InfoFlex Desktop Customer Release Notes Version 5.70.0139

Contents

Version Notes

InfoFlex Version **5.70.0139**

These release notes cover the changes for **5.70.0139** only.

The Database Version is **5.70.0107**. The Database Version has not changed.

The Minimum InfoFlex Client is **5.20.0400**. The Minimum InfoFlex Client has not changed.

Note that this version incorporates all the functionality from Customer Release 5.70.0130 and from 5.70.0132, 5.70.0133, 5.70.0134, 5.70.0135, 5.70.0136, 5.70.0137 and 5.70.0138.

Note that it does <u>not</u> contain all the functionality in, 5.70.0113, 5.60.0427, 5.60.0409. *(The only omissions from 5.70.0113 are the changes to spell checking).*

Changes to 3rd Party Controls

None. Note that the TxText v19 controls were required for release 5.60.0400.

Important Note if you use SQL2005

We are withdrawing support for SQL2005 from April 2020. However it is still possible to use SQL 2005 with this 5.70.0139 version of InfoFlex.

Important Note about Access Databases and SQL 2000

If you use an Access database or SQL 2000 database please contact CIMS Support and **do not upgrade** to this version. Access databases and SQL 2000 databases are no longer supported.

Important Note about SQL Server Drivers

The SQL Server database is now using VARCHAR(MAX) instead of the TEXT data type for InfoFlex memo item fields. Some SQL Server Drivers are not able to handle VARCHAR(MAX) data types and so we recommend that the connection string is kept at the default driver={sql server}.

Important Note if you use the Scheduler Module

A change from 5.60.0415 (June 2016) onwards requires that a new text item definition with the name of 'Waiting List Key' is added as the 9th item in the Patient event definition (after item 'Notes'). Also, ensure that this new 'Waiting List Key' item is write protected. The new item does not need to be added into any data view defined on the Scheduler domain. **Note that the Scheduler module will not open until this new item has been created.**

Release Note Ordering

These release notes follow on from **5.70.0138**

This is the order of previous Customer Release Notes:

- **5.70.0138**
- **5.70.0130**
- **5.70.0127**
- **5.70.0120**
- **5.70.0100**
- **5.60.0400**
- **5.60.0300**

- **5.60.0200**
- **5.60.0100**
- **5.50.0500**
- **5.50.0300 & 5.50.0400**
- **5.50.0200**
- **5.50.0100**
- **5.40.0500**

Our standard user guides are available here: https://infoflex.co.uk/support/#user-guides

1   NEW FUNCTIONALITY

1.1   InfoFlex Scheduler New Functionality

BS-01486 Define separate OnBook, OnChange and OnCancel item maps for appointment events NP-007

It is now possible to define separate On Book, On Change and On Cancel maps for Appointment Events. Previously it was only possible to define one Appointment Event map which was used in all scenarios.

For existing users upgrading to this version, the existing Appointment Event map will be copied into all 3 new maps, so that behaviour will continue as before.

Defining the maps

In the scheduler configuration, go to the **Appointment Events** tab and add or edit a map as usual. The Appointment Event Item Map box is replaced by 3 separate tabs for the On Book, On Cancel and On Change Item Maps.

Mapped items are now displayed in blue and there is a new **Show Mapped Items Only** option. Default calculated items can now be mapped.
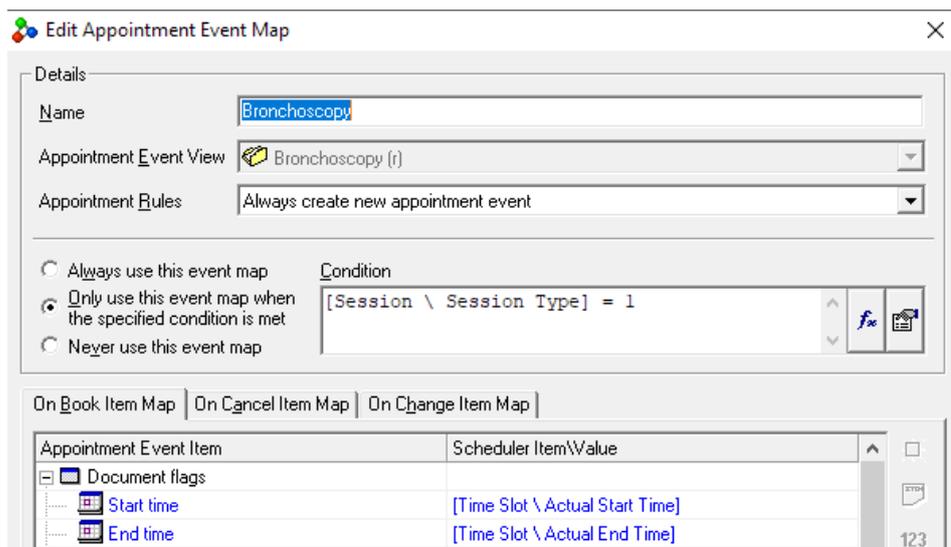
Behaviour of the maps

The **On Book Item Map** will be applied only when the appointment event is created, or when an existing appointment event is linked to, as part of the book appointment process.

The **On Cancel Item Map** will be used when an appointment is cancelled and post cancellation (if configured).

The **On Change Item Map** will be used in all other scenarios including:

- Rescheduling a session (both Move All Appointments and Move Entire Session)
- Rescheduling an appointment
- Reordering time slots
- Editing a time slot

BS-01465 Revision to prevention of double booking of appointments in Session Search mode **JW-1359, JW-1308**

When booking appointments in Scheduler, the session or time slot now only locks for the minimum amount of time possible. In particular, the user will no longer be prompted with any dialogs or messages whilst the session or time slot is locked.

Previously, the session or time slot event was locked at the start of the booking process before the user was prompted to select the required appointment event (or parent for the new appointment event). This prompt dialog also allowed the user to open the data entry dialog for the selected patient.

Also, the session or time slot event were only unlocked after the user was prompted to generate any required documents (including the document generation).

<u>To use the new double booking prevention mechanism:</u>

Ensure **Event Locking Level** property of Scheduler domain definition is set to a value other than **0 – No locking** (eg set it to **2 – Lock and allow read-only viewing**). See also BS-01467 Allow locking only to be applied in certain areas **JW-1359, JW-1308** below.

Carry out the booking process as normal. After pressing Book, if another user is also trying to book into the same or an overlapping time within the same session, a message is displayed indicating the session is currently locked.
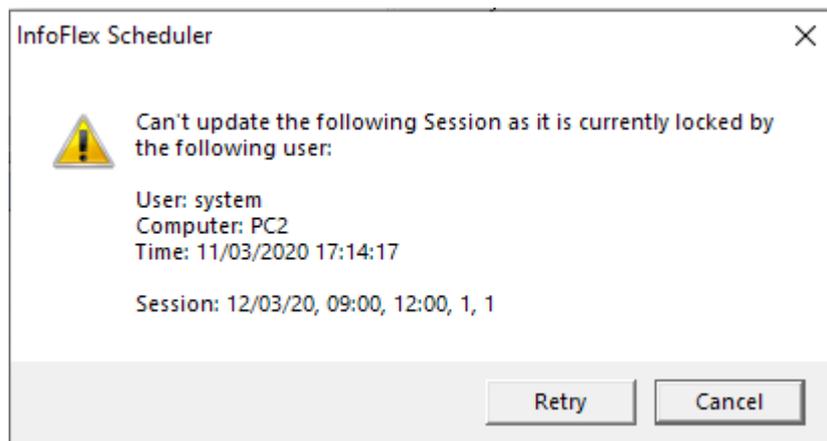
Once the first appointment has been booked, clicking on the **Retry** message displays a further message that the start time and/or duration of the new time slot for the appointment are no longer valid.
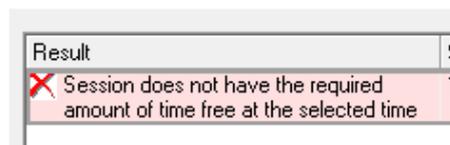
If the other user is booking into the Session but at a different time, then once that booking is complete, pressing **Retry** allows the user to continue booking the appointment.

BS-01467 Allow locking only to be applied in certain areas JW-1359, JW-1308

There are new locking options on the **Scheduler Domain** tab of the Scheduler configuration. These either allow all areas or just specific areas in Scheduler to apply event locking. If the **Lock events whenever possible** option is selected then all of the other locking options will be selected and disabled.

Note that this has been introduced for troubleshooting purposes and CIMS recommends that all the locking options are left switched on.

In order to just apply locking in specific areas, deselect the **Lock events whenever possible** option and then select the areas to apply locking as required. If no options are selected then event locking will not be applied anywhere in Scheduler.

Note that the **Event Locking Level** property of the Scheduler domain definition will still be set automatically depending on whether or not any locking options are selected.

The specific Scheduler areas that can apply event locking are as follows…

- Booking appointments
- Cancelling appointments
- Editing session, time slot and patient details in diary
- Editing session, time slot and patient details in grid

The locking options are related to the current setting of the **Event Locking Level** property of the Scheduler domain definition.

If the domain **Event Locking Level** is set to **0 – No locking** then none of the locking options will be selected in Scheduler. Switching on the Scheduler **Lock events whenever possible** option will change the domain **Event Locking Level** to **2 – Lock and allow read-only viewing**.

If the domain Event Locking Level set to a value other than **0 – No locking** then the **Lock events whenever possible** option will be selected meaning that event locking will be applied in all appropriate areas in Scheduler. Switching off the Scheduler **Lock events whenever possible** option will change the domain **Event Locking Level** to **0 – No locking**.

BS-01405 Ability to reschedule booked appointments NB-099

There is now the ability to Reschedule existing patient appointments. This function can be used as an alternative to cancelling and rebooking.

When an appointment is rescheduled, it is completely removed from the diary and a new one created. The existing waiting list and appointment events for the rescheduled appointment are reused for the new appointment. This means that the user will not be prompted to select or create a linked appointment event as part of the booking process. The On Change maps are applied to both the Waiting List event and the Appointment event. If configured appropriately, the user may still be prompted to generate appointment letters for the rescheduled appointments.

If the appointment was booked into a time slot created at time of booking (Session search), the time slot will also be removed. If the appointment was booked into a time slot created in advance (Time Slot search), the time slot will remain.

This functionality also allows an appointment to be moved to a different time within the same session. This can be either an existing time slot or a new time slot (so long as it doesn't overlap with any of the existing time slots in the session, including the time slot containing the appointment being rescheduled).

To reschedule an appointment:

Select an appointment in either Diary or Grid mode. Use the new **Reschedule Appointment** option on the right click or Patient menus.

This opens the Book Appointment wizard in a new **Reschedule** mode.

The wizard contains the following steps:

Initial wizard page.

Patient Select   (if a time contains multiple patient appointments is being rescheduled). This step allows the user to select which patient appointments to reschedule. Multiple patient appointments can be selected from the same time slot, if the time slot creation mode is set to allow time slots to be created in advance. If multiple patients are selected then it will only be possible to reschedule into an existing time slot (ie using Time Slot search rather than Session Search).

Patient Details   if a time slot containing a single patient is being rescheduled. This step allows the user to amend the details of the patient whose appointment is being rescheduled. If configured accordingly, this may include the procedure the patient is booked for.

Book Appointment Mode   Select which search method to use (if configured to allow both Time Slot Search and Session Search, and a single patient is being rescheduled)

Session, Time Slot or On Hold search Find an appropriate appointment to book the patient(s) into. For Session and On Hold searches, the time required is taken from the duration of the current time slot rather than the time specified for the associated appointment procedure.

Confirmation   Displays confirmation of the appointment rescheduling that will be performed.

Results   Displays results of the appointment rescheduling.

In diary mode, after rescheduling appointments, the diary will be refreshed to remove the old appointments and display the new appointments. In grid mode, the user will be prompted to refresh the grid in order to reflect the rescheduled appointments.
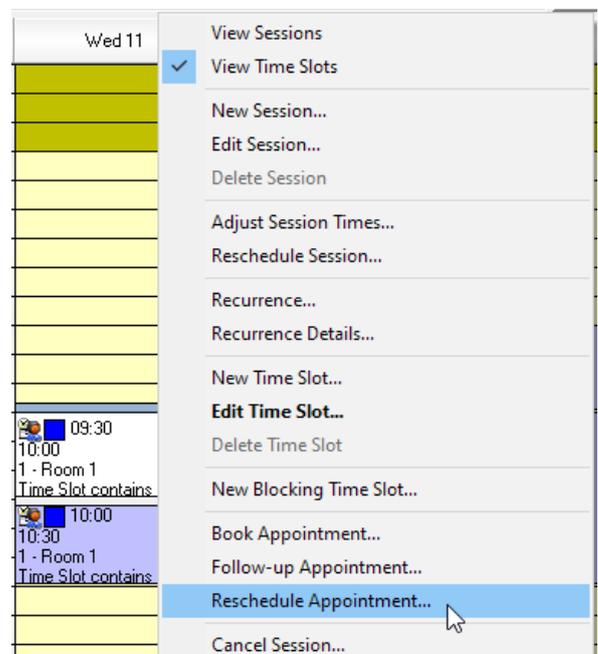
BS-01507 Allow entire session to be rescheduled to a different day JW-1386

There is now the ability to reschedule an entire session that contains booked appointments. This can be used to either move the session in its entirety to another date and/or time, or to reschedule all patient appointments in the session into a different existing session.

(If a session does not contain any active patient appointments then it can be moved to a different date and/or time via drag and drop in the diary or via the edit session dialog.)

The existing waiting list and appointment events for the rescheduled appointment are reused for the new appointment. This means that the user will not be prompted to select or create a linked appointment event as part of the booking process. The On Change maps are applied to both the Waiting List event and the Appointment event. If configured appropriately, the user may be prompted to generate appointment letters for the rescheduled appointments.

To move all appointments to another session:

Select a session in the Diary. Use the new **Reschedule Session** option on the right click or Session menus.

Select the **Move all Patient appointments to another Session** tab.

