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ShiftTrack/Plus

Database Schema - Version 14

Purpose: This document describes the structure of the tables in the standard ShiftTrack/Plus database.

Table of Contents

Introduction.....	3
Validity.....	3
Applications	3
Data Tables	4
CentreParamsTable	4
DS_ Tables	4
Forecast Tables	5
Fcast_header Table	5
Forecasts Table.....	5
Forecast_Skills Table	6
Forecast_Sfactors	6
forecast_notes Table	6
Model_Params Table	7
Dist_data Table	7
Dist_header Table	7
PubHols Table.....	8
Queries Table.....	8
Queue Tables	8
Queue_Header Table	8
Queue_Maps Table	9
Queue_Skills Table	9
Qgroup_header table	9
Qgroup_members table.....	9
Scripts Table	9
Runscripts Table	10
ServiceLevels Table	10
Sfactors Table	11
ACD_Stats	11
Shifts Tables	12
Shifts Table	12
Shift_Breaks Table	12
Shift_Profiles Table	12
Shift_skills Table	13
Templates Table.....	13
RosterTemplates	13
Users Tables	14
Users Table.....	14
User_profiles Table	14

Introduction

This document describes the structure of the tables in the standard ShiftTrack/Plus database. The tables described here are the tables that are used to store user-defined information. ShiftTrack/Plus uses other tables for temporary storage and for formulating report data. In general these table start with “temp” or “prt” and are not described here.

The data types used are not specific to a particular database type – it is assumed that the reader will map these types to their specific database.

Where a column is a foreign key, this is noted in the comments to that column.

Note: If a text field does not have a length specified, then this indicates that the size can be variable and ShiftTrack/Plus adjusts automatically to suit the database column size. This is true of most text columns, but the user should always check with Open Wave before altering the size of any text column.

Validity

Database Version 14 corresponds to Version 5.4.3 of ShiftTrack Plus.

Applications

The following applications in the ShiftTrack Suite connect to the ShiftTrack Plus Database:

- ShiftTrack Plus
- ShiftTrack Hub Server
- ShiftTrack RTS (if so configured)

Data Tables

CentreParamsTable

Contains information about the opening hours of each location.

Column Name	Data Type	Description
Location	Text 10	The location of the roster. Foreign key into <i>locations</i> .
Queue	Text 50	If set, then the hours apply only to this queue.
Day	Integer	The day of the week 1 = Sunday to 7 = Saturday.
Open	Date	The time the location opens.
Close	Date	The time the location closes.
MinShiftLen	Float	The minimum shift length for this location.
MaxShiftLen	Float	The maximum shift length for this location.
Capacity	Integer	The seating capacity for this location.
Inherit	Integer	Flags if the hours for default queue for the location should be used. If not, then uses the default hours
SpecificDay	Date	Stores the date if the row applies to only a specific date.

DS_ Tables

Any tables that start with the prefix "DS_" are used to store historical event data for forecasting. They are presented to the user as datasets. All dataset tables are based on the model table *st_temp*.

Column Name	Data Type	Description
Celldate	Date	The date of the historical data interval.
Celltime	Date	The date and time of the historical data interval.
CellStart	Date	Not used.
Tot_num_incoming	Integer	The total number of events for this interval.
Tot_time_incoming	Integer	The total handling time for the events (in seconds).
QueueID	Text 50	The queue that these events apply to.
Interval	Integer	Historical data interval in minutes.
Username	Text 64	
GOS	Float	The grade of service calculated for this interval.
APS	Float	Average Positions Staffed as provided by the ACD
Abandoned	Float	The amount of calls that have not been answered in this interval

Forecast Tables

Fcast_header Table

The base table for event forecasts. There is one row in this table for each distinct forecast.

Column Name	Data Type	Description
FName	Text 20	Name of the forecast. Must be unique.
Display1	Date	The earliest forecast date.
Display2	Date	The latest forecast date. ¹
Notes	Memo	Description of the forecast.
LastSaved	Date	The date and time the forecast was last updated by ShiftTrack/Plus.
DataSet	Text 255	The dataset (table) that the forecast is based on. It should point to a valid table in the database.
FcastTable	Text 255	Not used.
Location	Text 20	The location for which this forecast applies. Foreign key into <i>locations</i> .
FKey	Long integer.	Unique ID generated by the database.
Pooled	Integer	Indicates if the forecast has been pooled.

Forecasts Table

Contains the forecast data for forecasts split by interval.

