

SERVICE ORDER
SCHEDULER

Technical Documentation

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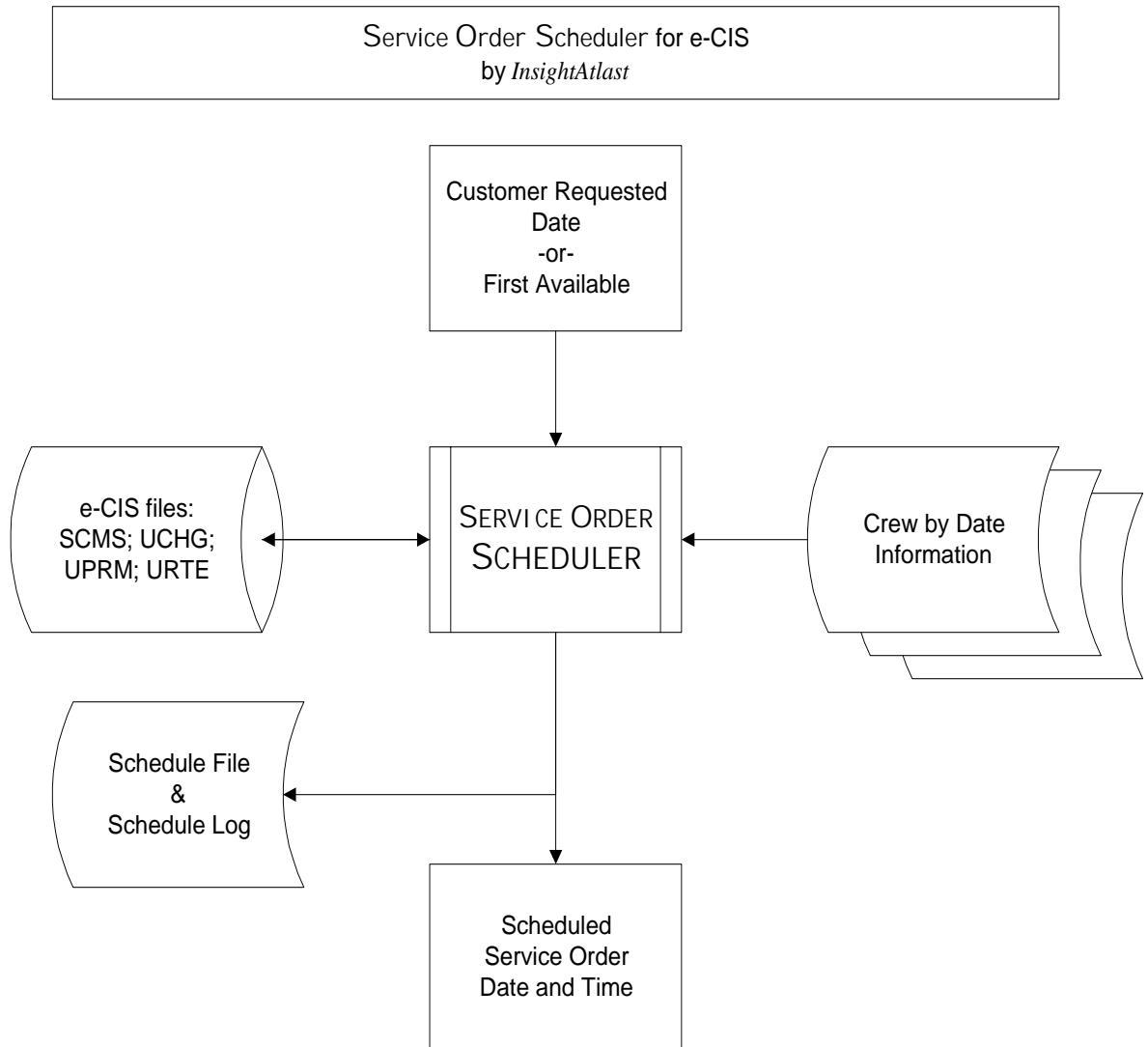
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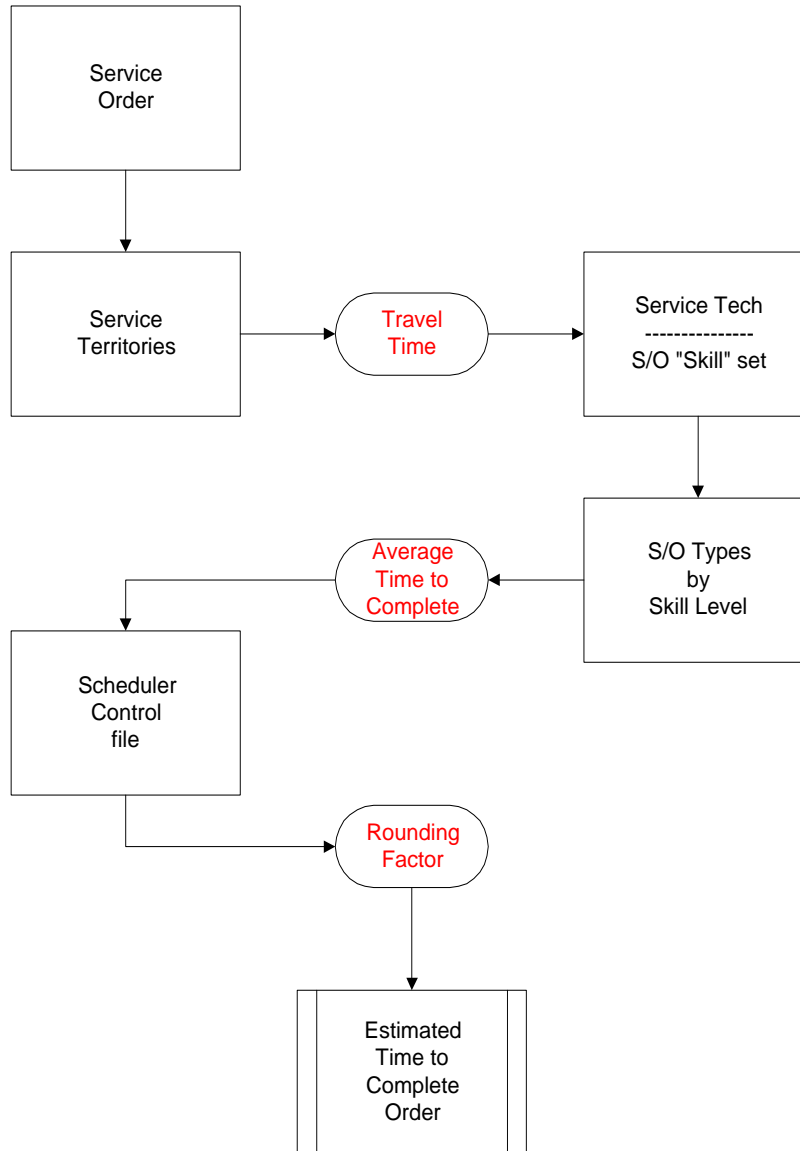
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Flow Diagrams

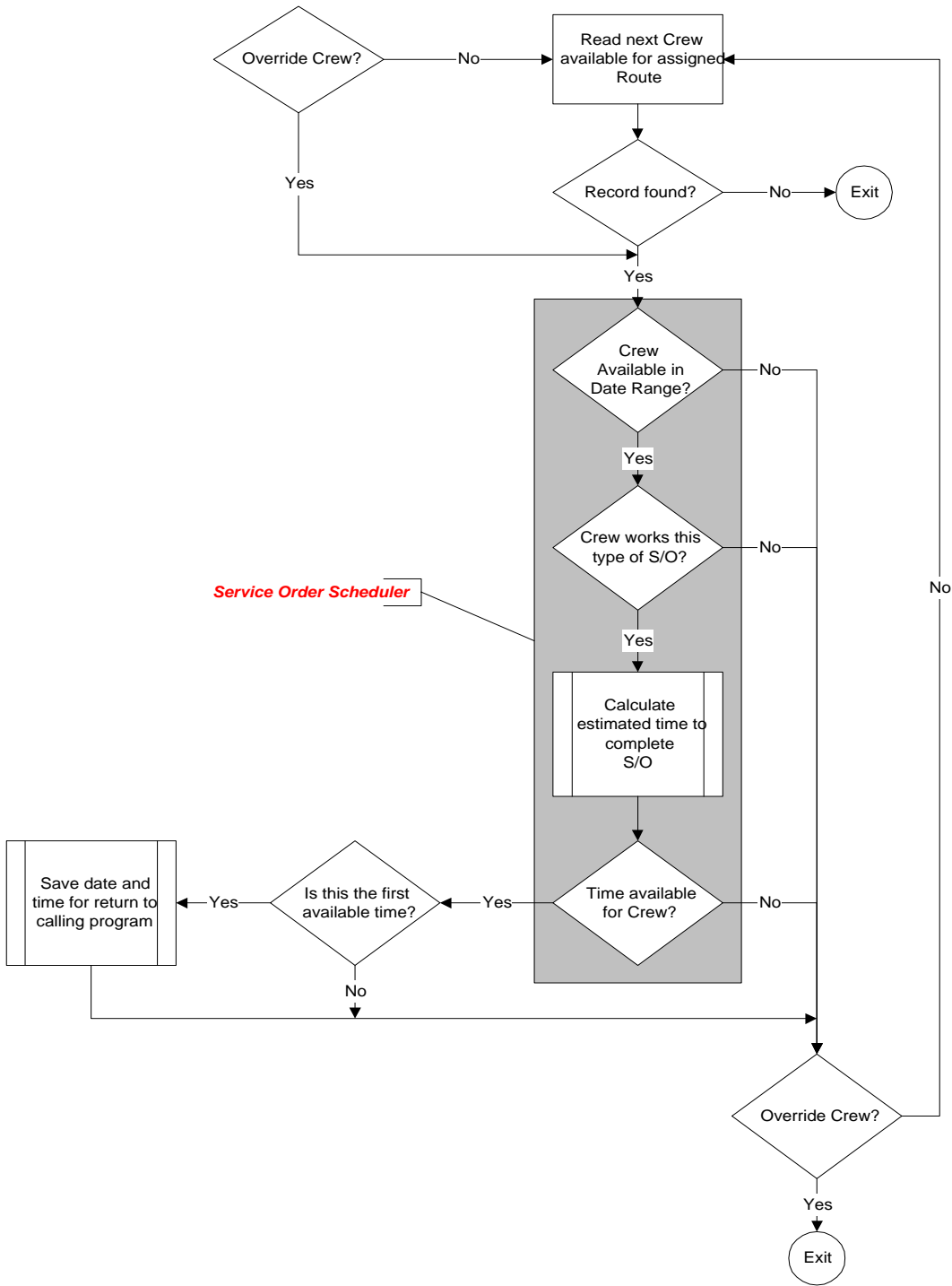


Estimated Time To Complete Order

$(\text{Travel Time} + \text{Average Time to Complete}) \times \text{Rounding Factor}$



Service Order Scheduling Process



Scheduling Limits

There are a number of ways to limit how many service orders can be assigned to a Service Tech on a given date. The following is a list of limits in the order of precedence used by the Scheduler:

1. **Daily limit by Service Territory** – this limit is specified in the *Service Tech Territory by Date* file (@SSCRT), and is used to restrict the number of service orders of any type assigned to the Service Tech. Default = no limit.

Example: due to the size of a particular territory, it may be practical to limit the total number of orders that a Service Tech can be assigned for one day. The same thing can be accomplished by increasing the estimated amount of time it takes to complete an order, but if a Service Tech covers multiple territories, using this limit may be better solution.

2. **Daily limit by Order Type** – this limit is specified in the *Estimated Time to Complete* file (@SSTIM), and is used to restrict the number of orders of a specific type that can be assigned to the Service Tech. Default = no limit.

Example: in order to better balance the work load, you may want to limit certain order types (i.e.: connects, disconnects, etc.) to only a few per day. Depending on the demographics of the territories being covered, it is possible that at certain times of the year you would be inundated with connect or disconnect order requests, and you would not have time available to complete other order types.

3. **Number of Minutes allowed for Non-Priority and Priority orders** – these limits are specified in the *Service Tech Availability by Date* file (@SSCDY), are used to restrict the total number of minutes that can assigned to the Service Tech for Non-Priority and Priority scheduled orders. Default = minutes remaining in the work day can be scheduled to either Priority or Non-Priority work.

Example: without these limits, a Service Tech's schedule would likely be full at the start of a work day, leaving no room for priority orders that come in during the day. It is possible to just let the Scheduler manage this through the "bumping" of Non-Priority work, but this can lead to more work on the dispatcher's part as they attempt to manage the rescheduling of these "bumped" orders.

