About this Guide

This guide is intended for customers of NextBus, Inc. who will use the arrival prediction software to manage routes and vehicles. Readers are assumed to have a basic understanding of transit management terminology and Internet use.

You should read this guide if you:

- Manage vehicle activity along agency routes.
- Set up messages for display to transit authority users.
- Use reports to monitor and analyze the system.
- Set up system users and grant them permissions to use parts of the system.

System administrator functionality is covered in a separate guide. System administrators are responsible for functions such as installing software and related databases, configuring web servers, setting up system tables, and basic troubleshooting. They are also responsible for contacting NextBus, Inc. with support and service requests.

**Important!** NextBus frequently adds new functionality and capabilities to the system. Although the documentation is regularly updated to reflect such changes, some displays shown in this guide might not exactly match those on the system.
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Getting Started

This chapter provides an overview of the NextBus transit management system and lists common terms used in this guide.

Transit Management System Overview

The NextBus transit management and passenger information system is an Internet-based system that works with buses, trains, and other vehicles operating on fixed and semi-fixed routes. System status and arrival time information is delivered to any location where people need it, including public transit stops and stations, homes, offices, schools, senior centers, retail stores near stops and stations, and more.

The NextBus system consists of three components that utilize internet protocol and communications. These are:

- Automatic Vehicle Location (AVL). This component uses GPS to provide real-time vehicle tracking.
- Prediction server system with relational database. This component provides estimates of vehicle arrival time based on AVL information and on historical data contained in the agency database.
- Passenger and management information displays.
System Architecture

This diagram shows the NextBus system architecture.

NextBus System Architecture

AVL devices located on each vehicle receive real-time location data from GPS satellites. Using wireless technology, they transmit their location to NextBus servers.

The prediction server combines this information with route and schedule information from the agency database to create arrival and departure time predictions based on past performance and current location of each vehicle. These predictions are transmitted over the Internet to passenger information display devices such as signs and phones. The system logs AVL and other data for later display and analysis in management reports.
Agency Sites

System functionality is provided on two web sites — a public site and a private agency management site. Both sites contain maps showing current locations of tracked vehicles, but the agency maps provide more information than the public map.

Public Site

The public site provides:

- Arrival predictions for a selected stop.
- A simple interface for less capable browsers.
- ADA compliant pages for text reader software.
- Real-time map display.
- MyNextBus web alerts.
- Wireless access instructions.

Passengers can access pages on this site using PCs, PDAs, cell phones, and other types of display devices.
This is a sample passenger main page, available through the agency public site. Note that the agency logo and other agency information appear on the page.

Specify your stop to obtain the arrival time for the next vehicle:

1. **State:** California-Northern
2. **Agency:** San Francisco Muni, CA
3. **Route/Line:** 22 - Fillmore
4. **Direction:** Outbound toward Potrero Hill
5. **From Stop:** Fillmore St and Haight St

Special Metro service for Earthquake Centennial starting at 3am from West Portal to Emb Station inbound only stops at all Metro Stations except Civic Center

Next vehicles arrive in:

- 8 minutes
- 10 minutes
- 26 minutes
- 31 minutes

**Agency Management Site**

The private agency management site provides:

- Secure, password-protected access to agency management functions.
- Full capability real-time map display—small or full screen.
- Ability to replay map activity for prior periods.
- Access to reports and data.
- Remote vehicle login and logoff.
• Web interface for assigning vehicles to jobs / blocks.
• Capability to create and send informational messages.
• Transit management reports.
• The most current version of this Users Guide.

**Terminology Used in this Guide**

You should be familiar with the following terms.

**Agency Map**

A real-time map display of route and vehicle activity. This is accessed from a secure web page unique to the transit agency and not visible to the public.

**Agency Management Page**

The top-level private page for a transit agency. Also called the Agency Main Page, or Agency Main Menu.

The URL for the agency page is [http://www.nextbus.com/agencies/agencyname](http://www.nextbus.com/agencies/agencyname), where *agencyname* is the name of the agency in the NextBus system.

**Automatic Vehicle Location (AVL)**

AVL data is reported from various sources such as a combination of a GPS receiver, wireless modem, and the Internet.

**Block**

See Job. The terms block and job are often used interchangeably.

**Date Map**

A mapping, in the NextBus system, of a specific day (for example, *Dec 25 2007*) to a service class (for example, *Holiday*)

**Day Map**

A mapping, in the NextBus system, of the seven days of the week to service classes (for example, *weekday* or *weekend*).

**Direction**

The direction of travel for a vehicle or the direction of travel designation for a stop on a route. Typical directions of travel include; *Northbound, Southbound, Eastbound, Westbound, Inbound, Outbound, Uptown, Downtown*. Others might incorporate the endpoint of the route such as *To Ballston*.

Fix
See Position.

**General Packet Radio Service (GPRS)**

A wireless network standard that incorporates both voice and data. GPRS is not related to GPS (the Global Positioning System), a similar acronym that is often used in mobile contexts.

**Global Positioning System (GPS)**

A system of 24 satellites in earth orbit, operated and maintained by the US Department of Defense. GPS satellites transmit signals used by receivers to calculate position, time, velocity, and direction of travel. GPS is widely used by the civilian community for vehicle tracking, marine and aeronautical navigation, surveying and many other applications.

**Hidden Stop**

A stop that is not a passenger service stop and does not appear on the public map. Hidden stops are generally used for timepoints that the system uses to generate predictions for a vehicle, and are reported on the Schedule Adherence reports.

**Job (also called Block)**

The assigned operating schedule for a vehicle. A job includes the routes the vehicle is supposed to run and the schedule timepoints, or layovers, that the vehicle is supposed to observe. A job typically consists of a sequence of trips.

**Job Login**

The act of assigning a vehicle to a job. This can be done using the MDT, the Vehicle Inspector (accessed from the agency map toolbar), or automatically.

**Job Status**

Denotes whether the vehicle is off-job or on-job. A vehicle is considered on-job if it is logged in to the system.

**Job Sequence**

The order of vehicle stops for a job.

**Message**

A text string intended for display to passengers on an agency’s NextBus electronic signs, web page and/or wireless devices. Messages are often interspersed with other information, such as predictions, on the signs.

**Mobile Data Terminal (MDT)**

An on-vehicle device that the vehicle operator uses to log in to or log off from the NextBus system.
Pattern
A one-way bus drive from origin to destination on a route.

Position
The physical location for a vehicle designated as the latitude and longitude of the location, the exact time it was at the location, and the instantaneous speed and heading of the vehicle at that point in time. Also called a Fix.

Prediction Server System
Software that collates AVL data for vehicles from various input sources. The software receives position reports and job change notifications from a variety of AVL inputs and produces real-time arrival and departure predictions for the vehicles.

Public Data Network
The Public Data Network (PDN) generally refers to all data networks operated and maintained by carriers for public use. Examples are 1xRTT and GPRS.

Report
A transmission from a vehicle’s GPS tracker to the NextBus Information Center.

Route
A designated, specified path to which a transit unit (vehicle or train) is assigned. Several routes may traverse a single portion of a road or line.

Rugged Transit Display (RTD)
The NextBus LED transit stop shelter sign with vandal resistant features. Arrival predictions and messages are displayed on RTDs.

Run
A set of one or more trips assigned to an operator for the shift.

Schedule
A published table of departure and arrival times.

Service Class
A service variation within a schedule class. For example, the service classes Weekday, Schoolday, Weekend, and Holiday are service classes of the Daytime schedule class.

Stale Vehicle
A vehicle that has not reported its position in 6 minutes.
**Timepoint**
A stop location at which a vehicle is expected to wait until a scheduled departure time.

**Tracker Suite**
The on-vehicle equipment consisting of the integrated GPS tracker, the MDT, antennas and cables.

**Trip**
A single line of a schedule. A trip runs a defined pattern.

**Transfer Zone**
A defined geographic area that a bus enters which automatically assigns it to a generic job, but not a schedule.
CHAPTER 2

Logging In to the Agency Management Pages

This chapter discusses how to:

- Access (log in) to the NextBus agency management pages.
- Navigate in the system.

Accessing the System

To log in to the system, you must have a valid user name (login) and password and have permission to access one or more functions. You can log in to the system from any computer with access to the Internet.

For optimal performance, NextBus recommends Internet Explorer 5.0 or higher, or equivalent. If the NextBus pages do not display properly, check that these default browser settings are still in effect:

- Enable cookies.
- Enable Java, minimum version 1.3. This is needed for map display.
- Enable Javascript.

URL

The private agency site is located at https://www.nextbus.com/agencies/agencyname, where agencyname is the name of the agency. Upon accessing the site, the user must authenticate themselves by entering their user name (login) and password.
Management Login page

Contact the agency system administrator to obtain a login and password.

For more information on logins, passwords, and permissions, see Understanding Users and Permissions on page 76.

Agency Management Page

The agency management page enables you to access transit management system functions and documentation.
Agency management page (1 of 2)

Agency main page (2 of 2)

This page consists of:
• Main pane
This contains a menu of the system functions and the pages within each function. You can also access the first page for the function by clicking the picture to the right of the function. For example, click either the Agency Map link or the picture to access the agency map.

The current page always appears in the main pane.

• Left-hand navigation pane
The left-hand navigation pane always appears regardless of which page is currently shown in the main pane. It provides quick access to other pages without having to navigate back to the main menu.

Note. The page title is specific to the agency and is not shown on subsequent page examples.
CHAPTER 3

Working with Maps

This chapter discusses how to:

• Access map pages.
• View maps.
• Manage the map display.
• Manage routes.
• Manage vehicles.
• View large or full-screen maps.
• Replay map activity.
• View vehicles with Automatic Passenger Count (APC) capability
• Manage vehicles with Silent Alarm capability
Accessing Map Pages

The Maps menu provides you with access to agency map pages.
Viewing Maps

To view the agency map, click the Agency Map link on the Maps menu.