Column Name	Data Type	Description
Celldate	Date	The day of the forecast.
CellTime	Date	The time of the forecast.
CellSize	Integer	The interval size (in minutes) for which this forecast applies.
Forecast	Float	The forecast number of staff required for this interval.
Key	Long integer	Unique numeric key for this row.
Team	Text 20	Not used.
Volume	Integer	The forecast number of events for this interval.
Erlangs	Float	The forecast erlangs for this interval. The staffing value is based on this value.
FKey	Long Integer	Identifies the specific forecast. Foreign key into <i>fcast_header</i> .

¹ Note that the forecast dates for any particular forecast need not be continuous.

Forecast_Skills Table

Identifies the staff required for each queue for a forecast. For each row in *forecasts*, if there are matching rows in *forecast_skills*, then the reqd columns should add up to the Forecast column in *forecasts*.

Column Name	Data Type	Description
FKey	Long Integer	Identifies the individual forecast row. Foreign key into <i>forecasts</i> .
Skill	Text 50	Not used.
Reqd	Float	The number of staff required for this queue.
Queue	Text 50	Identifies the specific queue for this forecast.
Events	Float	The amount of events in this forecast
Erlangs	Float	The forecast erlangs for this interval. The staffing value is based on this value.

Forecast_Sfactors

Stores the shrinkage factors against a particular forecast

Column Name	Data Type	Description
Fkey	Integer	Identifies the specific forecast and interval (including day). Foreign key into <i>forecasts</i>
fLocation	Text 20	The location of the forecast. Foreign key into <i>shifttrack.locations</i>
fname	Float	The specific shrinkage factor. Foreign Key into <i>sfactors</i>
Factor	Float	The value of shrinkage for this interval and shrinkage factor

forecast_notes Table

Stores any notes against a particular forecast

Column Name	Data Type	Description
Fkey	Integer	Identifies the specific forecast and interval (including day). Foreign key into <i>forecasts</i>
rFrom	Date	
rTo	Date	
CMethod	Integer	
Notes	Text 1024	Notes for the forecast
Username	Text 50	
Campaign	Text 20	The name of the campaign the forecast may be used for. If set, then this campaign was applied between rFrom and rTo

Model_Params Table

Stores the smoothing parameters for datasets. These are used when ShiftTrack/Plus generates forecasts.

Column Name	Data Type	Description
Weekday	Integer	The day these parameters apply to, 1 = Sunday to 7 = Saturday.
Dataset	Text 255	The dataset that these parameters apply to. This should be a valid dataset name.
Level, trend, season	Float	The three exponential smoothing parameters.
LrFlag	Boolean	If true, then use linear regression instead of exponential smoothing when forecasting from this dataset.
ev_level	Float	Parameters for events
Ev_trend	Float	
Ev_season	Float	
Ht_level	Float	Parameters for Average Handle Time (or Handle Time)
Ht_trend	Float	
Ht_season	Float	
Fcast_Method	Integer	
AHTLR	Integer	

Dist_data Table

Column Name	Data Type	Description
ID	Integer	The unique identifier of the row
cellDate	Date	The date of the data
cellTime	Time	The start time of the interval that the data applies to
Events	Integer	The number of Events in the interval
HT	Integer	The Handle Time for the interval

Dist_header Table

Column Name	Data Type	Description
ID	Integer	The unique identifier of the row
Name	Text 20	The name of the distribution
StartDate	Date	
Queue	Text 50	
Location	Text 20	
Notes	Text 1024	
Interval	Integer	

PubHols Table

Stores information about special, or marked, days. When forecasting, ShiftTrack/Plus treats these days differently.

Column Name	Data Type	Description
Location	Text 10	Location that this day applies to.
Holiday	Date	The date of the special day.
Description	Text 30	Description of the day.
Year	Integer	Year in which the day occurs – always set to the year value of “Holiday”.
Dataset	Text 255	If set, then this day only applies to forecasts generated from the given dataset.

Queries Table

Stores save sql queries from the Isql screen. If this table is not present then no error is generated, but the user will not be able to save and run stored queries.

Column Name	Data Type	Description
Name	Text 20	The name of the query. Must be unique.
Sqlstr	Memo	The actual sql text to execute.

Queue Tables

Queue_Header Table

Defines the queues that will be used in generating forecasts and roster templates.

Column Name	Data Type	Description
Queue	Text 50	Name of the queue. Must be unique.
Description	Text 50	Description of the queue.
SKey	Text 20	Sort key. This is used by the MRE in ShiftTrack to determine the priority in which queues are allocated.
Cmethod	Integer	
CScript	Text 50	
CSEntry	Text50	
Alternate_q	Text20	The queue (if any) a call will be transferred to if not answered
Pct_redial	Float	
Pct_redial_time	Float	
Q_size	Integer	The maximum amount of calls in the queue
Tolerance	Integer	
Xfer_after	Integer	The length of time before a call is transferred to the alternate queue

Queue_Maps Table

Defines the relationship between queues in ShiftTrack/Plus and the queue names reported by the ACD historical call data.

