StreetSmart

Web Services Developer Guide

Contents

Introduction

StreetSmart is mobile workforce management application that is delivered as an on-demand application. StreetSmart allows companies to measure manage and optimize their mobile service organizations through a suite of application functionality. The StreetSmart suite of web services allows 3rd party software systems to send and retrieve information from the StreetSmart system.

Integration can be accomplished using a series of different technologies depending upon your needs and existing infrastructure.

Integration can be accomplished in many ways. Depending on whether you need to information returned to you on a five-minute interval or only need information on a daily or weekly basis will affect which integration technology you choose. Below are the available technologies and suggested uses.

Overview

StreetSmart offers a series of web services that allow customers and partners to extend and leverage existing investments in other software and systems by synchronizing and sharing data between the systems. StreetSmart web service APIs are SOAP based implementation. The list of services and APIs are exposed through WSDL. A WSDL document describes web service. In WSDL you may notice multiple versions (v0.0.1, v0.0.2, etc.) and types (wrapped and RPC). The difference between wrapped and RPC is, the response in wrapped service will not have type encoding info (ex. integer/String/float) and size is less compared to the RPC response. The SOAP based services are strictly typed so adding new version is the only way to add new properties without breaking the existing integration. The latest version will have additional data so always integrate with latest version.

Authentication

Access to the StreetSmart web services is provided via a username/password/company id combination of authentication information. This combination of information must be passed on each web service request. The capabilities and access of the requesting user are determined by the web services user specified role and associated security permissions.

The authentication parameters are passed in the HTTP header, this is commonly confused with the SOAP header. The parameters need to be passed with each request.

To view WSDL or connect to web services go to the following URL:

Web Service URL

https://webservices.streetsmartmobile.com

IMPORTANT NOTE

If you are not using the above URL for your web service calls, we strongly encourage you to migrate from your existing SHA-1 web service URL to the above URL which uses SHA-2 based SSL certificate. The SHA-2 based URL provides more security against malicious attacks than SHA-1 URL. Also, many leading browser and certificate vendors industry consortium have stopped supporting SHA-1 based URLs."

You will be prompted to enter your web service user credentials to gain access to the services and WSDLs. You can create a web service user by logging into the application as an administrator and creating a user with a web service role.

The username for web services will be a combination of the username for the user and the company (username@companyID). For example, the username for a user with a username of bob in company 9999 would be bob@9999. The password will be the password for the web service user.

You will be prompted to enter your web service user credentials to gain access to the services and WSDL"s. You can create a web service user by logging into the application as an administrator and creating a user with a web service role.

The username for web services will be a combination of the username for the user and the company (username@companyID). For example, the username for a user with a username of bob in company 9999 would be bob@9999. The password will be the password for the web service user.

Polling & Usage Restrictions

The StreetSmart web services system is designed to allow the user to keep their system synchronized with other back office systems. Here are a couple restrictions to keep in mind when querying the system for data.

- The StreetSmart system limits web service responses to returning up to 500 items. If you request returns more than 500 items, try limiting the date range or other filter ranges you're querying for.
- The StreetSmart system limits querying for data from a specific web service method to once every five minutes. Web service requests that happen more often are subject to being rejected by the system. The service will return an error if hourly usage is exceeded.
- The StreetSmart system is monitored for excessive usage and reserves the right to turn off web service accounts for excessive usage. Customers whose web services accounts are turned off due to excessive usage will be notified of the revoked credentials by StreetSmart customer support.

Throttling

The Throttling filter protects a Web Service or Service Oriented Architecture (SOA) from message flooding. The throttle is in place to protect the system performance from customers who may be experiencing an issue with their integration from overwhelming the system for long periods of time. If the number of calls exceeds the specified limit, the filter rejects the calls. If a call is rejected, then wait for the specified period and then calls will start working automatically. There are a very few specific scenarios which might necessitate raising the throttles slightly, if you believe your business requires this, please contact our support department for

guidance and review of your integration to determine if your throttle limit can/will be modified.

We have following type of throttling

Time based limits:

a. **Per minute throttling** – 25 calls per service
b. **Per hour throttling** – 250 calls per service

Per hour throttling

This rule limits the total number of API calls per service per hour. The default limit is 250 request/service/hour. This means if your integration is using UserStatusService and JobService, you are allowed to make 250 call for UserStatusService and 250 calls for JobService within an hour. If you constantly get throttling exception, then please check the call pattern. For example, a company having 200 mobile workers and 4 divisions which requires to create 400 jobs in a day can use following call pattern

Call createJobs API with 25-50 jobs instead of calling createJob 400 times.

Make one getJobs call or four getJobsByDivision calls (1 call per division), instead of calling getJobsByWorker 200 times (1 call for each worker).

Make 1 getWorkers or 4 getWorkersByDivision call instead of calling getWorkerByName 200 times.

Per minute throttling

This rule limits the total number of API calls per service per minute. The default limit is 25 requests per minute. This throttle makes sure you aren't overwhelming the system with a ton of near-simultaneous requests. If your application makes relatively few requests (under your hourly limit described above), you may need to ensure your integration does not try to make too many requests at a time. For example, if you need to call getJobByReferenceNumber on 100 different jobs every hour, plan on taking over 4 minutes to complete (25/minute) by giving 3-5 seconds delay between consecutive calls. If you have to create 1000 jobs for the whole day, then use createJobs API with 20-50 jobs in each call and make 1 to 2 calls per minute. This pattern would create all the jobs within an hour.

Volume based limits:

The maximum image size in get calls is 500 MB.

This rule limits the total size of all images in a single "get" call. The limit is 500 MB. If a call has images more 500 MB, then the service will throw an exception. If the client gets this exception, then call the API by reducing the date range or number of groups.

System Integration and Troubleshooting

The client system can be integrated with web services using various technologies or 3rd party software systems. When choosing amongst alternatives for creating web services clients choose the latest and best technologies which is cost effective and easy to integrate. The best approach to have integration which can be scheduled and having a back-end storage system (like MSACCESS, Oracle, MySQL) to store the data.

Before starting the integration, identify the APIs that best suits your business/requirement. Make regular requests for small and fixed duration and store the data. This will make your integration robust. We have exposed large number of APIs for convenience. Select the APIs based on the number of Mobile workers, Number of divisions, Number of Jobs per day etc. You can contact our support department for more assistance.

Example 1:

Requirement: Need to create jobs 1 at a time based on need and no fixed number of jobs per day.
Solution: Can use createJob or createJobs API to create Job. To get the job information can use getJobs API or getJobsByDivision if the data is required per division separately.

The get calls can made 1 call per hour for 1 hour duration / 2 calls per hour for 30 mins duration / 1 call per 2 hour for 2 hour duration.

Example 2:

Requirement: Need to create 1000 Jobs before 5:00 AM.

Solution: Use createJobs API with 50-100 jobs in a call. Make sure that client will wait sufficient time (2-5 minutes) before resubmitting same data in case of no response. It is better to give 1-3 minutes delay between the calls. The client should not try to push all the jobs at a time with multiple threads.

Best practices

1. Make calls at regular interval.
2. Use multi-threads but make sure that client doesn't make all the calls at a time. Give sufficient time gaps between the calls.
3. Make different API calls in different try - catch block so if one API fails it will not bring the client to halt.

Trouble shooting

General

Check the time-out value of the client, other network devices like router, proxy etc. and make sure that it is not less than 1 minute. It is preferable to set the client timeout to 5-10 mins in cases when there is a large response size and/or when the calls take a longer duration to complete.

.Net

1. Make sure that client is using the most recent version of the .NET Framework.
2. Disable the keep-alive feature. In the .NET Framework, set the HttpWebRequest.KeepAlive property to FALSE. Setting the keep-alive to false sets it to close and reopen connections for each request.
3. Set ServicePointManager.MaxServicePointIdleTime property to less than the timeout value of the server keep-alive connection.

Security & Roles

Access to StreetSmart web services are controlled by the role of the user making the request. Each web service request must contain a valid username and password for the requesting user. If an invalid username and password are provided access to the service is restricted. The default web service role is configured with all web service permissions for the company. The permissions available to roles within a company are controlled by the package or features available to a company or account. The following is a list of all permissions that are available:

Web Service available by package:

Service	Lite/Locator	Silver/Standard	Gold/Premier
Company Admin Service		√	√
User Status Service		√	√
Location Service		√	√
Message Service		√	√
Alert Service		√	√
Job Service			√
GPS Service			√

Methods available by Service:

Web Service	Method	Permission
GpsService-0.0.1	getGpsByWorker	GPS Read getGps
		GPS Read
	getGpsbydivision	GPSRead
	submitGps	Submit GPS
	getStopsandTravel	Stop/Travel Read
	getStopeandTravelByWorker	Stop/Travel Read
	getStopsAndTravelByDivision	Stop/Travel Read
	getStops	Stop/Travel Read
	getStopByWorker	Stop/Travel Read
	getStopsByDivision	Stop/Travel Read

	getTravel	Stop/Travel Read
	getTravelByWorker	Stop/Travel Read
	getTravelByDivision	Stop/Travel Read
CompanyAdminService-0.0.1	getWorkers	Worker Read
	getWorkerByName	Worker Read
	getWorkersByName	Worker Read
	createCompany	Company Create
	createWorker	Worker Create
	updateWorker	Worker Update
	createOrUpdateWorker	Worker Update
	deleteWorker	Worker Delete
	createDevice	Device Create
	getDevice	Device Read
	getDevices	Device Read
	updateDevice	Device Update
	createOrUpdateDevice	Device Update
	deleteDevice	Device Delete
	linkDeviceToWorker	Device Link
	getDivisions	All Groups or Divisions
CompanyAdminService-wrapped-0.0.2	createGroup	Group Create
	getGroups	Division Read
	createCompany	Company Create
	deleteGroups	Group Delete
	createDevice	Device Create
	getWorkers	Worker Read
	getWorkerByName	Worker Read
	getWorkersByName	Worker Read
	getDevice	Device Read
	getDevices	Device Read
	deleteDevice	Device Delete
	updateDevice	Device Update
	createOrUpdateDevice	Device Update
	linkDeviceToWorker	Device Link
	createWorker	Worker Create
	updateWorker	Worker Update
	createOrUpdateWorker	Worker Update
	deleteWorker	Worker Delete
	getDivisions	All Groups or Divisions
	updateGroup	Group Update
	populateWorkerCustomStatus	Worker Update
MessageService-0.0.1	sendMessage	Send Message
UserStatusService-0.0.1	getTimesheets	Timesheets Read
	getTimesheetsByWorkerName	Timesheets Read
	submitUserAction	User Action Create
	getTimecardActions	Timesheets Read
	getTimecardActionsByWorkerName	Timesheets Read
	getUserForms	UserFormsRead
	getUserFormsByWorkerName	UserFormsRead

	getUserFormsByFormName	UserFormsRead
JobService-0.0.1	createJobs	Job Create
	updateJobs	Job Update
	createOrUpdateJobs	Job Create and Job Update
	createJob	Job Create
	updateJob	Job Update
	createOrUpdateJob	Job Create and Job Update
	getJobByReferenceNumber	Job Read
	SubmitJobAction	Submit Job Action
	getJobs	Job Read
	getJobsByDivision	Job Update
	assignWorkerToJob	Job Update
	deleteJob	Job Update
	restoreJob	Job Update
	terminateJob	Job Update
	terminateJobForWorker	Job Update
	unassignJob	Job Update
	removeWorkerFromJob	Job Update
	assignWorkerAndUpdateJob	Job Update
	getUpdatedActions	Job Update
	getUpdatedActionsByDivision	Job Update
	getJobActions	Job Update
	getJobActionsByDivision	Job Update
	createLocation	Location Create
	updateLocation	Location Update
Location Service- 0.0.1	createorUpdateLocation	Location Create and Location Update
	getLocationsByLocationType	Location Read
	deleteLocation	Deletes Location
	getFiredAlerts	Fired Alert Read
Alert Service-0.0.1	getFiredAlertsByWorker	Fired Alert Read
	getFiredAlertsByDivision	Fired Alert Read

Methods Available by Service:

Web Service	Method	Permission
JobService-v0.0.3, 0.0.4 and 0.0.5	createJobs	Job Create
	updateJobs	Job Update
	createOrUpdateJobs	Job Create and Job Update
	getJobByReferenceNumber	Job Read
	SubmitJobAction	Submit Job Action
	getJobs	Job Read
	getJobsByDivision	Job Update
	assignWorkerToJob	Job Update
	deleteJob	Job Update
	restoreJob	Job Update
	terminateJob	Job Update
	terminateJobForWorker	Job Update
	unassignJob	Job Update
	removeWorkerFromJob	Job Update
	assignWorkerAndUpdateJob	Job Update
	getUpdatedActions	Job Update

	getUpdatedActionsByDivision	Job Update
	getJobActions	Job Update
	getJobActionsByDivision	Job Update
	cacelJobs	Job Update

Date & Time Formats

The StreetSmart web services utilize dates and date ranges to allow the web service user to poll for data over a specified date range. The StreetSmart web services use GMT/UTC date time zone for the date ranges of all queries. When making a web service request to the StreetSmart system, the web service will query items that have been created or updated during the date range specified. The date range queried looks at changes to the StreetSmart system during that timeframe, meaning that events that may have taken place in the past (GPS, Timecard Actions) which may have been stored and forwarded on a device will have a last updated date time of when they"re received. These events will also have an entry date time that specifies when the event actually took place. The StreetSmart system allows you to synchronize data using continuous date ranges that are inclusive on the startDate but exclusive on the endDate. When querying over a date range you should use the endDate provide to you as the startDate for your next query. The endDate returned is the StreetSmart system time and using it as your start date time will ensure no data is duplicated or missed.

The format of the date/time is as

follows: YYYY-MM-DD HH:MM:SS.MMM

Dates are stored in GMT/UTC so query parameters and returned data will be in this offset and format.

For example February 13, 2006 12:45 PM would

be 2006-02-13 12:45:00.000

User Status Service

getTimesheets

(SvDate start, SvDateHolder end)

Description

This web service allows the retrieval of all timesheets completed by *all* workers in a company within a date range. The start and end dates must be specified in UTC. A timesheet is only created once a shift is completed. For example a shift starts when a user performs a Start Shift and ends once a Start Break or End Shift action is performed. The timesheet shift will not be available to be queried until the shift is complete or closed.

Method Signature

Ordinal	DataType	Can be Null?	Description
start	SvDate	No	The starting time of the search range. The start date is inclusive. The start date must be a UTC date.
end	SvDateHolder	No	The ending time of the search range. The end date is exclusive. The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. The current database time is then returned to the caller.
Return Result	SvTimesheet[]	No	For each timesheet that is found, a fully populated SvTimesheet object will be returned. If no timesheets are found, an empty array is returned.

SvTimesheet

Field	DataType	Comments
timecardName	String	The shift name. Is one of the following: On Duty, On Break, Off Duty, Logged In
workerName	String	The name of the worker who"s timesheet it is.
startDate	SvDate	Timestamp of when the shift was started

endDate	SvDate	Timestamp of when the shift was ended. Can be null if the shift has not ended.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.

getTimesheetsByWorkerName

(String workerName, SvDate start, SvDateHolder end)

Description

This web service allows the retrieval of all timesheets completed by a specified worker within a date range.