4. **Daily limit by Service Tech** – this limit is specified in the *Service Tech Skills* file (@SSCOV), and is used to restrict the total number of orders that can be assigned to the Service Tech. Default = no limit.

Example: due to the skill level of a particular Service Tech, you may want to limit the total number of orders that can be assigned to them.

5. ***Time interval limit*** – this limit is specified in the *Service Tech Availability by Time* file (@SSCTM), and is used to restrict the number of orders that can be assigned to the Service Tech within defined appointment “windows”. Default = no limit.

Example: because appointments put greater pressure on the Service Techs to arrive at a certain time and to complete the orders by a certain time, it may be wise to limit the number of appointments that can be scheduled.

Calculating Available Time

There are two different categories of scheduled orders, Priority and Non-Priority, and two methods for calculating available time.

$$\text{Available Priority Minutes}^1 = m - p + rp$$

$$\text{Available Non-Priority Minutes}^2 = m - rsv - n + rn - xp$$

***m* = minutes available.** This is the lesser of 1) the total minutes in the Service Tech's work day (as defined in the *Service Tech Availability by Time* file), 2) the daily limit for priority work (as defined in the *Service Tech Availability by Date* file), or 3) the remaining minutes in the work day (current system time up to the ending time in the *Service Tech Availability by Time* file).

***n* = non-priority minutes used.** This is the total number of minutes that has already been scheduled to this Service Tech for non-priority work, and includes pending and completed orders.

***p* = priority minutes used.** This is the total number of minutes that has already been scheduled to this Service Tech for priority work, and includes pending and completed orders.

***rn* = reclaimed non-priority minutes.** If the Scheduler control file has been set to "*Reclaim closed minutes*", then this is the total number of minutes of completed non-priority orders that has been assigned to this Service Tech for this date.

***rp* = reclaimed priority minutes.** If the Scheduler control file has been set to "*Reclaim closed minutes*", then this is the total number of minutes of completed priority orders that has been assigned to this Service Tech for this date.

***rsv* = reserved priority minutes.** If the Scheduler control file has been set to "*Reserve priority minutes*", then this is the total number of minutes that has been set aside strictly for priority work. To calculate this amount, subtract the Non-Priority Limit from the Priority Limit in the *Service Tech Availability by Date* file³.

***xp* = excess pending priority minutes.** This is the number of minutes of pending priority orders scheduled to this Service Tech that are in excess of the minutes set aside for priority work⁴.

¹ A value of less than zero is invalid, and is defaulted to zero. By definition, all minutes in a work day can be scheduled for priority work. If needed, the Scheduler will bump non-priority orders to make room for the priority order.

² A value of less than zero is invalid, and is defaulted to zero.

³ If the "Reserve priority minutes" flag is not set in the control file, this value is zero even if you specify daily limits for Non-Priority and Priority work.

⁴ Example: if the Non-Priority Limit is 330 minutes, and the Priority Limit is 450 minutes, then the number of minutes set aside for priority work is 120 minutes. If the Service Tech currently has 150 minutes of pending priority work to complete, then the excess pending priority minutes would be 30.

Application Program Interfaces (API)

Scheduler API (#SOSSCHAPI)

Use this API to retrieve a schedule date and time or to assign a schedule date and time to a service order.

Parameters are passed in a single 512 byte alphanumeric field.

From	To	Description	Comments
1	10	Action Code	Leave blank to retrieve next available schedule date and time 'WRITE' = Select next available date/time
11	15	Current Assigned Tech ¹	From @SSSCH
16	23	Current Scheduled From Date	From @SSSCH [CCYYMMDD]
24	29	Current Scheduled From Time	From @SSSCH [HHMMSS]
30	34	S/O Type	* Required * From @SSSCH or SCMS
35	43	S/O Number	* Required * From @SSSCH or SCMS
44	48	Override Tech Code ²	Required if territory fields not specified
49	56	Override Start Date	[CCYYMMDD]
57	62	Override Start Time	[HHMMSS]
63	70	Override End Date	[CCYYMMDD]
71	76	Override End Time	[HHMMSS]
77	82	From Time Window	[HHMMSS]
83	88	To Time Window	[HHMMSS]
89	89	Attempt to schedule after hours?	[Y/N]
90	95	Route ³	From UPRM. Ignored if Override Service Tech specified
96	101	Stop	From UPRM
102	103	Rounding Code	From @SSCTL [01-99; H1-H9]
104	104	Use "Priority" scheduling?	[Y/N]
105	109	Reason Code ⁴	Written to Scheduler Log as type
110	110	Override Service Tech? ⁵	[Y/N] Required to be "Y" if territory fields not specified.
111	120	Update Exit Program ⁶	From @SSCTL

¹ This data defines the key to the current schedule record for the service order. This is especially important if you are moving a service order to a new date and time.

² The "override" data (positions 44 - 76) is used by the Scheduler to define the period to search for an available date and time. For instance, the override start date defines when to start looking for a schedule date.

³ If the Override Tech field (and flag) are not specified, then at least one of the following fields must be specified in order for a schedule to be created: Route/Stop, Service State, Area Code, District Code, Region Code, and/or Division Code.

⁴ Written to Service Order Schedule Log to indicate the type of action completed by the scheduler. See *reason code table* for a list of system generated values.

⁵ Enter "Y" to force the Scheduler to use the value in the override Tech field.

⁶ For a complete description of these program exits, see the section titled Program Exits.

From	To	Description	Comments
121	130	General Exit Program	From @SSCTL
131	140	Reschedule Exit Program	From @SSCTL
141	142	Service State	From either UPRM or UACTOV
143	146	Area Code ¹	From either UPRM or UACTOV
147	150	District Code	From either UPRM or UACTOV
151	154	Region Code	From either UPRM or UACTOV
155	158	Division Code	From either UPRM or UACTOV
159	159	Select by Route/Stop ²	[Y/N]
160	160	Select by Service State	[Y/N]
161	161	Select by Area Code	[Y/N]
162	162	Select by District Code	[Y/N]
163	163	Select by Region Code	[Y/N]
164	164	Select by Division Code	[Y/N]
165	165	Schedule by Cost Factor	[Y/N]
166	166	Use Defaults	[Y/N] If set to "Y", the system will retrieve default values from control files for use in scheduling. Only values passed as blank are overlaid by the default information.
167	167	Set Time (Appointment)	[Y/N/P] Tells the Scheduler which scheduling method to use. If "Y", the Scheduler will issue a set appointment time. If "N", the Scheduler will issue a schedule date only (time is set to a 24 hour range). If "P", then the Scheduler issues a time interval equal to one established for the selected service tech (file @SSCTM).
168	170	Time Zone	From UARA file. Used to determine the current time in the territory being scheduled (if different from the time zone where the system is located).
171	174	Date Format	*USA, *ISO, *EUR, etc.
175	179	Start Time Increment	Number of minutes to add to current time to use as the default starting time.
180	180	Link Type	I = Scheduling Window connects using IP Address of client PC. N = Scheduling Window connects using user name.
181	190	User Id	AS/400 User Id (<i>VARPG programs connect to AS/400 using QUSER</i>)
191	196	Same Day Time	The time at which the Scheduler automatically advances the calendar the number of days specified in the Start Days field as the default scheduling start date.
197	198	Start Days	The number of days to advance the calendar once the Same Day Time has been exceeded.

¹ Area, District, Region, and Division codes are all user-defined territory fields within the e-CIS database. The titles of these fields (i.e., "Town Code" instead of "Area Code", etc.) may vary within your implementation. Note: all of these territory fields (like route and stop above) are ignored by the Scheduler if override Tech is specified.

² These flags tell the Scheduler which data fields to look at to determine a Tech's territory. More than one of these flags can be set to "Y". If none of these flags are set to "Y", then the Scheduler assumes that all Techs are available to complete the service order.

From	To	Description	Comments
199	199	Reclaim Closed Minutes	Y = minutes from closed and inactivated scheduled orders are reclaimed by the Scheduler for use during the day.
200	200	Reserve Priority Minutes	Y = allocate the number of minutes available for priority orders so that non-priority order cannot be scheduled in those minutes (even if they are not currently used up).
201	210	Return Code ¹	*ERR = Error Occurred *WRN = Warning message *OK = schedule date/time found
211	217	Return Message Id	<i>Prefix Message file</i> SOS @SSMSGF RNQ QRNQMSG CPF QCPFMSG
218	222	Return Service Tech	
223	230	Return Start Date	[CCYYMMDD]
231	236	Return Start Time	[HHMMSS]
237	244	Return End Date	[CCYYMMDD]
245	250	Return End Time	[HHMMSS]
251	255	Return Time to Complete	Minutes
256	257	Return Skill Level	
258	258	Return After Hours	[Y/N]
259	336	Return Message Data	Passed with return message id
337	414	Formatted Message	Complete message text based on message id and message data fields.
415	420	Starting Time Interval	If scheduling is not to a set appointment time, this field contains the starting time for the interval being scheduled (value of zero if scheduling to a date only).
421	426	Ending Time Interval	If scheduling is not to a set appointment time, this field contains the ending time for the interval being scheduled (value of 12:00 if scheduling to a date only).
427	441	Log Key	15 character unique identifier that is associated with uploaded SOS Palm information.
442	445	Company ID	The CIS company code (OCT file)
427	512	[Not Used]	

¹ This field indicates if the requested schedule event completed normally. Return codes starting with “*ERR” indicate that a schedule date and time could not be found. Return codes of “*WRN” and “*OK” will generate schedule dates and times. *See Return Code Table.*

*Reason Code Table **

CHG	Schedule Date and Time Changed
MOV	Existing Schedule Moved
NEW	Schedule Date and Time Added
PTY	Priority scheduled
RSCHM	Rescheduled
RSCHU	Unable to Reschedule
RSCHI	Inactive S/O not Rescheduled

* The reason code is user-defined, and can be any value up to 5 characters. If you choose to use one of the codes from this table, then it will be interpreted by the system as having been created as a result of the described event.

Return Code Table

*ERR PGM	Program error (see message id for cause of error)
*ERR TERR	No override tech or territory fields specified
*ERR SCD	No service order type
*ERR SO#	No service order number
*ERR SDT	Invalid start date
*ERR EDT	Invalid end date
*ERR N/SVT	No available service tech found
*ERR N/SCH	No schedule date/time found
*WRN N/TIM	No completion time found
*OK	Schedule date/time found (no update)
*OK ADD	Schedule date/time added
*OK UPDATE	Schedule date/time updated

Note: These codes are returned by the Scheduler, and do not reflect any direct data validation done by the API interface. If an invalid date is passed to this interface, for instance, it will not be sent on to the Scheduler, and a default value will be sent in its place (01-01-0000). Under some conditions, an invalid start date passed to this interface will not generate an error in the Scheduler, causing unexpected results.

Schedule Transfer API (#SOSXFRAPI)

Use this API to transfer existing schedule records for a service tech to another tech or the same tech on a different day.

Parameters are passed in a single 128 byte alphanumeric field.

From	To	Description	Comments
1	5	Source Service Tech	* Required * Tech to be rescheduled
6	13	Source "From Date" ¹	* Required * [CCYYMMDD]
14	19	Source "From Time"	* Required * [HHMMSS]
20	27	Source "To Date"	* Required * [CCYYMMDD]
28	33	Source "To Time"	* Required * [HHMMSS]
34	38	Target Service Tech ²	Tech to receive rescheduled orders
39	46	Target "From Date" ³	
47	52	Target "From Time"	
53	60	Target "To Date"	
61	66	Target "To Time"	
67	80	[Not Used]	
81	89	Number of Rescheduled Orders	Count returned by Scheduler
90	98	Number of Orders that could not be Rescheduled	Count returned by Scheduler
99	108	Return Code ⁴	*ERR = Error Occurred
109	115	Return Message Id	<i>Prefix Message file</i> SOS @SSMSGF RNQ QRNQMSG CPF QCPFMSG
116	128	[Not Used]	

Return Code Table

*ERR PGM	Program error (see message id for cause of error)
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¹ Defines the time frame to be rescheduled. All service orders scheduled to the "From Service Tech" that falls within the "from" and "to" dates and times will be subject to be rescheduled.

² This field is not required. If left blank, the Scheduler will pick the first available Tech.

³ Defines the time frame to receive rescheduled orders. Orders that cannot be rescheduled will retain their original schedule (service tech, date, and time).

⁴ This field indicates if the requested schedule event completed normally. Return codes starting with "**ERR" indicate that a schedule date and time could not be found. Return codes of "**WRN" and "**OK" will generate schedule dates and times. See *Return Code Table*.

Scheduler Territory API (#SOSGETTER)

Use this API to retrieve the Scheduler territories for a given date.

