



Web Services API Technical User Documentation

Fair Use:

To ensure service uptime and equitable access, the S4 API is capped at 10 sessions . We ask all users to adhere to the following guidelines:

- **Session Management:** The API is limited to 10 simultaneous sessions. If this limit is exceeded subsequent calls will be queued until a connection is freed up following the completion of a call.
- **Efficient Use:** To maximise the efficiency of your API interactions, we recommend batching requests where possible and avoiding unnecessary calls.
- **Awaiting Responses:** Please ensure that your routines await a response from the S4 API before initiating subsequent calls. This practice helps in servicing all requests in a timely manner and prevents excessive session occupancy.
- **Consequences of Misuse:** Users found failing to abide by the S4 fair use policy may face temporary access restrictions. Repeat offenders, especially after a warning, may be restricted until they demonstrate compliance with the fair use policy.

Description

The WebServices API currently allows for access to four core areas:

- Return Payroll details of Employees at Organisation/Site level. (including report of Starters/Leavers).
- Return Shift details of Actual, Amended and Forecast shifts at Employee, Site or Organisation level
- Return Additional Pay details of jobs at Employee, Site or Organisation level
- Return Daily Sales Figures for a given week showing Forecast, Amended and Actual sales.

Data is returned in streamed Json format.

Security and Login

The API relies on a Http session that is instigated by a call to

```
"https://api.s4labour.com/api/Account/LogIn"
```

with username and password set as a Basic Http Authentication header in the Http request. The password should be 64 bit encoded using "iso-8859-1" code page.

If login is successful, the requested user's 'User ID' and 'Name' is saved as part of the Current Http Session and a token is returned to the calling process. This token must be included as part of subsequent calls to the API during until the connection is closed with a call to "LogOut". User privileges are checked for each call to the API at Site and Organisation level.

If the Authorization Header is missing from the Http request to Login a HTTP 401 error is returned with a message of

```
"No Http Authentication Header found."
```

If login fails due to an invalid username or password information the API returns a HTTP 401 error with a message of:

```
"Invalid user credentials".
```

Separate Http sessions can consume the API provided the Token created at Login is included as part of the call. The token is destroyed when the user call Logout or after a given timeout.

```
"https://api.s4labour.com/api/Account/LogOut"
```

This 'LogOut' should be used as it closes and destroys both the current token and the current HTTP session.

If the API is inactive for longer than 5 minutes the current login is terminated and subsequent calls using the allocated Token will a HTTP 401 error with a message of

```
"Connection timed out... Login required."
```

Additional security prevents unauthorised or excessive access to the API resulting in a HTTP 401 error with a message of

```
"SYSTEM VIOLATION DETECTED."
```

The current login (or attempted login) will then be locked until reactivated by S4 support.

Payroll Export

Command Format:

domainname/api/
PayrollExport/
GetPayrollExport/
OrganisationID/
DateFrom/
DateTo /
Token

The OrganisationID must be supplied and the two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetPayrollExport/1/2015-12-31/2016-01-31/123456789012345678901234"
```

Would return Payroll details for OrganisationID 1 between 31st December 2015 and 31st January 2016

Example 2.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetPayrollExport/1/2015-12-31/""/123456789012345678901234"
```

Would return Payroll details for OrganisationID 1 from 31st December 2015 until today.

Example 3.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetPayrollExport/1/""""/123456789012345678901234"
```

Would return all Payroll details for OrganisationID 1 on the system.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
EmployeeID	Employee ID of Employee. If OriginalEmployeeID is present (i.e. the Employee left and later re-joined the organisation) The first OriginalID is used instead.	int	No
EmployeeNumber	Employee Number specific to Organisation preference (normally payroll number)	string	Yes
FirstName	Employee first name	string	Yes
LastName	Employee surname	string	Yes
DOB	Employee date of birth	string	Yes

StartDate	Date employment started	string	Yes
Information	User specified information	string	Yes
LocationCode	Normally Post Code of Site	string	Yes
Location	Name of Site	string	Yes
Division	Division or Area worked	string	Yes
JobTitle	Job Title (as of supplied [DateTo])	string	Yes
TerminationDate	Date employment finished	string	Yes
Message	Unused (currently stores record number of returned recordset)	string	Yes
SiteCode	Organisation reference for site	string	Yes
S4SiteID	The PhysicalSiteID used by the S4 system. Any Site related calls within the API need to use this s4SiteID not the SiteCode above	int	Yes
EmployeeShiftID	The latest EmployeeID for this employee. This Employee ID should be used for shift reports instead of the EmployeeID above.	int	Yes

Timesheet Line Export

Command Format:

```
domainname/api/  
PayrollExport/  
GetTimesheetLineExport/  
OrganisationID/  
WeekNo/  
Token
```

The OrganisationID must be supplied and the week number to be exported, this will be the week number as displayed in S4.

Token should be the Token returned by the Login command.

Example

The command