Method Signature

Ordinal	DataType	Can be Null?	Description
workerName	String	No	The username of the worker whose timesheets are to be returned.
start	SvDate	No	The starting time of the search range. The start date is inclusive. The start date must be a UTC date.
end	SvDateHolder	No	The ending time of the search range. The end date is exclusive. The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
Return Result	SvTimesheet[]	No	For each timesheet that is found, a fully populated SvTimesheet object will be returned. If no timesheets are found, an empty array is returned.

SvTimesheet

Field	DataType	Comments
timecardName	String	The shift name. Is one of the following: On Duty, On Break, Off Duty, Logged In
workerName	String	The name of the worker who"s timesheet it is.
startDate	SvDate	Timestamp of when the shift was started
endDate	SvDate	Timestamp of when the shift was ended. Can be null if the shift has not ended.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*The worker name cannot be null.*" – Thrown if the workerName is null or blank.
"*Could not find a worker with the username.*" – Thrown if the worker corresponding to the input workerName cannot be found.

GetTimecardActions

(SvDate start, SvDateHolder end)

Description

The *getTimecardActions* service method provides the ability to retrieve timecard information over a specified time range. Only timecard data which was actually received by the system during the time range is returned. Thus, due to network latency or cell coverage issues between the mobile device and the server, this may result in SvUserAction objects being returned that have an excutionDateTime earlier than the startDate of the query. Form data is included within the SvUserAction
object if a form was associated with the timecard. Note that login and logout actions are also returned as timecard data.

Method Signature

Ordinal	DataType	Required	Description
startDate	SvDate	Yes	Starting date for the range to check for changes. Starting date is inclusive

endDate	SvDateHolder	Yes	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserAction[]	Yes	An array of SvUserAction objects. An empty array is returned if no timecards are found. See documentation on SvUserAction for more details.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetTimecardActionsByWorkerName

(String workerName, SvDate start, SvDateHolder end)

Description

The getTimecardActionByWorkerName service method provides the ability to retrieve timecard information for a specific worker over a specified time range. Only timecard data which was actually received by the system during the time range is returned. Thus, due to network latency or cell coverage issues between the mobile device and the server, this may result in SvUserAction objects being returned that have an excutionDateTime earlier than the startDate of the query. Form data is included within the SvUserAction object if a form was associated with the timecard.

Method Signature

Ordinal	DataType	Required	Description
workerName	String	Yes	The username of the worker whose timecards are to be returned.
startDate	SvDate	Yes	Starting date for the range to check for changes. Starting date is inclusive
endDate	SvDateHolder	Yes	Ending date for the range to check for changes. Ending date is exclusive.

Return Result	SvUserAction[]	Yes	An array of SvUserAction objects. An empty array is returned if no timecards are found. See documentation on SvUserAction for more details.

Validation Errors

"The start date cannot be null." – thrown if the start date is null
"The end date cannot be null." – thrown if the end date is null
"The end date must be after the start date." – thrown if the start date is after the end date.
"You are only allowed to query for 7 days of data at a time." – thrown if an attempt is made to query for more than 7 days of data.
"The worker name cannot be null." – Thrown if the workerName is null or blank.
"Could not find a worker with the username." – Thrown if the worker corresponding to the input workerName cannot be found.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetUpdatedTimecardActions

(SvDate start, SvDateHolder end)

Description

This *API* works similar to getTimecardActions. The API returns the timecard actions created or edited during the specified time range. The response includes an additional property actionId which can be used to uniquely identify a timecard action. Form data is included within the SvUserActionUpdate object if a form was associated with the timecard. The excutionDateTime in SvUserActionUpdate might be earlier than the start date some time due to network latency or cell coverage issues between the mobile device and the server. Note that login and logout actions are also returned as timecard data.

Method Signature

Ordinal	DataType	Required	Description
startDate	SvDate	Yes	Starting date for the range to check for changes. Starting date is inclusive

endDate	SvDateHolder	Yes	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserActionUpdate[]	Yes	An array of SvUserActionUpdate objects. An empty array is returned if no timecards are found. See SvUserActionUpdate for more details.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetUpdatedTimecardActionsByWorkerName

(String workerName, SvDate start, SvDateHolder end)

Description

This *API* works similar to getTimecardActionsByWrokerName. The API returns the timecard actions created or edited during the specified time range for a given worker. The response includes an additional property actionId which can be used to uniquely identify a timecard action. Form data is included within the SvUserActionUpdate object if a form was associated with the timecard. The excutionDateTime in SvUserActionUpdate might be earlier than the start date some time due to network latency or cell coverage issues between the mobile device and the server. Note that login and logout actions are also returned as timecard data.

Method Signature

Ordinal	DataType	Required	Description
workerName	String	Yes	The username of the worker whose timecards are to be returned.

startDate	SvDate	Yes	Starting date for the range to check for changes. Starting date is inclusive
endDate	SvDateHolder	Yes	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserActionUpdate []	Yes	An array of SvUserActionUpdate objects. An empty array is returned if no timecards are found. See documentation on SvUserActionUpdate for more details.

Validation Errors

"The start date cannot be null." – thrown if the start date is null
"The end date cannot be null." – thrown if the end date is null
"The end date must be after the start date." – thrown if the start date is after the end date.
"You are only allowed to query for 7 days of data at a time." – thrown if an attempt is made to query for more than 7 days of data.
"The worker name cannot be null." – Thrown if the workerName is null or blank.
"Could not find a worker with the username." – Thrown if the worker corresponding to the input workerName cannot be found.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetUserForms

(SvDate start, SvDateHolder end)

Description

The *getUserForms* service method allows the download of user forms both adhoc forms and those forms associated with a timecard action. Only forms which were actually received by the system during the time range is returned. Thus, due to network latency or cell coverage issues between the mobile device and the server, this may result in SvUserAction objects being returned that have an excutionDateTime earlier than the startDate of the query. There are multiple overloaded versions of this method.

Method Signature

Ordinal	DataType	Can be Null?	Description

startDate	SvDate	No	Starting date for the range to check for changes. Starting date is inclusive.
endDate	SvDateHolder	No	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserAction[]	No	An array of SvUserAction objects. An empty array is returned if no forms are found.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetUserFormsByWorkerName

(String workerName, SvDate start, SvDateHolder end)

Description

The *getUserFormsByWorkerName* service method allows the download of user forms both adhoc forms and those forms associated with a timecard action. Only forms which were actually received by the system during the time range is returned. Thus, due to network latency or cell coverage issues between the mobile device and the server, this may result in SvUserAction objects being returned that have an excutionDateTime earlier than the startDate of the query.

Method Signature

Ordinal	DataType	Can be Null?	Description
workerName	String	No	Only forms for this worker will be retrieved.
startDate	SvDate	No	Starting date for the range to check for changes. Starting date is inclusive.
endDate	SvDateHolder	No	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserAction[]	No	An array of SvUserAction objects. An empty array is returned if no forms are found.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time.*" – thrown if an attempt is made to query for more than 7 days of data.
"*The worker name cannot be null*." – Thrown if the workerName is null or blank.
"*Could not find a worker with the username.*" – Thrown if the worker corresponding to the input workerName cannot be found.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

GetUserFormsByFormName

(String formName, SvDate start, SvDateHolder end)

Description

The *getUserFormsByFormName* service method allows the download of user forms both adhoc forms and those forms associated with a timecard action. Only forms which were actually received by the system during the time range is returned. Thus, due to network latency or cell coverage issues between the mobile device and the server, this may result in SvUserAction objects being returned that have an excutionDateTime earlier than the startDate of the query.

Method Signature

Ordinal	DataType	Can be Null?	Description
formName	String	No	Only instances of the specified form will be returned.
startDate	SvDate	No	Starting date for the range to check for changes. Starting date is inclusive.
endDate	SvDateHolder	No	Ending date for the range to check for changes. Ending date is exclusive.
Return Result	SvUserAction[]	No	An array of SvUserAction objects. An empty array is returned if no forms are found.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*The form name must be populated*" – Returned if the form name is blank.
"*Could not find an active form with form name = <formName>*" – Returned if a form with the submitted form name cannot be found in the StreetSmart system.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

submitUserAction

(SvUserAction userAction)

Description

This service allows a user action to be submitted. It is similar in functionality to the MDM1013 that exists on the device bridge. The SvUserAction object must have a workerName value of a worker that is in the StreetSmart system. The actionName must be one of a set of valid actions. At this time, form data cannot be submitted through this method. This method requires that the specified worker must already be associated with a device in the StreetSmart system.

Method Signature

Ordinal	DataType	Can be Null?	Description
userAction	SvUserAction	No	The user action that has been executed. See the description of SvUserAction. A non-zero result code will be returned within the SvResult object if the actionName, dateTime or workerName is empty or null or the actionName is not one of a set of defined values.
Return Result	SvResult	No	A result object that indicates if the operation was successful. Any error codes or error messages will be returned here.

Validation Errors

"The worker name cannot be null." – Returned if the workerName field on the SvUserAction object is null or blank.
"Could not find a worker with the username: <username>" – Returned if the worker specified cannot be found.

"The execution datetime must be populated in the SvUserAction object." – Returned if the dateTime field on the SvUserAction object is null or blank.

"The action name must be populated in the SvUserAction object." – Returned if the actionName field on the SvUserAction object is null or empty.

"Unrecognized action name. The action name must be one of: 'Login', 'Exit', 'Start Shift', 'End Shift', 'Start Break', 'End Break' " – Returned if an invalid value is entered for the action name.

"A device could not be found for the input worker." – Returned if the worker is not associated with a device in the StreetSmart system.

Job Service

Job service provides a set of APIs to manage jobs. This service includes APIs to create/update/ delete job, get job details, actions and action updates. As a part of enhancement, we have added new features like invoice, dispatcher Id etc. To provide the web service support for these enhancements we have added new versions over time. The latest version of job service is jobservice-0.0.6. The following table will help to identify the new features in each version.

Version	**What's New**
Job Service-0.0.1 JobService-wrapped-0.0.1	Initial implementation
JobService-wrapped-0.0.2	Resolved discrepancy between the targetnamespace definition in the WSDL and the actual returned namespace in the web service response. **Change reflects in APIs** All
JobService-0.0.3 JobService-wrapped-0.0.3	**SvcJob** SvString dispatcherId - Not Applicable; SvString serviceOrganizationId - Not Applicable; SvDate createdDateTime - Job creation time; SvDate rejectedDateTime - it will return the date time at which the job has been rejected SvString rejectReason - it will return the rejected reason if the job has been rejected SvString suspendedTime - it gives the total suspended time that was done on the job SvString timeOnJob-it gives the total actual time spent to complete the job SvString totalTime - it gives the total time taken to complete the job SvString jobPattern - tells either it is a One Time Job or Always Available Job SvString connectionId - Not Applicable; SvString emailId - email contact for the job SvString jobStatus - status of the job

	SvString jobDetailsURL - URL to the job Details PDF **Change reflects in APIs** getJobs/getJobsByDivision/getUpdatedActions/getUpdatedActionsByDivision/getJobActions/ getJobActionsByDivision/ getJobByReferenceNumber
JobService-0.0.4 JobService-wrapped-0.0.4	**SvcJobExt** SvString jobDescription - Description for the job SvString sendToDeviceDate - When the job has to be send to the device SvInvoiceDetail invoiceDetail - Invoice details for the job **Change reflects in APIs** SvString jobDescription and sendToDeviceDate are used in createJobs/updateJobs/createOrUpdateJobs All are used in get calls getJobs/getJobsByDivision/getUpdatedActions/getUpdatedActionsByDivision/getJobActions/ getJobActionsByDivision/getJobByReferenceNumber
JobService-0.0.5 JobService-wrapped-0.0.5	**SvInvoiceDetail5** Double taxRate - renamed to taxCost in Invoice details (aggregation of tax for the job) **SvInvoicePartsDetail5** Double taxRate - tax per part Boolean labour - Indicates the part is of type labour or not **Change reflects in APIs** getJobs/getJobsByDivision/getUpdatedActions/getUpdatedActionsByDivision/getJobActions/ getJobActionsByDivision/ getJobByReferenceNumber
JobService-0.0.6 JobService-wrapped-0.0.6	There is no change in the WSDL compared to the 0.0.5 version. The only change is, all the get calls response will have HTTP URL for image instead of image as binary inside xml. In the previous versions the response was containing image as binary string. When the image is converted to binary string the size of each image increases by 30% and result in increase of response size. When there are lot of images, the response size will grow huge and result in increase of response time or call timeout. To reduce the response time and avoid timeout we are including image as URL. The web service client can use some HTTP library to download all the images in the Webservice response in batch. Use your Webservice username /password to download the image.

	Throttling The image download will have restriction per minute. The max image download limit per minute is 30. If client exceeds the image download limit, it will receive 'Media download threshold per minute exceeded 30' message with HTTP code 403. Client has to wait till end of the minute and can continue downloading the image again. **fieldValue** fieldValue in SvFormField returns HTTP URL instead of binary if it is picture. **Change reflects in APIs** getJobs/getJobsByDivision/getUpdatedActions/getUpdatedActionsByDivision/getJobActions / getJobActionsByDivision/ getJobByReferenceNumber

createJobs

The JobWebService v0.0.1 and v0.0.2 takes in an array of objects of type (**SvJob).** The JobWebService v0.0.3 takes in an array of objects of type (**SvcJob).** The JobWebService v0.0.4 takes in an array of objects of type (**SvcJobExt)** and jobWebService v0.0.5 takes in an array of objects of type (**SvcJob5).** The jobWebService v0.0.6 takes in an array of objects of type (**SvcJob6).** The difference between v0.0.3 and v0.0.4/ v0.0.5/v0.0.6 is, the later accepts job description.

Description

This web service call create jobs in the StreetSmart system. In each call 1-100 jobs can be submitted. If there are more than 100 jobs then it can be submitted with multiple calls. If a call has more than 100 jobs then, the additional jobs will be ignored and an error code and error message will be returned for these extra jobs. This API handles error conditions gracefully by returning an error code and error message back to the caller with job reference number. The new (SvJob/SvcJob/SvcJobExt/SvcJob5/ SvcJob6) object is similar to the deprecated SvWorkItem object but provides the ability to allow callers to do differential updates (see UpdateJobs web service). If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

An error condition in one job does not prevent other jobs from being created. As an example, say that 3 jobs are input. If one job in the set has a validation error, then the SvJobServiceResult object for that job will indicate the error. The other two jobs will still be created.

Method Signature

Ordinal	DataType	Can be Null?	Description
jobs	SvJob[]- JobWebService v0.0.1 and v0.0.2 SvcJob[] - JobWebService v0.0.3 SvcJobExt[] - JobWebService v0.0.4 SvcJob5[] - JobWebService v0.0.5 SvcJob6[] - JobWebService v0.0.6	No	Set of jobs that are to be created. Array can have at least 1 job and max 100 jobs in a call.
Return Result	SvJobServiceResult[]	No	An array of SvJobServiceResult objects indicating success or failure for each job. The size of the return array will be the same as the size of the input array; there will be one result object for each input job object.