Parameters are passed individually.

Length	Description	Comments
8	Date	* Required * format ccyymmdd.
22000	Table of territories (22 bytes x 1000)	Returned by API. See datastructure below for definition of individual fields in each table element.
5	Total count of elements in table.	Returned by API.
5	Total number of sub-elements in table	Returned by API. Since each entry in the territory table can have up to 5 "sub-entries", this count reflects the total of all of these entries.
4	Sort order	Returned by API. Indicates the hierarchical order of the 4 territory fields, with A=Area, D=District, R=Region, and V=Division.
10	Return Code	If an error occurs within the API, the value of this field will contain "**ERR PGM"
7	Return Message ID	If an error occurs within the API, the AS/400 error message code is returned.

Territory Definition Data Structure

From	To	Description	Comments
1	4	Territory Code 1	Check Sort Order (position 1) to determine code type.
5	8	Territory Code 2	Check Sort Order (position 2) to determine code type.
9	12	Territory Code 3	Check Sort Order (position 3) to determine code type.
13	16	Territory Code 4	Check Sort Order (position 4) to determine code type.
17	17	Level Break	Indicates where a territory break has occurred (i.e.: new Area, District, etc.). Value will be '1' thru '4', corresponding to the level of the new entry ¹ .
18	22	Service Tech	Service Tech assigned to this territory

Return Code Table

*ERR PGM	Program error (see message id for cause of error)
----------	---

¹ Under the default setup, the hierarchy would be Area, District, Region, and Division. If an Area has multiple Districts, each new District would have an entry of '2' in the Level Break field. A new Area would yield a value of '1' in the Level Break field. If all of the Territory fields are the same between two elements (only the Service Tech is different), then the Level Break field is blank.

Schedule Calendar API (#SOSBLDCAL)

Use this API to retrieve the Scheduler calendar for a given date.

Parameters are passed individually.

Length	Description	Comments
51	Selection Criteria	* Required * see datastructure below.
5	Number of time increments	Defines the number of time increments used to define the calendar, which is based on the value specified in the Scheduler Control file (SOS0001).
2304	Table of time increments (8 bytes x 288)	Use the "Number of time increments" to retrieve the ending element of this table.
5	Number of service techs	Defines the number of service techs that have been scheduled on this date.
500	Table of service techs (5 bytes x 100)	Use the "Number of service techs" to retrieve the ending element of this table.
5	Number of scheduled orders	Defines the number of scheduled orders passed back by the calendar.
22000	Table of scheduled orders (22 bytes x 1000)	Use the "Number of scheduled orders" to retrieve the ending element of this table. This table is sub-defined through a data structure. See format below.

Selection Criteria Data Structure.

From	To	Description	Comments
1	8	Date	* Required * [CCYYMMDD]
9	9	Filter on/off ¹	* Required * [Y/N] If set to "Y", will filter selection by service territory.
10	15	Filter from route	Starting route number used by filter.
16	21	Filter from stop	Starting stop number used by filter.
22	27	Filter to route	Ending route number used by filter
28	33	Filter to stop	Ending stop number used by filter.
34	35	Filter state code	State code used by filter.
36	39	Filter area	Area used by filter.
40	43	Filter district	District used by filter.
44	47	Filter region	Region used by filter.
48	51	Filter division	Division used by filter.

¹ The service tech territory is defined by a combination of the fields that follow this flag. Supply values only for those fields used to define your service territories.

Scheduled Service Order Data Structure.

From	To	Description	Comments
1	3	Row	Defines the row number of the scheduled order. ¹
4	6	Column	Defines the column number of the scheduled order. ²
7	15	Service Order Number	The scheduled service order number.
16	20	Service Order Type	The scheduled service order type code.
21	21	Attribute	Defines the type of schedule, and is used by the system to control the color that displays. "G" = Set appointment time (Green) "W" = Scheduled time period (White) "Y" = Scheduled to date only (Yellow) "R" = Priority scheduled order (Red) "B" = Closed; Cancelled; Inactive; Order not found (Blue)
22	22	Type Code	Defines special display attributes. "1" = First line of schedule order "C" = Cancelled service order "Y" = Closed service order "I" = Inactive service order "?" = Service order not found "2" = Subsequent schedule line.

Check GUI Security Access Level (#SOSCHKSEC)

Use this API to determine the access level that a user has to specific functions within the GUI. This program follows the CIS defined hierarchy for determining access levels, checking first by User ID, then by Group ID (if defined in CIS file UUSR), and finally by *ALL.

Parameters are passed individually.

Length	Description	Comments
10	User ID	* Required * must be a valid CIS User ID.
10	Security Type	* Required * must be one of the valid security types from the @SSSCT file.
1	Access Level	Returned by the API, and contains either a U (update or all access), I (inquiry or view only access), or N (no access).

¹ The calendar is defined as a matrix of time increments and service techs. The row refers to the time increment.

² The calendar is defined as a matrix of time increments and service techs. The column refers to the service tech.

Copy Existing Information to New Service Tech (#SOSCPYPRF)

Use this API to copy a Service Tech's profile to a new Service Tech. This API can also be used to verify that existing profile records do not exist for the new Service Tech.

Parameters are passed individually.

Length	Description	Comments
5	From Service Tech	* Required * unless "Check" parameter is set to "C".
5	To Service Tech	* Required *
1	Check code	C – Check if New Service Tech has existing profile records --- API returns either "Y" or "N" in response.

Schedule Remove with Log API (#SOSDLTAPI)

Use this API to delete an existing schedule record, and create a schedule log entry.

Parameters are passed in a single 128 byte alphanumeric field.

From	To	Description	Comments
1	9	Service Order Number	* Required * Service order to be deleted
10	14	Service Order Type	* Required *
15	19	Reason Code	If specified, this value is written to the schedule log as the type of transaction.
20	32	[Not Used]	
33	42	Error Flag	"FAILED" if error
43	49	Message Id	If the delete operation fails, this is the error message generated.
50	127	Message Text	Used in combination with the message id, contains details of the error generated.
128	128	Date Format	"Y" = CCYYMMDD or YYMMDD "M" = MMDDCCYY or MMDDYY "D" = DDMMCCYY or DDMMYY

Schedule Delete API (#SOSDLTSOS)

Use this API to delete an existing schedule record and any associated log entries.

From	To	Description	Comments
1	9	Service Order Number	* Required * Service order to be deleted

Scheduled Service Tech Listing API (#SOSLSTAPI)

Use this API to print a listing of scheduled service orders for a specified service tech.

Parameters are passed in a single 128 byte alphanumeric field.

From	To	Description	Comments
1	5	Service Tech	* Required *
6	13	Date	* Required *
14	32	[Not Used]	
33	42	Error Flag	**ERR PGM" if error
43	49	Message Id	Return message from list program. If print operation is successful, returns output queue that the list was printed on.
50	127	Message Text	Used in combination with the message id, contains details of the error generated.
128	128	Date Format	"Y" = CCYYMMDD or YYMMDD "M" = MMDDCCYY or MMDDYY "D" = DDDMMCCYY or DDDMMYY

Retrieve Message API (#SOSGETMSG)

Use this API to retrieve a formatted message from the AS/400.

Parameters are passed individually.

Length	Description	Comments
7	Message Id	* Required * Message id to be retrieved (AS/400 format).
10	Message File	* Required *
78	Message Data	If specified, contains specific information about the error (substitution data).
78	Formatted Message	
10	Return Code	**ERR PGM" if error encountered

Retrieve System Time API (#SOSGETTIM)

Use this API to retrieve the system time from the server.

Parameters are passed in a single 14 byte alphanumeric field.

From	To	Description	Comments
1	8	System Date	Format CCYYMMDD
9	14	System Time	Format HHMMSS

Create New Service Order API (#SOSNEWSO)

Use this API to create a new service order in CIS.

Parameters are passed in a single 256 byte alphanumeric field.

From	To	Description	Comments
1	10	Action	[currently not used]
11	15	Service Order Type	* Required * corresponds to value in CIS file SOCD.
16	22	Account Number	* Required * corresponds to value in CIS file UACT.
23	37	Premise Number	
38	52	Taken By	
53	54	Requested By	Corresponds to value in CIS file SRQB.
55	55	Initial Status value ¹	
56	100	[Not Used]	
101	109	Service Order Number	Returned by API.
110	119	Return Code	Indicates API completion status. See table below.
120	126	Return Message ID	If Return Code begins with *ERR, then this field will contain AS/400 message code.
127	204	Return Message Data	Used in conjunction with Message ID to build error message text.
205	256	[Not Used]	

Return Code Table

*OK	Service Order created successfully
*ERR CALL	CIS program CISSOGEN was not found or ended abnormally
*ERR S/O	Service Order could not be created.
*ERR PGM	Program error (see message id for cause of error)

¹ This value is populated in field SMCL0 in CIS file SCMS (service order master), and normally would be blank. If you want the newly created service order to remain inactive until some further action is taken (scheduling, for instance), then pass a value of "I" in this field.

Create New Customer API (#SOSNEWC)

Use this API to create a new Customer in CIS.

Parameters are passed in a single 512 byte alphanumeric field.

From	To	Description	Comments
1	5	Prefix	Valid prefix code from CIS (UPFX file).
6	25	First Name	
26	26	Middle Initial	
27	46	Last Name	* Required * This field can contain the entire name, as in the case of a business.
47	81	Address line 1	
82	116	Address line 2	
117	146	DBA name	
147	181	Attention To	
182	216	City/State (Address line 3)	
217	226	Zip Code	
227	229	SSN Prefix	First 3 digits of SSN
230	231	SSN Center	Middle 2 digits of SSN
232	235	SSN Suffix	Last 4 digits of SSN
236	238	Phone Number Area Code	
239	241	Phone Number Exchange	First 3 digits of 7 digit phone number
242	245	Phone Number	Last 4 digits of 7 digit phone number
246	345	E-Mail Address	
346	355	Password	Used for accessing Customer information via SOSWeb.
356	365	Verify Password	
366	465	Error	Return error message text
466	472	New Customer Number	Returned by API
473	479	New Account Number	Returned by API
480	512	[Not Used]	

Retrieve Location of Local PC Service Tech File (#SOSSVTLOC)

Use this API to retrieve the centralized location of the local PC Service Tech file. This value is set in the Service Order Scheduler Control file (@SSCTL), and if specified, defines one location that all PC clients look to for the local PC version of the Service Tech file. The value returned is a standard PC path, including file name.

From	To	Description	Comments
1	80	Network location	Returned by API.

Rescheduled Service Order Acknowledgement API (#SOSRSHACK)

Use this API to “acknowledge” a rescheduled service order. Once an rescheduled order has been acknowledged, it will no longer appear in the Rescheduled Service Order list.

Parameters are passed individually.

Length	Description	Comments
9	Service Order Number	* Required *
5	Reason Code	If specified, this value is written to the scheduler log file.
26	New Schedule Date	* Required * alphanumeric timestamp

Retrieve CIS Information API (#SOSRTVCIF)

Use this API to retrieve information related to the scheduling of service orders from the CIS database

Parameters are passed as a single 512 byte alphanumeric field (see #SOSSCHAPI for the parameter list definition).

Schedule History API (#SOSHSTAPI)

Use this API to retrieve scheduled order information for an account or premise. This program will return the five most recent scheduled orders.

Parameters are passed in a single 640 byte alphanumeric field.

From	To	Description	Comments
1	7	Account Number	
8	22	Premise Number	* Required * if account number blank
23	27	S/O Type ¹	
28	35	From Date ²	
36	43	To Date	
44	80	[Not Used]	
81	90	Return Code	*ERR = Error Occurred
91	97	Return Message Id	Prefix Message file SOS @SSMSGF RNQ QRNQMSG CPF QCPFMSG
98	98	Return Count	A value from 0 to 5 that represents the number of historical schedules retrieved.
99	100	[Not Used]	
		Group 1	<i>Five groupings of most recently scheduled orders (based on selection criteria).</i>
101	105	Return Service Tech	
106	110	Return S/O Type	
111	119	Return S/O Number	
120	127	Return From Date	
128	133	Return From Time	
134	141	Return To Date	
142	147	Return To Time	
148	149	Return Skill Level	
150	154	Return Time to Complete	
155	155	Return After Hours	
156	156	Return Priority Code	
157	157	Return Override Tech Flag	
158	163	Return From Time Window	
164	169	Return To Time Window	
170	175	Return Starting Interval	
176	181	Return Ending Interval	
182	182	Return Set Time Flag	
183	200	[Not Used]	
		Group 2	
201	205	Return Service Tech	
206	210	Return S/O Type	
211	219	Return S/O Number	
220	227	Return From Date	
228	233	Return From Time	
234	241	Return To Date	

¹ Can be used to further limit the selection of historical information.