On this map:

- Each route is identified by a specific color.
- On each route, a small pointed icon in the route’s color represents each vehicle’s current position and direction of travel. Each time a vehicle reports a changed position, the icon “jumps.” An optional label attached to the vehicle icon provides information about the route and vehicle number.

See also Managing Vehicles on page 23.
• Stops on a route are identified by white dots surrounded by a box of the same color as the route.

The mouse pointer changes to a cross when you move it over the map. You can move the mouse pointer over a stop or vehicle tag to view detailed information about the stop or vehicle.

Note: To display several maps at one time, open multiple browsers.

Map Toolbar

The map toolbar located at the top of the map enables you to:

• Zoom in and out of the map display.
• Change or save the current map configuration.
• Select the routes and vehicles that appear on the map.
• View a history of events that occurred for displayed routes.
• Change map properties that control whether optional information, such as vehicles that are not in service, appears on the map display.
• Access online help.

Map Toolbar

Zooming and Panning

The map area is often too large to display on the Web page. You can click and drag the mouse pointer to reposition, or pan, the map display if the displayed portion of the map does not show the routes and stops you want to see. When panning, the mouse pointer changes to a cross-hatch.

The Zoom In and Zoom Out buttons on the map toolbar adjust the scale of the displayed map. You can zoom in to view an area of the map in greater detail or zoom out to see a higher level view. Zooming in on a map is often necessary to distinguish between several routes that travel along the same streets or share the same stop, whereas zooming out results in a more cluttered display.

Zooming redraws the map at a higher resolution and does not reposition it. Before zooming in, pan the map display so that the area of interest is positioned in the center.

Zooming and panning cause new street map data to be loaded from the NextBus server to your computer. Once loaded, it is cached (stored) on the user’s computer to improve speed of future displays.
Managing the Map Display

The agency map appears in its default configuration when you first access the map; however, you can create and save map configurations based on the way you use the system. A map configuration consists of the selected set of routes, the zoom level, and the current position, or area of focus, of the map.

Creating Map Configurations

After you have panned and zoomed the map, selected the routes for display, and set map properties (explained in the next section), you can save the display as a configuration. Saving and reusing configurations saves time because it eliminates the need to adjust the display each time you want to view a different route or section of the map. It is also useful when you manage several routes.

To create a configuration, click the Save Config … button on the map toolbar. The Save Configuration dialog box appears.

![Save Configuration Dialog Box](image)

Enter a name in the Configuration Name field and click the Save Current Config button. The current map display settings are saved as a configuration. You can return to this saved configuration at any time by selecting the configuration name from the Select Config drop down box on the map toolbar. The set of saved configurations that a user enters is associated with your login and does not display to any other user.

![Selecting a Configuration](image)
When you exit from the system, the system “remembers” the current map display and restores the last displayed configuration the next time you log in to the system.

**Changing Map Properties**

To change map properties, click the Properties... button on the map toolbar. The Properties dialog box appears.

Select or deselect a check box to enable or disable the corresponding map property. The effect appears on the map immediately—you do not need to close the dialog box first.

These are the properties that you can modify using the Properties dialog box.

**Show No-Job (grey) Vehicles**

Select to display vehicles that are powered on and operating, but are not currently logged in to a job. These vehicles have a grey label when displayed.

**Show Off-Job (white) Vehicles**

Select to display vehicles that considered as off-job. These vehicles are assigned to a job and operating, but the last fix received for the vehicle did not generate a prediction. This can occur when a vehicle performs unexpectedly – for example, the vehicle stays in one location for too long or travels down a street that is not on the route. These vehicles have a white label when displayed.

**Show Street Map**

Select to display the street map behind the routes. The street map displays only if the map is zoomed to an appropriate level of resolution.
Show Hidden Stop
Select to display stops that do not service passengers. Hidden stops might correspond to timepoints that the NextBus prediction algorithms use or to rest areas where a vehicle can park off-route.

Snap Vehicles to Route
Select to position vehicle icons on their assigned routes. The vehicle icon’s pointed end indicates the direction of travel.

Show No-Job Vehicles in Yards
Select to show vehicles in designated bus yards. Deselect this property to reduce visual clutter by removing vehicles in the bus yard from view.

Show Vehicle Labels
Select to display vehicle labels on the map.

Schedule Adherence Mode
Select to show each vehicle’s relative early or late performance with respect to their assigned jobs or blocks. The vehicle icon color indicate its performance: early vehicles are colored red, on-time vehicles are white, and late vehicles are yellow.

Show Stale Vehicle
Select to display vehicles that have not reported a position in approximately 6 minutes. Selecting the Stale Vehicle property shows the vehicle locations even if they are days old, because the system keeps the last known location of a vehicle in long term memory,
Viewing Route Information

Each route drawn on the map shows the stops along the route and vehicles assigned to the route. You can also view event history and schedule adherence for the route.

Selecting Routes for Display

To select the routes that display on the map, click the Routes… button on the map toolbar. The Routes dialog box appears.

Routes appear in the dialog box in the color assigned to the route. To display or hide the route and the vehicles and stops on the route, select or deselect the check box for each route. When no routes are selected, only unassigned (off-job) vehicles are shown on the map if the Show No Job (grey) Vehicles property is selected.

The agency determines the routes that appear in the Routes dialog box for each user. This is configured during system installation. For example, agencies with a large number of routes might want only the routes associated with a user’s group or division to display, while smaller agencies might want all agency routes to display.

See also Understanding Users and Permissions on page 76.

The buttons on the Routes dialog box function as follows:

Select All and De-Select All

When four or more routes are defined for the agency, these buttons appear. They enable quick selection or deselection of routes.
Zoom to Selected Routes

Click to change the map scale so that all selected routes display. This re-centers the map and changes the zoom level as necessary to fit the selected routes. You can click this button repeatedly until the map reaches its maximum zoom level.

Close

Closes the dialog box and saves the selections.

Viewing Stop Information

Routes and vehicles appear superimposed over a street map image. Stops are drawn along the routes as a white point surrounded by a small square box in the route color.

To view stop information, move the mouse over a stop. A pop-up window appears showing information about the stop.

Stop Pop-up window

If the stop is served by more than one route, multiple stops show in the pop-up window, each color-coded to the route to which it belongs.

Stop information includes:

- The full name of the stop.
- The direction for the stop, if the same stop is used for more than one direction on the route. For example, both inbound and outbound trains normally arrive at the same stops.
- The route name for the selected stop.
- Predictions of when the next several vehicles will arrive at that stop.

Viewing Events

An event is logged every time the server polls and records information about a vehicle’s status. To view events, click the Events… button on the map toolbar. The Events pop-up window appears.
Event types include:

- **Adherence.** The vehicle is moving faster or slower than expected.
- **Off Job.** The vehicle is not assigned to a job / block.
- **On Job.** The vehicle is assigned to a job / block.

**Viewing Schedule Adherence**

To view schedule adherence, click the Schedule Adherence Mode button in the Properties window. The map display changes to show real time schedule (time point) adherence information for each vehicle.

The color of vehicle labels indicates the vehicle’s early/on-time/late performance relative to the schedule:
- White indicates within schedule tolerance.
- Yellow indicates late (positive numeric time value).
- Red indicates early (negative numeric time value).

The depth of yellow or red color indicates the severity of schedule deviance. For example, a vehicle that is ten minutes early is colored a brighter red than one that is only 6 minutes early.

Each transit agency defines its own default values for number of minutes early and late. These default values appear in the schedule adherence management reports.

See also Agency Reports on page 46.

The schedule adherence value that appears on the map is real-time and updated each time a vehicle reports its location or arrives at a time point. The value is a combination of the adherence at the last timepoint and the expected travel time to the next timepoint.

This real-time combination is useful in identifying trends—vehicles falling behind or moving ahead of schedule.

**Managing Vehicles**

Vehicles equipped with NextBus tracker suites report their locations to the NextBus servers at defined intervals that depend on time elapsed and distance traveled since the last report. The default interval is every 90 seconds or 200 meters since the last report, whichever occurs first. For example, a vehicle traveling down a fast moving highway will report more often than one in a crowded downtown street.

**Note:** Agencies that provide AVL data to NextBus from a pre-existing system might not report as frequently.
Viewing Vehicle Information

Vehicles appear on a route as pointed icons – the vehicle label does not display within the icon, but is connected to it by a black line. The pointed end of the vehicle icon indicates the direction of travel based on the route it is traveling. Internal to the vehicle icon is a white or black “V” that indicates that the vehicle is moving. If the internal line is straight, the vehicle reported it was stopped (zero velocity) at the last report. The vehicle icon appears to jump from one position to the next each time the vehicle’s AVL information is reported and updated on the server.

Vehicle Status

The icon color and label identify the route that the vehicle is running and indicate vehicle status. The following table describes the vehicle statuses and how they are set.

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
<th>Set When</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-job</td>
<td>The vehicle is currently logged in to a job and operating according to its defined block</td>
<td>The vehicle operator logs in. A manager assigns it to a job using the Vehicle Inspector or Specify Vehicle Assignment page. An off-job or no-job vehicle reports back on-job.</td>
</tr>
<tr>
<td>Off-job</td>
<td>The vehicle is logged in to a job but is exhibiting behavior that does not match the job definition.</td>
<td>A vehicle is logged in to the wrong job or driven off route. The vehicle reports three consecutive times from the same location. The vehicle is too far off schedule.</td>
</tr>
<tr>
<td>No-Job</td>
<td>The vehicle is not logged in to a job. Some no-job vehicles are in yards.</td>
<td>The operator logs off. The vehicle is removed from a job using the Vehicle Inspector or Specify Vehicle Assignment page. The vehicle is off-job for more than three consecutive reports.</td>
</tr>
</tbody>
</table>

To view details for a vehicle, move the mouse pointer over a vehicle label. The Vehicle Information pop-up window appears.
Using the Vehicle Inspector

To locate a specific vehicle, click the Vehicles… button on the map toolbar, and select the vehicle ID and optionally the line and run. The Vehicle Inspector window appears.

