

# **Helix Server 6.1.5**

**(& Helix Server for PowerPC)**

# **Release Notes**

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# 1 Welcome to Helix Server 6.1.5

## 1.1 Introduction

Welcome to Helix Server 6.1.5. This is the fifth maintenance release of the Helix 6.1 Client/Server product family. This release contains feature refinements and bug fixes that have been incorporated into the code.

This release feature both Helix Server for PowerPC and Helix Server. Helix Server now runs natively in Mac OS X on both PowerPC and Intel Macs.

## 1.2 About this document

This document is a supplement to *The Helix Reference*, the complete guide to Helix 4.5.5 and earlier. It is our intention to publish an up-to-date, self-contained Helix reference manual, but that manual is not available as of this writing.

This document describes the features, enhancements, and bug fixes made to Helix since the release of Helix Server OS X 6.0.x. This document is designed for people who are already familiar with Helix Server OS X 6.0.x and want to quickly learn about the changes made since that release. If you are not familiar with Helix Server OS X 6.0.x, you should also refer to the *Helix 6.0.1 Release Notes*, as that document covers changes made in earlier Helix 6 releases. You may also want to refer to the *Helix 5.3.2 Release Notes*, as that document covers changes made during the Helix 5 life-span.

QSA ToolWorks, LLC makes the information in this document available on an as is basis and is not responsible for its accuracy, use, or future compatibility with Helix products or other products such as the Macintosh® operating system.

## 1.3 About this release

Helix Server 6.1.5 is a maintenance release, addressing bugs found in earlier version of Helix Server 6.1 and adding compatibility with current Mac OS X systems. Available in two forms, *Helix Server for PowerPC* which runs natively on Mac OS X computers with PowerPC G3, G4 or G5 processors and *Helix Server* which runs natively on Mac OS X computers with Intel processors. Both versions are compatible with Mac OS X 10.4 and later. Together these two versions are referred to simply as “Helix Server 6.1.5.”

Helix Server 6.1.5 supports Helix Clients running in Mac OS 9.1 and later. Helix Client Classic 6.1.5 is the only official Client available for this release. However, Preview Release versions of Mac OS X native Helix Client for Intel and Helix Client for PowerPC are available for download from our Preview Release web site at <http://www.qsatoolworks.com/product/preview/>.

Helix Server for PowerPC is a free update for owners of Helix Server OS X 6.0.x. The serial number/enablement keys for Helix Server OS X 6.0.x also work with Helix Server for PowerPC.

Helix Server is **not** a free update. Helix Server 6.0.x (and older) serial number/enablement key combinations do not work with this release. For an explanation about this policy, please read our May 19, 2008 announcement at <http://www.qsatoolworks.com/tlw/2008/may19.html>

To purchase an upgrade to any Helix 6.1 product, visit our web store at <<http://store.qsatoolworks.com>> or contact QSA ToolWorks, LLC by email <[sales@qsatoolworks.com](mailto:sales@qsatoolworks.com)> or by phone 800-784-7018.

Helix Server 6.1.5 is a general release and can be used with all existing collections. We encourage all customers to update existing collections to Helix Server 6.1.5, regardless of whether or not they are experiencing problems in the areas that are specifically addressed by this release.



*Although we are confident that Helix Client/Server 6.1.5 is a solid release, it is still possible that problems may be found that could result in collection damage. QSA ToolWorks, LLC will do everything in its power to support users who encounter errors caused by this software, but we cannot guarantee that problems do not exist. As always, please be diligent regarding your backup and utility procedures.*

### 1.3.1 Helix Server 6.1 and Helix 6 compatibility

Helix Server 6.1 is “code compatible” with all Helix 6 products. Collections served with Helix Server 6.1.5 can be used without issue with any Helix 6 product. You can take advantage of this should the need arise to revert to Helix Server OS X 6.0.x. We do not expect that this backwards compatibility will be needed, but it is a safety net we will continue to provide until Helix RADE is Mac OS X native.

Running Helix Utility and Update Collection on your collections before using them with Helix Server 6.1.5 — and then running both utilities on a regular basis to ensure continued collection integrity — is strongly encouraged. QSA ToolWorks, LLC also sells Helix Maintenance Manager, a utility that automates the backup and utility checking process. Visit our web site and click on the Products link for more information.

### 1.3.2 Helix Utility and Update Collection 6.0.1 are current

Because Helix Server 6.1 is fully code compatible with previous Helix 6 releases, the existing Helix 6.0.1 versions of Helix Utility and Update Collection should be used with Helix Server 6.1.5. There is no version 6.1 release of these utilities.

Helix Utility and Update Collection 6.0.1 are available in Mac OS X native and Classic versions. The Mac OS X versions require Mac OS X 10.3 or later; the Classic versions require Mac OS 9.1 or later.

The Mac OS X and Classic versions of Helix Utility and Update Collection can be used interchangeably with all Helix 6 collections. Since Helix Server 6.1 only runs under Mac OS X, you should use the Mac OS X native version of the utilities, as they provide better checking capability and run significantly faster than their Classic counterparts.

### 1.3.3 Mac OS X native progress

Helix Server 6.1 represents an interim step in our work in updating our code for Mac OS X. Helix Server, Helix Utility and Update Collection are currently Mac OS X native. Mac OS X native versions of Helix Client and Engine are also available in Preview Release versions — section 1.3.4 (*Mac OS X native Helix Client Preview Release*) for more information.