Validation Errors

"*The input job array is null.*" – Thrown if the input SvJob array is null.
"*The input job array is empty.*" – Thrown if the input SvJob array is input.

Error Messages (on the SvResult object)

"*The reference number must be populated.*" – Returned if the reference number on the SvJob object is blank or null.
"*CreateJob called with a reference number that already exists in the system.*" – Returned if the reference number specified already exists.
"*The reference number must be less than 95 characters in length.*" – *Returned if a reference number greater than 95 characters in length*.
"*The job description (Job Name) must be less than 300 characters in length.*" – *Returned if the job description (Job Name) is greater than 300 characters in length.*
"*The work item type name is required for job create.*" – Returned if the work item (Job type) type name is not valued on the SvJob object.
"*The work item type specified in job create was not found.*" – Returned if the work item type name is valued but is not a valid work item type name.
"*The priority is required for job create.*" – Returned if the priority is not valued on the SvJob object.
"*The priority name specified in job create was not found.*" – Returned if the priority is valued but is not a valid priority.

"The worker specified in job create was not found." – Returned if the workerName field is valued but a worker with that username cannot be found.

"The division specified in job create was not found." – Returned if the divisionName field is valued but a division with that name cannot be found.

"Scheduled start must be before scheduled end." – Returned if the scheduledStartTime field is later than the scheduledEndTime field.

"Cannot input actual start or actual end on job create." – Returned if the actualStartTime or actualEndTime fields are populated.

"Cannot set the deleted datetime on job create or job update." – Returned if the deleted datatime field is populated.

"Actions are not supported." – Returned if any actions are input.

"Only 100 jobs can be processed in a single request. Additional jobs were ignored." – Returned if the user inputs more than 100 jobs.

"The description (Job Name) must be populated " – Returned when the Job Type has a mandatory Job Name field.

Error Messages (on the SvResult object - (JobWebService v0.0.3))

"Cannot set rejected date/time and/or reject reason on the job" - thrown if trying to set the reject date time or reject reason.

"Cannot assign worker to a rejected job "- thrown if trying to assign worker to a rejected job.

"Specified service organization id does not exist. " - thrown if the service organization id doesn't belong to the company.

"Specified emailID is not valid" - thrown if the email id is not in a valid format.

Error Messages (on the SvResult object -Validation Erros(JobWebService v0.0.4))

"Send to device date should not be after scheduled start time"

"Send to device date should not be in past"

"Send to device date should not be after scheduled end time"

"Description should not exceed 2000 characters"

SvJob, SvcJob and SvcJobExt, SvcJob5, SvcJob6 Required Fields

The following fields are required for job create: ReferenceNumber, WorkItemTypeName and Priority. If a status is specified it will be used but may be overridden by a system calculated status.

createJob

(SvJob job)

Description

This web service allows the creation of a single job in the StreetSmart system. The reference number must be populated and must not already exist in the StreetSmart system. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Method Signature

Ordinal	DataType	Can be Null?	Description
job	SvJob	No	The job that is to be created.
Return Result	SvJobServiceResult	No	An SvJobServiceResult object indicating success or failure for the job

Validation Errors

"*The input job object is null.*" – Thrown if the input SvJob object is null.

Error Messages (on the SvResult object)

"*The reference number must be populated.*" – Returned if the reference number on the SvJob object is blank or null.

"*CreateJob called with a reference number that already exists in the system.*" – Returned if the reference number specified already exists.

"*The reference number must be less than 95 characters in length.*" – *Returned if a reference number greater than 95 characters in length*.

"*The job description (Job Name) must be less than 300 characters in length.*" – *Returned if the job description (Job Name) is greater than 300 characters in length.*

"*The work item type name is required for job create.*" – Returned if the work item (job type) type name is not valued on the SvJob object.

"*The work item type specified in job create was not found.*" – Returned if the work item type name is valued but is not a valid work item type name.

"*The priority is required for job create.*" – Returned if the priority is not valued on the SvJob object.

"*The priority name specified in job create was not found.*" – Returned if the priority is valued but is not a valid priority.

"*The worker specified in job create was not found.*" – Returned if the workerName field is valued but a worker with that username cannot be found.

"*The division specified in job create was not found.*" – Returned if the divisionName field is valued but a division with that name cannot be found.

"*Scheduled start must be before scheduled end.*" – Returned if the scheduledStartTime field is later than the scheduledEndTime field.

"*Cannot input actual start or actual end on job create.*" – Returned if the actualStartTime or actualEndTime fields are populated.

"Cannot set the deleted datetime on job create or job update." – Returned if the deleted datatime field is populated.
"Actions are not supported." – Returned if any actions are input. *"Only 100 jobs can be processed in a single request. Additional jobs were ignored."* – Returned if the user inputs more than 100 jobs.

SvJob Required Fields

The following fields are required for job create: ReferenceNumber, WorkItemTypeName and Priority. If a status is specified it will be used but may be overridden by a system calculated status.

updateJobs

The JobWebService v0.0.1 and v0.0.2 takes in an array of objects of type (**SvJob).** The JobWebService v0.0.3 takes in an array of objects of type (**SvcJob).** The JobWebService v0.0.4 takes in an array of objects of type (**SvcJobExt)** and jobWebService v0.0.5 takes in an array of objects of type (**SvcJob5).** The JobWebService v0.0.6 takes in an array of objects of type (**SvcJob6).** The difference between v0.0.3 and v0.0.4/ v0.0.5/0.0.6 is, the later accepts job description.

Description

This web service enables updating of one to many jobs in the StreetSmart system. This method uses the new SvJob object as input. If the reference number of a job is not in the database, then an error is returned to the caller. If over 100 jobs are input to be updated, the additional jobs will be ignored and an error code and error message will be returned for these extra jobs. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Ignorable Values versus Null Values: The caller will be able to specify that certain values in the SvJob object should be ignored and the current value in the database maintained. This will allow a caller to choose which fields should be updated. Each field in the SvJob object is "wrapped" by a container object. For example, the SvString holder object contains a single String as a value. To set the job description, the value string within the jobDescription SvString object will be set to the description. If the server is not to update the description, then the container SvString object should be set to null. See the SvJob documentation for more details.

Location updates: The ability to specify that a value is to be ignored only applies to the first level of the object graph. If the location field is non-null then the job"s location is updated fully with the values of the SvLocation object and any null values in the SvLocation object cause null or empty values to be inserted in the database. For example, if the address field is null, any address currently existing in the database will be removed.

Attribute updates:
On a job update, only the attributes that are supplied in the input attribute array will be modified. Any other attributes will be untouched. If an attribute is specified in the input array that is not currently created for the job, that attribute will be added to the job.

Method Signature

Ordinal	DataType	Can be Null?	Description
jobs	SvJob[]- JobWebService v0.0.1 and v0.0.2 SvcJob[] - JobWebService v0.0.3 SvcJobExt[] - JobWebService v0.0.4 SvcJob5[] - JobWebService v0.0.5 SvcJob6[] - JobWebService v0.0.6	No	Set of jobs that are to be updated.
Return Result	SvJobServiceResult[]	No	An array of SvResult objects indicating success or failure for each job. The size of the return array will be the same as the size of the input array; there will be one result object for each input job object

Validation Errors

"The input job array is null." – Thrown if the input SvJob array is null.
"The input job array is empty." – Thrown if the input SvJob array is empty.

Note:
Unassign a job from a wroker through updateJob is not possible , need to use either assignJob or removeWorkerFromJob API can be used for the same.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number on the SvJob object is blank or null.
"UpdateJob called with a reference number that does not exist in the system." – Returned if the reference number specified does not exist.
"The reference number must be less than 95 characters in length." – Returned if a reference number greater than 95 characters in length.
"The job description (Job Name) must be less than 300 characters in length." – Returned if the job description (Job Name) is greater than 300 characters in

length.

"Actions are not supported." – Returned if any actions are input.

"Different job type than original not allowed." – Returned if the workItemTypeName input on job update is different than the job type that the job was created under.

"The worker specified in job update was not found." – Returned if the worker to assign the job to could not be found.

"The division specified in job update was not found." – Returned if the division specified was not found.

"The priority name specified in job update was not found." – Returned if the priority name was not found.

"Actual start must be before actual end if they are input." – Returned if the actual end time is valued and is before the actual start time.

"Cannot set the deleted datetime on job create or job update." – Returned if the deleted datatime field is populated.

"Only 100 jobs can be processed in a single request. Additional jobs were ignored." – Returned if the user inputs more than 100 jobs.

Error Messages (on the SvResult object - JobWebService v0.0.3))

"The service organization id should not exceed 100 characters." thrown if the service organization id is more than 100 characters.

"Cannot set rejected date/time and/or reject reason on the job." thrown if trying to set the reject date time or reject reason.

"Cannot assign worker to a rejected job "- thrown if trying to assign worker to a rejected job.

"Specified service organization id does not exist." - thrown if the service organization id doesn't belong to the company.

"The Dispatcher id should not exceed 100 characters." - thrown if the dispatcher id is more than 100 characters.

"The service organization id must be populated. " - thrown if the service organization is not specifed.

"Specified emailID is not valid" - thrown if the email id is not in a valid format.

Error Messages (on the SvResult object - JobWebService v0.0.4))

"Description should not exceed 2000 characters" – Returned if the description is more than 2000 characters

"Job is already downloaded. Cannot set Send to device date" – Returned if the job is already retrieved on device and updating the send to device of job.

"Send to device date should not be in past" – Returned if the send to device date is of past time.

"Send to device date should not be after scheduled start time" – Returned if the send to device date is earlier than the scheduled start time.

"Send to device date should not be after scheduled end time" – Returned if the send to device date is later after the scheduled end time.

SvJob ,SvcJob , SvcJobExt,SvcJob5,SvcJob6 Required Fields

The only field that is required for updateJobs is the ReferenceNumber.

updateJob

(SvJob job)

Description

This web service allows the update of a single job in the StreetSmart system. The reference number must be populated and must exist in the StreetSmart system. See the description of updateJobs for more information on how differential updates are implemented. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Method Signature

Ordinal	DataType	Can be Null?	Description
job	SvJob-JobWebService v0.0.1 and v0.0.2	No	Job that is to be updated.
Return Result	SvJobServiceResult	No	An SvJobServiceResult object indicating success or failure of the update.

Validation Errors

"The input job object is null." – Thrown if the input SvJob object is null.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number on the SvJob object is blank or null.

"UpdateJob called with a reference number that does not exist in the system." – Returned if the reference number specified does not exist.

"The reference number must be less than 95 characters in length." – Returned if a reference number greater than 95 characters in length.

"The job description (Job Name) must be less than 300 characters in length." – Returned if the job description (Job Name) is greater than 300 characters in length.

"Actions are not supported." – Returned if any actions are input.

"Different job type than original not allowed." – Returned if the workItemTypeName input on job update is different than the job type that the job was created under.

"The worker specified in job update was not found." – Returned if the worker to assign the job to could not be found.
"The division specified in job update was not found." – Returned if the division specified was not found.
"The priority name specified in job update was not found." – Returned if the priority name was not found.
"Actual start must be before actual end if they are input." – Returned if the actual end time is valued and is before the actual start time.
"Cannot set the deleted datetime on job create or job update." – Returned if the deleted datetime field is populated.
"Only 100 jobs can be processed in a single request. Additional jobs were ignored." – Returned if the user inputs more than 100 jobs.

SvJob Required Fields

The only field that is required for updateJobs is the ReferenceNumber.

createOrUpdateJobs

The JobWebService v0.0.1 and v0.0.2 takes in an array of objects of type (**SvJob).** The JobWebService v0.0.3 takes in an array of objects of type (**SvcJob).** The JobWebService v0.0.4 takes in an array of objects of type (**SvcJobExt)** and JobWebService v0.0.5 takes in an array of objects of type (**SvcJob5).** The v0.0.6 takes in an array of objects of type (**SvcJob6).** The difference between v0.0.3 and v0.0.4/ v0.0.5/v0.0.6 is, the later accepts job description.

Description

This Web Service will do the work of determining whether or not each job is to be created or updated. If the reference number already exists in the database, then the job will be updated. Otherwise the job will be created. This Web Service will call into the same code as the createJob or updateJob web services. It is provided primarily as a convenience to our clients. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Note:
Unassign a job from a wroker through updateJob is not possible, need to use either assignJob or removeWorkerFromJob API can be used for the same.

createOrUpdateJob

(SvJob job)

Description

This Web Service will do the work of determining whether or not the job is to be created or updated. If the reference number already exists in the database, then the job will be updated. Otherwise the job will be created. This Web Service will call into the same code as the createJob or updateJob web service methods. It is provided

primarily as a convenience to our clients. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

createOrUpdateJobs2

(SvJobExt job)

Description

This Web Service will do the work of determining whether or not the job is to be created or updated. If the reference number already exists in the database, then the job will be updated. Otherwise the job will be created. This Web Service will call into the same code as the createOrUpdateJobs web service method with extra feature, which will provide the option for creating location. It is provided primarily as a convenience to our clients.

Method Signature

Ordinal	DataType	Can be Null?	Description
job	SvJobExt	No	Job that is to be updated.
Return Result	SvJobServiceResult	No	An SvJobServiceResult object indicating success or failure of the update.

getJobByReferenceNumber

(String referenceNumber)

Description

The *getJobByReferenceNumber* service method provides the ability to retrieve a single job from the StreetSmart system.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The reference number of the job to retrieve.

Return Result	SvJob- JobWebService v0.0.1 and v0.0.2 SvcJob - JobWebService v0.0.3 SvcJobExt - JobWebService v0.0.4 SvcJob5 - JobWebService v0.0.5 SvcJob6 - JobWebService v0.0.6	No	The job object which was retrieved. Attributes and actions on the job will also be returned. If a job with the corresponding reference number is not found, then null is returned.

Validation Errors

"The reference number must be populated." – thrown if the reference number is null or blank

getJobs

The JobWebService v0.0.1 and v0.0.2 take objects **SvDate, SvDateHolder, boolean, boolean**

The JobWebService v0.0.3, 0.0.4, 0.0.5 and 0.0.6 take objects **SvDate, SvDateHolder, boolean , boolean ,String , String**

Description

The *getJobs* service method provides the ability to retrieve Jobs from StreetSmart that have been changed, created or deleted within a specified time range. Examples of changes include status updates from devices (worker performed actions), worker assignment or un-assignment, and updates to the job information such as the scheduled time or duration. Setting the includeAttributes and includeActions flags to false will minimize the length of time it takes the call to return.