The buttons on the Vehicle Inspector window function as follows:

Find Vehicle
Draws a circle around the vehicle on the map at its current zoom level.

Zoom to Vehicle
Re-centers the map on the selected vehicle and draws a circle around the vehicle. If necessary to view the vehicle tag, zooms to several times the present zoom level.

Zoom to All Vehicles
Sets the map’s zoom level so that all vehicles are visible. HINT: use the Zoom to All Vehicles button to display vehicles operating away from the normal route area.
Show Trails and Clear Trails

Marks each position where the vehicle made a GPS report with an X, providing a trail for the vehicle. Trails are drawn only for the time since the map was accessed. The markers are large when initially displayed behind the vehicle and diminish in size as they get older. After about 16 markers, the markers become too small to see.

New Route, New Job, and Specify New Job

To assign the vehicle to a new route, select the new route and new job in the Vehicle Inspector window and click the Specify New Line/Run button. A confirmation appears.

Vehicle Change Confirmation

See also Assigning Vehicles to Jobs on page 63.
Viewing Large or Full-Screen Maps

To view large or full-screen maps, click the Large Map or Full Screen Map menu link on the Maps menu.

Large Map

The large map does not use the web browser. This map has most of the functionality of the agency map, but appears in a simpler window for use by mobile or wireless devices. This map can be scaled to any size, from a small thumbnail to a full screen map.

Large maps are often used to view several areas of the map at one time, without repositioning or changing configurations. You position the map at a desired location and open it as a large map. Because the large map remains open until closed, you can reposition the agency map and open as many large maps as needed.

Full-Screen Map

The full screen map fills the monitor screen, hiding the Windows task bar and any other programs running at the time. This map also removes the agency name at the top of the page as well as the left hand navigation pane. The map toolbar still appears.

To toggle between the full-screen map and other programs that are running, press the Alt-Tab keys on the keyboard.
Replaying Map Activity

To replay map activity, select Replay Map from the Maps menu. The map toolbar is redrawn with controls that enable you to control the replay.

The Replay Map function enables you to replay vehicle activity at rates up to 120 times real-time for any time from the default of three months previous up to the present. Replay does not show arrival time predictions that were generated during the replay period.

**Note:** The system archives activity data older than three months. NextBus must manually restore this data if you want to replay activity older than three months.

Replay Map toolbar

This information appears on the replay map toolbar:

**Begin**

Select a month, day, and year to begin the replay. These fields are active only if the replay is not currently running.

**Rate**

Select a time rate for the replay. For example, a rate of 10x replays the map activity at 10 times normal speed. Replay rates range from 1x to 120x.

**Status**

Indicates whether the replay is running or stopped. If running, the status shows the date and time of the replayed activity.

The replay applet gets historical information from the NextBus server. If the server is initializing or busy, this is shown in the replay status.

When a replay reaches the present time, it pauses and the status shows that playing cannot continue into the future.
View vehicles with Automatic Passenger Count (APC) capability

The Automatic Passenger Counting (APC) capability is an optional feature that requires specialized sensors to be installed above the front and rear doorways of each vehicle type. Refer to APC hardware and installation manual for detail specification of the sensors and vehicle type requirements. Additionally, each vehicle must be equipped with NextBus tracker suites. This allows the vehicle location and APC related information to be reported to the NextBus servers at defined intervals. The default interval for vehicle with APC equipment is every 90 seconds time elapsed or 75 meters since the last report, whichever occurs first.

Note: NextBus tracker suite is responsible for collecting and transfer APC related data to NextBus servers.

The real-time on-board passenger count is shown on vehicle information window of agency map.

![Vehicle Information window with Passenger count](image)

To view number of passengers on board a vehicle, place the mouse on the vehicle icon in the agency map window. The vehicle information window will open with “# Passengers:” and is updated with each tracker reports.
Manage vehicles with Silent Alarm capability

To manage vehicles with Silent Alarm capability, each vehicle must be equipped with NextBus tracker suite and a specialized switch that is strategically installed and easily accessible by driver. Refer to Silent Alarm hardware and installation manual for detail specification. NextBus tracker transfers the vehicle location and the status of the silent alarm switch to the NextBus server.

If the vehicles are equipped with the silent alarm feature, the agency management page is automatically configured to display a green icon that indicates the system is monitoring for silent alarm activation.

A Red Siren Alarm icon is activated on the main menu of the agency management page, as shown below, if the vehicle operator turns ON the silent alarm switch.

Important! The silent alarm information is reported with tracker data. Agency operation shall pay special attention to broken or malfunctioning trackers. If the tracker is not reporting, the system cannot determine the status of the silent alarm and the siren alarm notifications will not be triggered.

System automatically sends an email notification to selected, registered staff members. During system setup, NextBus will need the name and email address for the selected staff in order to notify appropriate staff via emails.

An example of such email is shown below. Each transit agency is encouraged to establish a standard operational procedure to follow when such incidents occur.

From: nbadmin@carom.nextbus.com
[mailto:nbadmin@carom.nextbus.com]
Sent: Tuesday, March 17, 2009 12:47 PM
To: supervisor@agency.com
Subject: LilSister - (agency-name): SILENT_ALARM_ON

This email has been generated by LilSister, the Nextbus automatic warning system.
If you have any problems or questions regarding this email, please contact the Nextbus LilSister administrator at: lilsister-admin@nextbus.com

The following issue was reported to LilSister:
An SOS was triggered on vehicle 12345 at Tuesday March 17, 2009 3:46PM EDT Please contact officials

To locate the alarmed vehicle(s) on the map from the Main Page, click on the Red Siren Icon link. The agency map page will appear and the “Vehicles” button will be in red on the “Map Toolbar”. To Pan and Zoom to the alarmed vehicle, you must open the “Vehicle Inspector” menu and select the alarmed vehicle from the “Alarmed Vehicle Id” pull-down selection list.

Important! The agency map is displayed based on your map configuration. See Map Configuration for details of how to create and save your own.

An Alarmed Vehicles ID is shown on a pull down menu next to the standard Vehicle ID list. Choose an alarmed vehicle from the pull down menu and click on the vehicle. The agency map is redrawn with the selected vehicle on the center of the agency map, and vehicle label is prefixed with “SOS” characters and shown in red. The vehicle inspector window will remain open to allow you to zoom or trace the vehicle as it travels. See using the Vehicle Inspector, for detail description.
Sample display of activated silent alarm
CHAPTER 4

Working with Messages

This chapter lists common terms, provides an overview of messages, and discusses how to:

- Access message pages.
- Create and send messages.
- View and cancel messages.
- Set sign title messages.

Terminology Used in this Chapter

Duration
The period of time for which a message appears on signs. Preset durations range from one minute to indefinite. You can also set a custom duration with specified start and end dates and times.

Expiration
The point in time at which the message ceases to display. Depending on how you set the duration, this can be at the end of an elapsed period, such as an hour, or on a specific date and time.

Message
A text string that is displayed on an agency’s electronic signs, web page, or wireless devices. Messages are interleaved with other information, such as predictions, on the signs.

Message Console
An agency management page that enables the transit agency to send messages to NextBus electronic signs, the web page, and/or wireless devices.
Overview of Messages

The messages that appear on route signs and web pages communicate information, for example: delays, temporary route changes, or safety reminders, to passengers. The time of day always appears on signs in addition to the message.

These are the types of messages:

• Variable. Variable messages can be any length, but longer messages are broken up into message segments that conform to the size of the sign on which they appear. Each message segment appears for three seconds. You can select from a list of predefined messages, or enter new message text.

Variable messages can display on either routes or signs, including rugged transit display (RTD) signs. However, the messages displayed on RTD signs are usually bus arrival prediction messages, generated automatically by the system, as shown here:

![RTD message display](image)

• Sign Title. Sign Title messages are limited to a single line (16 characters) and appear on signs above the time of day. Sign title messages appear only on signs, not on the Web site. There is only one sign title message for the agency.

Note: The message you type into the text box is not checked for unseemly words or phrases or spelling errors prior to transmission. You should check messages carefully to ensure that an inappropriate message is not sent.
Web Messages

Transit system users can set up web alerts to automatically notify them when their selected vehicle is about to arrive. Instructions for setting up alerts are available on the agency’s public site under the My NextBus menu item.

When triggered, the alert appears as follows:
Accessing Messages Pages

The Messages menu provides you with access to pages for creating, sending, and managing messages.

Maps

- Agency Map
- Large Map
- Full Screen Map
- Replay Map

Messages

- Create for Routes/ Stops
- Create for Signs
- Current Messages
- Cancel Message
- Sign Title

Note: vehicle delays due to traffic

Management Reports

- Agency Reports
- Configuration Reports

Vehicle Assignment

- Specify Vehicle Assignment

Login: "Emily S"

- Edit Profile / Users
- Logout

Documentation:

- User's Guide
- Phone Server Guide
- Glossary
- Release Notes
Creating and Sending Variable Messages

You use different pages to send messages to routes and to signs.

- For route messages, click the Create for Lines / Stops link on the Messages menu.
- For sign messages, click the Create for Signs link on the Messages menu.

The Specify message to be displayed window has similar appearance and function for both route and sign messages. The top area of this window enables you to select or enter message text, preview messages, set message durations, and specify the times of week for which the message displays.