It is our intention to release Mac OS X native products as soon as possible, but because of the technical issues that made it impossible to reliably run Helix Server in Classic Mode in Mac OS X, we chose to focus first on the Mac OS X native Helix Server and to release it as soon as it was ready. That task was completed in December, 2005.

Shortly thereafter, Apple announced the transition from the PowerPC processor to Intel processors. That transition was completed in 2007. Unfortunately, Intel-based Macs do not support the Classic environment, and writing programs that run natively on them requires a switch to Xcode, Apple’s proprietary programming environment. In addition, Mac OS X 10.5 (aka: Leopard) which was released in October, 2007 does not support the Classic environment on PowerPC-based Macs. These events created a pressing need for Mac OS X native versions of all Helix products.

The technical nature of the shared components within the Helix product line make it most logical for us to deliver Mac OS X native versions of Helix Engine and Helix Client next. Helix RADE will be the last product to become Mac OS X native.

The Mac OS X Transition Journal on our web site contains the latest updates on this process.

### 1.3.4 Mac OS X native Helix Client Preview Release



*Helix Client Classic 6.1 is the only officially released Helix Client at this time. It is fully compatible with both Helix Server for PowerPC & Helix Server. The information in this section is provided for those who want a preview of the Mac OS X native Helix Client.*

Along with the release of Helix Server 6.1.5, Preview Releases of Helix Client and Helix Engine are now available. Helix Engine & Helix Client 6.1.5 — for both PowerPC and Intel — are available in Preview Release form via the Preview Release section of our website: <<http://www.qsa-toolworks.com/product/preview/>>.



*Preview Release versions are incomplete versions of our full products. They may do everything you need Helix to do, in which case they should work fine for you. If they do not, check the 'Non-Functional' list (in the **About Helix Client** window) to see if the function you need is listed there. If something does not work for you and the problem is not found in Release Notes, please file a bug report using the instructions found on the Preview Release web site. (Telephone and email bug reports for Preview Release products are not accepted.)*

It is our intention to deliver subsequent Preview Release versions of Helix Client on a regular basis, as we add features and fix reported bugs. The new **About Helix Client** window contains a live link to our web site, where information on the latest version of Helix Client is shown. We recommend that you check on a regular basis to see if an updated version of Helix Client is available.

Because of the rapidly changing nature of the Helix Client for Mac OS X Preview Releases, information about them is not contained in these Release Notes. Please check the Preview Release web site: <<http://www.qsa-toolworks.com/product/preview/>> for documentation on the Helix Client Preview Release.

## 2 Contacting QSA ToolWorks, LLC

### 2.1 Sales and Customer Service

If you need to purchase new or upgraded Helix products, you can visit our online store at <http://store.qsatoolworks.com>. You can also contact our sales and customer service department by email [sales@qsatoolworks.com](mailto:sales@qsatoolworks.com) or by phone 800-784-7018. General questions and other administrative issues should also be directed to the customer service department. The sales office is open 9AM–5PM Eastern Time (1400–2200 GMT).

### 2.2 Technical support

If you encounter technical problems (or have general technical questions) related to Helix, technical support is here to help. You can contact technical support by email [support@qsatoolworks.com](mailto:support@qsatoolworks.com) or by phone 570-662-8883. Telephone support is available 9AM–5PM Eastern Time (1400–2200 GMT). Some support services are subject to additional fees.

The Technical Support section of our web site <http://www.qsatoolworks.com> contains the latest information about the support services we offer.

#### 2.2.1 techdb: the Helix-based source for technical support

techdb is a Helix Client/Server database that we use to provide technical support to our customers. In techdb you can search our knowledgebase, look up Helix error codes, submit bug reports and feature requests, chat with other Helix users, and more.

In essence, techdb is a live demo of Helix Client/Server in action, and it provides a communal gathering spot for Helix users around the world. That alone makes it a worthwhile part of our technical support services.

Instructions on accessing techdb are found at...  
<http://www.qsatoolworks.com/support/techdb.html>

#### 2.2.2 Sending files

Please do not send us files via email. Because of the increasing problem of malware sent as email attachments, unsolicited attachments are automatically deleted. If you have a file you wish to send to us, please contact us first and describe the problem. We may have already isolated the source of the problem and can discuss possible remedies without needing to see your example. If we do need to see the file you have, we will send instructions so you can send it in a way that will ensure the fastest possible action on our part.

#### 2.2.3 About collection repair

Collection repair is no longer charged as a flat fee service. Repairs are now billed on an hourly basis, as per our User Support Unit (USU) policy. Many repairs can be covered with the USUs that come with each Helix upgrade, effectively costing nothing extra. We strive to turn all repairs around as quickly as possible; typical turnaround time is under 8 hours. Please see the support section of our web site for more details.

### 2.3 Bug Reports

If we are to continue to improve the product and meet the needs of our customers, we need to know when you experience problems. Bug reports can now be submitted via the interactive bug reporting section of techdb. See section 2.2.1 (*techdb: the Helix-based source for technical support*) for information on connecting to techdb.

### 2.4 Feature Requests

If you wish to submit a request for a feature you would like to see added to Helix in the future, please visit the feature request page on our website and tell us about it. This is an automated system and you will not receive a personal reply from QSA ToolWorks, LLC to items submitted there.