² Can be used to limit selection of orders to a specific date range.

From	To	Description	Comments
242	247	Return To Time	<i>Five groupings of most recently scheduled orders (based on selection criteria).</i>
248	249	Return Skill Level	
250	254	Return Time to Complete	
255	255	Return After Hours	
256	256	Return Priority Code	
257	257	Return Override Tech Flag	
258	263	Return From Time Window	
264	269	Return To Time Window	
270	275	Return Starting Interval	
276	281	Return Ending Interval	
282	282	Return Set Time Flag	
283	300	[Not Used]	
		Group 3	
301	305	Return Service Tech	
306	310	Return S/O Type	
311	319	Return S/O Number	
320	327	Return From Date	
328	333	Return From Time	
334	341	Return To Date	
342	347	Return To Time	
348	349	Return Skill Level	
350	354	Return Time to Complete	
355	355	Return After Hours	
356	356	Return Priority Code	
357	357	Return Override Tech Flag	
358	363	Return From Time Window	
364	369	Return To Time Window	
370	375	Return Starting Interval	
376	381	Return Ending Interval	
382	382	Return Set Time Flag	
383	400	[Not Used]	
		Group 4	
401	405	Return Service Tech	
406	410	Return S/O Type	
411	419	Return S/O Number	
420	427	Return From Date	
428	433	Return From Time	
434	441	Return To Date	
442	447	Return To Time	
448	449	Return Skill Level	
450	454	Return Time to Complete	
455	455	Return After Hours	
456	456	Return Priority Code	
457	457	Return Override Tech Flag	
458	463	Return From Time Window	
464	469	Return To Time Window	
470	475	Return Starting Interval	
476	481	Return Ending Interval	
482	482	Return Set Time Flag	
483	500	[Not Used]	
		Group 5	
501	505	Return Service Tech	
506	510	Return S/O Type	
511	519	Return S/O Number	

From	To	Description	Comments
520	527	Return From Date	
528	533	Return From Time	
534	541	Return To Date	
542	547	Return To Time	
548	549	Return Skill Level	
550	554	Return Time to Complete	
555	555	Return After Hours	
556	556	Return Priority Code	
557	557	Return Override Tech Flag	
558	563	Return From Time Window	
564	569	Return To Time Window	
570	575	Return Starting Interval	
576	581	Return Ending Interval	
582	582	Return Set Time Flag	
583	640	[Not Used]	

Return Code Table

*ERR PGM	Program error (see message id for cause of error)
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Retrieve Schedule Date/Time API (#SOSRTVSCH)

Use this API to retrieve the schedule date and time for a Service Order.

Parameters are passed as separate fields

Length	Description	Comments
9	Service Order Number	* Required *
8	Schedule Date	Format: CCYYMMDD
4	Start Time	Format: HHMM
4	End Time	Format: HHMM

Retrieve S/O Information API (#SOSRTVSOI)

Use this API to retrieve additional information about a service order, including S/O Type, Account #, Name, Contact Phone Numbers, Service Address, etc.

Parameters are passed as a single 314 byte field.

Length	Description	Comments
9	Service Order Number	* Required *
10	Return Code	*NOT FND = invalid S/O Number *ERR PGM = program ended abnormally
7	Message ID	If return code is *ERR PGM, then this field contains the message id in the form of RNQxxxx.
5	S/O Type Code	
7	Account #	
1	Check Digit	Mod-10
30	Account Name	
25	Phone Number 1	
25	Phone Number 2	
25	Phone Number 3	
25	Phone Number 4	
15	Premise Number	
50	Service Address	
50	Service City, State	
30	Premise Additional Address	

Retrieve Service Tech Information API (#SOSRTVSVT)

Use this API to retrieve additional information about a Service Tech, including Name, Assigned Crew, Access Information, etc.

Parameters are passed as a single 322 byte field.

Length	Description	Comments
5	Service Tech Id	* Required *
10	Return Code	*NOT FND = invalid S/O Number

Length	Description	Comments
		*ERR PGM = program ended abnormally
7	Message ID	If return code is *ERR PGM, then this field contains the message id in the form of RNQxxxx.
30	Name	
5	Assigned Crew	
30	Crew Name	From SCRW
5	Backup Tech Id	
30	Backup Tech Name	From @SSSVT
20	Access Type 1	i.e.: Home, Business, Cell, etc.
20	Access Type 2	
20	Access Type 3	
20	Access Type 4	
20	Access Type 5	
20	Access Info 1	i.e.: Phone Number, e-mail address, etc.
20	Access Info 2	
20	Access Info 3	
20	Access Info 4	
20	Access Info 5	

Retrieve Territory Records API (#SOSRTVTER)

Use this API to retrieve territory information as defined on the IASO path. Records are broken down based on the hierarchy defined for Division, Region, District, and Area in CIS.

Parameters are passed as separate fields.

Length	Description	Comments
8	Input Date	* Required * format: CCYYMMDD
22000	Territory Breakdown	This is a 1000 element table, with each element containing 22 bytes: 1- 4 Territory value 1 ¹ 5- 8 Territory value 2 9-12 Territory value 3 13-16 Territory value 4 17-17 Level ² 18-22 Service Tech
5	Territory Breakdown Count	The number of elements in the Territory Breakdown table
5	Total "Branches"	Since one Territory Breakdown element can reference up to 5 different braches on the "tree" (4 different Territory values and a Service Tech), this count represents the total

¹ The "Territory Values" are based on how you have the hierarchy defined in CIS for Division, Region, District, and Area. If you only use District and Area to define your Service Territory, then only two of these values would ever be populated with data.

² Level defines where in the Territory Hierarchy you are currently. A level of "4" indicates that you are at the highest (least granular) level of the hierarchy. A blank level indicates that you are at the lowest (actual Service Tech) level.

Length	Description	Comments
		number of data elements in the table.
4	Sort Code	The sort order based on the Territory heirarchy. A=Area D=District R=Region V=Division
10	Return Code	*ERR PGM = program ended abnormally
7	Message Id	RNQxxxx

Check for “Meter Order” API (#SOSMTRORD)

Checks if a Service Order Type is defined as a “meter order” (i.e.: open service, close service, reread, etc.).

Parameters are passed as separate fields.

Length	Description	Comments
5	Service Order Type	* Required *
1	Meter Order flag	Input: if set to “L” and the Service Order Type is defined as a Meter Order, then the @SSSTO file is updated to exclude this Order Type from being a valid “Additional Order” type in SOSPalm. Output: returns “Y” if this is a Meter Order type.

SOSPalm API's

Close Service Order from SOSPalm API (#SOSP_CLS)

This API will close a Service Order in CIS using data stored in the SOSPalm Update file (@SSUPI).

Parameters are passed as separate fields.

Length	Description	Comments
9	Service Order Number	* Required *

Create SOSPalm Export file API (#SOSP_EXP)

Use this API to format data for transfer to SOSPalm.

Parameters are passed as separate fields.

Length	Description	Comments
5	Service Tech Id	* Required *
5557	Parameter List	This field is broken down into separate data elements: 1-10 Date (format: CCYYMMDD - *required *) 11-60 Date Text (format: normally used to indicated the Schedule Date of the orders) 61-2652 S/O Numbers (up to 288 nine digit S/O numbers) 2653-5532 Time of Day (up to 288 ten character times that correspond to the schedule times for the Orders above). 5533-5535 Count (1-288) 5536-5536 Include Codes? ("Y" if you want to rebuild the Code files on the Palm Pilot) 5537-5541 Date Format ("*ISO", "*USA", etc.) 5542-5542 Decimal Positions (number of decimal positions on the meter readings: 0-2) 5543-5557 Return Key (unique key used to group all of the interface records in the @SPEXx files).

Call SOSPalm Input File Creation Program API (#SOSP_INP)

Use this API to call a custom input creation program for SOSPalm.

Parameters are passed as separate fields.

Length	Description	Comments
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Length	Description	Comments
10	Program Name	* Required * Name of input file creation program.

Retrieve S/O Close Error Status API (#SOSP_RSOS)

This API will return the Closing Error Status value from the @SSPALM file.

Parameters are passed as separate fields.

Length	Description	Comments
2	Error Status	Returned by API. This value is compared against the value in field SMSOS in file SCMS, and if they match then the order was not closed due to an error.

Retrieve S/O Close Program API (#SOSP_RTV)

This API will return the S/O Close program value from the @SSPALM file.

Parameters are passed as a single alphanumeric field.

Length	Description	Comments
10	Close Program	Returned by API
90	[Not Used]	
10	Return Code	*ERR PGM = program ended abnormally
7	Message Id	RNQxxxx
11	[Not Used]	

Exit Programs

Update Exit Program

Defined in the Service Order Scheduler Control file (*file=@SSCTL; update program=SOS0001; path=IASC*). This program is called from the Scheduler after a schedule record has been created or updated, and can be used to update information in the e-CIS master files.

Supplied Exits: **SOS_UPD_01** – Update schedule date and crew in SCMS and create change log records.

Passed Parameters: **SOSPARM**
 @SSSCH record image

General Purpose Exit Program

Defined in the Service Order Scheduler Control file (*file=@SSCTL; update program=SOS0001; path=IASC*). This program is called from the Scheduler after a schedule record has been created or updated. Use this program to call an exit program in addition to the master file update program.

Supplied Exits: **N/A**

Passed Parameters: **SOSPARM**
 @SSSCH record image

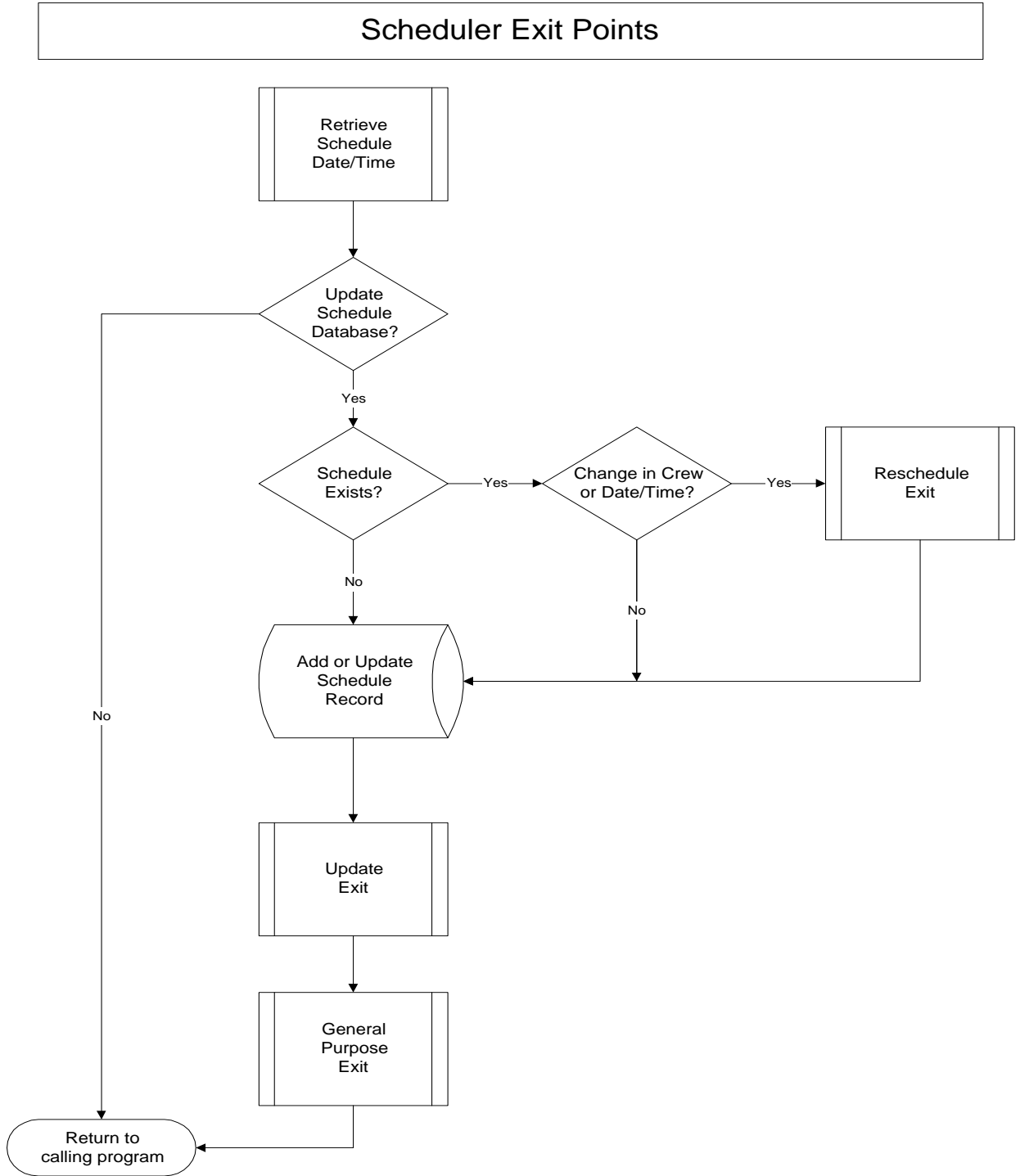
Reschedule Event Exit Program

Defined in the Service Order Scheduler Control file (*file=@SSCTL; update program=SOS0001; path=IASC*). This program is called from the Scheduler after an existing schedule record has been updated with a new assigned service tech or schedule date/time. It can be used to trigger a reminder to notify the customer of the new schedule.