<table>
<thead>
<tr>
<th>Message:</th>
<th>-- predefined messages --</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>indefinitely - until cancelled</td>
</tr>
<tr>
<td>Times of Week during Duration:</td>
<td>entire duration</td>
</tr>
<tr>
<td>Individual Sign Targets:</td>
<td>(No Signs)</td>
</tr>
</tbody>
</table>

Specify message to be displayed window

Entering Message Text

You can select from a list of predefined messages, enter new message text, or modify predefined message text.

Typical predefined messages are:

- Expect delays until XX
- Expect significant delays on the XX line
- Tracks blocked at XX use alternative routes
- Normal operation restored

You must replace the XX with relevant information. For example, if there is an emergency that closes State Street until 4 PM, you might send the message *Expect delays until 4:30 PM* to routes that travel along State Street.
To view how the message appears on various signs in the system, click the preview… link next to the Message text box.
Specifying Message Duration

Select the duration for the message from the Duration drop-down list.

If there are message scheduling requirements that the preset durations do not meet, you can specify precise begin and end dates and times for the message display. For example, the agency might schedule special shopping shuttles to run every 15 minutes during the holiday period between Thanksgiving and Christmas.

To specify precise dates for message display, click the set duration … link next to the Duration field. The Specify schedule for message to be displayed window appears.

Select the specific dates and times for the message to display and click OK to update or Cancel to discard changes.
Specifying Times of Week for Message Display

You can control the times of day and days of the week when the message displays during the duration period. For example, holiday shuttle service might run only on weekends or only during the daytime hours. By default, the time of week during the duration is set to *Entire Duration*.

To specify times for the message to display, click the set times… link next to the Times of Week during Duration field.

Select the days and times and click OK to update or Cancel to discard changes.
Sending Messages

The bottom area of the Create Message window differs depending on whether you create a route message or a sign message. Route messages are sent to signs on a selected route or routes, while sign messages are sent to only specific signs.

Sending Messages to Routes and Stops

To specify destination routes for message display, select the check box for all desired destination routes.

Selecting Routes for Message Display

You can then click the Send Message button to send the message or select individual stops along routes where the message is to display.
To select the stops where the message is to display, click the select stops… line next to a route. The Select stops window appears

![Select stops window]

Select stops for message display

Select the desired stops and click OK or Cancel.

**Sending Messages to Signs**

To send the message to one or more signs, use the Create Messages for Signs page. After you specify the message, select the message destinations from the Individual Sign Targets area of the page.

![Create Messages for Signs page]

Specify message to be displayed:

Create Messages for Signs page
Viewing and Canceling Messages

Viewing Messages

To view the messages that are currently defined in the system, click the Current link on the Messages menu. A list of the current messages appears.

Current Messages page

All messages defined in the system appear on this page, regardless of whether they are currently displaying.

Canceling Messages

To cancel a message, click the Cancel link on the Messages menu. A list of the currently defined messages appears, with a column to select messages for cancellation.

Cancel Messages page

Select one or more messages and click the Cancel Selected Messages button. To exit from the page without canceling any messages, select another page from the left-hand navigation or use the browser’s Back button.
Creating Sign Title Messages

To create a sign title message, click the Sign Title link on the Messages menu.

A sign title message is a one-line message that appears on all agency signs above the time of day. Only one sign message is active at any one time—every agency sign displays the same message. This message does not appear on the web site.

The Sign Title is displayed on all signs above the time of day.
It does not appear on the website.

The predefined messages for sign titles are:

• Happy Holidays!
• Thanks for riding
• Have a nice day
• Welcome

Note. Agencies often use the sign title message to display their agency name on signs.
CHAPTER 5

Management Reports

This chapter provides an overview of management reports and discusses how to:

- Access the reports function.
- Enter report parameters.
- Submit reports.
- View report output.

Terminology Used in this Chapter

Comma Separated Values

This format saves the data values in text format separated by commas, which most spreadsheet software can use to import data.

Headway

The time between vehicle arrivals a specific stop location.

Time Bucket

Breaks a 24-hour period (a day) into different time periods that are used to quickly specify a time for running many of the reports.

Timepoint Adherence

How closely a vehicle meets its scheduled arrival or departure at a timepoint.
Understanding Management Reports

Available Management Reports

The Reporting feature generates reports of real-time or historical information and displays them through the browser. Pre-defined reports that provide insight into and control over agency plans and schedules are available.

Agency Reports

Agency reports provide information about the daily operation and performance of the agency. They include schedule adherence, headway, job/block, and tracker reports.

These are the schedule adherence reports:

- Schedule Adherence Summary by Route for One or More Days
- Schedule Adherence Summary by Stop for One or More Days
- Schedule Adherence Detail by Stop
- Schedule Adherence Summary by Vehicle
- Schedule Adherence Summary by Route and Vehicle
- Schedule Adherence Details by Vehicle
- Arrivals, Departures, and Timepoints by Vehicle

These are the headway reports:

- Headway by Route
- Headway by Stop
- Headway Detail

These are the job / block reports:

- Timeliness of Job/Block Assignments
- Jobs/Blocks Scheduled
- Jobs/Blocks Running
- Jobs/Blocks Missed

These are the tracker reports:
• Vehicle Reporting
• AVL Report
• GPS Quality

Configuration Reports

Configuration reports provide information about the types of information that exists in the system. These are the available configuration reports:

• Stops for a Job.
• Holidays.
• Stops.
• Jobs/Blocks.
• Phone Codes. Phone codes are numbers that passengers can dial to get predictions for specific routes and stops.
• Wireless Devices.

Report Parameters

Report parameters narrow, or filter, the information that appears on the report.

This table describes the available report parameters and the allowable values for each. Not all reports require the same set of parameters.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Allowable Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Enter a date in one of these formats:</td>
</tr>
<tr>
<td></td>
<td>• MM/DD/YY</td>
</tr>
<tr>
<td></td>
<td>• YYYY-MM-DD</td>
</tr>
<tr>
<td></td>
<td>• Month DD, YYYY</td>
</tr>
<tr>
<td></td>
<td>Examples of valid dates:</td>
</tr>
<tr>
<td></td>
<td>07/12/06</td>
</tr>
<tr>
<td></td>
<td>2006-07-12</td>
</tr>
<tr>
<td></td>
<td>July 7, 2006</td>
</tr>
<tr>
<td>End Date and Number of Days</td>
<td>Enter the number of days and ending date for which the report is to run. All data for the number of days prior to and including the end date are included in the report.</td>
</tr>
<tr>
<td>Start Date and Number of Days</td>
<td>Enter the number of days and starting date for which the report is to run. All data for the number of days following to and including the start date are included in the report.</td>
</tr>
<tr>
<td>Start Time and End Time</td>
<td>Enter start time and end time in this format:</td>
</tr>
</tbody>
</table>
HH: MM (am/pm)

If you omit the am/pm designation, the time defaults to a 24 hour clock. In this clock format, 2:00 is 2:00 am and 14:00 is 2:00 pm.

Examples of valid times:
- 6:00 pm
- 18:00
- 6:00 (defaults to 6:00 am)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Allowable Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route</td>
<td>Select a route from the scroll list. This list contains all routes defined for the agency. You can select multiple routes/lines by pressing the Ctrl or Shift keys when selecting with the mouse</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Select a vehicle from the scroll list. This list contains all vehicles defined for the agency. You can select multiple vehicles by pressing the Ctrl or Shift keys when selecting with the mouse</td>
</tr>
<tr>
<td>Allowable Early Time (minutes) / Allowable Late Time (minutes)</td>
<td>The default values for the allowable early and late times are defined during system configuration. The report uses these values to determine whether a vehicle is considered early, on time, or late at a given time point when compared to the schedule. To change the values for a report run, enter the desired early and late tolerance in minutes. Changing the value for a report DOES NOT alter the default values stored in the configuration.</td>
</tr>
</tbody>
</table>

The parameters you entered to run the report are listed in a table that appears following each page of the report results. This is for reference in remembering the exact selections made on the selection screen.

**Accessing the Reports Function**

The Management Reports menu enables you to access pages on which you can request and view management reports.
Maps
- Agency Map
- Large Map
- Full Screen Map
- Replay Map

Messages
- Create for Routes/Stops
- Create for Signs
- Current Messages
- Cancel Message
- Sign Title

Management Reports
- Agency Reports
- Configuration Reports

Vehicle Assignment
- Specify Vehicle Assignment

Login: "Emily S"
- Edit Profile / Users
- Logout

Documentation:
- User's Guide
- Phone Server Guide
- Glossary
- Release Notes

Management Reports Menu

Requesting Management Reports

To request a report, click the report name on the Agency Reports page or the Configuration Reports page. These pages list and describe the available reports.
### Agency Reports page (1 of 2)

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule Adherence Reports</td>
<td></td>
</tr>
<tr>
<td>Schedule Adherence Summary by Route for One or More Days</td>
<td>Summary of schedule adherence for selected routes for up to one month. Note: if all routes for all day for a month are selected, the report can take a while to run.</td>
</tr>
<tr>
<td>Schedule Adherence Summary by Stop for One or More Days</td>
<td>Summary of timepoint adherence for each scheduled stop for a route for up to one month. Note: if all routes for all day for a month are selected, the report can take a while to run.</td>
</tr>
<tr>
<td>Schedule Adherence Detail by Stop</td>
<td>Detailed schedule adherence for each stop for selected route and date.</td>
</tr>
<tr>
<td>Schedule Adherence Summary by Route and Vehicle</td>
<td>Summary of schedule adherence of each vehicle by route for selected date.</td>
</tr>
<tr>
<td>Schedule Adherence Details by Vehicle</td>
<td>Detailed schedule adherence by vehicle.</td>
</tr>
<tr>
<td>Arrivals, Departures, and Timepoints for Vehicle</td>
<td>Detailed arrivals and departures at timepoints and stops for a day.</td>
</tr>
<tr>
<td>Headway Reports</td>
<td></td>
</tr>
<tr>
<td>Headway by Route</td>
<td>Headway summary for each direction for specified route or for all routes.</td>
</tr>
<tr>
<td>Headway by Stop</td>
<td>Headway summary for each stop for specified route.</td>
</tr>
<tr>
<td>Headway Detail</td>
<td>Headway and arrival time for each arrival for each stop for specified route.</td>
</tr>
</tbody>
</table>