This tab allows you to search for an existing matching target session to move the patient appointments into. Set a date range to search within. Also choose whether to search for a session with the same recurrence, type or location or for empty sessions. Press the orange **Session Search** button to search for sessions.

Available sessions are displayed in the results grid, which can be sorted using the column headings or filtered further using the calendar on the right hand side. Select a session by ticking the check box in the first column.

On pressing OK, a confirmation message is displayed and then moves the appointments. **The on Change map is applied**. New time slots are created if existing time slots do not exist. Existing clinical events are updated.

For time slots created in advance (and booked using a time slot search), if the time slot is recurring and the target session is part of the same recurrence as the selected session then the matching recurring time slot from the target session will be used so long as it has slots available. Otherwise, an attempt is made to find an existing time slot in the target session with slots free that starts at the same start time offset and is of the same duration. If such a time slot cannot be found then a new time slot will be created for the patient appointment, so long as the session is large enough to accommodate the new time slot.

After rescheduling, any time slots in the source session that were created using search session will be deleted. Any time slots created in advance will remain but the patients will be removed.

When rescheduling into an existing session, if the target session also contains one or more empty time slots (i.e. time slots containing no active patient appointments) or time blocks then the user will additionally be prompted as whether or not these should also be rescheduled to the target session.

To move the entire session to a different date and/or time:

Select a session in the Diary. Use the new **Reschedule Session** option on the right click or Session menus.

Select the **Move entire Session to a different date and/or time** tab.

This tab allows you to specify a new date and/or time to move the currently selected session to. The date defaults to seven days after the selected session, or today or tomorrow, whichever is later. The time defaults to the same start time as the selected session.

On pressing OK, a confirmation message is displayed and then the session along with its appointments is moved. The On Change map is applied. Existing clinical events are updated.. The user will be prompted to generate any configured documents.

BS-01504 Ability to adjust start and end times of sessions JW-1312

Session start and end times can now be adjusted without affecting the start and end times of any contained time slots. There is a new **Adjust Session Times** menu option on the Session and right click menus.
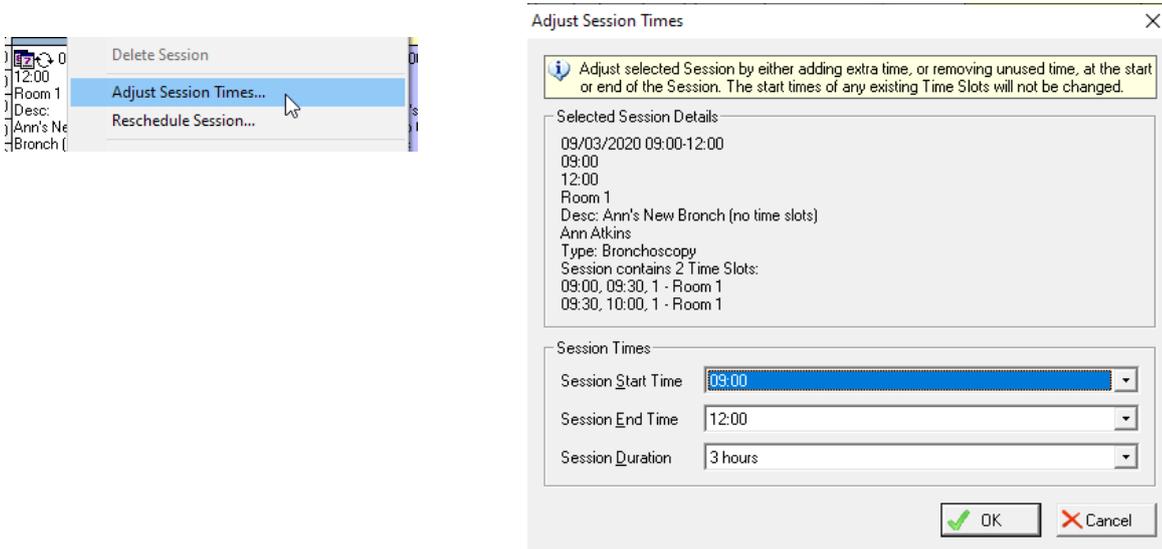
The **Adjust Session Times** dialog displays the details of the session and its time slots, and allows the **Start**, **End** or **Duration** to be adjusted. These changes will only be applied to the current session. There is no option to choose to apply the changes to other sessions.

The dialog only allows new start times earlier than the first time slot and end times later than the last time slot.

Changing the start time will change the length of the session and update the **Duration** field. (This is different to the behaviour of the **Edit Session** dialog which keeps the session length the same and updates the **End time** field when the start time is changed (only available if there are no booked time slots)).

Since adjusting the session time does not change any time slots, no maps are triggered for the linked waiting list or appointment events.

Summary of methods of changing the session times

Method	Adjust start?	Adjust end?	Adjust duration?	Current or multiple sessions?	WL and appt events updated?
Adjust session times	Yes – extends the duration	Yes	Yes	Current only	No
Edit session	Only if no booked time slots. Moves the session ie duration remains the same	Yes	Yes	Prompt to select which sessions	Yes
Drag and drop session start on the diary			No	Prompt to select which sessions (only if no time slots present)	No
Drag and drop session end on the diary		Yes	Yes	Prompt to select which sessions	No

BS-01506 Allow time slots that contain patient appointments to be moved within session SR-061, JW-1386

It is now possible to adjust the start times of time slots once patient appointments have been booked into them (in addition to end time/duration). This affects both time slots created in advance and those created when booking appointments. A prompt is displayed if the user attempts to move a time slot that contains active appointment bookings.

The time slot start times can be adjusted in the edit time slot dialog, or by dragging and dropping the time slot in the diary. Start times cannot be adjusted in grid mode, whether from the grid or by opening the edit time slot dialog from the grid.

The existing waiting list and appointment events for the rescheduled appointment continue to be used and they will be updated by the **On Change** item maps. If configured accordingly, the user will be prompted to regenerate the patient appointment documents associated with each appointment booking in the moved time slot.

Guidelines

If the adjusted time slot is recurring and contains an appointment, then only the selected instance will have its start time updated, ie the user will not be prompted to apply changes to multiple time slots.

If the adjusted time slot is recurring and does not contain an appointment, then the user will be prompted to apply changes to multiple time slots.

Time slots cannot be moved to a time earlier than the start time of the session.

If the moved time slot would fall after the end of the containing session, the user will be prompted to enlarge the session to accommodate the moved time slot.

Overlapping time slots

Time slots are allowed to be moved such that they overlap with any other type of time slot. If a time slot created when booking is moved or extended such that is causes an overlap with other booked appointments, a warning message is displayed and the user can choose to cancel the move.
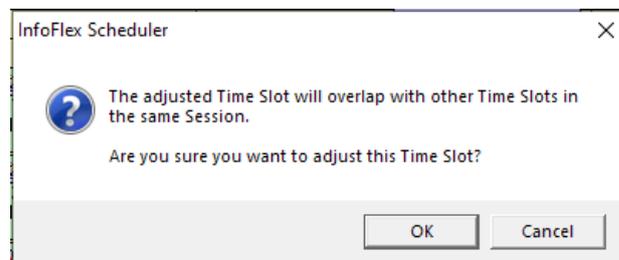
BS-01483 Make session and time slot diary entry details configurable JW-1382

It is now possible to configure more of the information displayed in the session and time slot diary entries. This will also affect the tooltips displayed when hovering the mouse over a diary entry, and the session, time slot and patient details as displayed in the **Details** pane (displayed in the top right corner when the **Show Details** menu item is selected).

Single and Multiple line summaries

Single line summaries define that information that is displayed in the tree summary top left and the dialog headings. Multiple line summaries define the information in the Details tabs (top right).

The session diary blocks show the session multiline and the timeslot single line information. Session tooltips show session multi line, timeslot multi line and patient single line information.

The time slot diary blocks show the timeslot multi line and the patient single line information. Time slot tooltips show time slot multi and patient single line information.

It was previously possible to configure the single line summary information for sessions, time slots and patients. The **Define Session, Time Slot and Patient Summaries** button on the **Options** tab of the scheduler configuration has been updated so that the multiple line details can be configured in addition to the single line summaries. Each tab of the dialog now contains radio buttons to select whether the configuration of Single Line or Multiple Line summaries are being defined.

Each summary allows you to choose which items to display and the format of the item.

The item formats are shared between the single and multiple line summaries. The formats are used even if the default single or multiple line summaries are being displayed (as is the case when no items are defined for a summary).

For multiple line summaries only, it is possible to specify a prefix that will be displayed before the item's value in the session, time slot or patient details. For example, if the Notes item has a prefix of "Notes :" then the line displayed in the details will be "Notes : these are some notes". A prefix can be specified for an item in the Prefix column

BS-01485 Ability to edit the waiting list event from the waiting list step of book appointment wizard **JW-1380**

It is now possible to edit the waiting list events from the waiting list step of the book appointment wizard. The **Patient Waiting Lists** step of the wizard now contains an **Edit Selected Waiting List Event** button which will open the Data Entry dialog for the currently selected event. This button is only displayed if is switched on in the scheduler configuration. In addition, the user must have Edit permission to the configured patient data view.

The Data Entry dialog can also be opened by double-clicking a row in the waiting list grid. If the patient is updated and saved in the Data Entry dialog then the waiting list grid will be refreshed accordingly.

Scheduler configuration

To switch on the new button, in the scheduler configuration, go to the **Appointment Booking** tab, edit the **Appointment Waiting List** and tick the new option in the **Options** section of the **Waiting List** tab.

BS-01490 Display selected waiting list event details on session and time slot search wizard steps JW-1379

The Session Search and Time Slot Search steps of the Scheduler book appointment wizard can now optionally display selected details from the selected waiting list event (and ancestor events). This can assist with ensuring that the patient is booked into the appropriate session or time slot.

<u>To configure items to display on the Search step:</u>

In the Scheduler configuration, go to the **Appointment Booking** tab and edit the **Appointment Waiting List**. Press the **Define Waiting List Summary** button on the **Waiting List** tab.

The Patient Data View is displayed on the left. Select items from the Waiting List event or its ancestors to add to the Selected box on the right. You can re-order the items as necessary.
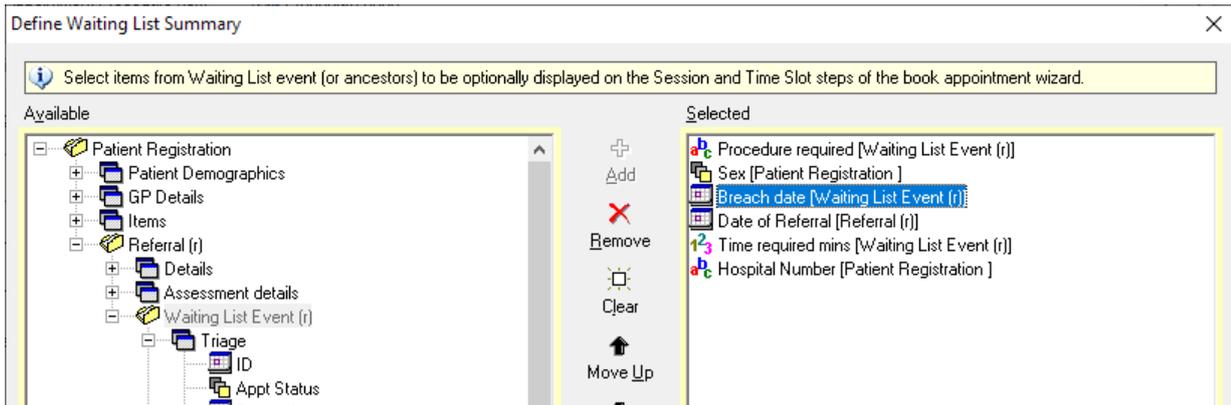
In the booking wizard, there is a new **Show Waiting List Details** tick box, which will display the items defined in the configuration. The tick box is only displayed if the waiting list summary has been defined as described above. The check box will be initially unticked and then will remember its previous state.
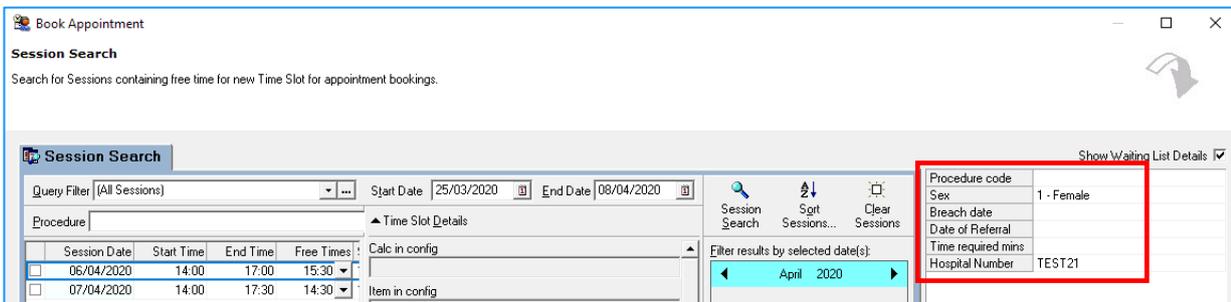
BS-01491 Ability to block part of session to make it unavailable JW-1381, JW-1413, JW-1421

It is now possible to block out part of a session to prevent it being booked. This can be done when the scheduler is configured for time slots to be created when booking appointments (ie Session Search). You can create a "blocking time slot" and this prevents a length of time being available during a session search. Blocking time slots can either be **On Hold** or **Block**. **On Hold** means the time is reserved to be booked for particular patients and a new On Hold Search can be carried during the booking process in order to book patients into held slots. **Block** means the time is never available, for example because the staff member or room is not available during that time.