We hope to integrate Feature Requests into techdb soon.

## 3 Configuring Your Computer

The following information is designed to help you achieve maximum performance with Helix Server 6.1. Other applications that you use may prefer different settings. If you discover a problem while using this version of Helix Server, please confirm that it also occurs with these settings in effect. If you discover something that behaves differently based on your Mac OS configuration, please inform us of the details.

### 3.1 Installing Helix Server 6.1

Installing Helix Server is simply a matter of inserting your Helix CD into your Mac (or downloading the software from our web site) and running the installer package. Helix products for Mac OS X are installed in the **Applications** folder of your hard drive, in a folder named **Helix 6.1**.

#### 3.1.1 Enabling Helix Server

After installation, you must *enable* your copy of Helix Server 6.1. Enabling Helix Server requires three pieces of information:

1. Your Helix product *serial number*
2. The correct *enablement key* for the product and version you are installing
3. Your personal registration information (name, address, etc.)

Helix enablement keys for one product do not work with other Helix products and they only work with the version of Helix for which they are designed. In other words, you can not use a key for different product (e.g. Helix RADE) to enable Helix Server. Likewise you can not use a key for an older version of Helix to enable a newer product.

The one exception to this is Helix Server for PowerPC. Because Helix Server OS X 6.0.x was sold with the understanding that purchasers would be entitled to a free upgrade to a version that would support a Mac OS X native Helix Client, we have made Helix Server for PowerPC so that existing Helix Server OS X 6.0.x keys *do work* to enable it. However, Helix Server OS X 6.0.x keys will not enable Helix Server. See section 1.3 (*About this release*) for more information.

Because of the confusion inherent in this situation, the Helix Server 6.1 installation dialog contains additional information to help guide you during installation:

Helix Server for PowerPC Installation

Enable your copy of Helix Server for PowerPC...

Serial Number 1234567

Enablement Key ABC12DEF34GHI56JKL78MNO90PQR

Name John Smith

Company ABC Company

Address 1 Main Street

Address Anytown, AS 12345

City, State & Zip www.abccompany.com

A valid Helix Server for PowerPC (Helix 6.0) serial number and enablement key are required to complete the installation. This information can be found on your invoice or by logging if you need to purchase additional Helix Server licenses, visit our web store or call +1 800-784-7018.

Cancel OK

Helix Server for PowerPC Installation Dialog

Note that this dialog specifically states that it is enabling Helix Server for PowerPC (and not Helix Server for Intel) and that a Helix Server 6.0.x key is required to enable it. If you are having trouble enabling your Helix Server, double check to make sure you are using the correct key for your product. Also make sure to enter letters in upper case.



When entering a key, the letter 'I' and the number '1' are interchangeable, as are the letter 'O' and the number '0'

## 3.2 System requirements

### 3.2.1 Computer requirements

#### 3.2.1.1 Helix Server

Helix Server runs natively on Mac OS X computers with Intel processors and Mac OS X 10.5 or higher.

#### 3.2.1.2 Helix Server for PowerPC

Helix Server for PowerPC runs natively on Mac OS X computers with PowerPC G3, G4 or G5 processors and Mac OS X 10.4 or 10.5.x. It also runs on Intel-native Macs via Rosetta, but this is not recommended. When running Helix Server for PowerPC on an Intel-native Mac, the following dialog box appears during launch:



Helix Server for PowerPC on Intel-native Warning

Performance of Helix Server for PowerPC is significantly reduced when running on Intel-native Macs, as the Rosetta translation consumes a great deal of processing time.

If you see this alert, we recommend that you upgrade to Helix Server for maximum performance.

### 3.2.2 Memory requirements

Because Mac OS X features automatic Virtual Memory (VM), Helix Server 6.1 will run with any amount of installed memory. However, accessing VM results in reduced performance, typically seen in the spinning, multi-colored 'beachball' cursor in Mac OS X.

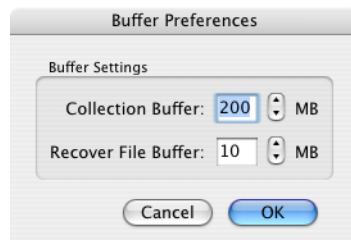
#### 3.2.2.1 Setting a collection buffer

Performance of Helix Server 6.1 can be increased by loading the collection into a memory buffer. Maximum performance is available when you have enough memory installed in your computer to load your entire collection into memory. We strongly recommend installing sufficient memory in the computer on which Helix Server 6.1 runs to take advantage of this performance boost.



*Enabling a collection buffer on a computer with insufficient memory will result in significantly reduced performance and stability. Be certain that you understand all of the requirements before enabling a collection buffer.*

The Collection Buffer, is set via the **Preferences...** menu item in the **Helix Server** menu:



Specifying the Collection Buffer Size

Two settings are available, one for the collection itself, and one for the Recover File. (The Recover File is a temporary file Helix uses to store changes made between saves.)

The Collection Buffer can be set to any size up to 1023 MB, but it should not be set so large as to force Mac OS X's Virtual Memory to begin working. We recommend setting the Collection Buffer to approximately 10% larger than your collection size. Setting it to a larger size will not make Helix Server run faster, and may actually decrease performance.