### Agency Reports page (2 of 2)

<table>
<thead>
<tr>
<th>Report Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops for a job</td>
<td>Lists each stop that is covered by a job</td>
</tr>
<tr>
<td>Holidays</td>
<td>Which days run which type of service (e.g. seasonal or holiday schedules)</td>
</tr>
<tr>
<td>Stops</td>
<td>Fixed route vehicle stops in NextBus database</td>
</tr>
<tr>
<td>Jobs/Blocks</td>
<td>Driver schedules (e.g. timepoints sorted by job number)</td>
</tr>
<tr>
<td>Phone Codes</td>
<td>Codes for 123-456-7890 phone system, and <a href="mailto:sms@nextbus.com">sms@nextbus.com</a></td>
</tr>
<tr>
<td>Wireless Devices</td>
<td>Lists both sign and tracker wireless devices</td>
</tr>
</tbody>
</table>

### Documentation on Configuration Reports

**Note:** The Documentation on Configuration Reports link following the report grid opens a window that has more information on the configuration reports.
Entering Report Parameters

The process of entering report parameters and viewing report output is illustrated using the Schedule Adherence by Route report.

**Schedule Adherence Summary by Line for 1 day ending at 3/2/06**

More than 5 minutes ahead colored **Early**

More than 7 minutes behind colored **Late**

<table>
<thead>
<tr>
<th>Line</th>
<th>Percent of Timepoints</th>
<th>Number of Timepoints</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>On Time</td>
</tr>
<tr>
<td>1</td>
<td>1%</td>
<td>94%</td>
</tr>
<tr>
<td>3</td>
<td>1%</td>
<td>88%</td>
</tr>
<tr>
<td>4</td>
<td>0%</td>
<td>95%</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td>1%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Set parameters for report page

The amount of data selected affects how long it takes to produce the report. The smaller the selection, the quicker the report runs. Selections should include just the amount of data needed. Many times, it is more efficient to break down the information requested into several smaller reports.

Submitting Reports

After you enter the report parameters, click the Submit button to start processing the report. While the report is running, this message appears:
Warning! If you click the browser’s Back button while this message appears, the report is cancelled and the browser returns to the Report Selection page.

Error Messages

If you enter a date or time for which data does not exist, such as March 28, 2010, this message appears:

```
Empty Result Set
There was no data for the parameters you specified. Please try other parameters.
```

If you enter an improperly formatted date or time, such as March 28, 200 instead of March 28, 2007, this message appears:

```
SQL Exception occurred:
ERROR: Bad timestamp external representation 'March 28, 200 12:00am'
```
Viewing Report Output

The output of a report appears in table format. This is a sample of report output:

Schedule Adherence Summary by Line for 1 day ending at 3/2/06

More than 5 minutes ahead colored Early
More than 7 minutes behind colored Late

<table>
<thead>
<tr>
<th></th>
<th>Percent of Timepoints</th>
<th>Number of Timepoints</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>On Time</td>
</tr>
<tr>
<td>Line 1</td>
<td>1%</td>
<td>94%</td>
</tr>
<tr>
<td>Line 3</td>
<td>1%</td>
<td>88%</td>
</tr>
<tr>
<td>Line 4</td>
<td>0%</td>
<td>95%</td>
</tr>
<tr>
<td>Totals:</td>
<td>1%</td>
<td>93%</td>
</tr>
</tbody>
</table>

Parameters:

<table>
<thead>
<tr>
<th>End Date</th>
<th>Number of Days</th>
<th>Service Classes</th>
<th>Start Time</th>
<th>End Time</th>
<th>Lines</th>
<th>Early</th>
<th>Late</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/2/06</td>
<td>1</td>
<td>all</td>
<td>12:00am</td>
<td>11:59pm</td>
<td>1,3,4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

Schedule Adherence Summary Report

Notice that the parameters used to run the report are listed in a table following the report. This is useful especially if the report is printed or downloaded.

Drill Down

If a magnifying glass icon appears in a row, the user can drill down to the detail that makes up the row’s data. For example, click the icon next to a Line in the Schedule Adherence by Line report to open a separate browser window with detailed information for each stop on the line.
Schedule Adherence
by Timepoint Stop
for 1 day ending at Mar 2, 2006

Output Options
This table explains the actions available for report output. These icons appear in a row following the report parameters:

- **Refresh**: Click this link to recreate the report using current information from the database. Because report data is normally cached, you must refresh and not reload the report.
- **Printable**: The Printable format is similar to the standard format except that the extraneous information such as the table of contents and the border are not included. This uncluttered format is ideal for printing.
- **Plain Text**: The Plain Text format is useful for archiving or for e-mailing to others. The results page is rendered using plain text instead of HTML.

Schedule Adherence Detail Report

<table>
<thead>
<tr>
<th>Timepoint Stop</th>
<th>Percent of Timepoints</th>
<th>Number of Timepoints</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>On Time</td>
</tr>
<tr>
<td>Sacramento &amp; Sansome</td>
<td>0%</td>
<td>97%</td>
</tr>
<tr>
<td>Sacramento &amp; Powell</td>
<td>0%</td>
<td>96%</td>
</tr>
<tr>
<td>Sacramento &amp; Polk</td>
<td>0%</td>
<td>96%</td>
</tr>
<tr>
<td>Fillmore &amp; Sacramento</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Sacramento &amp; Fillmore</td>
<td>0%</td>
<td>93%</td>
</tr>
<tr>
<td>California St at Steiner St</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>California St at Presidio Ave</td>
<td>1%</td>
<td>91%</td>
</tr>
<tr>
<td>Cornwall &amp; 5th Av</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>California St at 6th Ave</td>
<td>2%</td>
<td>88%</td>
</tr>
</tbody>
</table>
The CSV Spreadsheet format exports the report results to a Comma Separated Values (CSV) file that you can use to import the data into spreadsheet program such as Microsoft Excel.

Optional Management Reports

The Optional Management Reporting feature generates specific reports of historical information on Automatic Passenger Count (APC) and Silent Alarm activation events and displays them through the browser.

Agency Reports

These are the Automatic Passenger Count (APC) Reports

- Passenger Counts By Route
- Passenger Counts By Route and Stop
- Passenger Count Details
- Vehicle Passenger Capacities

There is a single report available for Silent Alarm Activation by Vehicle.

Report Parameters

Report parameters required for optional management reports are the same as other standard reports and it will narrow, or filter, the information that appears on the report.

This table describes the available report parameters and the allowable values for each. Not all reports require the same set of parameters.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Allowable Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Enter a date in one of these formats: MM/DD/YY&lt;br&gt;YYYY-MM-DD&lt;br&gt;Month DD, YYYY&lt;br&gt;Examples of valid dates: 07/12/06&lt;br&gt;2006-07-12&lt;br&gt;July 7, 2006</td>
</tr>
</tbody>
</table>
A valid date can also be selected from a calendar widget by placing the mouse on the date field and selecting the left mouse button.

<table>
<thead>
<tr>
<th>Start Date and Number of Days</th>
<th>Enter the number of days and starting date for which the report is to run. All data for the number of days following to and including the start date are included in the report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Time and End Time</td>
<td>Enter start time and end time in this format: HH: MM (am/pm)</td>
</tr>
<tr>
<td></td>
<td>If you omit the am/pm designation, the time defaults to a 24 hour clock. In this clock format, 2:00 is 2:00 am and 14:00 is 2:00 pm.</td>
</tr>
<tr>
<td></td>
<td>Examples of valid times:</td>
</tr>
<tr>
<td></td>
<td>• 6:00 pm</td>
</tr>
<tr>
<td></td>
<td>• 18:00</td>
</tr>
<tr>
<td></td>
<td>• 6:00 (defaults to 6:00 am)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Allowable Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route</td>
<td>Select a route from the scroll list. This list contains all routes defined for the agency. You can select multiple routes/lines by pressing the Ctrl or Shift keys when selecting with the mouse</td>
</tr>
<tr>
<td>Vehicle</td>
<td>Select a vehicle from the scroll list. This list contains all vehicles defined for the agency. You can select multiple vehicles by pressing the Ctrl or Shift keys when selecting with the mouse</td>
</tr>
<tr>
<td>Show ID codes</td>
<td>Select “True” to include the ID codes for route/stop/direction on the reports.</td>
</tr>
</tbody>
</table>

The parameters you entered to run the report are listed in a table that appears following each page of the report results. This is for reference in remembering the exact selections made on the selection screen.
Automatic Passenger Count Reports

The reports listed under Automatic Passenger Count category provide information on automatic passenger count summary by route, stops and vehicle.

When accessing these reports, you are presented with a set of “prompts” to enter as report parameters (see Figure below). The Start Date is the day that the report will begin to collect data. By default, system pre-populates these field with yesterday’s date. The start/end time are optional parameters. If omitted, the report is run over 24 hours.

### Passenger Count By Route

The Passenger Count by Route report provides summary passenger count information for one or more routes. The report is run based on the selected parameters above. The report shows the total number of passengers boarding and Alighting (de-boarding) and the maximum passenger load. In case there are no data available for a route, Not Available, “N/A” is shown in the appropriate column of the table.

Additionally, next to each route a magnifying glass icon is presented which allows the user to "drill down" and obtain detailed data for one particular route using the same report parameters (date and time range).