Creating a blocking time slot

To create a new Blocking Time Slot, right click on a Session in the diary and select **New Blocking Time Slot**. The Blocking Time Slot dialog allows Start and End times, Description and Notes, and the Type (Block or On Hold).
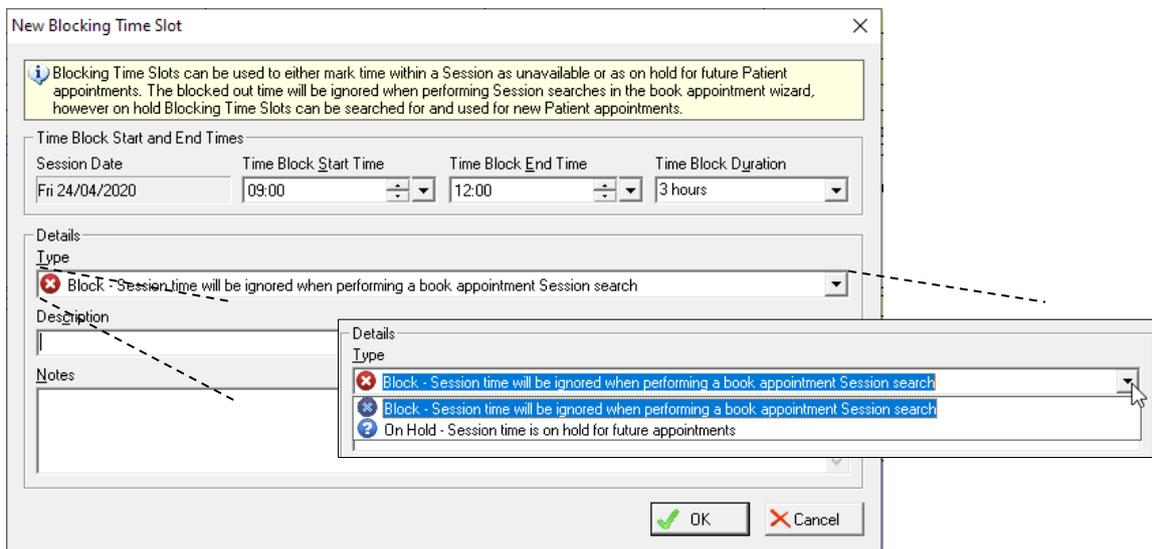
If you add a blocking time slot to a recurring session, you can choose to add it to the current session only or others.

Blocking time slots on the diary

Blocking time slots are displayed in the same colour as the session they belong to. On Hold slots show a question mark 🔵, a padlock 🔒 and **[ON HOLD]**. Block slots show a red cross icon ❌, a padlock and **[BLOCK]**.
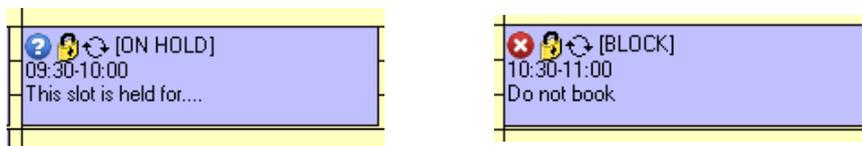
Blocking time slots are also shown in the tree along with regular time slots and appointments.

Blocking Time Slots can be edited and deleted via the Edit Time Slot and Delete Time Slot menu items. It is not be possible to cancel Blocking Time Slots. They should be deleted if they are no longer required.

Overlapping slots

There are no restrictions on how Blocking Time Slots overlap with other Blocking Time Slots or with booked or free Time Slots. A blocked time slot will always override free time or On Hold time in session searches.

Session and Time Slot Searches

Time slot searches will **not** find either form of blocking time slot. Available start times in Session searches will **not** show the time represented by either form of blocking time slot.

On Hold Searches

A new search for On Hold Time Slots is available (if scheduler is configured to allow Session Search). The Book Appointment Wizard displays a new step to select either Session Search or On Hold Time Slot Search.

The new functionality for booking appointments into on hold blocking time slots will work in both diary and grid mode, and when rescheduling appointments, booking follow-up appointments or rebooking appointments after cancelling.
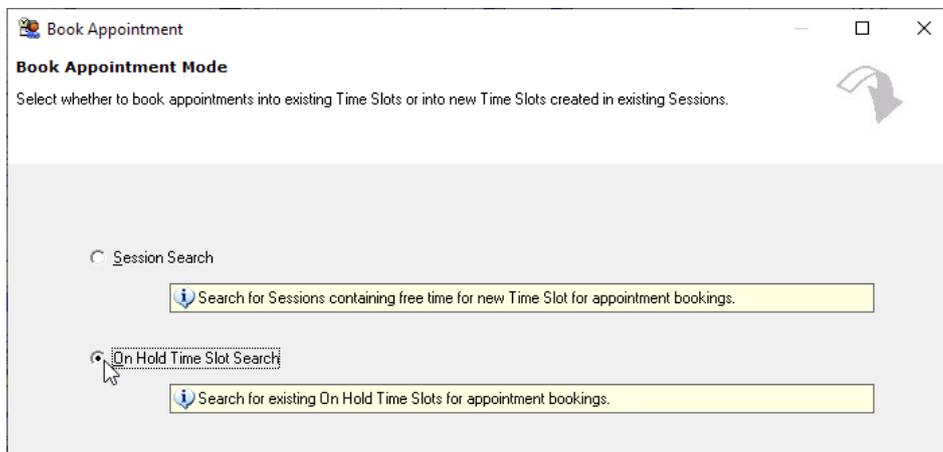
The On Hold Time Slot Search behaves in the same way as the Session Search. The same filters are available, and the default filter is for All On Hold Time Slots. An additional filter is available to find text entered in the Description of the On Hold Time Slot. The Time Slot Details pane will be available if configured. If an On Hold Time Slot was selected in the diary when the wizard was opened, that blocking time slot will be displayed in the results grid.
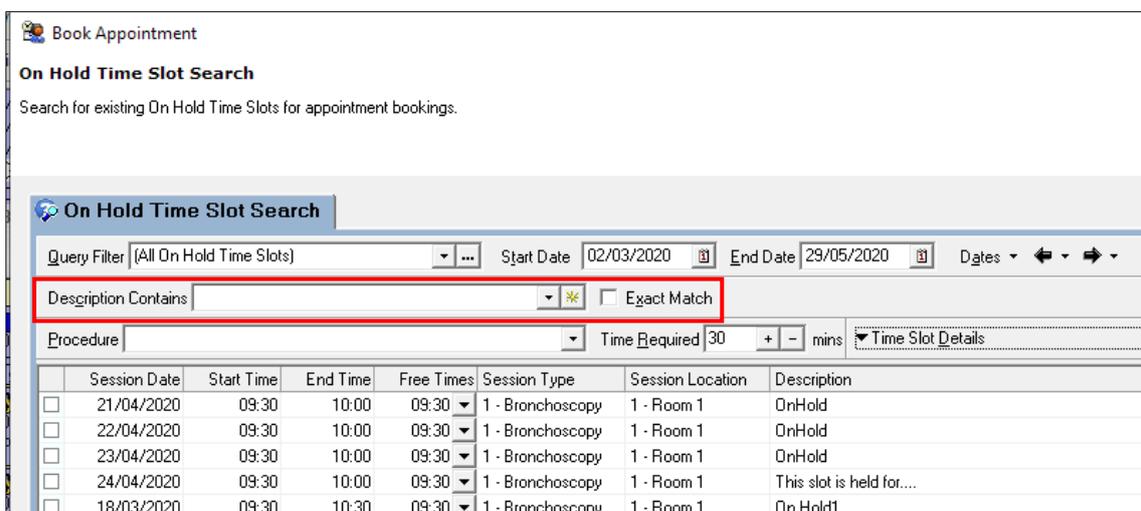
The available start times in the Free Times dropdown are controlled by the Time Required field (as in the Session search). The available start times will also take account of any On Hold Time Slot or free time that immediately follows or overlaps the On Hold slot in the current session.

For patient searches (but not waiting lists) multiple blocking time slots can be selected from the results grid at the same time and the selected patient will be booked into new time slots replacing each of them.

Length of appointments booked into On Hold Time Slots

An appointment can be shorter than an On Hold Time Slot. The remaining unused time in the On Hold slot can be retained as On Hold by ticking the **Keep unused time from selected Blocking Time Slots as on hold after booking appointment(s)** tick box option below the search results. The remaining unused time will keep the same description and notes.

An appointment can also be longer than an On Hold Time Slot if the selected slot is followed by another On Hold slot or by free time within the session. In these cases, the available free times will take account of the available time following the On Hold Time Slot.

Appointments created from On Hold Time Slots

The new time slots will be marked as having been created when booking appointments (ie will display the icon for a session search appointment in the diary and tree).

The description and notes from the On Hold Time Slot will be cleared (or reset to its default calculation or value if defined). The Time slot panel on the search step of the wizard can be used to enter data into the Time Slot fields. Remaining On Hold spaces keeps the values set in the original On Hold slot.

Booking patients into multiple On Hold slots

When booking patients into On Hold slots, if a patient is being booked into more than one On Hold slot on the same search dialog and one of the bookings fails for some reason, then the following rules apply:

On Hold slots on the same day in the same session – if one appointment fails for some reason, all the appointments will fail to booked.

On Hold slots on the same day in different sessions – those that can be booked will be booked

On Hold slots on different days in different sessions – those that can be booked will be booked.

BS-01492 Differentiate between time slots created in advance and those created when booking appointments JW-1318

Time slots can either be created in advance (time slot search) or when booking appointments (session search). However, it has not previously been possible to distinguish how a time slot was created once it is booked on the diary.

This has been changed so that time slots now record how they were created.

Time slots created in advance (time slot search) are displayed with the original time slot icon.

Time slots created when booking appointments (session search) are now displayed in the diary with the book appointment icon ( ),

Cancelled icons have also been updated.

Cancelled time slots created in advance

Cancelled time slots created when booking appointments

Cancellation dialog

The cancellation dialog has been updated to show time slots and appointments more clearly.

Note that the cancellation menu options vary according to whether the selected time slot was created in advance (time slot search) or at the time of booking (session search).

When a time slot is created at the time of booking (session search), both the time slot and the appointment must be cancelled in order to release the space to be rebooked. The menu options now reflect this.
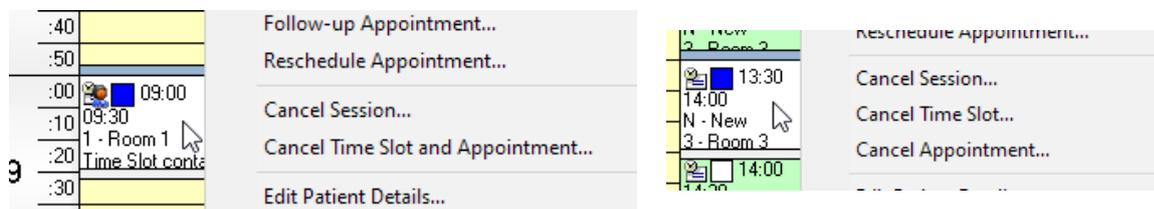
The cancellation dialog now lists all the time slots and appointments in the session using the new icons. The initial view ticks time slots and/or patients according to which cancellation menu the user chose.
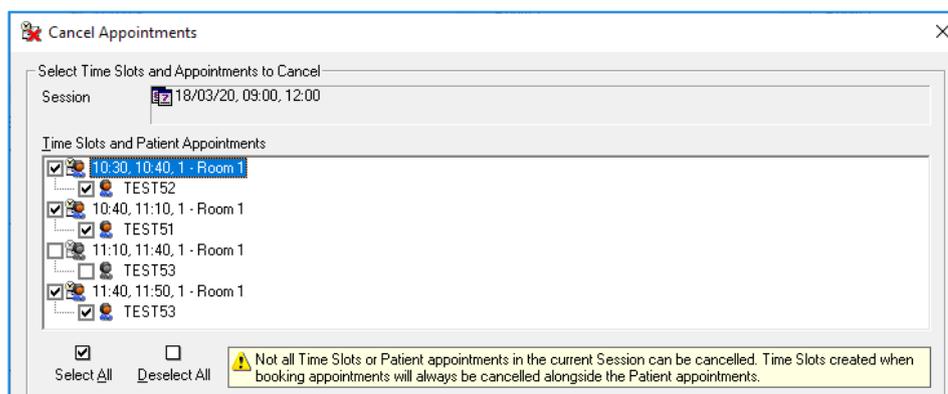
The dialog does not display blocking time slots as they cannot be cancelled.

Appointments that cannot be cancelled because they do not meet the cancellation criteria are displayed in grey and cannot be ticked. Please see however Known issue JW-1434 Scheduler: Cancel session dialog ticks appointments that don't meet the cancellation criteria

What to cancel

For time slots created when booking appointments, both the time slot and the appointment must be cancelled, therefore selecting the time slot automatically selects the appointment and vice versa.

For time slots created in advance, an appointment can be cancelled without cancelling the time slot, but if a time slot is cancelled, all appointments must be cancelled. Therefore, initially selecting a time slot will also select all child patients, and deselecting a child patient will deselect the time slot.

The dialog contains a new information box that is configured according to whether the session contains time slots created when booking appointments, or time slots created in advance, or both.

Cancelling time slots with no appointments

If only time slots are selected and no appointments, (ie time slots were created in advance and no appointments are booked) then only a **Cancel Selected Time Slots** button is displayed (as there are no appointments to cancel or rebook).

Also, the fields in the **Cancellation Items** are only enabled if one or more patient appointments are selected (as these fields aren't used if just cancelling time slots).

Time slots created in earlier versions

All time slots created using earlier versions of InfoFlex will continue to use their original icon which means they always be seen as being created in advance regardless of how they were actually created.

This will affect the behaviour of the cancellation dialog. Time slots created at the time of booking won't be forced to be cancelled along with the appointment because they won't have the appropriate new icon.

See also BS-01508 Introduction of cancellation conditions **JW-1387** and BS-01509 Allow patient event items displayed on cancel appointment dialog to be configurable **JW-1321** and Known issue JW-1434 Scheduler: Cancel session dialog ticks appointments that don't meet the cancellation criteria

BS-01508 Introduction of cancellation conditions JW-1387

It is now possible to define Cancellation Conditions.