Method Signature

Ordinal	DataType	Cab be Null?	Description
StartDate	SvDate	No	Starting date for the range to check for changes. The server queries for changes inclusive of this

			specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
IncludeAttributes	Boolean	No	Indicates whether or not to query for job attribute changes. If false, job attributes will also not be returned in the SvJob object.
IncludeActions	Boolean	No	Indicates whether or not to query for job action changes. If false, job actions will also not be returned in the SvJob object.
dispatcherId	String - JobWebService v0.0.3 and above	Yes	Gets the jobs of the given dispatcher

serviceOrganization Id	String - JobWebService v0.0.3 and above	Yes	Gets the jobs of the given service organization
Return Result	SvJob[] - JobWebService v0.0.1 and 0.0.2 SvcJob []- JobWebService v0.0.3 SvcJobExt[]- JobWebService v0.0.4 SvcJob5[]- JobWebService v0.0.5 SvcJob6[]- JobWebService v0.0.6	No	Returns an array of SvJob /SvcJob/SvcJobExt objects. This array can be empty (length=0) if no changes occurred within the specified interval, but it will not return null.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

getJobsByDivision

The JobWebService v0.0.1 and v0.0.2 take objects **SvDate, SvDateHolder, boolean, boolean , SvDivision[]**

The JobWebService v0.0.3, 0.0.4, 0.0.5 and 0.0.6 take objects **SvDate, SvDateHolder, boolean, boolean, SvDivision[], String , String**

Description

The *getJobsByDivision* service method provides the ability to retrieve Jobs from StreetSmart that have been changed, created or deleted within a specified time range and belong to one of the input divisions. It has the same behavior as the getJobs service method but allows filtering by division. If a null or empty divisions array is input then all divisions are searched.

Method Signature

Ordinal	Data Type	Can be	Description

		Null?	
StartDate	SvDate	No	Starting date for the range to check for changes. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
IncludeAttributes	Boolean	No	Indicates whether or not to query for job attribute changes. If false, job attributes will also not be returned in the SvJob object.

IncludeActions	Boolean	No	Indicates whether or not to query for job action changes. If false, job actions will also not be returned in the SvJob object.
Divisions	SvDivision[]	Yes	List of divisions for which to return job actions. The query is restricted to only returning these divisions.
dispatcherId	String - JobWebService v0.0.3 and above	Yes	Gets the jobs of the given dispatcher
serviceOrganizationId	String - JobWebService v0.0.3 and above	Yes	Gets the jobs of the given service organization
Return Result	SvJob[] - JobWebService v0.0.1 and 0.0.2 SvcJob []- JobWebService v0.0.3 SvcJobExt []- JobWebService v0.0.4 SvcJob5 []- JobWebService v0.0.5 SvcJob6 []- JobWebService v0.0.6	No	Returns an array of SvJob objects. This array can be empty (length=0) if no changes occurred within the specified interval, but it will not return null.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date

range or number of divisions and try again.

assignWorkerToJob

(String referenceNumber, String workerName)

Description

The *assignWorkerToJob* service method provides the ability to assign a worker to a job. The referenceNumber and workerName must be unique within the company. Note that if a job has been completed, additional assignments are ignored.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job
workerName	String	No	The username of the worker who will be assigned the job.
Return Result	SvResult	No	The result object. Any errors in assigning the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The worker with the following name is already assigned to the job: <workerName>." – Returned if the worker is already assigned to the job.

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

"The worker name must be populated." – Returned if the worker name parameter is blank.

"The worker with the following name was not found: <workerName>." – Returned if a user with the supplied worker name cannot be found.

unassignJob

(String referenceNumber)

Description

The *unassignJob* service method provides the ability to remove the active assignment from a job. The referenceNumber must be unique within the company.
Jobs which are completed will not be affected by unassignment.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job.
Return Result	SvResult	No	The result object. Any errors in unassigning the worker are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

removeWorkerFromJob

(String referenceNumber, String workerName)

Description

The *removeWorkerFromJob* service method provides the ability to unassign a worker from a job. It differs from the *unassignJob* method in that it checks that the worker input is actually assigned to the job before removing the worker assignment. The worker name and the reference number must be unique within the company. Jobs which are completed will not be affected.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job.
workerName	String	No	The username of the worker who will be unassigned from the job.
Return Result	SvResult[]	No	The result object. Any errors in removing the worker from the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The worker with the following name is not currently assigned to the job: <workerName>." – Returned if the worker is not assigned to the job.

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference

number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

"*The worker name must be populated*." – Returned if the worker name parameter is blank.

"*The worker with the following name was not found: <workerName>*." – Returned if a user with the supplied worker name cannot be found.

deleteJob

(String referenceNumber)

Description

The *deleteJob* method provides the ability to unconditionally delete a job regardless of its current status. The referenceNumber must be unique within the company.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job
Return Result	SvResult	No	The result object. Any errors in deleting the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number parameter is blank.

"*The reference number supplied does not exist in the system. Reference number: <referenceNumber>"* – Returned if a job with the supplied reference number cannot be found.

terminateJob

(String referenceNumber, SvDate completionDateTime)

Description

The *terminateJob* method provides the ability to unconditionally terminate (complete) a job. The actual end time on the job will be set to the time supplied (or the system time if no end time is supplied) and the job status will be set to „Terminated". If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job
completionDateTime	SvDate	Yes	The time to use as the completion time on the job. If null, then the StreetSmart system
Return Result	SvResult	No	The result object. Any errors in terminating the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

terminateJobForWorker

(String referenceNumber, String workerName, SvDate completionDateTime)

Description

The *terminateJobForWorker* method provides the ability to unconditionally terminate (complete) a job. The actual end time on the job will be set to the time supplied (or the system time if no end time is supplied) and the job status will be set to „Terminated". This method differs from the *terminateJob* method in that it checks that the worker is actually assigned to the job before terminating the job. The worker name and the reference number must be unique within the company. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job
workerName	String	No	The username of a worker in StreetSmart.
completionDateTime	SvDate	Yes	The time to use as the completion time on the job. If null, then the StreetSmart system time is used.
Return Result	SvResult	No	The result object. Any errors in terminating the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The worker with the following name is not currently assigned to the job: <workerName>." – Returned if the worker is not assigned to the job.

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

"The worker name must be populated." – Returned if the worker name parameter is blank.

"The worker with the following name was not found: <workerName>." – Returned if a user with the supplied worker name cannot be found.

restoreJob

(String referenceNumber)

Description

The *restoreJob* method provides the ability to restore (undelete) a job which has previously been deleted. The job will be restored in the same state as when it was deleted.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	No	The referenceNumber of the job
Return Result	SvResult	No	The result object. Any errors in restoring the job are indicated in the SvResult object.

Error Messages (on the SvResult object)

"The reference number must be populated." – Returned if the reference number parameter is blank.

"The reference number supplied does not exist in the system. Reference number: <referenceNumber>" – Returned if a job with the supplied reference number cannot be found.

getUpdatedActionsByDivision

(SvDate start, SvDateHolder end, SvDivision[] divisions)

Description

The *getUpdatedActionsByDivision* service method provides the ability to retrieve job

actions from StreetSmart that have been created or changed within a specified time range. Only changed actions are returned, the accumulated set of actions that have been performed can only be returned by retrieving the job itself. Actions are returned in the order that they were performed.

Method Signature

Ordinal	Data Type	Can be Null?	Description
StartDate	SvDate	No	Starting date for the range to check for changes. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
Divisions	SvDivision[]	Yes	List of divisions for which to return job actions. The query is restricted to only returning these divisions.
Return Result	SvJobActionUpdate[] - JobWebService v0.0.1 and 0.0.2	No	Returns an array of SvJobActionUpdate / SvcJobActionUpdate / SvcJobExtActionUpdate objects. This array can

	SvcJobActionUpdate[]-JobWebService v0.0.3 SvcJobExtActionUpdate[]-JobWebService v0.0.4 and Above	No	be empty (length=0) if no changes occurred within the specified interval, but it will not return null.

The intended usage of this service call is to provide a way to periodically synchronize an external system's data with StreetSmart. The external system is expected to call this service incrementally using adjacent time ranges such as:

Call 1: 2004-01-28 13:50:00.0000 to 2004-01-28 14:52:00.000
Call 2: 2004-01-28 14:52:00.0000 to 2004-01-28 15:49:07.000
Call 3: 2004-01-28 15:49:07.0000 to 2004-01-28 16:55:43.000

In this example, the external system is querying at intervals of 1 hour. The external system must keep track of the last call's endTime and should use the last endTime as the startTime for the next call. The results returned are inclusive on the startTime and exclusive on the endTime to prevent the returned results from overlapping between two adjacent calls.

Expected behaviors

- If no changes are detected for any WorkItems, an empty array is returned.
- If either the start or end timedate parameters are null, an exception is thrown.
- If the endDate is equal to or before the startData, an exception is thrown.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range or number of divisions and try again.

getUpdatedActions

(SvDate start, SvDateHolder end)

Description

The *getUpdatedActions* method functions the same as the *getUpdatedActionsByDivision* method but does not filter the result by division. All

updated actions within the company are returned.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	Starting date for the range to check for changes. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
Return Result	SvJobActionUpdate[] - JobWebService v0.0.1 and 0.0.2 SvcJobActionUpdate[]- JobWebService v0.0.3 SvcJobActionUpdateExt[]- JobWebService v0.0.4 and above	No	Returns an array of SvJobActionUpdate / SvcJobActionUpdate / SvcJobExtActionUpdate objects. This array can be empty (length=0) if no changes occurred within the specified interval, but it will not return null.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

getJobActionsByDivision

(SvDate start, SvDateHolder end, SvDivision[] divisions)

Description

The *getJobActionsByDivision* service method provides the ability to retrieve job actions from StreetSmart that have been created within a specified time range. Only new created actions are returned, the accumulated set of actions that have been performed can only be returned by retrieving the job itself. Actions are returned in the order that they were performed.

Method Signature

Ordinal	Data Type	Can be Null?	Description
StartDate	SvDate	No	Starting date for the range to check for newly created job actions. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for newly created job actions. The server queries for changes exclusive of this specified time (e.g., the query returns newly created job actions up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
Divisions	SvDivision[]	Yes	List of divisions for which to return job actions. The query is restricted to only returning these divisions.
Return	SvJobActionUpdate[] - JobWebService v0.0.1	No	Returns an array of SvJobActionUpdate / SvcJobActionUpdate /

Result	and 0.0.2 SvcJobActionUpdate[]- JobWebService v0.0.3 SvcJobActionUpdateExt[ ]- JobWebService v0.0.4 and above	No	SvcJobExtActionUpdate objects. This array can be empty (length=0) if no new job actions were created within the specified interval, but it will not return null.

The intended usage of this service call is to provide a way to periodically synchronize an external system's data with StreetSmart. The external system is expected to call this service incrementally using adjacent time ranges such as:

Call 1: 2004-01-28 13:50:00.0000 to 2004-01-28 14:52:00.000
Call 2: 2004-01-28 14:52:00.0000 to 2004-01-28 15:49:07.000
Call 3: 2004-01-28 15:49:07.0000 to 2004-01-28 16:55:43.000

In this example, the external system is querying at intervals of 1 hour. The external system must keep track of the last call's endTime and should use the last endTime as the startTime for the next call. The results returned are inclusive on the startTime and exclusive on the endTime to prevent the returned results from overlapping between two adjacent calls.

Expected behaviors

- If no new job actions are detected for any WorkItems, an empty array is returned.
- If either the start or end timedate parameters are null, an exception is thrown.
- If the endDate is equal to or before the startData, an exception is thrown.

Validation Errors

"*The start date cannot be null.*" – thrown if the start date is null
"*The end date cannot be null.*" – thrown if the end date is null
"*The end date must be after the start date.*" – thrown if the start date is after the end date.
"*You are only allowed to query for 7 days of data at a time*." – thrown if an attempt is made to query for more than 7 days of data.
"*Media size exceeded max allowed bytes of 524288000.*" – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range or number of divisions and try again.

getJobActions

(SvDate start, SvDateHolder end)

Description

The *getJobActions* method functions the same as the *getJobActionsByDivision* method but does not filter the result by division. All newly created job actions within the company are returned.

Method Signature

Ordinal	Data Type	Can be Null?	Description
StartDate	SvDate	No	Starting date for the range to check for newly created job actions. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The start date must be a UTC date.
EndDate	SvDateHolder	No	Ending date for the range to check for newly created job actions. The server queries for changes exclusive of this specified time (e.g., the query returns newly created job actions up to BUT NOT including the specified end time). The end date must be a UTC date. The end date is adjusted if the date passed to the web service is later than the current database time. This value is then returned to the caller.
Return Result	SvJobActionUpdate[] - JobWebService v0.0.1 and 0.0.2 SvcJobActionUpdate[]- JobWebService v0.0.3 SvcJobExtActionUpdate[]- JobWebService v0.0.4 and above	No	Returns an array of SvJobActionUpdate / SvcJobActionUpdate / SvcJobExtActionUpdate objects. This array can be empty (length=0) if no new job actions were created within the specified interval, but it will not return null.

Validation Errors

"The start date cannot be null." – thrown if the start date is null
"The end date cannot be null." – thrown if the end date is null
"The end date must be after the start date." – thrown if the start date is after the end date.
"You are only allowed to query for 7 days of data at a time." – thrown if an attempt is made to query for more than 7 days of data.
"Media size exceeded max allowed bytes of 524288000." – thrown if total size of all the images returned in a single API call exceeds 500 MB. Reduce date range and try again.

assignWorkerAndUpdateJob

(String workerName, SvJob svJob)

Description

This method is available in the wsdl but will throw an exception if called. It is not supported for general usage. It is possible to assign a worker during the updateJob method call by setting the workerName property. If actual start date and/or actual end date is provided for a job, the actual duration is computed as the difference of actual start and end date and persisted.

Method Signature:

Ordinal	DataType	Can be Null?	Description
workername	string	No	The name of the worker to assign to the job
svJob	SvJob	No	Array of jobs.
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

cancelJobs

The JobWebService v0.0.3 and above takes in a list of objects
(String[] referenceNumbers)

Description

The cancelJobs service method provides the ability to cancel the job. The referenceNumber should be unique with the company and jobs that are deleted will not

get cancelled. Cancelled jobs can be viewed by the user but the job status cannot be changed.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber[]	String	No	The referenceNumber's of the job
Return Result	SvJobServiceResult	No	The result object. Any errors in cancelJobs are indicated in the SvJobServiceResult object

Error Messages (on the SvJobServiceResult object)

"CancelJob called with a reference number that does not exist in the system." - Returned if the referenceNumber is not found in companies jobs or if the serviceOrganizationId associated to the job is different from the logged in serviceOrganizationId.