The Maximum load column reports the percentage that the bus is full, based on the seated capacity of each bus. Refer to the Vehicle Capacity Report to see each bus total capacity.
Passenger Count by Route and Stop

The Passenger Count by Route and Stop report provides summary passenger count information for each stop on a given route. This report provides data for total number of passengers which got on and off at each stop on a route.

The report is organized into separate sections for each route, and by each direction. Inbound stops and outbound stops are grouped separately.

All passenger counts information that can’t be correlated with a stop are shown under the “Unknown” section of the report. In case there are no data available for a route, Not Available, “N/A” is shown in the appropriate column of the table.

This report is accessed from the Agency Reports menu or by the magnifying glass icon next to the route name on Passenger Count by Route report.
Passenger Counts By Route and Stop
for 1 day starting at Mar 10, 2009

Route: Hollis South
Direction: to BART Station

<table>
<thead>
<tr>
<th>Stop</th>
<th>Boardings</th>
<th>Deboardings (Alightings)</th>
<th>Max Load</th>
<th>Max Load (percent full, seated capacity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hollis at 59th (Emery Station)</td>
<td>57</td>
<td>55</td>
<td>14</td>
<td>41 %</td>
</tr>
<tr>
<td>Hollis at 63rd</td>
<td>23</td>
<td>0</td>
<td>16</td>
<td>47 %</td>
</tr>
<tr>
<td>Hollis at 45th</td>
<td>8</td>
<td>2</td>
<td>15</td>
<td>44 %</td>
</tr>
<tr>
<td>Park at Watts (Pixar)</td>
<td>8</td>
<td>1</td>
<td>16</td>
<td>47 %</td>
</tr>
<tr>
<td>Emery at 40th</td>
<td>12</td>
<td>5</td>
<td>15</td>
<td>44 %</td>
</tr>
<tr>
<td>MacArthur Bar Station</td>
<td>0</td>
<td>3</td>
<td>15</td>
<td>44 %</td>
</tr>
<tr>
<td>MacArthur Bar Station (Hidden Arrival)</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>44 %</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>100</strong></td>
<td><strong>66</strong></td>
<td><strong>16</strong></td>
<td><strong>(overall max) 47%</strong></td>
</tr>
</tbody>
</table>

Direction: to Emeryville

<table>
<thead>
<tr>
<th>Stop</th>
<th>Boardings</th>
<th>Deboardings (Alightings)</th>
<th>Max Load</th>
<th>Max Load (percent full, seated capacity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MacArthur BART Station</td>
<td>128</td>
<td>90</td>
<td>20</td>
<td>68 %</td>
</tr>
<tr>
<td>IHOP</td>
<td>7</td>
<td>23</td>
<td>16</td>
<td>62 %</td>
</tr>
<tr>
<td>Park at Watts (Pixar)</td>
<td>0</td>
<td>11</td>
<td>17</td>
<td>50 %</td>
</tr>
<tr>
<td>Hollis at 45th</td>
<td>2</td>
<td>10</td>
<td>14</td>
<td>41 %</td>
</tr>
<tr>
<td>Hollis at 53rd</td>
<td>2</td>
<td>17</td>
<td>14</td>
<td>41 %</td>
</tr>
<tr>
<td>Stanford at Horton (Emery Station)</td>
<td>4</td>
<td>6</td>
<td>14</td>
<td>41 %</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>143</strong></td>
<td><strong>157</strong></td>
<td><strong>20</strong></td>
<td><strong>(overall max) 58%</strong></td>
</tr>
</tbody>
</table>

Passenger Count Details

The Passenger Count Details report provides chronology of passengers boarding, alighting and number of passengers on board at each stop for a vehicle.

This report is accessed from the Agency Reports menu or by the magnifying glass icon next to the stop name on Passenger Count by Route and Stop report.

This report shows the time the vehicle arrived at a particular stop and how many passengers got on and off the vehicle at that stop.
All data that can’t be associated to a particular stop is accumulated as “Unknown” and is listed on the very last row of this report. This happens when driver is not logged on to a job/block but is servicing the route.

**Passenger Count Details**
for 1 day starting at Mar 10, 2009

**Vehicle: v106wAPC**

<table>
<thead>
<tr>
<th>Time</th>
<th>Stop</th>
<th>Boardings</th>
<th>Deboardings</th>
<th>Passenger Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>05:47:17</td>
<td>Hollis: MacArthur BART Station (to Emeryville)</td>
<td>14</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>05:50:29</td>
<td>Hollis: HOP (to Emeryville)</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>05:50:46</td>
<td>Hollis: Park at Watts (Pisgah) (to Emeryville)</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>05:51:57</td>
<td>Hollis: Hollis at 45th (to Emeryville)</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>05:52:43</td>
<td>Hollis: Hollis at 53rd (to Emeryville)</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>05:56:45</td>
<td>Hollis: Peladeau at 50th (Emery Station) (to Emeryville)</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>05:56:09</td>
<td>Hollis: Hollis at 50th (to Emeryville)</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>05:56:59</td>
<td>Hollis: Hollis at 65th (to Emeryville)</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>05:57:37</td>
<td>Hollis: Hollis at 55th (to Emeryville)</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>05:59:59</td>
<td>Hollis: Vallejo at 65th (to Emeryville)</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>06:09:37</td>
<td>Hollis: 65th at Hollis (to BART Station)</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>06:00:08</td>
<td>Hollis: Hollis at 63rd (to BART Station)</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>06:00:32</td>
<td>Hollis: Hollis at 59th (Emery Station) (to BART Station)</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>06:01:36</td>
<td>Hollis: Hollis at 53rd (to BART Station)</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

**Vehicle Passenger Capacity**

The Vehicle Passenger Capacity report shows all the vehicles that are equipped with Automatic Passenger Counting (APC) sensors and reports the total number of seats and maximum capacity of each vehicle, which includes standing area. This is information is used by previous passenger count reports to calculate the max. load and percent full columns.
**Vehicle Passenger Capacities**

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Vehicle Type</th>
<th>Passenger Capacity (seated)</th>
<th>Passenger Capacity (total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>700</td>
<td>Ford E350</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>702</td>
<td>Bluebird</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>703</td>
<td>Bluebird</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>705</td>
<td>Thomas</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>707</td>
<td>Bluebird</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>709</td>
<td>Bluebird</td>
<td>38</td>
<td>58</td>
</tr>
<tr>
<td>800</td>
<td>Chevy 550</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>801</td>
<td>Chevy 550</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>802</td>
<td>Chevy 550</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>803</td>
<td>Chevy 550</td>
<td>39</td>
<td>39</td>
</tr>
<tr>
<td>900</td>
<td>Ford E460</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>901</td>
<td>Ford E460</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

**Silent Alarm report**

The Silent Alarm report is grouped in a tabular format by vehicle, and shows when the driver has activated the alarm and its location in latitude, longitude, along with when the silent alarm was turned off and the location.

Refer to optional management features for detail description of silent alarm functionality.
Silent alarms By Vehicle
for 3 days starting at Mar 09, 2009

for Vehicle APC 14681

<table>
<thead>
<tr>
<th>time alarmed</th>
<th>start location</th>
<th>time off</th>
<th>end location</th>
<th>resolution</th>
</tr>
</thead>
</table>

for Vehicle APC 14690

<table>
<thead>
<tr>
<th>time alarmed</th>
<th>start location</th>
<th>time off</th>
<th>end location</th>
</tr>
</thead>
</table>

for Vehicle APC 14693

<table>
<thead>
<tr>
<th>time alarmed</th>
<th>start location</th>
<th>time off</th>
<th>end location</th>
</tr>
</thead>
</table>
Assigning Vehicles to Jobs

This chapter provides an overview of vehicle and jobs and discusses how to assign vehicles to jobs:

- Using the MDT to Log In
- Communicating to Drivers
- Using the Specify Vehicle Assignment page.
- Using automated login.

Vehicles and Jobs

A job definition specifies the routes a vehicle is scheduled to run and the schedule timepoints or layovers it is supposed to observe. Transit agencies refer to a job by various terms, including: block, run, and train. Jobs typically manage an agency’s list of block ids.

NextBus defines jobs during initial system configuration and any change to defined jobs is done by NextBus. Job changes must be communicated at least two weeks in advance of the change to assure there is adequate time to implement them.

During daily operation, each operating vehicle is assigned to a job. Usually, a vehicle runs a single job during an entire day or an entire shift; however, a vehicle can be reassigned.

The predictor software uses the job information to determine the vehicle’s assigned route and schedule. It combines this information with the vehicle’s actual location, provided by AVL data, to predict vehicle arrivals at stops.

Loop Jobs

Vehicles assigned to loop jobs do not have a schedule; instead, they travel the route in a continuous loop. There are predictions for these vehicles; but not schedule adherence reports or map display.

Assigning Vehicles to Jobs

The act of assigning a vehicle to a job is called login. These methods are used for vehicle login:
• Mobile Data Terminal (MDT), used by the vehicle operator.
• Specify Vehicle Assignment web page, used by a dispatcher.
• Automated login, using work assignment data sent to NextBus by the agency.
• The Vehicle Inspector window, accessed from the Agency Map page. See Using the Vehicle Inspector on page 25.

Using the MDT to Log In

The vehicle operator can perform a login to the NextBus system by using the Mobile Data Terminal (MDT). The Mobile Data Terminal (MDT) is powered off when the vehicle engine is turned off, and is powered on again when the vehicle is started.

To monitor the MDT login process, supervisors should view the Agency Map routinely to ensure that all operators are logging in to the system.

Important! The vehicle operator must log in using a valid job/block number. If the driver does not log in, the system cannot determine the job/block to which the vehicle is assigned and the vehicle appears as gray (no-job) on the map. Traveling vehicles that are not assigned to a job/block are not assigned to any routes, either.