The Recover File does not typically grow very large, and a setting of 10MB or less should be sufficient for most collections. As with the Collection Buffer, there is no benefit in setting a Recover File Buffer size greater than the largest size your Recover File becomes during typical operation. The Server Information window's 'File Info' panel shows the actual size of the Recover File.

The maximum amount of memory that can be allocated to buffers is 1023 MB by default. This amount may be split among the two buffers in any configuration. It is also possible to increase this limit, but QSA ToolWorks, LLC does not officially support this at the present time and will not be held liable for damages resulting from making this change. See *Server Preferences* in Helix Server Help (in the Help menu) for more information.



*The **Server Information** window's 'Machine Info' panel shows the number of 'page-outs' that have happened since Mac OS X was started. Optimal performance is achieved when the pageouts value remains at 0. A higher (and constantly climbing) number indicates that Helix Server 6.1's Collection Buffer is set to a value larger than the amount of available memory can support. Adding memory to the computer can alleviate this problem.*

# 4 Preparing to Update

## 4.1 Please read these notes carefully

### 4.1.1 Make a backup before you update

Before you begin the update process, make a backup copy of your database. Refer to Chapter 18 of *The Helix Reference* for more information on maintaining your databases.

### 4.1.2 Update Collection not required

Collections that have been updated to work with Helix 6 products do not need to be updated before they can be used with Helix Server 6.1. Nonetheless, checking your collections for potential trouble is strongly encouraged.

#### 4.1.2.1 Update Collection

To check a collection for structural integrity, drag it onto the **Update Collection** application icon. Two dialogs remind you to make a backup and ask you to confirm that you want to check the collection.

#### 4.1.2.2 Helix Utility

To check a collection for data integrity, drag it onto the **Helix Utility** application icon. A dialog reminds you to make a backup. After the collection is read by Helix Utility, choose the **Data Damage Repair** command found in the Tools menu. A progress dialog opens to let you know the process is working.

If no problems are found, make a backup of the updated collections and put them in a safe place. You are now ready to use Helix Server 6.1.

## 5 What's New in Helix Server 6.1

*If you are upgrading from a version prior to Helix Server OS X 6.0.x, you should also read the Helix Server OS X 6.0.x Release Notes, as they contain additional information that is not found in these notes.*

### 5.1 New Features in Helix Client/Server 6.1.5

#### 5.1.1 Mac OS X native Helix Client features

Changes in Helix Server 6.1.5 & 6.1.4 were made to support new features that are seen when using the Mac OS X native Helix Client Preview Release. A list of these changes can be found at our Preview Release web site: <<http://www.qsatoolworks.com/product/preview>>

### 5.2 New Features in Helix Client/Server 6.1.3

*The following features are new in Helix Client/Server 6.1.3.*

#### 5.2.1 OS X text files can now be displayed

When Helix displays the contents of a document, the Picture tile first checks the Classic TYPE (an internal code) for TEXT and EPSF document types (which are handled internally) and then passes all other types to QuickTime for conversion. Because Mac OS X does not use the type and creator codes many Mac OS X text documents could not be displayed via the Picture tile. Helix Server now completes the loop: if QuickTime returns the 'document format unsupported' error, Helix Client now displays the file as plain text. This allows all sorts of text files (e.g. crash logs) to be displayed as plain text. However, other non-graphic file types (e.g. .dmg) are also shown as plain text, which can be disconcerting to a non-technical end user. Nonetheless, this ability can be useful when diagnosing problems, so it has been left in.

#### 5.2.2 Client Info window contains 'Seat #' information

To assist in tracking down bugs, we have added the "Seat #" column in the "Logged In" and "Logged Out" panels of the "Client Info" window. (The Seat # concept is simple to grasp, but difficult to explain, so we'll just leave it unexplained, until the need to explain it arises.

### 5.3 Modern Macintosh support

Helix Server 6.1 runs natively on *all* current Mac OS X computers being sold as of April 1, 2009. Specifically, that means:

#### 5.3.1 Intel-native support

Helix Server 6.1 runs natively on PowerPC and Intel-based computers running Mac OS X. See section 1.3 (*About this release*) and section 3.2.1 (*Computer requirements*) for more information on the two versions of Helix Server 6.1 that are available.

#### 5.3.2 OS X 10.5 (Leopard) compatible

Helix Server 6.1 for PowerPC is fully compatible with Mac OS X 10.4 (Tiger) & 10.5 (Leopard). Helix Server *requires* Mac OS X 10.5 or later.

### 5.4 Open Recent menu

The **Open Recent** menu, found in the File menu, provides a quick way to reopen recently served collections. The number of items displayed is controlled by the Mac OS X System Preference for number of recent items to display.



*If you hover over a menu item in the **Open Recent** menu, a tooltip appears showing the full path to that file.*

## 5.5 New About Helix Server window

The **About Helix Server** window has been completely redesigned. Using Apple's WebKit, the about pages are created as standard HTML files. In fact, the **Current Version** page (see below) is a live web page, pulled from our web server.

The top section of this window also indicates whether you are running Helix Server for PowerPC or Helix Server.

Two other panels are available in this window: the **End User License Agreement** and the **Notices & Credits** page.

### 5.5.1 Current version checking

The **Current Version** panel in the **About Helix Server** window connects to our web server so the information is always up to date. (If you have no internet connection, a message to that effect is displayed.)

Because the current version information is pulled live from our web server, we can also use this page to provide you with late-breaking news. Should any important bugs be found, we will be sure to post a message here, letting you know.