Supplied Exits: **N/A**

Passed Parameters: **Old Schedule** [**@SSSCH record image – before update**]
 New Schedule [**@SSSCH record image – after update**]
 SOSPARM

Exit Points Diagram



File Layouts

Master Files

@SSCHG Scheduling Limits Change Log

External Field Name	Description	Type	Len	Dec	Notes
SCGSVT	Service Tech	Char	5		
SCGSDT	Schedule Date	Char	10		<i>format ccyymm-dd</i>
SCGDAT	Change Timestamp	TStmp			
SCGUSR	Changed by User ID	Char	10		
SCGPGM	Changed by Program	Char	10		
SCGFIL	Scheduler File Changed	Char	10		
SCGKEY	Key to File	Char	50		values separated by slashes (/)
SCGFLD	Changed Field Name	Char	10		
SCGOVL	Old Value	Char	50		variable length
SCGNVL	New Value	Char	50		variable length
SCGDEC	Number of Decimals	Num	3	0	
SCGEDT	Edit Code	Char	1		must exist if value is numeric

Logical Views: @SSCHG1 – Tech; Change Timestamp; Schedule Date

@SSLOG Service Order Schedule Log

External Field Name	Description	Type	Len	Dec	Notes
SCLSVT	Service Tech	Char	5		
SCLSO#	S/O Number	Num	9	0	
SCLOSD	Old Schedule Date	Char	30		
SCLNSD	New Schedule Date	Char	30		
SCLOVT	Override Service Tech	Char	5		
SCLPGM	Change Program	Char	10		
SCLCBY	Changed By	Char	10		User Id
SCLCDT	Change Date/Time	TStmp			Timestamp
SCLRSN	Reason Code	Char	5		Describes schedule event – see table under the scheduling API (#SOSSCHAPI) for list of system generated values.
SCLRAK	Acknowledgment	Char	1		Y/N

Logical Views: @SSLOG1 – S/O #; Change Date; Reason Code
 @SSLOG2 – S/O # (Rescheduled Orders only)

@SSSCH Service Order Schedules

External Field Name	Description	Type	Len	Dec	Notes
SCSSVT	Service Tech	Char	5		

Logical Views: @SSSEC1 – User ID; Security Type

@SSSVT Service Techs

External Field Name	Description	Type	Len	Dec	Notes
SCISVT	Service Tech	Char	5		
SCINAM	Name	Char	30		
SCICRW	Assigned Crew	Char	5		
SCIBKT	Back-up Tech	Char	5		
SCIAC1	Access Code 1	Char	5		
SCIAT1	Access Method 1	Char	20		
SCIAC2	Access Code 2	Char	5		
SCIAT2	Access Method 2	Char	20		
SCIAC3	Access Code 3	Char	5		
SCIAT3	Access Method 3	Char	20		
SCIAC4	Access Code 4	Char	5		
SCIAT4	Access Method 4	Char	20		
SCIAC5	Access Code 5	Char	5		
SCIAT5	Access Method 5	Char	20		
SCIFDL	Future Date Limit	Num	5	0	Minutes
SCICDL	Current Date Limit	Num	5	0	Minutes
SCISUN	Schedule on Sunday	Char	1		Y/N
SCIMON	Schedule on Monday	Char	1		Y/N
SCITUE	Schedule on Tuesday	Char	1		Y/N
SCIWED	Schedule on Wednesday	Char	1		Y/N
SCITHU	Schedule on Thursday	Char	1		Y/N
SCIFRI	Schedule on Friday	Char	1		Y/N
SCISAT	Schedule on Saturday	Char	1		Y/N
SCISKP	Skip Holidays	Char	1		Y/N

Logical Views: @SSSVT1 – Tech
 @SSSVT2 – Name; Tech
 @SSSVT3 – Crew; Tech
 @SSSVT4 – Crew; Name; Tech

@SSUPI Service Order Update Interface

External Field Name	Description	Type	Len	Dec	Notes
SUIISO#	Service Order Number	Num	9	0	
SUITYP	Record Type	Char	1		2=SCMS; 3=SCSR; 4=SOCM
SUIUTL	Utility Type	Char	1		
SUISEQ	Sequence Number	Num	7	0	Meter Seq if SUITYP=3 Comment Seq if SUITYP=4
SUIMCO	Meter Change-Out Code	Char	1		
SUIFLD	Field Name	Char	10		
SUIDTA	Data	Char	128		

Logical Views: @SSUPI1 – S/O #; Type; Utility; Sequence; Change-Out Code

Control Files

@SSCTL Scheduler Control file

External Field Name	Description	Type	Len	Dec	Notes
SC\$CMP	Company Code	Char	4		from OCT
SC\$RND	Rounding Code	Char	2		01-99; H1-H9
SC\$SDY	Same Day Schedule Time	Time			
SC\$ADY	Scheduler Start Days	Num	2	0	
SC\$DIN	Display Increment	Num	2	0	
SC\$#RF	Check Route/Stop	Char	1		Y/N
SC\$#SF	Check State Code	Char	1		Y/N
SC\$#AF	Check Area Code	Char	1		Y/N
SC\$#DF	Check District Code	Char	1		Y/N
SC\$#GF	Check Region Code	Char	1		Y/N
SC\$#VF	Check Division Code	Char	1		Y/N
SC\$UDP	Update Program	Char	10		no validation
SC\$RSX	Reschedule Exit	Char	10		no validation
SC\$EXT	Exit Program	Char	10		no validation
SC\$SCF	Schedule by Cost Factor	Char	1		Y/N
SC\$STI	Start Time Increment	Num	5	0	minutes
SC\$DTF	Default Scheduling Method	Char	1		Y/N/P
SC\$SVP	Path to centralized local Service Tech file	Char	80		

Logical Views: @SSCTL1 – Company Code

@SSRSCH Scheduling Required

External Field Name	Description	Type	Len	Dec	Notes
SS\$CMP	Company Code	Char	4		from OCT
SS\$REQ	Require Scheduling?	Char	1		Y/N
SS\$SUN	Require on Sunday?	Char	1		Y/N
SS\$SAT	Require on Saturday?	Char	1		Y/N
SS\$HOL	Require on Holiday?	Char	1		Y/N (as defined in UHOL file)

Logical Views: @SSRSCH1 – Company Code

@SSSCT GUI Security Types

External Field Name	Description	Type	Len	Dec	Notes
SCYSCT	Security Type	Char	10		
SCYDES	Description	Char	30		

Logical Views: @SSSCT1 – Security Type

@SSSCT2 – Description; Security Type

@SSTIM Estimated Time to Complete Order

External Field Name	Description	Type	Len	Dec	Notes
SCASCD	S/O Type	Char	5		
SCALVL	Skill Level	Num	2	0	User defined (0-99)
SCAAVG	Avg Time to Complete	Num	5	0	Minutes
SCACSF	Cost Factor	Num	3	0	User defined (0-999)
SCADLM	Daily Limit	Num	5	0	User defined (0-99999)

Logical Views: *@SSTIM1 – S/O Type; Skill Level*

@SSDQM IP Address cross-reference

External Field Name	Description	Type	Len	Dec	Notes
SDQIPA	IP Address	Char	15		
SDQNAM	Dataqueue Name	Char	10		
SDQSO#	Service Order Number	Char	9		
SDQSCD	Service Order Type	Char	5		
SDQCGI	Change Indicator	Char	1		

Logical Views: *@SSDQM1 – IP Address*
@SSDQM2 – Data Queue Name

@SSPALM Palm Pilot Control Information

External Field Name	Description	Type	Len	Dec	Notes
SPPCMP	Company Code	Char	4		
SPPCLS	Palm Pilot Close Program	Char	10		
SPPSOC	S/O Close Program	Char	10		
SPPCU	Calculate Usage Program	Char	10		
SPPSOS	Closing Error Status	Char	2		
SPPSDT	Use Schedule Date as Close Date?	Char	1		Y/N
SPPDAY	Days before Closing Error	Dec	3	0	

Logical Views: *@SSPALM1 – Company Code*

@SSSTO Service Order Type Overrides

External Field Name	Description	Type	Len	Dec	Notes
STOSCD	S/O Type	Char	5		
STOXCL	Exclude from Scheduling	Char	1		Y/N

STOXRF	Exclude from Referrals	Char	1		Y/N
STOXAF	Exclude from Additional Order Types	Char	1		Y/N

Logical Views: @SSSTO1 – S/O Type

@SSWAC Web Access Control

External Field Name	Description	Type	Len	Dec	Notes
SCWCAF	Customer/Account flag	Char	1		C/A
SCWCA#	Customer/Account Number	Num	7	0	
SCWRTP	Record Type	Char	10		
SCWDTA	Data	Char	1024		

Logical Views: @SSWAC1 – Customer/Account Flag; Customer/Account #;
Record Type
@SSWAC2 – Record Type; Customer/Account Flag;
Customer/Account Number

Profile Files

@SSCRP Service Tech Territory

External Field Name	Description	Type	Len	Dec	Notes
SCRSVT	Service Tech	Char	5		
SCRFR	From Route	Num	6	0	<i>Compared against assigned route</i>
SCRFS	From Stop	Num	6	0	<i>in Premise file [UPRM]</i>
SCRTR	To Route	Num	6	0	
SCRST	To Stop	Num	6	0	
SCRAT	Average Travel Time	Num	5	0	Minutes
SCRSTC	State Code	Char	2		
SCRARA	Area Code	Char	4		
SCRDS	District Code	Char	4		
SCRGN	Region Code	Char	4		
SCRDI	Division Code	Char	4		
SCRNB	"Neighborhood"	Char	1		Y/N
SCRBF	Buffer Time	Num	5	0	minutes
SCRDL	Daily Limit	Num	5	0	count

Logical Views: @SSCRP1 – *Tech; From Route; From Stop; To Route; To Stop; State Code; Area Code; District Code; Region Code; Division Code*

@SSCSP Service Tech Skill Levels by S/O Type

External Field Name	Description	Type	Len	Dec	Notes
SCLSV	Service Tech	Char	5		
SCLSC	S/O Type	Char	5		
SCLLV	Skill Level	Num	2	0	User defined
SCRDL	Daily Limit	Num	5	0	

Logical Views: @SSCSP1 – *Service Tech; S/O Type*

@SSCTP Service Tech Availability by Time of Day

External Field Name	Description	Type	Len	Dec	Notes
SCTSV	Service Tech	Char	5		
SCTOT	On-Time	Time			
SCTFT	Off-Time	Time			
SCTAHR	After Hours?	Char	1		Y/N
SCTTIL	Time Interval Limit	Num	5	0	minutes

Logical Views: @SSCTP1 – *Service Tech; On-Time*

Code Files

@SSATP Access Types

External Field Name	Description	Type	Len	Dec	Notes
SCAATP	Access Type	Char	5		
SCAATD	Description	Char	30		

Logical Views: @SSATP1 – Access Type
@SSATP2 – Description; Access Type

@SSCDY Service Tech Availability by Date

External Field Name	Description	Type	Len	Dec	Notes
SCDSVT	Service Tech	Char	5		
SCDDAT	Date	Date			
SCDFDL	Future Date Limit	Num	5	0	Minutes
SCDCDL	Current Date Limit	Num	5	0	Minutes

Logical Views: @SSCDY1 – Service Tech; Date
@SSCDY2 – Date; Service Tech

@SSCOV Service Tech Skill Override by Date

External Field Name	Description	Type	Len	Dec	Notes
SCOSVT	Service Tech	Char	5		
SCODAT	Date	Date			
SCOSCD	S/O Type	Char	5		
SCOLVL	Skill Level	Num	2	0	User defined
SCODLM	Daily Limit	Num	5	0	