Configuring cancellation conditions

A new **Appointment Cancelling** tab has been introduced in the Scheduler configuration.
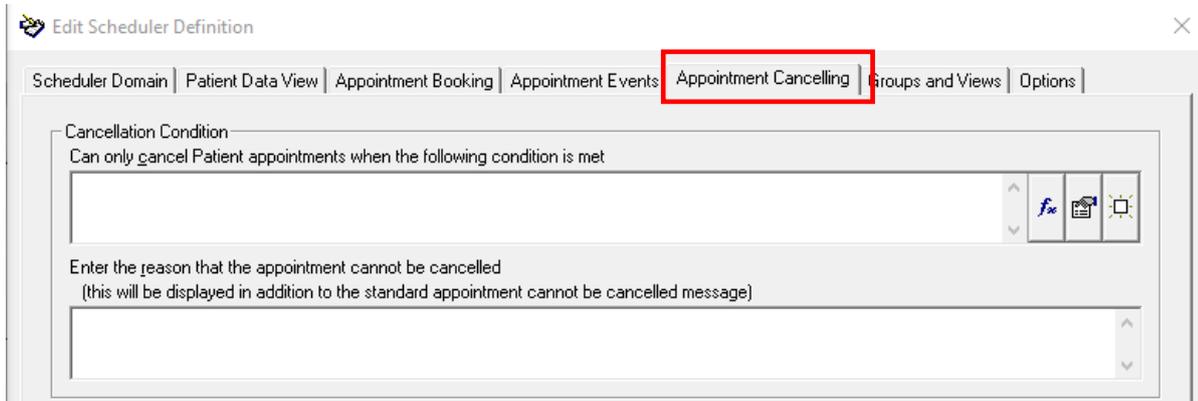
The **Cancellation Condition** frame allows a formula condition to be defined against the Scheduler patient event. This condition must be satisfied before a patient appointment can be cancelled. It also allows a message to be defined which will be displayed if the condition is not met and the appointment cannot be cancelled.

The appointment cancelling options from the **Appointment Events** tab have been moved to this new tab.

Cancellation conditions in use

In Scheduler, the cancellation menu options remain enabled. When cancelling a single appointment, the warning message will be displayed on selecting the menu option if the condition is not met.
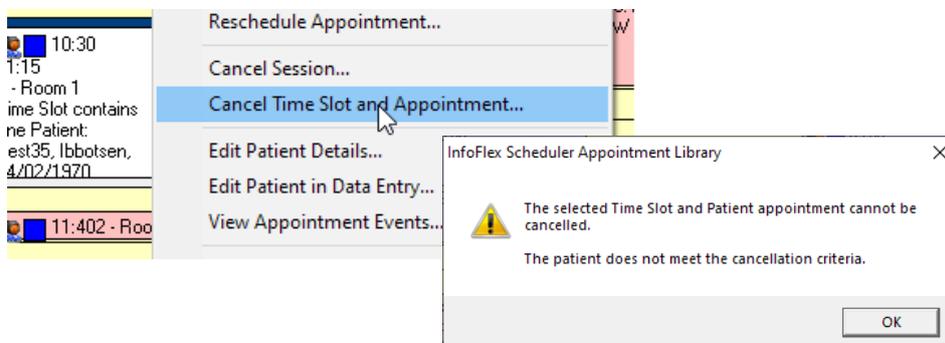
When cancelling a whole session, the dialog is displayed and any appointments that cannot be cancelled are shown in grey and cannot be ticked.
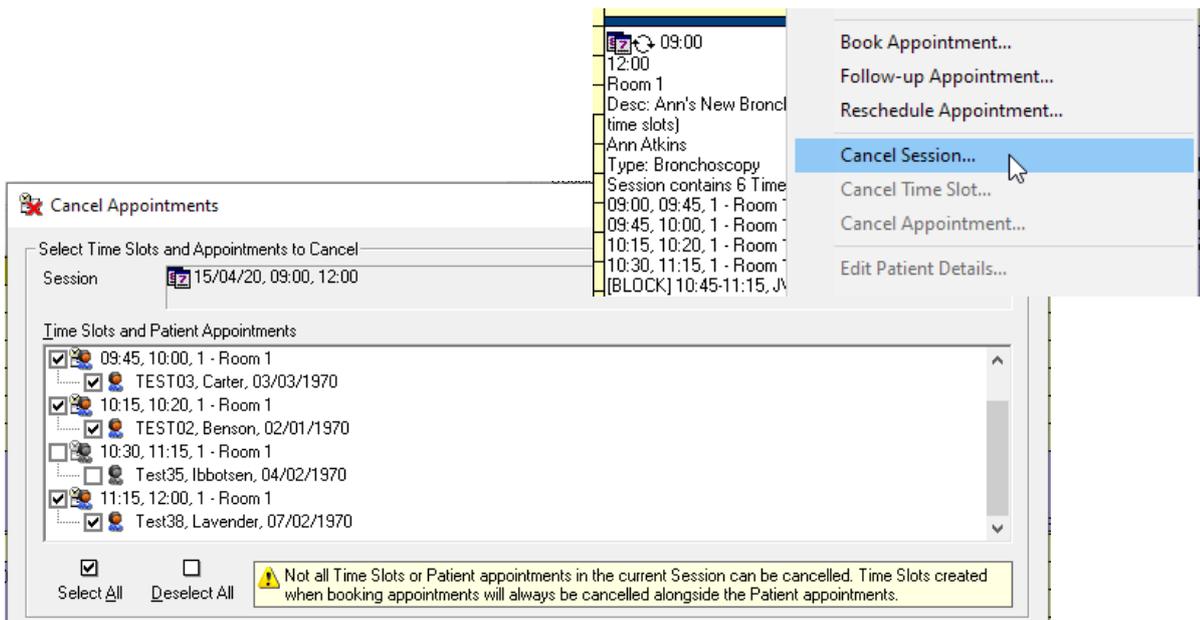
However please see Known issue JW-1434 Scheduler: Cancel session dialog ticks appointments that don't meet the cancellation criteria

See also BS-01492 Differentiate between time slots created in advance and those created when booking appointments **JW-1318** and BS-01509 Allow patient event items displayed on cancel appointment dialog to be configurable **JW-1321**

Known issue JW-1434 Scheduler: Cancel session dialog ticks appointments that don't meet the cancellation criteria

Please be aware that we have found an issue when cancellation conditions are in use.

If the user chooses to cancel a whole session, the cancellation dialog correctly lists all the appointments and correctly shows in grey appointments that should not be cancelled because they don't meet the cancellation criteria. However these appointments that should not be cancelled are still ticked and <u>will be</u> cancelled if the user does not interact with the dialog and untick the appointments.
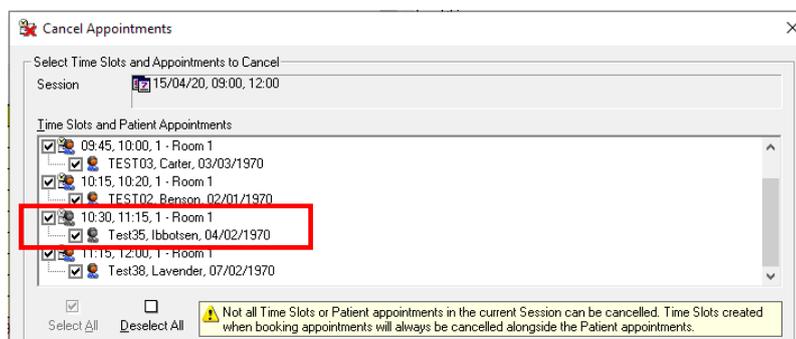
The short term solution is for the user to untick the appointments shown in grey if a whole session is being cancelled. The dialog correctly prevents them being ticked again.

When cancelling single appointments, the behaviour is correct and the dialog does not open.

BS-01509 Allow patient event items displayed on cancel appointment dialog to be configurable JW-1321

It is now possible to select which items from the Scheduler Patient event are displayed for editing on the Cancel Appointment dialog. By default the dialog displays the **Attended Status** and the **Notes** items. These items can now be changed.

Defining cancellation dialog items

The new **Appointment Cancelling** tab in the Scheduler configuration has a **Select items...** frame that allows you to select items from the Patient event to display on the cancellation dialog.
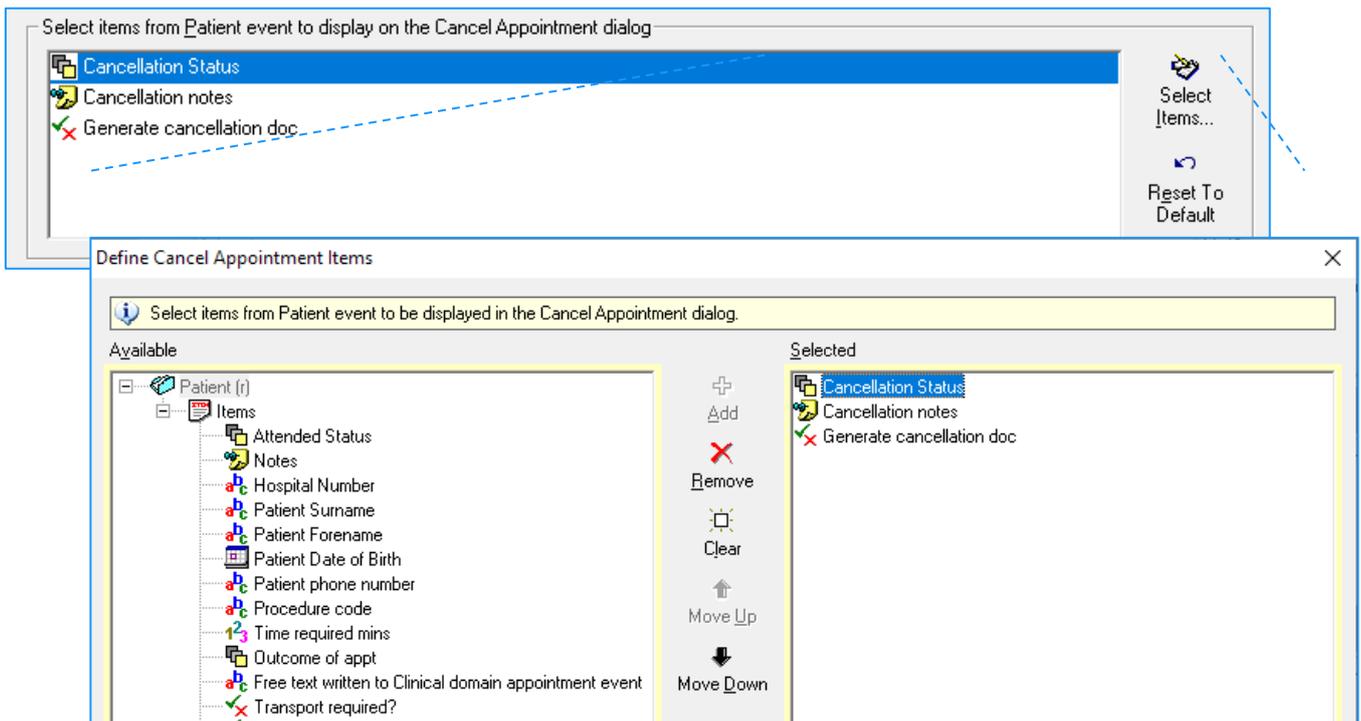
Note that it is completely acceptable for no items from the Patient event to be selected as cancellation items. In this case, cancellation dialog will not display any items.

Using the cancellation dialog

The cancellation dialog now has a **Cancellation Items** section displaying the configured items.

If a single patient appointment, is selected for cancellation then the patient is shown in the **Patient** field and you can update the cancellation item values.

If multiple patient appointments are selected for cancellation, the **Patient** field displays a dropdown list of all the patients, which initially shows the selection of **(All Patients)**. If the user completes the cancellation items while the **(All Patients)** heading is showing, the same values will be entered in those fields for all the patients. Alternatively, if different values need to be entered for each patient, you can use the dropdown list or the right and left arrows to scroll through the selected patients and enter values for each patient in turn.
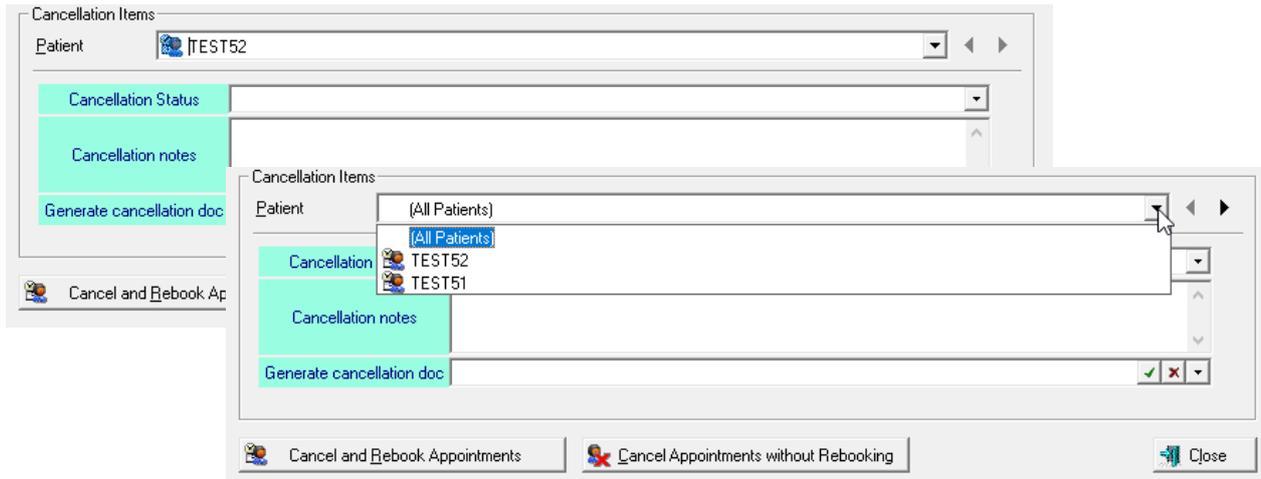
See also BS-01492 Differentiate between time slots created in advance and those created when booking appointments **JW-1318** and

BS-01508 Introduction of cancellation **conditions JW-1387** and Known issue JW-1434 Scheduler: Cancel session dialog ticks appointments that don't meet the cancellation criteria

BS-01551 Save appointment event maps when primary identifier is calculated JW-1424

Previously, it wasn't possible to create or save appointment event maps if the primary identifier item of the selected appointment event view was calculated. This was occurring because calculated items are not included in the item map grids but the map was still prompting for a value to be set for the primary identifier.