"Cannot cancel a deleted job" - Returned if the referenceNumber is already a deleted job in the company.

submitJobAction

(SvJobAction jobAction, String referenceNumber)

Description

This method is used to submit job actions

Method Signature:

Ordinal	DataType	Can be Null ?	Description
jobAction	SvJobAction	No	Array of job actions performed for Jobs
referenceNumber	String	No	Job reference number.
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

JobService Error Codes

Error Code	Description of Error
General Error Codes (Applies across multiple methods)	
0	Success (No Error)
1	The reference number was not valued.
2	A job with the supplied reference number does not exist.
3	The worker name was not valued.
4	A worker with the supplied worker name does not exist.
5	An error occurred persisting the data. The specific error message will be supplied in the SvResult message string.
500	Unable to connect to the web
service. *Error codes specific to unassignment*	
6	The worker is not currently assigned to the job.
Error codes specific to assignment	
7	The worker is already assigned to the job.
Error codes specific to job create or job update	
8	The input job object is null.
10	The reference number supplied already exists.
11	The work item type name is required but was not supplied.
12	The work item type name supplied does not exist.
13	The priority of the job is required but was not supplied.
14	The priority name supplied is not a valid priority.
15	The division name supplied is not a valid division.
16	The scheduled start time or scheduled end time is more than 30 years in the future.
17	The scheduled start time of the job is after the scheduled end time.
18	The job actual start time or the job actual end time is input on job create or job update. This is not allowed.
19	Actions cannot be input on job create or job update.
20	The reference number supplied is more than 45 characters in length.
21	Attributes required by the work item type were not present on job create.
22	More than 100 jobs were input for creation or updating.
23	The customer type supplied does not exist.
24	The job category supplied does not exist.
25	The deleted datetime cannot be set on job create or job update.
38	The Job Type has a mandatory job name field.
Error codes specific to cancel job	
46	Cannot cancel a deleted job
47	CancelJob called with a reference number that does not exist in the system.
48	Cancelled jobs cannot be re-assigned.
49	Rejected jobs cannot be re-assigned.
Error codes specific to job description	

50	Description should not exceed 2000 characters
Error codes specific to send to device	
51	Send to device date should not be after scheduled start time / Send to device date should not be in past / Send to device date should not be after scheduled end time / Job is already downloaded. Cannot set Send to device date

PartsManagementWebService

createParts

(SvMpPart[] svMpParts)

Description

The createParts service methods creates a unique part for the specified serviceOrganizationId checks the categoryName if it exists or not for the serviceOrganizationId if exists it uses the same categoryName to create the part else it will create a new categoryName along with the new part with the partNumber.

Method Signature

Ordinal	DataType	Can be Null?	Description
svMpPart[]	SvMpPart	No	The list of parts that needs to be created
Return Result	SvMpPartResult	No	The result object. Any errors in createParts are indicated in the SvMpPartResult object.

Error Messages (on the SvMpPartResult object)

"PartCategory should not be more than 60 characters" - Returned if the categoryName is more than 60 characters.

"PartNumber cannot be blank" - Returned if the partNumber is empty

"PartNumber should not be more than 15 characters" - Returned if the partNumber is more tha 15 characters.

"PartNumber should not have special characters" - Returned if the partNumber is not alphanumeric and contains special characters in it.

"PartName should not be more than 100 characters" - Returned if the partName is more than 100 characters.

"Suggested Unit Price should not be less than 0" - Returned if the suggested unit price is a negative value.

"Suggested Unit Price should not be greater than 9999.99f " - Returned if the unit price is more than the maximum unit price accepted.

"Barcode should not be more than 15 characters" - Returned if the barcode value is more than 15 characters.

"PartCategory cannot be blank" - Returned if the catergoryName is empty.

"PartNumber should be unique for the ServiceOrganization" - Returned if the partNumber is already associated with the serviceOrganizationId.

updateParts

(SvMpPart[] svMpParts)

Description

The updateParts service methods updates part for the specified serviceOrganizationId checks the categoryName if it exists or not for the serviceOrganizationId if exists it uses the same categoryName to update the part else it will create a new category along with the updating part details with the partNumber.

Method Signature

Ordinal	DataType	Can be Null?	Description
svMpPart[]	SvMpPart	No	The list of parts that needs to be updated.
Return Result	SvMpPartResult	No	The result object. Any errors in updateParts are indicated in the SvMpPartResult object.

Error Messages (on the SvMpPartResult object)

"PartCategory should not be more than 60 characters" - Returned if the categoryName is more than 60 characters.

"PartNumber cannot be blank" - Returned if the partNumber is empty

"PartNumber should not be more than 15 characters" - Returned if the partNumber is more tha 15 characters.

"PartNumber should not have special characters" - Returned if the partNumber is not alphanumeric and contains special characters in it.

"PartName should not be more than 100 characters" - Returned if the partName is more than 100 characters.

"Suggested Unit Price should not be less than 0" - Returned if the suggested unit price is a negative value.

"Suggested Unit Price should not be greater than 9999.99f " - Returned if the unit price is more than the maximum unit price accepted.

"Barcode should not be more than 15 characters" - Returned if the barcode value is more than 15 characters.

"PartNumber used for update doesn't exist with the ServiceOrganization" - Returned if the partNumber is not found with the serviceOrganizationId.

deleteParts

(String[] partNumbers)

Description

The deleteParts service methods deletes the parts of the specific serviceOrganization.

Method Signature

Ordinal	DataType	Can be Null?	Description
partNumbers[]	String	No	The list of parts that needs to be deleted.
Return Result	SvResult	No	The result object. Any errors in deleteParts are indicated in the SvResult object.

Error Messages (on the SvResult object)

"PartNumber cannot be blank" - Returned if the partNumbers array is empty or the partNumber is blank.

"Number of input exceeds max allowed (5000) per API call." - Returned if the deleteParts array is more than the allowed size.

"PartNumber should not be more than 15 characters" - Returned if the partNumber length is more than 15 characters.

"PartNumber should not have special characters" - Returned if the partNumber is not alphanumeric and contains special characters in it.

"Part deletion failed." - If any internal server error occurs while deleting the part.

PartsManagementWebService Error Codes

Error Code	Description of Error
General Error Codes (Applies across multiple methods)	
0	Success (No Error)
1	PartCategory cannot be blank
2	PartNumber cannot be blank
3	PartNumber should not be more than 15 characters
4	PartName should not be more than 100 characters
5	PartNumber should be unique for the ServiceOrganization
6	PartNumber used for update doesn't exist with the ServiceOrganization
7	Part deletion failed.
8	PartNumber should not have special characters
9	Suggested Unit Price should not be less than 0
10	Suggested Unit Price should not be greater than 9999.99
11	Number of input exceeds max allowed (5000) per API call.
12	PartCategory should not be more than 60 characters
13	Barcode should not be more than 15 characters

SvMpPart

Field	Data Type	Comments
partNumber	SvString	The partNumber that needs to be created or updated.
partName	SvString	The partName
suggestedUnitPrice	float	The suggested unit price of the part
barcode	SvString	The barcode for the part
categoryName	SvString	The categoryName of the part that needs to be created or updated

SvMpPartResult

Field	Data Type	Comments
partNumber	String	The partNumber that was given as the input.
errorCode	int	The error code that denotes the error
errorMessage	String	The error message for the errorCode we received.

GPS Service

GetGps

Description

The getGps (String, SvDate, SvDateHolder) service method provides the ability to retrieve GPS information for an entire company over a specified time range. The intended usage of this service call is to provide a way to periodically synchronize an external system's data with StreetSmart. The external system is expected to call this service incrementally using adjacent time ranges such as:

Call 1: 2004-01-28 13:50:00.0000 to 2004-01-28 14:52:00.000
Call 2: 2004-01-28 14:52:00.0000 to 2004-01-28 15:49:07.000
Call 3: 2004-01-28 15:49:07.0000 to 2004-01-28 16:55:43.000

In this example, the external system is querying at an intervals of 1 hour. The external system must keep track of the last call's endTime and should use the last endTime as the startTime for the next call. The results returned are inclusive on the startTime and exclusive on the endTime to prevent the returned results from overlapping between two adjacent calls.

Method Signature:

Ordinal	DataType	Can be Null?	Description

StartDate	SvDate	No	The starting date time to be used to fetch the gps points when it got created in the StreetSmart system, inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time) The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	The ending date time to be used to fetch the gps points when it got created in the StreetSmart system, exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Return Result	SvGpsPositio n[]	No	An array of SvGpsPosition instances. See documentation on SvGpsPosition for more details

Expected behaviors

- GPS positions are returned with a coverage status code. Valid GPS positions have a value of 0 for the status code. Invalid GPS position will have a non-

0 status code value. The status code values indicate why the GPS acquisition failed (e.g., user
indoors and cannot get GPS, battery too low, user turned off
GPS permissions, etc.)

- If the status code value for a position is non-0 (invalid), the latitude and longitude will be 0.
- If the endDate is equal to or before the startDate, an exception is thrown.
- If either the start or end time date parameters are null, an exception is thrown.
- If no new GPS are detected for the company, an empty array is returned (i.e., StreetSmart received no GPS information for the specified time range).
- The maximum date range that can be requested is 7 days. If the date range exceeds 7 days, a validation exception is thrown.
- The maximum number of GPS points returned is 500.
- If the difference between the GPS collection date (fix) on the mobile device and the date when the GPS point actually reached the StreetSmart server, is more than 4 days, then that GPS point is not returned back in the web service response. This may happen if the GPS was collected on the mobile device (but not sent to StreetSmart yet), and then device was turned off and then back on after 4 days.

GetGpsByDivision

Description

The getGpsByDivision(String, SvDate, SvDateHolder) service method provides the ability to retrieve GPS information for a specified division over a specified time range. The division must exist in StreetSmart, otherwise an exception is thrown. The intended
usage of this service call is to provide a way to periodically synchronize an external system's data with StreetSmart. The external system is expected to call this service incrementally using adjacent time ranges such as:

Call 1: 2004-01-28 13:50:00.0000 to 2004-01-28 14:52:00.000
Call 2: 2004-01-28 14:52:00.0000 to 2004-01-28 15:49:07.000
Call 3: 2004-01-28 15:49:07.0000 to 2004-01-28 16:55:43.000

In this example, the external system is querying at an intervals of 1 hour. The external system must keep track of the last call's endTime and should use the last

endTime as the startTime for the next call. The results returned are inclusive on the startTime and exclusive on the endTime to prevent the returned results from overlapping between two adjacent calls.

Method Signature:

Ordinal	DataType	Can be Null?	Description
Divisions	String[]	No	List of divisions for which to return GPS. The query is restricted to only returning these divisions.
StartDate	SvDate	No	The starting date time to be used to fetch the gps points when it got created in the StreetSmart system, inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000

EndDate	SvDateHolder	No	The ending date time to be used to fetch the gps points when it got created in the StreetSmart system, exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time).The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Return Result	SvGpsPosition[]	No	An array of SvGpsPosition instances. See documentation on SvGpsPosition for more details

Expected behaviours

- GPS positions are returned with a coverage status code. Valid GPS positions have a value of 0 for the status code. Invalid GPS position will have a non-0 status code value. The status code values indicate why the GPS acquisition failed (e.g., user indoors and cannot get GPS, battery too low, user turned off GPS permissions, etc.)
- If the status code value for a position is non-0 (invalid), the latitude and longitude will be 0.
- If the endDate is equal to or before the startDate, an exception is thrown.
- If either the start or end timedate parameters are null, an exception is thrown.
- If no new GPS are detected for the division, an empty array is returned (i.e., StreetSmart received no GPS information for the specified time range).
- The maximum date range that can be requested is 7 days. If the date range exceeds 7 days, a validation exception is thrown.
- The maximum number of GPS points returned is 500.
- If the difference between the GPS collection date (fix) on the mobile device and the date when the GPS point actually reached the StreetSmart server, is more than 4 days, then that GPS point is not returned back in the web service response. This may happen if the GPS was collected on the mobile device (but not sent to StreetSmart yet), and then device was turned off and then back on after 4 days.

GetGpsByWorker

Description

The getGpsByWorker(String, SvDate, SvDateHolder) service method provides the ability to retrieve GPS information for a specified worker over a specified time range. The worker must exist in StreetSmart, otherwise an exception is thrown. The intended usage of this service call is to provide a way to periodically synchronize an external System's data with StreetSmart. The external system is expected to call this service incrementally using adjacent time ranges such as:

Call 1: 2004-01-28 13:50:00.0000 to 2004-01-28 14:52:00.000
Call 2: 2004-01-28 14:52:00.0000 to 2004-01-28 15:49:07.000
Call 3: 2004-01-28 15:49:07.0000 to 2004-01-28 16:55:43.000

In this example, the external system is querying at an intervals of 1 hour. The external system must keep track of the last call's endTime and should use the last endTime as the startTime for the next call. The results returned are inclusive on the startTime and exclusive on the endTime to prevent the returned results from overlapping between two adjacent calls.

Method Signature:

Ordinal	DataType	Can be Null?	Description
WorkerName	String	No	The username for a valid user in application
StartDate	SvDate	No	The starting date time to be used to fetch the gps points when it got created in the StreetSmart system, inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	The ending date time to be used to fetch the gps points when it got created in the StreetSmart system, exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as:

			yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000

Return Result	SvGpsPosition[]	No	An array of SvGpsPosition instances. See documentation on SvGpsPosition for more details

Expected behaviours

- The worker specified by the WorkerName parameter must exist, otherwise an exception is thrown.
- GPS positions are returned with a coverage status code. Valid GPS positions have a value of 0 for the status code. Invalid GPS position will have a non-0 status code value. The status code values indicate why the GPS acquisition failed (e.g., user indoors and cannot get GPS, battery too low, user turned off GPS permissions, etc.)
- If the status code value for a position is non-0 (invalid), the latitude and longitude will be 0.
- If the endDate is equal to or before the startData, an exception is thrown.
- If either the start or end timedate parameters are null, an exception is thrown.
- If no new GPS are detected for the worker, an empty array is returned (i.e., StreetSmart received no GPS information for the specified time range).
- The maximum date range that can be requested is 7 days. If the date range exceeds 7 days, a validation exception is thrown.
- The maximum number of GPS points returned is 500.
- If the difference between the GPS collection date (fix) on the mobile device and the date when the GPS point actually reached the StreetSmart server, is more than 4 days, then that GPS point is not returned back in the web service response. This may happen if the GPS was collected on the mobile device (but not sent to StreetSmart yet), and then device was turned off and then back on after 4 days.

getStopsAndTravel

Description

The getStopsandTravel service method provides the ability to retrieve stop or travel segments for all workers for a specified time period. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	Data Type	Can be Null?	Description

StartDate	**SvDate**	**No**	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	**SvDateHolder**	**No**	Ending date for the range to changes. The server queries for changes changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of

			January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Return Result	**SvStopTravel**	**No**	An array of SvStopTravel.

