC. However, there is currently no Web user interface to import glider data. Importing glider data into SFMC requires a local login to an SFMC system as the "localuser."

To import glider data:

1. Place all of the glider data files to be imported into a single folder that is accessible by SFMC.



NOTE *The glider data files to be imported must not already exist in the SFMC /var/opt/gmc folder of the system into which the data files are being imported.*

2. Log in to your computer using your local user account. Do not log in to SFMC.
3. Run the SFMC glider import tool command `/opt/sfmc-toolbox/bin/import-dialogs.sh <folder-path-containing-glider-data-files>`.

The SFMC glider data import tool will import the data from each file and report "SUCCESS" or "FAILURE" for each. When all the files have been imported, the SFMC glider import tool will exit and return to the Linux command prompt.



NOTE *If the glider data being imported were generated within the same timeframe as an existing active deployment for the glider, or for a glider for which there is no current active deployment, data will be generated for the active deployment resulting in many notifications on the Dashboard. Therefore it is recommended not have the Dashboard open when importing glider data.*

APPENDIX C: Viewing Glider Data on a Smartphone or Tablet

SFMC can be viewed on a smartphone or a tablet. Examples of the Dashboard and the Glider Terminal Access page as they are displayed on a smartphone and tablet are shown in Figure C-1 through Figure C-4 in the following pages.

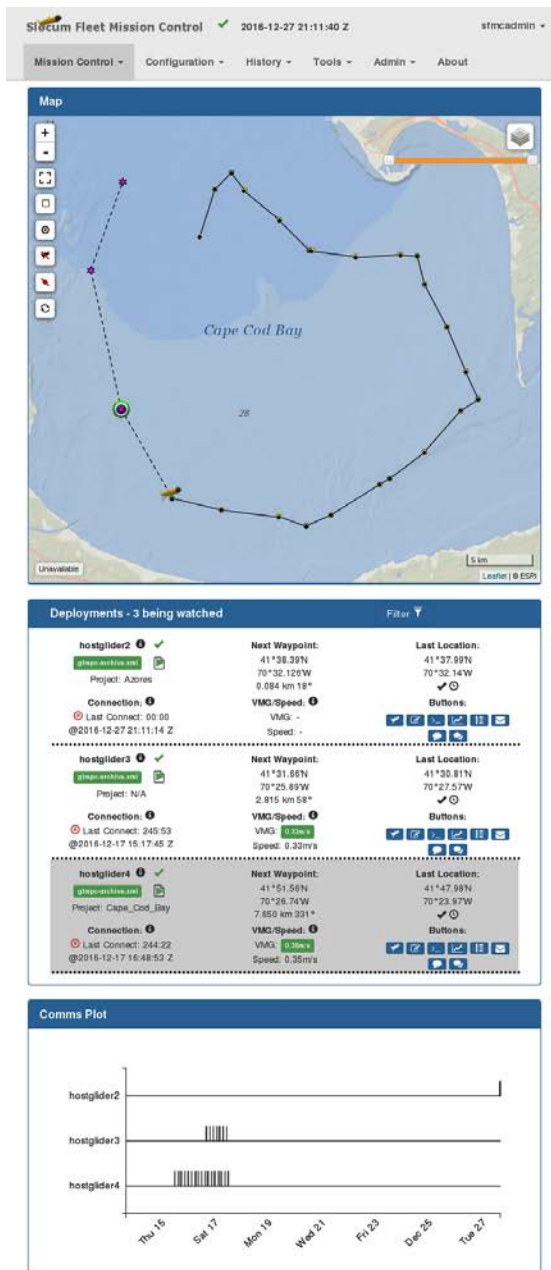


Figure C-1 Dashboard as Displayed on a Tablet

Slocum Fleet Mission Control 2016-12-27 20:20:07 Z sfmcadmin

Mission Control Configuration History Tools Admin About

Glider Terminal Access Terminal for Glider: hostglider3

Script: glider-scripture.txt Script State: scriptMode

Terminal for Glider: hostglider3

hostglider3 network-net0

```
control-P to RESUME the mission, i.e. dive!
MIT Control-C to END the mission, i.e. GliderDOS
MIT Control-E to extend surface time by 5 minutes.
MIT Control-W to get device warning reports.
MIT Control-F to re-read y0, goto_1, surface, sample, drift, _nafiles.
MIT S [-t=rf][irid] [-numens] [-t=rs] [filespec ...] to send log files
MIT I <GliderDOS cmd> to execute <GliderDOS cmd>
MIT Control-T to connect to science computer when comes ready:
... communications NOT ready for consci.
... because: sci_n_science_on = 0

Water Velocity Calculations waiting for final gps fix(ideally -1 sec)
Waypoint: (4131.660,-7025.890) Range: 2804m, Bearing: 58deg, Age: 3:25h
Time until diving in: 248 secs

<dockserver command="docker -archive ">
not found>
[ docker | dockszr [T][v N][nonmardir][-t rf | irid][cd dir][nonmove] [-archive]
[-d <path1> <file1> <file2> ... <fileN>]
[-d <path0> <file21> <file22> ... <file2N>] ... ]
</dockserver>
```

Recent Commands Submitted

Command	Submission Time	Submitter
run stock.ml	2016-12-14 15:16:30	sfmcadmin
dockszr **	2016-12-14 15:10:08	sfmcadmin

Other Gliders

hostglider1
hostglider2
hostglider3
unknown

Files

from glider

to glider

To Glider File Drop Zone

to science

To Science File Drop Zone

logs

archive

TELEDYNE WEBB RESEARCH
Everywhere you look

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Figure C-2 Glider Terminal Access Page as Displayed on a Tablet



Figure C-3 Dashboard as Displayed on a Smartphone



Figure C-4 Glider Terminal Access Page as Displayed on a Smartphone