Also, if the primary identifier item was default calculated, the event map could not be saved until a value was set for the identifier item, even though a value did not need to be set because the item was default calculated (default calculated items are displayed in the item map grids).

New functionality has been added so that if the primary identifier of the appointment event is calculated, the map does not require the identifier to be included.

Also, if the primary identifier of the appointment event is default calculated, the map no longer requires the identifier to have a value set.

No changes have been made for auto-sequenced events since appointment event maps could already handle them.

BS-01463 Ability to define a Session search view JW-1204

It is now possible to define a custom view for the grid in the Session Search step of the book appointment wizard. Previously the Time Slot Search view was used for Session searches.

To define a Session Search view, display the Scheduler configuration and go to the **Groups and Views** tab. The tab now includes more options than previously.

The **Views** section is now called **Grid Query Views** and contains new options for **Session Search** (select a view from QDM) and for **Insert Free Times Column After Column** (choose where in the query view the **Free Times** column is displayed.

If no **Session Search** query view is selected then the default session details will be displayed (as they were before).

BS-01487 Define grid views separately from diary views and maintain as lists JW-1388

There are three areas in Scheduler that use views: diary mode, grid mode and session/timeslot searching when booking appointments.

Previously the same list of views was used in both diary and grid mode. It is now possible to have separate lists for each mode. Additionally it is now possible to specify whether to select a query group or to select individual queries.

<u>Defining views</u>

To configure views, go to the **Groups and Views** tab in the Scheduler configuration. The **Query Groups** box is renamed to **Display Queries/Filters** box contains options for **Diary Mode**, **Grid Mode** and **Appointment Search**.

Press the **…** button against any of the options to display the **Define Display View List** dialog. There are two radio buttons allowing you either to choose to use query filters from a query group, or to select individual filters to create a custom list.
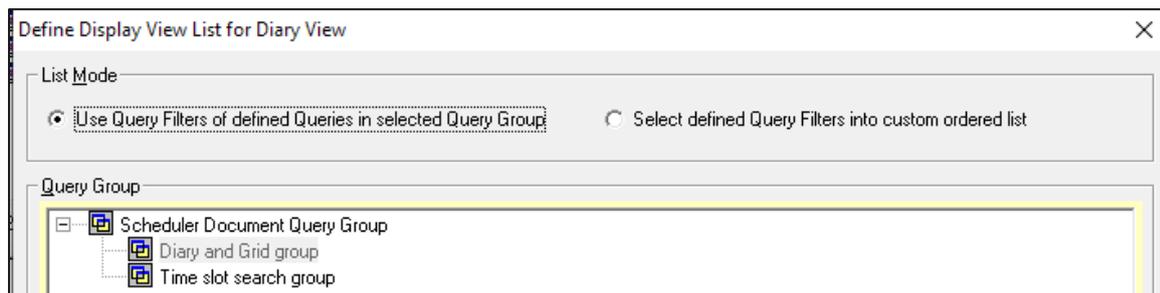
<u>Diary Mode</u>

In the scheduler diary, the list of available views contains the names of the <u>queries</u>. However, although the query name is displayed, it is only the associated query <u>filter</u> which is actually used to filter the diary. For existing configurations, the query group previously selected as the Diary and Grid group will continue to be used to populate the list of views.

However, it is now possible to define a list of query filters to use as the diary views. Select the **Select defined Query Filters into custom ordered list** option. A confirmation message is displayed. Press **Yes** to populate the list with the filters belonging to the queries in the current query group. Press **No** to create a list from scratch. Then select queries from the **Available Query Filters** box on the left and use the buttons to reorder or remove filters from the **Selected Query Filters** box. The **Rename** button allows you to specify a display name without changing the filter name.
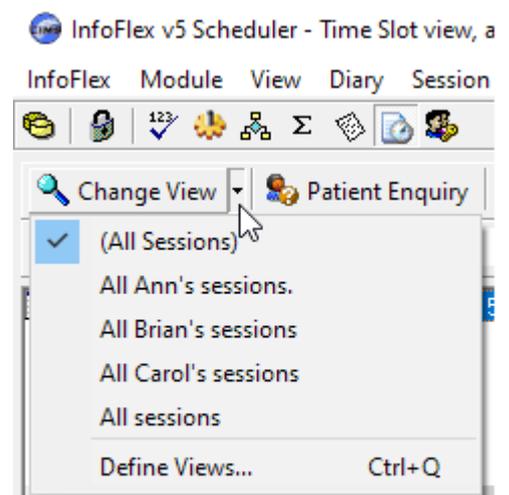
Grid Mode

In the scheduler grid, the list of available views contains the names of queries. The view is used to identify the columns and the filter is used to select the rows. For existing configurations, the query group previously selected as the Diary and Grid group will be used by default.

However, it is now possible to define a list of queries to use as grid views. Select the **Select defined Queries into custom ordered list** option. A confirmation message is displayed. Press **Yes** to populate the list with the queries in the current query group. Press **No** to create a list from scratch. Then select queries from the **Available Query Filters** box on the left and use the buttons to reorder or remove filters from the **Selected Query Filters** box. The **Rename** button allows you to specify a display name without changing the query name.

Appointment Search

For session and time slot searches, the list of available filters contains the names of query filters. The filter is used to populate the rows in the search result grid. For existing configurations, the query group previously selected as the Time Slot Search group will be used by default.

The columns in the search results grid are defined by a separate query view configured in the **Grid Query Views** box on the Groups and Views tab. (See also BS-01551 Save appointment event maps when primary identifier is calculated **JW-1424**)

However, it is now possible to define a list of filters to use as the appointment search filters. Select the **Select defined Query Filters into custom ordered list** option. A confirmation message is displayed. Press **Yes** to populate the list with the queries in the current query group. Press **No** to create a list from scratch. Then select queries from the **Available Query Filters** box on the left and use the buttons to reorder or remove filters from the **Selected Query Filters** box. The **Rename** button allows you to specify a display name without changing the query name.

Note that the displayed list of query filters for session searches will not include those that reference the time slot event.

Using views

In diary and grid mode, the **Define Views** menu item in the Change View dropdown list now opens the **Define Display View List** dialog, as described above (depending on user permissions). For session and time slot searches, the **…** button of the **Query Filter** dropdown list now opens the **Define Display View List** dialog.

In diary mode, the **(default)** option in the **Change View** dropdown has been renamed to **(All Sessions)**. As before, this will cause all sessions or time slots to be displayed in the diary for the current time frame.

In Session and Time slot searches, the **(default)** option in the **Query Filter** list has been renamed **(All Sessions)** and **(All Time Slots)** respectively.

The ability to define diary, grid and appointment search views is controlled by user permissions and this now requires the same permissions as to edit the scheduler configuration. The **Define Views** menu item in diary and grid mode, and the … button of the **Query Filter** in time slot and session searches, are now only enabled if the current user has change access to both the Scheduler and Scheduler Manager modules and also change access to the data view selected as the patient data view in the Scheduler configuration.

BS-01489 Specify different data views for config and data entry JW-1404

Previously, the scheduler configuration required a single clinical data view to be specified and this was used both in the scheduler configuration and in the Data Entry dialog. It is now possible to specify different data views for these purposes, which allows the clinical design to be developed separately from the scheduler development if necessary.

To maintain backwards compatibility when upgrading, the same data view will be set for both uses, and you will be able to change the data view that is used for Data Entry users, but it will not be possible to change the data view that is used for the Scheduler configuration.

In the scheduler configuration, the **Patient Data View** tab contains a new **Data Entry Data View** property. The Data View selected here will be used whenever a user uses the Data Entry dialog to view a patient's clinical events.

For new configurations, the **Data Entry Data View** will be disabled until a valid data view is selected for the **Patient Data View** field.
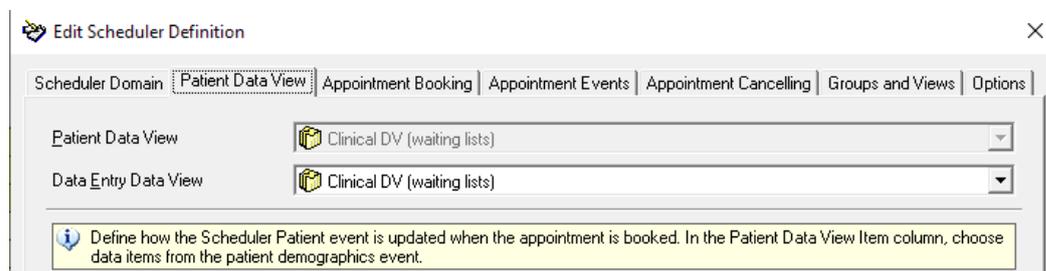
The user's ability to open the Data Entry dialog from Scheduler is now controlled by the user permissions for the specified Data Entry Data View rather than the Patient Data View.

The Data Entry dialog is displayed in the following places:

1) Diary/Grid mode - **Edit Patient In Data Entry** menu item and toolbar button

2) **View Appointment Events** menu item

The **View Appointment Events** dialog initially uses the Patient Data View to display the Source Event and the Appointment Event. Clicking the **Open In Data Entry** button opens the Data Entry dialog using the Data Entry Data View.

3) Book Appointment Wizard - Waiting list step

Clicking on the **Edit Selected Waiting List Event** button opens the Data Entry dialog, and displays the selected waiting list event in the Data Entry Data View. (Note that the waiting list itself is configured using the Patient Data View so the waiting list event must also exist in the Data Entry Data View if you wish it to be editable from the Book Appointment Wizard.)

4) Book Appointment Wizard or Standard Dialog – **Edit Patient** button

Clicking on the **Edit Patient** button wherever it appears throughout the Book Appoint Wizard or the Standard Dialog, opens the Data Entry dialog.

6) Book Appointment Wizard – **View Appointment Events** button

The **View Appointment Events** dialog initially uses the Patient Data View to display the Appointment Event. Clicking the **Open In Data Entry** button opens the Data Entry dialog using the Data Entry Data View.

The **Patient Data View** is used in the following places

1) Scheduler configuration

Throughout the configuration where options or maps are defined by selecting from a data view, the Patient Data View is used.

2) View Appointment Events dialog

The **View Appointment Events** dialog initially uses the Patient Data View to display the Source Event and the Appointment Event.

3) Book Appointment Wizard – **Waiting List** step

The waiting list summary grid is populated from event view and event view summary definitions defined in the Patient data view.

BS-01525 New buttons to edit patient at end of book appointment wizard JW-1410

The final step of the Book Appointment wizard has two new buttons: **Edit Booked Appointment** and **View Appointment Events**.

These buttons open the same dialogs as the **Edit Patient Details** and **View Appointment Events** menu items.
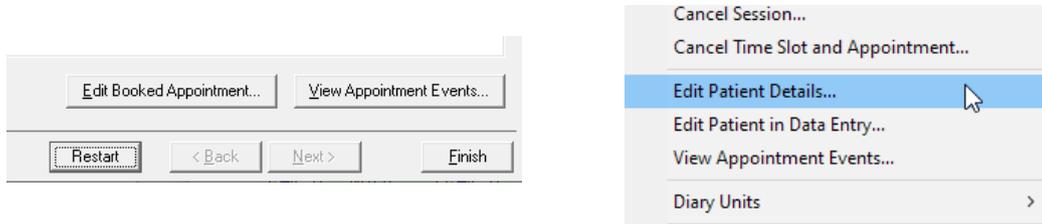
BS-01501 Display count of Scheduler grid rows GW-432

The scheduler grid now displays a count of the rows that are being displayed. The count is displayed in square brackets on the root node of scheduler tree.

BS-01493 Changes to creating new sessions from templates BS-656, BS-657

Changes have been made to the creation of new sessions from templates in Scheduler to make it more obvious which date(s) and time(s) will be used for the new session(s).

The **Select Template** dialog now includes new **Session Date** and **Start Time** fields to allow the user to see and optionally change the date and time for the new session(s). The initial values for these fields will be taken from the current selection in the diary. If there is no current selection then the first diary day and prime start time will be used as the initial values. When a session template is selected then the start time field will default to the start time of the selected template.
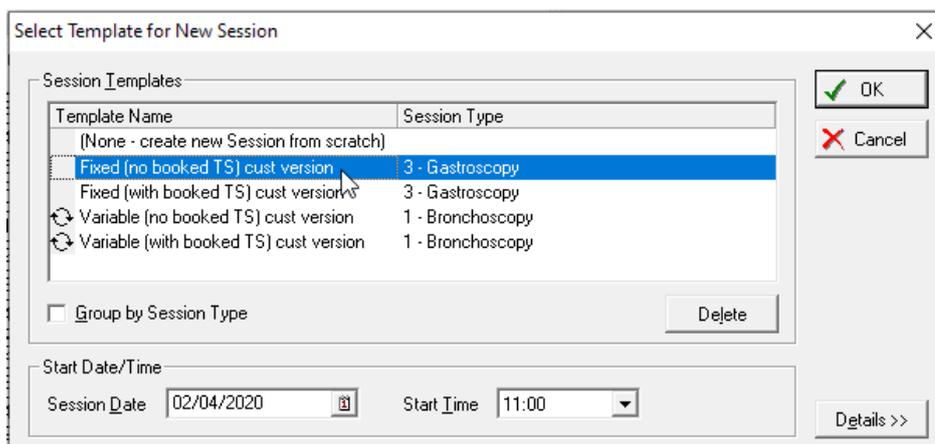
When a session template is selected then the specified session date and start time will be used when populating the scheduler tree (shown on pressing the **Details** button) which lists the session and time slots to be created. Also, if a recurring session template is selected, the specified session date and start time will be used for the recurrence summary (shown on pressing the **Details** button). If the session date or start time is changed then the scheduler tree and the recurrence summary will be updated accordingly.