SvStopTravel

Field	DataType	Comments
address	SvAddress	Address Object
coordinate	SvCoordinate	Coordinate Object
distance	double	The distance traveled in the segment. The distance is only valid for non-stopped segments
endTime	SvDate	The date time the stop or travel segment began
jobReferenceNumber	String	The reference number of a job if the stop was determined to have occurred at a job
landmarkName	String	The name of the landmark if the stop was determined to have occurred at a location
startTime	SvDate	The date time the stop or travel segment started
stoppedFlag	Boolean	Whether or not the segment was a stop. If true the segment is a stop, if false the segment is a travel segment.
timecardName	String	The timecard status for a segment. The possible statuses are Logged Off, Logged In, On Duty, On Break
workerName	String	The username of the worker who performed the stop or travel segement.

getStopsAndTravelByWorker

Description

This service method returns stop and travel for the specified time range and specified worker. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
WorkerName	String	No	The username for a valid user in application
Return Result	SvStopTravel	No	An array of SvStopTravel.

getStopsAndTravelByDivision

Description

This service method returns stops and travel for the specified time range and divisions(groups) The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Divisions	SvDivision[]	Yes	List of divisions for which to return. The query is restricted to only returning these divisions.
Return Result	SvStopTravel	No	An array of SvStopTravel.

getStops

Description

This method returns stops for the specified time range. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	**SvDate**	**No**	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	**SvDateHolder**	**No**	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000

Return Result	**SvStopTravel**	**No**	An array of SvStopTravel.

getStopsByWorker

Description

This method returns stop for a specified time range for a specified worker. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	**SvDate**	**No**	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	**SvDateHolder**	**No**	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be

			2004-01-28 13:50:00.000
WorkerName	String	No	The username for a valid user in application
Return Result	SvStopTravel	No	An array of SvStopTravel.

getStopsByDivision

Description

This method returns stop for a specified time range for specified divisions(Groups) The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as:

			yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Divisions	SvDivision[]	Yes	List of divisions for which to return. The query is restricted to only returning these divisions.
Return Result	SvStopTravel	No	An array of SvStopTravel.

getTravel

Description

This method returns travel for a specified time range. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the

			query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Return Result	SvStopTravel	No	An array of SvStopTravel.

getTravelByWorker

Description

This method returns travel for a specified time range for a specified worker. The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive

			of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
WorkerName	String	No	The username for a valid user in application
Return Result	SvStopTravel	No	An array of SvStopTravel.

getTravelByDivision

Description

This method returns travel for a specified time range for specified divisions(Groups). The method will return stop/travel segment where both the start and end datetime fall within the specified date time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000

EndDate	SvDateHolder	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Divisions	SvDivision[]	Yes	List of divisions for which to return. The query is restricted to only returning these divisions.
Return Result	SvStopTravel	No	An array of SvStopTravel.

submitGps

(SvGpsPosition[] points)

Description

The *submitGps* method provides the ability to send gps points to the StreetSmart system. Up to a maximum of 1000 gps points can be submitted in a single call. The points can belong to different users but all users must belong to the same company. In order for the gps points to be accepted for a user, that user must be linked to a device. The caller of the *submitGps* service must also call the *submitUserAction* web service and login the user if the user wants the system to determine and create stop/travel segments for the submitted GPS pts.

Method Signature

Ordinal	DataType	Can be Null?	Description
points	SvGpsPosition[]	No	Set of gps points that are to be added to StreetSmart.
Return Result	SvResult	No	An array of SvResult result objects that indicate if the operation was successful. There is one SvResult object for each input SvGpsPosition object.

Error Messages (on the SvResult object)

"The input array for gps points is null." – thrown if input array is null.

"Only 1000 points can be processed in a single request. Additional points were ignored." – Returned on each SvResult object for points over the max of 1000.

"A worker with the following username was not found: <workerName> " – Returned if the workerName in the SvGpsPosition object cannot be found.

"A device could not be found for the worker with username:: <workerName>" – Returned if the worker is not associated with a device in the StreetSmart system.

"The worker name is required." – Returned if the workerName in the SvGpsPosition object is not valued.

"The timestamp when the gps point was collected must be supplied." – Returned if the timestamp in the SvGpsPosition object is not valued.

"The position coordinate must be either „DEGREES" or „RADIANS"" – Returned if the positionCoordinateSystem field of the SvGpsPosition object is not set to an acceptable value. If nothing is specified, Radians is used be default.

Message Service

sendMessage

(SvMessage message)

Description

The *sendMessage* method provides the ability to send StreetSmart messages to one or multiple recipients.

Method Signature

Ordinal	DataType	Can be Null?	Description
message	SvMessage	No	The message to send. See the documentation of SvMessage.
Return Result	SvResult	No	The result object. Any errors in creating and sending the message are indicated in the SvResult object.

Field	DataType	Comments
subject	String	The subject of the message. This is a required field.
body	SvDate	The message body.
creatorUsername	String	The username of the StreetSmart worker who the message will be from. If the creatorUsername is not valued then an StreetSmart system message will be sent.
recipientUsernames	String[]	Name of the intended recipients of the message.

Error Messages (on the SvResult object)

- *"The input SvMessage object cannot be null."* – Returned if the input object is null.
- *"There must be a message subject on the SvMessage object."* – Returned if the message subject is not valued.
- *"The creator with username <username> cannot be null."* – Returned if the input object is null.
- *"No recipients with the input usernames could be found."* – Returned if none of the usernames of recipients could be found.
- *"One or more message recipients could not be found. The message was sent to the other recipients. Missing recipients: <missing recipient list>"* – Returned if one or more recipients could not be found by username.

MessageService Error Codes

Error Codes	Description of Error
1	A null SvMessage object was input.
2	The subject string was empty.
3	The message creator does not exist.
4	No recipients were input or none of the recipients that were input exist.
5	One of more of the recipients input does not exist.
6	An error occurred persisting the message. The specific error message will be supplied in the SvResult message string.

Alert Service

getFiredAlerts

Description

This service method allows fired alert to be returned for a specified time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDate	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Return Result	SvFiredAlert	Yes	An array of SvAlert

Field	DataType	Comments
Address	SvAddress	Address Object
Alertdescription	String	The text description of the alert
alertType	String	The Type of alert that fired
Coordinate	SvCoordinate	The coordinate object of where the alert fired
Criteriadescription	String	The rules of the alert that fired
Message	String	The text of the message that was recorded for the fired alert
Name	String	The name of the fired alert
Priority	String	The priority of the fired alert
receivedTime	SvDate	The time the item that triggered the alert was received at the server.
timecardName	String	
triggeredTime	SvDate	The datetime the item that triggered the alert actually happened at.
workerName	String	The name of the worker who triggered the alert.

getFiredAlertsByWorker

Description

This service method allows fired alert to be returned for a specified time range and a specified worker.

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM,

			the format would be 2004-01-28 13:50:00.000
EndDate	SvDate	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
WorkerName	String	No	The username for a valid user in application
Return Result	SvFiredAlert	Yes	An array of SvAlert

getFiredAlertsByDivision

Description

This service method allows fired alert to be returned for a specified time range and specified divisions (Groups)

Method Signature

Ordinal	DataType	Can be Null?	Description
StartDate	SvDate	No	The starting date time for a requested range of results. The server queries for changes inclusive of this specified time (e.g., the query returns changes up to AND including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS

			e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
EndDate	SvDate	No	Ending date for the range to changes. The server queries for changes. The server queries for changes exclusive of this specified time (e.g., the query returns changes up to BUT NOT including the specified end time). The time date format must be provided as: yyyy-MM-dd HH:mm:ss.SSS e.g., to specify a start time of January 28th, 2004 at 1:50PM, the format would be 2004-01-28 13:50:00.000
Divisions	String[]	Yes	List of divisions for which to return. The query is restricted to only returning these divisions.
Return Result	SvFiredAlert	Yes	An array of SvAlert

Location Service

The old Landmark service was deprecated with StreetSmart 7.0 The new Location service adds the ability to specify divisions (Groups) for each Location and also renames the old Landmark service to match the name of the functionality with the web application.

createLocation

Description

This service method allows a Location to be created.

Method Signature

Ordinal	DataType	Can be Null?	Description
Name	String	No	The Name of the Location
landmarkType	String	No	The type of the Location
Location	svLocation	No	The object of the address
Referencenumber	String	No	The unique number used to update locations
Divisions	svDivisions	Yes	Array of divisions that this Location will be available to. If null, it will be available to all divisions
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

createOrUpdateLocation

Description

This service method allows a Location to be created or updated.

Method Signature

Ordinal	DataType	Can be Null?	Description
Name	String	No	The Name of the Location
landmarkType	String	No	The type of the Location
Location	svLocation	No	The object of the address
Divisions	svDivisions	Yes	Array of divisions that this Location will be available to. If null, it will be available to all divisions
Referencenumber	String	No	The unique number used to update locations
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

updateLocation

Description

This service method allows Location to be updated.

Method Signature

Ordinal	DataType	Can be Null?	Description
Name	String	Yes	The Name of the Location
landmarkType	String	Yes	The type of the Location
Location	svLocation	Yes	The object of the address

Referencenumber	String	No	The unique number used to update locations
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

getLocationByLocationType

Description

This service method returns all Locations for specified landmark types.

Method Signature

Ordinal	DataType	Can be Null?	Description
landmarkType	String	No	The type of the Location
Return Result	SvLandmark	No	Land mark information.

deleteLocation

Description

This service method deletes a Location.

Method Signature

Ordinal	DataType	Can be Null?	Description
referenceNumber	String	Yes	Deletes a location with the reference number, If the location is found then returns true as the result, If the location is not found then returns false with the message as Landmark reference number not specified.

CompanyAdmin Service

SvWorker

Ordinal	DataType	Can be Null?	Descriptions
firstName	String	Yes	The first name of the worker. *Either the first and last name must be populated or the preferred name must be populated*. The first name of the worker. *Either the first and last name must be populated or the preferred name must be populated.*
middleName	String	Yes	The middle name of the worker.
lastName	String	Yes	The last name of the worker. *Either the first and last name must be populated or the preferred name must be populated.*
preferredName	String	Yes	The preferred name of the worker. *Either the first and last name must be populated or the preferred name must be populated.*
userName	String	No	The username of the worker. *Must be unique within the company. Required for both createWorker and updateWorker.*
divisionName	String	No	The division of the worker. *Required for createWorker*.
securityRoleName	String	No	The name of the security role of the worker. Can be either a custom security role or one of the following: Mobile Worker, Operations, Company Administrator, Super User, WebService. *Required for createWorker.*
timeZone	String	Yes	The time zone of the worker. Must be one of the following: US/Samoa, US/Aleutian, US/Hawaii, US/Alaska, US/Pacific, US/Arizona, US/Mountain , US/Central, US/East-Indiana, US/Eastern, US/Indiana-Starke, US/Michigan. *Defaults to the*

			company"s time zone if the time zone is not specified.
address	SvAddress	Yes	The address of the worker. See definition of SvAddress below. The pin for a mobile worker. Must be numeric and between 4 and 10 characters and must be unique. *Will be automatically generated if not set.*
pin	String	No	The pin for a mobile worker. must be numeric and between 4 and 10 characters and must be unique. *Will be automatically generated if not set.*
password	String	No	The password for a mission control or web service worker.
mobilephoneNumber	String	Yes	*Required for createWorker The worker"s mobile phone number.*
otherPhoneNumber	String	Yes	Alternate phone number.
faxNumber	String	Yes	The worker"s fax number.
emailAddress	String	Yes	The worker"s e-mail address.
smsAddress	String	Yes	The worker"s SMS address.
notificationMechanism	String	Yes	How the worker prefers to be notified with information. This setting is used, for example, by the Alerts Engine to notify the recipient of an alert.
notifyOfSystemMaintenance	Boolean	Yes	Must be one of the following: email, sms, StreetSmartMessage. Registers a worker to be notified of system maintenance via the preferred notification mechanism.
sendWhatsNewMail	Boolean	Yes	Registers a worker to receive "what"s new" information.
IVR Auth Number	String	Yes	The 10 digit phone number by which the PowerTalk system authenticates IVR callers.
Return Result	SvResult	No	Returns a SvResult object that indicates the success or failure of the method call.

SvResult

Field	DataType	Comments
errorCode	Integer	The error code. 0 if no error
errorMessage	String	The error message
goodResult	Boolean	True if successful, False otherwise

SvAddress

Field	DataType	Comments
streetAddress	String	The address line(s)
apt	String	The suite or apartment
city	String	The city
state	String	The state
zip	String	The zip code

Error Messages

Error Code	Error Message
1	The worker does not exist in the database (only set for updateWorker)
2	Cannot update worker. Unexpected error occurred.
3	Cannot delete worker. Unexpected error occurred.
4	Invalid PIN specified. Must be numeric, must be between 4 and 10 characters long, and must be unique.
5	Password field must be non-null and not empty.
6	Either the first and last name must be populated or the preferred name must be populated.
7	The input timezone is not valid.
8	securityGroupName is required *or* Invalid security group name
9	Username must be populated.
10	Username must be unique within the company.
11	Cannot autogenerate pin.

12	Worker type code not valid.
13	Division name was empty or division not found.
14	Ivr authentication number must only contain numeric values *or* Ivr authentication number already exists for another worker.
15	Attempt to delete worker with assigned active jobs.
16	Workers cannot delete themselves.

GetGroups

Description

Returns all groups available including its parent, children hierarchy and profile name, to the calling user.

Note: The getDivisions API does not return the parent and children hierarchy information and returns only the group names.

Method Signature

Ordinal	Data Type	Can be Null?	Description
Return Result	SvGroupExt[]	No	Returns an array of SvGroupExt objects. If no groups are found, an empty array is returned.

CreateGroup

Description

This API will provide the ability to create a new group, and assign a parent group and a profile(if feature available) for the company. The new group will automatically be associated with all alerts configured for the new group's parent.

Method Signature

Ordinal	Data Type	Can be Null?	Description
group	SvGroup	No	Group to be created
Return Result	SvResult	No	SvResult object indicating success or failure.

Validation Errors

Error Code	Error Message
1	The input group is null/empty
2	Group name must be populated
3	Duplicate group name not allowed
4	Group name must not exceed 50 characters
5	No group exists with the given parent group name - <parentGroupName>
6	No profile exists with the given name - <profileName>
7	Parent Group is not associated with the user's role - <rolename>
8	Comma not allowed in group name.

UpdateGroup

Description

This API will provide the ability to update an existing group, assign or change a parent group and profile (if feature available).

When a group is moved from one parent group to another parent group, all alerts linked to the new parent group are linked to the group being moved.

At the same time this group gets **disassociated** with all alerts which are linked with the old parent group. If the parent is not associated to an alert and the child group is, then the group remains associated to the alert.

Method Signature

Ordinal	Data Type	Can be Null?	Description
group	SvGroup	No	Group to be updated.
Return Result	SvResult	No	SvResult object indicating success or failure.

Validation Errors

Error Code	Error Message
1	The input group is null/empty
2	Group name must be populated
3	Duplicate group name not allowed
4	Group name must not exceed 50 characters
5	Group not found with the name provided - <groupName>
6	No group exists with the given parent group name - <parentGroupName>
7	No profile exists with the given name - <profileName>
8	Comma not allowed in group name
009	Group - <parentGroupName> is the child of - <existingGroupName> and cannot be made the parent.
10	Group cannot be parent of itself
11	No such group exists or is associated with the user's role
12	No such parent group exists or is associated with the user's role

DeleteGroups

Description

This API will provide the ability to delete group/s. A maximum of 100 groups could be passed in the input.

Method Signature

Ordinal	Data Type	Can be Null?	Description
groups	String[]	No	Array of group name/s to be deleted
Return Result	SvGroupResult[]	No	An array of SvGroupResult objects indicating success or failure for each group.