```
"https://api.s4labour.com/api/PayrollExport/GetTimesheetLineExport/1/  
20/123456789012345678901234"
```

Would return the hours worked details for OrganisationID 1 for the seven days in financial week 20.

This method will return all hourly paid employees for the financial week, including the hours worked and their credit card tips as shown on the rota, but not their special pay total.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Data Type
EmployeeID	The S4 identifier for this employee	int
EmployeeNumber	Employee Number specific to Organisation preference (normally payroll number)	string
LastName	Employee surname	string
FirstName	Employee forename	string
WorkPeriodEndDate	The date of the last day in the requested financial week in the format yyyy-mm-dd (year hyphen month hyphen day).	Date
StandardRateHours	This is the number of hours this employee has worked across all positions.	decimal
OvertimeHours	This will always be zero, unless Overtime is activated in S4; in which case this will be the number of hours worked past the contracted hours for a week.	decimal
HolidayPay	This is the number of hours taken of holiday; this is calculated as the number of days scheduled as holiday multiplied by the run rate of the employee.	decimal
CreditCardTips	These are the credit card tips awarded to the employee in the current financial week.	decimal

Starters and Leavers

Command Format:

```
domainname/api/  
PayrollExport/  
GetStartersAndLeavers/  
OrganisationID/  
DateFrom/  
DateTo /  
Token
```

The OrganisationID must be supplied.

The two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

The maximum period between DateFrom and DateTo dates is 1 year.

- If the period is greater than a year DateFrom will be set to 1 year before DateTo.
- If either date is left blank "" the current Date will be used.
- If DateTo is before DateFrom both dates will be set at DateFrom,

Token should be the Token returned by the Login.

Example 1.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetStartersAndLeavers/1/2  
015-12-31/2016-01-31/123456789012345678901234"
```

Would return details for OrganisationID 1 of Employees with either a StartDate or EndDate between 31st December 2015 and 31st January 2016

Example 2.

Assume today's date is Saturday 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetStartersAndLeavers  
/1/2015-12-31/"/123456789012345678901234"
```

Would return details for OrganisationID 1 from 1st September 2016 to 1st September 2017. (given period is greater than 1 year).

Example 3.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetStartersAndLeavers  
/1/"/123456789012345678901234"
```

Would return details for OrganisationID 1 on the system just for today.

Example 4.

Assume today's date is Saturday 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetStartersAndLeavers  
/1/"/2017-09-30/123456789012345678901234
```

Would return details for OrganisationID 1 for new starters or leavers scheduled for this month.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
Physical SiteID	The PhysicalSiteID used by the S4 system. Any Site related calls within the API need to use this s4SiteID not the SiteCode below	int	No
SiteCode	The Organisation reference of this Site	string	Yes
Site	Name of Site	string	Yes
EmployeeName	Full name of Employee	string	Yes
EmployeeNumber	Employee local (TopSourceID) number or S4 EmployeeID	int	Yes
EmployeeID	The latest EmployeeID for this employee. This Employee ID should be used for shift reports instead of the EmployeeNumber above.	int	Yes
StartDate	Employment Start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss	string	No
EndDate	Employment End date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	string	Yes
Type	"Starter" or "Leaver"	string	No
ReasonForLeaving	null for Starters and Leavers with no reason selected	string	Yes
Actioned Date	DateTime entered on S4 date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	string	Yes
LeavingHoliday	Holiday pay accrued for Leaver or 0.0	Decimal	No
Deleted	If the employee has been deleted or has left	string	No
SelfServe	If the employee is in the process of self-serving	string	No

GetEmploymentHistory

Command Format:

domainname/api/
employees/
GetEmploymentHistory/
EmployeeID/
Token

The EmployeeID must be supplied.

Token should be the Token returned by the Login.A

Example 1.

Assume the employee being queried is ID 123456

The command

```
"https://api.s4labour.com/api/employees/GetEmploymentHistory/123456/123456789012345678901234"
```

Would return all the payrates that employee 123456 has within their View Pay History on their employee profile.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
EmployeeID	ID for the employee being queried	Int	No
EffectiveFrom	Pay setup start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	No
EffectiveTo	Pay setup end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00". Null if ongoing.	string	Yes
PayHistory_Type	The Employee's paytype, e.g. "Hourly"	string	No
Positions	An array of objects representing each role that was a part of the associated pay setup. Each object has the following three records: 'PayHistory_Position', 'PayHistory_MainRole' and 'PayHistory_Rate'	array	No
PayHistory_Position	The name of the Position	string	No
PayHistory_MainRole	Whether the position is the main role or not	boolean	No
PayHistory_Rate	The Pay Rate of the position	int	No
ContractedTerms_DaysPerWeek	Contracted days per week for the associated pay setup	Int	No
ContractedTerms_HoursPerWeek	Contracted hours per week for the associated pay setup	Int	No
ContractedTerms_Holiday	Contracted holiday allowance for the associated pay setup	int	No
ModifiedBy	Audit of who last edited the associated pay setup	string	No
ModifiedDate	Date/time of when the associated pay setup was last edited as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	No

EmployeeChanges

Command Format:

```
domainname/api/  
PayrollExport/  
EmployeeChanges/  
OrganisationID/  
DateFrom/  
Token
```

The OrganisationID must be supplied.

The DateFrom must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

DateFrom cannot be earlier than 1 year ago and cannot be in the future.

- If DateFrom is earlier than 1 year in the past it will 1 year before today.
- If DateFrom is left blank "" or in the future the current Date will be used.

Token should be the Token returned by the Login.

Example 1.

Assume todays date is 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChanges/1/2015-12-31/123456789012345678901234"
```

Would return details for OrganisationID 1 from 1st September 2016 to 1st September 2017. (given FromDate is earlier than 1 year ago).

Example 2.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChanges/1/"/123456789012345678901234"
```

Would return details for OrganisationID 1 on the system just for today.

Example 3.

Assume todays date is Saturday 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChanges/1/2017-01-01/123456789012345678901234"
```

Would return details for OrganisationID 1 for since January 1st 2017.

The Output is a Json string Array of records as follows:

JSON name	Col ID	JSON value definition	Decode as	Nullable
ChangedFields	A	Comma separated list of Col IDs that have changed for this Employee. Always starts with "A" Examples: "A,Q,T" EmailAddress and SortCode have changed. "A" Nothing has changed (possibly a change was made but reverted)	string	No
Surname	B	Employee personal detail	string	Yes
Forename	C	Employee personal detail	string	Yes
KnownAs	D	Employee personal detail	string	Yes
TopSourceID	E	Employee local (TopSourceID) number or S4 EmployeeID	string	Yes
StartDate	F	Employment Start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss	DateTime	No
SiteName	G	Site detail	string	Yes
SiteCode	H	Site detail	string	Yes
Gender	I	Employee personal detail	string	Yes
DateOfBirth	J	Employment detail as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	DateTime	Yes
NINumber	K	Employee personal detail	string	Yes
Address	L	Employee personal detail (address line 1)	string	Yes
Address1	M	Employee personal detail (address line 2)	string	Yes
Country	N	Employee personal detail	string	Yes
Postcode	O	Employee personal detail	string	Yes
PhoneNumber	P	Employee personal detail	string	Yes
EmailAddress	Q	Employee personal detail	string	Yes
EmergencyContactName	R	Employee personal detail	string	Yes
Relationship	S	Employee personal detail	string	Yes
SortCode	T	Employee personal detail	string	Yes
AccountNum	U	Employee personal detail	string	Yes
JobPositionName	V	Employee job detail	string	Yes
PayType	W	Employee job detail	string	Yes
Rate	X	Employee job detail	string	Yes
ContractedHoursPerWeek	Y	Employee job detail	Decimal	Yes
HolidaysPerYear	Z	Employee job detail	Decimal	Yes
EndDate	AA	Employee leave date as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	DateTime	Yes
HistoricContract	AB	"Y" or "N"	string	No
Overtime	AC	"Y" or "N"	string	No

EmployeeChangesWithHistory

Command Format:

```
domainname/api/  
PayrollExport/  
GetEmployeeChangesWithHistory/  
OrganisationID/  
DateFrom/  
Token
```

The OrganisationID must be supplied.

The DateFrom must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

DateFrom cannot be earlier than 1 year ago and cannot be in the future.

- If DateFrom is earlier than 1 year in the past it will 1 year before today.
- If DateFrom is left blank "" or in the future the current Date will be used.

Token should be the Token returned by the Login.

Example 1.

Assume todays date is 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChangesWithHistory/1/2015-12-31/123456789012345678901234"
```

Would return details for OrganisationID 1 from 1st September 2016 to 1st September 2017. (given FromDate is earlier than 1 year ago).

Example 2.

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChangesWithHistory/1/"/123456789012345678901234"
```

Would return details for OrganisationID 1 on the system just for today.

Example 3.

Assume todays date is Saturday 2017/09/01

The command

```
"https://api.s4labour.com/api/PayrollExport/GetEmployeeChangesWithHistory/1/2017-01-01/123456789012345678901234"
```

Would return details for OrganisationID 1 for since January 1st 2017.