Logical Views: @SSCOV1 – Service Tech; Date; S/O Type

@SSCRT Service Tech Territory by Date

External Field Name	Description	Type	Len	Dec	Notes
SCRSVT	Service Tech	Char	5		
SCRDAT	Date	Date			
SCRFRRT	From Route	Num	6	0	Compared against assigned route
SCRFFST	From Stop	Num	6	0	in Premise file [UPRM]
SCRTRRT	To Route	Num	6	0	
SCRFTST	To Stop	Num	6	0	
SCRATT	Average Travel Time	Num	5	0	Minutes

SCRSTC	State Code	Char	2		
SCRARA	Area Code	Char	4		<i>Compared against assigned route</i>
SCRDST	District Code	Char	4		<i>in Premise file [UPRM]</i>
SCRNGN	Region Code	Char	4		
SCRDIV	Division Code	Char	4		
SCRNBR	"Neighborhood"	Char	1		Y/N
SCRBFT	Buffer Time	Num	5	0	minutes
SCRDLM	Daily Limit	Num	5	0	count

Logical Views: @SSCRT1 – *Tech; Date; From Route; From Stop; To Route; To Stop; State Code; Area Code; District Code; Region Code; Division Code*
 @SSCRT2 – *Date; From Route; From Stop; Tech; To Route; To Stop; State Code; Area Code; District Code; Region Code; Division Code*

@SSCTM Service Tech Availability by Date and Time of Day

External Field Name	Description	Type	Len	Dec	Notes
SCTSVT	Service Tech	Char	5		
SCTDAT	Date	Date			
SCTOTM	On-Time	Time			
SCTFTM	Off-Time	Time			
SCTAHR	After Hours?	Char	1		Y/N
SCTTIL	Time Increment Interval	Num	5	0	Minutes

Logical Views: @SSCTM1 – *Service Tech; Date; On-Time*
 @SSCTM2 – *Date; Service Tech; On-Time*

Interface Files

@SPEXH SOSPalm Export Header

External Field Name	Description	Type	Len	Dec	Notes
SXHKEY	Selection Key	Char	15		Unique value to define entire group of selected records.
SXHDAT	Date	Num	8	0	Format: CCYYMMDD
SXHCRB	Created By	Char	10		
SXHCRD	Create Date	Num	8	0	Format: CCYYMMDD
SXHCRT	Create Time	Num	6	0	Format: HHMMSS

Logical Views: @SPEXH1 – Selection Key

@SPEXP SOSPalm Export Detail

External Field Name	Description	Type	Len	Dec	Notes
SXPKEY	Selection Key	Char	15		Unique value to define entire group of selected records.
SXPDATA	Data	Char	640		Data formatted to be sent to the SOSPalm application on the Plam Pilot. Represents a comma separated value (CSV) file.

Logical Views: @SPEXP1 – Selection Key

@SPEXS SOSPalm Export Selection

External Field Name	Description	Type	Len	Dec	Notes
SXSKEY	Selection Key	Char	15		Unique value to define entire group of selected records.
SXSSO#	Service Order Number	Num	9	0	
SXSSEQ	Sequence Number	Num	5	0	Order of record on the Palm Pilot. This value must be unique as it is used for searching from within SOSPalm.

Logical Views: @SPEXS1 – Selection Key

@SSUPI SOSPalm Update Interface Data

External Field Name	Description	Type	Len	Dec	Notes
SUIISO#	Service Order Number	Num	9	0	

SUITYP	Record Type	Char	1		1=Header 2=S/O Master 3=Service 4=Comment 5=Additional
SUIUTL	Utility Type	Char	1		
SUISEQ	Sequence Number	Num	7	0	
SUIMCO	Meter Change-Out Code	Char	1		O=Change-Out
SUIFLD	Field Name	Char	10		
SUIDTA	Data	Char	128		

Logical Views: @SSUPII – S/O Number; Record Type; Utility; Sequence #;
Change-Out Code; Field Name

@SSUPIBKP SOSPalm Update Interface Data Backup

External Field Name	Description	Type	Len	Dec	Notes
SUIISO#	Service Order Number	Num	9	0	
SUITYP	Record Type	Char	1		1=Header 2=S/O Master 3=Service 4=Comment 5=Additional
SUIUTL	Utility Type	Char	1		
SUISEQ	Sequence Number	Num	7	0	
SUIMCO	Meter Change-Out Code	Char	1		O=Change-Out
SUIFLD	Field Name	Char	10		
SUIDTA	Data	Char	128		
SUITSP	Timestamp	Tstmp	26		

Logical Views: @SSUPIBKP1 – Timestamp; S/O Number; Record Type; Utility;
Sequence #; Change-Out Code; Field Name

Parameter Lists

SOSPARM Service Order Scheduler Standard Parameter List

External Field Name	Description	Type	Len	Dec	Notes
SCPSVT	Service Tech	Char	5		
SCPFDT	From Date	Date			
SCPFTM	From Time	Time			
SCPSCD	S/O Type	Char	5		
SCPSO#	S/O Number	Num	9	0	
SCPOVT	Override Tech	Char	5		
SCPOSD	Override Start Date	TStmp			Timestamp
SCPOED	Override End Date	TStmp			Timestamp
SCPFTW	From Time Window	Time			
SCPTTW	To Time Window	Time			
SCPAHR	After Hours?	Char	1		Y/N
SCP RTE	Route	Num	6	0	
SCPSTP	Stop	Num	6	0	
SCPSTC	State Code	Char	2		
SCPARA	Area Code	Char	4		
SCPDST	District Code	Char	4		
SCPRGN	Region Code	Char	4		
SCPDIV	Division Code	Char	4		
SCPRTT	Return Service Tech	Char	5		Scheduled Tech
SCP RSD	Return Start Date	TStmp			Timestamp
SCPRED	Return End Date	TStmp			Timestamp
SCPRTC	Return Time to Complete	Num	5	0	Minutes
SCPRLV	Return Skill Level	Num	2	0	
SCPRAH	Return After Hours?	Char	1		Y/N
SCP RND	Rounding Code	Char	2		
SCPPTY	Priority Scheduling?	Char	1		Y/N
SCP RSN	Reason Code	Char	5		
SCPOCF	Override Tech?	Char	1		Y/N
SCPUDP	Update Program	Char	10		
SCPEXT	Exit Program	Char	10		
SCP RSX	Reschedule Exit Program	Char	10		
SCP#RF	Check Route/Stop	Char	1		Y/N
SCP#SF	Check State Code	Char	1		Y/N
SCP#AF	Check Area Code	Char	1		Y/N
SCP#DF	Check District Code	Char	1		Y/N
SCP#GF	Check Region Code	Char	1		Y/N
SCP#VF	Check Division Code	Char	1		Y/N
SCPSCF	Schedule by Cost Factor	Char	1		Y/N
SCP TZF	Time Zone Factor	Num	3	0	
SCPSTF	Set Time Flag	Char	1		Y/N/P
SCP CMP	Company Code	Char	4		From CIS – used to denote fileset and enviroment.
SCP RSP	Start of Time Period	Time			
SCP REP	End of Time Period	Time			

SCPDTF	Date Format	Char	4		*ISO; *USA; *EUR
SCPMID	Message Id	Char	7		
SCPMDT	Message Text	Char	78		Substitution text for message id

SSCHGPARM Scheduling Limits Change Log Parameter List

External Field Name	Description	Type	Len	Dec	Notes
P#SVT	Service Tech	Char	5		
P#SDT	Schedule Date	Num	8	0	format ccyymmdd
P#CGD	Change Date	Num	8	0	format ccyymmdd
P#CGT	Change Time	Num	6	0	format hhmmss
P#USR	User ID	Char	10		
P#PGM	Program Name	Char	10		
P#FIL	File Name	Char	10		
P#KEY	File Key	Char	50		Preferred format: key fields separated by slashes (/).
P#FLD	Changed Field	Char	10		
P#OVL	Old Value	Char	50		Left justified
P#NVL	New Value	Char	50		Left justified
P#DEC	Decimal places	Num	3	0	
P#EDT	Edit Code	Char	1		Must exist if field is numeric

Scheduler Export formats

The Schedule Export file is created by running the **Export Schedule** or **Export Schedule w/Codes** options from the “popup” menu on the Calendar. File **soscalcsv.txt** is created in the application directory, and this file can be used as the import file for the SOS Palm application.

The file is a comma separated value (CSV) file that consists of different record formats. Each record format starts with the record name followed by fields separated by commas. Text fields can be contained within double quotes (“”), but this is not required unless there are embedded blanks in the text field.

Record format *download* specifications:

- **Header** – Defines the operating environment for SOS Palm on the Palm Pilot. There should be one record per Service Tech in the download file.
- **Main** – One record for each service order assigned to a Service Tech. Contains information related to the service order (i.e.: S/O Type, Account #, Name, Service Address, etc.).
- **Services** – One record per metered service attached to a service order.
- **Service Additional** – Included if the metered service has “special” service requirements (i.e.: Demand, Kvarh, etc.).
- **Comments** – One record per existing comment attached to a service order.
- **Additional Service Orders** – One record per additional service order type attached to the main service order.
- **S/O Types** – One record per service order type that is valid as a Referral Order.
- **Additional S/O Types** - One record per service order type that is valid as a Additional Order type.
- **NR Codes** – One record per valid No Read code.

Record format *upload* specifications:

- **Header** – Returns the user id from SOS Palm.
- **Main** – Returns general update information related to the service order (i.e.: update flags, dates, times, etc.).
- **Services** – Returns meter read information and update dates and times.
- **Service Additional** – Returns meter read information and update dates and times for “special” service types (i.e.: Demand, Kvarh, etc).
- **Comments** – Returns comments added by the Service Tech.
- **Additional Service Orders** – Returns additional service order types added by the Service Tech.

“Header” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Header”
Service Tech Id	Char	5		
Service Tech Name	Char	30		
Schedule Date	Char	50		Example: “Thursday April 6 th ”
Palm User ID	Char	10		Normally left blank – this is returned from the SOSpalm application
Date Format	Char	1		M = MDY D = DMY Y = YMD
Date Separator	Char	1		Valid values: slash (/); period (.); dash (-). If Date Format is “M”, then on slash is valid.
Allow Sequence # Search	Char	1		Y/N
Allow Cancel Order	Char	1		Y/N
Allow Referral Orders	Char	1		Y/N
Allow Additional Orders	Char	1		Y/N
Decimal Positions	Char	1		0-2
Device Id	Char	15		Palm Internal Id

“Main” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Main”
Service Tech Id	Char	5		
Time	Char	10		Can be left blank for all day orders.
Service Order Number	Char	9		
Service Order Type	Char	5		
Account Number	Num	7	0	
Account Name	Char	30		
Service Address	Char	50		
Service City/State	Char	25		
Referral S/O Type	Char	5		Returned from SOSpalm
Update Flag	Char	1		Y/N; returned from SOSpalm
Update Date	Char	10		Formatted date; returned from SOSpalm
Update Time	Char	8		Formatted time; returned from SOSpalm
Start Date	Char	10		Formatted date representing the date that the order was opened by the Tech; returned from SOSpalm
Start Time	Char	8		Formatted time representing the time that the order was opened by the Tech; returned from SOSpalm
Cancelled	Char	1		Y/N
Referral Order Month	Char	2		
Referral Order Day	Char	2		

Referral Order Comment 1	Char	31		
Referral Order Comment 2	Char	31		
Sequence #	Num	5	0	System generated – must be unique for the search option to work.