Vehicle Mobile Data Terminal (MDT950)

MDT950 Interface

When the bus is powered on, the MDT also powers on. The backlight is on and the message NextBus Information Systems, firmware version xx **Please wait** displays.
After the MDT connects and is ready for input, the message **NextBus Information Systems V1.01** displays.

The driver presses the SPCL1 key and enters a job ID (also called block ID or run number) on the numeric keypad. The left arrow key is used to correct input errors. The CLR key is used to abort the login process and return to the main menu.

After the driver presses the Send button, the text **Sending Message** displays and the ACK (Acknowledge) light blinks. After the message is successfully sent, the **Message Sent** message appears and the ACK light stops blinking.

If the MDT is not connected to the tracker or the tracker is not in radio contact, the message **Error Sending Message: < Not Connected >** displays. The driver can retry sending the message.

If the driver enters an invalid job ID, a message is sent to the MDT. The MDT chimes and the MSG light blinks. The operator can press the VIEW key to view the message. If the job ID entered is valid, no notification is sent to the MDT.

**Vehicle Mobile Data Terminal (MDT960e)**

**MDT960E Interface**

When the bus is powered on, the MDT also powers on. The backlight is on and the message **NextBus Inc, firmware version** displays on the top line
After the MDT connects and is ready for input, the message **NextBus Inc V2.1.0** is displayed on the top line and following menu options are displayed on the bottom:

<table>
<thead>
<tr>
<th>LOGIN</th>
<th>LOGOUT</th>
<th>MSG</th>
<th>TEXT</th>
<th>VIEW</th>
<th>LIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>F2</td>
<td>F3</td>
<td>F4</td>
<td>F5</td>
<td>F6</td>
</tr>
</tbody>
</table>

**LOGIN**

The driver presses the Login/F1 key and enters a job ID (also called block ID or run number) on the numeric keypad. The left arrow key is used to correct input errors. The CLR key is used to abort the login process and return to the main menu.

After the driver presses the <ENT> button, the text **Sending Message** displays and the ACK (Acknowledge) light blinks. After the message is successfully sent, the **Message Sent** message appears and the ACK light stops blinking.

If the MDT is not connected to the tracker or the tracker is not in radio contact, the message **Error Sending Message: < Not Connected >** displays. The driver can retry sending the message.

If the driver enters an invalid job ID, a message is sent to the MDT. The MDT chimes and the MSG light blinks. The operator can press the VIEW/F5 key to view the message. If the job ID entered is valid, no notification is sent to the MDT.

**LOGOUT**

The driver presses the Logout/F2 key to log out of the previous job/block assignment. After pressing the Logout/F2 key, the text **Sending: CMD: Logout** displays and the ACK (Acknowledge) light blinks. After the message is successfully sent, the **Message Sent** message appears and the ACK light stops blinking.

The CLR key is used to return to the main menu.

**MSG**

The driver presses the MSG/F3 key to see a list of predefined messages. Driver can scroll through a list of messages by turning the scroll wheel.

After pressing the <ENT> button, the text **Sending: Message** displays and the ACK (Acknowledge) light blinks. After the message is successfully sent, the **Message Sent** message appears and the ACK light stops blinking.
The CLR key is used to return to the main menu.

**TEXT**

The driver presses the TEXT/F4 key to compose a message. Driver enters a message using the alphanumeric keypad.

After pressing the <ENT> button, the text *Sending: Message* displays and the ACK (Acknowledge) light blinks. After the message is successfully sent, the *Message Sent* message appears and the ACK light stops blinking.

The CLR key is used to return to the main menu.

**VIEW**

The driver presses the VIEW/F5 key to read messages sent from the system or two-way text messing page. Driver can scroll through long messages by turning the scroll wheel.

**LIGHT**

The drivers presses the Light/F6 button, to turn on/off the back light on the MDT.

**Communicating to Drivers**

The vehicle’s driver and the transit agency supervisor/staff can communicate with each other using the MDT and Two-Way Text communication page.
Maps
- Agency Map
- Full Screen Map
- Replay Map

Real-Time Monitoring
- Real-time Status Monitoring
- Real-time Headway Monitoring

Management Reports
- Agency Reports
- Configuration Reports

Messages
- Create for Routes/Stops
- Create for Signs
- Current Messages
- Cancel Message
- Sign Title

Vehicles
- Specify Vehicle Assignment
- Two-Way Text Messaging

Login: apctest (APC Test)
- Edit Profile / Users
- Logout

Documentation:
- User's Guide
- Glossary
- Release Notes

Two-Way Text Messaging Menu

Use the Two-Way Messaging page to send a message and view previous messages from vehicles.
Send a Message:

Vehicle(s) to send message to

Predefined Messages

Message

Message History:

Date/Time Sent
To/From
Vehicle
Message
Sent By

Mar 16, 01:35:20PM
From
901
CMD LOGIN 9001
Driver

Mar 16, 11:59:07AM
From
901
CMD LOGIN 9001
Driver

Mar 16, 11:02:31AM
To
802
Invalid block/job: 01, please re-enter.
Nextbus System

Mar 16, 11:02:26AM
From
802
CMD LOGIN 01
Driver

Mar 16, 10:36:06AM
From
901
CMD LOGIN 9001
Driver

Two-Way Text Communication

The information on Two-Way Text messaging page includes:

Vehicle(s) to send message to

Select the vehicle ID to send a message to. User can select one or multiple vehicles from the scrollable list.

Press “All” to choose all the vehicles on the list and press “None” to deselect the vehicles from the list.

Predefined messages

User can select a predefined message from the drop down list of messages.

Selected message will appear on the Message data field.

Message

User may choose to type in a single text message or modify the predefined message.
The message field is limited to 40 characters, however messages longer than 30 characters are discouraged because driver is required to use the scroll wheel to view the entire message. A warning dialogue box is show for all messages that exceed 30 characters.

**Clear**

Click on this button, if you wish to cancel the current selection and start over again.

**Send Message**

Click on this button, if you wish to send the message to the selected vehicles.

The text messages will be added to the Message History list.

**Message History**

All messages sent and received from vehicles within the past 48 hours are shown on the Message History in chronological manner. This is the default setting. Driver login by Job/Block number, logout and automatic system generated messages are also shown on the message history.

User can click on the “Vehicle” column and sort all messages by vehicle.

The Message History is updated automatically at 30 seconds interval and shows the following information on a tabular format:

**Date/Time Sent (Zone) Column**

Date and time for each message sent or received. The Date is in “MMM, DD” format and Time is in “HH:MM:SS am/pm” format and adjusted for transit agency’s time zone.

**To/From Column**

To means the message was sent to the vehicle from Two-Way Text Messaging page. From means the message was sent from the vehicle.

**Vehicle Column**

Vehicle is the vehicle identifier.

**Message Column**

Message sent or received to/from the vehicle. Messages sent to vehicles are colored green and messages sent from vehicles are colored blue.
All communication activities between driver and the system are also shown on this column. For instance, driver login information from MDT960 is shown as “CMD: LOGIN ####”.

Sent By

The login name of the originator of the message is shown in the Sent by column.

All Messages sent from the vehicle are marked as sent by the “Driver”, and system generated messages sent to the driver, such as “invalid block/job, please re-enter”, are marked as sent by “NextBus System”.

Using the Specify Vehicle Assignment Page

To access the Specify Vehicle Assignment page, click the Specify Vehicle Assignment link on the Vehicle Assignment menu.
Maps
- Agency Map
- Large Map
- Full Screen Map
- Replay Map

Messages
- Create for Routes/Stops
- Create for Signs
- Current Messages
- Cancel Message
- Sign Title

Management Reports
- Agency Reports
- Configuration Reports

Vehicle Assignment
- Specify Vehicle Assignment

Login: "Emily S"
- Edit Profile / Users
- Logout

Documentation:
- User's Guide
- Phone Server Guide
- Glossary
- Release Notes

Vehicle Assignment Menu

Use the Specify Vehicle Assignment page to assign vehicles to jobs or remove vehicles from jobs.
Specify Vehicle Assignment page

This is the information on the Vehicle Assignment page:

**Vehicle ID**
Select the vehicle to assign.

**Route**
Select the route for the vehicle assignment. If you select a route before selecting a vehicle, only the vehicles available to the route are available for selection in the vehicle list.

**Job**
Select the job for vehicle assignment.

**Put Vehicle on Job**
Click this button to assign the vehicle to the job. A confirmation window appears.

**Take Vehicle off Job**
Click to remove the vehicle from the job.

After the vehicle is successfully assigned to or taken off a job, this confirmation message appears.
Automated Login

With some agencies, NextBus has configured a system for automated job / block assignment. To use automated login, the agency must transmit a data file in a specified format before jobs begin. Once the data is received and validated, NextBus uses it as a default lookup to determine the job for each vehicle and place the vehicle on job.

This automated login can be overridden either when the driver logs in using the MDT or a dispatcher assigns the vehicle to a new job using the Vehicle Assignment web page.
Managing Users

This chapter provides an overview of users and user permissions and discusses how to:

- Sign in and out of the authorization system.
- Select users for update.
- Add users.
- Select update actions.
- Update user profiles.
- Update user permissions.
- Delete users.

Terminology Used in This Chapter

Authorization System
A subsystem that enables you to manage users. You must log in to these pages separately from the main agency page.

Permission
A security restriction that controls the pages that a user can access and the system functions the user can perform.

Profile
Information about the user, including name, telephone number, and email address.

Group
A group is used to associate login IDs with an organization level for the purpose of controlling user access to routes. The organization, or group, is associated with routes and users in the group can only access the routes with which the group is associated. NextBus must configure groups during system configuration for those agencies that wish to use this functionality.