The scheduler tree will not show time slots that were created when booking appointments as these will not be created in the new session(s). (However, this is only true for those time slots created when

booking appointment using version 5.70.0139 or later). The scheduler tree will show blocking time slots in the session template.

In the **Define Recurrence** dialog (displayed on pressing OK), the start/end time fields and the session date field will be configured according to the session date and start time specified in the select template dialog. Also, a new message will now be displayed at the top of the dialog informing the user what will happen when the **Yes** and **No** buttons are clicked. The **Yes** button will create multiple recurring sessions according to the specified recurrence criteria. The **No** button will create a single session on the date and time specified in the select template dialog. (The **Cancel** button will abort the creation of new sessions.)

If the recurrence dialog is closed via the **Yes** button, the new recurring sessions will be created starting on the session date and start time as specified in the recurrence dialog. If the recurrence dialog is closed via the **No** button, a single new session will be created on the session date and start time as specified in the select template dialog.

When sessions are created from a session template, time slots that were created when booking appointments will not be created in the new session (but only those time slots created in 5.70.0139 or later). Also, if the Time Slot Creation Mode is set to only create time slots when booking appointments then only blocking time slots will be created in the new session(s).

2   ISSUES RESOLVED

2.1   Scheduler Issues Resolved

BS-01395 Book appointment subject search shouldn't include option to search PAS when patient domain isn't interfaced SV-380

When booking an appointment within the InfoFlex Scheduler module and performing a patient search, the Search Level was still displaying the **PAS Interface Search** as one of the options even though the Interfacing setting has been switched off at Domain level. This was a cosmetic issue since the PAS Interface Search option did not carry out any actions, however the option has now been removed when the domain of the selected Scheduler patient data view is not interfaced.

BS-01396 Appointment booking fails when appointment event in patient domain has 'Hide in Subject Overview' property set SR-056

Booking appointments was failing in Scheduler when the event view definition of the new appointment event in the patient domain had its **Hide in Subject Overview** property set to **Yes**. This issue has been fixed.

BS-01461 Appointment booking item maps can display incorrect mapped values BS-648

The item map grids in the **Appointment Booking** tab of the scheduler configuration could leave incorrect values in the mapped value cells. If a value was present and the user chose either **(Select item...)**, **(Select value...)** or **(Define formula...)** and then cancelled the dialog, the cell was not returning to its original value. This issue has been fixed.

BS-01462 Grid shows 0 and 1 for boolean items rather than yes and no JW-1384

In Scheduler grid mode, boolean items included as columns in the grid were being displayed as **1** and **0** rather than their formatted values, e.g. **True** and **False**, **Yes** and **No**, etc. This issue has been fixed.

BS-01464 Cancel Time Slot and Appointment menu items should be enabled when time slot is locked BS-639

The diary and grid modes now enable the **Cancel Time Slot** and **Cancel Appointment** menu items even when selected time slot is locked. It was previously possible to cancel locked time slots via the Cancel Session menu option. Locked time slots can now therefore be cancelled directly.

BS-01466 Can't book appointments into new time slot if user does not have create permission **BS-649**

If the current InfoFlex user has permission to book appointments but doesn't have permission to create new sessions or time slots then booking appointments fails when attempting to create a new time slot for the appointment (i.e. after session search). This has now been changed so that booking appointments no longer checks user create permissions when creating new time slots for appointments.

BS-01468 Options dialog should prompt to abandon changes if closed via caption bar close button **BS-650**

In Scheduler, if unsaved changes were made to the Scheduler configuration, then closing the dialog via the close button in the caption bar will now cause the user to be prompted to abandon the changes made. Previously, the user was only prompted such if the dialog was closed via the Cancel button.

BS-01469 Update display of details in edit session/time slot/patient dialog **BS-651**

In Scheduler, the edit session/time slot/patient dialog sometimes did not have enough space in the summary details bar at the top in order to display all of the required details. The details were centred vertically in the bar, and, if they wrapped over more than two lines, the first line was displayed off the top edge of the bar. This has now been changed so that, when the summary details wrap onto more than two lines, the text is aligned to the top of the bar.

BS-01499 Run add-in actions not always performed on waiting list or appointment events **JW-1407**

In Scheduler, run add-in actions defined against the waiting list or appointment events were not performed as expected unless the user had been in the Data Entry or Work List modules first. This was also the case for run add-in actions performed against events created or updated by event write back or auto-generate event actions defined against the waiting list or appointment events. This issue was occurring due to the Scheduler module not loading all of the defined add-in definitions on module load. This happened for the Data Entry and Work List modules which is why the run add-in actions were performed as expected if either of those modules had been loaded first. This issue has now been fixed.

BS-01511 Cancellation letter not auto-generated if cancelled appointments are excluded from diary view **BS-662**

When cancelling appointments in Scheduler diary mode, the defined cancellation letters were not auto-generated after cancelling the appointments if the diary was currently configured not to display cancelled appointments (ie when **Exclude Cancelled Appointments** menu item is ticked). This has now been fixed so that the cancellation letters will be auto-generated as expected irrespective of whether cancelled appointments are excluded from the diary.

BS-01539 Grid Mode forward arrow for a week isn't doing anything HV-2326

In Scheduler grid mode, the forward arrow button didn't do anything when **Week** was selected. The back button worked as expected, and the back and forward buttons worked as expected for Day and Work Week. This issue has been fixed.

BS-01544 Updated patient event items are reverting to default values when booking appointments JW-1416

When booking an appointment, on the Edit Patient stage, if the user updated an item with a default value, then on saving the item was populated with the original default value rather than the updated value. This issue has been fixed so that the appointment is saved with the updated value rather than the original default value.

BS-01545 Appointment and waiting list item maps being applied unnecessarily after editing patient in data entry JW-1417

In Scheduler, editing a patient in Data Entry would always cause the appointment and waiting list event item maps to be applied for the edited patient if any event was updated and saved in the data entry dialog. However, they were not applied if no event was updated and saved. As the event item maps were being applied, this could lead to the appointment and waiting list events being updated and hence any associated actions, such as document generation, being executed.

This behaviour should only occur if any of the patient's data that is included in the Patient Details Item Map is changed. The behaviour has been corrected so that the appointment and waiting list event item maps are only applied if the patient event was updated due to changes in the patient's identifiable data. Note that if patient details are updated for one patient appointment then reloading patient details for other appointments will cause the patient event to be updated and saved and hence the appointment and waiting list event item maps to be applied.

This change also affects the reloading of patient details as invoked from the Reload Patient Details and Reload All Patient Details menu items.

BS-01546 Calculated and default values not set in new time slot or time block dialogs JW-1422

Any calculated or default calculated items in the time slot event were not being evaluated as expected when creating a new time slot in the diary. The calculated or default calculated fields were being shown as blank in the New Time Slot dialog, although they were being set as expected when the new time slot was saved. This affected time slots created in advance as well as the blocking time slots.

Move the Clear Grid menu item to the Grid main menu

The Clear Grid menu item has been moved from the Time Slot main menu to a more logical place in the Grid main menu.

HISTORY

For details of the following functionality, please read the release notes that accompany the release number given:

5.70.0138

Work List - Include current date and time in summary grid printouts **LC-151**

Make the image capture button more intuitive **NP-005**

WorkFlow - Introduce WorkFlow and Bus Service

IfxUrlAddin - Additional Functions and Value Processing options **SV-382,SV-383**

IfxPopulate to allow uncommitted reads with no locking **DFS-620**

IfxTaskManager to show database name in status bar **SV-384**

5.70.0130

Group panel button click actions by trigger and allow them to be disabled **BS-616**

Ability to duplicate defined actions **BS-615**

Allow panel item update on change property to be set via panel layout designer **JE-1106**

View calculated item dependencies for selected event definition

Introduce new expression functions FLOOR, ROUND and NUMTOSTR **JW-1378**

Chart Item - Make toolbar visibility configurable **JT-025**

Data Import Performance Improvements **JK-181**

Restructure of Document Queue to use Queue Library, and new Document History table

Task Manager - Added DocumentTask handler types to selectable list

Gen Doc Handler: TcpService - Make LF/CR replacement chars configurable **AB-1375**

Introduce last edited check into On Matching Criteria document monitoring **JW-1392**

Include Document History when checking for last checked time

Gen Doc Handler ITKService - Set maximum size to entry in log file

5.70.0127

Option to clear item values that are unavailable due to availability conditions **HV-1258**

Design Management - Extend protection to event and document definitions **BS-620**

Design Management - New web options for dictionary lookup searching **HV-2239**

Design Management - Run Add-in Manager from Design Management **DA-414**

Design Management - Ability to mark designs as system only **BS-619**

Design Management - New class names web option for text panel item definitions **HV-2251**

Design Management - Allow web options to be set for multiple panel items at same time **HV-2251**

Design Management - Additional web display format for value item type **PS-004**

Handle PDF input files **NB-110**

Allow HyperLinks to be inserted into generated documents **KR-288, KR-290**Scheduler - Extend session and time slot selection validations to reference other items from scheduler domain **JW-1345**

URL Add-in - Add UserName function **HV-2201**

Correspondence Add-in - Add ability to send additional attachments with emails **GW-410**

Summary Doc Add-in - Add ability to send additional attachments with emails **GW-410**

Clinical Doc Add-in - Add ability to send additional attachments with emails **GW-410**

Correspondence Add-in - Add ability to mark emails urgent **GW-418**

Protocol Manager and Activity Tracking configuration **BS-634**

IfxGenDocHandler - Check for Primary Document existence optional **AB-1369 AB-1370**

IfxGenDocHandler - Introduce Primary Document Edit Status tag **AB-1372**

IfxGenDocHandler - Make Edit Status text configurable

User export/import tools to include groups **CH-033**

DbUsersReport - Export results to file **DA-418**

5.70.0120

Core - Speed up loading of an event's data items **BS-623**

Core - Monitor and log resource usage **BS-632**

Data Entry - Performance enhancements when saving events in Data Entry and Work List **BS-611, BS-612, BS-613, BS-597**

Data Entry - Display progress messages while loading and saving subjects and events **HV-2149, DFS-554**

Data Entry - Removed unnecessary attempts made to preload definitions for data views **BS-601**

Allow the deletion of coded items in design management **SH-123**

Design Management - Allow 'Always Auto-refresh' and 'No Refresh After Save' options to be set for when no query selected **BS-609**

Configurable message for when alias found **CH-026**

Secondary identifiers for documents **HV-2059, JK-166**

Documents - Performance Improvements when generating large XML reports

Nested repeat sections to maintain context from the parent

Image Capture - Provide ability to force save each captured image into InfoFlex whilst capture session is in progress **RS-422**

Scheduler - Book appointment validations **JW-1077**

Scheduler - Misc performance enhancements **BS-623**

Scheduler - Always cancel complete time slot when can only be created on appointment booking **JW-1192**

Scheduler - Ability to restrict grid mode so can only edit patient details **BS-624**

Scheduler - Make ability to view appointment events linked to the selected patient always available **BS-625**

Scheduler - Updated session search time required field to increment by free time interval **JW-1309**

Scheduler - Option to hide cancelled appointments and time slots in diary mode **JW-1310**

Scheduler - Increase timeout of diary tooltips **JW-1320**

Scheduler - Prevent double booking of appointments in session search mode **JW-1308**

Windip Addin - Change behaviour of "Keep Previous Document" **LB-022**

Add-in to fetch Patient Pathway Ids from web service IfxWebServiceCallAddin **SH-357**

Web Service Call can return no data without error

Intersite Messaging to allow dynamic targets etc. **JK-175**

Task handler for document generation from InfoFlex Web

IfxTaskHandlers - Introduce NetProxy communication with .Net assemblies

Document Task Library - Introduce Monitor End Date

General Document Handler - Introduce General Document Proxy

General Document Handler - Add RetryAction error result **SJW-437**

General Document Handler - Introduce HL7/sockets functionality **AB-1364**

General Document Handler - TcpService: Introduce ability to send HL7 message without validation

General Document Handler - TcpService - Extend options for sending HL7 messages

General Document Handler - Batch Sql Execution and Html encoding **SJW-431 SJW-432**

General Document Handler - Introduce ability to specific ASCII chars as Tags **SJW-436**

General Document Handler - Introduce Rest-based Web Client

Audit Viewer - Archives to both CSV files and databases fail with a large amount of data **MWG-004**

Audit Client OS version during login **DA-408**

SubjectMerge - Merge two events for same subject **HV-1964**

New IfxDocToPDF conversion utility

DataLink Queue Interface

5.70.0100

Databases should use VARCHAR(MAX) instead of TEXT data types. **HV-2109**

Convert existing TEXT columns to VARCHAR(MAX) when using DBPublisher

Dictionary Linked Items in Queries Refresh Optimisation **DFS-531**

Dictionary Refresh Optimisation **DFS-531**

Extra Debug Statements Added

InfoFlex - Disable legacy charting **BS-617**

Data Entry - Display event icons in data view design event tree and button list **JE-088**

Data Entry - Alternative year selector for year-only date fields LC-121

Perform actions on events updated by event writeback action **JE-105**

Data Entry - Unavailable panel items should be shown in read-only back and fore colours **JE-092**

Remove licensing for Worklist and some other components **HV-2001**

New embedded summary grid option to auto-select parent for new summarised events **JE-1096**

New Refresh Summary View Controls button action **JE-1089**

Ability to specify initial panel for events selected from summary view grids **JE-1080**

Define order of panel items in panel layout designer JE-067

Set properties for multiple selected panel items or controls **JK-027, RR-019, SH-072, SH-284, SV-294**

Additional icons for events, summary views and panel buttons **CH-029, HV-2147**

New user information functions UserFullName and UserDepartment **JE-019**

Enable edit panel/screen layout menu items when event view or panel item definitions selected

Wording change for new 'Available For' property of Data view definitions **HV-2092**

Setting Default Web display types per data view **HV-2094**

New CONFIGVALUE function required for web-based applications

New EXTERNALUSERDATA function for expressions used in web apps. **HV-2093, HV-2105**