By default, the **About Helix Server** window opens once per week as an easy reminder to keep up to date. Leaving this window open does not impact performance.

## 5.6 Server Info window enhancements

New or enhanced pieces of information found in the **Server Info** window...

### 5.6.1 Font Info list

A list of all fonts referenced in the collection is available. The list shows the name of the font, font ID, whether it is available or not, and if not available, the substitute font being used. Note that each Client handles its own font substitution table, so a font that is not present on the Server will still display correctly as long as it is installed on the Client.



*If the **Server Info** command is available to a user running the Mac OS X native Helix Client, the Client's Font Info list reflects the availability of fonts on the workstation.*

The Reference Count column is of little use. It is included for technical support purposes.

A 'referenced font' is any font that has ever been used in the collection, in both collection design and Styled Text field, even if it is no longer used. (The font reference table does not remove obsolete entries.)

### 5.6.2 Save statistics precision is 0.1 seconds

Under Mac OS X, Helix typically saves so quickly that the Last Save Length and Average Save Length statistics are sometimes reported as '0 seconds.' In Helix Server 6.1, saves are reported with 0.1 second accuracy.

### 5.6.3 More machine statistics

One of the keys to maximum performance in Mac OS X is to minimize the use of Virtual Memory. VM usage is best gauged by the pageins and pageouts statistics. These are now available in the Machine Info panel.

## 5.7 Additional preferences

New preferences have been added to Helix Server. See the Helix Server online help for the updated list.

## 5.8 Other changes

### 5.8.1 Processor use reduced

Prior versions of Helix consumed 100% of the free processor time. Helix now uses only what is needed, resulting in more efficient computer operation.

### 5.8.2 Form compiling eliminated

Helix 6.1 no longer relies on compiled forms. As a result, Helix Server opens recently modified collections faster. Compiled forms were shown to be the source of some obscure and intermittent bugs.

### 5.8.3 Navigation services

All Helix Server file service dialogs take full advantage of Mac OS X Navigation Services.

### 5.8.4 AutoSave options

The 12 Hour (AM/PM) option has been removed from the Start Time setting. Specify the start time using 24 hour format.

## 6 Bug Fixes

Each of the following bugs has been fixed in Helix Server 6.1. Visit our web site and review the tech notes listed for a more detailed explanation of each bug.

### 6.1 Bugs Fixed in Helix Server 6.1.5

*The following bug fixes first appeared in Helix Server 6.1.5.*

#### 6.1.1 Clicking in Apple event info window crashes server (R#6729)

Clicking in the AE Processes panel of the Collection Information window resulted in a crash. This has been fixed.

#### 6.1.2 Apple event OneTimeStore crash (R#6687)

Sending a OneTimeStore Apple event resulted in a crash. This has been fixed.

#### 6.1.3 Assorted random crashes (R#6683, 6699, 6708, 6725)

Various crashes introduced by bugs in the Helix Client/Server 6.1.5 update have been fixed.

#### 6.1.4 Numerous issues affecting Mac OS X native Helix Client

Many issues that were seen as bugs when using the Mac OS X native Helix Client Preview Release have been fixed. A list of these fixes can be found at our Preview Release web site: <<http://www.qsatoolworks.com/product/preview>>

### 6.2 Bugs Fixed in Helix Server 6.1.4

*The following bug fixes first appeared in Helix Server 6.1.4.*

#### 6.2.1 Client Info... window grows taller and taller (BZ#834)

As more and more Clients logged in and out of the Server, the **Client Info...** window would grow taller and taller in an attempt to show every Client log event in the window. This has been fixed.

#### 6.2.2 Visual bugs in the Server Info and Client Info windows

Numerous visual bugs in the **Client Info...** and **Server Info...** windows have been fixed.

#### 6.2.3 Numerous issues affecting Mac OS X native Helix Client

Many issues that were seen as bugs when using the Mac OS X native Helix Client Preview Release have been fixed. A list of these fixes can be found at our Preview Release web site: <<http://www.qsatoolworks.com/product/preview>>

#### 6.2.4 Memory leaks and mismanagement issues

Various memory leaks and other memory mismanagement issues have been fixed.

### 6.3 Bugs Fixed in Helix Server 6.1.3

*The following bug fixes first appeared in Helix Server 6.1.3.*

#### 6.3.1 Post on Print could cause Helix Server crashes

Many bugs that could cause Helix Server crashes when a Helix Client prints a view that has posting icons attached to the On Print column have been fixed. Posting while printing should be much more stable.

#### 6.3.2 External document displayed as 'format unsupported' (BZ957)

A bug where Helix Client would see a 'format unsupported' message when Helix Server for Intel attempted to render a picture from an externally stored document is fixed.

### 6.3.3 Reports with over 32,766 records failed to display all records (BZ976)

A bug that caused Helix Client Classic (and RADE) to fail to show all of the records in a report (list) when there were more than 32,766 records in the report is fixed.

### 6.3.4 Option 1 post to cold form with defaulted field corrupts index (BZ900)

A rare combination of circumstances, an indexed field with a default value on a cold form using Option 1 posting to change the field value from undefined to the default value, resulted in corruption to the index built on that field. This bug is fixed.

### 6.3.5 Fixed Point Posting Trigger Multiplied by 100 (BZ1034)

A bug that caused conditional sequences to run 100 times the expected value when a fixed point value is used as the trigger *and* that same value is posted to another relation, has been fixed.