The Output is a Json string Array of records as follows:

JSON name	Col ID	JSON value definition	Decode as	Nullable
ChangedFields	A	Comma separated list of Col IDs that have changed for this Employee. Always starts with "A" Examples: "A,Q,T" EmailAddress and SortCode have changed. "A" Nothing has changed (possibly a change was made but reverted)	string	No
Surname	B	Employee personal detail	string	Yes
Forename	C	Employee personal detail	string	Yes
KnownAs	D	Employee personal detail	string	Yes
TopSourceID	E	Employee local (TopSourceID) number or S4 EmployeeID	string	Yes
StartDate	F	Employment Start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss	DateTime	No
SiteName	G	Site detail	string	Yes
SiteCode	H	Site detail	string	Yes
Gender	I	Employee personal detail	string	Yes
DateOfBirth	J	Employment detail as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	DateTime	Yes
NINumber	K	Employee personal detail	string	Yes
Address	L	Employee personal detail (address line 1)	string	Yes
Address1	M	Employee personal detail (address line 2)	string	Yes
Country	N	Employee personal detail	string	Yes
Postcode	O	Employee personal detail	string	Yes
PhoneNumber	P	Employee personal detail	string	Yes
EmailAddress	Q	Employee personal detail	string	Yes
EmergencyContactName	R	Employee personal detail	string	Yes
Relationship	S	Employee personal detail	string	Yes
SortCode	T	Employee personal detail	string	Yes
AccountNum	U	Employee personal detail	string	Yes
JobPositionName	V	Employee job detail	string	Yes
PayType	W	Employee job detail	string	Yes
Rate	X	Employee job detail	string	Yes
ContractedHoursPerWeek	Y	Employee job detail	Decimal	Yes
HolidaysPerYear	Z	Employee job detail	Decimal	Yes
EndDate	AA	Employee leave date as a UTC dateTime YYYY-MM-DDThh:mm:ss or null	DateTime	Yes
HistoricContract	AB	"Y" or "N"	string	No
Overtime	AC	"Y" or "N"	string	No
PrevRateOfPay	AD	Employee job detail	Decimal	No

EmployeeShift / SiteShift / OrganisationShift

Command Format:

EmployeeShift

domainname/api/
Shift/
GETEMPLOYEESHIFTS/
ID/
DateFrom/
DateTo /
DataType/
Token

SiteShift

domainname/api/
Shift/
GETSITESHIFTS/
ID/
DateFrom/
DateTo /
DataType/
Token

OrganisationShift

domainname/api/
Shift/
GETORGANISATIONSHIFTS/
ID/
DateFrom/
DateTo /
DataType/
Token

The [ID] must be a valid EmployeeID when using the GetEmployeeShifts method, a valid SiteID when using the GetSiteShifts method and a valid OrganisationID when using the GetOrganisationShifts method.

The two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

DataType must be supplied and must be FORECAST, AMENDED or ACTUAL to return shifts which have been flagged accordingly.

Token should be the Token returned by the Login command.

All these Shift calls return data for Rotas that have been flagged as Forecast complete. This applies to Forecast Amended and Actual reports.

The data presented using these methods are cached, and make take up to an hour to update from changes made on the rota page. They are designed to allow fast access to shift data and for comparison between forecast, amended and actual rota stages.

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetEmployeeShifts/1000/2016-10-31/2016-11-30/Actual/123456789012345678901234"
```

Would return Actual Shift details for EmployeeID 1000 between the weekstart containing 31st October 2016 and weekstart containing 30th November 2016 which have been flagged as Forecast complete.

Example 2.

The command

```
"https://api.s4labour.com/api/Shift/GetEmployeeShifts/1000/2016-10-31/"/Forecast/123456789012345678901234"
```

Would return Forecast Shift details for EmployeeID 1000 from the weekstart containing 31st October 2016 and the next 5 weeks which have been flagged as Forecast complete.

Example 3.

The command

```
"https://api.s4labour.com/api/Shift/GetSiteShifts/123/"/"/Amended/123456789012345678901234"
```

Assume today's date is Saturday 2016/10/01 and weekstart for the Organisation is 'Monday'

Would return Amended Shift details for SiteID 123 from MONDAY 29th AUGUST to SUNDAY 30th OCTOBER 2016 which have been flagged as Forecast complete. (being four complete working weeks before today to four complete working weeks from today).

Example 4.

The command

```
"https://api.s4labour.com/api/Shift/GetOrganisationShifts/100/2001-01-01/2016-10-01/Actual/123456789012345678901234"
```

Assume weekstart for the Organisation is 'Monday'

Would return Actual Shift details for OrganisationID 100 from MONDAY 25th JULY to SUNDAY 2nd OCTOBER 2016 which have been flagged as Forecast complete. (being weekstart of [DateTo] 2016-10-01 minus 63 days to the working week containing [DateTo]). This is because the difference between the two entered dates was greater than 63 days.

Example 5.

The command