Introduce NEWGUID function

New function UTC

New function LOCALTIME

Mark data views as available for web **HV-2050, KR-193**

New web based display properties for panel items **HV-2050**

Setting default web display types per data view **HV-2094**

InfoFlex Analytics - Chart Items **SH-320, HV-1882**

InfoFlex Analytics - Charts in Documents and Reports **DS-551**

Allow BLOBs fields to be defined in database for storage of images

Image controls to load and save images as BLOBs

Image Capture control using Direct Show DS-552, DS-549

Image capture - Prevent multiple images being captured by adding a timer delay

Improve performance getting user information about last login **AK-003**

Book appointments using waiting lists **HV-1907, SW-106**

Display more detailed prompts when cancelling appointments **JW-1070, JW-1101, JW-1102**

Validate patient details before booking appointment **JW-1105**

Data import wizard - Calculations during the import **AW-091, JW-1226**

Correspondence Addin - Multiple letter validation **GW-417**

Correspondence Add-in - Introduce message and debug logging for documents missing CCs **DFS-523**

Correspondence Add-in - Prevent double-clicks on preview form buttons **HV-2122**

Correspondence Add-in: Missing CC logging and message to be configurable by registry setting **DA-403**

Run SQL Add-in needs to handle optional parameters in order to handle 'On Delete' actions **HV-2106**

URL Add-in - Introduce UTCTimestamp and additional encryption

E-mail Add-in - Enable logging from SMTP control plus added extra debug

E-mail add-in - No longer retains login details per session **HV-2118**

Digital Dictation Add-in: Custom debug log to allow path to be configured from local machine **HV-2112**

Digital Dictation Add-in - IfxActiveSndEncoder removed unnecessary calls to Do Events

Digital Dictation Add-in - Allow immediate write for custom log

Digital Dictation Add-in - Improve error logging from the audio capture component

Digital Dictation Add-in - Additional debug statements from the Ifx Media Controls

Digital Dictation Add-in to detect no audio being recorded and alert user to check audio device connection **GW-421, HV-2146**

Digital Dictation Add-in - Improve the speed performance **DS-548,JW-1252**

Event Transfer Add-in - Added ability to suppress patient search and success/failure message **JK-167**

Event Transfer Add-in - Ability to use formulas and constants in target event item map **JK-169**

Event Transfer Add-in - Allow comparison between current and updated target event prior to transfer **JK-168**

Run program Add-in - Not giving enough error information upon failure **DS-546**

Data Portal Add-in - Updated so can now change user names and disable unregistered accounts **KR-270, AW-094**

Data Portal Add-in - Allow external user registrations to be saved even if errors printing or emailing registration details **HV-2133**

Data Portal Add-in - Added ability to unlock locked external user account **HV-2134**

Data Portal Add-in - Check external user's identifier matches source domain value **HV-2136**

Growth chart Add-in taking too long to load **DFS-543**

Dental Charting

General Document Handler - Create new document task handler for Document Repository integration **NB-077**

General Document Handler for ITK **SW-103**

General Document Handler – Introduce ability to select reports **NB-096**

General Document Handler – Ability to send to National Endoscopy Database Webservice **NB-096**

General Document Handler - Introduce new special items **JW-1303**

General Document Handler - Permit tilde characters in filename expressions/tags **JW-1304**

Writeback action handler needs to provide more information on failure **DFS-557**

Add WebUser column to export/import users **HV-2176**

New hub mode and queue library required by Intersite Messaging

5.60.0400

InfoFlex - Remove sounds played on startup and on opening about box

User Management - User-definable minimum client version **SH-309, DFS-524**

New CONFIGVALUE function required for web-based applications

Data Entry - Scroll screen and panel layouts using mouse wheel **BH-010**

Allow order of Summary View groups in Data view to be defined **JW-920**

Design Management - Additional layout properties for panel summary grid controls **SH-340**

Design Management - Reduce restriction on dimensions of panel summary grid controls **JE-1082**

Design Management - Default query property for panel summary grid controls **JE-1088**

Design Management - Show column headers in panel summary grid controls at design time **JE-1083**

Adjust wording in summary view available for dialog **JW-1075**

Sort Outer Join Context Queries **BH-090**

Permit longer aliases in Queries **KR-035**

Enhanced account filtering and actions **DFS-474, DFS-510**

Epiphan capture control for USB connection **JK-127, JW-1153**

Improved speed of Data Import **JK-160**

Submissions Add-in

Importing External Documents into InfoFlex **NB-063**

Correspondence Add-in - New button on edit document form **GW-413**

Event Transfer Add-in - Include media items in target item map **JW-955, JW-1143, JW-1148, JW-1149**

Event Transfer Add-in - Can specify items and formulas in source event item map **JW-955**

User Management - Auditing of data deletion through Design Management **DFS-420**

User Management - Auditing is enabled by default for new domains **DFS-502**

Delete media tool - Prevent deletion of database reference if error occurs **SS-089**

Changes to locks utility (IfxLocksUtil) functionality to improve usability **JK-132**

5.60.0300

Performance enhancements when logging in and loading Data Entry and other Modules **RS-408**

Data Entry - Event view summaries in panel layouts **SH-330, JK-134, SH-318**

Searching for old subjects after merging via Aliases **SH-328**

New 'Update on Change' property for certain panel item types **JK-152, HV-1561**

Event write back to another instance of the same event **KR-022**

Data Entry - Sort dated non-repeat events in chronological order **LC-190**

Data Entry - Subject load performance enhancements

Ability to copy selected row, column and cell contents **JK-112**

Changes to Edit Layout and Edit Panel Layout navigation

Event view summary 'Available For' property

Document XML files to save in UTF-8 format **JK-154**

Ability to print external documents from within InfoFlex **BH-097**

Replace existing document option for external documents **LC-178**

Allow default format for attachments when emailing documents. **LC-154**

Document templates to allow repeat sections in email body **HV-1215, JK-087**

Re-usable calculated values introduced for document templates **SJW-413**

Document parse file needs to be versioned. **JW-1068, JW-1069**

Changes to allow web access for InfoFlex Users **HV-1793**

Imaging enhancements - viewing images across events **SH-300,SH-227**

Imaging enhancements - Rotate, flip and mirror images **SH-296,SH-297**

Imaging enhancements – Cropping **SH-298**

Ability to book follow-up appointments for all patients **JK-124**

Display tooltips when hovering over appointments in diary **NB-005**

Allow diary and grid to store selected view independently **JK-125**

Auto-select single patient found in book appointment patient search **NB-049**

Ability to specify session colours **LC-182**

Option to exclude cancelled appointments in grid mode **NB-050**

Variable length time slots created when booking appointments **CH-007, JW-1008**

New calendar to filter appointment booking search results

Changes to auto-matching during validation **HV-1439**

Display source object ancestry during import **HV-264**

Extend drop area for data items onto event to includes target event's data items **KR-126**

Design tree should be larger and remember its previous size **DEA-038**

Design tree should pre-select based on last use **KR-128**

Allow import definitions to be deleted in the data import wizard **DFS-428, RS-367**

URL Add-in – Add-in to build and execute URLs and other commandlines **CH-014**

IfxDbPublisher very slow to copy data between SQL databases

Poor startup performance of Export Users tool when large number of users **BH-123**

Move media utility program **JK-090**

DataLink Merges to update the alias table

5.60.0200

Enhancements to Subject Overview **AB-347, HV-1122, SH-331**

New Default Filter Date Range Data view property **HV-1774**

Event hierarchy drop down in Data Entry screen

Ability to zoom panel layouts **SH-327**

Data Entry - Expand all nodes in dictionary lookup grid after search **HV-1742**

Allow black to be used as a summary view conditional formatting background colour **LC-183**

Design Management - Changes to loading and saving of panel/screen layout defaults **DFS-512**

Further actions that can be run as a task on the Task Server

Document Task Handler – Introduce Query Filter for selecting documents **NB-064**

New Document Task handler to email documents **NB-064**

Extend PDF Document Handler to external documents and reports **HV-1693 CH-004**

5.60.0100

Spell Checking

Button click 'Save Event' action. **LC-134**

Perform other button actions on panel button click **KR-103**

Data Entry - Changes to validation messages **BH-089**

Option to enforce valid selection from conditional dictionary. **JE-023**

Changes to Summary View lists **BH-031, CH-001, DEA-032, DEA-033**

Work List - Option not to refresh summary grid list after saving changes to event **HV-1653**

Allow event icons to be assigned to panel controls **JE-089**

Design Management - Changes to panel control border styles **JE-090**

QDM - Introduce Median Function **SH-321**

Queries - Enable Default Values in Query Filter Prompts to use functions/expressions **GW-397**

Option to auto-save documents after document opened in Word **HV-1587**

User Management - Poor performance when saving groups **MH-055**

User Management - Update user/group lookup table using User Management **HV-1491**

Introduce multiple image selection and deletion **SH-323**

Auditing of documents **HV-719**

Auditing of calculation refreshes **DFS-496**

Growth Chart Add-in **DEA-031**

Clinical Document Add-in

Digital Dictation Add-in

Correspondence Add-in

Event Transfer Add-in

Dictionary Derived Add-in for TNM Staging **HV-1166**

Document Task Add-in

PCTi Add-in Removal

Enhancements to Event Selector Add-in **HV-1517**

Performance of loading of parameters with Run External Programs Add-in

Ability to generate and print a document from the alert add-in **SH-326**

PDF Document Task Handler

PCTi Document Task Handler

ITK Document Task Handler

Graphnet Link updated so that messages can be published via the task server

DBPublisher cycle locks down the Scheduler options **HV-1649**

Digital Dictation Add-in Delete Media utility **JW-594**

Intersite Messaging

3   SPECIFICATIONS FOR INFOFLEX SYSTEMS V3.1

Version 3.1 Last updated 22nd February 2019.

Note that this section was formerly called "IT Hardware Recommendations for InfoFlex systems".

1. SQL SERVER

The following estimates of Windows Server recommendations are based on the following assumptions:

SQL Server 2012 R2 or above is recommended

No other third-party databases are hosted on the Server

No other third-party applications are running on the server (InfoFlex Server based applications such as IfxDataServer and TaskServer can be run on the Server, or on separate Servers)

In order to access the full functionality of the InfoFlex application the InfoFlex client application should be installed on the server

The SQL Server Database Mail feature should be installed in all cases

OLE Automation should be enabled on the SQL Server

Processor and RAM

Number of Concurrent Users	Recommended
1-10 concurrent users	2 logical processors, 4GB RAM
11-25 concurrent users	4 logical processors, 4GB RAM
26-50 concurrent users	8 logical processors, 6GB RAM
51-150 concurrent users	8 logical processors, 8GB RAM
151-300 concurrent users	12 logical processors, 12GB RAM
301-500 concurrent users	16 logical processors, 16GB RAM
More than 500 concurrent users	20 logical processors, 20GB RAM

Processors are assumed to operate at a minimum speed of 2.4 GHz per core.

Interfacing transactions on DataServer

An additional 1Gb RAM, and 1 logical CPU, is required for each InfoFlex DataServer service running on the server

Task Server

An additional 1Gb RAM, and 1 logical CPU, is required for each InfoFlex Task Server service running on the server.

SQL Server Editions

SQL Server 2012 R2 Enterprise Edition or above is recommended for average sized or larger systems (more than 40 concurrent users or 3 DataServer services or 3 TaskServer services), or where high availability and uptime is required. 64-bit editions of SQL Server are recommended for 64-bit operating systems. Note that SQL Server 2008 Enterprise Edition and above can be used, but 2012 R2 is the recommendation due to increased performance and security.

The main benefits offered by Enterprise edition over Standard Edition for an InfoFlex system in these environments are as follows:

- Online REINDEX operations

- Table and Index Partitioning - divides large tables and indexes into multiple file groups for better performance

- Database snapshots - for capturing point-in time database copies

- Enhanced read-ahead and scan functionality

- Fast recovery

- Data compression - automatically compresses database data

- Transparent database encryption - encrypts databases without making application changes

Disk Storage

Initially, disk space of 80Gb for Database mdf files and 80Gb for Database ldf files is recommended. An Additional 120Gb is recommended for backups, user letters, reports and log files.

For future Database sizing, an additional 20GB per Database per year is recommended. Note that this does not cater for sizing of Reports, Letters and Images generated from the InfoFlex system. Future sizing requirements for these needs to be established through Server monitoring by Trust IT resources.

The Server requires a separate drive to the operating system drive, to store application files etc.

Disk I/O bottlenecks can be one of the biggest factors in performance, so fast disk controllers should be used wherever possible, e.g. Serial Attached SCSI drives (SAS).

RAID hardware controllers can also improve performance, as well as providing fault tolerance:

RAID0 provides best performance (uses striping rather than mirroring) but no fault tolerance.

RAID1 provides best performance and good fault tolerance (2 I/O per write, disk mirroring hence 4 logical disks require 8 real disks).

RAID01 is a hybrid of RAID0 and RAID1 – RAID 01 is a mirrored configuration of two striped sets. RAID 10 is recommended over RAID01.

RAID5 provides low cost fault tolerance but poor performance (4 I/O per write, parity checking, smaller number of disks: 4 logical disks require 5 actual disks).

RAID10 is a hybrid of RAID1 and RAID0 and provides good performance and best fault tolerance. RAID 10 is a stripe across a number of mirrored sets.

Backup Recommendations

The Windows Server should be backed up at least daily, either through the network or using a third party backup program to external media. Further advice can be found in the technical documentation.

Operating System

All revisions of Windows Server 2012 R2 or above. 64-bit editions are recommended where the amount of RAM memory is greater than 4GB. Note that Server 2008 and above can be used, but 2012 R2 is the recommendation due to increased performance and security.

Additional Software Requirements

A file compression utility needs to be provided on the server, so that files can be transferred quickly, and to minimise hard disk usage. The software needs to have the following functionality:

1) Compression of unlimited file size

2) 256 bit encryption

3) Functionality to split file into multiple compressed files

E.g. WinRar, WinZip v10.0 or greater

.Net Framework Version 4 – Full Version only (not Client Profile).