“Services” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Services”
Service Order Number	Char	9		
Utility Type	Char	1		
Meter Sequence #	Num	7	0	
Change-Out Code	Char	1		
Meter Location	Char	30		
Previous Read Month	Char	2		01-12
Previous Read Day	Char	2		01-31
Previous Read	Char	12		
Current Read Month	Char	2		01-12
Current Read Day	Char	2		01-31
Current Read	Char	12		
Low Read	Char	12		Used by SOSpalm to compare against entered read. If entered read is less than this value, then a message window is displayed
High Read	Char	12		See Low Read
Read Compare Flag	Char	1		Y/N; If “Y”, then the entered read is compared against the Low and High read values. Default is “N”.
No-Read Code	Char	5		
Change Flag	Char	1		Y/N; returned from SOSpalm
Update Date	Char	10		Formatted date; returned from SOSpalm
Update Time	Char	8		Formatted time; returned from SOSpalm
Start Date	Char	10		Formatted date representing the date that the order was opened by the Tech; returned from SOSpalm
Start Time	Char	8		Formatted time representing the time that the order was opened by the Tech; returned from SOSpalm
Allow Current Read Information to be updated	Char	1		Y/N. Default to value from S/O Type file.
Meter Read Comments	Char	50		

“Svc Addtl” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Svc Addtl”
Service Order Number	Char	9		
Utility Type	Char	1		

Meter Sequence #	Num	7	0	
Change-Out Code	Char	1		
Demand Meter	Char	1		Y/N
Demand Reading	Char	10		
Demand No-Read Code	Char	5		
Demand Decimal Positions	Char	1		0-3
Demand Low Compare	Char	10		
Demand High Compare	Char	10		
Demand Compare Flag	Char	1		Y/N
Peak Month	Char	2		01-12
Peak Day	Char	2		01-31
Peak Hour	Char	2		00-23
Peak Minute	Char	2		00-59
Kvarh Meter	Char	10		
Kvarh Previous Read	Char	12		
Kvarh Current Read	Char	12		
Kvarh No-Read Code	Char	5		
Kvarh Decimal Positions	Char	1		0-2
Kvarh Low Compare	Char	12		
Kvarh High Compare	Char	12		
Kvarh Compare Flag	Char	1		Y/N
Record Change Flag	Char	1		Y/N
Billing KVA	Char	7		1 decimal position assumed
Configuration Type	Char	1		[Not Used]

“Comments” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Comments”
Service Order Number	Char	9		
Comment Type	Char	1		O=Existing Comment; N=New
Sequence Number	Num	7	0	
Comment	Char	31		

“Additional Service Orders” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Add SO”
Service Order Number	Char	9		
Service Order Type	Char	5		

“SO Types” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“SO Types”
Service Order Type	Char	5		

Description	Char	30		
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“Additional S/O Types” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“Add SOTyp”
Service Order Type	Char	5		
Description	Char	30		

“NR Codes” format

Field	Type	Max Len	Dec	Notes
Record Name	Char	15		“NR Codes”
No Read Code	Char	5		
Description	Char	30		

Source Members

Standard

Member Name	Type	Description
#SOSBLDCAL	RPGLE	IA – Build Schedule Calendar by Date API
#SOSCHKSEC	RPGLE	IA - Check security level
#SOSCPYPRF	RPGLE	IA - Copy Tech Profile to new Tech
#SOSDLTAPI	RPGLE	IA – Delete an Existing Schedule API
#SOSDLTSOS	RPGLE	IA – Delete Schedule and Log API
#SOSGETMSG	RPGLE	IA – Retrieve Message Text API
#SOSGETSOI	RPGLE	IA - Retrieve S/O Information
#SOSGETSVT	RPGLE	IA - Retrieve Service Tech Information
#SOSGETTER	SQLRPGLE	IA - Retrieve territory records
#SOSGETTIM	RPGLE	IA – Get Server Time API
#SOSHSTAPI	RPGLE	IA – S/O Schedule History API
#SOSLSTAPI	RPGLE	IA – Print Service Tech Schedule API
#SOSMTRORD	RPGLE	IA - Check if S/O Type is a Meter Order
#SOSNEWC	RPGLE	IA - Build Customer from Internet
#SOSNEWSO	RPGLE	IA - Retrieve new S/O record
#SOSP_CAN	RPGLE	IA - Cancel Service Order - Date/Time
#SOSP_CLS	RPGLE	IA - Close S/O from SOSPalm
#SOSP_CLS2	RPGLE	IA - Check for S/O Closing Errors
#SOSP_CLS3	RPGLE	IA - Check other S/Os that may prevent S/O Close
#SOSP_CU	RPGLE	IA - Call CalUse Meter - SOSPalmClose (Standard)
#SOSP_CUD	RPGLE	IA - Call CalDus Demand - SOSPalm Close (Standard)
#SOSP_CUK	RPGLE	IA - Call CalUse Kvarh - SOSPalm Close (Standard)
#SOSP_EXP	RPGLE	IA - Create Palm Export file
#SOSP_INPF	RPGLE	IA - Call Palm Input file create program
#SOSP_RSOS	RPGLE	IA - Retrieve SOSPalm S/O Closing Error Status
#SOSP_RTV	RPGLE	IA - Retrieve SOSPalm Close Program for SOSPalm
#SOSRSHACK	RPGLE	IA – Acknowledge Rescheduled Service Order API
#SOSRTVCIF	RPGLE	IA – Retrieve CIS Information API
#SOSRTVRSN	RPGLE	IA - Retrieve SOS Log Description for SOLOG
#SOSRTVSCH	RPGLE	IA - Retrieve Schedule Date/Time
#SOSSCHAPI	RPGLE	IA - S/O Scheduler API
#SOSSVTLOC	RPGLE	IA - Retrieve SVT file location for PC's
#SOSXFRAPI	RPGLE	IA - S/O Transfer Schedule API
@API_NEWC	PF	IA - New Customer API parameter list
@API_NEWSO	PF	IA - New S/O API parameter list
@API_SCHED	PF	IA - Scheduler API parameter list
@API_SOHST	PF	IA - S/O History API parameter list
@SCMS_INF	PF	IA - S/O Master Interface
@SCMSSO	LF	IA - Service Order Master by SMSO# Descending
@SCSR_INF	PF	IA - S/O Services Interface
@SCSRA_INF	PF	IA - S/O Additional Services Interface
@SOCD_INF	PF	IA - S/O Type Interface
@SOCM_INF	PF	IA - S/O Comments Interface
@SPEXH	PF	IA - Palm Export file (header)
@SPEXH1	LF	IA - Palm Export file (header) [selection key]
@SPEXP	PF	IA - Palm Export file (detail)

Member Name	Type	Description
@SPEXP1	LF	IA - Palm Export file (detail) [selection key]
@SPEXS	PF	IA - Palm Export file (select)
@SPEXS1	LF	IA - Palm Export file (select) [selection key]
@SSATP	PF	IA - Access Type codes
@SSATP1	LF	IA - Access Type codes [ptp]
@SSATP2	LF	IA - Access Type codes [ptd;ptp]
@SSCDY	PF	IA - Tech availability by date
@SSCDY1	LF	IA - Tech availability by date [svt;dat]
@SSCDY2	LF	IA - Tech availability by date [dat;svt]
@SSCHG	PF	IA - Service Tech setup change log
@SSCHG1	LF	IA - Service Tech setup change log (svt;dat;tim)
@SSCOV	PF	IA - Tech skills by date
@SSCOV1	LF	IA - Tech skills by date [svt;dat;scd]
@SSCRP	PF	IA - Tech territory by route *Profile*
@SSCRP1	LF	IA - Tech territory by route [svt;frt;fst] *Profile*
@SSCRT	PF	IA - Tech territory by route
@SSCRT1	LF	IA - Tech territory by route [svt;dat;frt;fst]
@SSCRT2	LF	IA - Tech territory by route [dat;frt;fst;svt]
@SSCSP	PF	IA - Tech skills *Profile*
@SSCSP1	LF	IA - Tech skills [svt;scd] *Profile*
@SSCTL	PF	IA - Scheduler control file
@SSCTL1	LF	IA - Scheduler control file [cmp]
@SSCTM	PF	IA - Tech availability by time
@SSCTM1	LF	IA - Tech availability by time [svt;dat;otm]
@SSCTM2	LF	IA - Tech availability by time [dat;svt;otm]
@SSCTP	PF	IA - Tech availability by time *Profile*
@SSCTP1	LF	IA - Tech availability by time [svt;otm] *Profile*
@SSDQM	PF	IA - IP Address cross-reference
@SSDQM1	LF	IA - IP Address cross-reference [IP Address]
@SSDQM2	LF	IA - IP Address cross-reference [Data Queue Name]
@SSLOG	PF	IA - Scheduler log file
@SSLOG1	LF	IA - Scheduler log file [so#;cdt;rsn]
@SSLOG2	LF	IA - Scheduler log file [rescheduled orders]
@SSPALM	PF	IA - Palm Pilot Interface Control
@SSPALM1	LF	IA - Palm Pilot Interface Control [cmp]
@SSRSCH	PF	IA - Scheduler control - Schedule Required
@SSRSCH1	LF	IA - Scheduler control - Schedule Required [cmp]
@SSSCH	PF	IA - S/O Schedules
@SSSCH1	LF	IA - S/O Schedules [svt;fdt;ftm;so#;scd]
@SSSCH2	LF	IA - S/O Schedules [so#]
@SSSCH3	LF	IA - S/O Schedules [fdt;svt;ftm;so#;scd]
@SSSCH4	LF	IA - S/O Schedules [svt;fdt;pst;ftm;so#;scd]
@SSSCH5	LF	IA - S/O Schedules [svt;fdt;stf;pst;ftm;so#;scd]
@SSSCH6	LF	IA - S/O Schedules [fdt;svt;stf;pst;ftm;so#;scd]
@SSSCH7	LF	IA - S/O Schedules [territory]
@SSSCH8	LF	IA - S/O Schedules [scd;fdt;lv;svt;so#]
@SSSCH9	LF	IA - S/O Schedules [territory]
@SSSCL	PF	IA - Schedule Transaction Log
@SSSCL1	LF	IA - Schedule Transaction Log [key]
@SSSCT	PF	IA - Security Types

Member Name	Type	Description
@SSSCT1	LF	IA - Security Types [sct]
@SSSCT2	LF	IA - Security Types [des;sct]
@SSSEC	PF	IA - Scheduler Security
@SSSEC1	LF	IA - Scheduler Security [usr;sct]
@SSSTO	PF	IA - Service Order Type Overrides
@SSSTO1	LF	IA - Service Order Type Overrides [typ]
@SSSVT	PF	IA - Service Techs
@SSSVT1	LF	IA - Service Techs [svt]
@SSSVT2	LF	IA - Service Techs [nam;svt]
@SSSVT3	LF	IA - Service Techs [crw;svt]
@SSSVT4	LF	IA - Service Techs [crw;name;svt]
@SSTIM	PF	IA - Estimated time to complete
@SSTIM1	LF	IA - Estimated time to complete [scd;lvl]
@SSUPI	PF	IA - SOS Update Interface
@SSUPIBKP	PF	IA - SOS Update Interface Backup
@SSUPIBKP1	LF	IA - SOS Update Interface Backup [so#;typ]
@SSUPI1	LF	IA - SOS Update Interface [so#;typ]
@SSWAC	PF	IA - SOS Web Access control
@SSWAC1	LF	IA - SOS Web Access control [act;typ]
@SSWAC2	LF	IA - SOS Web Access control [typ;act]
@UHOL_INF	PF	IA - Holiday File Interface
@UNRC_INF	PF	IA - No Read Cide interface
@UPRM_INF	PF	IA - Premise File Interface
CENTER	RPGLE	IA - Center text field
CENTER_CPY	COPY	IA - /Copy member for CENTER
CURUSRC	CLLE	IA - Retrieve current user ID
DATE_FMT	RPGLE	IA - Format date
DATE_VALID	RPGLE	IA - Validate date
EMSG_RTV	CPYRPG	IA - /Copy member for RTV_MSG
ERROR_MSG	CPYRPG	IA - Prototype for OCMG
FMT_LEFT	RPGLE	IA - Return formatted, left justified number
GET_DATA	RPGLE	IA - Retrieve data from Navigation files
GET_IPADR	RPGLE	IA - Retrieve IP Address
GET_IPDQN	RPGLE	IA - Retrieve IP Address Data Queue name
GET_NAVF	RPGLE	IA - Retrieve MP Navigation file data
HEX_VALUES	CPYRPG	IA - /Copy member for Hex conversion
LEFT_FMT	CPYRPG	IA - /Copy member for FMT_LEFT
LOAD_SVT	CPYRPG	IA - Copy SCRW to Service Tech file
NAVF_GET	CPYRPG	IA - /Copy member for GET_NAVF
PATH_RESEQ	RPGLE	IA - Resequence UAMD records for insertion
PATHHELP	PNLGRP	IA - Standard Path Help
PATHLIST	PNLGRP	IA - Standard Path List Screen Help
POP_FILES	RPGLE	IA - Populate profile files with default data
RJUST#	RPGLE	IA - Create right justified number from text
RJUST#_CPY	CPYRPG	IA - /Copy member for RJUST#
RTV_MSG	RPGLE	IA - Retrieve error message text
SET_FLD_@	CPYRPG	IA - /Copy member for path program attributes
SET_PCINF	RPGLE	IA - Update 400-to-PC interface file
SOS_CHGLOG	RPGLE	IA - Write change log for scheduling information
SOS_CKSVT	RPGLE	IA - Check for Service Tech scheduling information