Validation Errors

Error Code	Error Message
1	The input array is null/empty
2	No group exists with the given name
3	Unable to delete the group because it has active users, sub-groups, geofences, forms, job types and landmarks associated with it.
4	Maximum of 100 groups should be passed in the input.

GetWorkers

[CompanyAdminService]

Description

The getWorkers() service method provides the ability to query for all workers in a company.

Method Signature

Ordinal	DataType	Can be Null?	Description
Return Result	SvWorker[]	No	An array of SvWorker instances. See documentation on SvWorker for more details.

Expected behaviors

- All workers (except deleted) are returned by this service call.
- Each SvWorker has a boolean active flag that indicates if the worker/user is active in StreetSmart. A worker/user must be active to log in.
- Each SvWorker is assigned to a security group. The caller needs to inspect these values in order to determine the role of the worker. For example, operations users (Mission Control) cannot be assigned jobs, etc. To assign jobs to workers, the SvWorker"s security group must indicate they are a mobile worker.

getWorkerByName

(String workerName)

Description

This web service allows the retrieval of a worker by the worker"s username. It is assumed that the worker name that is input is unique within the company.

Method Signature

Ordinal	DataType	Can be Null?	Description
workerName	String	No	The username of the worker to retrieve.

Return Result	SvWorker	No	A fully populated SvWorker object if the worker is found. Otherwise null is returned.

Validation Errors

"Worker name must be supplied." – thrown if the worker name is blank or null.

getWorkersByName

(String[] workerNameArray)

Description

This web service allows the retrieval of a set of workers by username. It is assumed that the worker names that are input are unique within the company. Note that the size of the returned array may be different than the size of the input array if one or more workers are not found.

Method Signature

Ordinal	DataType	Can be Null?	Description
workerNameArray	String[]	No	An array of usernames listing the workers to retrieve.
Return Result	SvWorker	No	For each worker that is found, a fully populated SvWorker object will be returned in the corresponding array element. If no workers are found, an empty array is returned.

Validation Errors

"The worker name array cannot be null." – thrown if the array is null or empty.
"Worker name must be supplied." – thrown if an array element is blank or null.

createWorker

Description

SvResult createWorker(SvWorker worker)
The createWorker web service method will create a new worker in StreetSmart. See the documentation below for details on the fields that can be populated on the SvWorker object.

Method Signature

Ordinal	DataType	Can be Null?	Description
Worker	SvWorker	No	An SvWorker instance describing the details of how to create/update the worker.
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

updateWorker

Description

SvResult updateWorker(SvWorker workers)
The updateWorker web service method updates an existing worker. If the worker does not exist in StreetSmart, an error is returned. Only fields specified in the SvWorker object will be updated. All other fields will remain at their previous values.

Method Signature

Ordinal	DataType	Can be Null?	Description
Worker	SvWorker	No	An SvWorker instance describing the details of how to create/update the worker.

Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

createOrUpdateWorker

Description

SvResult createOrUpdateWorker(SvWorker workers)
The createOrUpdateWorker web service method will create a new worker if the worker doesn"t already exist. In this case, it will be subject to the same validation rules as createWorker. If the worker is determined to already exist, that worker will be updated as in the updateWorker method.

Method Signature

Ordinal	DataType	Can be Null?	Description
Worker	SvWorker	No	An SvWorker instance describing the details of how to create the company.
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

deleteWorker

Description

SvResult deleteWorker(String username)
The deleteWorker webservice method will delete an existing worker. The worker must have no active jobs assigned to them.

Method Signature

Ordinal	DataType	Can be Null?	Description

Username	String	No	The username of the user to be deleted.
Return Result	SvResult	No	SvResult object that indicates the success or failure of the method call.

SvDevice

Field	DataType	Comments
deviceType	String	The type of device. Must be valid selection for your Field Force Manager package. *Required for createDevice.*
description	String	Description. *Required for createDevice*
serialNumber	String	Serial number of the device.
softwareVersion	String	*AutoGenerated* String representing the current Field Force Manager software version on the device. *Read only.*
lastIPAddress	String	Last known IP address of the device. *Read only.*
createdDateTime	SvDate	Date device was created. *Read only.*
activatedDateTime	SvDate	Activation date/time of the device. *Read only.*
currentlyLinkedTo	String	workerName of the worker currently linked to the device. *Read only*
deviceIdentifier	String	The device identifier assigned to the device. Could be a phone number, IP address, etc as appropriate. Must be unique to system. *Required for createDevice.*

SvResult

Field	DataType	Comments
errorCode	Integer	The error code. 0 if no error
errorMessage	String	The error message
goodResult	Boolean	True if successful, False otherwise

SvAddress

Field	DataType	Comments
streetAddress	String	The address line(s)
apt	String	The suite or apartment
city	String	The city
state	String	The state
zip	String	The zip code
country	String	The country

Error Messages

Code	Message
	Invalid device type. Type specified does not exist in the system. description is required.

getDevices

SvDevice[] getDevices()

Description

The getDevices method will retrieve a list of all devices in the system for a company.

Method Signature

Ordinal	DataType	Can be Null?	Description
Worker	SvWorker	No	An SvWorker instance describing the details of how to create/update the worker.
Return Result	SvDevice	No	Device information.

getDevice

Description

SvDevice getDevice(String deviceIdentification)
The getDevice web service method will retrieve information about a Device by its phone number.

Method Signature

Ordinal	DataType	Can be Null?	Description
Return Result	SvDevice	No	Device information.

createDevice

Description

SvResult createDevice(SvDevice device)
The createDevice web service method will create a new device in StreetSmart. See the documentation below for details on the fields that can be populated on the SvDevice object.

Method Signature

Ordinal	DataType	Can be Null?	Description
Device	SvDevice	No	Populate the required device fields.
Return Result	SvResult	No	SvResult object that indicates the success failure of the method call.

updateDevice

Description

SvResult updateDevice(SvDevice devices)
The updateDevice web service method updates an existing device. If the device does not exist in StreetSmart, an error is returned. Only fields specified in the SvDevice object will be updated. All other fields will remain at their previous values.

Method Signature

Ordinal	DataType	Can be Null?	Description
Device	SvDevice	No	Populate the required device fields.
Return Result	SvResult	No	SvResult object that indicates the success failure of the method call.

createOrUpdateDevice

Description

SvResult createOrUpdateDevice(SvDevice devices)
The createOrUpdateDevice web service method will create a new device if the device doesn"t already exist. In this case, it will be subject to the same validation rules as createDevice. If the device is determined to already exist, that device will be updated as in the updateDevice method.

Method Signature

Ordinal	DataType	Can be Null?	Description
Device	SvDevice	No	Populate the required device fields.
Return Result	SvResult	No	SvResult object that indicates the success failure of the method call.

deleteDevice

Description

SvResult deleteDevice(String deviceIdentification)
The deleteDevice webservice method will delete an existing device. The device must have no active jobs assigned to it.

Method Signature

Ordinal	DataType	Can be Null?	Description
Device	deviceIdentifier	No	The phone number or IP address of the device.
Return Result	SvResult	No	SvResult object that indicates the success failure of the method call.

linkDeviceToWorker

Description

SvResult linkDeviceToWorker(String deviceIdentifier, String workerName) [CompanyAdminService]

The linkDeviceToWorker web service method will create a new device in StreetSmart. The specified username will be linked to the device represented by the specified phone number.

If the device has previously been linked to a worker, linkDeviceToWorker will override the current setting and reassign the device to the worker specified.

Attempt to link a device or user from a company that is not within the security context of the WS user should result in an error.

Method Signature

Ordinal	DataType	Can be Null?	Description
deviceIdentifier	String	No	The device identifier (may be a phone number, IP address, etc. as appropriate) of the device to be linked. This device must already exist in the system.
workerName	String	No	The workerName of the mobile worker to be linked. The user must already exist in the system, and must have a valid Mobile Worker security role.
Return Result	SvResult	No	Returns a SvResult object that indicates the success or failure of the method call.

getDivisions

Description

This service returns all Groups/Divisions available to the calling user.

Method Signature

Ordinal	**DataType**	**Can be Null?**	**Description**
Return Result	SvDivision[]	No	Returns an array of SvDivision instances based on security role of the web service user . If no divisions are found, an empty array is returned. Each SvDivision instance holds the name of a division.

Interface Objects

SvGroupExt

Field	Data Type	Comments
name	String	Name of the division
parentDivisionName	String	Name of its parent division (if any)
childDivisions	SvDivisionExt[]	Child divisions as array of SvDivisionExt
profileName	String	Name of the profile associated with the division (if any)

SvGroup

Field	Data Type	Comments
existingGroupName	String	Not applicable for createGroup API. Mandatory for updateGroup API.
newGroupName	String	Name of the group. Mandatory for createGroup API. Optional for updateGroup API.
parentGroupName	String	Optional. Name of its parent group to be associated to. To remove a parent for a group, the value for the **newGroupName** should be set as be **No parent group**.
profileName	String	Optional. Name of the profile to be associated with; if profile feature exists, else this property will be ignored. To disassociate a profile for the group, the value for the **newProfileNmae** must be **No profile**.

SvGroupResult

Field	Data Type	Comments
groupName	String	Name of the group provided in the input.
errorCode	int	The error code 0 if no error
errorMessage	String	The error message corresponding to the input group name.

SvResult

Field	DataType	Comments
errorCode	int	The error code. 0 if no error
errorMessage	String	The error message
goodResult	String	Success Message

SvJobServiceResult (subclass of SvResult)

Field	DataType	Comments
errorCode	int	The error code. 0 if no error
errorMessage	String	The error message
jobReferenceNumber	String	The reference number of the job

SvJobActionUpdate

Field	DataType	Comments
updatedActions	SvJobAction[]	The updated actions
svJob	SvJob	The job associated with the actions

SvUserAction

Field	DataType	Comments
timecardName	String	The timecard name. Will be null if this action is not a timecard action. Timecard actions include Login, Logout, Start Shift, Start Break, End Break, End Shift and Ad-Hoc Form.
executionDateTime	SvDate	Timestamp of when the user action was performed. Note that this is the timestamp logged by the device. Due to network latency or cell coverage issues, the service may not actually receive the user action until much later, so this value may be before the date range of the service query.
workerName	String	The name of the worker that completed the action
location	SvLocation	Where the action was performed. May be null
form	SvForm	Form data collected for the action. May be null

SvUserActionUpdate

Field	DataType	Comments
actionId	String	A Id which uniquely identifies a timecard action.
actionName	String	The timecard name. Will be null if this action is not a timecard action. Timecard actions include Login, Logout, Start Shift, Start Break, End Break, End Shift and Ad-Hoc Form.
executionDateTime	SvDate	Timestamp of when the user action was performed. Note that this is the timestamp logged by the device. Due to network latency or cell coverage issues, the service may not actually receive the user action until much later, so this value may be before the date range of the service query.
workerName	String	The name of the worker that completed the action
location	SvLocation	Where the action was performed. May be null
form	SvForm	Form data collected for the action. May be null

SvMessage

Field	DataType	Comments
subject	String	The subject of the message. This is a required field.
body	SvDate	The message body.
creatorUsername	String	The username of the StreetSmart worker who the message will be from. If the
		creatorUsername is not valued then an StreetSmart system message will be sent.
ntUsernames	]	ay of the intended recipients of the message.

SvTimesheet

Field	DataType	Comments
timecardName	String	The shift name. Is one of the following: On Duty, On Break, Off Duty, Logged In
workerName	String	The name of the worker who"s timesheet it is.
startDate	SvDate	Timestamp of when the shift was started
endDate	SvDate	Timestamp of when the shift was ended. Can be null if the shift has not ended.

SvJobAction

Field	DataType	Comments
name	String	The name of the job action
dateTime	SvDate	Timestamp of when the job action was performed
workerName	String	The name of the worker that completed the action

location	SvLocation	Where the action was performed. May be null
form	SvForm	Form data collected with the job action. May be null

SvForm

Field	DataType	Comments
formName	String	The form name
formData[]	SvFormField[]	The list of form fields

SvFormField

Field	DataType	Comments
fieldName	String	The name of the field
fieldValue	String	The value of the field as completed by the mobile worker. If the field is a picture or signature field, then the value of the form field will have the MIME type and Base64 encoded bytes information. E.g. jpeg | <Base64 encoded bytes> or application/octet-stream | <Base64 encoded bytes>

Field	DataType	Comments
referenceNumber	String	Reference number of the work item. This must be unique in StreetSmart (even among deleted work items). Reference number is used to link a work item existing in StreetSmart to an external system. This field cannot be null.
description	SvString	Description for the work item (work to be done). This is commonly referred to as the job name. This field displays on the device in lists. This field can be null. The reference number is shown on the device if this field is null.
workerName	SvString	Worker assigned (or to be assigned) to this work item.
divisionName	SvString	Division assignment for this job.
workItemTypeName	SvString	WorkItemTypeName for this job. Cannot be null. WorkItemType specified must exist in StreetSmart and be linked to the company.
priority	SvString	(Emergency | High | Medium | Low)
status	SvString	Current status string of the job (Assigned | Unassigned | Retrieved | Active | Expired | Terminated)
scheduledStartTime	SvDate	Scheduled start date and time for the work item. Can be null. Must be a UTC date.
scheduledEndTime	SvDate	Scheduled end date and time for the work item. Can be null. Must be a UTC date.
actualStartTime	SvDate	Actual start date and time for the work item. Will be null until the work item is completed. Must be a UTC date.
actualEndTime	SvDate	Actual end date and time for the work item. Will be null until the work item is completed. Must be a UTC date.
deletedDateTime	SvDate	Date time in UTC when the object is soft deleted.
customerTypeCode	SvString	Code for custom category.
jobCategoryCode	SvString	Code for job category.
location	SvLocation	Location of the work item.
attributes	SvJobAttribute[ ]	Array of attribute data for the job.
actions	SvJobAction[]	Array of actions for the job.