### 6.3.6 Collection Damage reported after Apple Events access (BZ979)

Helix 6.1 does not use the 'compiled form' data that was used in Helix 6.0 and earlier, but Update Collection is not aware of this. In cases where Apple Event access users neglected to close a process, this obsolete data would not be cleared properly. Because Update Collection is backward compatible with Helix 6.0, it considers this a problem and reports it as collection damage. In reality there is no damage; Update Collection is being overly sensitive.

Helix 6.1.3 takes greater care to discard this obsolete data, keeping Update Collection from falsely reporting damage.

### 6.3.7 Registration Dialog Issues (BZ904)

A bug where letters typed into the enablement key field in the registration dialog were not automatically converted to upper case and not recognized as valid is fixed.

The registration dialog would not allow the user to switch to another program, copy data, switch back and paste that new data into a field. This is fixed.

## 6.4 Bugs Fixed in Helix Server 6.1.2

*The following bug fixes first appeared in Helix Server 6.1.2.*

### 6.4.1 Intel-native only

#### 6.4.1.1 Queries on dates failed

A date typed into a query was being stored incorrectly in Intel-native Helix. The result was queries that would return either all records or no records, regardless of the date stored in the field. This bug has been fixed.

This bug affected all types of queries (quick, form, and power) where a date was literally typed into the query, as opposed to a query where the date is derived from data stored in a record.

#### 6.4.1.2 Helix Server crash when handling styled text

When a Helix Client caused a change to occur to a field containing styled text, Helix Server could scramble some important memory locations, resulting in a Helix Server crash. This bug has been fixed.

### 6.4.2 Pasting large pictures failed

Pasting data larger than 32KB into a Picture field failed to store the picture properly. This was immediately recognizable, as the contents of the rectangle would not match the picture being pasted into it, typically appearing as a blank. This bug was non-destructive and other than the fact that the pasted picture was not properly saved, there was no negative impact.

This has been fixed. Helix now handles pasted picture data correctly regardless of size.

### 6.4.3 Helix Server stability improved

Improvements to some core routines in Helix Server (both PowerPC and Intel) result in improved stability.

## 6.5 Bugs fixed in Helix Server 6.1.1

*The following bug fixes first appeared in Helix Server 6.1.1.*

### 6.5.1 Document corruption

A bug in Helix Client/Server 6.1 would sporadically result in internally stored documents being corrupted when the **Copy From Volume** command was used to upload a document.

The most insidious part of this bug was that there was no warning that a document had become corrupted during the upload. Only when retrieving a document at a later date would Helix Client report that it “detected a problem with the document” and offer to delete the download or let you try again. Trying again would not help, as the corruption was actually in the stored document.

Helix Client/Server 6.1.1 fixes this bug, and we recommend that all customers who use internal documents install this update immediately.

In addition to fixing this bug, the new code in Helix Server computes the document checksum during more stages of the document transfer, resulting in a more robust transfer mechanism that will report other types of network problems that may have gone undetected in the past.



*If you store documents internally in your collection, you should increase the preferred size of Helix Client so it is large enough to hold the entire document in memory while uploading it. A good rule of thumb is to estimate the size of your largest document (in KB) and add 10000 KB to that number. For example, if your documents are as large as 14 MB (14000 KB) then set your Helix Client Classic 6.1's Preferred Size to 24000 KB.*

*To increase the preferred memory: highlight the Helix Client Classic 6.1 icon in the Finder, and choose the **Get Info** command. Then open the **Memory** section and change the value in the **Preferred Size** field. (The **Minimum Size** field does not need to be changed.)*

### 6.5.2 Helix Client non-responsive when Helix Server dialogs are open

When a user chooses **Quit** on a Helix Server that has Clients connected, three dialog boxes are presented. The first is the standard “Save changes before Quitting?” dialog; the second informs the user that there are Clients connected, giving them one last opportunity to cancel the Quit operation. The third dialog states that the Server will quit when all Clients have logged off and offers only an **Abandon** button.

In prior versions of Helix Server, while either of the first two dialogs were open, connected Clients were unable to communicate with Server, making it impossible for them to finish their work or even to disconnect from the Server. Both of those dialogs now allow Client tasks to continue even while they are open on the Server's screen.

Nonetheless, it is still recommended that these dialogs be answered immediately. Network performance is significantly reduced when these dialogs are left open.

### 6.5.3 PORT resource value ignored (BZ903)

Helix Server 6.1 was ignoring the PORT resource, always using port 10860 (the default port). Helix Server 6.1.1 correctly reads and applies alternative port settings.

### 6.5.4 AutoOpen Post with omitted key field corrupts index (BZ777)

A rare combination of factors would result in the corruption of an index, resulting in records appearing twice in lists, or deleted records appearing as a blank line in lists. This has been fixed.

Helix Utility has always detected this problem and scheduled the index for rebuilding, but lists could display inaccurate data between Helix Utility runs.

### 6.5.5 Crash Recovery: pictures over 64KB are lost (TS2233)

Pictures over 64KB, pasted into Picture fields, were not being recovered when the log file was applied after a crash. Upon recovery, the records containing the pictures were recovered, but the picture field was left empty.

This is now fixed. All data is now properly recovered from the log file after a crash.