Member Name	Type	Description
SOS_DLTDAY	RPGLE	IA - Delete child records for a Tech for a Day
SOS_DLTSVT	RPGLE	IA - Delete records associated to a Service Tech
SOS_INST	RPGLE	IA - Install S/O Scheduler
SOS_INSTC	CLP	IA - Install S/O Scheduler (with precheck)
SOS_LOAD	RPGLE	IA - Load Date Differentiated Files from Profiles
SOS_LOADC	CLP	IA - Load Srv Tech Schedules
SOS_MASSUP	RPGLE	IA - Mass update of scheduling limits
SOS_MSGFC	CLP	IA - Recreate Scheduler message file
SOS_PRTY	RPGLE	IA - Process Priority Override Schedules
SOS_PCDQ	CLP	IA - Process PC Data Queue requests
SOS_RESCH	RPGLE	IA - Retrieve up to 200 rescheduled service orders
SOS_RESCHQ	SQLRPGLE	IA - Retrieve up to 200 rescheduled service orders
SOS_SCHED	RPGLE	IA - S/O Scheduler
SOS_SETSEC	RPGLE	IA - Set GUI Security level
SOS_UNINST	RPGLE	IA - Uninstall S/O Scheduler
SOS_UNSCH	RPGLE	IA - Retrieve up to 200 unscheduled service orders
SOS_UNSCHQ	SQLRPGLE	IA - Retrieve up to 200 unscheduled service orders
SOS_UPD_01	RPGLE	IA - Update CIS files (no schedule time)
SOSABOUT	PNLGRP	IA - About S/O Scheduler Panel
SOSCALCSV	RPGLE	IA - Create CSV file from calendar data
SOSCALLSCH	RPGLE	IA - Call Scheduler from Path Program
SOSCDLST	PRTF	IA - Tech schedule listing
SOSCDLST	RPGLE	IA - Print Tech Schedule Listing
SOSCHKSCH	RPGLE	IA - Check for valid schedule during S/O Change
SOSCVTNUM	RPGLE	IA - Convert alpha number to numeric
SOSGETBASU	RPGLE	IA - Retrieve Base Usage
SOSGETBSAU	RPGLE	IA - Retrieve additional base usage
SOSGETSCMS	RPGLE	IA - Retrieve S/O Master information
SOSGETSCSR	RPGLE	IA - Retrieve S/O Services information
SOSGETSOCD	RPGLE	IA - Retrieve S/O Code information
SOSGETSOCM	RPGLE	IA - Retrieve S/O Comments information
SOSGETUHOL	RPGLE	IA - Retrieve Holiday information
SOSGETUNRC	RPGLE	IA - Retrieve No Read Code information
SOSGETUPRM	RPGLE	IA - Retrieve Premise information
SOSHSATP	DSPF	IA - Help Search for Access Types
SOSHSATP	RPGLE	IA - Access Type Help Search
SOSHSSCT	DSPF	IA - Help Search for Security Types
SOSHSSCT	RPGLE	IA - Help Search for Security Types
SOSHSSOCD	DSPF	IA - Help Search for S/O Codes (SOCD)
SOSHSSOCD	RPGLE	IA - Help Search for Service Order Types
SOSHSSVT	DSPF	IA - Help Search for Service Tech
SOSHSSVT	RPGLE	IA - Service Tech Help Search
SOSHSTIM	DSPF	IA - Help Search for Order Types
SOSHSTIM	RPGLE	IA - Available Time Help Search
SOSINTRDS	RPGLE	IA - Load the INTRDS data structure
SOSOVRRSN	RPGLE	IA - Acknowledge Reschedule Event
SOSPARM	PF	IA - S/O Scheduler parameter list
SOSPOLST	PRTF	IA - SOS Priority Override Printout by Name
SOSPOLST	SQLRPGLE	IA - SOS Priority Override Printout
SOSPOLSTC	CLP	IA - Load Srv Tech Schedules

Member Name	Type	Description
SOSPURGE	RPGLE	IA - Purge Schedule Data for Purged Orders
SOSREQSCH	RPGLE	IA - Require Schedule if Scheduable
SOSREQSCHS	DSPF	IA - Require Schedule if Scheduable
SOSSLOG	RPGLE	IA - Display S/O Schedule Log
SOSSLOGS	DSPF	IA - Scheduler log screen
SOSVFYD	RPGLE	IA – Verify delete request
SOSVFYDS	RPGLE	IA – Verify delete request
SOSXFER	RPGLE	IA - Transfer scheduled records to new Tech
SOSXFERHLP	PNLGRP	IA – S/O Scheduler Transfer Help
SOSXFERP	RPGLE	IA - Prompt to reschedule orders
SOSXFERS	DSPF	IA - Transfer schedule records screen
SOS0001	RPGLE	IA - S/O Scheduler Control file update
SOS0001HLP	PNLGRP	IA - S/O Scheduler Control file help
SOS0001S	DSPF	IA - Scheduler control file screen
SOS0002	RPGLE	IA - S/O Scheduler Control - Require Schedule
SOS0002HLP	DSPF	IA - Scheduler control - Require Schedule help
SOS0002S	DSPF	IA - Scheduler control - Require Schedule
SOS0003	RPGLE	IA - S/O Scheduler Control file update-interfaces
SOS0003HLP	PNLGRP	IA - S/O Scheduler Control file update-interfaces help
SOS0003S	DSPF	IA - S/O Scheduler Control file update-interfaces
SOS0004	RPGLE	IA - Scheduler Palm Pilot Interface Control
SOS0004HLP	PNLGRP	IA - Scheduler Palm Pilot Interface Control help
SOS0004S	DSPF	IA - Scheduler Palm Pilot Interface Control
SOS0010	RPGLE	IA - S/O Scheduler Tech Skills update
SOS0010HLP	PNLGRP	IA - S/O Scheduler Tech Skills help
SOS0010S	DSPF	IA - Estimated time to complete list screen
SOS0015	RPGLE	IA - S/O Scheduler Average Completion Times update
SOS0015HLP	PNLGRP	IA - S/O Scheduler Average Completion Times help
SOS0015S	DSPF	IA - Estimated time to complete update screen
SOS0020	RPGLE	IA - Access Type list
SOS0020HLP	PNLGRP	IA - Access Type help
SOS0020S	DSPF	IA - Access Type list screen
SOS0025	RPGLE	IA - Access Type update
SOS0025HLP	PNLGRP	IA - Access Type update help
SOS0025S	DSPF	IA - Access Type update screen
SOS0030	RPGLE	IA - Security Type List
SOS0030HLP	PNLGRP	IA - Security Types help
SOS0030S	DSPF	IA - Security Types
SOS0035	RPGLE	IA - Security Type Update
SOS0035HLP	DSPF	IA - Security Types update screen help
SOS0035S	DSPF	IA - Security Types update screen
SOS0040	RPGLE	IA - S/O Scheduler Set S/O Exclusions
SOS0040HLP	DSPF	IA - S/O Scheduler Set S/O Exclusions screen help
SOS0040S	DSPF	IA - S/O Scheduler Set S/O Exclusions screen
SOS0045	RPGLE	IA - S/O Scheduler Set S/O Exclusions update
SOS0045HLP	DSPF	IA - S/O Scheduler Set S/O Exclusions update screen help
SOS0045S	DSPF	IA - S/O Scheduler Set S/O Exclusions update screen
SOS0050	RPGLE	IA - Service Order Web Access Control List
SOS0050HLP	DSPF	IA - Service Order Web Access Control List screen help
SOS0050S	DSPF	IA - Service Order Web Access Control List screen

Member Name	Type	Description
SOS0055	RPGLE	IA - Service Order Web Access Control Update
SOS0055HLP	DSPF	IA - Service Order Web Access Control Update screen help
SOS0055S	DSPF	IA - Service Order Web Access Control Update screen
SOS0090	RPGLE	IA - Scheduler GUI Security - User List
SOS0090HLP	DSPF	IA - Scheduler GUI Security - User Id's help
SOS0090S	DSPF	IA - Scheduler GUI Security - User Id's
SOS0095	RPGLE	IA - Scheduler GUI Security - Security Type List
SOS0095HLP	DSPF	IA - Scheduler GUI Security - Security Types help
SOS0095S	DSPF	IA - Scheduler GUI Security - Security Types
SOS0096	RPGLE	IA - Security Type Update
SOS0096HLP	DSPF	IA - Scheduler GUI Security – Update help
SOS0096S	DSPF	IA - Scheduler GUI Security – Update
SOS0100	RPGLE	IA - Schedule Service Order display
SOS0100HLP	PNLGRP	IA - Schedule Service Order help
SOS0100S	DSPF	IA - Schedule entry screen
SOS0200	RPGLE	IA - Tech Schedules for a Date display
SOS0200HLP	PNLGRP	IA - Tech Schedules for a Date help
SOS0200S	DSPF	IA - Tech schedules by date screen
SOS0210	SQLRPGLE	IA - Unscheduled Service Orders
SOS0210ALT	RPGLE	IA - Unscheduled Service Orders
SOS0210HLP	PNLGRP	IA - Unscheduled Service Order help
SOS0210S	DSPF	IA - Unscheduled service orders screen
SOS0220	SQLRPGLE	IA - Rescheduled Service Orders
SOS0220ALT	RPGLE	IA - Rescheduled Service Orders
SOS0220HLP	PNLGRP	IA - Rescheduled Service Order help
SOS0220S	DSPF	IA - Rescheduled service orders screen
SOS1000	RPGLE	IA - Scheduler Tech display
SOS1000HLP	RPGLE	IA - Scheduler Tech help
SOS1000S	DSPF	IA - Scheduler Service Tech list screen
SOS1001	RPGLE	IA - Copy profile records
SOS1001HLP	PNLGRP	IA - Copy profile records help
SOS1001S	DSPF	IA - Copy profile screen
SOS1005	RPGLE	IA - Service Tech update
SOS1005HLP	PNLGRP	IA - Service Tech update help
SOS1005S	DSPF	IA - Service Tech update screen
SOS1010	RPGLE	IA - Service Tech territory - list
SOS1010HLP	PNLGRP	IA - Service Tech territory - help
SOS1010S	DSPF	IA - Service Tech territory list screen
SOS1015	RPGLE	IA - Service Tech territory - update
SOS1015HLP	DSPF	IA - Service Tech territory update screen help
SOS1015S	DSPF	IA - Service Tech territory update screen
SOS1020	RPGLE	IA - Tech skills by date - list
SOS1020HLP	PNLGRP	IA - Tech skills by date - help
SOS1020S	DSPF	IA - Tech skills list screen
SOS1025	RPGLE	IA - Tech skills by date - update
SOS1025HLP	DSPF	IA - Tech skills update screen help
SOS1025S	DSPF	IA - Tech skills update screen
SOS1030	RPGLE	IA - Tech available times – list
SOS1030HLP	PNLGRP	IA - Tech available times – help
SOS1030S	DSPF	IA - Tech availability list screen

Member Name	Type	Description
SOS1035	RPGLE	IA - Tech available times - update
SOS1035HLP	DSPF	IA - Tech availability update screen help
SOS1035S	DSPF	IA - Tech availability update screen
SOS1040	RPGLE	IA - Tech schedule list - update
SOS1040HLP	DSPF	IA - Tech schedule list screen help
SOS1040S	DSPF	IA - Tech schedule list screen
SOS1055	RPGLE	IA - Tech time limits – update
SOS1055HLP	DSPF	IA - Tech time limits screen help
SOS1055S	DSPF	IA - Tech time limits screen
SOS2000	RPGLE	IA - SOS Priority Override Prompt for SOSPOLST
SOS2000HLP	DSPF	IA - SOS Priority Override Prompt for SOSPOLST screen help
SOS2000S	DSPF	IA - SOS Priority Override Prompt for SOSPOLST screen
SSCHGPARM	PF	IA - Service Tech setup change log
VALID_DT_1	COPY	IA - Prototype for date validation
VALID_DT_2	COPY	IA - /Copy for DATE_VALID
XSETUPF	PF	IA - Scheduler install navigation data

Custom

Member Name	Type	Description
CNNSOSBDE	CLP	NNG - Add binding directory entries for SOS
HMEXPPGM	SQLRPGLE	HM - Create Palm Export file
HMPXLST	RPGLE	HM - Print List of Downloaded Orders
NNG_RESCH	SQLRPGLE	NNG - Retrieve up to 100 rescheduled s/o's
NNG_UNSCH	SQLRPGLE	NNG - Retrieve up to 200 unscheduled s/o's
NNGGETSCMS	RPGLE	NNG - Retrieve S/O Master information
NNGGETSCSR	RPGLE	NNG - Retrieve S/O Services information
NNGGETSOCD	RPGLE	NNG - Retrieve S/O Code information
NNGSCMSINF	RPGLE	NNG - Retrieve S/O information
@NWN_SOIF	PF	NWN - Service Order Information field list
@SCMS_NWN	PF	NWN - S/O Type Interface
@SOCD_NWN	PF	NWN - S/O Master Interface
HMPXLST	PRTF	HM - Downloaded Palm Listing