Microsoft Office Word and Excel are also required for support purposes.

SQL Server Database Mail is needed for email alert functionality, together with an email profile.

For sites where HSCN connectivity is unavailable, remote access via the Internet or secure Access VPN is required. To facilitate support of the system(s), the remote access Servers must have Remote Desktop (RDP) enabled.

UAC (User Access Control) on the Server should be disabled. However, this should only be done if the following statements are both true (as per Microsoft advice - https://support.microsoft.com/en-us/kb/2526083)

- Only Administrators are allowed to log on to the Windows-based server interactively at the console or by using Remote Desktop Services.

- Administrators log on to the Windows-based server only to perform legitimate system administrative functions on the server.

2. CLIENT MACHINE

Description	Recommended
Operating system	Windows 7 or above
Processor	2GHz Dual-Core Processor
RAM	2GB
Disk Storage *	80GB or above
Office Version	Office 2010 or above
.Net Framework Version	4 – Full Version only (not Client Profile)
Screen resolution	1024 x 768

* For standalone InfoFlex installations, where the database resides on the client PC, the disk storage requirements should be increased by 80Gb, depending on the amount of data to be collected.

3. INFOFLEX IMAGE CAPTURE

To ensure compatibility customers should discuss the hardware requirements in detail with CIMS before purchasing hardware. A preliminary site visit will need to be arranged with CIMS to assess the current technology used by the Trust.

The InfoFlex Image Capture software works with: -

- Matrox Frame Grabber Boards
- Epiphan AV.io HD
- Kinesis Programmable Footswitch.

Matrox cards:

http://www.matrox.com/imaging/en/products/frame_grabbers/morphis/

Matrox is the preferred solution. The Matrox Morphis frame grabber has been tested at numerous sites under different operating systems.

InfoFlex image capture is compatible with both Matrox MOR2VDE/84 and MOR4VDE/84 cards. The four video decoder card (MOR4VDE/84) will give customers extra redundancy should any of the other ports/decoders fail. Please note that the Matrox cards are full height PCIe cards, and will not fit into Small-Form-Factor or mini tower cases.

Customers do not need to purchase the MIL LITE WIN Matrox Imaging MIL-Lite development toolkit. This will not be needed as CIMS have already built the capture control (IfxMatrox.ocx) with this SDK already.

The cards can be purchased from Clearview imaging (Telephone 01844 217270) :

http://www.clearviewimaging.co.uk/Imaging-Components/Frame-Grabbers/Morphis.aspx

The camera/system provides an output normally via a BNC cable to the frame grabber's input. A capture of the image from the frame grabber is called via the InfoFlex image capture control. CIMS normally come on site to install the drivers for the frame grabber and set up the InfoFlex components for image capture.   There is also some configuration in design manager (within the InfoFlex application) and registry settings that CIMS will install. Please note that the Matrox Morphis cards will only fit inside a full size tower pc case.

Epiphan AV.io HD:

If full sized PCIe cards are not an option then the AV.io HD USB device may be more suited. The device is plug and play and no additional software needs to be purchased alongside the devices.

The video grabber can be purchased below directly from the manufacturer:

https://www.epiphan.com/products/avio-hd/

Customers may also purchase a programmable or key customisable foot pedal if they would like to do hands free capture. Examples of these are the Scythe USB_2FS-2 USB Foot Switch and the Kinesis Savant Elite 2 footpedal. These can be purchased from the following suppliers:

https://www.kinesis-ergo.com/shop/savant-elite2-module-pedal/

http://www.scythe-eu.com/en/Bezugsquellen/Bezugsquellenliste.html#Britain

4. THIN CLIENT SERVER

This includes Citrix and Terminal Servers. The following estimates of Windows Server recommendations are based on the following assumptions:

- No other applications are running on the server

Processor and RAM

The figures below are based on a fixed amount of RAM + 100Mb per user. A load-balancing cluster of servers should be considered for more than 50 concurrent users.

Number of Concurrent Users	Recommended
1-25 concurrent users	8 logical processors, 8GB RAM
26-50 concurrent users	16 logical processors, 16GB RAM
More than 50 concurrent users	32 logical processors, 32GB RAM

Processors are assumed to operate at a minimum speed of 2.4 GHz per core.

Disk Storage

Minimum Disk space of 20Gb is recommended for the home directory drive.

Disk I/O bottlenecks can be one of the biggest factors in performance, so fast disk controllers should be used wherever possible, e.g. Serial Attached SCSI drives (SAS).

RAID hardware controllers can also improve performance, as well as providing fault tolerance:

Backup Requirements

The Windows Server should be backed up at least daily, either through the network or using a standalone backup program and tape drive.

Operating System

Microsoft Windows 2012 R2 Server or above is the recommended operating system on the Thin Client Server. Note that Server 2008 and above can be used, but 2012 R2 is the recommendation due to increased performance and security.

Word Processing Application

Microsoft Office 2010 or above is required on the Thin Client Server.

.Net Framework

 Version 4 – Full Version only (not Client Profile)

Client PC/Laptop

Specifications for PC's in a thin client based system are minimal as almost all processing is done by the Server. Screen resolution should be set to a minimum of 1024 x 768.

5. INTERNAL WEB SYSTEM REQUIREMENTS

An internal InfoFlex Web system is used for connections to InfoFlex Web from clients internal to the customer's organisation. An Internal InfoFlex Web System should be comprised of a Production internal Web Server and a Testing internal Web Server. This section lists the requirements for each Internal InfoFlex Web server.

The following estimates of Windows Server requirements are based on the following assumptions:

- No other applications are running on the server

Processor and RAM

Web Server RAM recommendations are as follows:

Number of Concurrent Users	Recommended
1-100 concurrent users	4Gb RAM
101-250 concurrent users	8Gb RAM
251-500 concurrent users	12Gb RAM
501-1000 concurrent users	16Gb RAM

2 logical processors are recommended for sites with a single InfoFlex Web implementation. An additional processor/core should be added for each extra InfoFlex Web implementation on the same server.

Processors are assumed to operate at a minimum speed of 2.4 GHz per core.

If greater numbers of concurrent users are required then multiple web servers can be deployed.

When planning and specifying the web server, it is key to size the CPU and RAM capacity according to this section.

Disk Storage

Disk space requirements are quite low for InfoFlex Web. Initially, disk space of 80Gb or greater is recommended for the Server. The Server requires a separate drive to the operating system drive, to store the InfoFlex Web Application files (20GB or greater).

Microsoft Windows Server and Internet Information Services (IIS)

Microsoft Windows Server 2012 R2 or above is recommended. Note that Server 2008 and above can be used, but 2012 R2 is the recommendation due to increased performance and security.

Version

IIS version 7 or above is required.

IIS is included in Windows Server. It does not need to be installed but activated – see *Activating IIS*.

Windows Server Version	IIS Version Included
2008	7.0
2008 R2	7.5
2012	8.0
2012 R2	8.5
2016	10

Role Services

The IIS Role services that should be installed on the web server are as follows. (Note that if testing on a desktop version of Windows, the names are slightly different)

Role Service	Role
Management Tools	IIS Management Console IIS Management Scripts and Tools Management Service
Web Server/Application Development	.NET Extensibility 3.5 *(IIS 8.0, 8.5)* .NET Extensibility 4.5 *(IIS 8.0, 8.5)* .NET Extensibility *(IIS 7.0, 7.5)* Application Initialization *(IIS 8.0, 8.5)* ASP.NET 3.5 *(IIS 8.0, 8.5)* ASP.NET 4.5 *(IIS 8.0, 8.5)* ASP.NET *(IIS 7.0, 7.5)* ISAPI Extensions ISAPI Filters
Web Server/Common HTTP Features	Default Document HTTP Errors Static Content HTTP Redirection
Web Server/Health and Diagnostics	HTTP Logging Logging Tools Request Monitor
Web Server/Performance	Static Content Compression Dynamic Content Compression
Web Server/Security	Request Filtering IP and Domain Restrictions URL Authorization

Additional components required

The following additional components are required for each Web Server:

- Microsoft .NET Framework, version 4 or above

- Adobe Acrobat PDF Reader

- A standard Sitefinity licence (with an 8.1 licence file) – see InfoFlex Web Description – Concepts doc for more details.

  Currently, the Sitefinity licence must be purchased from a reseller. CIMS recommends Rika Digital: https://rikadigital.com/ (+44) 023 8038 1673

  Our contacts are James Beeson (james@rikadigital.com) and Kristina Angelova (kristina@rikadigital.com)

  The licence required is a Standard Edition licence, version 8.1.5830.

  There is a useful video on licence management here:

  https://www.sitefinity.com/developer-resources/videos/sitefinity-client-account-orientation

Security

In order to prevent against events such as the POODLE man-in-the-middle attack, CIMS recommend that SSL protocols are disabled on the Web Server. TLSv1 or better should be used instead. See the following link for further details on the process:

https://support.microsoft.com/en-us/kb/187498

Please note that a Server reboot will be required at the end of this procedure.

The following website provides a free online service which performs a deep analysis of the configuration of any SSL web server on the public Internet. It can be used to identify and remedy vulnerabilities in an SSL Web Server including the SSLv3 protocol:

https://www.ssllabs.com/ssltest/index.html

SQL Server Databases for InfoFlex Web

This is normally the same database as used by the InfoFlex v5 system. It does not need to be on the web server (in fact it is normally not).
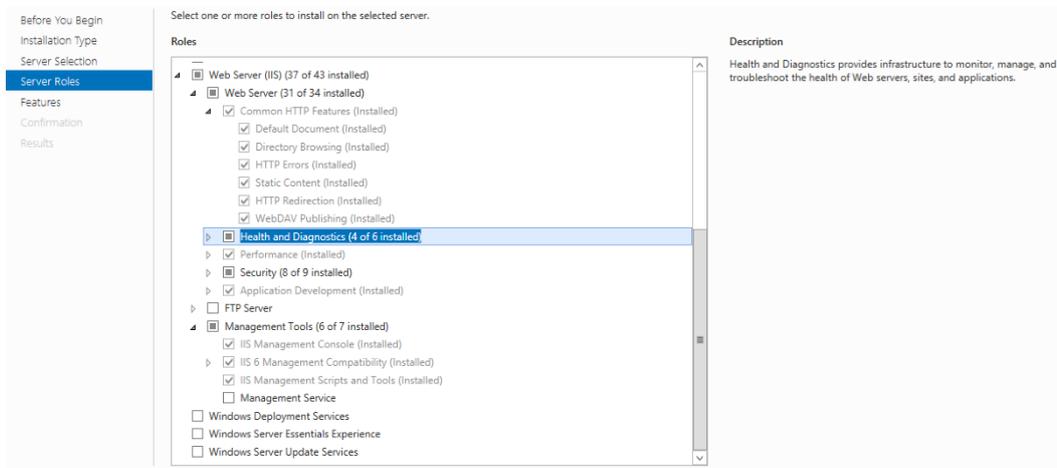
Client Requirements for InfoFlex Web

InfoFlex Web works with any current browser such as:

- Internet Explorer 11 or higher

- Google Chrome

- Mozilla Firefox

Up to date browsers on mobile devices are also supported.

Activating IIS

On Server operating systems, IIS is installed via the **Add Roles and Features** option in **Server Manager**.

On Desktop operating systems, IIS is installed via the feature "**Turn Windows features on or off**", accessed from the Control Panel. This is under **Programs and Features** > **Turn Windows features on or off**. It requires Administrator access.
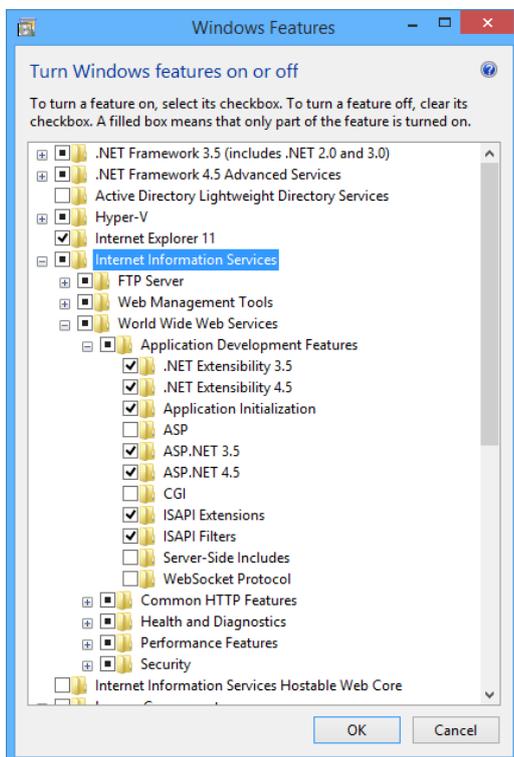
Refer to **Role Services** for the full list of features to be activated.

6. EXTERNAL WEB SYSTEM REQUIREMENTS

An external InfoFlex Web system is used for connections to InfoFlex Web from clients outside of the customer's organisation. An external InfoFlex Web System should be comprised of a Production external Web Server and a Testing external Web Server. This section lists the requirements for each external InfoFlex Web server.

The following estimates of Windows Server requirements are based on the following assumptions:

- No other applications are running on the server

Processor and RAM

See Internal Web Server *Processor and RAM* section

Disk Storage

See Internal Web Server *Disk Storage* section

Microsoft Windows Server and Internet Information Services (IIS)

See Internal Microsoft Windows Server and Internet Information Services (IIS) section

Version

See Internal Web Server *Version* section

Role Services

See Internal Web Server *Role Services* section

Additional components required

See Internal Additional components required section

Security

See Internal Web Server *Security* section

SQL Server Databases for InfoFlex Web

See Internal Web Server SQL Server Databases for InfoFlex Web section

Client Requirements for InfoFlex Web

See Internal Web Server Client Requirements for InfoFlex Web section

Activating IIS

See Internal Web Server *Activating IIS* section

Document history

Date	Doc version	InfoFlex version	Editor	Change
2nd April 2020	1.0	5.70.0139	JW	New Document

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