### 6.5.6 Potential crash on export

During export operations an internal counter was set too high. This would occasionally cause a crash when Helix was running natively in Mac OS X. This bug has existed since at least Helix Express 4.0 (and probably since Helix 1.0) and although we never had a crash report in Helix Client/Server directly attributable to this bug, it was a theoretical possibility. Therefore the fix was also applied to Helix Client Classic 6.1.1.

### 6.5.7 Potential write lock failure

It was discovered that every four billionth attempt to write lock a record would fail, and the record could potentially be edited by two users simultaneously. A user would have to write lock a record once every second of every day for 136 years to reach this number, so we are confident this bug has never affected any Helix user to date. Nonetheless, it is now fixed and will not affect users no matter how many centuries their databases are kept in use.

### 6.5.8 'Mini menu' cleaned up

The items available in the 'mini menu' — the one that appears when you launch Helix Client but have not yet connected to a Helix Server — contained a number of pointless commands that were always disabled. Those have been removed.

### 6.5.9 Miscellaneous fixes

Because the main focus of our effort since the release of Helix Client/Server 6.1 has been on completing the Intel-native version of Helix Server and advancing the Mac OS X Helix Clients, many changes have been made to the communications core that exchanges data between Helix Server and Helix Clients. Although not cataloged specifically as Helix Server 6.1.1 fixes, we expect that many of these changes will have a beneficial effect in Helix Server 6.1.1 as well.

## 6.6 Bugs fixed in Helix Server 6.1

*The following bug fixes first appeared in Helix Client/Server 6.1.*

### 6.6.1 Server on Intel-based Mac crashes when Client posts (TS1965)

Helix Server OS X 6.0.x running on an Intel-native Mac could on rare occasions occasionally crash when a Client does something that involves posting. Helix Server 6.1 fixes this bug.

### 6.6.2 Intermittent posting failures (TS2013)

In prior versions of Helix Server, a posting operation could mysteriously stop working. When this bug struck, the post would stop working and not work again until the administrator took the collection into Design Mode and re-specified the posting operations. Helix Server 6.1 fixes this bug.

### 6.6.3 Inaccurate message on permissions failure

If a collection can not be edited because it is locked or permissions are set to 'read only', Helix Server OS X 6.0.x would display a dialog indicating that the collection was damaged. Helix Server 6.1 corrects this. The dialog now reports 'The collection is locked or read-only (permission denied).'

### 6.6.4 Longstanding bugs

Because of Xcode's more thorough code checking, many long-standing bugs have been eliminated. These are bugs that would appear intermittently and were therefore extremely hard to track down.

## 7 Known Problems

This list of known problems was compiled from previous release notes as well as recent additions made to our web site Knowledgebase. Check <<http://www.qsatoolworks.com/support/technical/knowledgebase/>> for the latest updates to the known problem list.

### 7.1 Known problems new to Helix Client/Server 6.1

#### 7.1.1 Performance degradation on WAN

Although Helix Client/Server 6.1 users on a local area network (LAN) will find performance to be equal or better than Helix Server OS X 6.0.x, Helix Clients accessing a Server across a wide area network (WAN) may find performance not as good as it was in Helix 6.0. Changes required to create the Intel-native products require us to generate smaller data packets, which are delayed by the latencies involved in routing TCP/IP traffic. We continue to work on methods of improving the performance of Helix Client/Server for both LAN and WAN connections.

#### 7.1.2 Server Preferences and AutoSave Dialogs highlighting

When the **Server Preferences** or **AutoSave** dialog is opened, all of the editable fields appear to be highlighted. Tabbing through them removes the highlighting. This is a cosmetic issue only.

### 7.2 Pre-existing known problems

#### 7.2.1 Fragile indexes are not invalidated

If a Client changes data that requires the rebuilding of a fragile index, the index is not invalidated by Helix Server. The Helix Utility Data Damage Repair process will flag this index, causing this index to rebuild the next time the collection is opened.

## 8 Functional Clarifications

### 8.1 Mac OS X keyboard command settings

Mac OS X includes the ability to define custom key commands via the Keyboard System Preference panel. Keyboard commands assigned via System Preferences take precedence over Helix Server's default keyboard commands.

### 8.2 When does 'Post on Print' post?

The question has been asked: when a post icon is attached to a view in the 'On Print' column, when does the posting actually take place? This is important to know when considering the effects of a write-locked record or other problems (e.g: paper jams) that prevents the print job from completing.

First, a word about templates. In Helix a (page layout) template can be designed as a single page or a span of multiple pages, each with a distinct layout. Multiple page templates (described in section 8.1.11 of The Helix Reference) can be identified by the presence of page boundary lines in the layout area. In the case of a template designed to print multiple, distinct pages, each group of pages is considered one 'Template Page' — not to be confused with a single page template that prints multiple copies of the same page.

In Mac OS X native Helix 6.1, post icons attached to the 'On Print' column occur one 'Template Page' at a time. This is straightforward in the case of a single page template: print page 1, post record(s) on page 1, print page 2, post record(s) on page 2, etc.

But in the case of multiple page templates, it is important to understand that no records are posted until the entire template page has printed. So, in the case of a two page template the order of events would be: print page 1, print page 2 (the first pass through the template is now complete), post record(s) on pages 1 & 2, print page 3, print page 4 (the second pass through the template is now complete), post record(s) on pages 3 & 4, etc.