```
"https://api.s4labour.com/api/Shift/GetSiteShifts/100/"/2016-10-01/Actual/123456789012345678901234"
```

Assume weekstart for the Organisation is 'Monday'

Would return Actual Shift details for SiteID 100 from MONDAY 29th AUGUST to SUNDAY 2nd OCTOBER 2016 which have been flagged as Forecast complete. (being four complete

working weeks before [DateTo] to the working week containing [DateTo]). This is because the difference between the two entered dates was greater than 63 days.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	Yes
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	Yes
ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	Yes
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	Yes
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	Yes
OrganisationID	S4 OrganisationID	int	Yes

GetEmployeeAdditionalPay / GetSiteAdditionalPay / GetOrganisationAdditionalPay

Command Format:

GetEmployeeAdditionalPay

domainname/api/
AdditionalPay/
GETEMPLOYEEADDITIONALPAY/
ID/
startDate/
endDate/
Token

GetSiteAdditionalPay

domainname/api/
AdditionalPay/
GETSITEADDITIONALPAY/
ID/
startDate/
endDate/
Token

GetOrganisationAdditionalPay

domainname/api/
AdditionalPay/
GETORGANISATIONADDITIONALPAY/
ID/
startDate/
endDate/
Token

The [ID] must be a valid EmployeeID where using the GetEmployeeAdditionalPay method, a valid SiteID when using the GetSiteAdditionalPay method and a valid OrganisationID when using the GetOrganisationAdditionalPay method.

The two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes. PayDate filtering is inclusive of both DateFrom and DateTo.

- If both dates are supplied and their range exceeds 63 days, the returned window is reduced to the 63 calendar days ending on DateTo (inclusive).
- If only DateFrom is supplied, DateTo is set to the weekstart on or before (DateFrom + 35 days).
- If only DateTo is supplied, DateFrom is set to the weekstart on or before (DateTo - 27 days), and DateTo is used as supplied (inclusive).
- If both dates are left blank, DateFrom is set to the weekstart on or before (today - 28 days) and DateTo to the weekstart on or before (today + 35 days).

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/AdditionalPay/GetEmployeeAdditionalPay/1000/2016-10-31/2016-11-30/123456789012345678901234"
```

Would return Additional Pay details for EmployeeID 1000 with a PayDate between 31st October 2016 and 30th November 2016 (inclusive).

Example 2.

The command

```
"https://api.s4labour.com/api/AdditionalPay/GetEmployeeAdditionalPay/1000/2016-10-31/"/"/123456789012345678901234"
```

Would return Additional Pay details for EmployeeID 1000 with a PayDate from 31st October 2016 up to (but not including) the weekstart on or before 5th December 2016 (i.e. 35 days after the supplied DateFrom, rounded back to the organisation's weekstart).

Example 3.

The command

```
https://api.s4labour.com/api/AdditionalPay/GetSiteAdditionalPay/123/"/"/"/123456789012345678901234"
```

Assume todays date is Saturday 2016/10/01 and weekstart for the Organisation is 'Monday'

Would return Additional Pay details for SiteID 123 with a PayDate from Monday 29th August 2016 up to (but not including) Monday 31st October 2016 - i.e. the weekstart on or before (today - 28 days) to the weekstart on or before (today + 35 days).

Example 4.

The command

```
https://api.s4labour.com/api/AdditionalPay/GetOrganisationAdditionalPay/100/2001-01-01/2016-10-01/123456789012345678901234"
```

Assume weekstart for the Organisation is 'Monday'

Would return Additional Pay details for OrganisationID 100 with a PayDate from 31st July 2016 to 1st October 2016 (inclusive). This is because the difference between the two entered dates was greater than 63 days, so the returned window is reduced to the 63 calendar days ending on DateTo (inclusive). The 63-day window uses calendar days, not weekstart-aligned dates.

Example 5.

The command

```
https://api.s4labour.com/api/AdditionalPay/GetSiteAdditionalPay/100/"/"/2016-10-01/123456789012345678901234"
```

Assume weekstart for the Organisation is 'Monday'

Would return Additional Pay details for SiteID 100 with a PayDate from Monday 29th August 2016 to 1st October 2016 (inclusive). When DateFrom is left blank, DateFrom is set to the weekstart on or before (DateTo - 27 days), and DateTo is used as supplied (inclusive).

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
-----------	-----------------------	-----------	----------

IncrID	Internal ID	int	No
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	Yes
CCTips	Credit card tips	Decimal	No
SP	Special pay	Decimal	No

ActualPayrollShifts

Command Format:

```
domainname/api/
Shift/
GetActualPayrollShifts/
ID/
DateFrom/
DateTo/
Token
```

The [ID] must be a valid SiteID.

The two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

Token should be the Token returned by the Login command.

This method call returns data for Rotas that have been flagged as actual complete. This will return the shifts as they are displayed on the rota at the time at which the web call is made; it represents the most up-to-the-second shift information and should only be used when that level of precision is important (for example, calculating payroll).