Column Name	Data Type	Description
Queue	Text 20	Queue name. Foreign key into <i>queue_header</i> .
Acd_q	Text 20	The ACD queue name. Must be unique.

Queue_Skills Table

Defines the skills required for a person to accept work from a queue.

Column Name	Data Type	Description
Queue	Text 20	The name of the queue. Foreign key into <i>queue_header</i> .
Skill	Text 20	Skill required. Foreign key into <i>shifttrack.competencies</i> .
Seq	Integer	Sequence number to preserve the order of skills in the display.

Qgroup_header table

Defines the groups that queues can be grouped into

Column Name	Data Type	Description
Name	Text 20	The name of the Queue Group
Description	Text 100	Describes to Queue Group

Qgroup_members table

Stores the groupings of Queues into Queue Groups

Column Name	Data Type	Description
QGroup	Text 20	The name of the Queue Group that the queue identified in the row belongs to. Foreign key to <i>Qgroup_header</i>
Queue	Text 50	The Queue. Foreign key to <i>Queue_Header</i>

Scripts Table

Stores the call import scripts used by the Import Raw Data wizard.

Column Name	Data Type	Description
Name	Text 20	Name of the script. Must be unique.
Category	Text 20	Not used.
Language	Text 10	Script language. Must be either "VB Script" or "J Script".
Script	Memo	The actual text of the script that will be executed.
Entry	Text 50	The name of the initial routine to call to execute the script. In ShiftTrack/Plus this must always be called "Process".

Type	Integer	Script type. If 0 then the input to the script is assumed to be text files and the script is called once for each line of text in the data files. If 1 then the script is called just once and the script is responsible for all import processing.
Sortkey	Text 20	The value on which the list of scripts is sorted within the application display

Runscripts Table

Stores the schedule of scripts to be run by ShiftTrack RTS

Column Name	Data Type	Description
Name	Text 20	Name of the script
Interval	Integer	How often the script is to be run
Start	Time	The time each day the script is to commence running
Finish	Time	The time each day the script is to stop running
InitProc	Text 50	The subroutine within the script to be executed the 1 st time it's run
Entry	Text 50	The subroutine within the script to be executed subsequent times it's run
Key	Integer	The unique identifier of the row
Run	Text 50	
Mdays	Text 100	If set, then the schedule is filtered by these lists, in the same format as "crontab" in Unix
Ydays	Text 100	
Wdays	Text 250	
Months	Text 250	

ServiceLevels Table

Contains the service level parameters for each queue.

Column Name	Data Type	Description
Queue	Text 20	Queue for which this service level applies. Foreign key into <i>queue_header</i> .
Wday	Integer	Day of the week for this service level. 1 = Sunday, 7 = Saturday.
When	Date	The start interval for this service level.
Upto	Date	The end of the interval for which this service level applies.
Pct	Float	The target percentage of calls to be answered.
Wait	Float	The number of seconds within which the percentage of calls should be answered.
Util	Float	The staff utilisation percentage.
Asa	Float	The target average speed of answer in seconds. If non-zero, then this target overrides the percentage/wait target service level.

Sfactors Table

Contains the shrinkage factor percentages for each location in 30 minute intervals.

Column Name	Data Type	Description
Name	Text 20	Name of the Shrinkage Factor.
When	Date	The start time of the 30-minute interval for which this factor will apply.
Day1	Float	The percentage factor for Sunday.
Day2	Float	The percentage factor for Monday.
Day3	Float	The percentage factor for Tuesday.
Day4	Float	The percentage factor for Wednesday.
Day5	Float	The percentage factor for Thursday.
Day6	Float	The percentage factor for Friday.
Day7	Float	The percentage factor for Saturday.
Location	Text 20	The location for which this factor applies. Foreign key into <i>shifttrack.locations</i> .

ACD_Stats

Column Name	Data Type	Description
CellDate	Datetime	The date of the historical data interval.
CellTime	Datetime	The date and time of the historical data interval.
QueueID	Text50	Name of the queue.
ActServiceLevel	Float	The actual Grade of service during the interval.
ActAbandon	Float	The amount of calls abandoned during the interval.
ActStaff	Float	The amount of Staff allocated in the queue during the interval

Shifts Tables

Shifts Table

Contains the shift definitions for shifts created by the Weekly Forecast Wizard.