Together with the new specification for printing page ranges, it is possible to print pages from Helix Client for Mac OS X that do not post, and to post pages that do not print. Consider a page template that spans two physical pages. Posting will not occur until the template page (both pages) completes. If you specify a print range of '1 to 1' then the template page will not complete and no posting will occur. Conversely, if you specify a print range of '2 to 2' then the template page will appear as complete (the 2nd page of the 2 page template having printed) and the posting will occur for both pages on the template.

Because of these situations, and because it is impossible to predict physical printing failures once the print job has spooled, it is our general recommendation that Post on Print not be used. Consider printing as a first step and then using Post All to mark the records as printed.

The term 'Print' in this discussion refers to the process of sending the data from Helix to the printer driver. Paper jams, low ink, etc. can all interfere with the physical aspect of printing the pages. Once the page is sent from Helix, it is assumed that the printer will successfully print the page.

For multiple page templates, this is different from prior versions which posted each physical page as it printed.

### 8.3 Rounding in Helix

Rounding is generally a pretty straightforward topic: when you round, round to the nearest number for the level of precision specified. Confusion is introduced when the value to be rounded is exactly halfway between the two possible values. This section is designed to explain and document how Helix rounds those values.



*For the sake of illustration, we will deal with rounding to the nearest integer, typically done with Helix's "Round" tile. Keep in mind that these same rules apply to the "Round to Nearest" tile, which allows you to specify the rounding precision.*

Rounding always seeks the nearest value to round to, but when the original value is exactly halfway between the target values, Helix employs one of two distinct sets of rounding rules. The rounding rules used depend on the data type being rounded.

The rules below only apply to values that fall exactly halfway between the two possible values. All other values round to the nearest number.

### 8.3.1 Rounding fixed points: financial rounding

Fixed Point data (technically, *integers*) were introduced much later in Helix's history and have always used the financial rounding method. Financial rounding seeks to make rounding more predictable, so it rounds *away from zero*, thereby guaranteeing consistent rounding.



*Financial rounding is also known as “symmetric arithmetic rounding,” “banker’s rounding,” and a few others names. There are also variations on the basic rules for financial rounding — always rounding toward zero is one common variation — so be aware that not everybody has the same rules in mind when speaking about financial rounding.*

To see financial rounding in another setting, open Apple's ScriptEditor and run this AppleScript (make sure the event log is open so you can see the results).

```
repeat with i from -10 to 10
  get round (i + 0.5) rounding as taught in school
end repeat
```

In AppleScript, as taught in school uses financial rounding, and you will get the exact answers that Helix produces when rounding data in fixed point format.

### 8.3.2 Rounding numbers: scientific rounding

Number data (technically, *floating point numbers*) were introduced in the very first version of Helix and have always used the scientific rounding method. Scientific rounding seeks to minimize cumulative errors, so it rounds to the nearest *even* number, thereby reducing the possibility that the result will be skewed.

To see scientific rounding in another setting, open Apple's ScriptEditor and run this simple AppleScript (make sure the event log is open so you can see the results).

```
repeat with i from -10 to 10
  get round (i + 0.5) rounding to nearest
end repeat
```

In AppleScript, to nearest uses scientific rounding, giving you the exact answers Helix produces when rounding data in number format.

#### 8.3.2.1 Decimal to binary conversion errors

Certain numbers can be seen to violate the specification for scientific rounding. This problem is introduced because computers typically convert decimal (as in base 10) numbers into their binary (base 2) equivalents before doing mathematical operations. In decimal math, we have many fractional values (e.g. 1/3) that we understand to be ‘infinitely repeating decimal numbers.’ Attempting to divide 100 identical items evenly between three people is impossible. Doing mathematical operations along this line introduces rounding errors that we naturally understand and compensate for. A human being can look at  $((100/3)*3)$  and understand that the answer is 100, but if you work it out, the answer comes out as 99.999... and we simply ‘round it off’ to 100. But it is important to keep in mind that 100 is an approximation, the ‘real’ answer is 99.999...

When examining binary numbers, you find that a whole different series of fractional numbers turn out to be infinitely repeating. For example 1/10 is an infinitely repeating binary number.

Now consider how this applies to rounding. Given the number 0.235 and being asked to round to the nearest 0.01, you would apply the financial rounding rules and arrive at the (correct) answer of 0.24. However, Helix rounds this to 0.23.

Why? The answer is binary conversion error. 235/1000 is, when expressed as a binary number, an infinitely repeating number. Converting 235/1000 to binary and then back to decimal will yield (approximately) 0.23499999... Because *this* value is not exactly halfway between the two

numbers we are potentially rounding to, it is rounded to the nearest value (down, in this case) and the result appears incorrect.

Why does Helix make this mistake? The math routines that Helix uses are part of the Macintosh CPU's ROM: they are part of the common package that most programs use. Open your Classic Calculator DA and type  $1 \div .9 =$  and you'll see that the answer is  $2.032879E-20$ , *not* 0. Remember that  $1/10$  (0.1 in decimal notation) can not be accurately represented in binary: it is an infinitely repeating value in binary. The value has to be approximated, and the minute error is seen when math operations are performed.

If you do not need more than two decimal places of precision, you can avoid these rounding errors by converting the number into a Fixed Point data type before performing math operations, converting the result back to a number data type if necessary.