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetActualPayrollShifts/123/2016-10-31/2016-11-30/123456789012345678901234"
```

Would return Shift details directly from the rota for SiteID 123 between the weekstart containing 31st October 2016 and weekstart containing 30th November 2016 which have been flagged as actual complete.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	Yes
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	Yes

ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	Yes
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	Yes
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	Yes
OrganisationID	S4 OrganisationID	int	Yes
Position	Position name	string	Yes

ActualPayrollShiftsWithContractTerms

Command Format:

```
domainname/api/  
Shift/  
GetActualPayrollShiftsWithContractTerms/  
ID/  
DateFrom/  
DateTo/  
Token
```

The [ID] must be a valid SiteID.

The two dates must either be supplied in unquoted UTC date only format YYYY-MM-DD or left blank with two double quotes.

Token should be the Token returned by the Login command.

This method call returns data for Rotas that have been flagged as actual complete. This will return the shifts as they are displayed on the rota at the time at which the web call is made; it represents the most up-to-the-second shift information and should only be used when that level of precision is important (for example, calculating payroll).

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetActualPayrollShiftsWithContractTerms/123/2016-10-31/2016-11-30/123456789012345678901234"
```

Would return Shift details directly from the rota for SiteID 123 between the weekstart containing 31st October 2016 and weekstart containing 30th November 2016 which have been flagged as actual complete.

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	Yes
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes

SiteName	Name of Site	string	Yes
ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	Yes
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	Yes
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	Yes
OrganisationID	S4 OrganisationID	int	Yes
Position	Position name	string	Yes
ContractedHours	Contracted hours from employee contract history	decimal	Yes
ContractedDays	Contracted days from employee contract history	decimal	Yes

Site Sales

Command Format:

domainname/api/
Sales/
GetSiteSales/
SiteID/
TestDate/
Token

The [SiteID] must be a valid S4 SiteID and the [TestDate] must be present in unquoted UTC date only format YYYY-MM-DD. Neither value can be left blank

Example 1.

The command

```
"https://api.s4labour.com/api/Sales/GetSiteSales/123/2016-10-31/123456789012345678901234"
```

Would return Budget, Forecast, Amended and Actual Sales details for SiteID 123 for the complete working week containing 31st October 2016

The Output is a Json string Array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
PhysicalSiteID	Site ID	int	No
WorkDate	Date of the day with workweek	string	Yes
SalesType	"Budget", "Forecast", "Amended" or "Actual"	string	Yes
Wet	Sales for Wet products	decimal	Yes
Dry	Sales for Dry products	decimal	Yes
Other	Sales for Other products	decimal	Yes

Flag State:

Command Format:

domainname/api/
sites/
FlagState/
SiteID/
StartDate/
EndDate/
Token

This is a “GET” method which will return the current state of a day and whether it has been flagged as Forecast or Actual.

A forecast day is one that is in the future while an actual day is one that is in the past. A day can't be flagged as actual in the future and a day can't be flagged as forecast in the past.

Max date period is 1 year / 365 days

The two dates must be supplied in unquoted UTC date format YYYY-MM-DD.

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetActualShifts/123/2016-10-31/2016-11-30/123456789012345678901234"
```

JSON name	JSON value definition	Decode as	Nullable
SiteID	Site ID	int	No
Date	Date referring to a day of the week as a UTC dateTime YYYY-MM-DD i.e. "2022-12-31"	int	No
FlaggedForecast	True if rota is flagged as forecast otherwise false	bool	No
FlaggedActual	True if rota is flagged as actual otherwise false	bool	No

Actual Shifts:

Command Format:

domainname/api/
shift/
GetActualShifts/
SiteID/
WeekStartDate/
WeekEndDate/
Token

This is a "GET" method which will return the shifts as they are on the rota at the point of making the api call. This method requires the rota to be flagged as "actual" to pull shifts back.

The two dates must be supplied in unquoted UTC date format YYYY-MM-DD.

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetActualShifts/123/2016-10-31/2016-11-30/123456789012345678901234"
```

JSON name	JSON value definition	Decode as	Nullable
Position	Name of position	string	No
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	No
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	No
ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	No
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	Yes
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	No
OrganisationID	S4 OrganisationID	int	No

The method returns all the shifts for the site as they are at the time of the call being made (Live data) for each employee for the date that has been passed as long as the rota has been flagged as forecast completed (SignedOff = 1).

All Shifts:

Command Format:

domainname/api/
shift/
GetActualShifts/
SiteID/
WeekStartDate/
WeekEndDate/
Token

This is a "GET" method which will return the shifts as they are on the rota at the point of making the api call. This method requires the rota to be flagged as "forecast" to pull shifts back in the future.

The two dates must be supplied in unquoted UTC date format YYYY-MM-DD.