User Name
The unique name that identifies a user to the system. This is associated with a user profile, password, and permissions. This is also called a login ID, user ID, or signin.
Understanding Users and Permissions

Users with a valid user name and password can access agency management pages from any Internet connected computer. Access expires after four hours and the user is required to log in again. However, if a map is running, it continues to run until the user requests a change to the map.

Each system user is assigned a personal user name and password. To ensure that users can view and update only the data for which they are authorized, the user name is granted one or more permissions. To access a transit management page, the user must have the appropriate permission to view and update data on that page. The permissions are:

**View**

Enables the user to view and update information on the main agency page and the agency map pages. This is the basic level of security. All users must have at least View permission.

**SendMessage**

Enables the user to view pages under the Messages menu and send messages to stops and signs.

**Reports**

Enables the user to run and view management reports.

**SpecifyJob**

Enables the user to assign vehicles to jobs and remove vehicles from jobs.

**View Authorization Pages**

Enables the user to view users and permissions in the authorization pages.

**ModifyUsers**

Enables the user to perform system administration functions—add, modify, and delete users—in the authorization pages.

NextBus assigns an Administrative User login to each agency. This login has permission to create additional user names, modify user profiles and assign access permissions. The Administrative User can add as many users as required, and grant ModifyUsers permission to other users.

**Note:** All users can modify their own profiles.
Accessing the User Management Pages

To access the user management pages, click the Edit Profile / Users link under the Login: name heading on the main agency page. Note that the name shown on this menu is your first and last name, not the username with which you sign in.

Maps
- Agency Map
- Large Map
- Full Screen Map
- Replay Map

Messages
- Create for Routes/Stops
- Create for Signs
- Current Messages
- Cancel Message
- Sign Title

Management Reports
- Agency Reports
- Configuration Reports

Vehicle Assignment
- Specify Vehicle Assignment

Login: "Emily S"
- Edit Profile / Users
- Logout

Documentation:
- User’s Guide
- Phone Server Guide
- Glossary
- Release Notes

The Administrative User login is created by NextBus during system configuration. All other agency logins and users are created by the Administrative User.
Note: Administrative users can also access the user management pages from the agency login page.

Authorization Login

On the Authorization Login window, enter the same user name and password that you used to login to the agency management page.

The actions you can perform after login depend on the permissions that are associated with your user name.

- If you have the ModifyUsers permission, you can add, modify, or delete users.
- If you have View Authorization Pages permission, you can view the permissions that are assigned to user names.
- If you have View permission, you can modify your own user profile.
Selecting Groups

If your agency has defined multiple groups to which users can belong, you must next use the Select Agency/Grouping page to select the user’s group.

<table>
<thead>
<tr>
<th>Agency/Grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Agencies and Groups</td>
</tr>
<tr>
<td>AC Transit, CA</td>
</tr>
<tr>
<td>Alexandria DASH, VA</td>
</tr>
<tr>
<td>Amerimar</td>
</tr>
<tr>
<td>Black Hawk Transportation Authority, CO</td>
</tr>
<tr>
<td>Camarillo Area (CAT), CA</td>
</tr>
<tr>
<td>Case Western University, OH</td>
</tr>
<tr>
<td>DART First State, DE</td>
</tr>
<tr>
<td>Emery-Go-Round, CA</td>
</tr>
<tr>
<td>Fairfax (CUE), VA</td>
</tr>
<tr>
<td>Fort Myers, FL</td>
</tr>
<tr>
<td>Georgia State Campus, GA</td>
</tr>
<tr>
<td>Georgia Tech Campus, GA</td>
</tr>
<tr>
<td>Glendale Beeline, CA</td>
</tr>
<tr>
<td>Howard County, MD</td>
</tr>
<tr>
<td>Loyola College, MD</td>
</tr>
<tr>
<td>Moorpark Transit, CA</td>
</tr>
<tr>
<td>National Institutes of Health, MD</td>
</tr>
</tbody>
</table>
Selecting Users for Update

If you are an administrative user with the ModifyUsers permission, the Select a User … page appears next. On this page, you can either select an existing user to modify or add a new user.

Select a User for Agency/Grouping "Emery-Go-Round, CA"

You are logged in as "Emily S". Because you are an administrator you can modify the profiles of other users. Please select a user or click on the "Add new user" link.

Select a User:
- Admin1, Emery (airporter)
- Admin2, Emery (avon)
- Isaac, Lauren (NextInsight)
- Nesbitt, Bryce (bnesbitt)

Group: guests
- Demonstrator, Sales (nbdemo)

or
- Add new user

BACK

Select a User … page

Note: You can click the Logout button on any of the user management pages to sign out of the authorization subsystem.
Adding Users

Click the Add new user link on the Select a User … page. This initiates a sequence of pages on which you:

- Enter user profile information. When the user profile is entered and saved, the new user is created with no permissions.
- Assign user permissions.

These pages function similarly to the pages where you update user profiles and user permissions.

Selecting Update Actions

Use the Managing User page to select the next user action to perform. This page appears after you either save a new user profile or select a user to modify.

Managing User "Bryce Nesbitt" for Agency/Grouping "Emery-Go-Round, CA"

You are logged in as "Emily S". Please select an action to perform for user "Bryce Nesbitt".

- Update User Permissions
- Update User Profile
- Update Agencies User Can Access
- Delete User

Managing User page

On this page, you select an action to perform for the user. You can:

- Update user permissions.
- Update a user’s profile.
• Update the agencies a user can access.
• Delete a user.

**Updating User Profiles**

Users with ModifyUser permission can modify profiles of others as well as their own. Users without this permission can only modify their own profiles.

To update the user profile, use the Modify Profile for User … page.

![Modify Profile for User page](image-url)
The same page is used to enter a profile for a new user and to modify a profile for an existing user. However, when modifying an existing user profile you cannot change the login or password.

All users can modify their own profile from this screen selection.

This is the profile information:

**Login**
Enter the user name for the new user. Logins must be unique throughout the system. Complex logins are recommended, for example *wbsmith12* instead of *bill*.

*Note:* Upper and lower case letters are different in this system. For example, the Login *Abcdefg* is different from the login *abCDEFG*.

**Password**
Enter the password for the user name. Complex passwords that contain both upper case and lower case letters and at least one number are encouraged, for example *Mb28kdfP*.

**First Name and Last Name**
Enter the user’s first and last name.

**Grouping**
Enter the group to which the user belongs.

**Email Address**
Enter the user’s email address.

**Phone Number**
Enter the user’s telephone number.

**Notes**
Enter free-form notes pertaining to the user login.

When the profile is complete, click Save to save the profile and continue to the next page or Cancel to return to the previous page without saving.
Changing Passwords

To change the password, click the Change Password link, enter a new password and confirm the password, and click Save.

Changing Password page
Updating User Permissions

To update user permissions, use the Managing Permissions for User page.

<table>
<thead>
<tr>
<th>Enabled</th>
<th>Class</th>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>TransitAgency</td>
<td>View</td>
<td>View agency pages</td>
</tr>
<tr>
<td>✓</td>
<td>TransitAgency</td>
<td>Reports</td>
<td>View or Run Reports</td>
</tr>
<tr>
<td></td>
<td>TransitAgency</td>
<td>SendMailMessage</td>
<td>Send message to signs</td>
</tr>
<tr>
<td>✓</td>
<td>TransitAgency</td>
<td>SpecifyJob</td>
<td>Put Bus On Job</td>
</tr>
<tr>
<td></td>
<td>TransitAgency</td>
<td>EditData</td>
<td>Edit certain tables in database</td>
</tr>
<tr>
<td></td>
<td>TransitAgency</td>
<td>CreateReports</td>
<td>Create new reports using powerful Generic Query feature</td>
</tr>
<tr>
<td></td>
<td>Authorization</td>
<td>AuthorizationView</td>
<td>View users</td>
</tr>
<tr>
<td></td>
<td>Authorization</td>
<td>ModifyUsers</td>
<td>Add or modify users</td>
</tr>
<tr>
<td></td>
<td>TransitAgency</td>
<td>InternalTools</td>
<td>Tools for NextBus internal use</td>
</tr>
</tbody>
</table>

Managing Permissions for User page

The permission classes, Authorization and TransitAgency, are for informational purposes only and do not affect the ability to assign permissions. You can set up any combination of permissions for any user. The most commonly used permissions are View and Reports.

To specify the user’s permissions, select or deselect the Enabled check box for each listed permission. When finished, click Save to commit the changes and return to the previous page or Cancel to return to the previous page without saving.
Update Agencies User Can Access

Certain agencies might coordinate the activities of several independent sub-agencies. For example, a regional transit authority might consist of different transit agencies for each municipality within the region or for each transit mode (electric train, subway, bus, ferry, etc).

The Managing Agencies for User page enables you to select the agencies that a user is permitted to access.

Managing Agencies for User "Bryce Nesbitt"

Welcome "Emily S". Please specify the agencies user "Bryce Nesbitt" should have access to. Then click the SAVE button to proceed.

NOTE: Adding a new agency for a user does not give the user permissions for that agency. After adding a new agency and clicking on the SAVE button you must hit the BACK button until the "Select Agency/Grouping" page is reached, select the new agency, select the user, and then specify the permissions for the new agency. This must be done for each agency added.

- All Agencies and Groups
- AC Transit, CA
- Alexandria DASH, VA
- Amerimar
- Black Hawk Transportation Authority, CO
- Camarillo Area (CAT), CA
- Case Western University, OH
- DART First State, DE
- Emery-Go-Round, CA
- Fairfax (CUE), VA
- Fort Myers, FL
- Georgia State Campus, GA
- Georgia Tech Campus, GA
Deleting Users

To delete a user, select Delete User on the Managing User page. The Deleting User page appears.

![Deleting User page](image)

Click Delete to continue with the delete or Cancel to return to the Managing User page without deleting.
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