Column Name	Data Type	Description
Sdate	Date	Date of the shift.
Start, Finish	Date	Start and finish times of the shift.
Key	Long integer	Unique numeric key for this row.
Notes	Text 50	Description of this shift.
Shift	Text 20	Shift name.
Rt_id	Integer	Identifies the which Roster Template the shift belongs to. Foreign key into <i>roster templates</i>

Shift_Breaks Table

Contains the breaks and activities for shifts defined in *shifts*. Breaks are organised into patterns, so that staff allocated to shifts will get different patterns in a round-robin allocation.

Column Name	Data Type	Description
Shift_key	Long integer	Parent shift row. Foreign key into <i>shifts</i> .
Seq	Integer	Sequence number used to preserve the order the shifts are displayed.
Start, Finish	Date	The date and time of the start and finish of the activity.
Person	Integer	Break pattern number. Breaks with the same sequence number are grouped together.
Label	Text 20	The name of the activity.
Duty	Boolean	If true, then the activity is a duty, otherwise it is assumed to be a break.
Paid	Boolean	If true and Duty is false, then the activity is assumed to be a paid break. This is ignored if duty is true.

Shift_Profiles Table

Contains the position requirements for shifts.

Column Name	Data Type	Description
Shift_key	Long integer	Parent shift row. Foreign key into <i>shifts</i> .
Rank1, rank2, rank3	Text 20	The position code(s) for the shift. In order to be eligible to work this shift, a person should have one of the three positions. Foreign key into <i>shifttrack.ranks</i> .
Cnt	Integer	The number of staff required for this shift.

Shift_skills Table

Contains the skill requirements for shifts. There may be more than row for each parent row in *shifts*.

Column Name	Data Type	Description
Shift_key	Long integer	Parent shift row. Foreign key into <i>shifts</i> .
Skill	Text 20	The skill required to work this shift. Foreign key into <i>shifttrack.competencies</i> .
Cnt	Integer	The number of staff required with this skill.

Templates Table

Contains the template rules that the Weekly Forecast Wizard uses to generate roster templates.

Column Name	Data Type	Description
Queue	Text 20	Queue for which this rule applies. Foreign key into <i>queue_header</i> .
Weekday	Integer	Day of the week for which this rule applied. 1 = Sunday to 7 = Saturday.
Hours	Float	Shift length to generate for this rule.
Minc	Integer	If non-zero then the Weekly Forecast Wizard will generate at least this number of shifts of this type, but only if they are required.
Maxc	Integer	The maximum number of shifts to generate of this type.
Name	Text 20	The name of the template to which this rule belongs.
Seq	Integer	Sequence number to preserve the order of rules in ShiftTrack/Plus.
Locked	Date	If set, then the Weekly Forecast Wizard will create the minimum number of these shifts (MinC) at the specified time automatically.
RFrom, rTo	Date	If set, then this rule only applies to shifts that will start between these times.
Shift	Text 20	The name of the shift that this rule applies to
Locked2	Datetime	If set, then the Weekly Forecast Wizard will create the maximum number of these shifts (MaxC) at the specified time.

RosterTemplates

Column Name	Data Type	Description
Id	Integer	Unique row identifier. System Generator
Location	Text 20	The location where the roster applies to. Foreign key into <i>shifttrack.locations</i>
Name	Text 20	The name of the roster template
Modified	Datetime	The Date and time of the modification
Fkey	Integer	Identifies the specific forecast. Foreign key into <i>fcast_header</i> .

Users Tables

Users Table

Contains information about ShiftTrack/Plus users and their permissions.

Column Name	Data Type	Description
ID	Long integer	Unique numeric identifier.
Username	Text 20	Login code for the user. Must be unique.
Permiss	Text 20	The role of the user. Foreign key into <i>user_profiles</i> .
Passwd	Text 50	ShiftTrack/Plus login password.
Location	Text 20	If set, then the user is restricted to information relating to that location. Foreign key into <i>shifttrack.locations</i> .
Team	Text 20	If set, then the user is assumed by ShiftTrack/Remote to be a team leader for that team. Foreign key into <i>shifttrack.teams</i> .
LastUsed	Datetime	The date and time when Shift Track/Plus was last used by the user
LastComputer	Text 50	The computer name of the agents last used computer

User_profiles Table

Defines the "roles" or menu options that can be seen by users.

Column Name	Data Type	Description
Name	Text 20	Name of the user role. Must be unique.
Menus	Memo	The list of menu options that are visible to this role. The list is tab delimited.