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetAllShifts/123/2016-10-31/2016-11-30/123456789012345678901234"
```

JSON name	JSON value definition	Decode as	Nullable
Position	Position name	string	No
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	No
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	No
ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	No
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	No
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	No
OrganisationID	S4 OrganisationID	int	No

Get All Agency Shifts:

Command Format:

domainname/api/
shift/
GetAllAgencyShifts/
SiteID/
WeekStartDate/
WeekEndDate/
Token

This is a “GET” method which will return shifts as they are on the rota at the point of making the API call for agency staff only. This method requires the rota to be flagged as “forecast” to pull shifts back for future weeks.

The two dates must be supplied in unquoted UTC date format YYYY-MM-DD.

Token should be the Token returned by the Login command.

Example 1.

The command

```
"https://api.s4labour.com/api/Shift/GetAllAgencyShifts/123/2016-10-31/2016-11-30/123456789012345678901234"
```

JSON name	JSON value definition	Decode as	Nullable
Position	Position name	string	No
IncrID	Internal ID	int	No
ShiftID	ShiftID from shifts db	int	No
EmployeeID	Employee ID for Shift	int	No
PayrollNumber	Payroll reference for Employee	string	Yes
NINumber	NINumber of Employee	string	Yes
SiteCode	Organisation reference for site	string	Yes
SiteName	Name of Site	string	No
ShiftStart	Shift start date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T13:30:00"	string	No
ShiftEnd	Shift end date/time as a UTC dateTime YYYY-MM-DDThh:mm:ss i.e. "2016-12-31T22:30:00"	string	No
AbsenceCode	Reason code for Absence	string	Yes
SiteID	S4 SiteID	int	No
OrganisationID	S4 OrganisationID	int	No

Reports

WeeklySalesAndLabour

Command Format:

domainname/api/
Reports/
WeeklySalesAndLabour/
siteID/
weekStart/
weekEnd/
sessionID

The siteID, weekStart, weekEnd, and sessionID must be supplied.

- siteID: The ID of the physical site.
- weekStart: The start date of the week in unquoted UTC date format YYYY-MM-DD.
- weekEnd: The end date of the week in unquoted UTC date format YYYY-MM-DD.
- sessionID: The session token obtained from the login method.

Example 1.

The command

```
"https://api.s4labour.com/api/Reports/WeeklySalesAndLabour/123/2024-01-01/2024-01-07/123456789012345678901234"
```

Would return weekly sales and labor data for SiteID 123 from 1st January 2024 to 7th January 2024.

Output:

The output is a JSON string array of records as follows:

JSON name	JSON value definition	Decode as	Nullable
PhysicalSiteID	Site ID	int	No
SiteCode	Site Code	String	No
WeekStartDate	The start date of the week as a UTC dateTime YYYY-MM-DDThh:mm:ss	string	No
ActualSales	Total Actual Sales for all revenue streams for the week	decimal	No
ForecastSales	Total Forecast Sales for all revenue streams for the week	decimal	No
BudgetSales	Total Budgeted Sales for all revenue streams for the week	decimal	No
LastYearSales	Total actual sales for the same time last year	decimal	No
ActualCost	Total actual cost of the rota for the week	decimal	No
ForecastCost	Total forecast cost of the rota for the week	decimal	No
TotalHours	Total hours scheduled for the week (As a percentage -> Sum of Slack Hours Percentage + Correct Hours Percentage)	decimal	No
StressHours	Total hours in stress for the week (As a percentage)	decimal	No
SlackHours	Total hours in slack for the week (As a percentage)	decimal	No
CorrectHours	Total hours in spot on for the week (As a percentage)	decimal	No

OrgWeeklySalesAndLabour

Command Format:

domainname/api/
Reports/
WeeklySalesAndLabour/
orgID/
weekStart/
weekEnd/
sessionID

The siteID, weekStart, weekEnd, and sessionID must be supplied.

- orgID: The ID of the organisation.
- weekStart: The start date of the week in unquoted UTC date format YYYY-MM-DD.
- weekEnd: The end date of the week in unquoted UTC date format YYYY-MM-DD.
- sessionID: The session token obtained from the login method.

Example 1.

The command