SvJobExt- SubClass of SvJob

Field	DataType	Comments
referenceNumber	String	Reference number of the work item. This must be unique in StreetSmart (even among deleted work items). Reference number is used to link a work item existing in StreetSmart to an external system. This field cannot be null.
description	SvString	Description for the work item (work to be done). This is commonly referred to as the job name. This field displays on the device in lists. This field can be null. The reference number is shown on the device if this field is null.
workerName	SvString	Worker assigned (or to be assigned) to this work item.
divisionName	SvString	Division assignment for this job.
workItemTypeName	SvString	WorkItemTypeName for this job. Cannot be null. WorkItemType specified must exist in StreetSmart and be linked to the company.
priority	SvString	(Emergency | High | Medium | Low)
status	SvString	Current status string of the job (Assigned | Unassigned | Retrieved | Active | Expired | Terminated)
scheduledStartTime	SvDate	Scheduled start date and time for the work item. Can be null. Must be a UTC date.
scheduledEndTime	SvDate	Scheduled end date and time for the work item. Can be null. Must be a UTC date.
actualStartTime	SvDate	Actual start date and time for the work item. Will be null until the work item is completed. Must be a UTC date.
actualEndTime	SvDate	Actual end date and time for the work item. Will be null until the work item is completed. Must be a UTC date.

deletedDateTime	SvDate	Date time in UTC when the object is soft deleted.
customerTypeCode	SvString	Code for custom category.
jobCategoryCode	SvString	Code for job category.
location	SvLocation	Location of the work item.
attributes	SvJobAttribute[ ]	Array of attribute data for the job.
actions	SvJobAction[]	Array of actions for the job.
locationName	String	Name of the location. In create job APIs location will be created. If newLocation = true, then location name is mandatory. In get Jobs API, if job is associated with a location, response will have location name. **Available from JobService 0.0.3 or later**.
locationReferenceNumber	String	The unique number used to create location. In get Jobs API, if job is associated with a location, response will have location reference number. **Available from JobService 0.0.3 or later**.
newLocation	boolean	Used to specify whether to create new location or not in create job APIs. **Available from JobService 0.0.3 or later.**
placeHolder1	String	PlaceHolder for future
placeHolder2	String	PlaceHolder for future

SvcJob - SubClass of SvJobExt

Field	Data Type	Comments
dispatcherId	SvString	The dispacther Id of the job
serviceOrganizationId	SvString	The service organization id of the company for which job needs to be created.
createdDateTime	SvDate	Not Required to specify , it will return the datetime when the job was created
rejectedDateTime	SvDate	Not Required to specify, it will return the rejected datetime of the job if its been rejected
rejectReason	SvString	Not Required to specify, it will return the rejected reason of the job if its been rejected
jobSkills	SvString[]	
suspendedTime	SvString	Not required to speicgy, it gives the total suspended time that was done on the job.
timeOnJob	SvString	Not required to specify , it gives the total actual time spent to complete the job.
totalTime	SvString	Not required to specify , it gives the

		total time taken to complete the job.
jobPattern	SvString	Not required to specify, tells either its a One Time Job or Alawys Available Job
connectionId	SvString	Not required to specify, the unique identification for the company
emailId	SvString	The valid format of email id that the job needs to be associated
jobStatus	SvString	Tells the job is in what state either Assigned, Unassigned, Retrieved, Active, Completed or Expired.
jobDetailsURL	SvString	The URL which takes to view the details (pdf) of the job.
placeHolder3	SvString[]	Not used
placeHolder4	SvString[]	Not used

SvcJobActionUpdate

Field	**Data Type**	**Comments**
updatedActions	SvJobAction[]	The updated actions
svcJob	SvcJob	The job associated with the actions

SvcJobExt- SubClass of SvcJob (v0.0.4)

Field	**Data Type**	**Comments**

jobDescription	SvString	Description for the job
sendToDeviceDate	SvDate	The send to device date for the job when it can be downloaded on the device.
invoiceDetail	SvInvoiceDetail	The parts that were submitted as part of completing this job.

SvInvoiceDetail (v0.0.4)

Field	**Data Type**	**Comments**
invoicePartsDetails	SvInvoicePartsDetail	All the parts that were used to complete the job.
totalPartsCost	Float	The total cost of all the parts.
totalLaborCost	Float	The labor cost that was as part of completing the job.
taxRate	Float	Any tax rate that was issued for the used parts.
totalCost	Float	The total cost of parts labor and tax
currency	String	The currency used to do the billing ex: $

SvInvoicePartsDetail (v0.0.4)

Field	**Data Type**	**Comments**
partName	String	The part name which was used to perform

		the job.
quantity	int	The number of parts used to perform the job.
totalPrice	String	The total price with the quantity * per unit price
unitPrice	String	The price of each part.
partNumber	String	The par number unique used to identify which part.

SvcJob5- SubClass of SvcJob (v0.0.5)

Field	**Data Type**	**Comments**
jobDescription	SvString	Description for the job
sendToDeviceDate	SvDate	The send to device date for the job when it can be downloaded on the device.
invoiceDetail5	SvInvoiceDetail	The parts that were submitted as part of completing this job.

SvInvoiceDetail5 (v0.0.5)

Field	**Data Type**	**Comments**
invoicePartsDetails5	SvInvoicePartsDetail5	All the parts that were used to complete the job.
totalPartsCost	Double	The total cost of all the parts.
totalLaborCost	Double	The labor cost that was as part of completing

		the job.
taxCost	Double	Total tax for the used parts.
totalCost	Double	The total cost of parts labor and tax
currency	String	The currency used to do the billing ex: $

SvInvoicePartsDetail5 (v0.0.5)

Field	Data Type	Comments
partName	String	The part name which was used to perform the job.
quantity	Float	The number of parts used to perform the job.
totalPrice	String	The total price with the quantity * per unit price
unitPrice	String	The price of each part.
partNumber	String	The par number unique used to identify which part.
taxRate	Double	% tax for the part.
labour	Boolean	Indicates the part is of type labour.

SvcJobExtActionUpdate

Field	Data Type	Comments

updatedActions	SvJobAction[]	The updated actions
job	SvcJobExt	The job associated with the actions

SvJobAttribute

Field	DataType	Comments
Name	String	Name of job attribute.
Value	String	Value for job attribute.

SvCompany

Field	DataType	Comments
name	String	Name of the company

companyId	String	Identifier that uniquely identifies the company in StreetSmart. This is the id required to log into the website.
companyIdentifier	String	GUID that uniquely identifies the company in StreetSmart. This identifier can be used programmatically but is not considered usable for humans.
divisions	SvDivision[]	Array of SvDivision
packageName	String	Name of the package supported by this company for licensing purposes.
adminWorker	SvWorker	Administrative worker (of type SvWorker) that is passed in during calls to createCompany. Otherwise this parameter should be null.
location	SvLocation	SvLocation instance describing the location of this company. This parameter can be null
companyUrl	String	URL for the company. This parameter can be null.

SvDate

Field	DataType	Comments
dateString	String	String representation of a date. This type is used to provide a date using an underlying string type. This is done since some clients cannot pass dates as null values. The format must be: yyyy-MM-dd HH:mm:ss.SSS e.g., February 22, 2004 at 2:30PM equates to 2004-02-22 14:10:00.000

SvDivision

Field	DataType	Comments

name	String	Name of the division

SvGpsPosition

Field	DataType	Comments
Latitude	double	Latitude is a geographic coordinate that specifies the north–south position of a point on the Earth's surface
Longitude	double	Longitude is a geographic coordinate that specifies the east–west position of a point on the Earth's surface
positionCoordinateSystem	String	(RADIANS | DEGREES)
coverageStatus	int	0 = Valid GPS position attained -3 = Unable to get GPS (user probably indoors or out of GPS coverage) -1 = Timeout occurred attempting to get a

		GPS position -2 = Unable to connect to GPS subsystem on device -4 = GPS system has been restricted by the user on the device. 1 = GPS position not attainable 2 = GPS accuracy not attainable 4 = GPS accuracy data not available 5 = Battery too low to get GPS 6 = GPS chipset malfunction
heading	double	Heading associated with this position
headingCoordinateSystem	String	(RADIANS | DEGREES)
dateTime	SvDate	Device time when the GPS position is collected in UTC. If the devices are in different time zone then convert the device time to UTC before submit.
workerName	String	User name of the worker
speed	double	Speed at which the worker is travelling

SvLocation

Field	DataType	Comments
address	SvAddress	Address corresponding to the GPS position. This may be null
position	SvGpsPosition	Position corresponding to the address. This may be null

SvAddress

Field	DataType	Comments
streetAddress	String	Street address
apt	String	Suite number
city	String	City
state	String	State
zip	String	Postal code

SvWorker

Field	DataType	Comments
username	String	Login name for the user
password	String	Password (used only for created an admin user in createCompany)
firstName	String	Worker first name
lastName	String	Worker last name

preferredName	String	Worker preferred name
address	SvAddress	Address for the worker
phoneNumber	String	Phone number for the worker
mobileNumber	String	Mobile phone number for the worker
faxNumber	String	FAX number for the worker
emailAddr	String	Email address for the worker
divisionName	String	Name of the division in which the worker currently belongs
activeStatus	Boolean	Is the user active in StreetSmart (only active users can log in)
securityGroupName	String	Security group to which the user currently belongs (Operations | Mobile Worker)

svLocationExt

Field	DataType	Comments
Name	String	The Name of the Location
landmarkType	String	The type of the Location
Location	svLocation	The object of the address
Divisions	svDivisions	An array of svDivision
Referencenumber	String	The unique number used to update locations

SvWorkzone

Field	DataType	Comments
circleCenterCoordinate	SvCoordinate	GPS Object
circleRadiusMiles	Double	Size of circular workzone
workzoneType	String	Type of the work zone. Circular or Polygon or Rectangle

SvCoordinate

Field	DataType	Comments
latitude	Double	The latitude decimal degrees of object
longitude	Double	The longitude decimal degrees of object

SvFiredAlert

Field	DataType	Comments
Address	SvAddress	Address Object
Alertdescription	String	The text description of the alert
alertType	String	The Type of alert that fired
Coordinate	SvCoordinate	The coordinate object of where the alert fired

Criteriadescription	String	The rules of the alert that fired
Message	String	The text of the message that was recorded for the fired alert
Name	String	The name of the fired alert
Priority	String	The priority of the fired alert
receivedTime	SvDate	The time the item that triggered the alert was received at the server.
timecardName	String	Timecard status (On Duty/Logged Out/Logged In/Off Duty/On Break).
triggeredTime	SvDate	The datetime the item that triggered the alert actually happened at.
workerName	String	The name of the worker who triggered the alert.

SvStopTravel

Field	**DataType**	**Comments**
address	SvAddress	Address Object
coordinate	SvCoordinate	Coordinate Object
distance	double	The distance traveled in the segment. The distance is only valid for non-stopped segments
endTime	SvDate	The date time the stop or travel segment began
jobReferenceNumber	String	The reference number of a job if the stop was determined to have occurred at a job
landmarkName	String	The name of the landmark if the stop was determined to have occurred at a location
startTime	SvDate	The date time the stop or travel segment started
stoppedFlag	Boolean	Whether or not the segment was a stop. If true the segment is a stop, if false the segment is a travel segment.
timecardName	String	The timecard status for a segment. The possible statuses are Logged Off, Logged In, On Duty, On Break
workerName	String	The username of the worker who performed the stop or travel segment.

Mileage Web Service

The mileage web service gives the access to the trip data. It provides all the trip information and also calculates the trip distance, total expenses, duration of the trip.

There are 3 API published for the Mileage feature.

Interfaces

getTrips

Provides all the trips for the requested customer id for the given date range. The date range should not exceed 90 days.

Method Signature

Ordinal	DataType	Can be Null?	Description
startDate	SvDate	No	Starting date of the range to check for trips
endDate	SvDate	No	Ending date of the range to check for trips.
Return Result	SvTrip[]	No	Returns an array of SvTrip. Returns empty array if no trips found.

Validation Errors

- "The start date cannot be null." – thrown if the start date is null
- "The end date cannot be null." – thrown if the end date is null
- "The end date must be after the start date." – thrown if the start date is after the end date.
- "You are only allowed to query for 90 days of data at a time." – thrown if an attempt is made to query for more than 90 days of data.

getTripsByWorker

This API provides the entire trip done by the requested worker for the given time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
startDate	SvDate	No	Starting date of the range to check for trips
endDate	SvDate	No	Ending date of the range to check for trips.
workerName	SvString	No	Worker Name who has performed the trips.
Return Result	SvTrip[]	No	Returns an array of SvTrip.Returns empty array if no trips found.

Validation Errors

- "The start date cannot be null." – thrown if the start date is null
- "The end date cannot be null." – thrown if the end date is null
- "The end date must be after the start date." – thrown if the start date is after the end date.
- "You are only allowed to query for 90 days of data at a time." – thrown if an attempt is made to query for more than 90 days of data.
- "The worker name cannot be null." – Thrown if the workerName is null or blank.
- "Could not find a worker with the username." – Thrown if the worker corresponding to the input workerName cannot be found.

getTripsByJob

This API provides all the trip data associated with the requested Job for the given time range.

Method Signature

Ordinal	DataType	Can be Null?	Description
startDate	SvDate	No	Starting date of the range to check for trips.
endDate	SvDate	No	Ending date of the range to check for trips.
jobReference Number	SvString	No	jobReferenceNumber of the linked trips.
Return Result	SvTrip[]	No	Returns an array of SvTrip.Returns empty array if no trips found.

Validation Errors

- "The start date cannot be null." – thrown if the start date is null
- "The end date cannot be null." – thrown if the end date is null
- "The end date must be after the start date." – thrown if the start date is after the end date.
- "You are only allowed to query for 90 days of data at a time." – thrown if an attempt is made to query for more than 90 days of data.
- "The jobReferenceNumber cannot be null." – Thrown if jobReferenceNumber is null Or blank.
- "Could not find a job with the jobReferenceNumber." – Thrown if the job corresponding to the input jobReferenceNumber cannot be found.

Interface Objects

SvTrip

Field	Data Type	Description
startDateTime	SvDate	Trip start date and time.
endDateTime	SvDate	Trip end date and time.
workerName	SvString	In version 0.0.1 returns first name, last name. If first name and last name is null then returns preferred name. All later versions return username of the worker.

workerGroup	SvString	Group name of the worker who performed the trip.
category	SvString	Category of the trip. Used for the calculation of the expenses.
purpose	SvString	Purpose of the trip e.g Sales Call, Delivery
status	SvString	Current status of the trip. A trip can be in Started or Completed status.
jobName	SvString	Job name of linked job.
jobReferenceNumber	SvString	jobReferenceNumber of the linked Job
duration	Integer	The duration of the trip is in minutes.
odometerDistance	Double	Distance covered in the trip as per odometer reading.
gpsDistance	Double	Distance covered as per the GPS points collected by the device.
suggestedRouteDistance	Double	Distance of the suggested route between start and end trip point provided by the Third party System(Here its Google).
startOdometer	Double	Start trip odometer reading.
endOdometer	Double	End trip odometer reading.
reimbursementRate	Double	Reimburse rate as per the category of the trip.
additionalExpenses	Double	Any additional expenses of the trip.
totalExpense	Double	Summation of Reimbursement and the additional expenses.

notes	SvString	Note entered by the trip worker.
tripStartLocation	SvTripLocation	Trip start location details.
tripEndLocation	SvTripLocation	Trip end location details.
gpsPoints	SvGpsPosition[ ]	All the GPS points of the user route.Its is only for the completed route. See documentation on SvGpsPosition for more details.
placeHolder1	String	Extra placeholder field for future usage.
placeHolder2	String	Extra placeholder field for future usage.
placeHolder3	String	Extra placeholder field for future usage.
placeHolder4	String	Extra placeholder field for future usage.

SvTripLocation

Field	Data Type	Description
locationName	SvString	Landmark nearer to the trip start/end.
locationReferenceNumber	SvString	Landmark reference number of the start/end trip landmark.
latitude	SvString	Start/End trip GPS point latitude.
longitude	SvString	Start/End trip GPS point longitude
address	SvString	Start/End trip address.