```
"https://api.s4labour.com/api/Reports/OrgWeeklySalesAndLabour/456/2024-01-01/2024-01-07/123456789012345678901234"
```

Would return weekly sales and labor data for Organisation 456 from 1st January 2024 to 7th January 2024.

Output:

The output is a JSON string array of records as follows:

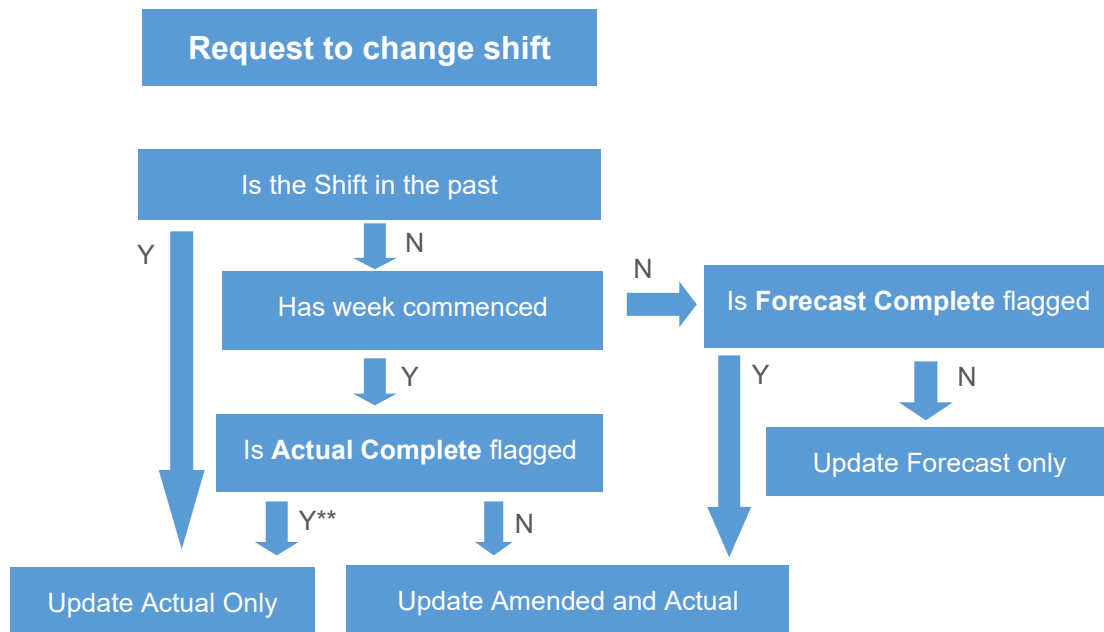
JSON name	JSON value definition	Decode as	Nullable
PhysicalSiteID	Site ID	int	No
SiteCode	Site Code	String	No
WeekStartDate	The start date of the week as a UTC dateTime YYYY-MM-DDThh:mm:ss	string	No
ActualSales	Total Actual Sales for all revenue streams for the week	decimal	No
ForecastSales	Total Forecast Sales for all revenue streams for the week	decimal	No
BudgetSales	Total Budgeted Sales for all revenue streams for the week	decimal	No
LastYearSales	Total actual sales for the same time last year	decimal	No
ActualCost	Total actual cost of the rota for the week	decimal	No
ForecastCost	Total forecast cost of the rota for the week	decimal	No
TotalHours	Total hours scheduled for the week (As a percentage -> Sum of Slack Hours Percentage + Correct Hours Percentage)	decimal	No
StressHours	Total hours in stress for the week (As a percentage)	decimal	No
SlackHours	Total hours in slack for the week (As a percentage)	decimal	No
CorrectHours	Total hours in spot on for the week (As a percentage)	decimal	No

Notes on Forecast, Amended and Actual

Forecast shifts are initial shifts that are entered in advance giving an estimate of the work required for the week. Initially this forecast is also copied to Actual and Actual will remain the same as Forecast unless the shift is changed.

Forecast shifts for a week can be changed and will remain forecast until the week is flagged *forecast complete* and any changes at this stage will not be marked as amended. After *forecast complete* has been flagged forecast shifts can still be changed but at this point an amended recorded will be created and actual will be changed to represent the amendment.

The following diagram shows how Forecast, Amended and Actual shifts can be modified at stages from forecast to Actual Completed.



** The ability to unflag and modify shifts flagged **Actual Completed** is restricted to level 5 users or above.

The Shift calls in the API for Forecast, Amended and Actual return shift data for rotas that

Version Change Log

Version	Release Date	Actions
1.1.0.0	29/11/2016	First formal release
1.1.1.0	19/01/2017	Include S4.SiteID and EmployeeShiftID to PayrollExport call
1.1.2.0	20/06/2017	Include hashed logins and fixed errors in not bringing in shifts for the last day of date range . URL has hanged to `https://api.s4labour.com/api/`
1.2.0.0	06/09/2017	Token based security and additional security added. Starters and Leavers added to PayrollExport Controller.
1.2.0.1	12/09/2017	Included Changed Employees call in Payroll and changes to Shifts to only return Forecast complete rotas
1.2.0.2	16/10/2017	Changes to example calls to include correct name.
1.3.0.0	23/01/2018	Added AdditionalPay controller methods
1.3.0.1	29/06/2018	Added Slack/Stress/Spot On controller methods.
1.3.0.2	07/01/2022	Added Actual Shifts Method
1.4.0.0	17/11/2023	Added All Agency Shifts method Added Flag State method Added Actual Shifts method Update fair use policy General formatting tidy up
1.4.0.1	04/12/2023	Further formatting revisions
1.5.0.0	19/06/2024	Added Reports controller methods
1.5.1.0	27/02/2025	Added GetChangeEmployeeWithHistory and GetActualPayrollShiftsWithContractTerms
1.5.2.0	01/05/2025	Added 'SelfServe' and 'Deleted' flags to GetStartersAndLeavers
1.5.3.0	09/05/2025	Added 'GetEmploymentHistory' method
1.5.3.1	14/05/2026	Corrected AdditionalPay date filter wording (replaced incorrect 'weekstart' phrasing with the exact PayDate inclusive range; rewrote all five examples and added a clarified rules block).